Notice is hereby given that an Ordinary meeting of Southland District Council will be held on:

Date:	**Wednesday, 16 October 2024**
Time:	**9.30am**
Meeting room:	**Council Chamber**
Venue:	**Level 2** **20 Don Street** **Invercargill**

Council Agenda
OPEN

MEMBERSHIP

Mayor	Rob Scott
Deputy mayor	Christine Menzies
Councillors	Jaspreet Boparai
	Don Byars
	Derek Chamberlain
	Paul Duffy
	Darren Frazer
	Sarah Greaney
	Julie Keast
	Tom O'Brien
	Margie Ruddenklau
	Jon Spraggon
	Matt Wilson

IN ATTENDANCE

Chief executive	Cameron McIntosh
Committee advisor	Fiona Dunlop

Contact telephone: 0800 732 732
Postal address: PO Box 903, Invercargill 9840
Email: emailsdc@southlanddc.govt.nz
Website: www.southlanddc.govt.nz
Online: Southland District Council YouTube

Full agendas are available on Council's website
www.southlanddc.govt.nz

Note: The reports contained within this agenda are for consideration and should not be construed as Council policy unless and until adopted. Should Members require further information relating to any reports, please contact the relevant manager, Chairperson or Deputy Chairperson.

Health and safety

Toilets – The toilets are located outside of the chamber, directly down the hall on the right.

Evacuation – Should there be an evacuation for any reason please exit down the stairwell to the assembly point, which is the entrance to the carpark on Spey Street. Please do not use the lift.

Earthquake – Drop, cover and hold applies in this situation and, if necessary, once the shaking has stopped we will evacuate down the stairwell without using the lift, meeting again in the carpark on Spey Street.

Phones – Please turn your mobile devices to silent mode.

Recording - These proceedings are being recorded for the purpose of live video, both live streaming and downloading. By remaining in this meeting, you are consenting to being filmed for viewing by the public.

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PROCEDURAL

Karakia Timatanga

Mā te whakarongo	Through listening
Mā te kōrero	Through talking
Mā te ngakau	From the heart
Mā te wairua	From the spirit
Mā te manaaki mai	Through giving
Mā te manaaki atu	And receiving respect
Ka puawai te maramatanga	Understanding will bloom
Tihei mauri ora	This is the essence of life

1 Apologies **5**

2 Leave of absence **5**

3 Conflict of Interest **5**

4 Extraordinary/Urgent Items **5**

5 Confirmation of Council Minutes **5**

6 Public Participation **5**

REPORTS

7.1 Great South quarterly update to Southland District Council **123**

7.2 Adoption of Code of Practice for Subdivision, Land Use, and Development 2023 and Notification Proposed Plan Change 2 **125**

Karakia Whakamutunga

Kia hora te marino	May peace be widespread
Kia whakapapa pounamu te moana	May the sea be like greenstone
Hei huarahi mā tātou i te rangi nei	A pathway for us all this day
Aroha atu, aroha mai	Let us show respect for each other
Tātou i a tātou katoa	For one another
Hui e! Tāiki e!	Bind us all together!

1 Apologies

At the close of the agenda no apologies had been received.

2 Leave of absence

At the close of the agenda no requests for leave of absence had been received.

3 Conflict of Interest

Councillors are reminded of the need to be vigilant to stand aside from decision-making when a conflict arises between their role as a councillor and any private or other external interest they might have.

4 Extraordinary/Urgent Items

To consider, and if thought fit, to pass a resolution to permit the Council to consider any further items which do not appear on the Agenda of this meeting and/or the meeting to be held with the public excluded.

Such resolution is required to be made pursuant to Section 46A(7) of the Local Government Official Information and Meetings Act 1987, and the Chairperson must advise:

(i) The reason why the item was not on the Agenda, and

(ii) The reason why the discussion of this item cannot be delayed until a subsequent meeting.

Section 46A(7A) of the Local Government Official Information and Meetings Act 1987 (as amended) states:

"Where an item is not on the agenda for a meeting,-

(a) that item may be discussed at that meeting if-

  (i) that item is a minor matter relating to the general business of the local authority; and

  (ii) the presiding member explains at the beginning of the meeting, at a time when it is open to the public, that the item will be discussed at the meeting; but

(b) no resolution, decision or recommendation may be made in respect of that item except to refer that item to a subsequent meeting of the local authority for further discussion."

5 Confirmation of Council Minutes

5.1 Meeting minutes of Council, 2 October 2024

6 Public Participation

Notification to speak is required by 12noon at least one clear day before the meeting. Further information is available on www.southlanddc.govt.nz or phoning 0800 732 732

Council

OPEN MINUTES

Minutes of a meeting of Council held in the Council Chamber, Level 2, 20 Don Street, Invercargill on Wednesday, 2 October 2024 at 9.31am. (9.31am – 9.36am, 10.26am – 10.54am, 11.06am – 12.51pm (PE 1.24pm – 3.10pm))

PRESENT

Mayor	Rob Scott
Deputy mayor	Christine Menzies (PE 1.24pm – 3.02pm)
Councillors	Jaspreet Boparai (9.31am – 9.36am, 10.26am – 10.54am, 11.07am – 12.51pm, (PE 1.24pm – 2.33pm, 2.35pm - 3.10pm))
	Don Byars (9.31am – 9.36am, 10.26am – 10.54am, 11.06am – 12.51pm, (PE 1.24pm – 3.10pm))
	Derek Chamberlain
	Paul Duffy (9.31am – 9.36am, 10.26am – 10.54am, 11.06am – 12.38pm, 12.39pm – 12.41pm, (PE 1.33pm – 3.10pm))
	Darren Frazer
	Sarah Greaney (9.31am – 9.36am, 10.26am – 10.54am, 11.06am – 12.51pm (PE 1.24pm – 3.02pm, 3.04pm - 3.10pm))
	Julie Keast (9.31am – 9.36am, 10.26am – 10.54am, 11.07am – 12.51pm, (PE 1.24pm – 3.10pm))
	Tom O'Brien
	Margie Ruddenklau (9.31am – 9.36am, 10.26am – 10.54am, 11.06am – 12.51pm (PE 1.24pm – 3.02pm))
	Jon Spraggon
	Matt Wilson (9.31am – 9.36am, 10.26am – 10.54am, 11.09am – 12.51pm, (PE 1.24pm – 3.10pm))

APOLOGIES

Deputy mayor Christine Menzies (for lateness)

IN ATTENDANCE

Acting chief executive/GM strategy and partnerships - Vibhuti Chopra
Committee advisor - Fiona Dunlop

Mayor Scott opened the meeting with a karakia timatanga as follows:

Whakataka te hau ki te uru	Cease the winds from the west
Whakataka te hau ki te tonga	Cease the winds from the south
Kia mākinakina ki uta	Let the breeze blow over the land
Kia mātaratara ki tai	Let the breeze blow over the ocean
E hī ake ana te atakura	Let the red-tipped dawn come with a sharpened
He tio, he huka, he hau hū	air.
Tīhei mauri ora!	A touch of frost, a promise of a glorious day.

1 Apologies

There were apologies for lateness from Councillor Menzies.

Moved Cr Boparai, seconded Cr Duffy **and resolved:**

That Council accept the apology.

2 Leave of absence

There were no requests for leave of absence.

3 Conflict of Interest

Councillor Boparai declared a conflict of interest in relation to Item 7.1 - Regional Climate Change Strategy for Murihiku Southland Phase One. She advised that she had submitted on the science of climate change which is part of phase two of the strategy. She would take part and vote on the matter with an open mind.

Councillor Wilson declared a conflict of interest in relation to Item 7.1 - Regional Climate Change Strategy for Murihiku Southland Phase One. He advised that he was the Southland District Council representative on the working group hearings panel. He would take part and vote on the matter with an open mind.

4 Extraordinary/Urgent Items

Mayor Scott advised that there was a late item for the agenda for today which he would be seeking agreement for the item to be considered. The late item is the Regional Climate Change Strategy for Murihiku Southland Phase One.

The item was originally circulated with the agenda on Friday 27 September 2024, but had an incorrect attachment appended. The agenda was amended to remove the report and incorrect attachment. The report with the correct attachment was then circulated on Monday 30 September 2024.

The item 7.1 Regional Climate Change Strategy for Murihiku Southland Phase One could wait until a later meeting, but to keep the process in motion, it would be wise to consider the item today as the other councils in the region have already adopted the strategy.

Moved Mayor Scott, seconded Cr Frazer **and resolved:**

That Council pursuant to section 46A of the Local Government Information and Meetings Act 1987, considers the late item Regional Climate Change Strategy for Murihiku Southland Phase One.

5 Confirmation of Council Minutes

Resolution

Moved Cr Ruddenklau, seconded Cr Duffy **and resolved:**

That the Council confirms the minutes of the meeting held on 18 September 2024 as a true and correct record of that meeting.

6 Public Participation

There was no public participation.

Adjournment of meeting

Moved Mayor Scott, seconded Cr Duffy **and resolved:**

That Council adjourns until the conclusion of Regional Climate Change Strategy for Murihiku Southland Phase One workshop.

(The meeting adjourned at 9.36am for a workshop on the report of the Regional Climate Change Strategy for Murihiku Southland Phase One hearings panel.)

(The meeting reconvened at 10.36am.)

Reports

7.1 Regional Climate Change Strategy for Murihiku Southland Phase One (LATE ITEM)

Record No: R/24/5/33446

Climate change lead – Rochelle Francis and Environment Southland Councillor Phil Morrison were in attendance for this item.

The purpose of the report was to present the Council with the revised Regional Climate Change Strategy for Murihiku Southland Phase One and recommend to adopt, following

changes made by the Regional Climate Change Working Group Hearing Panel in response to consultation feedback.

(During discussion, Councillor Byars left the meeting at 10.29am.)
(During discussion, Councillor Byars returned to the meeting at 10.32am.)

Resolution

Moved Cr Wilson, seconded Cr Ruddenklau **and resolved:**

That the Council:

a) receives the report titled "Regional Climate Change Strategy for Murihiku Southland Phase One"

b) determines that this matter or decision be recognised as significant in terms of Section 76 of the Local Government Act 2002

c) determines that it has complied with the decision-making provisions of the Local Government Act 2002 to the extent necessary in relation to this decision; and in accordance with Section 79 of the act determines that it does not require further information, further assessment of options or further analysis of costs and benefits or advantages and disadvantages prior to making a decision on this matter

d) receives the Regional Climate Change Working Group Report

e) adopts the Regional Climate Change Strategy for Murihiku Southland Phase One (attached to the minutes as appendix A).

(Councillor Boparai requested that her dissenting vote be recorded.)

(The meeting adjourned for morning tea at 10.54am and reconvened at 11.06am.)

(Mayor Scott and Councillors Byars, Chamberlain, Frazer, Greaney, O'Brien, Ruddenklau and Spraggon were present when the meeting reconvened.)

7.2 Pavement marking edge lines - level of service

Record No: R/24/9/55994

Roading asset engineer – Roy Clearwater and Strategic manager transport – Hartley Hare were in attendance for this item.

The purpose of the report was to present the potential level of service changes required to pavement markings on rural collector roads as a result of available budget to Council.

The decision for reduced levels of services is required prior to the commencement of the upcoming pavement marking season.

(During discussion, Councillor Boparai returned to the meeting at 11.07am.)
(During discussion, Councillor Keast returned to the meeting at 11.07am.)

(During discussion, Councillor Duffy returned to the meeting at 11.08am.)
(During discussion, Councillor Wilson returned to the meeting at 11.09am.)
(During discussion, Councillor Byars left the meeting at 11.25am and returned at 11.28am.)
(During discussion, Councillor Byars left the meeting at 11.47am and returned at 11.55am.)

Resolution

Moved Cr Greaney, seconded Cr Boparai **recommendations a to c, d with an addition (as indicated) and a new e (as indicated) and resolved:**

That Council:

a) Receives the report titled "Pavement marking edge lines - level of service".

b) Determines that this matter or decision be recognised as not significant in terms of Section 76 of the Local Government Act 2002.

c) Determines that it has complied with the decision-making provisions of the Local Government Act 2002 to the extent necessary in relation to this decision; and in accordance with Section 79 of the act determines that it does not require further information, further assessment of options or further analysis of costs and benefits or advantages and disadvantages prior to making a decision on this matter.

d) Approves the proposal to reduce the number of roads that are marked with edge lines to be in alignment with the minimum specification in the Traffic Control Devices Manual for the 2024/2025 financial year.

New e) request that Mayor Scott takes the issue direct to the Minister of Transport (linking in the Southland Regional Transport Committee, Mayoral Forum and Southland District Councillors) expressing concern over the decision to reduce funding from New Zealand Transport Agency.

7.3 Roading Bylaw - Stewart Island/Rakiura Parking and One Way Amendments Consultation

Record No: R/24/9/59479

Team leader organisational policy – Chris Rout and Strategic manager transport – Hartley Hare were in attendance for this item.

The purpose of the report was to seek Council's endorsement of a draft Roading Bylaw proposing amendments to parking restrictions and a new one way system on Stewart Island/Rakiura for release for public consultation.

Consultation would be open from 8am Thursday 10 October 2024 to 5pm Sunday 10 November 2024.

Resolution

Moved Cr Spraggon, seconded Cr Chamberlain **recommendations a to f, g with a change (as indicted with ~~strikethrough~~ and underline) and h and resolved:**

That the Council:

a) receives the report titled "Roading Bylaw - Stewart Island/Rakiura Parking and One Way Amendments Consultation".

b) determines that this matter or decision be recognised as not significant in terms of Section 76 of the Local Government Act 2002.

c) determines that it has complied with the decision-making provisions of the Local Government Act 2002 to the extent necessary in relation to this decision; and in accordance with Section 79 of the act determines that it does not require further information, further assessment of options or further analysis of costs and benefits or advantages and disadvantages prior to making a decision on this matter.

d) determines pursuant to section 155(1) of the Local Government Act 2002 that a bylaw is the most appropriate way of addressing the problem of parking scarcity and long term parking use preventing parking access of other road users on the Island and safety issues of two way traffic on hillside roads on the Island which approach Observation Rock.

e) determines pursuant to section 155(2)(a) of the Local Government Act 2002 that the draft Roading Bylaw 2008 (Revision 3, 2024) is the most appropriate form of bylaw.

f) determines pursuant to section 155(2)(b) of the Local Government Act 2002, that the draft Roading Bylaw 2008 (Revision 3, 2024) does not give rise to any implications under the New Zealand Bill of Rights Act 1990.

g) endorses the draft Roading Bylaw 2008 (Revision 3, 2024) for consultation in accordance with section 82 of the Local Government Act 2002, from 8am Thursday 10 October 2024 to 5pm ~~Friday 8~~ Sunday 10 November 2024.

h) notes that the decision to consult under section 82 of the Local Government Act 2002 may be significantly inconsistent with the Significance and Engagement Policy, and that staff will review the relevant section of the policy and propose amendments for consideration by Council.

7.4 Appointment of deputy chairperson of the Finance and Assurance Committee

Record No: R/24/8/54544

Acting chief executive/GM strategy and partnerships – Vibhuti Chopra was in attendance for this item.

The purpose of the report was to note the appointment of mayor Rob Scott as the deputy chairperson of the Finance and Assurance Committee under s 41A of the Local Government Act 2002.

Resolution

Moved Cr Frazer, seconded Cr Greaney **and resolved:**

That the Council:

a) receives the report titled "Appointment of deputy chairperson of the Finance and Assurance Committee".

b) notes the appointment of Mayor Rob Scott, as the Deputy Chairperson of the Finance and Assurance Committee under s 41A of the Local Government Act 2002.

7.5 Amending Standing Orders - members attending remotely counting towards quorum

Record No: R/24/9/59130

Democracy advisor – Michal Gray was in attendance for this item.

The purpose of the report was to present amended Standing Orders to Council for adoption. The proposed amendment would enable members of Council to attend meetings remotely and to count towards quorum for the meeting.

Legislation providing temporary arrangements to allow members attending a meeting remotely to count as part of the quorum has been repealed.

The Local Government Act 2002 now provides that from 1 October 2024, members remotely attending a meeting will count as part of the quorum if a territorial authority's standing orders allow.

Resolution

Moved Cr Greaney, seconded Cr Ruddenklau **and resolved:**

That the Council:

a) receives the report titled "Amending Standing Orders - members attending remotely counting towards quorum".

b) determines that this matter or decision be recognised as not significant in terms of Section 76 of the Local Government Act 2002.

c) determines that it has complied with the decision-making provisions of the Local Government Act 2002 to the extent necessary in relation to this decision; and in accordance with Section 79 of the act determines that it does not require further information, further assessment of options or further analysis of costs and benefits or advantages and disadvantages prior to making a decision on this matter.

d) agrees to adopt for Council and for its committees and subcommittees, new Standing Orders (attachment B to the report) that incorporate the following amendments:

i. the definition for 'present at the meeting to constitute quorum' is amended to say: 'Present at the meeting to constitute quorum means the member is either to be physically present in the room or attending the meeting by audio/visual link.'

Ii. in section 11.1, the word 'physically' is deleted from parts (a) and (b)

iii. in section 13.8, the word 'not' is deleted

iv. in section 13.9, the word 'physically' is deleted.

e) notes that the new Standing Orders for Council and its committees and subcommittees will come into effect on 2 October 2024 and will be published on Council's website.

7.6 Annual alcohol report to Alcohol Regulatory and Licensing Authority (ARLA)

Record No: R/24/9/60168

Manager – environmental health – Betty Hold was in attendance for this item.

The purpose of the report was to advise of the alcohol licensing reporting requirements under the Sale and Supply of Alcohol Act 2012.

Resolution

Moved Mayor Scott, seconded Cr O'Brien **and resolved:**

That Council:

a) Receives the report titled "Annual alcohol report to Alcohol Regulatory and Licensing Authority (ARLA)".

7.7 Management report

Record No: R/24/9/59749

Acting chief executive/GM strategy and partnerships – Vibhuti Chopra was in attendance for this item.

The report updated numerous issues which included:

- The adoption of the 2024/2034 Long Term Plan

- Representation review
- Implementation of the Legal panel
- Planning for the 2025 local government elections
- Regional development
- Installation of the SmartyGrants grants online application system
- Water and waste
- Alcohol ban awareness
- Colac Bay steps
- Public engagement for numerous bylaws and strategies.

The meeting was also updated on the activities of the following Council teams:

- Resource consents
- Building solutions
- Environmental health and licensing
- Services and libraries
- Community facilities
- Transport
- Forestry
- Water and waste and
- Project delivery team

(During discussion, Councillor Duffy left the meeting at 12.38pm and returned at 12.39pm.)
(During discussion, Councillor Duffy left the meeting at 12.41pm.)
(During discussion, Councillor Byars left the meeting at 12.48pm and returned at 12.50pm.)

Mayor Scott thanked the staff for their efforts as outlined in the activity group reporting papers.

Resolution

Moved Mayor Scott, seconded Cr Keast **and resolved:**

That Council:

a) receives the report titled "Management report".

Public Excluded

Exclusion of the public: Local Government Official Information and Meetings Act 1987

Resolution

Moved Mayor Scott, seconded Cr O'Brien **and resolved:**

That the public be excluded from the following part(s) of the proceedings of this meeting.

C8.1 Commercial infrastructure - Forest Management and Harvest Plan 2024/2025

C8.2 Strategic property purchase

The general subject of each matter to be considered while the public is excluded, the reason for passing this resolution in relation to each matter, and the specific grounds under section 48(1) of the Local Government Official Information and Meetings Act 1987 for the passing of this resolution are as follows:

General subject of each matter to be considered	Reason for passing this resolution in relation to each matter	Ground(s) under section 48(1) for the passing of this resolution
Commercial infrastructure - Forest Management and Harvest Plan 2024/2025	s7(2)(h) - the withholding of the information is necessary to enable the local authority to carry out, without prejudice or disadvantage, commercial activities.	That the public conduct of the whole or the relevant part of the proceedings of the meeting would be likely to result in the disclosure of information for which good reason for withholding exists.
Strategic property purchase	s7(2)(b)(ii) - the withholding of the information is necessary to protect information where the making available of the information would be likely unreasonably to prejudice the commercial position of the person who supplied or who is the subject of the information. s7(2)(i) - the withholding of the information is necessary to enable the local authority to carry on, without prejudice or disadvantage, negotiations (including commercial and industrial negotiations).	That the public conduct of the whole or the relevant part of the proceedings of the meeting would be likely to result in the disclosure of information for which good reason for withholding exists.

The public were excluded at 12.51pm.

(The meeting adjourned for lunch at 12.51pm.)

(The meeting reconvened at 1.24pm in public excluded.)

(Councillor Menzies joined the meeting at 1.24pm.)
(Councillor Duffy returned to the meeting at 1.33pm.)
(Councillor Boparai left the meeting at 2.33pm and returned at 2.35pm.)
(Councillor Ruddenklau left the meeting at 3.02pm.)
(Councillor Greaney left the meeting at 3.02pm.)
(Councillor Menzies left the meeting at 3.02pm.)
(Councillor Greaney returned to the meeting at 3.04pm.)

Resolutions in relation to the confidential items are recorded in the confidential section of these minutes and are not publicly available unless released here.

The meeting concluded at 3.10pm

CONFIRMED AS A TRUE AND CORRECT RECORD OF A MEETING OF THE COUNCIL HELD ON WEDNESDAY 2 OCTOBER 2024.

DATE:.....

CHAIRPERSON:.....

APPENDIX A


Climate change
in Murihiku
Regional
Climate Change Strategy
for Murihiku Southland Phase One
environment SOUTHLAND
GO RE RURAL CITY LIVING
Invercargill
SOUTHLAND DISTRICT COUNCIL
TE AO MARAMA INC.



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Climate change in Murihiku

Foreword

Murihiku Southland Councils, alongside Te Ao Mārama Inc, are committed to a collaborative and inclusive approach in defining our regional strategic response to a changing climate.

We acknowledge the mandate from our communities to do so and recognise the role of local government in supporting community resilience. It is essential our regional approach continues to build trust, confidence and capacity for ongoing community cooperation.

While the scientific consensus supports the reality of global climate change and its impacts, we recognise that some individuals and groups within our community continue to question this. It is important to address these differing perspectives while firmly grounding our response in the best available science to ensure the resilience and well-being of our region.

Murihiku Southland is not alone in addressing the challenges and opportunities of a changing climate. We are part of a global community responding to a shared crisis. We are able to learn from the experiences and efforts of others, both within Aotearoa New Zealand and abroad. However, we also recognise the distinctive character of our regional needs. Our actions will be guided by an appropriate mix of global and local knowledge including mātauranga Māori, ensuring the choices we make remain tailored to our unique environment, economy, and communities.

In aligning with national policy, this strategy distinguishes between the two pillars of climate change mitigation and climate change adaptation. Mitigation involves the decarbonisation of our economy, as well as widespread behavioural change. This will be a challenging journey but it's an important pathway for our community to minimise the escalating impacts of a changing climate. There is significant scope to learn from others, benchmark, and leverage technology as we pursue our net-zero greenhouse gas goals. Our region is on a pleasing pathway, with the 2022 measurements indicating that regional emissions have been reduced by 14.8% since 2018.

Alongside mitigation, adaptation pathways may be the more demanding of the two. As New Zealand's Climate Change Commissioner, Rodd Carr, stated in a presentation at Environment Southland in September 2022: "*Adaptation is going to be one of the most challenging conversations local and regional governments have to have, because adaptation is inherently local – it is inherently about communities directly affected by the changed climate.*"

Accepting this challenge, it is important to recognise that the pursuit of climate change mitigation and adaptation are two pillars which often intersect, offering a path toward resilience and sustainability. While opportunities may not always be immediately evident, we embrace the notion that actions to reduce emissions might enhance our adaptive capacity, and adaptation measures may contribute to mitigation efforts. This synergy highlights the importance of a holistic and flexible approach in response to the complex challenges and opportunities posed by a changing climate.

Finally, it is recognised that this strategy is framed against a backdrop of uncertainty in an increasingly changing world. Yet, given the potential consequences and costs of indecision, delay, and inaction, we need to do what we can with what we have now. Thus, we subscribe to the notion that local government agencies have a dual role – to lead as well as empower others to act. We understand that in navigating the complexities of a changing climate, we may not always 'get it right'. But we believe that purposeful action accompanied by reflexive learning are essential elements of our response.

This challenge is ours to meet – and with humility *māhaki*, resolve *māia*, and commitment *manawanui*, together *kotahitanga*, we can secure Murihiku Southland for future generations. Mō tātou, ā, mō kā uri ā muri ake nei.

Environment Southland Councillor, Phil Morrison and Te Ao Mārama (TAMI) Kaupapa Taiao Manager, Dean Whaanga

Co-chairs, Murihiku Southland Regional Climate Change Working Group

Background

At a regional hui held in July 2022, recognising our strong mutual interdependence, it was agreed that local government agencies need to work together to establish a regional approach to respond to Murihiku Southland's changing climate.

Environment Southland and Te Ao Mārama initiated discussions to create an inter-agency working group as a starting point for bringing Councils together – with Gore District Council, Invercargill City Council and Southland District Council being key partners in developing a regional approach. Great South, as Southland's regional economic development agency have also been involved.

This strategic collaboration will initially be defined and guided by two key documents as follows.

Phase One

Regional Climate Change Strategy for Murihiku Southland (this strategy) defining how local government agencies will work together (principles) and toward what outcomes that work will focus (aspirations).

Phase Two

Regional Framework for Action (being developed) which will define and prioritise the specific actions and initiatives needed to realise the outcomes being aspired to. It is expected the Regional Framework for Action will:

- Enable each individual local government agency to create Action Plans that align with the aspirations set out in this strategy.
- Evaluate the merits of and define the continuing or new collaborative actions to which local government agencies will commit.
- Identify opportunities for collaboration beyond local government – empowering the aspirations, energies, and creativity of communities and industry.

Purpose

The purpose of this strategy is to unite the efforts of our four local government councils, Te Ao Mārama Inc and Great South to support a cohesive response to help protect our environmental, economic, cultural and social wellbeing against the effects of a changing climate by agreeing on broad principles and aspirations.

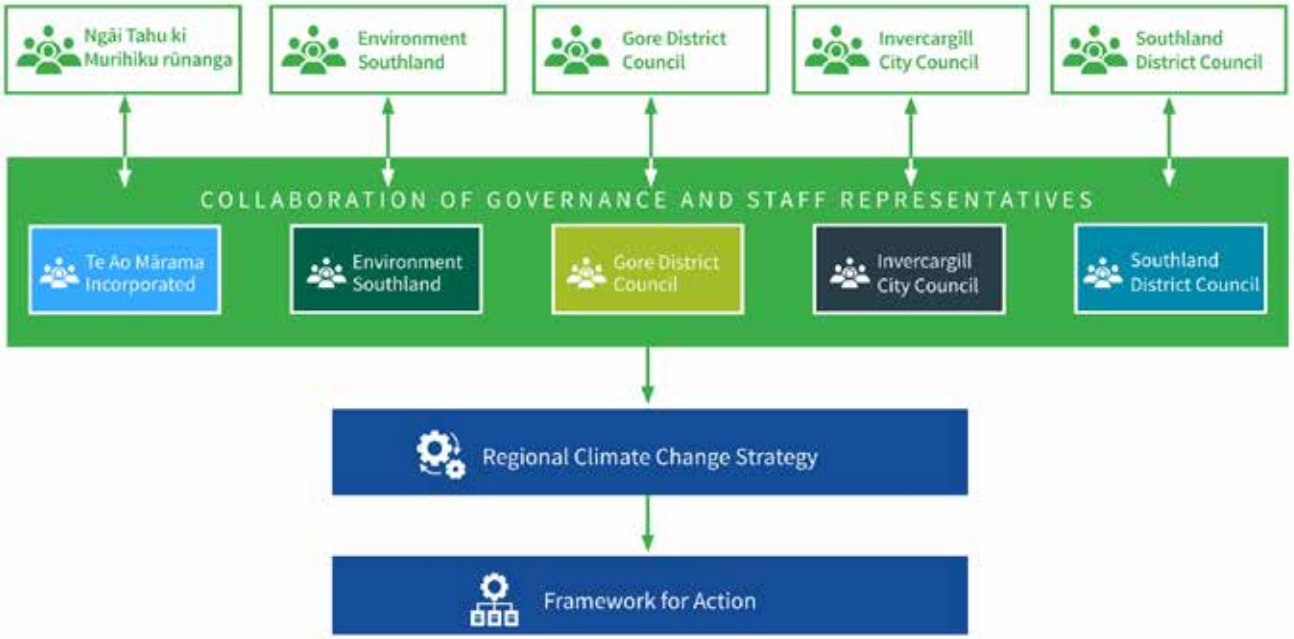
This strategy will enable local government agencies and our communities to work together efficiently and effectively, optimising the use of resources and expertise for the benefit of all ratepayers towards a resilient future for our region.



Climate change in Murihiku

Regional Climate Change Working Group structure

The Regional Climate Change Working Group (RCCWG) was established in early 2023 with governance representatives from each council and Te Ao Mārama Inc, supported by a staff level inter-agency group. This informal working group has been instrumental in enabling cross-agency discussions and collaboration to progress strategy development (phase one). It is envisaged that phase two will involve extending collaboration beyond the existing structure of this working group.



Our changing climate

Our global, national and regional understanding of the changing climate has developed over time; though this has significantly accelerated during the past decade.

Within Murihiku Southland there are still some that dispute that human activities are contributing to a changing climate. However, it is generally acknowledged that our region is experiencing the effects of a changing climate, such as increasing severe weather events and sea level rise.

Some parts of Murihiku Southland are already prone to river flooding, coastal inundation and erosion. Recent events include the Mataura catchment flooding in February 2020 (which also affected Fiordland), as well as all catchments experiencing significant flooding in September 2023.

In contrast, during the summers of 2021-22 and 2022-23 dry spells and drought conditions were experienced in many parts of our region.

These severe weather events often have serious economic, social and environmental impacts on the region. When these kinds of significant weather events are projected into the future, it can be daunting and overwhelming to consider.

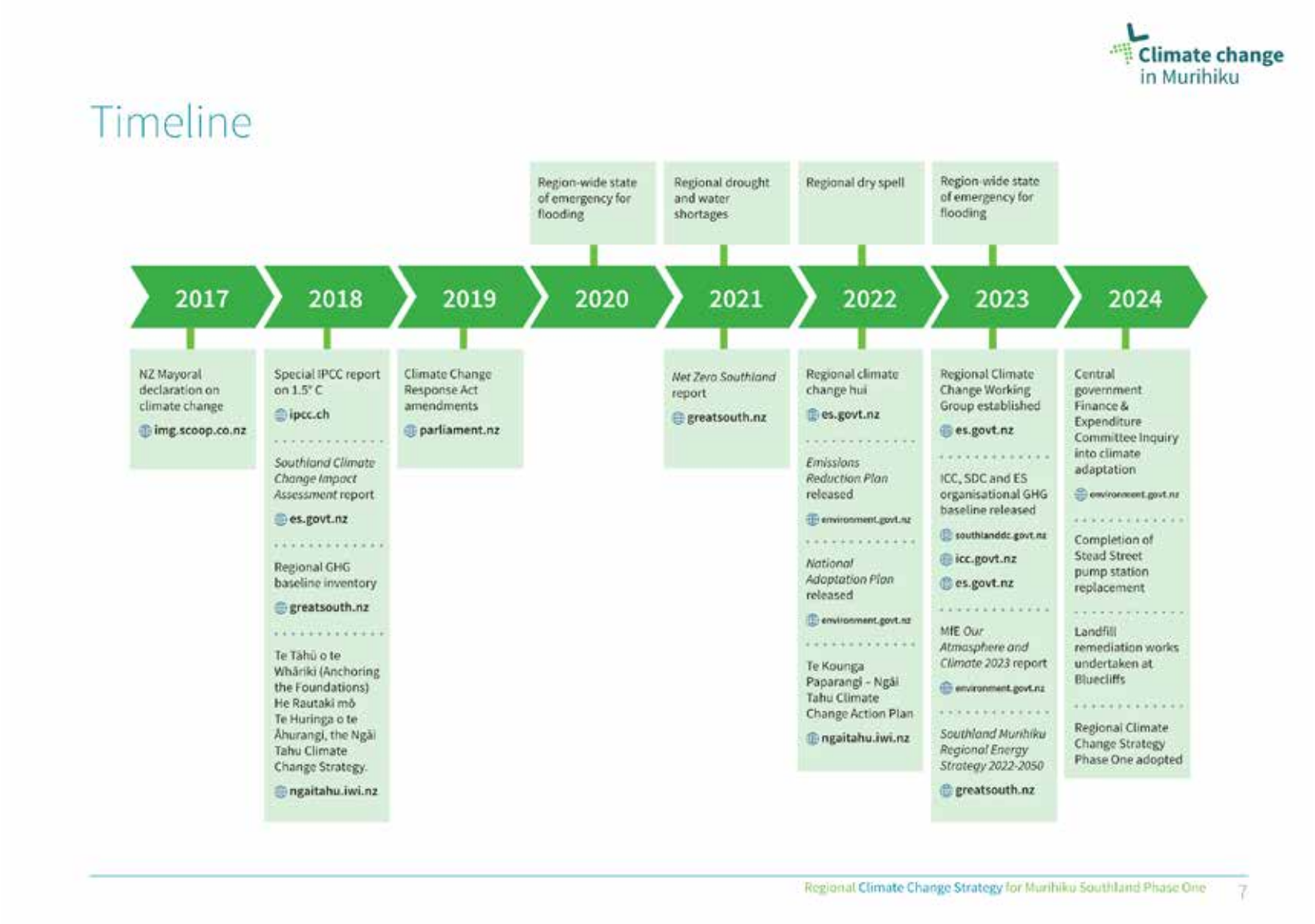
Determining what on-the-ground action can be pursued as individuals and as communities right now, could change the course of this future. Understanding the opportunities (and opportunity costs) of investing in resilience versus the costs of post-event recovery will be an important consideration.

Regardless of the causes of changes to our climate, local government are obliged to respond proactively and ensure long-term community resilience. Southland must also be prepared to grasp opportunities arising from a changing climate.

This climate change strategy seeks to guide this journey for the Murihiku Southland region.



The Mataura River in flood at Gore, February 2020.


Climate change in Murihiku
Timeline
2017
NZ Mayoral declaration on climate change
img.scoop.co.nz
2018
Special IPCC report on 1.5° C
ipcc.ch
Southland Climate Change Impact Assessment report
es.govt.nz
Regional GHG baseline inventory
greatsouth.nz
Te Tāhū o te Whāriki (Anchoring the Foundations) He Rautaki mō Te Huringa o te Āhurangi, the Ngāi Tahu Climate Change Strategy.
ngaitahu.iwi.nz
2019
Climate Change Response Act amendments
parliament.nz
2020
Region-wide state of emergency for flooding
2021
Regional drought and water shortages
Net Zero Southland report
greatsouth.nz
2022
Regional dry spell
Regional climate change hui
es.govt.nz
Emissions Reduction Plan released
environment.govt.nz
National Adaptation Plan released
environment.govt.nz
Te Kounga Paparangi - Ngāi Tahu Climate Change Action Plan
ngaitahu.iwi.nz
2023
Region-wide state of emergency for flooding
Regional Climate Change Working Group established
es.govt.nz
ICC, SDC and ES organisational GHG baseline released
southlanddc.govt.nz
icc.govt.nz
es.govt.nz
MfE Our Atmosphere and Climate 2023 report
environment.govt.nz
Southland Murihiku Regional Energy Strategy 2022-2050
greatsouth.nz
2024
Central government Finance & Expenditure Committee Inquiry into climate adaptation
environment.govt.nz
Completion of Stead Street pump station replacement
Landfill remediation works undertaken at Bluecliffs
Regional Climate Change Strategy Phase One adopted
Regional Climate Change Strategy for Murihiku Southland Phase One 7

Responding to a changing climate

Local government's role

Collective and collaborative regional leadership is important to enable the implications of a changing climate to be considered for the Murihiku Southland region. A core purpose of local government is to promote community wellbeing in the present and in the future. This is at the heart of how our local government agencies need to work together towards a more resilient future.

The Climate Change Response Act 2002 directs the development of clear and stable climate change policies, in order for New Zealand to meet its international obligations and administer a greenhouse gas emissions trading scheme. While New Zealand's resource management legislation is in the midst of significant and ongoing reforms, national policy directions currently issued under the Resource Management Act 1991 relating to freshwater, biodiversity, and coastal management require decision-makers to consider the need for enhancing climate resilience. The resource management reforms aim to ensure that appropriate regard is given to the implications of a changing climate among other national priorities, including community wellbeing.

Environment Southland as the regional council, has specific responsibilities for example, managing flood risk under various pieces of legislation including the Local Government Act 2002 and Soil Conservation and Rivers Control Act 1941.

Gore District Council, Invercargill City Council and Southland District Council also have a range of obligations to consider natural hazard risks in planning and infrastructure decisions.

Emergency Management Southland has the responsibility for the delivery of emergency management responses if a significant climate related event was to occur.

While historically flood banks have been the main solution for protecting communities at risk, over the longer term there is a need to redesign the way we manage our catchments ensuring consideration of a wider range of solutions to help manage this risk.

Science and mātauranga are fundamental to guiding a regional response to a changing climate. It is acknowledged that there are divergent views on climate change science, however local government is required to adopt best practice approaches, including using international science and national guidance to inform a precautionary approach towards adaptation.

While there is an abundance of international and national climate related science, there is currently still work to be done to ensure we understand the implications of this science for our region.

A crucial step towards regional leadership is an opportunity for each agency to carry out individual organisational efforts to support this work. This is important, not only for role modelling, but also ensuring each agency understands what is required to enable the support of others; as well as contributing towards a collective community effort.

For the Murihiku Southland region, this climate change strategy is a key step for local government agencies in undertaking this journey.

Environment Southland as the regional council, has specific responsibilities, for example, managing flood risk under various pieces of legislation including the Local Government Act 2002 and Soil Conservation and Rivers Control Act 1941.

Gore District Council, Invercargill City Council and Southland District Council also have a range of obligations to consider natural hazard risks in planning and infrastructure decisions.



Climate change in Murihiku

Key components of this strategy

Following the international and national lead, this strategy focuses on two key strands – mitigation and adaptation. Communication and engagement are needed to support these two inter-connected strands of the climate change conversation.

Mitigation

Mitigation is the human actions to reduce emissions by sources; or enhance removals of greenhouse gases. At a national level this is guided by the Emissions Reduction Plan. Examples include increasing the energy efficiency of homes and offices; or replacing a coal boiler with a renewable electric-powered one. An example of increasing the removal of greenhouse gases is growing new trees to absorb carbon from the atmosphere.

This strategy guides the development of future action in relation to each of these key components.



Adaptation

Adaptation is the process of adjusting to actual or expected climate variability and its effects. At a national level this is guided by the National Adaptation Plan. Examples of adaptation include managed retreat, land-use changes, and investment in climate resilient infrastructure.

This process is inherently local and about communities directly affected by the changing climate. In addition, the inter-generational ramifications are an important consideration as our collective grandchildren and future generations will face increasing consequences of a changing climate.

Strategy review

This strategy has been written within a national context of ongoing revisions to the legislative framework, not only for climate change policy, resource management but also local government reform. It will be reviewed by June 2025 to ensure it remains current and aligned with anticipated national legislative and policy changes.

The principles, aspirations and strategy as a whole are a starting point of a long-term partnership and journey. It is anticipated that the next iteration of this strategy will extend beyond the needs of local government with greater consideration of the needs of key stakeholders and our communities.

Our region's emissions

1 **Regional emissions inventory** → 2 **Regional emissions modelling** → 3 **Regional emissions reduction pathway**

Regional emissions inventory

In 2018, a baseline emissions inventory for the region was established*, following the methodology in the Global Protocol for Community-Scale Greenhouse Gas Emissions Inventory (WRI, 2015), City Inventory Reporting and Information System (CIRIS) and the IPCC's AR5. Each time regional emissions have been measured, the baseline inventory has been updated to reflect changes in methodology, most recently to utilise the Global Protocol for Community Scale Greenhouse Gas Emissions Inventory (WRI, 2021) and Measuring emissions: A guide for organisations (MfE, 2023).

This baseline inventory highlighted that we all contribute to our regional emissions profile, as individuals, communities, businesses and industry.

This profile indicated that with 12% of New Zealand's total land area and producing 15% of New Zealand's tradeable exports, Southland (with only 2% of New Zealand's population in 2018) contributed 9.7% of New Zealand's gross emissions*.

It is best practice for this kind of regional inventory to be updated on a regular 3 or 5-yearly cycle in order to monitor changes over time. This inventory has been repeated regularly by Great South** since 2020, which has indicated a progressive downward trend in regional net emissions compared to the 2018 baseline. Great South will continue to report against the 2018 baseline annually and plays an important role in supporting local businesses to measure and reduce emissions, assisting the region's net zero greenhouse gas journey.

Regional emissions modelling

Further to the emissions inventory work, Great South (working alongside MfE and the Tindall Foundation) has undertaken regional emissions modelling as part of developing a carbon neutral advantage programme. The Net Zero Southland 2050 report (March 2021) provides direction on potential economic mitigation pathways for Southland.

Part of this modelling seeks to understand the economic value of emissions reduction, which could enable our region to contribute towards achieving national net zero emissions by 2050. It also notes that a low emission economy would provide Southland with major opportunities to support economic and social prosperity while mitigating the risks posed by a changing climate.

* *Southland Regional Carbon Footprint 2018* – www.greatsouth.nz/resources/southlands-greenhouse-gas-emissions-2018 (please refer to this report for an understanding of the methodology used and the data sources).

** Great South is a council-controlled organisation, jointly owned by Invercargill City Council, Southland District Council, Gore District Council, Environment Southland, Invercargill Licensing Trust, Mataura Licensing Trust, Southland Chamber of Commerce, Southern Institute of Technology and Community Trust South. It is Southland's regional development agency which facilitates the implementation of the B2025 Southland Long Term Plan, as well as supporting the regional emissions reduction journey by working with businesses to reduce their greenhouse gas emissions across the region.

Climate change in Murihiku

Regional emissions reductions pathways

The Climate Change Response (Zero Carbon) Amendment Act 2019, sets the national target to reduce net emissions of greenhouse gases (except biogenic methane) to zero by 2050.

Our region is already on a net zero greenhouse gas journey and while some progress has been made since the 2018 baseline inventory, achieving this goal will involve individuals, communities, businesses and industries all evaluating their contribution/s.

In 2018 our region contributed 9.7% of the country's emissions. This has reduced by 14.8%, to contribute 8.2% of the country's emissions in 2022. This is due to the decarbonisation of fossil-fuelled boilers and a systematic reduction in emissions for agriculture, energy, transport, manufacturing and waste. Partnerships with EECA, Government, the private and public sector as well as educational outreach has created the impetus for the success of this programme.

Achieving net zero greenhouse gases by 2050, will require everyone to play their part. In the short-term, local government agencies in Murihiku Southland are focusing on ensuring each organisation is on track to achieving net zero goals; while the longer-term focus is determining how local government should best play its part regionally.



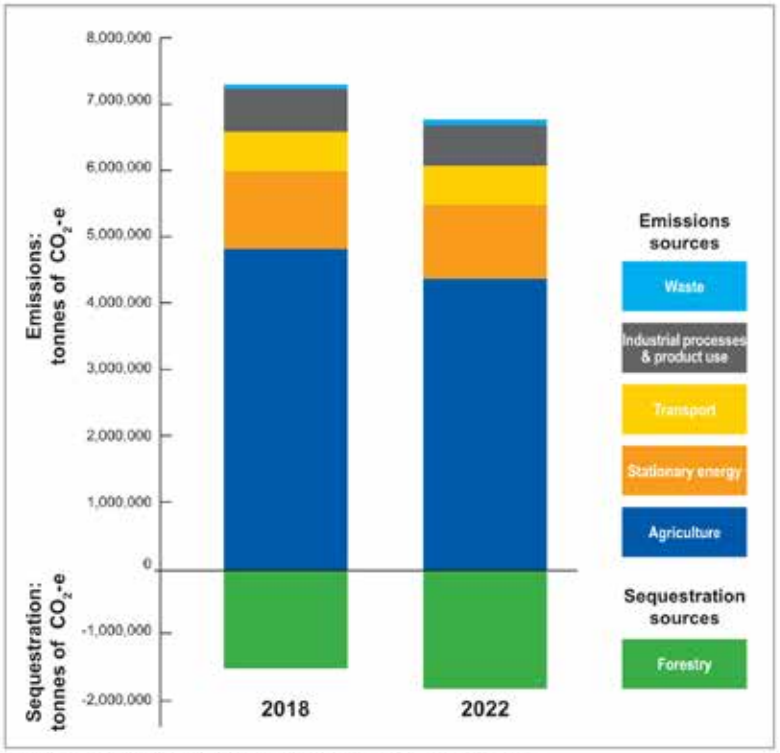
Southland regional greenhouse gas emissions

Southland regional net greenhouse gas emissions 2018 and 2022 as measured by Great South. This graph illustrates that net regional greenhouse gas emissions have reduced by 14.8% from 2018 to 2022.

Tonnes of CO_2-e	2018	2022
Total GROSS emissions CO_2-e*	7,308,128	6,753,059
Total CO_2-e sequestered**	-1,498508	-1,805,554
Total NET emissions CO_2-e	5,809,620	4,947,505

* CO2-e stands for 'carbon dioxide equivalent' to enable the comparison to six key GHG gases: carbon dioxide (CO2-e), methane (CH4), nitrous oxide (N2O), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs) and sulphur hexafluoride (SF6).

** Carbon sequestration is the process of capturing and storing atmospheric carbon dioxide. The regional emissions inventory currently only includes forestry related sequestration (due to current regional data limitations for other sources of sequestration).



Southland Greenhouse Gas Emissions Inventory for 2022 – www.greatsouth.nz/resources

Climate change in Murihiku

Principles

Principles provide direction on ways of working together to create a regional response to the impact of a changing climate on Murihiku Southland. The seven principles provide the foundation for regional efforts to respond to the challenges and opportunities presented by our changing climate and associated environmental effects such as sea-level rise, indigenous biodiversity loss and biosecurity incursions.

Kaitiakitanga *Guardianship* – our responsibility to protect the essential life-supporting capacity of our environment, balancing the wellbeing of our present and future generations.

Mōhiotanga *Understanding* – effective risk evaluation and an evolving, iterative management approach, which fosters a future-focused community of learning.



Hauora *Wellbeing* – the interconnectedness of a healthy environment for community wellbeing and resilience.

Whakamana *Empowerment* – facilitate innovative and bold pathways for action while nurturing the resilience of our youth, in preparation for their future.

Kotahitanga *Inclusivity* – transparent sharing of knowledge for a fair and equitable transition towards our future.

Whakarāneinei *Anticipation* – adopting a data-driven approach in developing proactive action plans, prioritising long-term thinking and reinvestment in our environmental capital.

Mahitahi *Alignment* – a comprehensive, inclusive, collaborative approach that facilitates consistency and synergy and enables informed and balanced decision-making.

Detailed principles

These principles will guide how Murihiku Southland local government agencies will work together, including prioritising to determine regional action.

They highlight the importance of recognising mutual dependencies and for example, taking a catchment focused and/or community focused approach to working across boundaries and prioritising the key issues.

These Murihiku Southland principles can be understood in more detail as follows.

Kaitiakitanga *Guardianship*

- Recognise our duty of care to safeguard our environment's fundamental life supporting capacity.
- Adopt a precautionary approach towards mitigating and adapting to the effects of a changing climate.
- Create a balanced framework, which supports many inter-connected strands.
- Value the wellbeing and livelihoods of our present and future generations.

Hauora *Wellbeing*

- Live with and understand how everything is connected.
- Recognise a healthy, functioning environment is inherent to our individual and collective wellbeing(s).
- Enhance community and environmental resilience in the face of change.

Whakarāneinei *Anticipation*

- Think and act with a long-term perspective, valuing and reinvesting in our environmental capital.
- Create proactive pathways for action, doing what we can now with what we know now.
- Ensure relevant regional science and information underpins a data-led approach.

Mōhiotanga *Understanding*

- Understand risks and look for potential ways to avoid, mitigate and manage risk.
- Pursue iterative management, adapting our approach as we learn and know better.
- Sow the seeds of how our future may be different, creating a broad community of learning.

Kotahitanga *Inclusivity*

- Share knowledge widely and transparently.
- Proactively consider those most vulnerable and voices least heard.
- Create a fair and equitable transition to our future.

Whakamana *Empowerment*

- Enable courageous pathways for action, inspiring individual and collective action.
- Look for opportunities and respond with innovation and creativity.
- Support our young people to understand, participate and be resilient in the face of their future – offering them hope.

Mahitahi *Alignment*

- Think ki uta ki tai – mountains to the sea, considering the effects in every direction and across boundaries.
- Adopt a united, integrated, consistent, and holistic approach enabling informed and balanced decision-making.
- Foster collaboration among various stakeholders, businesses, community groups and individuals.

Climate change in Murihiku

Overarching aspirations

Our collective values spanning science, beliefs and hopes for the future, come together to form our aspirations for our regional response to a changing climate.

They provide an agreed 'direction of travel' for local government agencies, which can be improved and modified as the journey progresses.

Ongoing cross-agency discussions will help develop and implement aligned pathways towards these aspirations. These pathways will include managing the effects of a changing climate as well as capitalising on potential opportunities that may benefit the region, keeping in mind the importance of ensuring that our future generations will also have the best possible opportunities. Additional specific aspirations may be developed, as part of the journey towards creating a Framework for Action.

The following aspirations reflect the collective intent of local government agencies to support and advocate for effective responses to our changing climate across Murihiku Southland.

In addition to these overarching aspirations, further aspirations provide a direction regarding mitigation, adaptation as well as communications and engagement as per the key focus areas of this strategy.

Our aspirations

1. Te Mana o Te Ao Tūroa – the mana of the environment is valued and respected enabling our people to be responsive as our climate changes.
2. Science and Mātauranga underpins our response to our changing climate in Murihiku Southland.
3. We understand the changes, challenges and opportunities associated with our changing climate and will act courageously, building resilience to respond and thrive.
4. We will create meaningful change within our generation and inspire future generations to continue this work.



Specific aspirations

Mitigation

Local government agencies need to collectively contribute towards mitigating the changing climate by reducing organisational emissions, offsetting if necessary and becoming more sustainable organisations. This will also enable Councils to understand the challenges businesses and other organisations face in reducing emissions and aid the efforts towards developing a best practice consistent approach.

Each agency is on their own organisational learning journey, of which measuring organisational greenhouse gas emissions is a first step towards understanding how these emissions can be reduced.

Councils are also working on understanding their mitigation role within the community. This is an important step towards being able to support the aspiration of becoming a net zero region.

In setting the aspirations, Councils have chosen to align with national legislation and direction and work towards becoming a net zero region by 2050.

5 Environment Southland, Gore District Council, Invercargill City Council, Southland District Council and Great South will be net zero* organisations by 2050 or earlier.

6 By June 2026**, all four Councils will measure their organisational greenhouse gas baseline and develop emissions reductions targets for progressive reduction of greenhouse gas emissions toward 2050.

7 Councils understand their role in enabling Murihiku Southland to become a net zero region by 2050.

* Net zero refers to the reduction of organisational greenhouse gas emissions to a net zero level.

** This date is being referenced to ensure the direction resulting from organisational baseline measuring of greenhouse gas emissions, can be incorporated into planning as part of the LTP cycle 2027-2037.

Adaptation

The changing climate will significantly impact our communities, ecosystems and natural resources. It is likely to result in changes to land use, not only in terms of where people live, but also the location of key infrastructure, where and how businesses operate and how natural resources are used. It is therefore important to ensure that local government agencies understand the risks and opportunities this presents, in order to consider the regional spatial planning implications.

Adaptation is about undertaking actions to minimise threats or to maximise opportunities resulting from the impact of a changing climate. A first step to this is that Councils will need to align on climate change scenarios to inform regional planning decisions; as well as collaborate to consider regional issues anew with a climate change lens.

8 We understand the risks and opportunities to our communities associated with the impact of our changing climate on Murihiku Southland.

9 Councils align on climate change scenarios to inform key regional decisions.*

10 We collaborate to create regional pathways for action**, acknowledging the inter-connectedness of specific issues.

* This is important as local government agencies collectively work towards planning for the LTP cycle 2027-2037, however it is also relevant for regional decisions in a broader sense as well.

** Examples are: carbon forestry, sustainable transport, water availability, waste management, biodiversity, nature-based solutions etc. The intention is that these RCCWG discussions will be ongoing and aligned pathways for action will be able to be incorporated into the planning for the LTP cycle 2027-2037 and beyond.

Communications and engagement

It is clear that as a community we are all at different stages of learning and understanding about the implications of a changing climate for our region. It is important to bring people on the journey, of which Councils are also a part, so that we can learn from each other and contribute to increasing collective knowledge.

Councils have a role to play to find ways of supporting people's learning, wherever they might be at on their journey responding to our changing climate. In particular, our young people will face increasing implications as the climate changes and are therefore a key audience to engage and empower.

11 We build a regional community of learning; collectively and openly improving our understanding of the complexity of our changing climate and its implications for Murihiku Southland.

12 We support individuals, businesses, community groups, and organisations to start and progress their journey responding to our changing climate.

13 We engage our children and young people to empower active participation in ongoing climate change conversations.



Creating a Framework for Action

This strategy sets out how local government agencies will work together towards these aspirations. The key next step for the Regional Climate Change Working Group is to develop a Framework for Action (phase two).

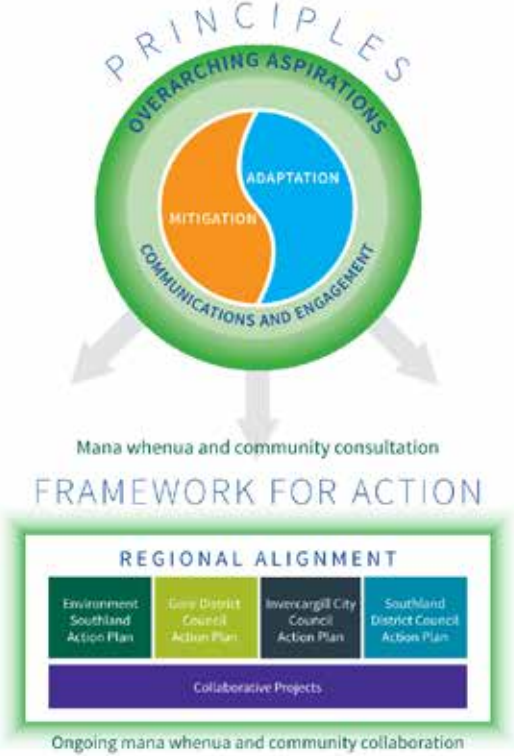
The purpose is to create 'regional action pathways' focusing on where there will be regional benefit. The pathways will highlight where agencies can collaborate and align, enabling each agency to progress these in their own way. It will be important to determine what the ongoing steps will be and the role and responsibilities of each agency to support these pathways.

The resulting pathways will inform the setting of regional priorities. There is a need for a balanced assessment and understanding of costs of action and inaction (economic, social, cultural and environmental) to help inform future long-term planning cycles; keeping in mind the agreed principle of doing what we can now, with what we have now.

Partnerships with key stakeholders and wider Murihiku Southland communities will be important to input, influence and support the progression of these pathways.

Framework for Action

It is envisaged that the Framework for Action will follow the structured approach set out in this strategy. It will enable iterative planning, providing direction for both mitigation as well as adaptation pathways.



Climate change in Murihiku

What's next?

Science and information are very important to understanding the regional implications of a changing climate.

Regional LiDAR data mapping has been commissioned.

Work is also underway to develop a scope for updating and expanding the 2018 NIWA regional climate change report using updated global and national projections. Following the national work, regional climate, hydrological and sea level rise projections will be developed, which will increase the understanding of which areas of our region are most vulnerable and what this might mean for changes in land-use.

As our collective understanding of human risk, significance and environmental impacts develops, this will enable iterative risk assessment and reflexive learning.

The Regional Climate Change Working Group plans to develop a proposal for setting up a wider Murihiku regional climate change forum to enable this learning to be widely shared*. The purpose of this forum will be to ensure the climate change conversation becomes more inclusive for individuals, businesses, community groups, and organisations that would like to be involved. This is likely to be a key initial stepping stone towards building a regional community of learning to support information sharing as well as on-the-ground action taking place.

It is also important to acknowledge that at any time our region may be subjected to a significant climate related event and preparation for these will aid our capacity for resilience. Emergency Management Southland provide significant resources enabling individuals, businesses and our communities to 'be ready' if this was to occur.

In the meantime, the Regional Climate Change Working Group will continue to progress a regional Framework for Action with a sense of urgency. Determining what on-the-ground action can be pursued as individuals and as communities is important to achieve a more resilient future.



* The concept of a wider regional climate change forum was also a recommendation of the *Beyond 2025 Southland Regional Long Term Plan* prepared by Great South, June 2023.

Glossary

Adaptation	In human systems, the process of adjusting to actual or expected climate and its effects, to moderate harm or take advantage of beneficial opportunities. In natural systems, the process of adjusting to actual climate and its effects. Human intervention may help these systems to adjust to expected climate and its effects. Ministry for the Environment (2022) National Adaptation Plan.
Aspirations	Aspirations provide a regionally agreed 'direction of travel' and do not specify how something will be achieved. Collective discussions will be ongoing to develop and implement aligned pathways for how these aspirations will be achieved.
Baseline	An initial set of critical observations or data used for comparison or a control. Ministry for the Environment (2022) National Adaptation Plan.
B2025	Beyond 2025 – the project lead by Great South to develop a Regional Long Term Plan for Murihiku Southland.
Climate	Informally, the average weather over a period ranging from months to thousands or millions of years. In more formal terms, a statistical description of the mean and variability of quantities, usually of surface variables such as temperature, precipitation and wind, averaged over a period (typically 30 years, as defined by the World Meteorological Organization). More broadly, climate is the state, including a statistical description, of the climate system. Ministry for the Environment (2022) National Adaptation Plan.
Climate Change	A change in the state of the climate that can be identified (eg, by using statistical tests) by changes or trends in the mean and/or the variability of its properties, and that persists for an extended period, typically decades to centuries. Includes natural internal climate processes and external climate forcings such as variations in solar cycles, volcanic eruptions and persistent anthropogenic changes in the composition of the atmosphere or in land use. The United Nations Framework Convention on Climate Change (UNFCCC) definition of climate change specifically links it to direct or indirect human causes, as: "a change of climate which is attributed directly or indirectly to human activity that alters the composition of the global atmosphere and which is in addition to natural climate variability observed over comparable time periods". The UNFCCC thus makes a distinction between climate change attributable to human activities altering the atmospheric composition and climate variability attributable to natural causes. Ministry for the Environment (2022) National Adaptation Plan.
Climate Change Commission (CCC)	A Crown entity that gives independent, expert advice to the Government on climate change matters and monitors progress towards the Government's mitigation and adaptation goals. Ministry for the Environment (2022) Emissions Reduction Plan.
Climate Change Scenario	A plausible description of how the future may develop based on a coherent and internally consistent set of assumptions about key driving forces (e.g., rate of technological change, prices) and relationships. Note that scenarios are neither predictions nor forecasts, but are used to provide a view of the implications of developments and actions. IPCC (2023) AR6 Glossary https://apps.ipcc.ch/glossary/
Climate projection	A potential future evolution of a quantity or set of quantities, often computed with the aid of a model. Unlike predictions, projections are conditional on assumptions concerning, for example, future socio-economic and technological developments that may or may not be realised. IPCC (2023) AR6 Glossary https://apps.ipcc.ch/glossary/

Climate change in Murihiku

Climate resilience	The ability to anticipate, prepare for and respond to the impacts of a changing climate, including the impacts that we can anticipate and the impacts of extreme events. It involves planning now for sea-level rise and more frequent flooding. It is also about being ready to respond to extreme events such as forest fires or extreme floods, and to trends in precipitation and temperature that emerge over time such as droughts. Ministry for the Environment (2022) National Adaptation Plan.
Climate variability	Deviations of climate variables from a given mean state (including the occurrence of extremes, etc.) at all spatial and temporal scales beyond that of individual weather events. Variability may be intrinsic, due to fluctuations of processes internal to the climate system (internal variability), or extrinsic, due to variations in natural or anthropogenic external forcing (forced variability) IPCC (2023) AR6 Glossary https://apps.ipcc.ch/glossary/
CO_2-e	CO_2-e stands for 'carbon dioxide equivalent' to enable the comparison to six key GHG gases: carbon dioxide (CO_2-e), methane (CH_4), nitrous oxide (N_2O), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs) and sulphur hexafluoride (SF_6).
Decarbonise	Reduce greenhouse gas emissions e.g. through the use of low-emissions power sources and electrification. Ministry for the Environment (2022) Emissions Reduction Plan.
Drought	An exceptionally long period of water shortage for existing ecosystems and the human population (due to low rainfall, high temperature and/or wind). Ministry for the Environment (2022) National Adaptation Plan.
Dynamic adaptive pathways planning (DAPP)	A framework that supports climate adaptation decision-making by developing a series of actions over time (pathways). It is based on the idea of making decisions as conditions change, before severe damage occurs, and as existing policies and decisions prove no longer fit for purpose. Ministry for the Environment (2022) National Adaptation Plan.
Emergency management	The process of applying knowledge, measures and practices that are necessary or desirable for the safety of the public or property, and are designed to guard against, prevent, reduce, recover from or overcome any hazard, harm or loss associated with any emergency. Activities include planning, organising, coordinating and implementing those measures, knowledge and practices. Ministry for the Environment (2022) National Adaptation Plan.
Emergency Management Southland (EMS)	Emergency Management Southland (EMS) was established by the four local government agencies in Murihiku Southland and is responsible for the delivery of Civil Defence and Emergency Management responses throughout this region. As part of this, Emergency Management Southland coordinates the 24/7 operation of the Emergency Coordination Centre which facilitates planning and operational activity during an event. Emergency Management Southland (2023) About US
Environment Southland	Environment Southland is a regional council as defined under the Local Government Act 2002. Environment Southland is responsible for the sustainable management of Southland's natural resources - land, water, air and coast - in partnership with the community.
Emissions	In the context of climate change, emissions of greenhouse gases, precursors of greenhouse gases and aerosols caused by human activities. These activities include the burning of fossil fuels, deforestation, land use and land-use change, livestock production, fertilisation, waste management and industrial processes. Ministry for the Environment (2022) National Adaptation Plan.
Emissions reduction plan	A plan that sets out the policies and strategies to meet emissions budgets by reducing emissions and increasing removals. A new emissions reduction plan must be in place before the beginning of each emissions budget period. Ministry for the Environment (2022) Emissions Reduction Plan.

Extreme weather event	An event that is rare at a particular place and time of year. What is 'extreme weather' may vary from place to place in an absolute sense. The measure of what is 'rare' may also vary but it involves the occurrence of a value of a weather or climate variable above (or below) a threshold value near the upper (or lower) ends of the range of observed values of the variable. In general, an extreme weather event would be as rare as, or rarer than, the 10th or 90th percentile of a probability density function estimated from observations. When a pattern of extreme weather persists for some time, such as a season, it may be classified as an extreme climate event, especially if it yields an average or total that is itself extreme (eg, high temperature, drought or heavy rainfall over a season). Ministry for the Environment (2022) National Adaptation Plan. *While not explicitly stated, extreme weather events are linked to wider climatic changes as a whole, and as such, intertwined with our changing climate. The actual magnitude and frequency of events may continue to change and need to be assessed against new baselines as climate change takes effect.*
Flood	An event where the normal boundaries of a stream or other water body overflow, or water builds up over areas that are not normally underwater. Floods can be caused by unusually heavy rain – for example, during storms and cyclones. Floods include river (fluvial) floods, flash floods, urban floods, rain (pluvial) floods, sewer floods, coastal floods and glacial lake outburst floods. Ministry for the Environment (2022) National Adaptation Plan.
Framework for Action	Phase two: The Framework for Action will provide clarity on how local government agencies in Southland will collectively achieve the aspirations outlined in this strategy; as well as focusing where there will be regional benefit for agencies to collaborate and potentially align on.
Gore District Council	Gore District Council is a territorial authority as defined under the Local Government Act 2002.
Great South	Great South is a Council-controlled organisation, jointly owned by ICC, SDC, GDC, ES, Invercargill Licensing Trust, Mataura Licensing Trust, Southland Chamber of Commerce, SIT and its member Community Trust South. It is Southland's regional development agency which facilitates the implementation of the B2025 Southland Long Term Plan; as well as supporting the regional emissions reduction journey by working with businesses to reduce their greenhouse gas emissions across the region.
Greenhouse gases (GHG)	Atmospheric gases that trap or absorb heat and contribute to climate change. The gases covered by the Climate Change Response Act 2002 are carbon dioxide (CO_2-e), methane (CH4), nitrous oxide (N2O), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), and sulphur hexafluoride (SF6). Ministry for the Environment (2022) Emissions Reduction Plan.
Gross emissions	Gross emissions include emissions include emissions from the following key sectors: Transport; energy and industry; agriculture; waste; fluorinated gases. Ministry for the Environment (2022) Emissions Reduction Plan.
Hazard	The potential occurrence of a natural or human-induced physical event or trend that may cause loss of life, injury or other health impacts, as well as damage and loss to property, infrastructure, livelihoods, service provision, ecosystems and environmental resources. Ministry for the Environment (2022) National Adaptation Plan.
Invercargill City Council	Invercargill City Council is a territorial authority as defined under the Local Government Act 2002.

Intergovernmental Panel on Climate Change (IPCC)	The United Nations body for assessing the science related to climate change. The IPCC is organised into three working groups and a task force: • Working Group I (WGI) – physical science basis • Working Group II (WGII) – impacts, adaptation and vulnerability • Working Group III (WGIII) – mitigation • Task Force on national greenhouse gas inventories. Ministry for the Environment (2022) National Adaptation Plan.
LiDAR	Light Detection and Ranging is a remote sensing method. It uses light in the form of a pulsed laser to measure ranges (variable distances) from the LiDAR instrument to the Earth. These are used to create 3D models and maps of objects and environments.
Long Term Plan (LTP)	Called the Long Term Council Community Plan (LTCCP) prior to 2012, the Long term plan is a document required under the Local Government Act 2002 that sets out a local authority's priorities in the medium to long term.
Mana	Prestige, authority, control, power, influence, status, spiritual power, charisma. Ministry for the Environment (2022) National Adaptation Plan.
Mātauranga	Māori knowledge systems and worldviews, including traditional concepts. Ministry for the Environment (2022) National Adaptation Plan.
MfE	Ministry for the Environment
Mitigation (of a changing climate)	In the context of climate change, a human intervention to reduce the sources or enhance the sinks of greenhouse gases. Ministry for the Environment (2022) National Adaptation Plan.
Nature Based Solutions	Solutions that are inspired and supported by nature and are cost effective, and at the same time provide environmental, social and economic benefits and help build resilience. Such solutions bring more, and more diverse, nature and natural features (eg, vegetation and water features) and processes into cities, landscapes and seascapes, through locally adapted, resource-efficient and systemic interventions. For example, using vegetation (eg, street trees or green roofs) or water elements (eg, rivers or water-treatment facilities) can help reduce heat in urban areas or support stormwater and flood management. Ministry for the Environment (2022) National Adaptation Plan.
Net emissions	Net emissions refer to the overall balance of emissions and carbon dioxide removals (sequestration). Ministry for the Environment (2022) Emissions Reduction Plan.
NEMA	National Emergency Management Agency
NIWA	National Institute of Water and Atmospheric Research
Net Zero	A target of completely negating the greenhouse gas emissions produced by human activity. This can be done by balancing emissions and removals or by eliminating the production of emissions in the first place. Ministry for the Environment (2022) Emissions Reduction Plan.
Pathway	The evolution of natural and/or human systems over time towards a future state. Pathway concepts range from sets of quantitative and qualitative scenarios or narratives of potential futures to solution-oriented, decision-making processes to achieve desirable social goals. Pathway approaches typically focus on biophysical, techno-economic and/or socio-behavioural changes, and involve various dynamics, goals and participants across different scales. Ministry for the Environment (2022) National Adaptation Plan.

Principles	Principles provide direction on agencies' collective agreed way of working together to create a regional response to the impact of a changing climate on Murihiku Southland.
Representative Concentration Pathways (RCPs)	Scenarios that include time series of emissions and concentrations of the full suite of greenhouse gases and aerosols and chemically active gases, as well as land use/ land cover (Moss et al.,2008; van Vuuren et al., 2011). IPCC (2023) AR6 Glossary https://apps.ipcc.ch/glossary/
RCCS	Regional Climate Change Strategy (this strategy).
RCCWG	Regional Climate Change Working Group, which consists of governance representatives from Environment Southland, Te Ao Mārama, Gore District Council, Invercargill City Council and Southland District Council as key partners in developing a regional approach to a changing climate.
Resilience/resilient	The capacity of interconnected social, economic and ecological systems to cope with a hazardous event, trend or disturbance, by responding or reorganising in ways that maintain their essential function, identity and structure. Resilience is a positive attribute when it allows systems to maintain their capacity to adapt, learn and/or transform. Ministry for the Environment (2022) National Adaptation Plan.
RSS	Regional Spatial Strategy for which there is an expectation that this will be legislated for as a requirement to be produced regionally as part of the ongoing RMA reforms.
Sea level rise	Change to the height of sea levels over time, which may occur globally or locally. Ministry for the Environment (2022) National Adaptation Plan.
Sequestration	The process of storing carbon in a carbon pool. IPCC (2023) AR6 Glossary https://apps.ipcc.ch/glossary/
Southland District Council	Southland District Council is a territorial authority as defined under the Local Government Act 2002.
Southland Mayoral Forum	The Southland Mayoral Forum includes the Mayors and Deputy Mayors from all four local government agencies in Southland. There is a standing invitation for all Rūnanga chairs or nominee, to attend meetings of the Southland Mayoral Forum. Te Ao Mārama Inc. also reports directly to their Board representing Ngāi Tahu ki Murihiku Rūnanga.
Shared Socioeconomic Pathways (SSPs)	A scenario that describes a plausible future in terms of population, gross domestic product (GDP), and other socio-economic factors relevant to understanding the implications of climate change. IPCC (2023) AR6 Glossary https://apps.ipcc.ch/glossary/
Te Ao Mārama Inc.	Te Ao Mārama Inc. looks after mana whenua interests in resource management and other aspects related to local government in Southland. It is authorised to represent Ngāi Tahu papatipu rūnanga in Murihiku/Southland. It is involved in the protection of the spiritual and cultural values of the region, including wahi tapu (sacred places), mahinga kai (gathering of food and resources) and other natural resources. Te Ao Mārama Inc. reports directly to their Board representing Ngāi Tahu ki Murihiku Rūnanga.
Wellbeing	The health, happiness and prosperity of an individual or group. It can cover material wellbeing (eg, income and wealth, jobs and earnings, and housing), health (eg, health status and work-life balance), security (eg, personal security and environmental quality), social relations (eg, social connection, subjective wellbeing, cultural identity and education) and freedom of choice and action (eg, civic engagement and governance). Ministry for the Environment (2022) National Adaptation Plan.

APPENDIX B

Southland District Council

Standing Orders

Adopted by Council on 2 October 2024

Preface

Standing orders contain rules for the conduct of the proceedings of local authorities, committees, subcommittees, subordinate decision-making bodies, and local and community boards. Their purpose is to enable local authorities to exercise their decision-making responsibilities in a transparent, inclusive, and lawful manner.

In doing so the application of standing orders contributes to greater public confidence in the quality of local governance and democracy in general.

These standing orders have been designed specifically for local authorities, their committees, subcommittees, subordinate decision-making bodies, and local and community boards. They fulfil, with regard to the conduct of meetings, the requirements of the Local Government Act 2002 (LGA 2002) and the Local Government Official Information and Meetings Act 1987 (LGOIMA).

Although it is mandatory that local authorities adopt standing orders for the conduct of their meetings, it is not necessary that they are adopted every triennium. However, LGNZ recommends that every council, committee, subordinate body and local and community board review their standing orders within at least the first six months following an election to ensure that they fully meet their needs for effective and inclusive meetings (see LGA 2002, sch 7, cl 27).

For clarity's sake whenever a question about the interpretation or application of these Standing Orders is raised, particularly where a matter might not be directly provided for, it is the responsibility of the chairperson of each meeting to make a ruling.

All members of a local authority must abide by standing orders.

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1. Introduction

These standing orders have been prepared to enable the orderly conduct of local authority meetings. They incorporate the legislative provisions relating to meetings, decision making and transparency. They also include practical guidance on how meetings should operate so that statutory provisions are complied with and the spirit of the legislation fulfilled.

To assist elected members and officials the document is structured in three parts:

- Part 1 deals with general matters.
- Part 2 deals with pre-meeting procedures.
- Part 3 deals with meeting procedures.

The Appendix, which follows Part 3, provides templates and additional guidance for implementing provisions within the Standing Orders. Please note, the Appendix is an attachment to the Standing Orders and not part of the Standing Orders themselves, consequently amendments to the Appendix do not require the agreement of 75% of those present. In addition, the 'Guide to Standing Orders' provides additional advice on the application of the Standing Orders and are also not part of the Standing Orders.

1.1 Principles

Standing orders are part of the framework of processes and procedures designed to ensure that our system of local democracy and in particular decision-making within local government is transparent and accountable. They are designed to give effect to the principles of good governance, which include that a local authority should:

- Conduct its business in an open, transparent and democratically accountable manner;
- Give effect to its identified priorities and desired outcomes in an efficient and effective manner;
- Make itself aware of, and have regard to, the views of all of its communities;
- Take account, when making decisions, of the diversity of the community, its interests and the interests of future communities as well;
- Ensure that any decisions made under these Standing Orders comply with the decision-making provisions of Part 6 of the LGA 2002; and
- Ensure that decision-making procedures and practices meet the standards of natural justice.

These principles are reinforced by the requirement that all local authorities act so that "governance structures and processes are effective, open and transparent" (LGA 2002, s 39).

1.2 Statutory references

The Standing Orders consist of statutory provisions about meetings along with guidance on how those provisions should be applied in practice. Where a statutory provision has been augmented with advice on how it might be implemented the advice (so as not to confuse it with the statutory obligation) is placed below the relevant legislative reference. In some cases the language in the statutory provision has been modernised for ease of interpretation or amended to ensure consistency with more recently enacted statutes.

It is important to note that statutory references in the Standing Orders apply throughout the period of a meeting, regardless of whether or not parts or all of the Standing Orders have been suspended. These provisions must also be carried through into any amendment of the Standing Orders that might be made. Please note, where it is employed the word 'must', unless otherwise stated, identifies a mandatory legislative requirement.

1.3 Acronyms

LGA 2002	Local Government Act 2002
LGOIMA	Local Government Official Information and Meetings Act 1987
LAMIA	Local Authorities (Members' Interests) Act 1968

1.4 Application

For the removal of any doubt these Standing Orders do not apply to workshops or meetings of working parties and advisory groups, unless specifically included in their terms of reference.

2. Definitions

Adjournment means a break in the proceedings of a meeting. A meeting, or discussion on a particular business item, may be adjourned for a brief period, or to another date and time.

Advisory group means a group of people convened by a local authority for the purpose of providing advice or information that is not a committee or subcommittee. These Standing Orders do not apply to such groups. This definition also applies to workshops, working parties, working group, panels, forums, portfolio groups, briefings, and other similar bodies.

Agenda means the list of items for consideration at a meeting together with reports and other attachments relating to those items in the order in which they will be considered. It is also referred to as an 'order paper'.

Amendment means any change of proposed change to the original or substantive motion.

Appointed member means a member of a committee, or subsidiary organisation of a council, who is not elected.

Audio link means facilities that enable audio communication between participants at a meeting where one or more of the participants is not physically present at the place of the meeting.

Audiovisual link means facilities that enable audiovisual communication between participants at a meeting when one or more of them is not physically present at the place of the meeting.

Chairperson means the person in a position of authority in a meeting or other gathering, also known as the presiding member.

Chief executive means the chief executive of a territorial authority or regional council appointed under s 42 of the LGA 2002, and includes, for the purposes of these Standing Orders, any other officer authorized by the chief executive.

Clear working days means the number of working days (business hours) prescribed in these Standing Orders for giving notice and excludes the date of the meeting and date on which the notice is served.

Committee includes, in relation to a local authority:

(a) A committee comprising all the members of that authority;
(b) A standing committee or special committee appointed by that authority;
(c) A joint committee appointed under cl 30A of sch 7 of the LGA 2002; and
(d) Any subcommittee of a committee described in (a), (b) and (c) of this definition.

Community board means a community board established under s 49 of the LGA 2002.

Conflict of Interest means any pecuniary interest and any interest arising because of that person's position as a trustee, director, officer, employee, or member of another body or because of any personal non-pecuniary interest, such as pre-determination or bias.

Contempt means being disobedient to, or disrespectful of, the chair of a meeting, or disrespectful to any members, officers, or the public.

Council means, in the context of these Standing Orders, the governing body of a local authority.

Debate means discussion by members that occurs once a motion has been moved/seconded

Deputation means a request from any person or group to make a presentation to the local authority which is approved by the Chairperson and which may be made in English, Te Reo Māori or New Zealand Sign Language.

Division means a formal vote at a Council, committee or subcommittee meeting whereby the names of those members present, including the mayor/chair, are formally recorded as voting either for or against. This includes a vote where the names and votes are recorded electronically.

Electronic link means both an audio and audiovisual link.

Emergency meeting has the same meaning as defined in cl 22A of sch 7 of the LGA 2002.

Extraordinary meeting has the same meaning as defined in cl 22 of sch 7 of the LGA 2002.

Foreshadowed motion means a motion that a member indicates their intention to move once the debate on a current motion or amendment is concluded.

Internet site means, in relation to a local authority or other person or entity, an Internet site that is maintained by, or on behalf of, the local authority, person, or entity and to which the public has free access.

Item means a substantive matter for discussion at a meeting.

Leave of the meeting means agreement without a single member present dissenting.

Joint committee means a committee in which the members are appointed by more than one local authority in accordance with cl 30A of sch 7 of the LGA 2002.

Karakia timatanga means an opening prayer.

Karakia whakamutunga means a closing prayer.

Lawfully excluded means a member of a local authority who has been removed from a meeting due to behaviour that a Chairperson has ruled to be contempt.

Leave of absence means a pre-approved absence for a specified period of time consistent with the council policy should one be in place.

Local authority means in the context of these Standing Orders a regional council or territorial authority, as defined in s 5 of the LGA 2002, which is named in these Standing Orders, and any subordinate decision-making bodies established by the local authority.

Mayor means the Mayor of a territorial authority elected under the Local Electoral Act 2001.

Meeting means any first, inaugural, ordinary, extraordinary, or emergency meeting of a local authority, subordinate decision-making bodies and any community or local board of the local authority convened under the provisions of LGOIMA.

Member means any person elected or appointed to the local authority.

Member of the Police means a Constable of the New Zealand Police within the definition of s 4 of the Policing Act 2008.

Mihi whakatau means a brief welcome typically delivered by one person without any further formalities.

Minutes means the record of the proceedings of any meeting of the local authority.

Motion means a formal proposal to a meeting.

Mover means the member who initiates a motion.

Newspaper means a periodical publication published (whether in New Zealand or elsewhere) at intervals not exceeding 40 days, or any copy of, or part of any copy of, any such publications; and this includes every publication that at any time accompanies and is distributed along with any newspaper.

Notice of motion means a motion given in writing by a member in advance of a meeting in accordance with, and as provided for, in these Standing Orders.

Officer means any person employed by the council either full or part time, on a permanent or casual or contract basis.

Pecuniary Interest includes any interest described in s 3 and 6 of the Local Authorities (Members Interests) Act 1968.

Open voting means voting that is conducted openly and in a transparent manner (i.e. enables an observer to identify how a member has voted on an issue) and may be conducted by electronic means. The result of the vote must be announced immediately it has concluded. Secret ballots are specifically excluded.

Order paper means the list of items for consideration at a meeting together with reports and other attachments relating to those items set out in the order in which they will be considered. An order paper is also referred to as an agenda.

Ordinary meeting means any meeting, other than the first meeting, of a local authority publicly notified in accordance with ss 46(1) and (2) of LGOIMA.

Petition means a request to a local authority which contains at least 20 signatures.

Pōwhiri means a formal welcome involving a karanga from the Tangata Whenua (the home people) followed by formal speech making. A pōwhiri is generally used for formal occasions of the highest significance.

Present at the meeting to constitute quorum means the member is either to be physically present in the room or attending the meeting by audio/visual link.

Presiding member means the chairperson.

Procedural motion means a motion that is used to control the way in which a motion or the meeting is managed as specified in Standing Orders 24.1 – 24.7.

Public excluded information refers to information, which is currently before a public excluded session, is proposed to be considered at a public excluded session, or had previously been considered at a public excluded session and not yet been released as publicly available information. It includes:

- Any minutes (or portions of minutes) of public excluded sessions which have not been subsequently released by the local authority; and
- Any other information which has not been released by the local authority as publicly available information.

Public excluded session, also referred to as confidential or in-committee session, refers to those meetings or parts of meetings from which the public is excluded by the local authority as provided for in LGOIMA.

Public participation refers to a period set aside usually at the start of a meeting for the purpose of public input.

Public notice means one that is made publicly available, until any opportunity for review or appeal in relation to the matter notified has lapsed, on the local authority's website. And in addition, is published in at least one daily newspaper circulating in the region or district of the local authority, or one or more other newspapers that have a combined circulation in that region or district which is at least equivalent to that of a daily newspaper circulating in that region or district.

Publicly notified means notified to members of the public by a notice contained in a newspaper circulating in the district of the local authority, or where there is no such newspaper, by notice displayed in a public place. The notice may also be replicated on a council's website.

Qualified privilege means the privilege conferred on member by s 52 and s 53 of LGOIMA.

Quasi-judicial means a meeting involving the consideration of issues requiring the evaluation of evidence, the assessment of legal argument and/or the application of legal principles.

Quorum means the minimum number of members required to be present in order to constitute a valid meeting.

Regional Council Chairperson means the member of the governing body of a regional council elected as chairperson of that regional council under cl 25 of sch 7 of the LGA 2002.

Resolution means a motion that has been adopted by the meeting.

Right of reply means the right of the mover of a motion to reply to those who have spoken to the motion. (The right does not apply to an amendment).

Seconder means the member who seconds a motion or amendment.

Sub judice means under judicial consideration and therefore prohibited from public discussion elsewhere.

Subordinate decision-making body means committees, subcommittees, and any other bodies established by a local authority that have decision-making authority, but not local or community boards or joint committees.

Substantive motion means the original motion. In the case of a motion that is subject to an amendment, the substantive motion is the original motion incorporating any amendments adopted by the meeting.

Substantive resolution means the substantive motion that has been adopted by the meeting or a restatement of a resolution that has been voted on in parts.

Subcommittee means a subordinate decision-making body established by a council, or a committee of a council, local board or community board. See definition of "Committee".

Working day means a day of the week other than:

(a) Saturday, Sunday, Good Friday, Easter Monday, Anzac Day, Labour Day, the Sovereign's birthday, Matariki, and Waitangi Day. If Waitangi Day or Anzac Day falls on a Saturday or a Sunday, then the following Monday;

(b) The day observed in the appropriate area as the anniversary of the province of which the area forms a part; and

(c) A day in the period commencing with 20 December in any year and ending with 10 January in the following year.

Should a local authority wish to meet between the 20th of December and the 10th of January of the following year any meeting must be notified as an extraordinary meeting, unless there is sufficient time to notify an ordinary meeting before the commencement of the period.

Working party means a group set up by a local authority to achieve a specific objective that is not a committee or subcommittee and to which these Standing Orders do not apply.

Workshop means in the context of these Standing Orders, a gathering of elected members for the purpose of considering matters of importance to the local authority at which no decisions are made and to which these Standing Orders will not apply, unless required by the local authority. Workshops may include non-elected members and may be described as briefings.

General matters

3. Standing orders

3.1 Obligation to adopt standing orders

A council is required to operate in accordance with standing orders for the conduct of its meetings and the meetings of its committees and subcommittees. Local boards and community boards must also adopt standing orders. Standing orders must not contravene any Act.

LGA 2002, sch 7, cl 27(1) & (2).

3.2 Process for adoption and alteration of standing orders

The adoption of standing orders and any amendment to standing orders must be made by the Council and by a vote of not less than 75% of the members present. Similarly, in the case of a local and community board the adoption of standing orders and any amendments also requires a vote of not less than 75% of the members of the specific board.

LGA 2002, sch 7, cl 27(3).

3.3 Members must obey standing orders

All members of the local authority, including members of committees and subcommittees, must obey these Standing Orders. Local boards and community boards which have adopted these Standing Orders must also comply with them.

LGA 2002, sch 7, cl 16(1).

3.4 Application of standing orders

These Standing Orders apply to all meetings of the local authority, its committees, subcommittees and subordinate decision-making bodies. They will also apply to any local boards and community boards unless stated otherwise. This includes meetings and parts of meetings that the public are excluded from.

3.5 Temporary suspension of standing orders

Any member of a council, committee, subcommittee and subordinate body, and local and community board, may move a motion to suspend specified Standing Orders at a meeting of which they are a member. Any such motion must also include the reason for the suspension. If seconded, the chairperson must put the motion without debate and at least 75 per cent of the members present and voting must support the motion for it to be carried.

LGA 2002, sch 7, cl 27(4).

A motion to suspend Standing Orders may be taken before or during a debate. The motion to suspend Standing Orders must also identify the specific Standing Orders to be suspended. Please Note: in the event of suspension, those Standing Orders prescribed in statute will continue to apply, such as the quorum requirements.

3.6 Quasi-judicial proceedings

For quasi-judicial proceedings the local authority or a local or community board may amend meeting procedures. For example, committees hearing applications under the Resource Management Act 1991 have additional powers under the Commissions of Inquiry Act 1908.

3.7 Physical address of members

Every member of a local authority, local board and community board must give to the chief executive a physical residential or business address within the district or region of the local authority and, if desired, an electronic or other address, to which notices and material relating to meetings and local authority business may be sent or delivered. Members are to provide their address within 5 working days of the publication of the declaration of the election results. Public access to those addresses is subject to the Privacy Act.

4. Meetings

4.1 Legal requirement to hold meetings

The local authority must hold meetings for the good government of its city, district or region. The same requirement applies to local boards and community boards in respect of their communities. Meetings must be called and conducted in accordance with:

(a) Schedule 7 of the LGA 2002;

(b) Part 7 of LGOIMA; and

(c) These Standing Orders.

A meeting can be adjourned to a specified time and day if required by resolution of the meeting.

4.2 Meeting duration

A meeting cannot continue more than six hours from when it starts (including any adjournments) or after 10.30pm, unless the meeting resolves to continue. If there is no such resolution, then any business on the agenda that has not been dealt with must be adjourned, transferred to the next meeting, or transferred to an extraordinary meeting.

No meeting can sit for more than two hours continuously without a break of at least ten minutes unless the meeting resolves to extend the time before a break.

4.3 Language

A member may address a meeting in English, Te Reo Māori or New Zealand Sign Language. A chairperson may require that a speech is translated and printed in English or Te Reo Māori.

If a member intends to address the meeting in New Zealand Sign Language, or in Te Reo Māori, when the normal business of the meeting is conducted in English, they must give prior notice to the chairperson not less than 2 working days before the meeting.

Where the normal business of the meeting is conducted in Te Reo Māori then prior notice of the intention to address the meeting in English must also be given to the chairperson not less than 2 working days before the meeting.

4.4 Webcasting meetings

Webcast meetings should be provided in accordance with the protocols contained in Appendix 7.

4.5 First meeting (inaugural)

The first meeting of a local authority, following a local authority triennial general election, must be called by the chief executive as soon as practicable after the results of the election are known. The chief executive must give elected members not less than 7 days' notice of the meeting. However, in the event of an emergency the chief executive may give notice of the meeting as soon as practicable.

LGA 2002, sch, cl 21(1) - (4).

4.6 Requirements for the first meeting

The chief executive (or, in the absence of the chief executive, their nominee) must chair the first meeting until the chairperson has made an oral declaration and attested the declaration (see LGA 2002, sch 7, cl 21(4)).

The business to be conducted at the first meeting following a general election must include the following:

The making and attesting of the declarations required of the mayor (if any) and members under LGA 2002, sch 7, cl14;

The election of the chairperson (if any) and the making and attesting of the declaration required of the chairperson under LGA 2002, sch 7, cl 14;

A general explanation, given or arranged by the chief executive, of:

LGOIMA; and

Other laws affecting members, including the appropriate provisions of the Local Authorities (Members Interests) Act 1968; and ss 99, 105, and 105A of the Crimes Act 1961; and the Secret Commissions Act 1910; and the Financial Markets Conduct Act 2013.

The fixing of the date and time of the first meeting of the local authority, or the adoption of a schedule of meetings; and

The election of the deputy Mayor or deputy chairperson in accordance with the LGA 2002, sch7, cl 17.

LGA 2002, sch 7, cl 21(5).

It is common for councils to adopt standing orders at the first meeting; however this is not always necessary as, if not amended, standing orders will remain in force after each triennial election.

Please note, that the election of a deputy mayor is not required if the Mayor has already made the appointment under s 41A(3)(a) of the LGA 2002 prior to the meeting. Nothing limits a territorial authority from removing a deputy Mayor from office in accordance with cl 18 of sch 7 of the LGA 2002.

5. Appointments and elections

5.1 Mayoral appointment of deputy Mayor, committee chairs and members

A Mayor may appoint the deputy Mayor, the chairperson and the members of each committee of the territorial authority. The names of any appointments made by the Mayor must be tabled at the first meeting of the council after the appointments are made. The Mayor may also appoint themselves.

LGA 2002, s 41A(3).

5.2 Council Discharge of a Mayoral Appointment

Nothing, however, limits or prevents a territorial authority from discharging deputy Mayor, a chairperson or a member of a committee appointed by the Mayor. Any decision by the territorial authority to discharge a deputy Mayor shall follow the procedure in Standing Order 5.5.

If the Mayor declines to appoint a deputy Mayor or committee chairpersons in accordance with LGA 2002, s 41A, the council (or a committee, if so directed by the council) must elect those positions in accordance with Standing Order 5.4.

LGA 2002, sch 7, cl 31.

5.3 Establishment of committees by the Mayor

The Mayor may establish committees of the territorial authority. Where a Mayor exercises this right, a list of the committees and their terms of reference must be tabled at the next following meeting of the council. Should the Mayor decline to establish committees under s 41A, then any decision to establish committees must follow the processes set out in these Standing Orders.

Nothing, however, limits or prevents a territorial authority from discharging or reconstituting, in accordance with cl 30 of sch 7, LGA 2002, a committee established by the Mayor, or appointing more committees in addition to any established by the Mayor.

Please note, a Mayor is a member of every committee unless specific legislation provides otherwise, such as a committee established under s 189 of the Sale and Supply of Alcohol Act 2012.

LGA 2002, s 41A (3) and (4).

5.4 Elections of regional chairpersons, deputy Mayors and deputy chairpersons

The council (or a committee responsible for making the appointment) must decide by resolution to use one of two voting systems (see Standing Order 5.6) when electing people to the following positions:

The chairperson and deputy chairperson of a regional council;

The deputy Mayor;

The chairperson and deputy chairperson of a committee; and

A representative of a local authority.

Please note, this provision does not apply in situations where a mayor has used their powers under LGA 2002, s 41A to appoint a deputy Mayor, or committee chairs. See the LGNZ Guide to Standing Orders for more information.

LGA 2002, sch 7, cl 25.

5.5 Removal of a deputy Mayor

A deputy Mayor, whether appointed by the Mayor under the Standing Order 5.1, or elected by the council, can only be removed in accordance with cl 18, sch 7, of the LGA 2002. See Appendix 9.

LGA 2002, sch 7, cl 18.

5.6 Voting system for chairs, deputy Mayors and committee chairs

When electing a regional council chair, a deputy Mayor or a committee chair the local authority must resolve to use one of the following two voting systems.

System A

The candidate will be elected or appointed if he or she receives the votes of a majority of the members of the local authority or committee who are present and voting. This system has the following characteristics:

There is a first round of voting for all candidates;

If no candidate is successful in the first round, there is a second round of voting from which the candidate with the fewest votes in the first round is excluded; and

If no candidate is successful in the second round, there is a third round, and if necessary subsequent rounds, of voting from which, each time, the candidate with the fewest votes in the previous round is excluded.

In any round of voting, if two or more candidates tie for the lowest number of votes, the person to be excluded from the next round is resolved by lot.

System B

The candidate will be elected or appointed if he or she receives more votes than any other candidate. This system has the following characteristics:

(a) There is only one round of voting; and

(b) If two or more candidates tie for the most votes, the tie is resolved by lot.

LGA 2002, sch 7, cl 25.

6. Delegations

6.1 Duty to consider delegations to community boards

The council of a territorial authority must consider whether or not to delegate to a community board if the delegation will enable the community board to best achieve its role.

LGA 2002, sch 7, cl 32(6).

Please note: A council is advised to delegate a range of decision-making responsibilities to its chief executive to cover the period from the day following the Electoral Office's declaration until the new council is sworn in. See the LGNZ Guide to Standing Orders for further information.

6.2 Limits on delegations

Unless clearly stated in the LGA 2002 or any other Act, a council may, for the purposes of efficiency and effectiveness, delegate to a committee, subcommittee, subordinate decision-making body, community board, local board, member, or officer of the local authority, any of its responsibilities, duties, or powers except:

(a) The power to make a rate;

(b) The power to make a bylaw;

(c) The power to borrow money, or purchase or dispose of assets, other than in accordance with the long-term plan;

(d) The power to adopt a long-term plan, annual plan, or annual report;

(e) The power to appoint a chief executive;

(f) The power to adopt policies required to be adopted and consulted on under the LGA in association with the long-term plan or developed for the purpose of the local governance statement;

(g) *Repealed*; and

(h) The power to adopt a remuneration and employment policy.

LGA 2002, sch 7, cl 32 (1).

6.3 Committees may delegate

A committee, subcommittee, subordinate decision-making body, local board, community board, member, or officer of the local authority, may delegate any of its responsibilities, duties, or powers to a subcommittee or person, subject to any conditions, limitations, or prohibitions imposed by the body that made the original delegation.

LGA 2002, sch 7, cl (2) & (3).

6.4 Use of delegated powers

The committee, subcommittee, other subordinate decision-making body, community board, or member or officer of the local authority to which or to whom any responsibilities, powers, duties are delegated may, without confirmation by the council, committee or body or person that made the delegation, exercise or perform them in the like manner and with the same effect as the local authority could itself have exercised or performed them.

LGA 2002, sch 7, cl 32(2),(3), and (4).

6.5 Decisions made under delegated authority cannot be rescinded or amended

Nothing in these Standing Orders allows a council, committee and subcommittee to rescind or amend a lawfully made decision of a subordinate decision-making body carried out under a delegation authorising the making of that decision. The same requirement applies to a local board and community board in relation to any committees or subcommittees with delegated authority.

LGA 2002, sch 7, cl 30 (6).

6.6 Committees and sub committees subject to the direction of the local authority

A committee, subcommittee or other subordinate decision-making body is subject in all things to the control of the local authority, and must carry out all general and special directions of the local authority given to them.

LGA 2002, sch 7, cl 30(3) & (4).

7. Committees

7.1 Appointment of committees and subcommittees

A council may appoint the committees, subcommittees, and other subordinate decision-making bodies that it considers appropriate. A committee may appoint the subcommittees that it considers appropriate, unless it is prohibited from doing so by the council.

LGA 2002, sch 7, cl 30(1) & (2).

7.2 Discharge or reconstitution of committees and subcommittees

Unless expressly provided otherwise in legislation or regulation:

(a) A local authority may discharge or reconstitute a committee or subcommittee, or other subordinate decision-making body; and

(b) A committee may discharge or reconstitute a subcommittee.

A committee, subcommittee, or other subordinate decision-making body is, unless a council resolves otherwise, discharged when members elected at a subsequent triennial general election come into office.

LGA 2002, sch 7, cl 30 (5) & (7).

Please note: Section12 (2) of the Civil Defence and Emergency Management Act 2002 states that a Civil Defence and Emergency Management Group is not deemed to be discharged following a triennial election. The same is true for District Licensing Committees (see the LGNZ Guide to Standing Orders).

7.3 Appointment or discharge of committee members and subcommittee members

A council may appoint or discharge any member of a committee and, if established by the council, a subcommittee. A committee may appoint or discharge any member of a subcommittee appointed by the committee unless directed otherwise by the council.

LGA 2002, sch 7, cl 31(1) & (2).

7.4 Elected members on committees and subcommittees

The members of a committee or subcommittee may be, but are not required to be, elected members of a local authority. A council or committee may appoint a person who is not a member of the local authority to a committee or subcommittee if, in the opinion of the council or committee, the person has the skills, attributes or knowledge to assist the committee or subcommittee.

At least one member of a committee must be an elected member of the council. In the case of a committee established by a local board or community board at least one member must be a member of that board. A staff member of the local authority, in the course of their employment, can be a member of a subcommittee but not a committee.

LGA 2002, sch 7, cl 31(4).

7.5 Local authority may replace members if committee not discharged

If a local authority resolves that a committee, subcommittee or other subordinate decision-making body is not to be discharged under cl 30 (7), sch 7, LGA 2002, the local authority may replace the members of that committee, subcommittee or subordinate decision-making body after the next triennial general election of members.

LGA 2002, sch 7, cl 31(5).

7.6 Membership of Mayor

The Mayor is a member of every committee of the local authority unless specific legislation provides otherwise, such as a committee established under s 189 of the Sale and Supply of Alcohol Act 2012.

LGA 2002, s 41A(5).

7.7 Decision not invalid despite irregularity in membership

For the purpose of these Standing Orders a decision of a local authority, committee, local board and community board is not invalidated if:

1. There is a vacancy in the membership of the local authority, committee, local or community board at the time of the decision; or
2. Following the decision some defect in the election or appointment process is discovered and/or that the membership of a person on the committee at the time is found to have been ineligible.

LGA 2002, sch 7, cl 29.

7.8 Appointment of joint committees

A local authority may appoint a joint committee with another local authority or other public body if it has reached agreement with each local authority or public body. The agreement must specify:

(a) The number of members each party may appoint;
(b) How the chairperson and deputy chairperson are to be appointed;
(c) The terms of reference of the committee;
(d) What responsibilities, if any, are to be delegated to the committee by each party; and
(e) How the agreement may be varied.

The agreement may also specify any other matter relating to the appointment, operation, or responsibilities of the committee agreed by the parties.

LGA 2002, sch 7, cl 30A(1) & (2).

7.9 Status of joint committees

A joint committee is deemed to be both a committee of a council and a committee of each other participating local authority or public body.

LGA 2002, sch 7, cl 30A(5).

7.10 Power to appoint or discharge individual members of a joint committee

The power to discharge any individual member of a joint committee and appoint another member in their stead must be exercised by the council or public body that made the appointment.

LGA 2002, sch 7, cl 30A(6)(a).

Pre-meeting

8. Giving notice

Please note: the processes described in this section (Standing Orders 8.1 – 8.12) apply as appropriate to local boards and community boards.

8.1 Public notice – ordinary meetings

All meetings scheduled for the following month must be publicly notified not more than 14 days and not less than 5 days before the end of the current month, together with the dates, the times and places on and at which those meetings are to be held. In the case of meetings held on or after the 21st day of the month public notification may be given not more than 10 nor less than 5 working days before the day on which the meeting is to be held. (See the LGNZ Guide to Standing Orders for more information).

LGOIMA, s 46.

8.2 Notice to members - ordinary meetings

The chief executive must give notice in writing to each member of the local authority of the date, time and place of any meeting. Notice must be given at least 14 days before the meeting unless the council has adopted a schedule of meetings, in which case notice must be given at least 14 days before the first meeting on the schedule.

LGA 2002, sch 7, cl 19(5).

8.3 Extraordinary meeting may be called

An extraordinary council meeting may be called by:

(a) Resolution of the council, or

(b) A requisition in writing delivered to the chief executive which is signed by:

  i. The Mayor; or

  ii. Not less than one third of the total membership of the council (including vacancies).

LGA 2002, sch 7, cl 22(1).

8.4 Notice to members - extraordinary meetings

The chief executive must give notice, in writing, of the time and place of an extraordinary meeting called under the Standing Order 8.3, as well as the general nature of business to be considered, to each member of the council at least 3 working days before the day appointed for the meeting. If the meeting is called by a resolution, then notice must be provided within such lesser period as is specified in the resolution, as long as it is not less than 24 hours.

LGA 2002, sch 7, cl 22(3).

8.5 Emergency meetings may be called

If the business a council needs to deal with requires a meeting to be held at a time earlier than is allowed by the notice requirements for holding an extraordinary meeting and it is not practicable to call the meeting by resolution, an emergency meeting may be called by:

(a) The Mayor; or

(b) If the Mayor is unavailable, the chief executive.

LGA 2002, sch 7, cl 22A(1).

8.6 Process for calling an emergency meeting

The notice of the time and place of an emergency meeting, and of the matters in respect of which the emergency meeting is being called, must be given by the person calling the meeting or by another person on that person's behalf.

The notice must be given, by whatever means is reasonable in the circumstances, to each member of the local authority, and to the chief executive, at least 24 hours before the time appointed for the meeting.

LGA 2002, sch 7, cl 22A(2).

8.7 Public notice – emergency and extraordinary meetings

Where an emergency or extraordinary meeting of a local authority is called but the notice of the meeting is inconsistent with these Standing Orders, due to the manner in which it was called, the local authority must cause that meeting and the general nature of business to be transacted at that meeting:

(a) To be publicly notified as soon as practicable before the meeting is to be held; or

(b) If it is not practicable to publish a notice in newspapers before the meeting, to be notified as soon as practicable on the local authority's website and in any other manner that is reasonable in the circumstances.

LGOIMA, s 46(3).

8.8 Meetings not invalid

The failure to notify a public meeting under these Standing Orders does not of itself make that meeting invalid. However, where a local authority becomes aware that a meeting has been incorrectly notified it must, as soon as practicable, give public notice stating:

- That the meeting occurred without proper notification;
- The general nature of the business transacted; and
- The reasons why the meeting was not properly notified.

LGOIMA, s 46(6).

8.9 Resolutions passed at an extraordinary meeting

A local authority must, as soon as practicable, publicly notify any resolution passed at an extraordinary meeting of the local authority unless:

(a) The resolution was passed at a meeting or part of a meeting from which the public was excluded; or

(b) The extraordinary meeting was publicly notified at least 5 working days before the day on which the meeting was held.

LGOIMA, s 51A.

8.10 Meeting schedules

Where the local authority adopts a meeting schedule it may cover any period that the council considers appropriate and may be amended. Notification of the schedule, or an amendment, will constitute notification to members of every meeting on the schedule or the amendment. This does not replace the requirements under LGOIMA to also publicly notify each meeting.

LGA 2002, sch 7, cl 19(6).

8.11 Non-receipt of notice to members

A meeting of a local authority is not invalid if notice of that meeting was not received, or not received in due time, by a member of the local authority or board unless:

(a) It is proved that the person responsible for giving notice of the meeting acted in bad faith or without reasonable care; and

(b) The member concerned did not attend the meeting.

A member of a local authority may waive the need to be given notice of a meeting.

LGA 2002, sch 7, cl 20(1) & (2).

8.12 Meeting cancellations

The chairperson of a scheduled meeting may cancel the meeting if, in consultation with the chief executive, they consider this is necessary for reasons that include lack of business, lack of quorum or clash with another event.

The chief executive must make a reasonable effort to notify members and the public as soon as practicable of the cancellation and the reasons behind it.

9. Meeting agenda

9.1 Preparation of the agenda

It is the chief executive's responsibility, on behalf of the chairperson, to prepare an agenda for each meeting listing and attaching information on the items of business to be brought before the meeting so far as is known, including the names of the relevant members.

When preparing business items for an agenda the chief executive must consult, unless impracticable, such as in the case of the inaugural meeting, the chairperson, or the person acting as chairperson for the coming meeting.

9.2 Process for raising matters for a decision

Requests for reports may be made by a resolution of the council, committee, subcommittee, subordinate decision-making body, local boards or community board and, in the case of all decision-making bodies other than the council, must also fall within the scope of their specific delegations.

9.3 Chief executive may delay or refuse request

The chief executive may delay commissioning any reports that involve significant cost or are beyond the scope of the committee that made the request. In such cases the chief executive will discuss options for meeting the request with the respective chairperson and report back to a subsequent meeting with an estimate of the cost involved and seek direction on whether the report should still be prepared.

Where a Chief executive refuses a member's request to prepare a report, an explanation for that refusal should be provided to the member.

9.4 Order of business

At the meeting the business is to be dealt with in the order in which it stands on the agenda unless the chairperson, or the meeting, decides otherwise. An example of a default order of business is set out in Appendix 10.

The order of business for an extraordinary meeting must be limited to items that are relevant to the purpose for which the meeting has been called.

9.5 Chairperson's recommendation

A chairperson, either prior to the start of the meeting and/or at the meeting itself, may include a recommendation regarding any item on the agenda brought before the meeting. Where a chairperson's recommendation varies significantly from an officer's recommendation the reason for the variation must be explained. A recommendation that differs significantly from the officer's recommendation must comply with the decision-making requirements of Part 6 of the LGA 2002.

9.6 Chairperson may prepare report

The chairperson of a meeting has the right to prepare a report to be included in the agenda on any matter which falls within the responsibilities of that meeting, as described in its terms of reference.

For clarity, any recommendation must comply with the decision-making requirements of Part 6 of the LGA 2002.

9.7 Public availability of the agenda

All information provided to members at a local authority, or local or community board, meeting must be publicly available, except where an item included in the agenda refers to a matter reasonably expected to be discussed with the public excluded.

LGOIMA, ss 5 & 46A.

9.8 Public inspection of agenda

Any member of the public may, without payment of a fee, inspect, during normal office hours and within a period of at least 2 working days before a meeting, all agendas and associated reports circulated to members of the local authority and local and community boards relating to that meeting. The agenda:

(a) Must be available for inspection at the public offices of the local authority (including service centres), at public libraries under the authority's control and on the council's website, and:

(b) Must be accompanied by either:

i. The associated reports; or

ii. A notice specifying the places at which the associated reports may be inspected.

LGOIMA, s 46A(1).

9.9 Withdrawal of agenda items

If justified by circumstances, an agenda item may be withdrawn by the chief executive. In the event of an item being withdrawn the chief executive should inform the chairperson.

9.10 Distribution of the agenda

The chief executive must send the agenda to every member of a meeting at least two clear working days before the day of the meeting, except in the case of an extraordinary meeting or an emergency meeting (see Standing Orders 8.4 and 8.10).

The chief executive may send the agenda, and other materials relating to the meeting or other council business, to members by electronic means.

9.11 Status of agenda

No matter on a meeting agenda, including recommendations, may be considered final until determined by a formal resolution of that meeting.

9.12 Items of business not on the agenda which cannot be delayed

A meeting may deal with an item of business that is not on the agenda where the meeting resolves to deal with that item and the chairperson provides the following information during the public part of the meeting:

(a) The reason the item is not on the agenda; and

(b) The reason why the discussion of the item cannot be delayed until a subsequent meeting.

LGOIMA, s 46A(7).

Items not on the agenda may be brought before the meeting through a report from either the chief executive or the chairperson.

Please note, that nothing in this standing order removes the requirement to meet the provisions of Part 6 of the LGA 2002 with regard to consultation and decision-making.

9.13 Discussion of minor matters not on the agenda

A meeting may discuss an item that is not on the agenda only if it is a minor matter relating to the general business of the meeting and the chairperson explains at the beginning of the public part of the meeting that the item will be discussed. However, the meeting may not make a resolution, decision, or recommendation about the item, except to refer it to a subsequent meeting for further discussion.

LGOIMA, s 46A(7A).

9.14 Public excluded business on the agenda

Items that are likely to be discussed under public-excluded must be indicated on each agenda, including the general subject of the item. The chief executive, however, may exclude public access to any reports, or parts of reports, which are reasonably expected to be discussed with the public excluded.

LGOIMA, s 46A(9).

9.15 Qualified privilege relating to agenda and minutes

Where any meeting is open to the public and a member of the public is supplied with a copy of the agenda, or the minutes of that meeting, the publication of any defamatory matter included in the agenda or in the minutes is privileged. This does not apply if the publication is proved to have been made with ill will, or improper advantage has been taken of the publication.

LGOIMA, s 52.

Meeting Procedures

10. Opening and closing

Local authorities, local boards and community boards may, at the start of a meeting, choose to recognise the civic importance of the occasion through some form of reflection. This could be an expression of community values, a reminder of the contribution of members who have gone before or a formal welcome, such as a mihi whakatau.

Options for opening a meeting could include a karakia tīmatanga, mihi whakatau, or pōwhiri as well as a karakia whakamutunga to close a meeting where appropriate.

11. Quorum

11.1 Council meetings

The quorum for a meeting of the council is:

(a) Half of the members present, where the number of members (including vacancies) is even; and

(b) A majority of the members present, where the number of members (including vacancies) is odd.

LGA 2002, sch 7, cl 23(3)(a).

11.2 Committees and subcommittee meetings

A council sets the quorum for its committees and subcommittees, either by resolution or by stating the quorum in the terms of reference. Committees may set the quorums for their subcommittees by resolution, provided that it is not less than two members. (See also 7.4).

In the case of subcommittees, the quorum will be two members unless otherwise stated. In the case of committees at least one member of the quorum must be a member of the council, or if established by a local board or community board, the relevant board.

LGA 2002, sch 7, cl 23(3)(b).

11.3 Joint Committees

The quorum at a meeting of a joint committee must be consistent with Standing Order 11.1. Local authorities participating in the joint committee may decide, by agreement, whether or not the quorum includes one or more members appointed by each local authority or any party.

LGA 2002, sch 7, cl 30A(6)(c).

11.4 Requirement for a quorum

A meeting is constituted where a quorum of members is present, whether or not they are all voting or entitled to vote. In order to conduct any business at a meeting, a quorum of members must be present for the whole time that the business is being considered.

LGA 2002, sch 7, cl 23(1) & (2).

11.5 Meeting lapses where no quorum

A meeting must lapse, and the chairperson vacate the chair, if a quorum is not present within 30 minutes of the advertised start of the meeting. Where members are known to be travelling to the meeting, but are delayed due to extraordinary circumstance, the chairperson has discretion to wait for a longer period.

No business may be conducted while waiting for the quorum to be reached. Minutes will record when a meeting lapses due to a lack of a quorum, along with the names of the members who attended.

Should a quorum be lost, the meeting will lapse if the quorum is not present within 15 minutes.

11.6 Business from lapsed meetings

Where meetings lapse the remaining business will be adjourned and be placed at the beginning of the agenda of the next ordinary meeting, unless the chairperson sets an earlier meeting, and this is notified by the chief executive.

12. Public access and recording

12.1 Meetings open to the public

Except as otherwise provided by Part 7 of LGOIMA, every meeting of the local authority, its committees, subcommittees, local boards and community boards, must be open to the public.

LGOIMA, s 47 & 49(a).

12.2 Grounds for removing the public

The chairperson may require any member of the public to be removed from the meeting if they believe that person's behaviour is likely to prejudice the orderly conduct of the meeting.

LGOIMA, s 50(1).

12.3 Local authority may record meetings

Meeting venues should contain clear signage indicating and informing members, officers and the public that proceedings may be recorded by the local authority and may be subject to direction by the chairperson.

12.4 Public may record meetings

Members of the public may make electronic or digital recordings of meetings which are open to the public. Any recording of meetings should be notified to the chairperson at the commencement of the meeting to ensure that the recording does not distract the meeting from fulfilling its business.

Where circumstances require, the chairperson may direct the recording to stop for a period of time.

13. Attendance

13.1 Members right to attend meetings

A member of a local authority, or of a committee of a local authority, has, unless lawfully excluded, the right to attend any meeting of the local authority or committee.

LGA 2002, sch 7, cl 19(2).

If a member of the local authority is not an appointed member of the meeting which they are attending, they may not vote on any matter at that meeting. However, they may, with the leave of the chair, take part in the meeting's discussions.

A member attending a meeting of which they are not an appointed member is not a member of the public for the purpose of s48 of LGOIMA. Consequently, if the meeting resolves to exclude the public then any members of the local authority who are present may remain, unless they are lawfully excluded.

Please note: this section does not confer any rights to non-elected members appointed to committees of a local authority.

13.2 Attendance when a committee is performing judicial or quasi-judicial functions

When a committee is performing judicial or quasi-judicial functions, members of the local authority who are not members of that committee are not entitled to take part in the proceedings.

13.3 Leave of absence

A council may grant a member leave of absence following an application from that member. The council may delegate the power to grant a leave of absence to the Mayor in order to protect a members' privacy and the Council may approve an application from the Mayor. The Mayor will advise all members of the council whenever a member has been granted leave of absence under delegated authority. Meeting minutes will record that a member has leave of absence as an apology for that meeting.

13.4 Apologies

A member who does not have leave of absence may tender an apology should they be absent from all or part of a meeting. The Mayor (or acting chair), must invite apologies at the beginning of each meeting, including apologies for lateness and early departure. The meeting may accept or decline any apologies. Members may be recorded as absent on council business where their absence is a result of a commitment made on behalf of the council.

For clarification, the acceptance of a member's apology constitutes a grant of 'leave of absence' for that meeting.

13.5 Recording apologies

The minutes will record any apologies tendered before or during the meeting, including whether they were accepted or declined and the time of arrival and departure of all members.

13.6 Absent without leave

Where a member is absent from four consecutive meetings of the council, local board or community board without leave of absence or an apology being accepted (not including extraordinary or emergency meetings) then the office held by the member will become vacant. A vacancy created in this way is treated as an extraordinary vacancy.

LGA 2002, sch 7, cl 5(d).

13.7 Right to attend by audio or audiovisual link

Provided the conditions in Standing Orders 13.11 and 13.12 are met, members of the local authority and its committees (and members of the public for the purpose of a deputation approved by the chairperson), have the right to attend meetings by means of an electronic link, unless they have been lawfully excluded.

13.8 Member's status: quorum

Members who attend meetings by electronic link will be counted as present for the purposes of a quorum.

LGA 2002, sch 7, cl 25A(4).

13.9 Member's status: voting

Where a meeting has a quorum, determined by the number present, the members attending by electronic link can vote on any matters raised at the meeting.

13.10 Chairperson's duties

Where the technology is available and a member is attending a meeting by audio or audiovisual link, the chairperson must ensure that:

(a) The technology for the link is available and of suitable quality; and

(b) Procedures for using the technology in the meeting will ensure that:

i. Everyone participating in the meeting can hear each other;

ii. The member's attendance by audio or audiovisual link does not reduce their accountability or accessibility of that person in relation to the meeting;

iii. The requirements of Part 7 of LGOIMA are met; and

iv. The requirements in these Standing Orders are met.

LGA 2002, sch 7, cl 25A(3).

If the chairperson is attending by audio or audiovisual link, then chairing duties will be undertaken by the deputy chair, or a member who is physically present.

13.11 Conditions for attending by audio or audiovisual link

Noting Standing Order 13.7, the chairperson may give approval for a member to attend meetings by electronic link, either generally or for a specific meeting. Examples of situations where approval can be given include:

(a) Where the member is at a place that makes their physical presence at the meeting impracticable or impossible;

(b) Where a member is unwell; and

(c) Where a member is unable to attend due to an emergency.

13.12 Request to attend by audio or audiovisual link

Where possible, a member will give the chairperson and the chief executive at least 2 working days' notice when they want to attend a meeting by audio or audiovisual link. Should, due to illness or emergency, this is not possible the member may give less notice.

Where such a request is made and the technology is available, the chief executive must take reasonable steps to enable the member to attend by audio or audiovisual link. However, the council has no obligation to make the technology for an audio or audio-visual link available.

If the member's request cannot be accommodated, or there is a technological issue with the link, this will not invalidate any acts or proceedings of the local authority or its committees.

13.13 Chairperson may terminate link

The chairperson may direct that an electronic link should be terminated where:

(a) Use of the link is increasing, or may unreasonably increase, the length of the meeting;

(b) The behaviour of the members using the link warrants termination, including the style, degree and extent of interaction between members;

(c) It is distracting to the members who are physically present at the meeting;

(d) The quality of the link is no longer suitable;

(e) Information classified as confidential may be compromised (see also SO 13.16).

13.14 Giving or showing a document

A person attending a meeting by audio or audiovisual link may give or show a document by:

(a) Transmitting it electronically;

(b) Using the audiovisual link; or

(c) Any other manner that the chairperson thinks fit.

LGA 2002, sch 7, cl 25(A)(6).

13.15 Link failure

Where an audio or audiovisual link fails, or there are other technological issues that prevent a member who is attending by link from participating in a meeting, that member must be deemed to be no longer attending the meeting.

13.16 Confidentiality

A member who is attending a meeting by audio, or audio-visual link, must ensure that the meeting's proceedings remain confidential during any time that the public is excluded. At such a time, the chairperson may require the member to confirm that no unauthorised people are able to view or hear the proceedings. If the chairperson is not satisfied by the explanation, they may terminate the link.

14. Chairperson's role in meetings

14.1 Council meetings

The Mayor must preside at meetings of the council unless they vacate the chair for a part or all of a meeting. If the Mayor is absent from a meeting or vacates the chair, the deputy Mayor must act as chairperson. If the deputy Mayor is also absent the local authority members who are present must elect a member to be the chairperson at that meeting. This person may exercise the meeting responsibilities, duties, and powers of the Mayor for that meeting.

LGA 2002, sch 7, cl 26(1), (5) & (6).

14.2 Other meetings

In the case of committees, subcommittees and subordinate decision-making bodies, the appointed chairperson must preside at each meeting unless they vacate the chair for all or part of a meeting. If the chairperson is absent from a meeting or vacates the chair, the deputy chairperson (if any) will act as chairperson. If the deputy chairperson is also absent, or has not been appointed, the committee members who are present must elect a member to act as chairperson. This person may exercise the meeting responsibilities, duties and powers of the chairperson.

LGA 2002, sch 7, cl 26(2), (5) & (6).

14.3 Addressing the chairperson

Members will address the Chairperson in a manner that the Chairperson has determined.

14.4 Chairperson's rulings

The chairperson will decide all procedural questions, including points of order, where insufficient provision is made by these Standing Orders (except in cases where appoint of order questions the chairperson's ruling). Any refusal to obey a Chairperson's ruling or direction constitutes contempt (see SO 20.5).

14.5 Chairperson standing

Whenever the chairperson stands during a debate, members are required to sit down (if required to stand to address the meeting) and be silent so that they can hear the chairperson without interruption.

14.6 Member's right to speak

Members are entitled to speak in accordance with these Standing Orders. Members should address the chairperson when speaking. They may not leave their place while speaking, unless they have the leave of the chairperson.

14.7 Chairperson may prioritise speakers

When two or more members want to speak the chairperson will name the member who may speak first. Other members who wish to speak have precedence where they intend to:

(a) Raise a point of order, including a request to obtain a time extension for the previous speaker; and/or

(b) Move a motion to terminate or adjourn the debate; and/or

(c) Make a point of explanation; and/or

(d) Request the chair to permit the member a special request.

15. Public Participation

Public participation is a defined period of time, usually at the start of an ordinary meeting, which, at the discretion of a meeting, is put aside for the purpose of public input. Public participation is to enable members of the public to bring matters of their choice, not necessarily on the meeting's agenda, to the attention of the local authority.

In the case of a committee, subcommittee, local or community board, any issue, idea, or matter raised in at public participation, must fall within the terms of reference of that body.

15.1 Time limits

A period of up to 30 minutes, or such longer time as the meeting may determine, will be available for the public participation at each scheduled local authority meeting. Requests must be made to the chief executive (or their delegate) at least one clear day before the meeting; however, this requirement may be waived by the Chairperson. Requests should also outline the matters that will be addressed by the speaker(s).

Speakers can speak for up to 5 minutes (this includes questions with the elected members). No more than two speakers can speak on behalf of an organisation during public participation. Where the number of speakers presenting in public participation exceeds 6 in total, the Chairperson has discretion to restrict the speaking time permitted for all presenters.

15.2 Restrictions

The Chairperson has the discretion to decline to hear a speaker or to terminate a presentation at any time where:

- A speaker is repeating views presented by an earlier speaker at the same public participation;
- The speaker is criticising elected members and/or staff;
- The speaker is being repetitious, disrespectful or offensive;
- The speaker has previously spoken on the same issue;
- The matter is subject to legal proceedings; and
- The matter is subject to a hearing, including the hearing of submissions where the local authority or committee sits in a quasi-judicial capacity. i.e. Resource Consent and District Licensing

15.3 Questions at public participation

At the conclusion of the presentation, and if the speakers time limit hasn't expired, with the permission of the Chairperson, elected members may ask questions of speakers. Questions are to be confined to obtaining information or clarification on matters raised by a speaker.

15.4 No resolutions

Following the public participation, no debate or decisions will be made at the meeting on issues raised during public participation unless related to items already on the agenda. (See the LGNZ Guide to Standing Orders for suggestions of good practice in dealing with issues raised during a forum).

16. Deputations

The purpose of a deputation is to enable a person, group, or organisation to make a presentation to a meeting on a matter or matters covered by that meeting's terms of reference. Deputations should be approved by the Chairperson, or an official with delegated authority, five working days before the meeting; however, this requirement may be waived by the Chairperson. Deputations may be heard at the commencement of the meeting or at the time that the relevant agenda item is being considered.

16.1 Time limits

Speakers can speak for up to 5 minutes, or longer at the discretion of the Chairperson. No more than two speakers can speak on behalf of an organisation's deputation.

16.2 Restrictions

The Chairperson has the discretion to decline to hear or terminate a deputation at any time where:

- A speaker is repeating views presented by an earlier speaker at the meeting;
- The speaker is criticising elected members and/or staff;
- The speaker is being repetitious, disrespectful or offensive;
- The speaker has previously spoken on the same issue;
- The matter is subject to legal proceedings; and
- The matter is subject to a hearing, including the hearing of submissions where the local authority or committee sits in a quasi-judicial capacity.

16.3 Questions of a deputation

At the conclusion of the deputation members may, with the permission of the Chairperson, ask questions of any speakers. Questions are to be confined to obtaining information or clarification on matters raised by the deputation.

16.4 Resolutions

Any debate on a matter raised in a deputation must occur at the time at which the matter is scheduled to be discussed on the meeting agenda and once a motion has been moved and seconded.

17. Petitions

17.1 Form of petitions

Petitions may be presented to the local authority or any of its committees, local boards or community boards, as long as the subject matter falls within the terms of reference of the intended meeting.

Petitions must contain at least 20 signatures and consist of fewer than 150 words (not including signatories). They must be received by the chief executive at least five working days before the meeting at which they will be presented; however, this requirement may be waived by the chairperson.

Petitions must not be disrespectful, use offensive language or include malicious, inaccurate, or misleading statements (see Standing Order 20.9 on qualified privilege). They may be written in English or Te Reo Māori. Petitioners planning to present their petition in Te Reo or sign language should advise the chief executive in time to allow translation services to be arranged.

17.2 Petition presented by petitioner

A petitioner who presents a petition to the local authority or any of its committees and subcommittees, local boards or community boards, may speak for 5 minutes (excluding questions) about the petition, unless the meeting resolves otherwise. The chairperson must terminate the presentation of the petition if he or she believes the petitioner is being disrespectful, offensive, or making malicious statements.

Where a petition is presented as part of a deputation or public participation the speaking time limits relating to deputations or public participation shall apply. The petition must be received by the chief executive at least 5 working days before the date of the meeting concerned.

17.3 Petition presented by member

Members may present petitions on behalf of petitioners. In doing so, members must confine themselves to presenting:

(a) The petition;
(b) The petitioners' statement; and
(c) The number of signatures.

18.1 Exclusion of public

18.1 Motions and resolutions to exclude the public

Members of a meeting may resolve to exclude the public from a meeting. The grounds for exclusion are those specified in s 48 of LGOIMA (see Appendix 1).

Every motion to exclude the public must be put while the meeting is open to the public, and copies of the motion must be available to any member of the public who is present. If the motion is passed the resolution to exclude the public must be in the form set out in schedule 2A of LGOIMA (see Appendix 2). The resolution must state:

(a) The general subject of each matter to be excluded;

(b) The reason for passing the resolution in relation to that matter; and

(c) The grounds on which the resolution is based.

The resolution will form part of the meeting's minutes.

LGOIMA, s 48.

18.2 Specified people may remain

Where a meeting resolves to exclude the public, the resolution may provide for specified persons to remain if, in the opinion of the meeting, they will assist the meeting to achieve its purpose. Any such resolution must state, in relation to the matter to be discussed, how the knowledge held by the specified people is relevant and be of assistance.

No such resolution is needed for people who are entitled to be at the meeting, such as relevant staff and officials contracted to the council for advice on the matter under consideration.

LGOIMA, s 48(6).

18.3 Public excluded items

The chief executive must place in the public-excluded section of the agenda any items that he or she reasonably expects the meeting to consider with the public excluded. The public excluded section of the agenda must indicate the subject matter of the item and the reason the public are excluded.

LGOIMA, s 46A(8).

18.4 Non-disclosure of information

No member or officer may disclose to any person, other than another member, officer or person authorised by the chief executive, any information that has been, or will be, presented to any meeting from which the public is excluded, or proposed to be excluded.

This restriction does not apply where a meeting has resolved to make the information publicly available or where the chief executive has advised, in writing, that one or both of the following apply:

(a) There are no grounds under LGOIMA for withholding the information; and

(b) The information is no longer confidential.

18.5 Release of information from public excluded session

A local authority may provide for the release to the public of information which has been considered during the public excluded part of a meeting.

Each public excluded meeting must consider and agree by resolution, what, if any, information will be released to the public. In addition, the chief executive may release information which has been considered at a meeting from which the public has been excluded where it is determined the grounds to withhold the information no longer exist.

19. Voting

19.1 Decisions by majority vote

Unless otherwise provided for in the LGA 2002, other legislation, or Standing Orders, the acts of, and questions before, a local authority (including a local or community board) must be decided at a meeting through a vote exercised by the majority of the members that are present and voting.

LGA 2002, sch 7, cl 24(1).

19.2 Open voting

An act or question coming before the local authority must be done or decided by open voting.

LGA 2002, sch 7, cl 24(3).

19.3 Chairperson has a casting vote

The Mayor, Chairperson, or any other person presiding at a meeting, has a deliberative vote and, in the case of an equality of votes, has a casting vote.

LGA 2002, sch 7, cl 24(2).

19.4 Method of voting

The method of voting must be as follows:

(a) The chairperson in putting the motion must call for an expression of opinion on the voices or take a show of hands, the result of either of which, as announced by the chairperson, must be conclusive unless such announcement is questioned immediately by any member, in which event the chairperson will call a division;

(b) The chairperson or any member may call for a division instead of or after voting on the voices and/or taking a show of hands; and

(c) Where a suitable electronic voting system is available that system may be used instead of a show of hands, vote by voices, or division, and the result publicly displayed and notified to the chairperson who must declare the result.

19.5 Calling for a division

When a division is called, the chief executive must record the names of the members voting for and against the motion, and abstentions, and provide the names to the chairperson to declare the result. The result of the division must be entered into the minutes and include members' names and the way in which they voted.

The Chairperson may call a second division where there is confusion or error in the original division.

19.6 Request to have votes recorded

If requested by a member, immediately after a vote the minutes must record the member's vote or abstention. Recording any other matters, such as a members' reason for their vote or abstention, is not permitted.

19.7 Members may abstain

Any member may abstain from voting.

20. Conduct

20.1 Calling to order

When the chairperson calls members to order they must be seated and stop speaking. If the members fail to do so, the chairperson may direct that they should immediately leave the meeting for a specified time.

20.2 Behaviour consistent with Code of Conduct

At a meeting no member may act inconsistently with their Code of Conduct or speak or act in a manner which is disrespectful of other members, staff or the public.

20.3 Retractions and apologies

In the event of a member, or speaker, who has been disrespectful of another member or contravened the council's Code of Conduct, the chairperson may call upon that member, or speaker, to withdraw the offending comments, and may require them to apologise. If the member refuses to do so the chairperson may direct that they should leave the meeting immediately for a specified time and/or make a complaint under the Code of Conduct.

20.4 Disorderly conduct

Where the conduct of a member is disorderly or is creating a disturbance, the chairperson may require that member to leave the meeting immediately for a specified time.

If the disorder continues the chairperson may adjourn the meeting for a specified time. At the end of this time the meeting must resume and decide, without debate, whether the meeting should proceed or be adjourned.

The chairperson may also adjourn the meeting if other people cause disorder or in the event of an emergency.

20.5 Contempt

Where a member is subject to repeated cautions by the chairperson for disorderly conduct the meeting may, should it so decide, resolve that the member is in contempt. Any such resolution must be recorded in the meeting's minutes.

A member who has been found to be in contempt and continues to be cautioned by the Chairperson for disorderly conduct, may be subject to Standing Order 20.6.

20.6 Removal from meeting

A member of the police or authorised security personnel may, at the chairperson's request, remove or exclude a member from a meeting.

This Standing Order will apply where the chairperson has ruled that the member should leave the meeting and the member has refused or failed to do so; or has left the meeting and attempted to re-enter it without the chairperson's permission.

20.7 Financial conflicts of interests

Every member present at a meeting must declare any direct or indirect financial interest that they hold in any matter being discussed at the meeting, other than an interest that they hold in common with the public.

No member may vote on, or take part in, a discussion about any matter in which they have a direct or indirect financial interest unless an exception set out in s 6 LAMIA applies to them, or the Auditor-General has granted them an exemption or declaration under s 6.

Members with a financial interest should physically withdraw themselves from the table unless the meeting is in public excluded, in which case they should leave the room.

Neither the chairperson, nor the meeting, may rule on whether a member has a financial interest in the matter being discussed. The minutes must record any declarations of financial interests and the member's abstention from any discussion and voting on the matter.

LAMIA, ss 6 & 7.

20.8 Non-financial conflicts of interests

Non-financial interests involve questions about whether the judgement of a member of a local authority (or local or community board) could be affected by a separate interest, or duty, which that member may have in relation to a particular matter. If a member considers that they have a non-financial conflict of interest in a matter they must not take part in the discussions about that matter, or any subsequent vote.

The member must leave the table when the matter is considered but does not need to leave the room. The minutes must record the declaration and member's subsequent abstention from discussion and voting.

Neither the chairperson, nor the meeting, may rule on whether a member has a non-financial interest in the matter being discussed.

20.9 Qualified privilege for meeting proceedings

Any oral statement made at any meeting of the local authority in accordance with the rules adopted by the local authority for guiding its proceedings is privileged, unless the statement is proved to have been made with ill will, or took improper advantage of the occasion of publication.

LGOIMA, s 53.

20.10 Qualified privilege additional to any other provisions

The privilege referred to above is in addition to any other privilege, whether absolute or qualified, that applies because of any other enactment or rule of law applying to any meeting of the local authority.

LGOIMA, s 53.

20.11 Electronic devices at meetings

Electronic devices and phones can only be used to advance the business of a meeting. Personal use may only occur at the discretion of the chair. A chairperson may require that an electronic device is switched off if:

I. its use is likely to distract a meeting from achieving its business, or,

II. a member is found to be receiving information or advice from sources not present at the meeting that may affect the integrity of the proceedings.

21. General rules of debate

21.1 Chairperson may exercise discretion

The application of any procedural matters in this section of the Standing Orders, such as the number of times a member may speak or when a chair can accept a procedural motion to close or adjourn a debate, is subject to the discretion of the chairperson.

21.2 Time limits on speakers

The following time limits apply to members speaking at meetings:

(a) Movers of motions when speaking to the motion – not more than 5 minutes;

(b) Movers of motions when exercising their right of reply – not more than 5 minutes; and

(c) Other members – not more than 5 minutes.

Time limits can be extended if a motion to that effect is moved, seconded and supported by a majority of members present.

21.3 Questions to staff

During a debate members can ask staff questions about the matters being discussed. Questions must be asked through the chairperson, and how the question is to be dealt with is at the chairperson's discretion.

21.4 Questions of clarification

At any point in a debate a member may ask the chairperson for clarification about the nature and content of the motion which is the subject of the debate and/or the particular stage the debate has reached.

21.5 Members may speak only once

A member, depending on the choice of options for speaking and moving set out in SO 22.2 - 22.4, may not speak more than once to a motion at a meeting of the council, except with permission of the chairperson. Members can speak more than once to a motion at a committee or subcommittee meeting with the chairperson's permission.

21.6 Limits on number of speakers

If three speakers have spoken consecutively in support of, or in opposition to, a motion, the Chairperson may call for a speaker to the contrary. If there is no speaker to the contrary, the Chairperson must put the motion after the mover's right of reply.

Members speaking must, if requested by the chairperson, announce whether they are speaking in support of, or opposition to, a motion.

21.7 Seconder may reserve speech

A member may second a motion or amendment without speaking to it, reserving the right to speak until later in the debate.

21.8 Speaking only to relevant matters

Members may only speak to;

i. any matter before the meeting

ii. a motion or amendment which they propose, and

iii. to raise a point of order arising out of debate,

Members must confine their remarks strictly to the motion or amendment they are speaking to.

The chairperson's rulings on any matters arising under this Standing Order are final and not open to challenge.

21.9 Restating motions

At any time during a debate a member may ask, for their information, that the chairperson restate a motion and any amendments; but not in a manner that interrupts a speaker.

21.10 Criticism of resolutions

A member speaking in a debate may not unduly criticise the validity of any resolution, except by a notice of motion to amend or revoke the resolution.

21.11 Objecting to words

When a member objects to any words used by another member in a speech and wants the minutes to record their objection, they must object at the time when the words are used and before any other member has spoken. The chairperson must order the minutes to record the objection.

Note: This provision does not preclude a member from making a complaint at any time during, or after, a meeting about the use of inappropriate or offensive language.

21.12 Right of reply

The mover of an original motion has a right of reply. A mover of an amendment to the original motion does not. In their reply, the mover must confine themselves to answering previous speakers and not introduce any new matters.

A mover's right of reply can only be used once. It can be exercised either at the end of the debate on the original, substantive or substituted motion or at the end of the debate on a proposed amendment.

The original mover may speak once to the principal motion and once to each amendment without losing that right of reply. If a closure motion is carried, the mover of the motion may

use their right of reply before the motion or amendment is put to the vote. The mover of the original motion may choose to indicate that they wish to reserve their right or reply until the closure motion.

21.13 No other member may speak

In exercising a right of reply, no other member may speak:

i. After the mover has started their reply;
ii. After the mover has indicated that they want to forego this right; and
iii. Where the mover has spoken to an amendment to the original motion and the chairperson has indicated that he or she intends to put the motion.

21.14 Adjournment motions

The carrying of any motion to adjourn a meeting must supersede other business still remaining to be disposed of. Any such business must be considered at the next meeting. Business referred to, or referred back to, a specified committee or local or community board, is to be considered at the next ordinary meeting of that committee or board, unless otherwise specified.

21.15 Chairperson's acceptance of closure motions

The Chairperson may only accept a closure motion where there have been at least two speakers for and two speakers against the motion that is proposed to be closed, or the chairperson considers it reasonable to do so.

However, the chairperson must put a closure motion if there are no further speakers in the debate. When the meeting is debating an amendment, the closure motion relates to the amendment. If a closure motion is carried, the mover of the motion under debate has the right of reply after which the chairperson puts the motion or amendment to the vote.

22. General procedures for speaking and moving motions

22.1 Options for speaking and moving

This subsection provides three options for speaking and moving motions and amendments at a meeting of a local authority, its committees and subcommittees, and any local or community boards.

Option C applies unless, on the recommendation of the chairperson at the beginning of a meeting, the meeting resolves [*by simple majority*] to adopt either of the other two options for the meeting generally, or for any specified items on the agenda.

22.2 Option A

- The mover and seconder of a motion cannot move or second an amendment. (This does not apply when the mover or seconder of a motion to adopt a report of a committee wants to amend an item in the report. In this case the original mover or seconder may also propose or second the suggested amendment).
- Only members who have not spoken to the original, or substituted, motion may move or second an amendment to it.
- The mover or seconder of an amendment, whether it is carried (in which case it becomes the substantive motion) or lost, cannot move or second a subsequent amendment.
- Members can speak to any amendment and, provided they have not spoken to the motion or moved or seconded an amendment, they can move or second further amendments.
- The meeting, by agreement of the majority of members present, may amend a motion with the agreement of the mover and seconder.

22.3 Option B

- The mover and seconder of a motion cannot move or second an amendment. (This does not apply when the mover or seconder of a motion to adopt a report of a committee wants to amend an item in the report. In this case the original mover or seconder may also propose or second the suggested amendment).
- Any members, regardless of whether they have spoken to the original or substituted motion, may move or second an amendment to it.
- The mover or seconder of an amendment that is carried can move or second a subsequent amendment. A mover or seconder of an amendment which is lost cannot move or second a subsequent amendment.
- Members can speak to any amendment.
- The meeting by agreement of the majority of members present may amend a motion with the agreement of the mover and seconder.

22.4 Option C

- The mover and seconder of a motion can move or second an amendment.
- Any members, regardless of whether they have spoken to the original or substituted motion, may move or second an amendment to it.
- The mover or seconder of an amendment whether it is carried or lost can move or second further amendments.
- Members can speak to any amendment.
- The meeting by agreement of the majority of members present may amend a motion with the agreement of the mover and seconder.

23. Motions and amendments

23.1 Proposing and seconding motions

All motions, and amendments moved during a debate, must be seconded (including notices of motion). The chairperson may then state the motion and propose it for discussion. A motion should be moved and seconded before debate but after questions.

Amendments and motions that are not seconded are not valid and should not be entered in the minutes.

Note: Members who move or second a motion are not required to be present for the entirety of the debate.

23.2 Motions in writing

The chairperson may require movers of motions and amendments to provide them in writing, signed by the mover.

23.3 Motions expressed in parts

The chairperson, or any member, can require a motion that has been expressed in parts to be decided part by part.

23.4 Substituted motion

Where a motion is subject to an amendment the meeting may substitute the motion with the amendment, provided the mover and seconder of the original motion agree to its withdrawal. All members may speak to the substituted motion.

23.5 Amendments to be relevant and not direct negatives

Every proposed amendment must be relevant to the motion under discussion. Proposed amendments cannot be similar to an amendment that has already been lost. An amendment cannot be a direct negative to the motion or the amended motion. Reasons for not accepting an amendment can include:

a) Not directly relevant

b) In conflict with a carried amendment

c) Similar to a lost amendment

d) Would negate a committee decision if made under delegated authority

e) In conflict with a motion referred to the governing body by that meeting

f) Direct negative.

Please note that amendments that are significantly different must comply with the decision-making provisions of Part 6 of the LGA 2002.

23.6 Foreshadowed amendments

The meeting must dispose of an existing amendment before a new amendment can be moved. However, members may foreshadow to the chairperson that they intend to move further amendments as well as the nature of the content of those amendments.

23.7 Lost amendments

Where an amendment is lost, the meeting will resume the debate on the original or substituted motion. Any member who has not spoken to that motion may, depending on the choice of options for speaking and moving set out in Standing Orders 22.2 – 22.4, speak to it, and may move or second a further amendment.

23.8 Carried amendments

Where an amendment is carried, the meeting will resume the debate on the original motion as amended. This will now be referred to as the substantive motion. Members who have not spoken to the original motion may, depending on the choice of options for speaking and moving set out in Standing Orders 22.2 – 22.4, speak to the substantive motion, and may move or second a further amendment to it.

23.9 Where a motion is lost

In a situation where a substantive motion that recommends a course of action is lost a new motion, with the consent of the Chairperson, may be proposed to provide direction.

23.10 Withdrawal of motions and amendments

Once a motion or amendment has been seconded the mover cannot withdraw it without the agreement of the majority of the members who are present and voting.

The mover of an original motion, which has been subject to an amendment that has been moved and seconded, cannot withdraw the original motion until the amendment has either been lost or withdrawn by agreement, as above.

23.11 No speakers after reply or motion has been put

A member may not speak to any motion once:

(a) The mover has started their right of reply in relation to the motion; and

(b) The chair has started putting the motion.

24. Revocation or alteration of resolutions

24.1 Member may move revocation of a decision

A member may give the chief executive a notice of motion for the revocation or alteration of all or part of a previous resolution of the council, subordinate body, local or community board. The notice must set out:

(a) The resolution or part of the resolution which the member proposes to revoke or alter;

(b) The meeting date when the resolution was passed;

(c) The motion, if any, which the member proposes to replace it with; and

(d) Sufficient information to satisfy the decision-making provisions of sections 77-82 of Part 6, of the LGA 2002.

If the mover of the notice of motion is unable to provide this information, or the decision is likely to be deemed a significant decision, the notice of motion should provide that the proposal is referred to the chief executive for consideration and report.

24.2 Revocation must be made by the body responsible for the decision

If a resolution is made under delegated authority by a committee, subcommittee or subordinate decision-making body, or a local or community board, only that body may revoke or amend the resolution, assuming the resolution is legally made.

This provision does not prevent the body that made the delegation from removing or amending a delegation given to a subordinate body or local board or community board.

LGA 2002, sch 7, cl 30(6).

24.3 Requirement to give notice

A member must give notice to the chief executive at least 5 working days before the meeting at which it is proposed to consider the motion. The notice is to be signed by not less than one third of the members of the local authority, including vacancies. Notice can be sent via email and include the scanned electronic signatures of members. If the notice of motion is lost, no similar notice of motion which is substantially the same in purpose and effect may be accepted within the next twelve months.

24.4 Restrictions on actions under the affected resolution

Once a notice of motion to revoke or alter a previous resolution has been received no irreversible action may be taken under the resolution in question until the proposed notice of motion has been dealt with.

Exceptions apply if, in the opinion of the chairperson:

(a) The practical effect of delaying actions under the resolution would be the same as if the resolution had been revoked;

(b) By reason of repetitive notices, the effect of the notice is an attempt by a minority to frustrate the will of the local authority or the committee that made the previous resolution.

In either of these situations, action may be taken under the resolution as though no notice of motion had been given to the chief executive.

24.5 Revocation or alteration by resolution at same meeting

A meeting may revoke or alter a previous resolution made at the same meeting where, during the course of the meeting, it receives fresh facts or information concerning the resolution. In this situation 75 per cent of the members present and voting must agree to the revocation or alteration.

24.6 Revocation or alteration by recommendation in report

The local authority, on a recommendation in a report by the chairperson, chief executive, or any committee or subcommittee, local or community board, may revoke or alter all or part of a resolution passed by a previous meeting. The chief executive must give at least two clear working days' notice of any meeting that will consider a revocation or alteration recommendation.

LGA 2002, sch 7, cl 30(6).

25. Procedural motions

25.1 Procedural motions must be taken immediately

A procedural motion to close or adjourn a debate will take precedence over other business, except points of order and rights of reply. If the procedural motion is seconded the chairperson must put it to the vote immediately, without discussion or debate. A procedural motion to close or adjourn debate can be taken after two speakers have spoken for the motion and two against or, in the chairperson's opinion, it is reasonable to accept the closure motion.

25.2 Procedural motions to close or adjourn a debate

Any member who has not spoken on the matter under debate may move any one of the following procedural motions to close or adjourn a debate:

(a) That the meeting be adjourned to the next ordinary meeting (unless the member states an alternative time and place);

(b) that the motion under debate should now be put (a closure motion);

(c) That the item being discussed should be adjourned to a specified time and place and not be further discussed at the meeting;

(d) That the item of business being discussed should lie on the table and not be further discussed at this meeting; (items lying on the table at the end of the triennium will be deemed to have expired); and

(e) That the item being discussed should be referred (or referred back) to the relevant committee or local or community board.

A member seeking to move a procedural motion must not interrupt another member who is already speaking.

25.3 Voting on procedural motions

Procedural motions to close or adjourn a debate must be decided by a majority of all members who are present and voting. If the motion is lost no member may move a further procedural motion to close or adjourn the debate within the next 15 minutes.

25.4 Debate on adjourned items

When debate resumes on items of business that have been previously adjourned all members are entitled to speak on the items.

25.5 Remaining business at adjourned meetings

Where a resolution is made to adjourn a meeting, the remaining business will be considered at the next meeting.

25.6 Business referred to the council, committee or local or community board

Where an item of business is referred (or referred back) to a committee or a local or community board, the committee or board will consider the item at its next meeting unless the meeting resolves otherwise.

25.7 Other types of procedural motions

The chairperson has discretion about whether to allow any other procedural motion that is not contained in these Standing Orders.

26. Points of order

26.1 Members may raise points of order

Any member may raise a point of order when they believe these Standing Orders have been breached. When a point of order is raised, the member who was previously speaking must stop speaking and sit down (if standing).

26.2 Subjects for points of order

A member who is raising a point of order must state precisely what its subject is. Points of order may be raised for the following subjects:

(a) Disorder – to bring disorder to the attention of the chairperson;

(b) Language – to highlight use of disrespectful, offensive or malicious language;

(c) Irrelevance – to inform the chair that the topic being discussed is not the matter currently before the meeting;

(d) Misrepresentation – to alert the chair of a misrepresentation in a statement made by a member, an officer or a council employee;

(e) Breach of standing order – to highlight a possible breach of a standing order while also specifying which standing order is subject to the breach; and

(f) Recording of words – to request that the minutes record any words that have been the subject of an objection.

26.3 Contradictions

Expressing a difference of opinion or contradicting a statement by a previous speaker does not constitute a point of order.

26.4 Point of order during division

A member may not raise a point of order during a division, except with the permission of the chairperson.

26.5 Chairperson's decision on points of order

The chairperson may decide a point of order immediately after it has been raised, or may choose to hear further argument about the point before deciding. The chairperson's ruling on any point of order, and any explanation of that ruling, is not open to any discussion and is final.

Should a point of order concern the performance of the chair, then the chair will refer the point of order to the deputy chair or, if there is no deputy, another member to hear arguments and make a ruling.

27. Notices of motion

27.1 Notice of intended motion to be in writing

Notice of intended motions must be in writing signed by the mover, stating the meeting at which it is proposed that the intended motion be considered, and must be delivered to the chief executive at least 5 clear working days before such meeting. [Notice of an intended motion can be sent via email and include the scanned electronic signature of the mover].

Once the motion is received the chief executive must give members notice in writing of the intended motion at least 2 clear working days' notice of the date of the meeting at which it will be considered.

27.2 Refusal of notice of motion

The chairperson may direct the chief executive to refuse to accept any notice of motion which:

(a) Is disrespectful or which contains offensive language or statements made with malice; or

(b) Is not related to the role or functions of the local authority or meeting concerned; or

(c) Contains an ambiguity or a statement of fact or opinion which cannot properly form part of an effective resolution, and where the mover has declined to comply with such requirements as the chief executive officer may make; or

(d) Is concerned with matters which are already the subject of reports or recommendations from a committee to the meeting concerned; or

(e) Fails to include sufficient information as to satisfy the decision-making provisions of the LGA 2002, ss 77-82. If the mover of the notice of motion is unable to provide this information, or the decision is likely to be deemed a significant decision, the notice of motion should provide that the proposal is referred to the chief executive for consideration and report; or

(f) Concerns a matter where decision-making authority has been delegated to a subordinate body or a local or community board.

Reasons for refusing a notice of motion should be provided to the mover. Where the refusal is due to (f) the notice of motion may be referred to the appropriate committee or board.

27.3 Mover of notice of motion

Notices of motion may not proceed in the absence of the mover unless moved by another member authorised to do so, in writing, by the mover.

27.4 Alteration of notice of motion

Only the mover, at the time the notice of motion is moved and with the agreement of a majority of those present at the meeting, may alter a proposed notice of motion. Once moved and seconded no amendments may be made to a notice of motion.

27.5 When notices of motion lapse

Notices of motion that are not moved when called for by the chairperson must lapse.

27.6 Referral of notices of motion

Any notice of motion received that refers to a matter ordinarily dealt with by a committee of the local authority or a local or community board must be referred to that committee or board by the chief executive.

Where notices are referred the proposer of the intended motion, if not a member of that committee, must have the right to move that motion and have the right of reply, as if a committee member.

27.7 Repeat notices of motion

When a motion has been considered and rejected by the local authority or a committee, no similar notice of motion may be accepted within the next 12 months, unless signed by not less than one third of all members, including vacancies.

Where a notice of motion has been adopted by the local authority no other notice of motion which, in the opinion of the chairperson has the same effect, may be put while the original motion stands.

28. Minutes

28.1 Minutes to be evidence of proceedings

The local authority, its committees, subcommittees and any local and community boards must keep minutes of their proceedings. These minutes must be kept in hard or electronic copy, authorised by a chairperson's manual or electronic signature once confirmed by resolution at a subsequent meeting. Once authorised the minutes are the *prima facie* evidence of the proceedings they relate to.

LGA 2002, sch 7, cl 28.

28.2 Matters recorded in minutes

The chief executive must keep the minutes of meetings. The minutes must record:

(a) The date, time and venue of the meeting;
(b) The names of the members present;
(c) The chairperson;
(d) Any apologies or leaves of absences;
(e) Member absent without apology or leave of absence;
(f) Member absent on council business;
(g) The arrival and departure times of members;
(h) Any failure of a quorum;
(i) A list of any external speakers and the topics they addressed;
(j) A list of the items considered;
(k) Items tabled at the meeting;
(l) The resolutions and amendments related to those items including those that were lost, provided they had been moved and seconded in accordance with these Standing Orders;
(m) The names of all movers, and seconders;
(n) Any objections made to words used;
(o) All divisions taken and, if taken, a record of each members' vote;
(p) the names of any members requesting that their vote or abstention be recorded;
(q) Any declarations of financial or non-financial conflicts of interest;
(r) The contempt, censure and removal of any members;
(s) Any resolutions to exclude members of the public;
(t) The time at which the meeting concludes or adjourns; and
(u) The names of people permitted to stay in public excluded.

Please Note: hearings under the RMA 1991, Dog Control Act 1996 and Sale and Supply of Alcohol Act 2012 may have special requirements for minute taking.

28.3 No discussion on minutes

The only topic that may be discussed at a subsequent meeting, with respect to the minutes, is their correctness.

28.4 Minutes of last meeting before election

The chief executive and the relevant chairpersons must sign, or agree to have their digital signature inserted, the minutes of the last meeting of the local authority and any local and community boards before the next election of members.

29. Keeping a record

29.1 Maintaining accurate records

A local authority must create and maintain full and accurate records of its affairs, in accordance with normal, prudent business practice, including the records of any matter that is contracted out to an independent contractor.

All public records that are in its control must be maintained in an accessible form, so as to be able to be used for subsequent reference.

Public Records Act 2002, s 17.

29.2 Method for maintaining records

Records of minutes may be kept in hard copy (Minute Books) and/or in electronic form. If minutes are stored electronically the repository in which they are kept must meet the following requirements:

(a) The provision of a reliable means of assuring the integrity of the information is maintained; and

(b) The information is readily accessible so as to be usable for subsequent reference.

Contract and Commercial Law Act 2017, s 229(1).

29.3 Inspection

Whether held in hard copy or in electronic form minutes must be available for inspection by the public.

LGOIMA, s 51.

29.4 Inspection of public excluded matters

The chief executive must consider any request for the minutes of a meeting, or part of a meeting, from which the public was excluded as if it is a request for official information in terms of the Local Government Official Information and Meetings Act 1987.

Referenced documents

- Commissions of Inquiry Act 1908
- Crimes Act 1961
- Contract and Law Act 2017
- Financial Markets Conduct Act 2013
- Local Authorities (Members' Interests) Act 1968 (LAMIA)
- Local Electoral Act 2001 (LEA)
- Local Government Act 1974 and 2002 (LGA)
- Local Government Official Information and Meetings Act 1987 (LGOIMA)
- Marine Farming Act 1971
- Public Records Act 2005
- Resource Management Act 1991 (RMA)
- Sale and Supply of Alcohol Act 2012
- Secret Commissions Act 1910
- Securities Act 1978

Appendix 1: Grounds to exclude the public

A local authority may, by resolution, exclude the public from the whole or any part of the proceedings of any meeting only on one or more of the following grounds:

A1 That good reason exists for excluding the public from the whole or any part of the proceedings of any meeting as the public disclosure of information would be likely:

(a) To prejudice the maintenance of the law, including the prevention, investigation, and detection of offences, and the right to a fair trial; or

(b) To endanger the safety of any person.

A2 That the public conduct of the whole or the relevant part of the proceedings of the meeting would be likely to result in the disclosure of information where the withholding of the information is necessary to:

(a) Protect the privacy of natural persons, including that of deceased natural persons; or

(b) Protect information where the making available of the information would:

i. Disclose a trade secret; or

ii. Be likely unreasonably to prejudice the commercial position of the person who supplied or who is the subject of the information.

(ba) In the case only of an application for a resource consent, or water conservation order, or a requirement for a designation or heritage order, under the Resource Management Act 1991, to avoid serious offence to tikanga Māori, or to avoid the disclosure of the location of waahi tapu; or

(c) Protect information which is subject to an obligation of confidence or which any person has been or could be compelled to provide under the authority of any enactment, where the making available of the information would:

i. Be likely to prejudice the supply of similar information, or information from the same source, and it is in the public interest that such information should continue to be supplied; or

ii. Be likely otherwise to damage the public interest.

(d) Avoid prejudice to measures protecting the health or safety of members of the public; or

(e) Avoid prejudice to measures that prevent or mitigate material loss to members of the public; or

(f) Maintain the effective conduct of public affairs through the protection of such members, officers, employees, and persons from improper pressure or harassment; or

(g) Maintain legal professional privilege; or

(h) Enable any council holding the information to carry out, without prejudice or disadvantage, commercial activities; or

(i) Enable any council holding the information to carry on, without prejudice or disadvantage, negotiations (including commercial and industrial negotiations); or

(j) Prevent the disclosure or use of official information for improper gain or improper advantage.

LGOIMA, s 7.

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Under A2 (above) the public may be excluded unless, in the circumstances of a particular case, the exclusion of the public is outweighed by other considerations which render it desirable and in the public interest that the public not be excluded.

A3 That the public conduct of the whole or the relevant part of the proceedings of the meeting would be likely to result in the disclosure of information, the public disclosure of which would:

(a) Be contrary to the provisions of a specified enactment; or

(b) Constitute contempt of Court or of the House of Representatives.

A4 That the purpose of the whole or the relevant part of the proceedings of the meeting is to consider a recommendation made to that Council by an Ombudsman under section 30(1) or section 38(3) of this Act (in the case of a Council named or specified in Schedule 1 to this Act).

A5 That the exclusion of the public from the whole or the relevant part of the proceedings of the meeting is necessary to enable the Council to deliberate in private on its decision or recommendation in:

(a) Any proceedings before a Council where:

i. A right of appeal lies to any Court or tribunal against the final decision of the Council in those proceedings;

ii. The Council is required, by any enactment, to make a recommendation in respect of the matter that is the subject of those proceedings; and

iii. Proceedings of a local authority exist in relation to any application or objection under the Marine Farming Act 1971.

LGOIMA, s 48.

Appendix 2: Sample resolution to exclude the public

In accordance with section 48(1) of the Local Government Official Information and Meetings Act 1987 and the particular interest or interests protected by section 6 or section 7 of that Act (or sections 6, 7 or 9 of the Official Information Act 1982, as the case may be), it is **moved:**

1 that the public is excluded from:

- The whole of the proceedings of this meeting; *(deleted if not applicable)*
- The following parts of the proceedings of this meeting, namely; *(delete if not applicable)*

The general subject of the matters to be considered while the public is excluded, the reason for passing this resolution in relation to each matter, and the specific grounds for excluding the public, as specified by s 48(1) of the Local Government Official Information and Meetings Act 1987, are set out below:

Meeting Item No. and subject	Reason for excluding the public	Grounds for excluding the public
		To prevent the disclosure of information which would— i. be contrary to the provisions of a specified enactment; or ii. constitute contempt of court or of the House of Representatives (s.48(1)(b)).
		To consider a recommendation made by an Ombudsman (s. 48(1)(c)).
		To deliberate on matters relating to proceedings where: i. a right of appeal lies to a court or tribunal against the final decision of the councils in those proceedings; or ii. the council is required, by an enactment, to make a recommendation in respect of the matter that is the subject of those proceedings (s.48(1)(d)).
		To deliberate on proceedings in relation to an application or objection under the Marine Farming Act 1971 (s.48(1)(d)).

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Meeting Item No. and subject	Reason for excluding the public	Grounds for excluding the public
		To carry on, without prejudice or disadvantage, negotiations (including commercial and industrial negotiations) (s 7(2)(i)).
		To protect the privacy of natural persons, including that of deceased natural persons (s 7(2)(a)).
		To maintain legal professional privilege (s 7(2)(g)).
		To prevent the disclosure or use of official information for improper gain or advantage (s. 7(2)(j)).
		To protect information which if public would; i. disclose a trade secret; or ii. unreasonably prejudice the commercial position of the person who supplied or who is the subject of the information (s 7(2)(b)).
		To avoid serious offence to Tikanga Māori, or the disclosure of the location of waahi tapu in relation to an application under the RMA 1991 for; • a resource consent, or • a water conservation order, or • a requirement for a designation or • an heritage order, (s 7(2)(ba)).
		To protect information which is subject to an obligation of confidence where the making available of the information would be likely to: i. prejudice the supply of similar information, or information from the same source, where it is in the public interest that such information should continue to be supplied; or ii. would be likely otherwise to damage the public interest (s 7(2)(c)).

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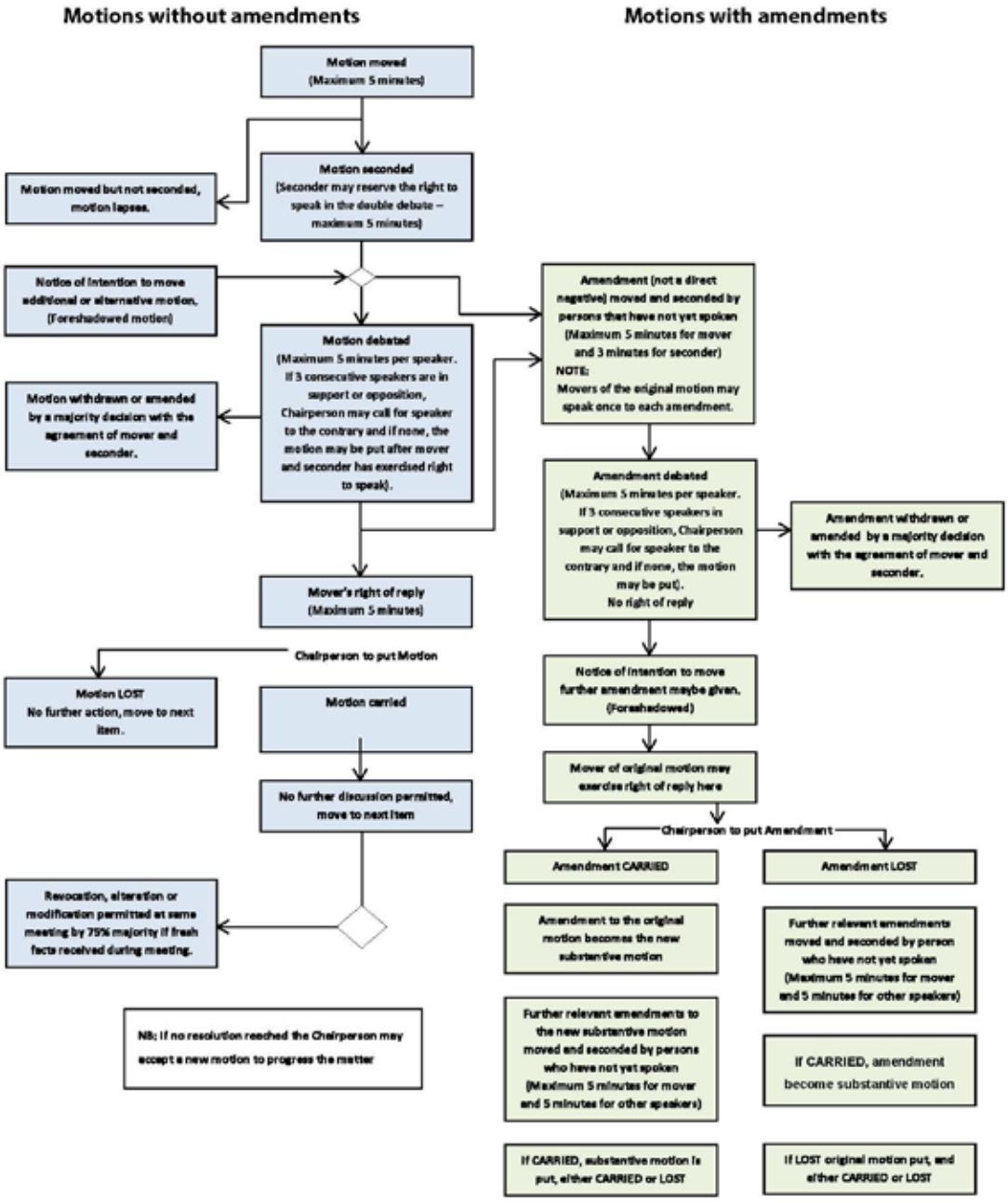
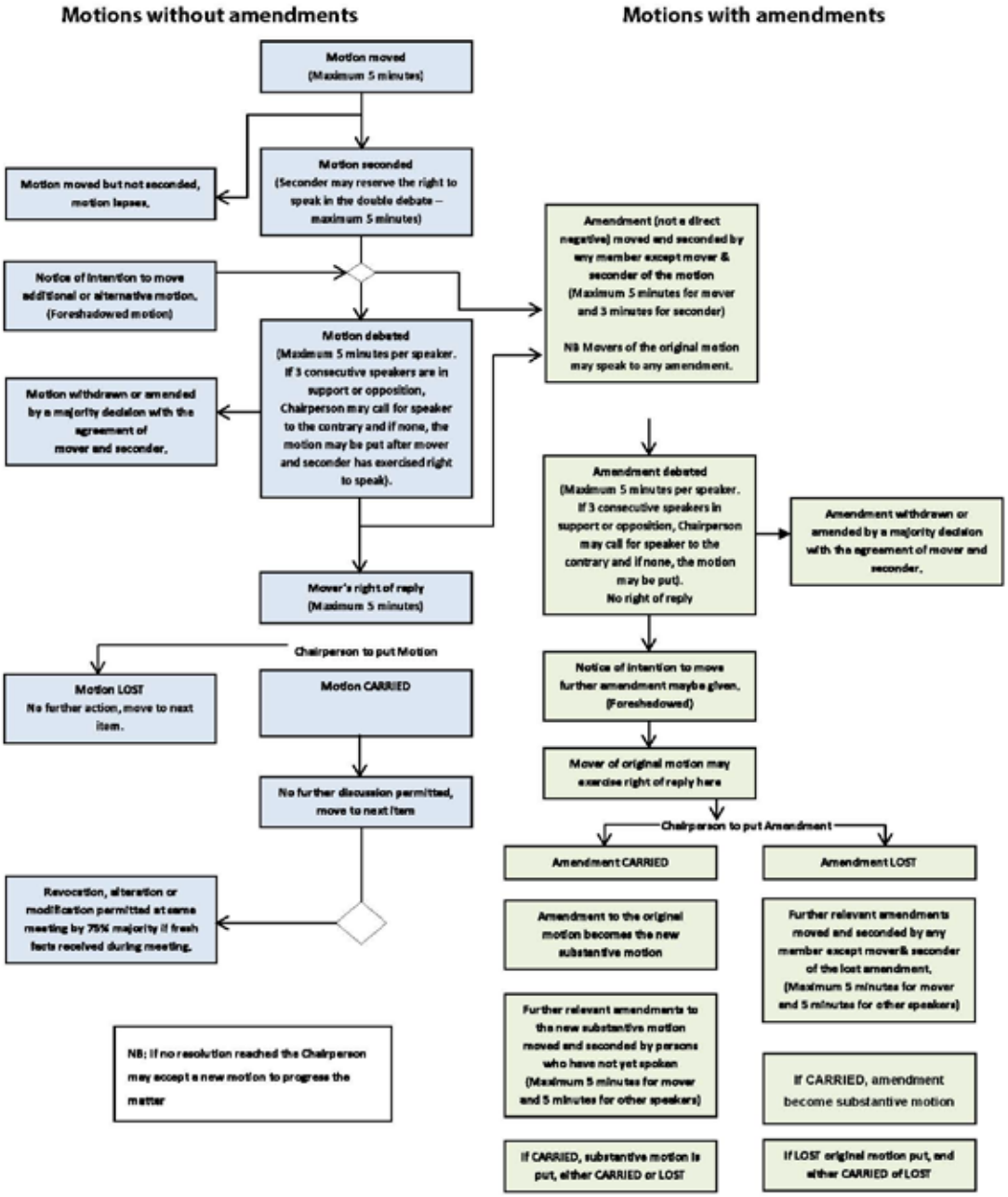
Meeting Item No. and subject	Reason for excluding the public	Grounds for excluding the public
		To avoid prejudice to measures protecting the health or safety of members of the public (s 7(2)(d)).
		To avoid prejudice to measures that prevent or mitigate material loss to members of the public (s 7(2)(e)).
		To maintain the effective conduct of public affairs by protecting members or employees of the Council in the course of their duty, from improper pressure or harassment (s 7(2)(f)(ii)).
		To enable the council to carry out, without prejudice or disadvantage, commercial activities (s 7(2)(h)).

2. That *(name of person(s))* is permitted to remain at this meeting after the public has been excluded because of their knowledge of *(specify topic under discussion)*. This knowledge, which will be of assistance in relation to the matter to be discussed, is relevant to that matter because *(specify)*. *(Delete if inapplicable.)*

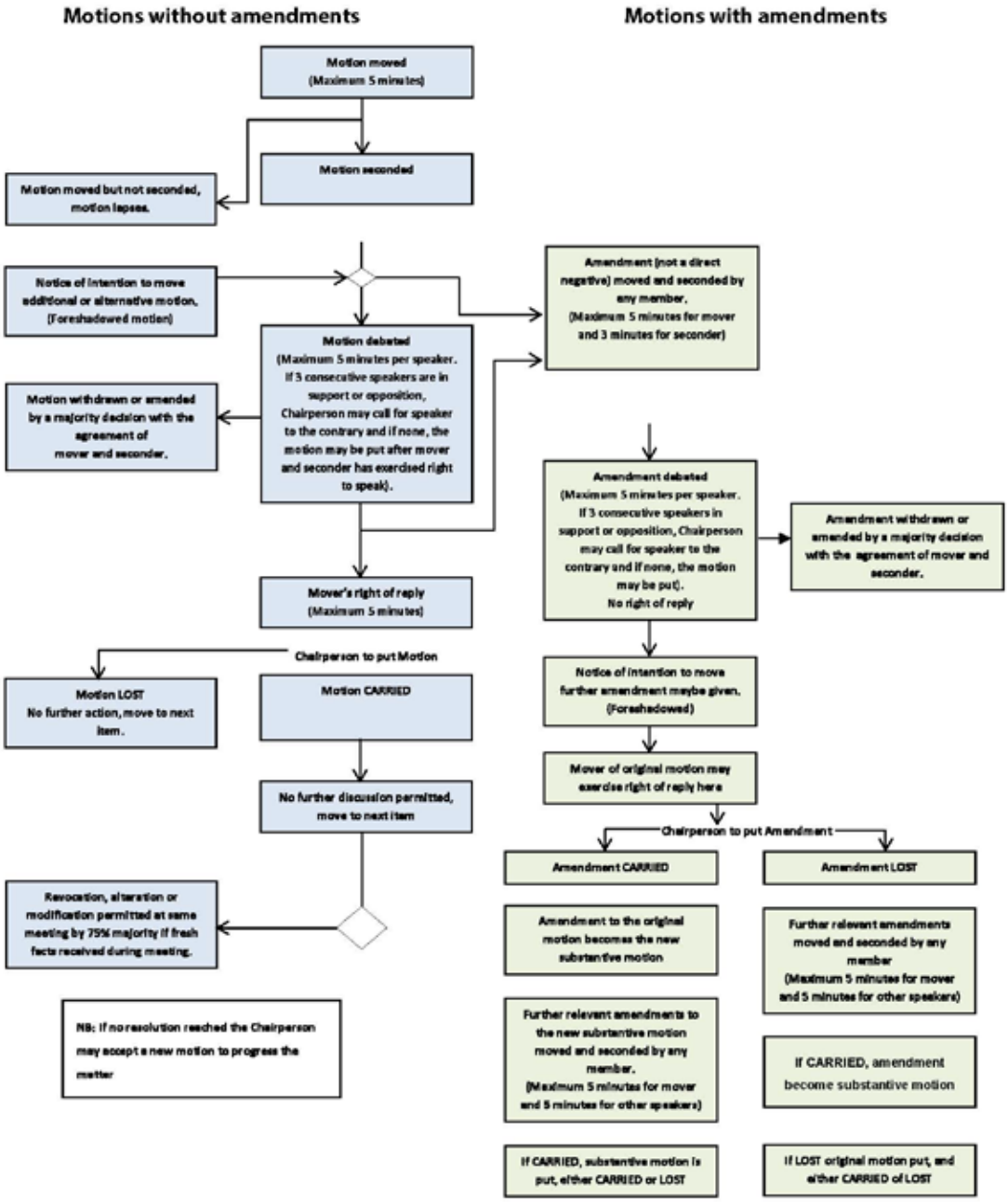
Appendix 3: Motions and amendments (Option A)



Appendix 4: Motions and amendments (Option B)



Appendix 5: Motions and amendments (Option C)



Appendix 6: Table of procedural motions

Motion	Has the Chair discretion to refuse this Motion?	Is seconder required?	Is discussion in order?	Are amendments in order?	Is mover of procedural motion entitled to reply?	Are previous participants in debate entitled to move this motion?	Can a speaker be interrupted by the mover of this motion?	If lost, can motion be moved after an interval?	Position if an amendment is already before the Chair	Position if a procedural motion is already before the Chair	Remarks
(a) "That the meeting be adjourned to the next ordinary meeting, or to a stated time and place'	No	Yes	No	As to time and date only	No	No	No	Yes – 15 minutes	If carried, debate on the original motion and amendment are adjourned	If carried, debate on the original motion and procedural motion are adjourned	On resumption of debate, the mover of the adjournment speaks first. Members who have spoken in the debate may not speak again
(b) "That the motion under debate be now put (closure motion)"	No	Yes	No	No	No	No	No	Yes – 15 Minutes	If carried, only the amendment is put	If carried, only the procedural motion is put	The mover of the motion under debate is entitled to exercise a right of reply before the motion or amendment under debate is put
(c) "That the item of business being discussed be adjourned to a stated time and place"	No	Yes	No	As to time and date only	No	No	NO	Yes – 15 minutes	If carried, debate ion the original motion and amendment are adjourned	If carried, debate on the original motion and procedural motion are adjourned	

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Motion	Has the Chair discretion to refuse this Motion?	Is seconder required?	Is discussion in order?	Are amendments in order?	Is mover of procedural motion entitled to reply?	Are previous participants in debate entitled to move this motion?	Can a speaker be interrupted by the mover of this motion?	If lost, can motion be moved after an interval?	Position if an amendment is already before the Chair	Position if a procedural motion is already before the Chair	Remarks
(d) "That the item of business being discussed does lie on the table and not be discussed at this meeting"	No	Yes	No	No	No	No	No	Yes – 15 minutes	If carried, the original motion and amendment are both laid on the table	Motion not in order	
(e) "That the item of business being discussed be referred (or referred back) to the local authority or to the relevant committee"	No	Yes	No	As to committee, time for reporting back etc only	No	No	No	Yes – 15 minutes	If carried, the original motion and all amendments are referred to the committee	If carried, the procedural motion is deemed disposed of	
(f) "Points of order"	No – but may rule against	No	Yes – at discretion of chairperson	No	No	Yes	Yes	No	Point of order takes precedence	Point of order takes precedence	See standing order 3.14

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Appendix 7: Webcasting protocols

The provisions are intended as a good practice guide to local authorities that are webcasting meetings or planning to do so.

1. The default shot will be on the chairperson or a wide-angle shot of the meeting room.
2. Cameras will cover a member who is addressing the meeting. Cameras will also cover other key participants in a meeting, including staff when giving advice and members of the public when addressing the meeting during the public input time.
3. Generally, interjections from other members or the public are not covered. However, if the chairperson engages with the interjector, the interjector's reaction can be filmed.
4. PowerPoint presentations, recording of votes by division and other matters displayed by overhead projector may be shown.
5. Shots unrelated to the proceedings, or not in the public interest, are not permitted.
6. If there is general disorder or a disturbance from the public gallery, coverage will revert to the chairperson.
7. Appropriate signage will be displayed both in and outside the meeting room alerting people that the proceedings are being web cast.

Appendix 8: Powers of a Chairperson

This Appendix sets out the specific powers given to the chairperson contained in various parts of these Standing Orders.

Chairperson to decide all questions

The Chairperson is to decide all questions where these Standing Orders make no provision or insufficient provision. The chairperson's ruling is final and not open to debate.

Chairperson to decide points of order (SO. 26.5)

The chairperson is to decide any point of order and may do so immediately after it has been raised or may first hear further argument before deciding. The ruling of the chairperson upon any point of order is not open to any discussion and is final. No point of order may be raised during a division except by permission of the chairperson.

Items not on the agenda (SO.9.12)

Major items not on the agenda may be dealt with at that meeting if so resolved by the local authority and the chairperson explains at the meeting at a time when it is open to the public the reason why the item was not listed on the agenda and the reason why discussion of the item cannot be delayed until a subsequent meeting.

Minor matters not on the agenda relating to the general business of the local authority may be discussed if the chairperson explains at the beginning of the meeting, at a time when it is open to the public, that the item will be discussed at that meeting, but no resolution, decision or recommendation may be made in respect of that item except to refer it to a subsequent meeting.

Chairperson's report (SO.9.6)

The chairperson, by report, has the right to direct the attention of the local authority to any matter or subject within the role or function of the local authority.

Chairperson's recommendation (SO.9.5)

The chairperson of any meeting may include on the agenda for that meeting a chairperson's recommendation regarding any item brought before the meeting. The purpose of such a recommendation is to focus debate on a suggested motion.

Chairperson's voting (SO19.3)

The chairperson at any meeting has a deliberative vote and, in the case of equality of votes, has a casting vote where Standing Orders make such provision.

Motion in writing (SO.23.2)

The chairperson may require the mover of any motion or amendment to submit it in writing signed by the mover.

Motion in parts (SO.23.3)

The chairperson may require any motion expressed in parts to be decided part by part.

Notice of motion (SO.27.2)

The chairperson may direct the chief executive to refuse to accept any notice of motion which:

(a) Is disrespectful or which contains offensive language or statements made with malice; or

(b) Is not within the scope of the role or functions of the local authority; or

(c) Contains an ambiguity or statement of fact or opinion which cannot properly form part of an effective resolution, and the mover has declined to comply with such requirements as the chief executive may have made; or

(d) Is concerned with matters which are already the subject of reports or recommendations from a committee to the meeting concerned.

Reasons for refusing a notice of motion should be provided to the proposer.

Where a notice of motion has been considered and agreed by the local authority, no notice of any other motion which is, in the opinion of the chairperson, to the same effect may be put again whilst such original motion stands.

Action on previous resolutions (SO.

If, in the opinion of the chairperson the practical effect of a delay in taking action on a resolution which is subject to a notice of motion, would be equivalent to revocation of the resolution; or if repetitive notices of motion are considered by the chairperson to be an attempt by a minority to frustrate the will of the meeting, action may be taken as though no such notice of motion had been given.

Repeat notice of motion (SO.27.7)

If in the opinion of the chairperson, a notice of motion is substantially the same in purport and effect to any previous notice of motion which has been considered and rejected by the local authority, no such notice of motion may be accepted within six months of consideration of the first notice of motion unless signed by not less than one third of the members of the local authority, including vacancies.

Revocation or alteration of previous resolution

A chairperson may recommend in a report to the local authority the revocation or alteration of all or part of any resolution previously passed, and the local authority meeting may act on such a recommendation in accordance with the provisions in these Standing Orders.

Chairperson may call a meeting

The chairperson:

(a) May call a meeting to dispose of the business to be transacted following the lapsing of a meeting due to failure of a quorum, if such business cannot be delayed until the next scheduled meeting; and

(b) May requisition an extra meeting to be held at a specified time and place, in order to conduct specified business.

Irrelevant matter and needless repetition (SO.21.8)

The chairperson's ruling preventing members when speaking to any motion or amendment from introducing irrelevant matters or indulging in needless repetition is final and not open to challenge.

Taking down words (SO.21.11)

The chairperson may order words used and objected to by any member, to be recorded in the minutes, provided such objection is made at the time the words are used and not after any other members have spoken.

Explanations

The chairperson may permit members to make a personal explanation in addition to speaking to a motion, and members who have already spoken, to explain some material part of a previous speech in the same debate.

Chairperson rising (SO.14.5)

Whenever the chairperson rises during a debate any member then speaking or offering to speak is to be seated and members are to be silent so that the chairperson may be heard without interruption.

Members may leave places (SO.14.6)

The chairperson may permit members to leave their place while speaking.

Priority of speakers (SO.14.7)

The chairperson must determine the order in which members may speak when two or more members indicate their wish to speak.

Minutes (SO.28.1)

The chairperson is to sign the minutes and proceedings of every meeting once confirmed. The chairperson and chief executive are responsible for confirming the correctness of the minutes of the last meeting of a local authority prior to the next election of members.

Questions of speakers (SO.16.3)

The chairperson may permit members to ask questions of speakers under public participation or deputations/presentations by appointment, for the purpose of obtaining information or clarification on matters raised by the speaker.

Withdrawal of offensive or malicious expressions (SO.20.3)

The chairperson may call upon any member to withdraw any offensive or malicious expression and may require the member to apologise for the expression.

Any member who refuses to withdraw the expression or apologise, if required by the chairperson, can be directed to withdraw from the meeting for a time specified by the chairperson.

Chairperson's rulings (SO.14.4)

Any member who refuses to accept a ruling of the chairperson, may be required by the chairperson to withdraw from the meeting for a specified time.

Disorderly behaviour (SO.20.4)

The chairperson may:

(a) Require any member or member of the public whose conduct is disorderly or who is creating a disturbance, to withdraw immediately from the meeting for a time specified by the chairperson.

(b) Ask the meeting to hold in contempt, any member whose conduct is grossly disorderly and where the meeting resolves to find the member in contempt, that resolution must be recorded in the minutes.

Failure to leave meeting (SO.20.6)

If a member or member of the public who is required, in accordance with a chairperson's ruling, to leave the meeting, refuses or fails to do so, or having left the meeting, attempts to re-enter without the permission of the chairperson, any member of the police or officer or employee of the local authority may, at the chairperson's request, remove or exclude that person from the meeting.

Audio or audiovisual attendance (SO.13.10)

Where the technology is available and a member is attending a meeting by audio or audio-visual link, the chairperson must ensure that:

(a) The technology for the link is available and of suitable quality; and

(b) Procedures for using the technology in the meeting will ensure that:

  i. Everyone participating in the meeting can hear each other;

  ii. The member's attendance by audio or audio-visual link does not reduce their accountability or accessibility in relation to the meeting;

  iii. The requirements of Part 7 of LGOIMA are met; and

  iv. The requirements in these Standing Orders are met.

If the chairperson is attending by audio or audiovisual link then chairing duties will be undertaken by the deputy chair or a member who is physically present.

Appendix 9: Process for removing a chairperson or deputy Mayor from office

1. At a meeting that is in accordance with this clause, a territorial authority or regional council may remove its chairperson, deputy chairperson, or deputy Mayor from office.
2. If a chairperson, deputy chairperson, or deputy mayor is removed from office at that meeting, the territorial authority or regional council may elect a new chairperson, deputy chairperson, or deputy mayor at that meeting.
3. A meeting to remove a chairperson, deputy chairperson, or deputy Mayor may be called by:
   (a) A resolution of the territorial authority or regional council; or
   (b) A requisition in writing signed by the majority of the total membership of the territorial authority or regional council (excluding vacancies).
4. A resolution or requisition must:
   (a) Specify the day, time, and place at which the meeting is to be held and the business to be considered at the meeting; and
   (b) Indicate whether or not, if the chairperson, deputy chairperson, or deputy Mayor is removed from office, a new chairperson, deputy chairperson, or deputy Mayor is to be elected at the meeting if a majority of the total membership of the territorial authority or regional council (excluding vacancies) so resolves.
5. A resolution may not be made and a requisition may not be delivered less than 21 days before the day specified in the resolution or requisition for the meeting.
6. The chief executive must give each member notice in writing of the day, time, place, and business of any meeting called under this clause not less than 14 days before the day specified in the resolution or requisition for the meeting.
7. A resolution removing a chairperson, deputy chairperson, or deputy Mayor carries if a majority of the total membership of the territorial authority or regional council (excluding vacancies) votes in favour of the resolution.

LGA 2002, sch 7, cl 18.

Appendix 10: Sample order of business

Open section

(a) Apologies
(b) Declarations of interest
(c) Confirmation of minutes
(d) Leave of absence
(e) Acknowledgements and tributes
(f) Petitions
(g) Public input
(h) Local and/or community board input
(i) Extraordinary business
(j) Notices of motion
(k) Reports of committees
(l) Reports of local and/or community boards
(m) Reports of the chief executive and staff
(n) Mayor, deputy Mayor and elected members' reports (information)

Public excluded section

(o) Reports of committees
(p) Reports of the chief executive and staff
(q) Mayor, deputy Mayor and elected members' reports (information)

Appendix 11: Process for raising matters for a decision

Matters requiring a decision at a meeting, may be placed on the meeting's agenda by a:

- Report of the chief executive;
- Report of the chairperson;
- Report of a committee;
- Report of a community or local board; or
- Notice of motion from a member.

Where a matter is urgent and has not been placed on an agenda, it may be brought before a meeting as extraordinary business by a:

- Report of the chief executive; or
- Report of the chairperson.

Although out of time for a notice of motion, a member may bring an urgent matter to the attention of the meeting through the chairperson.

Great South quarterly update to Southland District Council

Record no: R/24/10/63546
Author: Fiona Dunlop, Committee advisor
Approved by: Vibhuti Chopra, Acting chief executive/Group manager strategy and partnerships

☐ Decision ☐ Recommendation ☒ Information

Council will be receiving a quarterly update from Great South.

Recommendation

That the Council:

a) receives the report titled "Great South quarterly update to Southland District Council" and expresses it thanks for the update.

Attachments

There are no attachments for this report.

Adoption of Code of Practice for Subdivision, Land Use, and Development 2023 and Notification Proposed Plan Change 2

Record no: R/24/8/50326
Author: Ashton Mismash, Graduate environmental planner - policy
Approved by: Vibhuti Chopra, Acting chief executive/Group manager strategy and partnerships

☒ Decision ☐ Recommendation ☐ Information

Purpose

1 The purpose of this report is to seek Council to:

- adopt the Southland District Council and Invercargill City Council Subdivision, Land Use and Development Code of Practice 2023 as recommended by the hearing process held on Tuesday, 20 June 2023
- approve proposed plan change 2 to the Southland District Plan and the evaluation report for public notification.

Executive summary

2 A joint hearing panel has recommended that Southland District Council revoke the Subdivision, Land Use and Development Bylaw 2012 and adopt the Southland District Council and Invercargill City Council Subdivision, Land Use and Development Code of Practice 2023 (Code of Practice 2023). To implement this recommendation, Council initiated a plan change process to include the Code of Practice 2023 in the district plan by way of reference and to implement it through new and revised provisions within the District Plan.

3 The environmental policy team (the team) has met all requirements under the Resource Management Act 1991 (RMA or act) to publicly notify a proposed plan change. The team has prepared a plan change proposal in accordance with the requirements of Schedule 1of the RMA, and an evaluation report under Section 32 of the act. The final proposal incorporates feedback from stakeholders, mana whenua, and planning experts.

4 The complete package for the proposed plan change is ready for public notification through the formal process outlined in Schedule 1 of the Resource Management Act. Council adoption of the Code of Practice and authorisation to notify the plan change are required to proceed. Adopting the Code of Practice 2023 will allow the Team to propose a plan change based on a document developed in accordance with the Local Government Act 2002. Authorising the notification of the proposed plan change under Schedule 1 of the Resource Management Act will enable the team to follow necessary steps, ensuring regulatory compliance and providing for public participation. This will facilitate the successful implementation of the Code of Practice 2023 in the District Plan.

5 This report seeks Council's adoption of the Code of Practice for Subdivision, Land Use, and Development 2023 as recommended by the hearing panel and approval to notify the Proposed Plan Change to the Southland District Plan and the Evaluation Report under Schedule 1 of the Resource Management Act.

Recommendation

That the Council:

a) Receives the report titled "Adoption of Code of Practice for Subdivision, Land Use, and Development 2023 and Notification Proposed Plan Change 2 ".

b) Determines that this matter or decision be recognised as significant in terms of Section 76 of the Local Government Act 2002.

c) Determines that it has complied with the decision-making provisions of the Local Government Act 2002 to the extent necessary in relation to this decision; and in accordance with Section 79 of that Act determines that it does not require further information, further assessment of options or further analysis of costs and benefits or advantages and disadvantages prior to making a decision on this matter.

d) Adopts the Code of Practice for Subdivision, Land Use, and Development 2023.

e) Adopts proposed plan change 2 to the Southland District Plan and the Evaluation report prepared pursuant to Section 32 of the Resource Management Act 1991.

f) Approves proposed plan change 2 to the Southland District Plan and the Evaluation Report prepared pursuant to Section 32 of the Resource Management Act 1991 for public notification on 24 October 2024, for a period of no less than 20 working days.

g) Notes that the group manager strategy and partnerships and strategic planning and policy manager have delegated authority to amend the proposed plan change in accordance with Clauses 16(1) and 16(2) of the First Schedule to the Resource Management Act 1991, to make alterations of minor effect, or correct minor errors.

Background

6 On Thursday, 20 June 2023, a joint hearing panel recommended that the Southland District Council revoke the Subdivision, Land Use & Development Bylaw 2012 and adopt the joint Code of Practice for Subdivision, Land Use, and Development 2023 (Code of Practice 2023).

7 In response to these recommendations, Southland District Council (SDC) decided in December 2023 to initiate a limited review of the District Plan to implement the Code of Practice 2023. Since then, the environmental policy team has engaged with internal and external stakeholders (consultants and developers), mana whenua, and planning expert.

8 Currently, the environmental policy team (the team) has:

- completed the steps required by the RMA to include, by way of reference, the Code of Practice in the District Plan
- prepared proposed plan change 2 and an evaluation report in accordance with the relevant provisions of the RMA
- complied with all the requirements under the Resource Management Act to publicly notify a proposed plan change to implement the Subdivision, Land Use, and Development Code of Practice 2023 through the District Plan.

9 Essentially, the team has prepared a plan change proposal and its accompanying evaluation report. Both documents incorporate feedback from internal and external stakeholders, mana whenua, and planning experts as part of the pre-engagement process and the mandatory consultation under Clauses 3 and 4A of Schedule 1 of the RMA.

10 The proposed provisions include:

- the replacement of the existing citation to the bylaw 2012 with the new Code of Practice 2023
- significant changes in the subdivision section
- the addition of a new land development section
- changes to some zones provisions to facilitate effective implementation of the Code.

11 The evaluation report (s32) provides an assessment of the appropriateness of the proposed plan change, including the context of the plan change, the reasons for the change, and the objectives it aims to achieve. It also describes how the proposal aligns with national, regional, and local planning documents and policies, together with the consultation process with stakeholders, mana whenua, other feedback received, and potential environmental impacts of the proposed change.

12 The complete package for the proposed plan change is ready to be notified for public participation through the formal process outlined in Schedule 1 of the Resource Management Act. To proceed, Council adoption of the Code of Practice and authorisation to notify a plan change is required.

13 Council adoption of the Code of Practice 2023 referred to in the hearing panel recommendations will allow the team to propose a plan change on a document previously the subject of public consultation under the Local Government Act 2002. This means that the content of the Code of Practice is not open to submissions as part of the plan change process.

14 Council authorisation to notify a proposed plan change under Schedule 1 of the Resource Management Act will enable the team to progress with the necessary plan change steps, ensuring that the Council adheres to regulatory processes and general public participation. Furthermore, it will pave the way for the successful implementation of the Code of Practice 2023 in our District Plan.

Issues

15 Having prepared a revised Code of Practice, consulted on it under the relevant provisions of the Local Government Act 2002, heard and considered all feedback received, made amendments to the document, and now adopted it, the issue facing Council is how best to implement and give effect to the Code of Practice throughout the District.

16 Proposed plan change 2 is the only viable option for achieving proper implementation of, and giving effect to, the provisions of the Code of Practice 2023.

Factors to consider

Legal and statutory requirements

17 The current Subdivision, Land Use and Development Bylaw 2012 (Bylaw) expired in March 2023 as required by s159 Local Government Act 2002.

18 The essence of the proposed plan change is to incorporate into the District Plan by reference the new Code of Practice, which will bring its implementation under the RMA legal framework.

19 Replacing the bylaw with the new Code of Practice means that subdivision, land use and development processes will only be enforceable under the RMA process (District Plan).

Community views

20 Developers and consultants supported and participated in the creation of the Code to align Invercargill City and Southland District Councils in a unique document for engineering standards. These groups have also participated in the development of the plan change to incorporate the new Code of Practice as a reference document.

21 Southland District Council stakeholders (staff) supported and participated in the creation of the Code to align Invercargill City and Southland District Councils in a unique document for engineering standards. Southland District Council stakeholders (staff) have also been engaged in developing the SDC plan change to incorporate the new Code of Practice as a reference document.

22 Mana whenua has been engaged in a pre-engagement process and regulatory consultation.

Costs and funding

23 The costs of the plan change process are covered by the Council's pre-approved funding, as well as the environmental policy team's staff time and budget allocations. Additional support for this process will be provided by other Southland District Council teams through the contribution of their staff time.

24 The costs associated with the process following the implementation of the changes to the district plan will be identified subsequent to the required consultation process.

Policy implications

25 If Council opts not to adopt the Code of Practice 2023 and notify proposed plan change 2, the current plan change process would fail to meet the legislative requirements stipulated by the Resource Management Act. This would consequently hinder the Council's ability to regulate and

enforce engineering standards following the revocation of the current bylaw in March 2025. As a result, standards for stormwater, wastewater, and landscaping would become unenforceable.

Analysis

Options considered

26 The options to consider involve the adoption of the Code of Practice for Subdivision, Land Use, and Development 2023, as recommended by the hearing process held on Tuesday, 20 June 2023, and the approval of proposed plan change 2 to the Southland District Plan and the evaluation report for public notification.

27 Option 1 – Council adopts the Southland District Council and Invercargill City Council Subdivision, Land Use and Development Code of Practice 2023 and approves the proposed plan change 2 to the Southland District Plan and the evaluation report for public notification.

28 Option 2 – Council decides not to adopt the Southland District Council and Invercargill City Council Subdivision, Land Use and Development Code of Practice 2023, nor approves the proposed plan change 2 to the Southland District plan and the evaluation report for public notification.

Analysis of Options

Option 1 – Adopt the Code of Practice 2023 and approve public notification of the Proposed Plan Change 2

Advantages	*Disadvantages*
· Council will meet the statutory requirements relating to a proposal to change a plan under the RMA · Council will ensure that the decision-making process is open and transparent · Council will allow for community input and engagement, giving everyone a voice and the chance to be involved in the plan change process · feedback from the public can provide valuable insights and perspectives that may not have been considered, leading to more informed and balanced decisions · notification and involvement can help identify and address potential conflicts or concerns before they escalate · Council will propose amendments to the District Plan in a fair and effective representation of communities' views · Council will be able to enforce minimum standards for three-waters, roading, network utilities, and infrastructure through the provisions of the RMA.	· none identified.

Option 2 – Council decides not to adopt the Code of Practice or/and nor to approve Proposed Plan Change 2 to the Southland District Plan and the Evaluation Report for public notification.

Advantages	*Disadvantages*
· None identified.	· Council will fail to meet the legislative requirements stipulated by the Resource Management Act for plan change processes · Council will not able to regulate and enforce engineering standards following the expiration of the current bylaw in March 2025 · As a result, standards for three-waters, roading, network utilities, and infrastructure would become unenforceable.

Assessment of significance

29 The decisions in this report are significant in relation to Southland District Council's Significance and Engagement Policy and the Local Government Act 2002. The level of significance was determined by:

- how much does the matter promote Council's community outcomes for the Southland district? – *Significant importance.*
- does the matter impact the levels of service for any Council activity (as set out in the long term plan)? *Moderate importance.*
- does the matter align with existing Council strategies, plans and policies and previous Council decisions? – *Significant importance.*
- how are people impacted by the matter? Are particular groups experiencing inequities? (such as socio- economic groups, different communities)? - *Some importance.*
- does the matter mitigate or help the district adapt to climate change? - *Some importance*.
- how big are the financial costs for the matter? - *Moderate importance.*
- are they already budgeted for? Is the matter reversible? Are the public interested in the matter? – *Significant importance*.

30 It is recognized that a future proposed plan change 2 in this area could:

- positively affect development, subdivision, and land use activity
- impact the construction and maintenance of council strategic assets and infrastructure
- generate moderate public interest in the matter related to this report
- attract significant interest from consultant developers in the matter related to this report
- incur potential costs and changes in achieving customer attention processes in the areas related to this report.

Recommended option

31 Option 1 – Council adoption of the Code of Practice for Subdivision, Land Use, and Development 2023 and the approval of proposed plan change 2 to the Southland District Plan and the evaluation report for public notification.

Next steps

32 If Council adopts recommended Option 1 of this report, the environmental policy team will publicly notify the proposed plan change 2 on 24 October 2024 under Schedule 1 of the Resource Management Act). The post-notification process generally involves the following key steps:

- submission: A period of no less than 20 working days for the public to make written submissions on the proposed plan change, providing an opportunity to support, oppose, or request modifications.
- further Submission: A period of 10 working days for making further submissions, allowing specified people to respond to the initial submissions either in support or in opposition
- hearing: A hearing is held where submitters can present their views in person. The hearing panel considers all submissions and evidence.
- decision: The hearing panel's recommendations and reasons will be presented to the Council, which will then decide whether to accept or reject those recommendations. This decision is then publicly notified.

Attachments

A Southland District Council and Invercargill City Council Subdivision, Land Use and Development Code of Practice 2023
B Proposed Plan Change 2
C Section 32 Evaluation Report Plan Change 2

Southland District Council and Invercargill City Council

Subdivision, Land Use, and Development

Code of Practice 2023

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Foreword

The purpose of this Code of Practice (CoP) is to set out how to manage and regulate Subdivision, Land Use, and Development within the Southland District and Invercargill City.

This CoP seeks to ensure that subdivision, land use and development within the Southland District and Invercargill City takes place in a manner which is environmentally, socially and culturally sustainable whilst balancing the need to be technically robust.

This robustness is very important in order to ensure works undertaken in new developments are durable and future focused, will not impose costs (both environmental and financial) and difficulties onto future generations, nor expose Southland District Council or Invercargill City Council and its communities to undue future liabilities and costs.

This CoP supersedes the Southland District Council Subdivision and Land Development Bylaw 2012, and the Invercargill City Council Code of Practice for Land Development and Subdivision Infrastructure Bylaw 2016.

Section 1. Introduction

1.1 General

The CoP is a document that sets out network asset design and construction requirements for the Southland District and Invercargill City.

These requirements will aid council in achieving the objectives and levels of service as set out in the Long Term Plans and Resource Management Plans.

1.2 Purpose

It is intended to provide consistent minimum standards and guidance for assets that council will accept as part of its network. This includes requirements suitable for ongoing operations and maintenance of these assets. It also includes requirements relevant to network assets which will remain in private ownership but connect to public assets.

1.3 Relationship with Ngāi Tahu ki Murihiku

The Invercargill City Council and Southland District Council acknowledge and respect Ngāi Tahu ki Murihiku as Rangatira over the Murihiku takiwā, having rights and responsibilities to protect the environment "mō tātou, ā mō ka uri, ā muri ake nei" – for us and our children after us.

Ngāi Tahu ki Murihiku is made up of four Papatipu Rūnanga being Te Rūnanga o Awarua, Te Rūnanga o Hokonui, Te Rūnanga o Oraka Aparima and Waihopai Rūnaka, who hold equally, mana whenua and kaitiaki status over the takiwā. Ngāi Tahu ki Murihiku will bring a depth of knowledge, experience and values which will expand the knowledge base of infrastructure providers and invariably strengthen this CoP.

Across infrastructure planning and design, users of this CoP are encouraged to adopt a partnering approach with mana whenua to ensure Ngāi Tahu ki Murihiku values and aspirations are accurately reflected within infrastructure project planning from inception. This collaborative approach will result in outcomes that have the greatest benefit for all whom it is designed to serve, unlocking economic, environmental, social and cultural benefits.

Te Tangi a Tauira (The Cry of the People) is the Iwi Management Plan providing strategic planning directions important to Papatipu Rūnanga o Murihiku, with policies to guide users of this CoP.
The CoP is a document intended to evolve over time, and its relationship with the values and aspirations of Ngāi Tahu whānui will similarly evolve.

1.4 Relationship with the Building Act

The Building Act provides a national framework for building control to ensure that buildings are safe and sanitary and have suitable means of escape from fire. The Building Regulations made under the Act provide the mandatory requirements for building control in the form of the New Zealand Building Code. The Building Code contains the objective, functional requirements, and performance criteria that building works shall achieve.

Where the development of land and subdivision infrastructure involves the creation of structures with associated site works, including specific aspects of stormwater management and the interaction of buildings, fences, and walls with stormwater flows, the requirements of the Building Act shall be observed. Nothing in this Code of Practice shall detract from the requirements of the Building Act or the Building Code.

In some instances, and with the prior agreement of Council, certain works may be approved under the engineering approval process outlined in Section 3 in place of requiring a building consent.

1.5 Document Structure

The CoP document has been laid out with the following chapters:

1. Introduction
2. References and Abbreviations
3. General Requirements and Procedures
4. Earthworks and Geotechnical Requirements
5. Roads
6. Stormwater
7. Wastewater
8. Water Supply
9. Network Utility Services
10. Landscape
11. Community Facilities

Section 1 of this CoP outlines matters of general application and general requirements to be observed.

Section 2 lists the referenced documents and abbreviation for this CoP.

Section 3 to 11 of this CoP provides specific provisions on particular types of infrastructure to be provided.

The CoP also provides best practice land development and subdivision infrastructure techniques in low impact design, climate change, and urban design.

The provisions of this CoP does not reduce the responsibility of professionals to exercise their judgement and devise appropriate solutions for the particular circumstances of each development.

The Council standards as set out in this document are intended to reflect the minimum standard required by the Council. They should not be seen as a replacement for professional engineering design.

Section 2. References and Abbreviations

2.1 Referenced Documents

Reference is made in this CoP to the following documents. Where an Act or Standards document is referenced, this must be the current version including any associated amendments or applicable successor.

2.1.1 Local Planning Documents:

- Environment Southland (Southland Regional Council) - Regional Plans
- Invercargill District Council Code of Practice for Land Development and Subdivision Infrastructure Bylaw: 2016
- Southland District Plan: 2018
- Southland 10 year Long Term Plan: 2018 – 2028

2.1.2 New Zealand Standards

NZS 1170	Structural design actions
NZS 3104	Specifications for concrete production
NZS 3109	Concrete construction
NZS 3114:	Specification for concrete surface finishes
NZS 3116	Concrete segmental and flagstone paving
NZS 3121	Water and aggregate for concrete
NZS 3501	Specification for copper tubes for water, gas and sanitation
NZS 3604	Timber-framed buildings
NZS 4058	Specification for pre-cast concrete drainage and pressure and non-pressure pipes
NZS4121	Design for access and mobility: Buildings and associated facilities
NZS 4241	Public toilet
NZS 4402	Methods of testing soils for civil engineering purposes
NZS 4404	Land development and subdivision infrastructure
NZS 4431	Code of practice for earth fill for residential development
NZS 4442	Welded steel pipes and fittings for water, sewage and medium pressure gas
NZS 4501	Code of practice for the location and marking of fire hydrants
NZS 4522	Underground fire hydrants and surface box frames and fittings
NZS 5828	Playground equipment and surfacing
NZS 6803	Acoustics – Construction Noise
NZS 7643	Code of Practice for the installation of un-plasticised PVC pipe systems
NZS 8409	New Zealand standard for the management of agrichemicals
NZS 8630	New Zealand handbook – tracks and outdoor visitor structures
NZS/AS 1657	Fixed platforms, walkways, stairways and ladders. Design, construction and installation
NZS/BS 21	Pipe threads for tubes and fittings
NZS/BS 5163	Specification for predominantly key operated cast iron gate valves for water works purposes
SA/SNZ TS 1158.6	Lighting for roads and public spaces – Part 6 Luminaires – Performance
NZS 5828	Playground equipment and surfacing
SNZ PAS 4509	New Zealand Fire Service firefighting water supplies code of practice

2.1.3 Joint Australian/New Zealand Standards

AS/NZS 1100	Technical drawing: structural engineering drawing
AS/NZS 1158	Lighting for roads and public spaces AS/NZS 1254 PVC-U pipes and fittings for stormwater and surface water applications
AS/NZS 1260	PVC-U pipes and fittings for drain, waste and vent applications
AS/NZS 1477	PVC pipes and fittings for pressure applications
AS/NZS 1546	On-site domestic wastewater treatment units
AS/NZS 1547	On-site domestic wastewater management
AS/NZS 2032	Installation of PVC pipe systems
AS/NZS 2033	Installation of polyethylene pipe systems
AS/NZS 2041.4	Buried Corrugated Metal Structures - Helically formed sinusoidal pipes
AS/NZS 2280	Ductile iron pipes and fittings
AS/NZS 2544	Grey iron pressure fittings
AS/NZS 2566	Buried flexible pipelines
AS/NZS 2638	Gate valves for water works purpose – resilient-seated
AS/NZS 2890	Parking facilities
AS/NZS 3000	Electrical installations (Australian/New Zealand wiring rules)
AS/NZS 3500	Plumbing and drainage
AS/NZS 3518	Acrylonitrile butadiene styrene (ABS) compounds, pipes and fittings for pressure applications
AS/NZS 3690	Installation of ABS pipe systems
AS/NZS 3725	Design for installation of buried concrete pipes
AS/NZS 4793	Mechanical tapping bands for waterworks purposes
AS/NZS 3845	Road safety barrier systems
AS/NZS 3879	Solvent cements and priming fluids for PVC (PVC-U and PVC-M) and ABS pipes and fittings
AS/NZS 4020	Testing of products for use in contact with drinking water
AS/NZS 4058	Precast concrete pipes (pressure and non-pressure)
AS/NZS 4065	Concrete utility services poles
AS/NZS 4087	Metallic flanges for water works purposes
AS/NZS 4129	Fittings for polyethylene (PE) pipes for pressure applications
AS/NZS 4130	Polyethylene (PE) pipes for pressure applications
AS/NZS 4131	Polyethylene (PE) compounds for pressure pipes and fittings
AS/NZS 4158	Thermal-bonded polymeric coatings on valves and fittings for water industry purposes
AS/NZS 4331	Metallic flanges – Part 2: Cast iron flanges
AS/NZS 4441	Oriented PVC (PVC-O) pipes for pressure applications
AS/NZS 4676	Structural design requirements for utility services poles
AS/NZS 4677	Steel utility services poles
AS/NZS 4680	Hot-dip galvanized (zinc) coatings on fabricated ferrous articles
AS/NZS 4765	Modified PVC (PVC-M) pipes for pressure applications
AS/NZS 4793	Mechanical tapping bands for waterworks purposes
AS/NZS 4819	Rural and Urban Addressing
AS/NZS 4998	Bolted unrestrained mechanical couplings for waterworks purposes
AS/NZS 5065	Polyethylene and polypropylene pipes and fittings for drainage and sewerage applications

2.1.4 Australian Standards

AS 1579	Arc-welded steel pipes and fittings for water and wastewater
AS 1646	Elastomeric seals for water works purposes
AS 1741	Vitrified clay pipes and fittings with flexible joints - Sewer quality
AS 1906	Retroreflective materials and devices for road traffic control purposes
AS 2129	Flanges for pipes
AS 2200	Design charts for water supply and sewerage
AS 2638	Gate valves for waterworks purposes – Resilient seated
AS 2700	Colour Standards for general purposes
AS 2870	Residential slabs and footings - Construction
AS 3571	Plastics piping systems - Glass-reinforced thermoplastics (GRP) systems based on unsaturated polyester (UP) resin
AS 3572	Glass filament reinforced plastics
AS 3681	Application of polyethylene sleeving for ductile iron piping
AS 3996	Access covers and grates
AS 4181	Stainless steel clamps for water purposes
AS 4702	Polymeric cable protection covers

2.1.5 British Standards

BS EN 295:	Vitrified clay pipes and fittings and pipe joints for drains and sewers
Part 1	Requirements
Part 2	Quality control and sampling
Part 3	Test methods
Part 4	Requirements for special fittings, adaptors and compatible accessories
Part 6	Requirements for vitrified clay manholes
Part 7	Requirements for vitrified clay pipes and joints for pipe jacking
Part 10	Performance requirements
BS EN 805	Water supply - Requirements for systems and components outside buildings
BS 3412	PE materials for moulding and extrusion

2.2 Other Publications

2.2.1 General

- Ministry for the Environment. New Zealand urban design protocol. Wellington: Ministry for the Environment 2005.
- Ministry for the Environment. National Environment Standard – Telecommunication Facilities. Wellington: Ministry for the Environment. 2016.
- Ministry of Justine. National guideline for crime prevention through environmental design in New Zealand. Wellington: Ministry of Justine.

2.2.2 Earthworks and Geotechnical Requirements

- BRANZ. *BRANZ Study Report 004, Assessment of slope stability at building sites*. BRANZ and Worley Consultants Ltd, 1987.
- Cook, D, Pickens, G A, and MacDonald, G. 'The role of peer review', Report by Crawford S A. *NZ Geomechanics News* (Dec 1995).
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- New Zealand Geotechnical Society Inc. 'Geotechnical issues in land development'. Proceedings of New Zealand Geotechnical Society Symposium, Hamilton, 1996.

2.2.3 Roads

- Auckland Regional Transport Authority (ARTA). *Bus stop infrastructure design guidelines.* Auckland: ARTA, 2009.
- Austroads codes and guides, 2009. (Subject to the relevant New Zealand supplement).
- Austroads. Guide to road design – Part 1-8: Austroads.
- Austroads. Guide to Pavement Technology Part 2: Pavement Structural Design, Austroads, 2019
- Austroads. Guide to traffic management - Part 8: Local area traffic management. Austroads, 2008.
- Austroads. Guide to Road Safety Part 6 Road Safety Audit, Austroads, 2019
- Austroads guide to bridge Technology Part 8: Hydraulic design of Waterway Structures, June 2019.
- Cement and Concrete Association of Australia. *Guide to residential streets and paths.* Cement and Concrete Association of Australia, 2004.
- Waka Kotahi New Zealand Transport Agency. – it is noted that many of Waka Kotahi guidelines and reference manuals are now online documents. https://www.nzta.govt.nz/
- *Bridge manual.* (SP/M/022) 2nd ed. Wellington: Waka Kotahi NZ Transport Agency, 2013.*Chipsealing in New Zealand*. Wellington: Waka Kotahi NZ Transport Agency Available at: https://www.nzta.govt.nz/resources/chipsealing-new-zealand-manual/chipsealing-in-new-zealand/
- *Cycle network and route planning guide.* Waka Kotahi NZ Transport Agency Available at
- Cycling network guidance - All updates | Waka Kotahi NZ Transport Agency (nzta.govt.nz)
- *Cycling standards and guidance – planning and design*. Wellington: Waka Kotahi NZ Transport Agency. Cycling standards and guidance | Waka Kotahi NZ Transport Agency (nzta.govt.nz)
- *Economic Evaluation Manual.* Waka Kotahi NZ Transport Agency. 2013. Available at: https://www.nzta.govt.nz/resources/economic-evaluation-manual
- *Pedestrian planning and design guide*. Wellington: Waka Kotahi NZ Transport Agency, 2009. Available at: http://www.nzta.govt.nz/resources/pedestrian-planning-guide/docs/pedestrian-planning-guide.pdf
- *Manual of Traffic Signs and Markings (MOTSAM) Part I – Traffic Signs & Part II – Markings.* Wellington: Waka Kotahi NZ Transport Agency, 2010
- *Traffic control devices manual.* Wellington: Waka Kotahi NZ Transport Agency. 2008
- Traffic control devices manual (TCD manual) | Waka Kotahi NZ Transport Agency (nzta.govt.nz)
- *Road safety audit procedures for projects* (Manual number TFM9). Wellington: Transfund New Zealand, 2013. Available at: https://www.nzta.govt.nz/resources/road-safety-audit-procedures.
- *RTS 11: Urban roadside barriers and alternative treatments.* Wellington: Land Transport Safety Authority, 2001. Available at: http://www.nzta.govt.nz/resources/road-traffic-standards/docs/rts-11.pdf
- RTS 14 '*Guidelines for facilities for blind and vision-impaired pedestrians.* Wellington: Waka Kotahi NZ Transport Agency, 2015. Available at: https://www.nzta.govt.nz/assets/resources/road-traffic-standards/docs/rts-14.pdf
- *RTS 18: New Zealand on-road tracking curves for heavy vehicles*. Wellington: Land Transport New Zealand, 2007. Available at: http://www.nzta.govt.nz/resources/road-traffic-standards/rts-18.html
- *Stormwater treatment standard for state highway infrastructure.* Wellington: Waka Kotahi New Zealand Transport Agency, 2010. https://www.nzta.govt.nz/resources/stormwater-management/stormwater-management/
- Waka Kotahi (NZTA) specifications (available at: http://www.nzta.govt.nz/resources/index.html)
  - B/2 Construction of Unbound Granular Pavement Layers
  - F/1 Earthworks Construction
  - F/2 Pipe Subsoil Drain Construction
  - F/3 Pipe Culvert Construction
  - M/1 Bitumen for Pavements
  - M/1-A Asphalt Binders

- M/4 Crushed Basecourse Aggregate
- M/6 Sealing Chip
- M/10 Dense Graded Asphaltic Concrete
- M/13 Adhesion Agents
- M/27 Stone Mastic Asphalt
- P/3 First Coat Sealing
- P/4 Resealing
- P/17 Bituminous Reseals
- P/33 Coloured Surfacing
- T/10 Skid Resistance Deficiency Investigation and Treatment Selection

- United Kingdom Department for Transport. *Manual for streets.* London: Thomas Telford Publishing, 2007.

- United Kingdom Transport Research Laboratory. *TRL661 - The manual for streets: evidence and research.* TRL, 2007.

2.2.4 Stormwater, Wastewater, and Water Supply

- Auckland Regional Council
  - Technical Publication No. 124 (TP124) *Low impact design manual for the Auckland region*, 2000.
  - Technical Report 2008-20 *Application of low impact design to brownfield sites*.
  - Technical Report 2009-83 *Integration of low impact design, urban design and urban form principles*
- Australasian Society for Trenchless Technology (ASTT). *Guidelines for horizontal directional drilling, pipe bursting, microtunnelling and pipe jacking*. Greenwood, Western Australia: ASTT, 2009.
- Austroads. *Guide to road design - Part 5: Drainage design*. Austroads, 2008.
- Hicks, D M, and Mason, P D. *Roughness characteristics of New Zealand rivers*. Wellington: Water Resources Survey, DSIR Marine and Freshwater, 1991.
- Janson, Lars-Eric. *Plastics pipes for water supply and sewage disposal*. 2003.
- Lamont, P. 'Metrication: Hydraulic data and formulae.' *Water Services* Volume 81, numbers 972/3/4 (Reprinted by Kent Meters Ltd, UK)
- Ministry for the Environment.
- *Coastal hazards and climate change - Guidance for local government.*
- Wellington: Ministry for the Environment, 2017.
- *Preparing for climate change - A guide for local government in New Zealand.*
- Wellington: Ministry for the Environment, 2008.
- *Preparing for coastal change - A summary of coastal hazards and climate change guidance for local government.*
- Wellington: Ministry for the Environment, 2017.
- *Preparing for future flooding - A guide for local government in New Zealand.*
- Wellington: Ministry for the Environment, 2010.
- *Tools for estimating the effects of climate change on flood flow - A guidance manual for local government in New Zealand.* Wellington: Ministry for the Environment, 2010.
- Ministry of Health. *Drinking-water standards for New Zealand 2005 (Revised 2018)*. Wellington: Ministry of Health, 2018.
- Ministry of Business, Innovation & Employment. NZ Building Code – E1, B2, G13, G14, and associated acceptable solutions and verification methods. Wellington: Ministry of Business, Innovation & Employment. 2019
- Najafi, M. *Trenchless technology - Pipeline and utility design, construction, and renewal*. McGraw-Hill, 2005.
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- Stein, D. *Trenchless technology for installation of cables and pipelines*. Germany: Stein & Partner, 2005.

- Uni-Bell. *Handbook of PVC pipe.* 4th ed. Dallas: Uni-Bell PVC Pipe Association, 2001.
- Underground Utilities – Seismic Assessment and Design Guidelines and associated Technical Note 15 – Manhole Flotation
- Water New Zealand. *NZ Infiltration and Inflow Control Manual. 2rd Edition,* 2015.
- Water New Zealand. *New Zealand Gravity Pipe Inspection Manual 4rd edition*. 2020.
- Water New Zealand. Drinking Water Standards for New Zealand. 2018.
- Water Services Association of Australia (WSAA):
    - WSA 02-2014 Gravity Sewerage Code of Australia
    - WSA 03-2011 Water Supply Code of Australia
    - WSA 04-2005 Sewage Pumping Station Code of Australia
    - WSA 06-2008 Vacuum Sewerage Code of Australia
    - WSA 07-2007 Pressure Sewerage Code of Australia

2.2.5 Network Utility Services

- Department of Labour. *Guide for safety with underground services*. Wellington: Department of Labour, 2002.
- NZ Electricity Code of Practice. Current and voltage ratings.
- New Zealand Utilities Advisory Group (NZUAG). *National code of practice for utilities' access to the transport corridors.* Wellington: NZUAG, 2019.

Note - The NZUAG code of practice is an interim measure until a national code of practice is approved under the Utilities Access Act 2010.

2.2.6 New Zealand Legislation

The provisions of this CoP shall be read subject to the provisions of regional and District Plans and to any applicable statutes, regulations, bylaws, and any subsequent amendments, including (but not limited to):

- Building Act 2004, Building Regulations, and New Zealand Building Code (NZBC) 1992
- Civil Defence Emergency Management Act 2002
- Civil Defence Emergency Management Amendment Act 2016
- Conservation Act 1987
- Electricity Act 1992
- Electrical safety regulations 2009
- Housing Accords and Special Housing Areas Act 2013
- Health and Safety at Work Act 2015
- Health (Drinking Water) Amendment Act 2007
- Heritage New Zealand Pouhere Taonga Act 2014
- Infrastructure (Amendments Relating to Utilities Access) Act 2010
- Land Transfer Act 2017
- Land Transport Rule (Traffic Control Devices) 2004
- Local Government Act 1974 and Local Government Act 2002
- Property Law Act 2007
- Reserves Act 1977
- Resource Management Act 1991
- Unit Titles Act 2010
- Utilities Access Act 2010

2.3 Related Documents

When interpreting this CoP it may be helpful to refer to other documents, including but not limited to:

2.3.1 General

- Ministry for the Environment. *Climate change effects and impacts assessment - A guidance manual for local government*. 2nd ed. Wellington: Ministry for the Environment, 2008.

- Climate Change Projections for New Zealand: Atmospheric projections based on simulations undertaken for the IPCC 5th Assessment 2nd edition, MfE, 2018
- National Climate Risk Assessment for New Zealand, 2020
- National Adaptation Plan, Ministry for the Environment, 2022
- Interim guidance on the use of new sea-level rise projections, Ministry for the Environment, 2022
- Te hau mārohi ki anamata Towards a productive, sustainable and inclusive economy AOTEAROA NEW ZEALAND'S FIRST EMISSIONS REDUCTION PLAN, Ministry for the Environment, 2022

2.3.2 Earthworks and Geotechnical Requirements

- Auckland Regional Council. Technical Publication No. 90 (TP90) *Erosion and sediment control: guidelines for land disturbing activities in the Auckland Region.* Auckland: Auckland Regional Council, 1999.
- Ministry for the Environment. *Planning for development of land on or close to active faults - A guideline to assist resource management planners in New Zealand.* Wellington: Ministry for the Environment, 2004.
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2.3.3 Roads

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- Ministry of Justice. *National guidelines for crime prevention through environmental design in New Zealand Part 1: Seven qualities of safer places, and Part 2: Implementation guide.* Wellington: Ministry of Justice, 2005.
- Ministry of Transport *Government policy statement on land transport funding 2012/12 - 2021/22.* Wellington: Ministry of Transport, July 2011.
- Ministry of Transport. *Safer journeys - New Zealand's road safety strategy 2010 - 2020.* Wellington: Ministry of Transport, 2010.
- National Code of Practice for Utilities, Access to the Transport Corridors.
- New Zealand Waka Kotahi Transport Agency
- *Traffic note 48 - Light vehicle sizes and dimensions: Street survey results and parking space requirements - Information.* Land Transport New Zealand, December 2004. Available at: http://www.nzta.govt.nz/resources/traffic-notes/docs/traffic-note-48.pdf
- *Manual of traffic signs and markings* (MOTSAM) Parts 1 - 4
- *Waka Kotahi (NZTA)* Code of practice for temporary traffic management (CoPTTM: Part 8 of the Traffic Control Devices manual (TCD Manual).
- *Waka Kotahi (NZTA) register of network standards and guidelines.* Wellington: Waka Kotahi (NZTA), 2020. Available at: http://www.nzta.govt.nz/resources/nzta-register-network-standards-guidelines/
- SNZ HB 44:2001 *Subdivision for people and the environment.* Wellington: Standards New Zealand, 2001.
- National Code of Practice for Utilities, Access to the Transport Corridors
- Concrete Masonry Association of Australia. *Concrete segmental pavements - Design guide for residential accessways and roads.* Sydney: Concrete Masonry Association of Australia, 2014.

2.3.4 Stormwater, Wastewater, and Water Supply

- Auckland Council. *On-site stormwater management manual.* Auckland: Auckland City Council, 2002.
- Auckland Council. *Soakage design manual.* Auckland: Auckland City Council, 2003.
- Auckland Council. *Stormwater management devices in the Auckland region.* Auckland Council guideline document, GD2017/001 (GD01)
- Auckland Council. Technical Publication No. 10 (TP10) *Design guideline manual stormwater treatment devices,* 2003.

- Auckland Council. Technical Publication No. 108 (TP108) *Guidelines for stormwater runoff modelling in the Auckland region*, 1999.
- Auckland Council. Technical Report TR2013/018: *Hydraulic Energy Management - inlet and outlet design for treatment devices*, 2013
- Auckland Council. *Water Sensitive Design for Stormwater*. March 2015 Guideline Document 2015/004
- Auckland Council. Technical Report TR2013/040: *Stormwater Disposal via Soakage*, 2013
- Christchurch City Council. *Waterways, wetlands and drainage guide - Part A: Visions and Part B: Design*. 2003.
- Environment Protection Authority (EPA) Victoria. *Maintaining water sensitive urban design elements*. Melbourne: EPA Victoria, 2008.
- Greater Wellington Regional Council. Fish friendly culverts. June 2003. Available at:
- http://www.gw.govt.nz/assets/council-publications/fishfriendlyculv.pdf
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- North Shore City Council. *Bioretention guidelines*. Takapuna: North Shore City Council, 2008.
- Puddephatt, J, and Heslop, V. *Guidance on an integrated process - Designing, operating and maintaining low impact urban design and development devices*. Landcare Research, July 2008.
- Sustainable urban drainage systems (SUDS) design manuals for countries in the United Kingdom
- Water sensitive urban design (WSUD) manuals from various Australian states and cities

2.3.5 Websites

Auckland Council	https://www.aucklandcouncil.govt.nz
Austroads	http://www.austroads.com.au
Ministry for the Environment	http://www.mfe.govt.nz
National Pest Plant Accord	http://www.biosecurity.govt.nz/nppa
Heritage New Zealand	http://www.heritage.org.nz
New Zealand Legislation	http://www.legislation.govt.nz
New Zealand Waka Kotahi Transport Agency	http://www.nzta.govt.nz/
Plastics Industry Pipe Association of Australia:	http://www.pipa.com.au
Trips Database Bureau	https://www.transportationgroup.nz/trips-database-bureau/
Water Services Association of Australia	http://www.wsaa.asn.au/

2.4 Definitions

For the purposes of this CoP, the following definitions shall apply:

Annual exceedance probability (AEP)	The probability of exceedance of a given occurrence, generally a storm, in a period of one year (1% AEP is equivalent to a 1 in 100 year storm).
Carriageway	That part of road corridor consisting of the traffic lanes, sealed shoulders and other sealed areas, sometimes defined between kerbs, including sealed parking and loading areas when provided within the carriageway.
Corridor Manager	Means,

	(a) In relation to a road (as defined in Section 315(1) of the Local Government Act 1974, and which includes State Highways and Government roads), the local authority or other person that has jurisdiction over the road. (b) In relation to a motorway (as defined in Section 2(1) of the Government Roading Powers Act 1989), the New Zealand Transport Agency. (c) In relation to railway land, the licensed access provider who controls access to the land.
Crime prevention through environmental design (CPTED)	Has a set of four principles: surveillance, access management, territorial reinforcement, and quality environments of the built environment. These CPTED principles lead to a reduction in the incidence and fear of crime as well as an improvement in the quality of life.
Developer	An individual or organisation having the financial responsibility for the development project. Developer may include the owner.
Developer's Professional Advisor/Designer	The person, appointed by the developer, who shall be responsible for: (a) The investigation, design and obtaining of approvals for construction. (b) Contract administration and supervision of construction. (c) Certification upon completion of construction.
Drinking water	As defined in the Health (Drinking Water) Amendment Act.
Dwelling unit	Any building or group of buildings, or part thereof used, or intended to be used principally for residential purposes and occupied, or intended to be occupied by not more than one household.
Earthworks	Any alteration to the contours, including the excavation and backfilling or recompaction of existing natural ground and the stripping of vegetation and topsoil .
Footpath	That part of any road or other area as is laid out or constructed by authority of Council primarily for pedestrians; and may include the edging, kerbing, and channelling of the road.
Freeboard	A provision for flood level design estimate imprecision, construction tolerances, and natural phenomena (such as waves, debris, aggradations, channel transition, and bend effects) not explicitly included in the calculations.
Geo-professional	A chartered professional engineer (CPEng) or an engineering geologist with recognised qualifications and experience in geotechnical engineering, and experience related to land development.
Ground	Describes the material in the vicinity of the surface of the earth whether soil or rock.
Independent qualified person (IQP)	A specialist approved by Council and having the appropriate skills and qualification to carry out specific procedures.
Local authority	As defined in the Local Government Act 2002 and includes territorial authorities and regional councils.

Low impact design	An approach to land development and stormwater management that recognises the value of natural systems in order to mitigate environmental impacts and enhance local amenity and ecological values.
Movement lane	That part of the formed and sealed road that serves the link function in a road. It may have a shared use for other activities such as walking, cycling, parking and play.
Network utility operator	Has the same meaning given to it by Section 166 of the Resource Management Act.
Owner	In relation to any land or interest in land, includes an owner of the land, whether beneficially or as trustee, and their agent or attorney, and a mortgagee acting in exercise of power of sale; and also includes the Crown, the Public Trustee, and any person, TA, board, or other body or authority however designated, constituted, or appointed, having power to dispose of the land or interest in land by way of sale.
Potable water	As defined in the Health (Drinking Water) Amendment Act.
Primary flow	The estimated surface water run-off specified to be managed by the primary stormwater system. This flow may be piped or contained within relatively narrow confines under public control by reserve or easement.
Private road	Any roadway, place, or arcade laid out within a district on private land by the owner of that land intended for the use of the public generally and has the same meaning given to it by Section 315 of the Local Government Act 1974.
Private way	Any way or passage over private land within the Southland District, or Invercargill City, the right to use which is confined or intended to be confined to certain persons or classes of persons, and which is not thrown open or intended to be open to the use of the public generally and includes any shared access or right of way and has the same meaning given to it by Section 315 of the Local Government Act 1974.
Receiving water	The water body that receives the discharge from the stormwater conveyance system and is usually a watercourse, stream, river, pond, lake, or the sea.
Road	Has the same meaning given to it by Section 315 of the Local Government Act 1974.
Road Reserve	The land vested for use as road, whether formed or not.
Secondary flow	The estimated surface water run-off in excess of the primary flow. In most cases this flow will be managed in an overland flow path or ponding area that is protected by public ownership or easement.
Stormwater	Rainwater that does not naturally percolate into the ground or evaporate, but flows via overland flow, interflow, channels, or pipes into a defined surface water channel, open watercourse, or a constructed infiltration facility.
Street	Has the same meaning as 'road' as defined by Section 315 of the Local Government Act 1974.
Surface water run-off	All naturally occurring water, other than subsurface water, which results from rainfall on the site or water flowing onto the site, including that flowing from a drain, stream, or river.

Survey plan	A survey plan under Section 2 of the Resource Management Act.
Swale	A constructed watercourse shaped or graded in earth materials and stabilised with site-suitable vegetation or rocks, for the safe conveyance and water-quality improvement of stormwater run-off.
Target operating speed	The desired maximum speed for motor vehicles identified by the designer to suit the land use context and road classification. This speed can be managed by physical and psychological devices such as narrowed movement lanes, reduced forward visibility, parking, slow points, build outs, leg lengths, chicanes, planting, landscaping, street furniture, and art works.
Territorial authority	A territorial authority (TA) defined in the Local Government Act 2002.
Vehicle crossing	Means the part of a vehicle access that starts where a driveway leaves the legal boundary of a property and continues until it meets the road carriageway.
Wāhi tapu	Means a place sacred to Māori in the traditional, spiritual, religious, ritual, or mythological sense.
Wastewater	Water that has been used and contains unwanted dissolved or suspended substances from communities, including homes, businesses, and industries.

2.5 Abbreviations

The following abbreviations are used in this CoP:

AADT/ADT	Annual Average Daily Traffic/Average Daily Traffic
ABS	acrylonitrile butadiene styrene
AEP	annual exceedance probability
AV	air valve
°C	degrees Celsius
CBD	central business district
CBR	California bearing ratio
CCTV	closed circuit television
CLS (SCL)	concrete lined steel (steel concrete lined)
CPTED	crime prevention through environmental design
DI	ductile iron
DN	nominal diameter under the pipe manufacturing standard
du	dwelling unit
ESA	equivalent standard axle
FAC	free available chlorine
FAR	floor-to-area ratio
FL	flange
FSL	finished surface level
GL	ground level
g/m3	grams per cubic metre
GRP	glass reinforced plastic
H	head (in metres)

Hr	hour
Ha	hectare
HDD	horizontal directional drilling
IQP	independent qualified person
Km	kilometre
km/hr	kilometres per hour
kPa	kilopascal
L	litre(s)
LA	local authority
LID	low impact design
M	metre
MDD	maximum dry density
MH	manhole or maintenance hole
min	minute(s)
MPa	megapascal
MS	maintenance shaft
m/s	metres per second
m3/s	cubic metres per second
Mm	millimetres
NAASRA	National Association of Australian State Road Authorities
NES	National Environmental Standard
NIWA	National Institute of Water and Atmospheric Research
NPS	National Policy Statement
NZBC	New Zealand Building Code
NZHPT	New Zealand Historic Places Trust
NZTA	Waka Kotahi NZ Transport Agency
OSH	Occupational Safety and Health
P	person
PE	polyethylene
PE 80B	polyethylene with minimum required strength (MRS) of 8 MPa as defined in AS/NZS 4130 and AS/NZS 4131
PE 100	polyethylene with MRS of 10 MPa as defined in AS/NZS 4130 and AS/NZS 4131
PF	peaking factor
PIPA	Plastics Industry Pipe Association of Australia Ltd
PN	nominal pressure class (maximum rated operating pressure)
PP	polypropylene
PRV	pressure reducing valve
PVC	polyvinyl chloride
PVC-U	unplasticised polyvinyl chloride
PVC-M	modified polyvinyl chloride
PVC-O	orientated polyvinyl chloride
RMA	Resource Management Act
RRJ	rubber ring joint
s.	section
Soc	socket
STP	specified test pressure
TA	territorial authority
TMS	terminal maintenance shaft

UV	ultraviolet
VC	vitrified clay
vpd	vehicles per day

Section 3. General Requirements and Procedures

3.1 Scope

Section 1 of this CoP outlines matters of general application and general requirements to be observed.

Schedules containing information to be provided in certificates or as-built plans are included within this section.

3.2 Infrastructure Development Process

3.2.1 General

The infrastructure development process is illustrated in a schematic flowchart including as-built process in Figure 1-1. This flowchart is intended for developer and relevant parties to understand the roles and responsibilities at each stage of the submission at a high level. The detailed requirements and procedures of each stage are listed in the following sections.

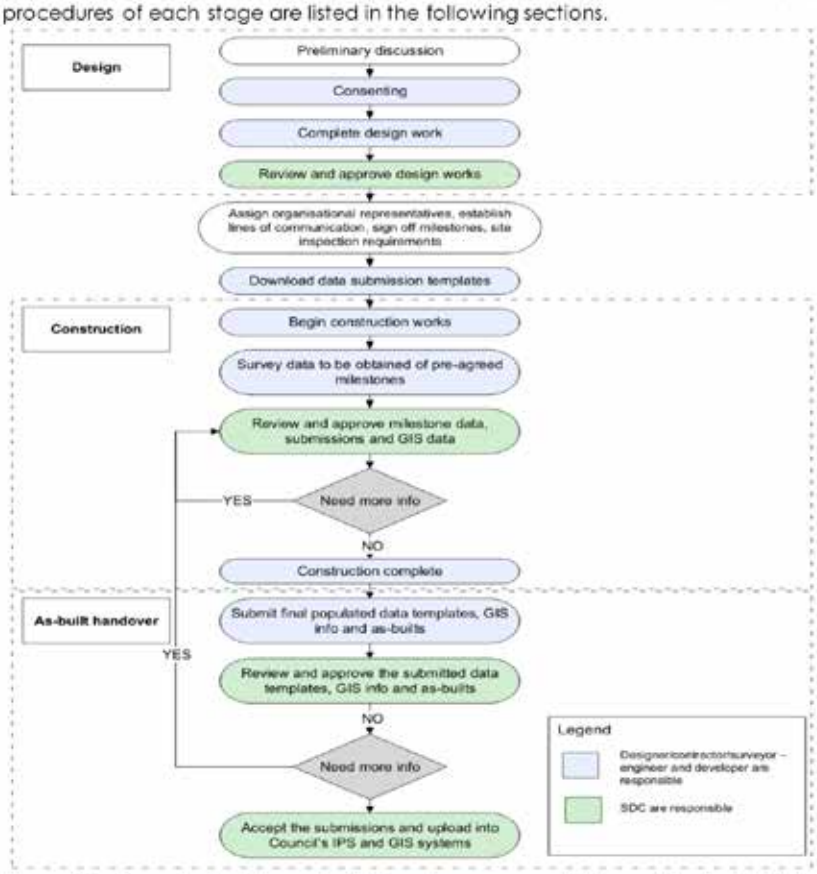


Figure 1-1: Flowchart of the as-built handover process (blue cells indicate tasks undertaken by the developer and other parties, green cells indicate tasks undertaken by Council)

The responsibility for the site-specific design rests on the Designer of the works. Suitable investigations depending on the nature of the works, the site conditions and circumstances shall be advised by the Designer.

The Designer will need to consider all risks to lifeline systems (Infrastructure) in the event of a natural disaster, including the potential effects of climate change.

3.2.2 Consenting

To apply a resource consent for subdivision or development of land, or as otherwise considered necessary by Council when considering applications to construct infrastructure, Council will require documents to be submitted as indicated in accordance with this CoP.

3.2.2.1 Landowner Consent

Where construction is required on another property, written evidence of the affected landowner's consent is required (proof of ownership shall be included within the documentation provided).

The Council will need to understand any proposed easement details at the design approval stage and at during the as built acceptance process.

3.2.3 Preliminary discussion

The Council encourages Designers and/or the Developers Advisor to meet with Council and other possible stakeholders, in the early stages of the design development to discuss any proposed works. The aim of these early discussions is to confirm how the development will meet the Council's standards and integrate with existing networks and infrastructure. These meetings being of a technical nature need suitably qualified and experienced designers to attend to guide their clients on the way forward.

As part of the preliminary discussions the developer shall start consultation with Council on matters such as:

- Vesting of Land
- Creation of Easements
- Landscape design and construction at an early stage of the design development. This is because the Council may seek input from the relevant Community Board or Community Development Area Subcommittee in relation to landscape issues, prior to its approval of any proposed landscaping.
- Stormwater systems including secondary flow paths shall be considered when landscape designs are determined, so as to avoid conflict or failure of these systems.

3.2.4 Design

3.2.4.1 Standard Design Basis

Proposals submitted on a standard design basis shall conform to this CoP.

3.2.4.2 Investigation

All investigation, calculations, design, supervision, and certification of the infrastructure outlined in this CoP shall be carried out by or under the control of persons who:

(a) Are experienced in the respective fields.
(b) Hold appropriate membership in the respective professional bodies or are recognised by the Council as having proven experience.
(c) Have appropriate professional indemnity insurance and public liability insurance.

3.2.4.3 Environment Southland (Southland Regional Council) Requirements

Environment Southland exercises control over infrastructure associated with land development and subdivision.

The requirements of relevant plans from Environment Southland on stormwater shall be met. Environment Southland requirements will generally be limited to effects of stormwater on the natural environment. Environment Southland's Regional Water Plan and their proposed Southland Water and Land Plan. Coastal Plan also apply.

Authorisation will be required from Environment Southland for the discharge of stormwater unless the discharge is to an existing and consented stormwater system and meets any conditions which apply to that existing system. Environment Southland's Stormwater Discharges Information Guide - January 2013 refers. Other activities often associated with stormwater infrastructure which need to be authorised by Environment Southland include: the diversion of natural water during construction, the permanent diversion of natural water as a consequence of the development, activities in the bed or on the banks of a natural waterway and damming of a waterway.

The discharge of clean stormwater and other activities where effects are considered minor may be authorised as a permitted activity subject to certain conditions in the Regional Plan. Authorisation may also be by way of a comprehensive consent held by Council for a particular areas or catchments.

In other circumstances site specific discharge permits and water permits shall be obtained. Advice should be sought from Environment Southland at the earliest stage of planning for stormwater infrastructure and receiving waters.

Discharge and temporary water permits required during construction shall be applied for by the developer and exercised in the name of the developer.

3.2.4.4 Catchment Management Planning

Stormwater management planning should be carried out on a sub-catchment or catchment-wide basis. Where the proposed development is in an area covered by an Environment Southland Water Plan / water and land plan, designers will be required to comply with the design philosophy in the plan.

If there is no catchment management plan for the area of the proposed development, the stormwater planning requirements should be discussed with Environment Southland at an early stage.

The implications of future development on adjoining land should be on the basis of replicating the pre-development hydrological regime whereby the maximum rate of discharge and peak flood levels post-development are no greater than pre-development.

3.2.4.5 Water Quality

Stormwater treatment devices will be required to avoid adverse water quality effects on receiving waters. The type of potential contaminants shall be identified and then treatment devices designed to address the particular issues. The need for treatment devices shall be considered for every discharge even when it is not a direct discharge to a receiving water, for instance where the discharge is to an existing network. In this instance specific approval from Council will be required.

3.2.4.6 Connection to the Public System

Where the connection of individual lots and developments (including lateral pipelines) are to the public system they shall meet the requirements in guideline and be approved by the Council.

All services within the boundaries of the road reserve shall be property of Council or other utility company once formally taken over by that organisation.

Unless specifically arranged otherwise and protected by an easement, services through privately owned allotments shall be the responsibility of the landowner.

3.2.4.7 Roading Design

Development design shall ensure connectivity to properties and roads that have been developed, or that have the potential to be developed in the future.

Unless otherwise approved by the Council through a resource consent decision, all new allotments shall have physical connections to power utilities.

3.2.4.8 Documents to Be Submitted For Design Approval

Prior to, or as a condition of, granting a resource consent for subdivision or development of land, or as otherwise required by a District or Regional Plan, or as otherwise considered necessary by Council when considering applications to construct infrastructure, Council will require documents to be submitted including the following:

(a) Design and construction documentation including drawings, specifications, and calculations for the following:

(i) Earthworks and geotechnical requirements;

(ii) Roading and site access including a design and access statement and a road safety audit. The Access Statement shall cover the relevant aspects listed in the CoP.

Road Safety Audit - Proposals that provide for new roads to vest in the Council shall be subject to the Waka Kotahi NZ Transport Agency Road safety audit procedures for projects unless the Council decides that audits are not required at any or all of the stages. The developer's professional advisor may recommend that audits are not required at any or all of the stages and complete an 'exemption declaration' as described in the procedures and submit it as part of the application process to be considered by Council. The 'exemption declaration' shall be prepared by a suitably qualified road safety auditor.

Safety audits shall cover all road users, including the needs of pedestrians, cyclists, and disabled/elderly users. Where appropriate, the requirements of these groups may demand specific audit procedures.

Future Development - Where existing and/or further subdivision, adjacent to the one under consideration, is provided for in the Southland District/Invercargill City or Environment Southland Regional plans, Council may require enhanced infrastructure to cater for that development.

(iii) Stormwater;

The approval process for land development and subdivision design and construction and documents and supporting information on stormwater drainage infrastructure to be provided at each stage of the process shall be in accordance with Section 1 of this CoP and to be approved by the Council. Specific information to be provided on any concept plans or scheme plans for development or subdivision incorporating stormwater infrastructure shall include details such as proposed capacities, storage, overland flow paths, structural details and the like.

Stormwater infrastructure requires approval from Council and unless Council holds a comprehensive, or network consent for the catchment, consents from the Regional Council to discharge, divert, or dam water will also be required.

In these circumstances it is good practice:

(a) To consult with the Council prior to consent application.

(b) To lodge applications with the Council at the same time so that land use and water-related resource consents can, if required, be dealt with at a joint hearing under Section 102 of the RMA.

(iv) Wastewater;

Wastewater infrastructure proposed in the subdivision requires approval from Council. Applications for design approval shall include the information outlined in Section 4 and Section 9 of this CoP.

If the scope of the development is sufficiently large to include its own pumping station, then reference should be made to WSA 04.

Structure Plan - Council may provide a structure plan setting out certain information to be used in design, such as flows, sizing, upstream controls, recommended pipe layout, or particular requirements of Council. Where a structure plan is not provided, the designer shall determine this information by investigation using this CoP and normal engineering principles.

Future Development – Where further subdivision, upstream of the one under consideration, is provided for in the district or regional plan, Council may require wastewater infrastructure to be constructed to the upper limits of the subdivision to provide for the needs of this development. Peak flows and cleansing velocities shall be taken into account when designing for additional latent capacity. All infrastructure proposed to service future development will require the approval of Council.

Pumping Stations - Pump stations to service new subdivision areas will be permitted only where there is prior agreement with Council on need and positioning. Pump stations shall meet the performance standards detailed in this CoP and any referenced documents.

(iv) Water supply;

Water supply infrastructure requires approval from the Council. Design drawings compatible with Council's requirements and the design parameters included in this CoP shall be provided to Council for approval.

The designer is responsible for all aspects of the water system design, excepting those aspects nominated and provided to the designer by Council. If the scope of the development is large and includes its own water source, treatment or reservoirs, reference shall be made to WSA 03.

Detailed plans and design calculations shall be submitted to Council. In addition the requirements outlined in this CoP shall be met.

Structure Plan - Council may provide a structure plan setting out certain information to be used in the design, such as flows, sizing, upstream controls, recommended pipe layout, or other particular requirements of the Council. Where a structure plan is not provided, the designer shall determine this information by investigation using the CoP and engineering principles and shall agree these parameters with Council prior to the design.

Future Development - Where further subdivision, adjacent to the one under consideration, is provided for in the Southland District/Invercargill City or Environment Southland Regional plans, Council may require water supply infrastructure to be sized and or installed to cater for such future development.

(v) Network Utility Services;

(vi) Landscape;

All proposed planting to be located within the publicly vested areas shall be agreed with Council prior to installation. So that the suitability ad long term maintenance implications can be assessed and agreed.

(vii) Community Facilities.

(b) A geotechnical engineers-professional's report on the suitability of the land for subdivision or development.

(c) Other reports as considered necessary by Council in the circumstances of the proposed infrastructure in order to meet the requirements of the CoP.

(d) Safety in Design register that records design decisions made through the planning and design process to mitigate health and safety risks during the investigation, construction, operation and maintenance, and demolition of the infrastructure.

(e) A design certificate in the form of the certificate in Schedule 2A.

3.2.4.9 Approval of Design

When it is satisfied that the design meets the requirements of this CoP, or in the case of an alternative design, that the design satisfies the requirements, Council shall notify the owner that the design has been approved and endorse the plans, specifications, and other documents accordingly.

For the purpose of this approval Council may require the owner to make amendments to any plans, specifications, and other documentation and to submit further or other reports. In considering project design and giving its approval, Council shall act without undue delay.

3.2.4.10 Alternative Design Basis

Proposals submitted on an alternative design basis may differ from this CoP and shall apply specifically to a particular proposal. Council approval of an alternative design does not confer approval in general by the Council to any design criteria, construction technique or material forming part of the alternative design.

An explanation of the design basis or construction method is to be submitted, for approval in principle. It will be considered on its merits and may be approved provided that the design results in infrastructural development equivalent or superior in performance to that complying with this CoP.

Alternative designs need to provide flexibility to meet the circumstances and requirements peculiar to the site, or as a means of encouraging innovative design, or to meet the principle of life-cycle costing.

3.2.4.11 Life-Cycle Costing

Life-cycle costing may be used to consider options within a proposal or a proposal as a whole. In undertaking a life-cycle costing, consideration shall be given to the initial costs borne by the developer and the maintenance and replacement costs borne by the future owners or Council. A reasonable balance shall be maintained between these short-term and long-term costs.

3.2.5 Datum and Coordinate Systems

All reduced level information shall be in metres in terms of the Council datum and shall be referred to a permanent benchmark identified on the plans. The Council vertical and horizontal datum is defined using:

- Southland District Council: New Zealand Vertical Datum 2016 (NZVD2016).
- Invercargill City Council: New Zealand Vertical Datum 2016 (NZVD2016) plus 100 metres above mean sea level.
- Southland District Council and Invercargill City Council: Horizontal coordinates in New Zealand Transverse Mercator 2000 (NZTM 2000) projection.

3.2.6 Drawings

3.2.6.1 General

Design drawings shall be prepared in accordance with Council's latest published practices/requirements. Except where otherwise notified, the requirements are as set out in this CoP.

All drawings shall be provided in the forms required by Council. Hand drawn plans or Hand drawn mark ups will not be accepted except for the smallest of projects.
Drawings should not contain any linked, embedded objects or external referencing.
Drawings shall be to adequate detail to clearly illustrate the proposals and enable assessment of compliance with this CoP and enable accurate construction.

3.2.6.2 Composition of drawings

Design drawings generally include the following:

a) A locality plan giving the overall layout and location.

b) Detailed plans, longitudinal sections, cross sections, and diagrams of the proposed developments.

c) Separate drawing sets for the various networks being constructed, e.g., – for roading, for car parks, for potable water, for stormwater and for wastewater.

d) Special details where the standard drawings are not sufficient.

e) A north point and level datum, the scale or scales used, the date of preparation and the date of any amendments, the designer's name and contact details, and a unique contract and drawing number or identifier.

3.2.6.3 Scale

The scale for plans is generally 1:500 but other accepted scales may be used to suit the level of detail on the plans. Special details shall be to scales appropriate for clarity.

3.2.6.4 Content of drawings

The following information when relevant shall be shown on the design drawings:

a) The extent of the construction showing existing and proposed roads, and the relationship with adjacent construction, services, or property.

b) Significant existing vegetation to be removed and any special or protected trees, areas of heritage significance, and existing water bodies that may be affected by the construction

c) The extent of earthworks, including earthworks on proposed reserves, existing and proposed contours, areas of cut and fill, batter slopes, subsoil drainage, and sediment control measures both temporary and permanent.

d) The design of proposed roads (and their connections with existing roads), including longitudinal and cross section plans, horizontal and vertical geometry and levels, typical cross sections, details of proposed pavement surface, kerbing, swales, berms, footpaths, cycle paths, tree planting, road marking and signals, and all other proposed road furniture.

e) The horizontal and vertical location and alignment, lengths, sizes, materials, minimum cover, position relative to other services of all proposed water, wastewater, and stormwater systems and service connections, valves, hydrants, manholes, bends, tees, meters and backflow devices, and services that may be reconnected or plugged, and any proposed overland stormwater flow path.

f) Details and location of mechanically restrained portions of pipelines, pipeline bridges, pumping stations, reservoirs, intake and outlet structures and the location of surface obstructions, hazards, or other features that may be affected by the construction.

g) For water mains, the nominal static pressure head at the point of connection and at the lowest point; design pressure and maximum design pressure.

h) Details and location of existing and proposed telecommunications, electricity and gas supply, and street lighting layout, including proposed underground and above ground junction boxes, transformers and similar equipment. This information is typically provided by the service authorities once other design drawings are finalised and approved

i) Details of proposed landscaping of roads and allotments, and details of proposed reserve development including earthworks, hydrological features, walkways and accessways, landscaping features, landscaping structures, tree planting, revegetation, hard and soft surface treatment, park and road furniture, and playground equipment.

j) The location of any natural waterways or wetlands within the site or in close proximity to a boundary. The location in plan and level of the water's edge and shoulder of the banks shall be indicated

k) Typical pre-existing and post development cross sections through any natural waterways or wetlands

l) The proposed proximity of buildings to the water's edge or the shoulder of the banks, or both.

m) Clear identification of the extent of any river, stream, or coastal floodplains on, or in close proximity to the site and overland flow paths within the site

n) Confirm the level datum is as defined within this document.

Applications for design approval shall include the information outlined in Section 3.2.4.8 of this CoP. In addition the following information shall be provided:

a) A plan showing the proposed location of existing and proposed stormwater infrastructure and flow paths.

b) Detailed long sections showing the levels and grades of proposed stormwater infrastructure in terms of the Council datum.

c) Details and calculations prepared which demonstrate that agreed levels of service will be maintained. All applications to develop within a flood plain shall be supported by detailed calculations and plans to determine the floodplain boundaries and building floor levels to meet the freeboard requirements in Section 6.3.6.1.

d) Details and calculations prepared which clearly indicate any impact on adjacent area or catchment that the proposed infrastructure may have.

e) Operations and maintenance guidelines for any water quantity and or quality control structures shall be submitted to Council for design approval along with other documents. The guidelines should describe the design objectives of the structure, describe all major features, explain operations such as recommended means of sediment removal and disposal, identify key design criteria, and identify on-going management and maintenance requirements such as plant establishment, vegetation control, and nuisance control.

3.2.7 Low Impact Design

Low impact design (LID) is both a design approach and a range of structural techniques that can be applied to urban development and stormwater management. As a design approach, LID provides an opportunity to identify and recognise natural features and integrate these into the design of development layouts in order to minimise environmental impacts or enhance natural features. The integration of natural processes in the design stage of a development can result in more attractive, multifunctional landscapes with greater social, environmental, cultural, and transport outcomes.

Low impact design solutions that use natural processes and add value to urban environments are the preferred approach.

3.2.8 Climate Change

Climate change is likely to increase the magnitude and frequency of some hazards, therefore it is important to incorporate risk management in the design of infrastructure supporting new developments to maintain the same level of service throughout the design lifetime. The design of infrastructure for land development and subdivision needs to provide for the impact of sea level rise and the increased frequency of extreme weather events especially storm water impacts. To this end requirements for stormwater design set out in Section 6 include requirements for climate change and define the storm events to be designed to for primary and secondary drainage systems.

Requirements for climate change with respect to sea level rise are specifically detailed in Section 6.3.6.2.

3.2.9 Urban Design Protocol

The New Zealand urban design protocol seeks to ensure that the design of buildings, places, spaces, and networks that make up our towns and cities, work for all of us, both now and in the future. Council

is a signatory to the New Zealand Urban Design Protocol. The New Zealand urban design protocol identifies seven essential design qualities for good urban design:

(a) Context: seeing that buildings, places, and spaces are part of the whole town or city.
(b) Character: reflecting and enhancing the distinctive character, heritage, and identity of our urban environment.
(c) Choice: ensuring diversity and choice for people.
(d) Connections: enhancing how different networks link together for people.
(e) Creativity: encouraging innovative and imaginative solutions.
(f) Custodianship: ensuring design is environmentally sustainable, safe, and healthy.
(g) Collaboration: communicating and sharing knowledge across sectors, professions, and with communities.

The New Zealand urban design protocol has been the primary influence on the urban layouts that are encouraged in this CoP.

3.2.10 Construction Phases

3.2.10.1 Pre-Construction

Construction shall not commence on site unless and until:

(a) Resource consents have been issued, except when no such consents are required.
(b) Council have approved any other consents and the drawings, specifications, and calculations for the specific infrastructure that is required in accordance with Section 3 of this CoP.

3.2.10.2 Notification of Construction Programme

The developer shall notify Council, in writing, of the names and addresses of contractors to whom it is proposed to award the contracts, and the nature of the construction in each case.

Unless Council requires otherwise, the developer shall notify Council in writing when the following phases of construction are reached and such other phases as the Council may determine to enable inspection to be carried out:

(a) Commencement of construction.
(b) Prior to concrete construction.
(c) Prepared earthworks and subsoil drainage prior to filling.
(d) Completed earthworks and prepared subgrade.
(e) Water, wastewater, and stormwater reticulation prior to backfilling.
(f) Water and wastewater reticulation during pressure testing.
(g) Finished basecourse before the commencement of road sealing.
(h) Disinfection of water mains.

At least 48 hours notice shall be given by the developer. Further construction phases shall not proceed until inspection has been made.

3.2.10.3 Construction

All construction carried out in any development shall be carried out by persons who:

(a) Have the appropriate experience in the relevant areas.
(b) Have the appropriate equipment.
(c) Have the appropriate public liability insurance.
(d) Meet the requirements of the Health and Safety in Employment Act.

3.2.10.4 Earthworks Construction

Earthworks shall be carried out to the standards detailed in the CoP.

The construction control testing shall be carried out by a testing laboratory or competent person under the control of a suitably qualified person or, where required by Council, a geo-professional, and to the recognised testing standards as deemed appropriate. The testing laboratory shall have recognised registration or quality assurance qualifications.

3.2.10.5 Stormwater Construction

The construction of pipelines shall be carried out in accordance with the requirements of AS/NZS 2032 (PVC), AS/NZS 2033 (PE), AS/NZS 2566 Parts 1 and 2 (all buried flexible pipelines), or AS/NZS 3725 (concrete pipes).

On site disposal of stormwater may be permitted where:
(a) No piped system is immediately available or will not be available within 10 years of the subdivision application.
(b) No piped system is available immediately adjacent or within a reasonable distance of the site.
(c) Where it is ground conditions are suitable, and it is appropriate to encourage low impact design for the management of stormwater.

For clarification of what constitutes a "reasonable distance" refer to Section 9.8 of this CoP.

Areas where construction has taken place shall be reinstated to the condition required by Council.

3.2.10.6 Wastewater Construction

The construction of pipelines shall be carried out in accordance with the requirements of AS/NZS 2032 (PVC), AS/NZS 2033 (PE), AS/NZS 2566 Part 1 and 2 (all buried flexible pipelines), AS/NZS 3725 (concrete pipes), or AS 1741 or BS EN 295 (VC).
Areas where construction has taken place shall be reinstated to a condition as required by Council.

3.2.10.7 Water Supply Construction

Excavation of existing carriageways shall conform to Council's road opening procedures where these exist. Excavation in existing carriageways shall be carried out in a safe manner with the minimum disruption to traffic and pedestrians.

3.2.10.8 Road Construction

Construction shall comply with the requirements of Council and as a minimum to the Waka Kotahi NZ Transport Agency standards set out in this CoP.

3.2.11 Documentation Held on Site

A full set of up to date approved drawings shall be maintained on site at all times. These drawings shall be made available to Council staff during site inspections.

3.2.12 Variations to the Approved Design

Should the approved design need amending in any way that impacts upon the principles of the approved design, the developer shall resubmit the revised design for approval and obtain that approval prior to construction.

3.2.13 Inspections and Hold Points

Throughout this CoP there are a number of construction points which require notification to Council in advance so that the works can be inspected. The developer shall treat these as hold points and shall not progress until such time that Council confirms acceptance or approval to proceed. To avoid delays

to the developers construction programme this requirement highlights the need to provide adequate notice (5 days preferable, 2 days absolute minimum).

3.2.14 Supervision of Construction

Council will require completion certification for construction and supervision be submitted to it on completion. Such certification may be required from the contractors undertaking the construction, or the developer, or the developer's professional advisor (if any). The certificates shall be in the form given in Schedules 2B and 2C in this CoP.

The level of supervision undertaken in connection with any construction shall be agreed between Council and the developer, or, if appointed, the developer's professional advisor or the IQP as the case may be, and shall be appropriate to the circumstances considering the size and importance of the project, the complexity of the construction, and the experience and demonstrated skill in quality management of the person undertaking the construction.

Council will require completion certification for construction and supervision be submitted to it on completion. The certificates shall be in the form given in Schedules 2B and 2C in the CoP. Such certification may be required from the contractors undertaking the construction, or the developer, or the developer's professional advisor (if appointed).

3.2.15 Connecting To Existing Services

Connection of water, wastewater, stormwater, and other services to existing systems will normally be carried out by the appropriate network utility operator at the cost of the developer, except that at the discretion of the network utility operator connections may be made by the owner, or contractor employed by the owner, if appropriately qualified and under the network utility operator's supervision. The developer shall give the network utility operator five working days notice of intention to connect to existing services. Where required, new services shall be tested and approved by the network utility operator prior to connection.

3.2.16 Inspection and Acceptance

Council may, at its discretion, also require a water test to be carried out. Such testing shall be carried out as specified in Section 8.7

3.2.17 Maintenance

The developer shall maintain the infrastructure until it is formally taken over by Council or to a date specified in a bond or consent condition for completion of uncompleted infrastructure. The developer shall not be responsible for damage caused by other activities (outside the developer's control) such as building construction by others or for fair wear and tear or vandalism caused by public use of the roads that have been taken over by Council or network authority.

3.2.18 Testing

Any infrastructure required to be tested and witnessed by Council/the utility operator shall be pre-tested and proved satisfactory by the developer before testing by the network utility operator is requested.

3.2.19 Reinstatement

Areas where construction has taken place shall be reinstated to the condition required by Council and shall be no less than the original condition pre-works.

3.2.20 Asset Handover Process

3.2.20.1 Completion documentation

On completion of all subdivision, land use and development infrastructure, as built data and information is required for submission to Council. Figure 3-2 presents high-level requirements for as-built asset data and the developer shall provide Council with the following:

a) The geotechnical reports and as-built plans required by Section 4.4 of this CoP.

b) As-built plans of all infrastructure showing the information set out in Schedule 2D. As-built plans will be required in an electronic format (as laid out in this document) for major subdivisions and shall be supplied in hard copy if requested by Council. The electronic data is to use the New Zealand Transverse Mercator (NZTM) co-ordinate system or the current standard co-ordinate system recognised by the governing body (LINZ).
   - If electronic data does not meet Council's format requirements or is deemed to be of inadequate quality, Council will return to the developer for error correction.

c) Evidence that all testing required by this CoP has been carried out and that the test results comply with the requirements of this CoP.

d) Evidence that reticulation and plant to be taken over by network utility operators have been installed to their standards and will be taken over, operated and maintained by the network utility operator concerned.

e) Design certificate as per Schedule 2A

f) An updated Safety in Design register. This should be an updated form prepared at the completion of design to indicate what risks have been closed out during the construction phase.

g) Completion certificates as per Schedules 2B and 2C.

h) Certification by a suitably qualified person where they have recommended a specific design and construction has been undertaken in accordance with that recommendation. The certification shall state that the suitably qualified person supervised the construction and it has been completed in accordance with the recommended design principles.

i) Other documentation required by Council including, but not limited to, operation and maintenance manuals, and warranties for new facilities involving electrical or mechanical plant, and asset valuations for all infrastructures to be taken over by Council.

More specific requirements on roads, 3 waters, and community resources are listed in the following sections.

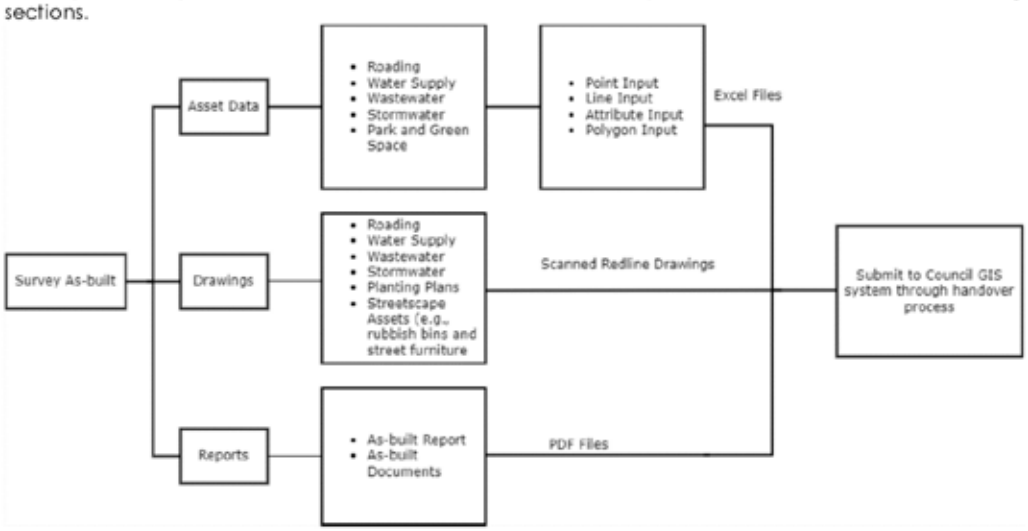


Figure 3-2. A diagram on the as-built data requirements for submission (high-level).

3.2.20.2 Roads

Roading specific tests are required for assets to be vested on the completion of the subdivision development or infrastructure build. The testing results are to be submitted to Council as part of the roading asset handover process. The list of required tests is presented in the Table 3-1. For assets that are not to be vested, developers shall provide a declaration to state that all CoP standards have been met.

Waka Kotahi will roll out a national RAMM database guideline in late 2022. Council will be adopting the updated national RAMM database guideline as a minimum requirement plus any other Council specific requirements.

Table 3-1. Test requirements for roads

Material Type	Testing Required	Test Method	Frequency of Testing
Design and site investigation	Subgrade CBR/test pits provided for any investigations undertaken to inform the design		
Roading Plans	Long section and cross sections etc		
Laboratory Tests			
Source properties (all granular materials, including sealing chip)	Weathering, Crushing	NZS 4407	1 test / source up to 48 months old
Subbase and Basecourse	Maximum Dry Density (NZ Vibrating compaction)	NZS 4402	1 test/source for each granular layer at minimum frequency of one test per 5,000m^2 of material laid frequency of one test per 5,000m^2 of material laid
Subbase	Particle Size Distribution, Sand Equivalent, Log-Log graph, The slope (n), Coefficient of Uniformity (Cu) & Curvature (Cc)	NZS 4407	Lots <2,000m^3 2 samples Lots >2,000m^3 2 samples Plus 1 sample for each additional 1,000m^3
Basecourse	Particle Size Distribution, % crushed faces, Sand Equivalent, Log-Log graph, The slope (n), Coefficient of Uniformity (Cu) & Curvature (Cc)	NZS 4407	Lots <1,000m^3 2 samples Lots >1,000m^3 2 samples Plus 1 sample for each additional 500m^3
Running Course	Particle Size Distribution, Sand Equivalent	NZS 4407	1 sample
Sealing Chip	ALD/AGD (Gr 2-4) only Particle Size Distribution Cleanness Value	NZS 4407 NZTA M06	Lots <100m^3 2 samples Lots 100-400m^3 3 samples Lots >400m^3 4 samples Plus 1 sample for each additional 100m^3
Sealing Chip	Polished Stone Value (PSV)	BS EN 1097-8 NZTA T/10	Per source
Field Tests			
Subbase	Field Dry Density – Nuclear Density Meter	NZS 4407 TNZ B/02	1 set of tests/1,000m^2 of surface area 0.5m lifts in culvert trenches
Construction Tolerances	Tolerances / Stringing	TNZ B/02	Every 20m

Concrete K&C and Footpaths	Slump and strength		
Basecourse	Field Dry Density – Nuclear Density Meter, (including field and oven water contents)	NZS 4407 TNZ B/02	1 set of tests/1,000m² of surface area
Basecourse	Benkelman beam	See Clause 5.4.9	Wheel path in both lanes at maximum interval of 10m
Surfacing	Spray sheets / Mix design	TNZ P/3 M/10 NZTA Z8:2020	NZTA Z8:2020 Minimum Standard for Inspection, Sampling and Testing
Underground services	description, as-builts, and photos		
Street lighting	all relevant information		
Site visit check lists	ITP		

3.2.20.3 3 Waters

The as-built handover documents for 3 waters infrastructure will include drawings, excel sheets and reports. These need to be based on site survey, georeferenced CAD or Shape files with coordinates and descriptions. Table 3-2 lists the requirements for 3 waters as-built asset information. Detailed requirements can be found in the "Southland District Council Infrastructure Assets Data Model Specification" (working draft).

The details of all pipes should include:

- Type
- Material
- Length
- Structural details (i.e. pressure class, stiffness rating & load rating)
- Diameter
- Off-set, segment and overall length dimensions should all correctly add up and agree once drawn into GIS.

Table 3-2. Requirements of as-built asset information for 3 waters assets

Excel Spreadsheet
▪ Coordinate system (NZTM 2000)
▪ Asset Type for each record
▪ XYZ/Northing Easting and Height coordinates
CAD Files
▪ Coordinate system (NZTM 2000)
▪ Well labelled objects
▪ Historic/abandoned pipes
▪ Legend with a breakdown of layers (e.g., 'Water_lateral', 'Water_Main', 'Water_Toby')
▪ Existing infrastructure and type of work (e.g., dug up, abandoned, replaced)
▪ New infrastructure clear and readable
▪ Parcels or reference for adding to Council system
As-built Report
▪ The date of construction
▪ Drain layers name, registration
▪ The address of the work
▪ Contract number, work order or purchase order

Excel Spreadsheet
▪ What/who this project/work was for and who the owners of the various assets that have been created are
▪ Existing infrastructure and type of work (e.g., dug up, abandoned, replaced)

3.2.20.4 Community Resources

Community resources includes community facilities, open space, water facilities, community services, and heritage and culture. Table 3-3 presents the requirements of asset handover for the community resource activities.

Table 3-3. Requirements of asset handover for community resource activities

Sub-activity	Land use and services	Requirements of asset handover
Community facilities	Community centre and halls	Treat as a building asset, for which the as-built information below should be collected: 1. As-built design drawings 2. Vendor supply information (shop drawings and technical dataset) 3. Operation and maintenance information 4. Survey information of the locations of key assets
	Offices and libraries	
	Public toilets	
	Dump stations	
	Amenity buildings	
Open space	Reserve	Asset handover submission need to specify based on the nature of the facilities: paths/tracks, seats, signage, bridges, board walk, fences, drinking fountains. For which the as-built information below should be collected: 1. As-built design drawings 2. Vendor supply information (shop drawings and technical dataset) 3. Operation and maintenance information 4. Survey information of the locations of key assets
	Community Park	
	Nature Park	
	Sports field	Asset handover submission need to specify based on the nature of the facilities: paths/tracks, seats, signage, bridges, board walk, fences, drinking fountains, artificial surface, training nets, clubrooms. For which the as-built information below should be collected: 1. As-built design drawings 2. Vendor supply information (shop drawings and technical dataset) 3. Operation and maintenance information 4. Survey information of the locations of key assets
	Streetscaping	Asset handover submission need to specify based on the nature of the facilities: paths/tracks, seats, signage, bridges, board walk, fences, drinking fountains. For which the as-built information below should be collected: 1. As-built design drawings 2. Vendor supply information (shop drawings and technical dataset) 3. Operation and maintenance information 4. Survey information of the locations of key assets
	Linear Park	
	Playground	Asset handover submission need to specify based on the nature of the facilities: play equipment,

Sub-activity	Land use and services	Requirements of asset handover
		soft fill, wooden edging, seats, shade, drinking fountains, paths, signage. For which the as-built information below should be collected: 1. As-built design drawings 2. Vendor supply information (shop drawings and technical dataset) 3. Operation and maintenance information 4. Survey information of the locations of key assets
	Golf Course	Leased
Community services	Cemeteries	Asset handover submission need to specify based on the nature of the facilities: cemetery beams (Concrete strips), sheds, memorial walls, seats and shelters. For which the as-built information below should be collected: 1. As-built design drawings 2. Vendor supply information (shop drawings and technical dataset) 3. Operation and maintenance information 4. Survey information of the locations of key assets
	Community housing units	Treat as a building asset, for which the as-built information below should be collected: 1. As-built design drawings 2. Vendor supply information (shop drawings and technical dataset) 3. Operation and maintenance information 4. Survey information of the locations of key assets
Water facilities	Wharf/jetty	
	Boat ramp	
	Navigation aid	
	Swimming pontoon	
	Retaining walls	
	Viewing platform	

3.2.20.5 Approval of Uncompleted work

Where in the opinion of Council it is assessed as reasonable, and unlikely to materially affect the safe operation of public assets and expectations and interests of the public and directly affected private parties, the Council may approve the deferral of completion of an element of a consented and approved work, subject to satisfactory bonds being arranged.

3.2.20.6 Bonds and Charges for Uncompleted works

Bonds to cover uncompleted works, especially where a subdivision or development has been substantially completed, are recognised as an acceptable procedure and should be permitted at the discretion of Council. Acceptance of a bond for uncompleted works shall not be unreasonably withheld.

Bonds shall be secured by an appropriate guarantee or shall be in cash and lodged with Council. Where necessary bonds shall be executed and registered.

The amount of the bond shall be the estimated value of the uncompleted work plus 50% to cover additional costs estimated to be incurred by Council in the event of default.

3.2.20.7 Reserves and Land Protection Covenants

Layout plans and location of reserves and land protection covenants shall be discussed with Council prior to the lodgement of finalised plans. Development plans for all future reserves shall be submitted with application for engineering approval, and no work is to be carried out on site before Council approval is issued.

All reserve development shall be completed in accordance with the plans approved by the Council. Development may include earthworks, drainage, planting, paths, structures (such as seating, tables, litter bins, fencing, barriers, signs, and play equipment) and facilities (such as toilets, changing sheds and footpath lighting) as specified by the Council.

3.2.20.8 Certification

The developer shall keep records of all testing and commissioning to be provided to Council as part of asset handover process.

3.2.20.9 As Built Drawings

General

Full as-built documentation is to be submitted for all infrastructure to be vested in Council, and all private infrastructure that is located within public land.

All as-built information will be issued in the approved format and of a quality acceptable to Council prior to the issue of Section 224(c). If electronic data does not meet Council's format requirements or is deemed to be of inadequate quality, Council reserves the right return to the developer for error correction.

The as-built documentation shall consist of:

- One set of paper prints showing the plan location of all new infrastructure features and utilities and any that have been either removed or retired as a consequence of the project.
- For all except very limited developments involving only one or two pipes, a digital copy of the plan information.
- A digital table of asset information such as pipe type, pipe diameter, pipe lengths, position co-ordinates, levels, depths, etc.

Except for minor works, all as-built plans are to be prepared under the supervision and certified as to accuracy by a suitably qualified person.

The documents are to be prepared in a format suitable for downloading into Council's GIS.

Detailed requirements for each of these are set out below.

Plan Coverage

Plans shall show:

- Accurate property boundary positions.
- The datums for levels and for coordinate positions.
- Local benchmarks for level and position, if applicable.
- All roading features (kerb and channel, footpaths).
- Street lighting and transformers.
- All wastewater, stormwater and water supply surface features.
- All pipelines with gravity and rising mains identified.
- Pipelines and other assets removed from the site.
- Superseded or disconnected pipelines still remaining at the site.
- The location of all cable to be taken over by Council.
- The location of any non-council utility services sited by agreement on Council reserves.
- Areas of filling showing the extent of and depth of fill (appropriate grid or fill contours).
- Correct road names as approved by Council.
- All alterations from the original design shall be shown on the plan with reference made in accompanying correspondence to the Engineer's approval for the alterations.

Plan Prints

Hard copy plans shall be supplied if requested by Council. They shall be prepared in accordance with accepted good engineering design practice and be easy to follow and clear to read. Draughting shall comply with AS/NZS 1100.

Digital Plans

Digital plans are to be prepared in a format such as DXF, DWG or Shapefile that can be imported into Council's GIS. Council's preference is for plan to be provided in Shapefile format. Surveyors and draughtsmen are advised to contact the Council office to check particular requirements. A digital (PDF version of the drawings shall also be provided.

Plans are to be prepared in accordance with the following conventions:

- The coordinate system shall match that used by the Council GIS (see Section 3.5 for requirements).
- Each utility asset type is to be placed on a specific separate layer.
- The layer is to be given a meaningful name (such as sewer mains or streetlights) with this name being consistently used for all plans.
- Only information relevant to the layer is to be placed on that layer.
- Each pipe is to be represented by a single line representing the pipe centreline.
- Each pipe shall run continuously between manholes and be broken at manholes.
- Water mains with bends are to be drawn as one continuous line.
- Pipes are not to be broken at service lines, sump leads or laterals junctions.
- Line work is to be accurately snapped to point features and to be accurately joined at junctions and bends.
- Point assets on water mains, such as valves, hydrants, tees are to be snapped on to the main, not breaking it.
- Manholes are to be located by the point at the centre of the manhole lid. Other surface features such as sumps, valves and hydrants are to be represented by the point at their centre.
- Gravity flow stormwater and sewer pipes are to be numbered in the direction of flow.
- Pressure networks are to be generally numbered in the direction of falling pressure.
- Each point feature and each line end on the plan is to be uniquely numbered with position and descriptive details relevant to each point being attached in a table, as set out in the next section.

Digital Tables

The following tables of information are to be supplied in digital format:
For all facilities:

- Feature number.
- Feature type.
- X, Y, Z co-ordinates.
- Additional information as below.

For underground facilities:

- Depths to manhole inverts and to pipe inverts entering manholes through drop connections.
- Depths of lateral service pipes at property terminations.
- Position of lateral connections relative to property side boundaries.
- Descriptive information. Descriptive information shall include such aspects as material type, pipe class, pipe diameter, manhole diameter, hydrant manufacturer relevant to the type of asset being described and sufficient to fully specify what has been installed.

For street-lighting:

- Descriptive information about poles such as make, model, material, height.
- Information on the mounting arm or bracket and final mounting height.
- Information on the luminare such as make, model type.

Conventions to be followed in populating the tables with information are:

- The feature number may be any unique whole number allocated by the licensed cadastral surveyor, but the numbers used are to be sequential.
- The feature type is to be the commonly used name such as sump, valve, and manhole with the naming being consistent over the project.
- Co-ordinate positions shall be accurate to within +/-100 mm.
- Levels shall be accurate to within +/-20 mm and expressed in terms of mean sea level.
- The local origin of levels shall be recorded.
- Pipe lengths are to be in metres.
- Levels are to be in metres.
- Diameters and other descriptive dimensions are to be in millimetres.

All text in tables is to be in UPPER CASE lettering.

As-built information for individual connections to Council infrastructure will be in a format as agreed with Council engineering staff.

3.2.20.9.1 As-built drawings and documentation for earthworks and subsoil drains

Where earthworks have occurred, an as-built plan shall be prepared showing finished contours. The plans shall also show original contours where earthworks have occurred to illustrate the extent and depth of cuts and fills. Alternative methods of representing earthwork depths may be acceptable including plans showing lines joining all points of equal depth of cut and fill at appropriate vertical intervals.

The as-built plans shall also record the position, type, and size of all subsoil drains and their outlets, and show any areas of fill or natural ground which the geo-professional considers do not comply with this Standard or areas where the standards have been varied from the original construction specification.

These plans shall be made available to Council and the developer in conjunction with the geotechnical completion report.

For all developments where a geo-professional is engaged the geo-professional shall submit a geotechnical completion report to the developer and Council accompanied by a statement of professional opinion as set out in Schedule 0 2A in the CoP. The geotechnical report shall identify any specific design requirements which would necessitate the building design deviating from NZS 3604.

3.2.20.9.2 Roading

On completion of construction, information and documents as required by Council shall be provided by the developer's professional advisor. (See Schedule 0 2D for further information.) The information provided shall provide sufficient detail to enable Council to complete the road assessment and maintenance management (RAMM) database input.

3.2.20.9.3 CCTV inspections

The developer shall supply to Council, prior to acceptance of the subdivision closed circuit television (CCTV) inspection records electronically for all newly constructed foul sewer and stormwater mains. A pan and tilt camera shall be used and lateral connections shall be inspected from inside the main. Inspection data shall be provided digitally in a format for capture into Council's Hansen Information Management System (e.g., Flexidata or similar).

When any defect is identified in the CCTV survey, remedial work shall be carried out to the satisfaction of the Engineer and a further CCTV inspection carried out to confirm correction of the defect.

CCTV inspections and deliverables shall be in accordance with New Zealand Gravity Pipe Inspection Manual 4th Edition (or latest version) and the requirements of Council.

Schedule 3A Design Certificate – Land Development/Subdivision

ISSUED BY:

(approved certifier firm/suitably qualified design professional)

TO:

(developer/owner)

TO BE SUPPLIED TO: Southland District Council / Invercargill City Council (delete one)

FOR:

(description of land development/subdivision)

AT:

(address)

……has been engaged by……
(Consultant/designer) *(Developer/owner)*
to provide……services for the land development and/or subdivision described above.

I……have the qualifications and experience relevant to this project as set our herein and have designed the land development/subdivision and confirm that the design is to the current engineering practice, and that I believe on reasonable grounds that it satisfies all relevant resource consent conditions, all relevant Southland District Council / Invercargill City Council (delete one) requirements and applicable codes and standards.

I/My practice holds professional indemnity insurance to the amount of $……and includes run-off cover.

…… Date……
(Signature of approved certifier on behalf of the approved certifier firm)

……
(Name, title, and professional qualifications)

Note – This statement shall only be relied upon by the Southland District Council or the Invercargill City Council. Liability under this statement accrues to the approved certifier firm only. The total maximum amount of damages payable arising from this statement and all other statements provided to the relevant Council on this land development/subdivision, whether in contract, tort, or otherwise (including negligence), is limited to the sum of $…… (insert).

Schedule 3B Contractor's Certificate Upon Completion of Land Development and/or Subdivision

ISSUED BY:

(approved certifier firm/suitably qualified design professional)

TO:

(developer/owner)

TO BE SUPPLIED TO:

Southland District Council / Invercargill City Council (delete one)

FOR:

(description of land development/subdivision)

AT:

(address)

……has contracted to……
(Contractor) *(Principal))*

to carry out and completed certain land development and/or subdivision construction in accordance with a contract, titled Contract No. …… for……
(Contractor)

I……a duly authorized representative of ……
(Duly authorised agent)) *(Contractor)*

hereby certify that ……has carried out and completed
(Contractor)

the construction, other than those outstanding works listed below, in accordance with the contract and in accordance with approved engineering drawings and specifications.

…… Date……
(Signature of authorised agent on behalf of)

……
(Contractor)

…… ……
(Address)

Outstanding works:

Schedule 3C Certification Upon Completion of Land Development/Subdivision

ISSUED BY: (approved certifier firm)

TO: (developer/owner)

TO BE SUPPLIED TO: Southland District Council / Invercargill City Council (delete one)
(territorial authority)

FOR: (description of land development/subdivision)

AT: (address)

.....has been engaged by.....
(Consultant/designer) *(Developer/owner)*
to provide construction observation review and certification services for the above subdivision which is described in the specification and shown on the drawings numbered..... approved by the Southland District Council / Invercargill City Council (delete one).

I have sighted the Southland District Council / Invercargill City Council (delete one) consent and conditions of subdivision and the approved specification and drawings.

On the basis of periodic reviews of the construction and information supplied by the contractor in the course of construction, I believe on reasonable grounds that the infrastructure other than those outstanding works listed below, is complete and has been constructed in accordance with:

(a) The approved engineering drawings and specifications and any approved amendments;
(b) The Councils' Engineering Standards; and
(c) The manufacturer's instructions

..... Date.....
(Signature of approved certifier on behalf of the approved certifier firm)

.....
(Name, title, and professional qualifications)

Note – This statement shall only be relied upon by the Southland District Council or the Invercargill City Council. Liability under this statement accrues to the approved certifier firm only. The total maximum amount of damages payable arising from this statement and all other statements provided to the relevant Council on this land development/subdivision, whether in contract, tort, or otherwise (including negligence), is limited to the sum of $..... (insert).

Outstanding Works:

Schedule 3D AS-Built Plans/Documentation

Information given on as-built drawings, whether submitted electronically or as paper plans, shall include but shall not be limited to:

(a) Stormwater and wastewater reticulation - including the coordinated positions of manholes, manhole inverts, inverts of pipes and lid levels, measurements to house connections, and laterals and their length and position. Positions of connections and laterals shall be both coordinated and referenced to adjacent manhole lids and boundary pegs. All levels shall be in terms of datum defined by Council.

(b) Stormwater management devices - as-built plans for low impact stormwater management devices and non-reticulated components.

(c) Flood and secondary flow information, flood water levels and the extent of any overland secondary flows shall be shown where these have been obtained or derived during the design.

(d) Water reticulation - including the position of mains, location of hydrants, valves, tees, reducers, connections, tobies, water meters, and specials. All features shall be accurately dimensioned, coordinated, and referenced so that they can be accurately relocated in the field.

(e) Ducts - measurements to ducts installed by the developer for utilities.

(f) Labelling of pipes and ducts to cover nominal and actual diameters (ID and/or OD), pipe material and class, year laid, jointing type, manufacturer, model references.

(g) Road names where available - as approved by Council.

(h) Coordinates and levels of all utility surface features to be taken over by Council including tobies, and water meters.

(i) The coordinates of at least two points on each plan in terms of an appropriate geodetic or cadastral datum and the origin of the plan level datum.

(j) Geotechnical completion report and as-built drawings as detailed in this CoP. As-built surface contours covering all areas of disturbed and cut/fill ground.

(k) Road construction, including location, structural details, and details of road marking, signals, lighting, and signs, landscape features, seating, and other amenities and features.

(l) Road pavement and surfacing information.

(m) Landscape features, seating, and other amenities and features.

Section 4. Earthworks and Geotechnical Requirements

4.1 Scope

This section sets out requirements for the assessment of land stability and the design and control of earthworks to ensure a suitable stable platform for the construction of buildings, roads, and other structures with no adverse impacts. A low impact design approach is preferred. Geotechnical assessment shall be undertaken by a geo-professional as defined in this CoP where:

(a) The assessment of land stability requires specialist expertise.
(b) The construction of earthworks associated with any development requires initial planning and design to ensure that banks and batters remain stable and that fill material is placed in such a way that it remains stable and can support the future loads imposed on it.
(c) There is historical fill which has not been undertaken in accordance with any Bylaw or where natural slopes, banks, or batters are involved.
(d) The assessment of ground for the foundations of buildings, roads, services, and other infrastructure requires specialist expertise as weak ground may require special design.
(e) The wide range of soil types, physical conditions, and environmental factors applying in different areas make it difficult to specify precise or prescriptive requirements for land stability assessment or earthworks.

In setting design, construction requirements, or development limitations the designer shall take account of all relevant standards and Council requirements. Where geotechnical assessment isn't required earthworks must be carried out in such a manner that complies with this CoP.

For clarification, the contents of this section do not apply to normal agricultural and forestry practices such as ploughing and root raking.

Note: NZS 4431 is applicable to the construction of earth fill for residential development including residential roading.

4.2 General

4.2.1 Objective

The objective of this section is to set out some, but not necessarily all of the matters which need to be considered in planning and constructing a land development project. The aim is to provide information for professionals involved in designing and constructing a land development project and to require geotechnical expertise in projects where land stability could be an issue or where earthworks other than of a minor nature will occur.

The geo-professional needs to be involved in the choice of final land form. This decision depends on many factors which may be specific to the development.

These include the relationship with surrounding landscapes, the size of the development, the proposed and existing roading patterns, the preservation of natural features, wāhi tapu, and other historic and archaeological sites, the land stability and underlying structural geology, the function and purpose of the development and the potential for flooding, and erosion and other natural hazards and events including earthquakes.

The aim is to also give guidance on the identification of and assessment of the order of importance of the above factors which will vary from project to project.

4.2.2 Referenced Documents

A selection of useful guidance material on geotechnical and geomechanical issues in land development is set out in the Referenced Documents under Section 2 of this CoP. Related documents list additional material that may be useful.

4.2.3 Council Geotechnical requirements

Where any proposed development involves the assessment of slope stability or the detailed evaluation of the suitability of natural ground for the foundations of buildings, roading, and other structures, or the carrying out of bulk earthworks, then a geo-professional shall be appointed by the developer to carry out the following functions:

(a) Check Regional and District Plans, records, and requirements prior to commencement of geotechnical assessment.

(b) Prior to the detailed planning of any development, to undertake a site inspection and such investigations of subsurface conditions as may be required, and to identify geotechnical hazards affecting the land, including any special conditions that may affect the design of any pipelines, underground structures, or other utility services.

(c) Before construction commences, to review the drawings and specifications defining any earthworks or other construction and to submit a written report to Council on the foundation and stability aspects of the project.

(d) Before and during construction, to determine the extent of further geo-professional services required (including geological investigation).

(e) Any work necessary to manage the risk of geotechnical instability during the construction process.

(f) Before and during construction, to determine the methods, location, and frequency of construction control tests to be carried out, determine the reliability of the testing, and to evaluate the significance of test results and field inspection reports in assessing the quality of the finished work.

(g) During construction, to undertake regular inspection consistent with the extent and geotechnical issues associated with the project.

(h) On completion, to submit a written report to Council attesting to the compliance of the earthworks with the specifications and to the suitability of the development for its proposed use including natural ground within the development area. Where NZS 4431 is applicable, the reporting requirements of that Standard shall be used as a minimum requirement.

4.3 Design

4.3.1 Design Factors

The design process shall include, but not be limited to:

(a) Preliminary site evaluation.

(b) Identification of special features to be retained/protected.

(c) Low impact design considerations.

(d) Selection of the choice of landform.

(e) Stability assessment.

(f) Assessment of special soil types where applicable.

(g) Setting of compaction standards for fill material.

(h) Erosion, sediment, and dust control.

(i) Seismic considerations.

(j) Geothermal issues where applicable.

4.3.2 Preliminary Site Evaluation

During the preliminary site evaluation phase the developer's professional advisor shall engage a geo-professional at an early stage to undertake a preliminary site evaluation and prepare a geotechnical assessment report.

In cases where more than a visual appraisal is deemed to be required, particular attention will need to be given to the following matters, as appropriate, which should normally be considered prior to preparing a proposal for development:

(a) **Low impact design factors:**

The preliminary site evaluation needs to take into account low impact design factors. These include consideration of maintaining and improving natural waterway features and optimising waterway crossing locations. Protection of well-drained soils and natural soakage areas also need to be taken into account.

(b) **Drainage:**

Identify the existing natural drainage pattern of any area and locate any natural springs or seepage. Where any overland flow paths or natural surface or subsurface drainage paths are interfered with or altered by earthworks, then appropriate measures must be taken to ensure that adequate alternative drainage facilities are provided to ensure there is no increase in flood hazard risk to the site or adjoining properties.

(c) **Slope stability:**

Some natural slopes exist in a state of only marginal stability and relatively minor disturbance such as trenching, excavation for streets or building platforms, removal of scrub and vegetation, or the erection of buildings, can lead to failure. Signs of instability include cracked or hummocky surfaces, crescent-shaped depressions, crooked fences, trees or power poles leaning uphill or downhill, uneven surfaces, swamps or wet ground in elevated positions, plants such as rushes growing down a slope, and water seeping from the ground. In addition, a simple desktop study of aerial photographs may show indications of historic failures as well as faulting, resulting in linear ground features. Refer to BRANZ Study Report 004, Crawford and Millar 1998, or the New Zealand Geotechnical Society publications Field description of soil and rock and Geotechnical issues in land development. For a sample checklist for geotechnical assessments refer to Crawford and Millar 1998. Existing or potential surface creep effects also need to be investigated and reported upon.

(d) **Foundation stability:**

A study of the general topography of the site and its surroundings may indicate areas which have previously been built up as a result of natural ground movement or by the deliberate placing of fill material. Unless such fill has been placed and compacted under proper control, instability or long-term differential settlement could occur causing damage to superimposed structures, roads, services, or other structures.

(e) **Stream instability:**

There is a potential for instability through changes to the current ground conditions, such as stream erosion.

(f) **Local conditions:**

A wide range of soil types exist throughout New Zealand which may need special consideration. Expansive soils, volcanic soils, soft alluvial sediments, and compressible soils are examples of these. Liquefaction of saturated non-cohesive soils should also be considered. Council may have information on the soil types in its area, including potentially contaminated land.

(g) **Peer review:**

Where risk for the land prior to development is assessed as being medium to very high risk, a peer review of the geotechnical assessment for the proposed development may be required and this

would need to be carried out by an independent geo-professional. (For guidance see *NZ Geomechanics News* (Crawford and Millar) for risk classification and (Cook et al) for peer review.)

4.3.3 Landform Selection

The final choice of landform shall represent the most desirable compromise between the development requirements and the preservation of natural features and the natural character and landscape amenity values of the site including the retention of natural watercourses. Landform selection needs to take into account low impact design principles including retention of existing landforms and natural features where possible, and avoiding earthworks where there are existing habitats of indigenous species, wetlands, or areas of high natural character. The design shall take into account the following factors in making the selection of the final choice of the landform:

(a) The choice of a suitable landform may be specific to a particular site. An earthworks approach that respects and reflects the natural topography of the site is preferred. Considerations for carrying out earthworks include:
  (i) the minimisation of the risk of damage to property and/or roads occurring through ground movement in the form of slips, subsidence, creep, erosion, or settlement;
  (ii) the minimisation of the risk of damage to property and/or roads occurring through flooding, or surface water run-off;
  (iii) the development of a more desirable roading pattern with improved accessibility to and within the site and the creation of a better sense of orientation and identity for the area as a whole;
  (iv) the efficiency of overall land utilisation including the quality of individual sites and amenity areas around buildings, the economics of providing engineering services, and the standard of roading and on-site vehicular access;
  (v) the need to create suitably graded areas for playing fields and other community facilities;
  (vi) the enhancement of the general environmental character of the area.

(b) The general nature and shape of the ground including:
  (i) the geological nature and distribution of soils and rock;
  (ii) existing and proposed drainage conditions, and the likely effects on groundwater;
  (iii) previous history of ground movements in similar soils in the area;
  (iv) performance of comparable cuts and fills (if any) in adjacent areas, and
  (v) air photography and other sources of information which should be reviewed and incorporated into any slope stability assessment.

(c) Soil data as applicable for areas which:
  (i) are intended to form in-situ bases for fills;
  (ii) are intended to yield material for the construction of fills;
  (iii) are intended to be exposed as permanent batters; and
  (iv) are to remain as permanent slopes or cut areas.

(d) Borings, probings, or open cuts as necessary to:
  (i) classify the soil strata by field and visual methods;
  (ii) evaluate the likely extent and variation in depths of the principal soil types; and
  (iii) establish the natural groundwater levels.

(e) Soil information required for:
  (i) further sampling and testing which may be required on representative soil types;
  (ii) relating subsequent soil test properties to relevant strata over the site;
  (iii) assessment and design for slope stability;
  (iv) assessment and design for foundations suitable for the finished site;
  (v) assessment and design for road subgrades.

The test data appropriate in different areas should be determined by the

geo-professional.

4.3.4 Stability Criteria

In making an assessment of the stability of slopes and earth fills, the geo-professional shall use accepted criteria and analysis methods. Stability criteria applicable to land development in New Zealand are published or recommended by the New Zealand Geotechnical Society (see Referenced Documents).

4.3.5 Special Soil Types

If special soil types are known to exist in a locality or are identified, then a geo-professional shall be engaged to advise on appropriate measures for incorporation of these soils into a development. Special soil types include, but are not limited to:

(a) Soils with high shrinkage and expansion.
(b) Compressible soils.
(c) Volcanic soils.
(d) Soils subject to liquefaction.
(e) Soils prone to dispersion (such as loess).
(f) Any excluded soils from the definition of good ground as defined in NZS3604:2011, as amended by B1/AS1 or its successor.

4.3.6 Compaction Standards for Fill Material

The standard of compaction and method of determination shall be as set out in NZS 4431. Where NZS 4431 is not applicable, the methods and standards of compaction shall be specified by the geo-professional.

Note: Commercial and industrial developments often have specialised requirements for fill materials and compaction. In these cases the requirements of NZS 4431 may not be applicable. The geo-professional should set the fill standards and procedures for these developments.

4.3.7 Erosion, Sediment, and Dust Control

4.3.7.1 Minimisation of Effects

Earthworks shall be designed and constructed in such a way as to minimise soil erosion and sediment discharge. Where necessary permanent provision shall be made to control erosion and sediment discharge from the area of the earthworks.

Generation of dust during and after the earthworks operation shall be considered during the planning and design phase. If necessary, specific measures shall be incorporated to control dust.

4.3.7.2 Protection Measures

Where surface water could cause batter erosion or internal instability through infiltration into the soil, open interceptor drains shall be constructed in permanent materials, and benches in batter faces should be sloped back and graded longitudinally and transversely to reduce spillage of stormwater over the batter.

Water from stormwater systems shall be prevented from flowing into fill or into natural ground near the toe or sides of the fill.

No stormwater or wastewater soakage systems shall be constructed in fill or natural ground which could

impair the stability of the ground.

Protection measures shall include the following as appropriate:

a) Erosion control mechanisms:

(i) temporary drains to be constructed at the toe of steep slopes to intercept surface run-off and to lead away for treatment where required before discharge to a stable watercourse or pipe stormwater system;

(ii) surface water to be diverted away from or prevented from discharging over batter faces and other areas of bare earth by bunds formed to intercept surface run-off and treated where required prior to discharge through stable channels or pipes, preferably into stable watercourses or piped stormwater systems;

(iii) the upper surface of fills to be shaped and compacted with rubber-tyred or smooth-wheeled plant when rain is impending, or when the site is to be left unattended to minimise water infiltration;

(iv) the completed battered surfaces of fills to be topsoiled and vegetated, or otherwise resurfaced to reduce run-off velocities;

(v) control of erosion and sediment discharge may require planting, environmental matting, hydroseeding, drainage channels, or similar measures at an early stage in the earthworks construction phase;

(vi) dust control may require frequent watering during construction along with establishment of the permanent surface at an early stage in the construction phase.

(b) Sediment management devices:

(i) the surfaces of fills and cuts to be graded to prevent ponding;

(ii) sediment traps and retention ponds to be constructed where they are necessary. These should be cleaned out, as required, to ensure that adequate sediment storage is maintained, with appropriate plans for decommissioning;

(iii) temporary barriers or silt fences using silt control geotextiles, to be used to reduce flow velocities and to trap sediment;

(iv) sections of natural ground to be left unstripped to act as grass (or other vegetation) filters for run-off from adjacent areas.

4.3.8 Seismic Considerations

The geo-professional shall consider the seismic effects on earth fills, slopes, and liquefiable ground and shall take these into account in design and construction of any development in accordance with the scale of the development.

4.4 Final Documentation

4.4.1 Geotechnical Completion Report

For all developments where a geo-professional is engaged the geo-professional shall submit a geotechnical completion report to the developer and Council accompanied by a statement of professional opinion as set out in Schedule 4A. The geotechnical report shall identify any specific design requirements which would necessitate the building design deviating from NZS 3604.

The expected level of site movement from reactive soil (expansive soils) under AS 2870:1996 shall be identified by their respective class and included in the geotechnical completion report. The soil properties used in determining the class are to be recorded in the report. The site subsoil class to the provisions of NZS 1170.5 Section 3 and NZS 1170.5 Supp 1 C3.1.3 shall be identified in the geotechnical completion report.

The report shall describe the extent of inspection, revisit and review all inferences and assumptions made during the investigation, assess the results of testing and state the geo-professional's professional opinion on the compliance of the development with the standards set by the geo-professional. The report shall also include all geotechnical reports prepared for the development.

Documentation on the testing of the soils for compaction shall be included in the geotechnical completion report. This documentation shall clearly show the areas in which compaction met the required standards, as well as any areas requiring retesting, and areas which did not meet the standards.

For developments where there are no earthworks the geotechnical completion report will comprise the geotechnical assessment report. For large or more complex developments where there may have been several stages of geotechnical reporting, all prior reports covering the subject area of land under certification shall be included in the geotechnical completion report. The geotechnical completion report shall identify areas that provide good ground as defined in NZS 3604. Those areas that require specific design for stability and foundation design shall also be noted.

4.4.2 As-Built Drawings for Earthworks and Subsoil Drains

Please refer to Section 3.2.20 of this CoP and the requirements in Schedule 3D.

Where earthworks have occurred, an as-built plan shall be prepared showing finished contours. The plans shall also show original contours where earthworks have occurred to illustrate the extent and depth of cuts and fills. Alternative methods of representing earthwork depths may be acceptable including plans showing lines joining all points of equal depth of cut and fill at appropriate vertical intervals.

The as-built plans shall also record the position, type, and size of all subsoil drains and their outlets, and show any areas of fill or natural ground which the geo-professional considers do not comply with this Standard or areas where the standards have been varied from the original construction specification.

These plans shall be made available to Council and the developer in conjunction with the geotechnical completion report.

4.5 Schedule 4A Statement of Professional Opinion on Suitability of Land for Building Construction

DEVELOPMENT:

DEVELOPER:

LOCATION:

I, …… of ……
(full name) (name and address of firm)

Hereby confirm that:

1. I am a geo-professional as defined in Section 2.4 of the SDC & ICC Subdivision, Land Use, and Development Code of Practice 2023 and was retained by the developer as the geo-professional on the above development
2. The extent of my preliminary investigations are described in my report(s) number: …… dated: …… and the conclusions and recommendations of that/those document(s) have been re-evaluated in the preparation of this report. The extent of my inspections during construction, and the results of all tests and/or re-evaluations carried out are as described in my geotechnical completion, report dated:
3. In my professional opinion, not to be construed as a guarantee, I consider that (delete as appropriate):
   (a) The earth fills shown on the attached Plan No:…… have been placed in compliance with the requirements of the Southland District Council / Invercargill City Council, and my specification.
   (b) The completed works take into consideration land slope and foundation stability considerations, subject to the appended foundation recommendations and earthworks restrictions, (which should be read in conjunction with the appended final site contour plan).
   (c) Subject to 3(a) and 3(b) of this Schedule, the original ground not affected by filling is suitable for the erection of buildings designed according to NZS 3604 provided that:
      i. ……
      ii. ……
   (d) Subject to 3(a) and 3(b) of this Schedule the filled ground is suitable for the erection of buildings designed according to NZS 3604 provided that:
      i. ……
      ii. ……
   (e) The original ground not affected by filling and the filled ground are not subject to erosion subsidence or slippage in accordance with the provisions of Section 106 of the Resource Management Act 1991 provided that:
      i. ……
      ii. ……
4. This professional opinion is furnished to the Southland District Council / Invercargill City Council and the developer for their purposes alone on the express condition that it will not be relied upon by any other person and does not remove the necessity for the normal inspection of foundation conditions at the time of erection of any building.
5. This certificate shall be read in conjunction with my geotechnical report referred to in Clause 2 above and shall not be copied or reproduced except in conjunction with the full geotechnical completion report.

(Signed) (Date)

(name, title and professional qualifications

Section 5. Roads

5.1 Scope

This section sets out requirements for the design and construction of roads for land use, development and subdivision. It provides engineering design and construction guidance, information on requirements, and references Roading Standard Details in Appendix B.

5.2 General

5.2.1 Objective

The objective is to provide roads that are safe for all road users and designed to the context of their environment. Roads shall be capable of carrying all utility services underground, provide for the management of stormwater, and contribute to quality urban design.

To this end a design report shall be prepared and submitted for Council Approval in respect of any new road, or road upgrade. The report shall include the design philosophy applied and confirmation of how the following design aspects have been resolved/selected. It should include the proposed materials to be used for the construction. The report shall also include a full set of design drawings.

5.2.2 Related Standards and Guidelines

A selection of currently available documents which provide an appropriate basis for road design is set out in the referenced documents. Related documents also list additional material that may be useful. These are not exclusive other Standards, guidelines, and design responses may be used where appropriate but must be accepted by Council.

Reference shall also be made to SDC's Roading Policy 2008, and Policy Procedures 2008, Rev 1 2015, or ICC's Roading and Traffic Bylaw 2022, or any future updates to the same.

5.2.3 Road Purpose

Roads serve a number of purposes that enhance quality of life in neighbourhoods, towns, and cities; improve opportunities for business in commercial areas; and meet a range of local, regional, and national goals for access, mobility, and land use. More explanation is available in NZS4404 Section 3. A road will serve the following functions:

- Creating access
- Providing a link for connection and movement of people via commercial or private vehicles, public transport, on foot, by bicycle or by other modes
- As a corridor for utility and amenity infrastructure

5.2.4 Classification Framework

Waka Kotahi (NZTA) has recently issued a One Network Framework which is the new national classification system to assist council in benchmarking their roads. It looks to ensure the network is fit for purpose for all modes of transport placing an emphasis on movement and place, integrating transportation with urban planning. Council intends to incorporate the principles into its planning hierarchy. Appendix A of the One Network Framework – current classification guidance provides a classification tables which identifies the route metrics, the land use zones and street categories.

Table 5-1 Road Functional Criteria (Land Use and Area Type Matrix Describing Typical Place And Transport Context)

Route function	Route Descriptor					
	M1	M1	M2	M3	M4	M5
Movement Significance	**Major**	**Major**	**Significant**	**Moderate**	**Minor**	**Low**
Scale of People Movement	**Typically > 20,000 per day**	**Typically > 20,000 per day**	**10,000 to 25,000 per day**	**3,000 to 12,000 per day**	**300 to 4,000 per day**	**Typically < 500 per day**
Link – Place Context	**Link function**	→			←	**Place function**
Through traffic	Highest capacity routes which have the greatest through movement function	Provides high capacity through movement between and within regions and between key places within districts	Carries predominantly medium capacity through traffic movements between and within districts between places.	Collects traffic from local streets in order to connect with arterials	Primary role is to service adjacent property.	Primary role is to serve adjacent property, minimal through traffic.
Network connectivity	Connects regions and nationally significant; airports, ports and economic activity generators	Connects regions and principal sectors of the region and activity centres within a district	Connects major places within a District.	Connect two arterials, or access roads and streets with arterial links.	Connect to other roads, streets, lanes and Collectors	Primary connect to roads, streets and other lanes
Frontage access	Provides little or no access to adjoining land	Provides controlled access to adjoining land	Managed accesses but many also serve adjacent activities	May provide access to adjacent key activities. Significant access adjoining property	Access to adjoining local shops, trade units, residential and rural properties	Property frontage may be shared with movement lane
Goods movement (Freight)	Provides highest capacity to or facilities that promote safe and efficient freight carriage	Provides quality access to or facilities that promote safe and efficient freight carriage	Provides access to or facilities that promote safe and efficient freight carriage where there is enduring demand	Provides for the transport of neighbourhood related freight		
Tourism	Provides high service levels (North Island) and amenity (South Island) with reliable journey times for long distance tourist traffic	Provides access to tourist facilities in areas of high tourist demand such as rest stop and viewing points	Provides access to tourist facilities in areas of high tourist demand including rural rest stop and viewing points	Provides tourist facilities access in areas of high tourist demand		

For Customer Levels of service, Road User and Place Service levels refer to Tables 5-2 and 5-3.

For additional Neighbourhood Place Service levels refer to NZS 4404:2010 Land Development and Subdivision Infrastructure, Part 3 Roads.

Notes:

1. The most appropriate Route descriptor in Table A is best identified as the one closest aligned with the most functions.
2. The most appropriate Route descriptor may reflect a planned future state rather than the present state.
3. A route may change its Route descriptor along its length (e.g. M1 Major to M2 Significant).
4. If the most appropriate Route descriptor is identified as say an M1 - Major BUT has one significantly lower function, it suggests this function needs addressing.

Table 5-2 Customer Level of Service

		Route Description					
		MAJOR	MAJOR	SIGNIFICANT	MODERATE	MINOR	LOW
Level of Service	**Safety**		Fatal, serious crash and RISA risk addressed and crime prevention through environmental design principles applied in risk priority order				
	Journey Time	High speed travel environment	Generally moderate to fast travel time environment in urban and rural areas	Generally moderate travel time environment in urban areas. Moderate to fast speed in rural areas	Generally moderate travel time environment with short lengths of lowered speed in urban areas. Moderate to high speed in rural areas	Generally low speed environment in urban areas. Moderate speed in rural areas	Walking pace environment in urban areas. Low speed in rural areas
	Delay predictability	Minimal delays to journey times achieved	Minimal delays during peak journey times achieved outside holiday seasons and events	May experience variable delays and reduced speeds depending on other activities on the network and conditions	May experience predictable significant delays depending on other activities on the network and conditions	May experience significant delays accessing higher level roads	Variable delays experienced
	Frontage Access	Limited friction from adjoining land	Controlled side friction from adjoining land	Managed side friction from adjacent properties	Side friction from adjoining property	Frontage form used to reduce operating speeds	Unrestricted frontage access
	Resilience and Security	Mitigate the risk to connectivity by providing robust infrastructure in Emergency response plans	Mitigate the risk to connectivity by providing robust infrastructure in Emergency response plans	Mitigate the risk to connectivity by providing robust infrastructure or alternative routes as the route critical demand requires	Vehicle access available for foreseeable events	Emergency vehicle access available for foreseeable events	Emergency vehicle access normally available

For Road User Service Levels refer to Table 5-3 below.

For Place Function Service Levels refer to Table 5-3 and NZS 4404 Land Development and Subdivision Infrastructure, Part 3 Roads

Table 5-3 Service Levels

Context		Road User Movement			Movement and Place			Place	
Table	C	PUBLIC TRANSPORT	FREIGHT	GENERAL TRAFFIC	CYCLE	PEDESTRIAN CROSSING	PARKING LOADING AND STOPPING	WALKING	AMENITY AND UTILITIES
	A	No trip delay. All day frequent service, Always runs to timetable may be on separate lanes	No delays or trip variability may be on separate lanes	No delays or trip variability may be on separate lanes	Separate cycle path. Minimal delays	Crossing regularly available. 40 km/hr operating speed. Minimal delays	Adequate parking, loading and stopping facilities	Quality pedestrian facilities in pedestrian friendly speed environment	Quality furniture, hard and soft landscaping both sides in pedestrian friendly speed environment. Accessible utilities
	B	No route delay, Peak period frequent service, Always runs to timetable may be on shared HOV lane	No delays or trip variability may be on shared HOV lane	No delays or trip variability.	Separation lane with minimal delays, less than 45 km/hr operating speed	Crossing available in required locations. Less than 45 km/hr operating speed. Minimal delays	Parking and stopping restrictions generally provided to meet demand	Pedestrian facilities provide to meet demand. Less than 45 km/hr operating speed	Soft & hard landscape both sides in pedestrian friendly speed environment. Accessible utilities
	C	Some route delay, 85% runs to timetable, Peak period frequent service and separate lane	Some route delays minimal trip variability. Share HOV lane	Some route delays minimal trip variability. Shared lanes	Separate on road cycle lane. Greater than 45 km/hr operating speed	Crossing available in managed locations. Average peak period crossing delay 45 sec	Parking and stopping restrictions during business hours or to assist travel times	Formed and sealed footpaths each side of road. Less than 45 km/hr operating speed	Hard landscape with minimal planting both sides. Accessible utilities
	D	Off peak runs to timetable, Shared facilities	Peak stop at every intersection. Shared lanes	Peak stop at every intersection. Shared lanes	Separate on road cycle lane. Less than 60 km/hr operating speed	Controlled crossings available in required locations. Average peak period crossing delay 45 sec. May be over 50 km/hr operating speed.	Time limit parking and stopping. Peak period clearways	Formed and sealed footpath one side of road	Hard landscape both sides. Accessible utilities
	E	Peak stop at every intersection. Shared lanes	Peak stop at every intersection. Shared lanes	Peak stop at every intersection. Shared lanes	Bicycle share wide movement lane. Greater than 60 km/hr operating speed	Crossing generally limited to controlled locations. Greater than 50 km/h operating speed.	Loading and stopping, off-peak only	Formed footpath one side of road	Hard landscape one side. Utilities may be in footpath or movement lane
	F	No separate facility takes at least 5 minutes to clear intersection during peak periods	No separate facility takes at least at least 5 minutes to clear intersection	Shared movement lane. Takes at least 5 minutes to clear intersection	Bicycle share movement lane. Greater than 60 km/hr operating speed	Crossing limited to controlled locations. Average peak period crossing delay 120 sec	None permitted	No footpaths	No amenity strip. Utilities in movement lane

Note: This table is indicative only and will be fully developed by a Network Operating Framework Working Group

5.2.5 Network Connectivity

Well-connected networks (roads and other links) are achieved with smaller block sizes and regular connections. Network connectivity shall be designed to achieve:

(a) Shorter travel distances.
(b) An increased number of alternative routes for all types of users.
(c) Increased opportunity for interaction.
(d) Improved access to public transport, cycling and walking networks, and access to destinations.
(e) Access to and from state highways limited to arterial routes, or as agreed with Waka Kotahi (NZTA).

The design process shall ensure the following maximum walking distances from a lot to a connector/collector or arterial road:

(a) Rural: No maximum distance. The design should maximise future connectivity to a suburban network.
(b) Suburban: 400 m. A shorter distance shall be considered near centres and major public transport routes.
(c) Urban: 300 m.

Where factors, such as topography or barriers, limit the ability to achieve the network connectivity standard, the designer shall optimise network connectivity and access to the maximum extent practical. The designer shall maximise connectivity to existing development.

5.2.6 Design And Access Statement

A design and access statement shall be submitted with the application for design approval.

The statement shall cover all relevant aspects of Section 5.2 and 5.3 of this CoP and specifically address:

(a) Road dimensions and layout.
(b) Link and place functions.
(c) Connectivity.
(d) How target operating speeds will be achieved.
(e) How Low Impact Development (LID) principles have been considered for stormwater run-off from the roads.

In addition a design and access statement shall evaluate the effects of the proposed development at its ultimate extent (and staged, where applicable) on the surrounding communities and transportation network.

Design and access statements allow the basis of the road design to be independently reviewed, and should be sufficient to illustrate the reasons for the design selections.

5.2.7 Road Safety Audit

Proposals that provide for new roads to vest in Council shall be subject to the Waka Kotahi (NZTA) Road safety audit procedures for projects unless Council decides that audits are not required at any or all of the stages. The developer's professional advisor may recommend that audits are not required at any or all of the stages and complete an 'exemption declaration' as described in the procedures and submit it as part of the application process to be considered by Council. The 'exemption declaration' shall be prepared by a suitably qualified road safety auditor.

Safety audits should cover all road users, including the needs of pedestrians, cyclists, and disabled/elderly users. Where appropriate, the requirements of these groups may demand specific audit procedures. The records and documentation from safety audits must be submitted to Council as part of the asset handover process.

5.3 Design

5.3.1 General requirements

The Design of Roads covered by this document shall be in accordance with the Waka Kotahi (NZTA) One Network Framework.

5.3.1.1 Cross section

In the case of urban and peri-urban roads (as defined in the Waka Kotahi (NZTA) One Network Framework), road widths shall be selected to ensure that adequate movement lanes, footpaths, berms, and batters can be provided to retain amenity values (including landscaping) and enable utility services to be provided safely and in economically accessible locations.

For rural roads design shall consider for the carriageway, sealed shoulders and space for the control of road surface water runoff, and clear space to allow for services should be allowed as detailed in the standard details later in this document.

Road widths shall be planned to cope with estimated long-term traffic volumes and account for community needs even though construction may be carried out only to shorter-term requirements. For guidance, the minimum cross section requirements including total road reserve widths are shown in Table 5-4. However, it should be noted that greater widths may be required to address the following situations:

(a) Potential frequent use by heavy vehicles or commercial vehicles
(b) Potential frequent use by vehicles towing boat trailers.
(c) Compatibility with existing road widths in the community.
(d) Widening where the geometry may influence sight distance of rural roads.
(e) The provision of cycle ways or shared paths where present or planned on the adjoining roadway.
(f) Specific width requirements needed to accommodate service authority's
(g) Specific requirements for public transport
(h) For other provisions such as on street parking

Alternative carriageway widths may be adopted to suit particular design considerations. The submitted proposal shall be subject to specific design consideration and approval by Council. Road cross sections

may include landscaped features, painted median facilities, or variations to parking provision.

5.3.1.2 Carriageway Width

Carriageway widths should be in accordance with Table 5-4. In urban areas, carriageways with a width of 6 m will require parking bays on at least one side of the carriageway for part or all of the road length.

In the case of a rear access lane, the concept relies heavily on minimal garage setback from the lane frontage. Rear access lanes are required to provide for manoeuvring for access to/from garages. Where the garages are located on or close to the lane edge the manoeuvring requirement may necessitate a wider lane dimension or increased setback. In this sense, a key function of the lane is to operate akin to an aisle within a car parking area and needs to be designed accordingly. A single lane sealed width with widening at the garage locations for turning is the minimum requirement. Sealing the entire lane increases opportunities for the lane to be used in a social sense. It is therefore desirable for the entire lane to be sealed. It is accepted that a narrow berm for services may be necessary.

The designer shall consider the environment, purpose, and function of the road being designed. In developing a design cross section the designer shall consider the relationships between speed, parking and its frequency, and the shared or recessed nature of parking in the movement lanes. Alternative carriageway widths may be adopted to suit particular design considerations. These shall be subject to specific design consideration and approval by Council. Such cross sections may include landscaped features, painted median facilities, or variations to parking provision.

5.3.1.3 Traffic Lanes

No more than one movement lane in each direction is typical. Streets in urban areas and centres may include a single movement lane operating as a one-way street.

5.3.1.4 Cyclists

Cyclists shall be provided with separate movement lanes if identified in a local or regional cycle network.

5.3.1.5 Side Roads

Side and rear access should not be the primary access. All carriageways shall be sealed for a minimum length of 20 m from the intersection with another road. This may need to be extended due to topography requirements.

5.3.1.6 Rural Roads

Shoulder widths on rural roads need to be assessed for each project based on the speed environment of the area, terrain including geometry, and crash history. Table 5-4 provides guidance for a standard width based on hierarchy. However, for high-speed environments where high non-motorised use is expected or where identified in a cycle strategy (e.g. where a route is a promoted tourist or recreational route), shoulder widths may need to be increased to optimise overall road safety.

5.3.1.7 Provision for Utility Providers

In some circumstances an increased overall road reserve may be necessary for utilities provision or increased amenity, landscape or urban design element. Specific design shall be undertaken and agreed with the territorial authority where road reserves are to be reduced. In other circumstances, reserve widths may be reduced if a one way road, or development is on one side of the road.

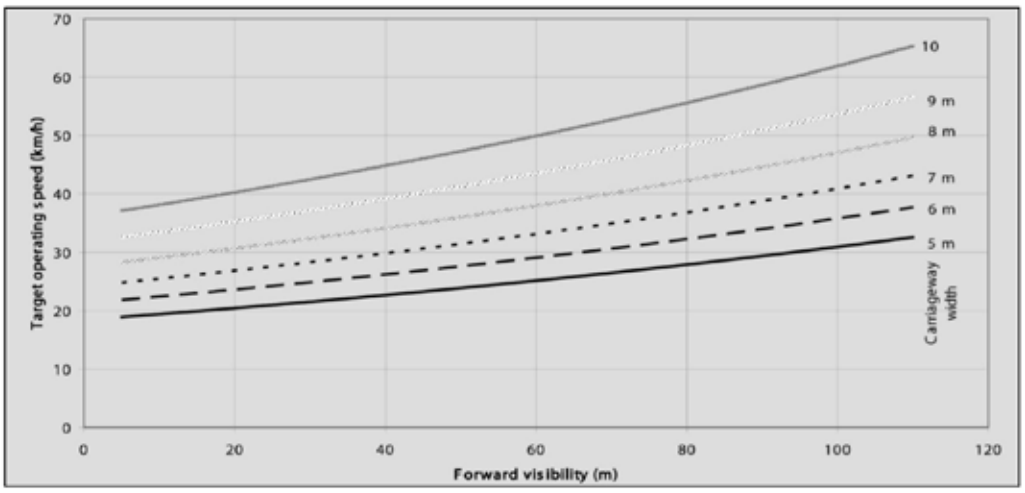
5.3.2 Target operating speed

Traffic management shall be included in road design to ensure that the target operating speed shown in Figure 5-1 is achieved. Target operating speed can be managed by physical and psychological devices such as narrowed movement lanes, reduced forward visibility, parking, slow points, build outs,

leg lengths, chicanes, raised platforms, planting and landscaping, and street furniture and art works. However, the target operating speed shall not be out of context with adjoining or neighbouring roads.

The Austroads *Guide to traffic management - Part 8: Local area traffic management* provides suitable guidance for designing to a target operating speed. Reference can also be made to the *Manual for streets* (UK Department for Transport 2007).

Figure 5-1 Influence of Road Geometry on Speed



5.3.3 Road Geometric Design

5.3.3.1 Design Parameters

Roads shall be designed to accepted standards generally satisfied by Table 5-4 of this CoP, relevant Austroads guides, and guides listed in Referenced Documents and Related Documents for other facilities. If there is potential for expansion through the subdivision then the appropriate standard shall be used to cater for this potential.

Specific Geometric design parameters shall firstly be in accordance with the Austroads Guide to Rroad Design - Part 3: Geometric design, and as detailed in this CoP.

5.3.3.2 Sight Distance

All roads shall be designed with sight distances that match the target operating speed. Where necessary, engineering measures may be undertaken to reinforce driver behaviour and appropriate speeds.

On M4 connector/M3 collector and M1 – M2 arterial roads (see Table 5-1), sight distance criteria at intersections as well as for stopping, overtaking, on curves, and to avoid obstructions should be applied in accordance with the relevant Austroads guides; primarily Part 3: Geometric Design, and 4A: Intersections and Crossings - General.

5.3.3.3 Widening On Horizontal Curves

In some areas the developed road geometry may be constrained, horizontal alignments may involve low radius curves, or the proportion of commercial vehicles may predominate. In such instances, movement lanes shall be assessed to determine the need for localised additional width, for example on low radius horizontal curves where the passage of vehicles has the potential to reduce safety.

5.3.3.4 Vertical Grade

The minimum preferred gradient is 0.5%. A minimum gradient of 0.4% may be considered in circumstances where it can be demonstrated it is appropriate and a gradient of 0.5% cannot be reasonably achieved. Maximum gradients shall be as per Section 5.3.17.1. Steeper gradients may be acceptable for shorter lengths of road in hilly country or low overall speed environments subject to Council approval. Where the gradient of a public road is steeper than 12.5%, Council approval will be required.

5.3.3.5 Crossfall

A movement lane may include a single lane operating in a one-way configuration or in two directions. Normal camber for sealed roads is 3%, and 6% for unsealed roads. Maximum super elevation is 6% for sealed and unsealed roads, unless required due to site constraints, which may be agreed with Council as an exception.

Table 5-4 Road Design – Cross section Standards

Movement Significance	Street Type	Units Served (Indicative only)	Average Daily Traffic AADT (veh/day)	Parking Lanes (m)	Traffic Lanes (m)	Carriageway Width (m)+	Kerb Type	Footpaths No. x m	Minimum Legal Width (m)
Sealed Roads									
Commercial/Industrial									
M2 – Significant	Arterial	N/A	8,000 +	2 x 2.5	2 x 3.5	12	Vertical	Both sides, sealed full width from kerb to property boundary (min. 1.4 m)	**20**
M3 – Moderate	Collector	N/A	< 8,000	1 x 2.5	2 x 3.5	9.5	Vertical	Both sides, sealed full width from kerb to property boundary (min. 1.4 m)	**20**
M4 - Minor	Local	N/A	< 2,000	2 x 2.5	1 x 3	8	Vertical	Both sides, sealed full width from kerb to property boundary (min. 1.4 m)	**17**
Urban Residential									
M2 – Significant	Arterial	100 +	8,000 +	2 x 2.5	2 x 3.5	12	Vertical	Concrete: 2 x 1.5 Asphalt: 2 x 1.8	**20**
M3 – Moderate	Collector	< 800	< 8,000	2 x 2.5	2 x 3	11	Vertical	Concrete: 2 x 1.5 Asphalt: 2 x 1.8	**20**
M4 - Minor	Local	< 200	< 2,000	2 x 2.5 (recessed)	2 x 3	6	Vertical or mountable	Concrete: 2 x 1.5 Asphalt: 2 x 1.8	**20**
M5 - Low	Cul-de-sac	≤ 20	< 200	1 x 2.5 (recessed)	2 x 3	6	Vertical or mountable	Concrete: 1 x 1.5 Asphalt: 1 x 1.8	**15**
M5 - Low	Private (Right of Way)	4 to 6	N/A	Nil	1 x 3	3*	Nil	Nil	**4.5**
M5 - Low	Private (Right of Way)	1 to 3	N/A	Nil	1 x 3	3	Nil	Nil	**3.5**
Rural/Rural Lifestyle									
M2 – Significant	Arterial	N/A	2,500 +	Nil	2 x 3.5	7	**	Concrete: 1 x 1.5*** Asphalt: 1 x 1.8***	**20**
M3 – Moderate	Collector	N/A	< 2,500	Nil	2 x 3.0	6	**	Concrete: 1 x 1.5*** Asphalt: 1 x 1.8***	**20**
M4 - Minor	Local	< 100	< 1,000	Nil	2 x 3.0	6	**	Concrete: 1 x 1.5*** Asphalt: 1 x 1.8***	**20**
M5 - Low	Long cul-de-sac (< 100 m)	≤ 20	N/A	Nil	2 x 3.0	6	**	Nil	**15**
M5 - Low	Short cul-de-sac (< 50 m)	≤ 10	N/A	Nil	2 x 3.0	6	**	Nil	**12**
M5 - Low	Private (Right of Way)	1 to 6	N/A	Nil	3	3*	Nil	Nil	**3.5**
Unsealed Roads									
M3 – Moderate	Collector	N/A	100 +	Nil	N/A	7.0	Nil	Nil	**20**
M4 - Minor	Local	N/A	< 100	Nil	N/A	6.5	Nil	Nil	**15**
M5 - Low	Track	N/A	N/A	Nil	N/A	Site Specific	Nil	Nil	**3.5**

* Passing bays (with a minimum 6 m carriageway width) are required every 50m in urban areas, and every 100 m in rural areas. Where a private way adjoins a Collector or higher, it shall also have a 6m carriageway width for a minimum length of 6m from the road boundary.

** Kerb and channel or dished channel may be required for scour protection.

*** Footpaths may not be required in rural and rural /residential situations.

Note 1 – All rights of way fronting a sealed road shall be hard surfaced to at least 5.0m inside the property boundary.

Note 2 - Carriageway width is defined as kerb-face to kerb-face in urban situations. It does not include shoulder width for rural/rural lifestyle, or unsealed roads.

Note 3 – Dedicated provision for cyclists will be required on identified cycling routes for any Collector road and above. See Section 5.3.12 for further guidance.

This table is to be used as a guide only and will be subject to particular Council requirements for each situation. NB. Urban/Rural definition is based on speed limit, ie, urban roads are those with a speed limit of 70 km/hr or less, rural > 70 km/hr.

Sensitivity: General

5.3.3.6 Stormwater

Roads shall be designed to account for stormwater and keep potential groundwater below structural pavement layers. On rural roads, this may be accomplished through the use of side drains or swales. All roads, including footpaths and cycleways, shall be adequately drained in accordance with good engineering practice. Roads also have the potential to provide stormwater ponding and overland flow paths in extreme events.

In soils of adequate permeability and favourable topography, the use of low impact design soakage systems and devices shall be considered to provide benefits of attenuating peak flows and improving run-off quality. For detailed design criteria for soakage systems and devices see 5.3.20.2 6.3.8.6, and 6.3.8.9.

Any design should be coordinated with the relevant landscape design requirements covered in Section 10 of this CoP.

5.3.4 Pavement Structural Design

Generally pavements shall be flexible designs. Other types of pavements shall be subject to Council approval. Pavements shall be designed in accordance with the Austroads and Waka Kotahi guides with a design life of 25 years.

C5.3.4

The structural design of all roads shall be undertaken by a suitably qualified person. Mechanistic or other industry standard chart-based methods may be used depending on the function of the road and expected traffic volumes.

5.3.4.1 California Bearing Ratio Design Method for Rigid and Flexible Pavements

Soaked California bearing ratio (CBR) values of the pavement subgrade shall be used and the pavement designed for the estimated number of equivalent standard axle (ESA) loadings over a 25-year design life.

5.3.4.2 California Bearing Ratio Tests

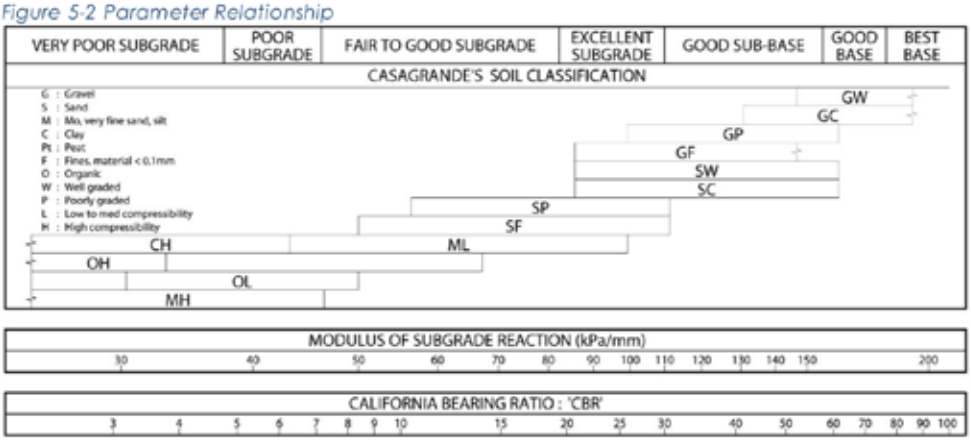
For local roads the method of determining subgrade CBR in non-granular materials in-situ by Scala Penetrometer is normally acceptable for clay and colluvial materials. Figure 5-2 shows a correlation between Scala penetration and CBR values. This should be used conservatively.

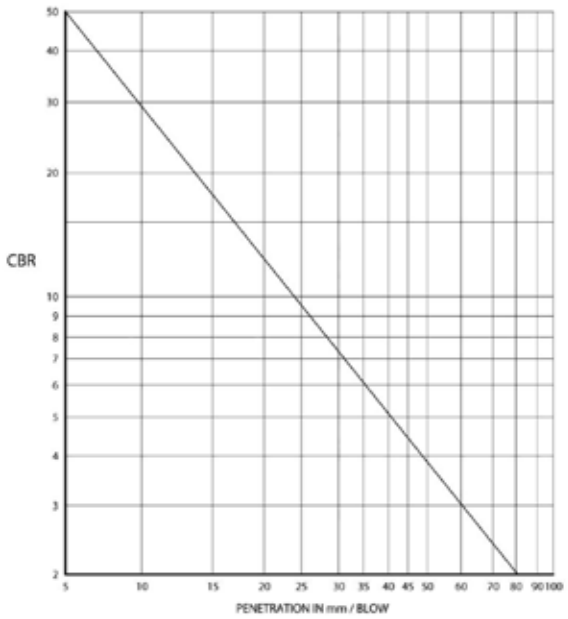
CBR values determined in the laboratory, in accordance with 6.1 of NZS 4402.6, may be required for high volume roads, or where deemed necessary by a geo-professional or by Council.

The CBR value used in the design shall be the 10th percentile value of the CBR tests taken on the subgrade material. A selection of tests shall be taken at 150, 300, and 450 mm below final subgrade level and included with the reporting.

Where CBR values are required for aggregates, these shall be based on laboratory tests prepared on the fraction passing the 19 mm sieve but a CBR of more than 30 shall never be used. The use of CBR on metal layers shall only be in conjunction with consideration of the CBR and stiffness of lower layers.

Figure 5-2 Parameter Relationship





CORRELATION OF DYNAMIC CONE mm PER BLOW AND
CALIFORNIAN BEARING RATIO
(SCALA PENETROMETER)

5.3.4.3 Pavement Surfacing

Acceptable surfacing for carriageways includes asphaltic concrete (40 mm minimum thickness), chip seals, in situ concrete or concrete pavers. Surface texture and skid resistance should comply with T/10 requirements. Unsealed carriageways may be accepted in rural areas at the discretion of Council. The whole of life cost for the surfacing treatment shall be shown by the designer.

5.3.5 Safety Barrier Provisions

5.3.5.1 Pedestrian Protection

Where safety barriers for pedestrian and cyclists are necessary, they shall comply with the design requirements of the New Zealand Building Code and NZS/AS 1657 Fixed platforms, walkways, stairways and ladders. Design, construction and installation.

5.3.5.2 Vehicle Barriers

Where safety barriers for vehicles in urban areas are necessary, they shall comply with the design requirements of Austroads Guide to Road design Part 6 Roadside Design, Safety and Barriers and use Waka Kotahi NZTA approved systems as stated in M/23. Further guidance can be found in Waka Kotahi (NZTA) RTS 11: *Urban roadside barriers and alternative treatments*.

5.3.5.3 Rural Vehicle Barriers

Where safety barriers for vehicles in rural areas are necessary, they shall comply with the design requirements in AS/NZS 3845.

5.3.6 Parking, Passing, and Loading

Parking and loading can be provided either on or off-street. Facilities shall meet the needs of the area and the requirements of Council as per Section 5.5 of this CoP and shall be addressed in the design and access statement (see Section 5.2.6). Further guidance can be found on the Trips Database Bureau website https://www.transportationgroup.nz/trips-database-bureau/.

Passing provision shall be in accordance with requirements of Council.

Acceptable and alternative on-street car park and loading dimensions should be taken from AS 2890.5 and/or Austroads guides. Off-street car park and loading dimensions should be taken from the New Zealand Building Code.

Parking and loading shall not be provided so that it has the potential to obstruct the movement of emergency or service vehicles along a road. Alternate provision within sites may be demonstrated in addition to the requirements of the District Plan, particularly when establishing rules for new subdivisions.

5.3.6.1 Parking Provision

On-street parking shall be in accordance with Table 5-4.

5.3.6.2 Parking Bays

Each parking area shall be a minimum 2.1 m x 6 m, and is used for loading it shall be a minimum 2.5 m x 12 m, each with appropriate entry and departure tapers outside of the movement lane.

5.3.7 Intersection and Alignment Design

The angle of intersection should be 90°, although a minimum angle of 70° can be used when justified by other constraints. Carriageway alignment may be offset within the street reserve to achieve the required target operating speed for the road. Minimum separation distances for intersections on a Connector/Collector or Arterial shall be assessed by an appropriately qualified person. For other road types, the minimum separation distance shall be 40m (measured centreline to centreline).

All road intersections in residential areas below M2 (arterial) class should have a kerb radius at intersections of 9 m. An alternative and reduced kerb radius may be considered to enhance pedestrian facility in low speed environments, and shall be subject to the approval of Council.

Intersections in all other 50 km/hr or lower speed environments shall have the lot corners splayed by a minimum of 4 m along both boundaries, although these may be dispensed with in low target operating speed situations provided that there is adequate provision for pedestrians and utility services. Corner boundary splays shall be subject to specific design in higher speed environments, to ensure safe visibility at intersections.

All major intersections, and those in rural, industrial or commercial areas, should have a minimum kerb radius of 15 m with corner splays of 6 m, or subject to specific design. Reference can also be made to Austroads guides.

Intersections between M4 (connector)/M3 (collector) roads or intersections of M4 (connector)/M3 (collector) roads with M2 (arterials) shall be a minimum distance of 150 m apart, centre line to centre line.

5.3.8 No-Exit Roads

'No-exit' roads should not be provided where through roads and connected networks can be designed. Where no-exit roads are provided, they should ensure connectivity for pedestrians and cyclists.

No-exit roads and lanes shall provide for road turning at the end of the road for an appropriate vehicle as described in *RTS 18: New Zealand on-road tracking curves for heavy vehicles*.

The design of turning facilities for light vehicles shall be in accordance with AS 2890.5. See Figure 5-3 and Figure 5-4 for acceptable solutions.

An on-road turning area may provide for parking or landscaping in the centre of the turning area. The minimum kerb gradient around turning heads shall be 0.5%. Appropriate drainage shall be provided.

5.3.9 Bus Stops

Bus stops shall be provided for on connector/collector roads or arterials in accordance with Council direction in consultation with the regional transport authority. Bus stops may be designed in accordance with the Waka Kotahi public transport design guidance (https://www.nzta.govt.nz/walking-cycling-and-public-transport/public-transport/public-transport-design-guidance/).

5.3.10 Services within Roads

Refer to Section 9.3.2 for requirements on locations for transformers and other utility components, mailboxes, and refuse collection.

5.3.11 Special Road and Footpath Provisions near Places of Assembly

Designs for areas adjacent to places of public assembly including schools, hospitals, shopping areas, and public halls, shall incorporate special provisions such as extra parking spaces, stopping lay-bys, widened footpaths, bus and taxi stops, pedestrian crossings, loading zones, and any associated facilities to ensure the safety of concentrations of vehicles and pedestrians. These designs shall be subject to Council's approval.

5.3.12 Footpaths, Accessways, Cycle Paths, and Berms

Pedestrians, cyclists, and berms shall be provided for in accordance with table Table 5-4 and associated notes. Dimensions, strength, durability, and finish shall be appropriate to their use and expected loadings. Paths shall be designed in accordance with Austroads guides and Waka Kotahi (NZTA) design guidelines (https://www.nzta.govt.nz/walking-cycling-and-public-transport/walking/walking-standards-and-guidelines/), and Standard Drawings in Appendix B.

Where accessways separate from the roads are to be illuminated, they shall be to the standard of illumination recommended in AS/NZS 1158.3.1.

5.3.12.1 Footpaths and Accessways

Footpaths may be required on one or both sides of the carriageway. Generally, footpaths shall be provided where potentially more than six households will be serviced. (Refer Table 5-4).

The width of footpaths shall be appropriate to the expected foot traffic, with guidelines as follows:

In all cul-de-sacs or other roads with a legal width of 15 m or less, footpaths shall preferably be located immediately behind the kerbs. In other locations a grass berm may separate the footpath and the kerb. Refer Standard Drawing Fig. R3.

Footpaths shall be a minimum of 1.5 m wide in concrete, or 1.8 m wide in asphalt, surfaced over their full width. The crossfall should be no greater than 2% and approval is required by Council to vary this. No crossfall shall exceed 4%. Wider footpaths or areas of local widening will often be required by Council where higher use or other needs dictate such widening. If a footpath is shared as a cycle path width shall be as per Section 5.3.12.2.

Accessways should be provided at no-exit roads or where necessary to improve connectivity. They shall be designed for user safety using crime prevention through environmental design (CPTED) principles and should:

(a) Be direct and no greater than two properties long.
(b) Have good sight lines for passive surveillance with fences a maximum height of 1.2 m for 10 m from the road frontage, or no fencing.
(c) Be sited to ensure high levels of community use.
(d) Be amenity landscaped without compromising safety.
(e) Have provision for the disposal of stormwater.
(f) Be provided with pedestrian level lighting.
(g) Have a legal width not less than 5.5 m.

5.3.12.2 Cycle Paths

Separate cycle paths shall be provided where good design requires separation from the carriageway or a different route to be selected. Cycle facilities shall be designed to the standards as set out in the Austroads guides and the Waka Kotahi (NZTA) Cycling Network Guidance *(Cycling standards and guidance | Waka Kotahi NZ Transport Agency (nzta.govt.nz))*.

Stormwater disposal shall be provided to all off-road cycle paths. Lighting is to be provided where appropriate.

5.3.12.3 Footpath and Cycle Path Surfacing

The choice of surface finish shall be to Council's approval with a general guideline being that the finish should match with adjacent footpath finishes.

All footpaths and cycle paths shall be surfaced with a permanent surfacing layer appropriate to the surrounding environment and level of use expected.

Acceptable surfacing for footpaths and cycle paths are:

(a) Concrete.
(b) Asphaltic concrete.

Other acceptable surfacing for footpaths are:

(c) Pavers only as approved by Council.

(d) Metal surfaces may be appropriate in rural areas, particularly where a sealed footpath already exists on the opposite side of the road.

In all cases the surfacing shall be placed over compacted basecourse which in turn shall be placed over a firm subgrade with all organic soft material removed.

5.3.12.4 Berms

Grassed or planted berms between the road legal boundary and carriageway shall be provided in accordance with the landscape character intent for each street type within the development. For streets with high pedestrian activity, a full footpath (with no berms) may be more appropriate. Residential streets with a lower pedestrian activity may have a ribbon footpath (planted berms between footpath and carriageway, and between footpath and road boundary).

In all cases the combined berm and footpath width shall be as required by Council to be adequate to enable landscaping and all current and expected services to be installed.

Where a berm crossfall greater than 1 in 12.5 is proposed, the designer shall produce a cross section along suitable individual property access locations to show that the sag or summit curves at crossings can be satisfactorily negotiated by a 99th percentile car.

Berms shall be at least 1.0m wide be between the footpath and property boundary, and at least 0.5m wide between the road and footpath, unless otherwise approved. They must also be of adequate width to:

(a) Achieve safe clearances between the carriageway edge and any obstacle.
(b) Allow running of utility services and placing of lighting poles within the berm unless approved otherwise by the utility provider or Council.
(c) Provide adequate space between the road reserve boundary and the carriageway edge to enable residents to safely enter the road traffic.
(d) Allow room for efficient road edge and edge drain maintenance.
(e) Allow adequate space for the effective operation and maintenance of any form of stormwater management device.

5.3.13 Traffic Signs, Road Markings And Road Furniture

The design shall incorporate all required road marking, signs, and other facilities as per the Manual of Traffic Signs and Markings (MoTSAM) and other appropriate standards. Roads should be designed to minimise the need for traffic signs and marking.

Designs shall satisfy the Waka Kotahi (NZTA) manual TCD Part 5, and Transport Rule (Traffic Control Devices) 2004 and linked traffic sign specification, and the Waka Kotahi (NZTA) *Pedestrian planning and design guide*.

Road markings shall be installed in accordance with MOTSAM Part 2. All road markings and traffic signs shall be approved by Council.

All fire hydrants shall be marked in accordance with NZS/BS 750.

Road name signs shall comply with Council's current road names standards and their mounting shall be provided by the developer to Council's requirements.

Developers are encouraged to suggest names for new roads. However all names for new roads, including named private ways, are to be approved by Council. Names must comply with the New Zealand Geographic Board's rules. Road names should be short (25 characters or less), not hyphenated or multiple words, readily pronounced and spelt and not resemble other existing names (including geographic feature names) in either spelling or pronunciation.

A road name will be required for every private access lane servicing more than eight properties, in order to facilitate easy property addressing.

Seats, signs, and other street furniture shall be designed and placed in accordance with Council's requirements. Furniture should, unless expressly approved otherwise, be compatible with Council's existing street furniture.

Also refer to Appendix B for Council's requirements on signs, markings and road furniture. Any changes from the details must be approved by Council.

5.3.14 Trees and Landscaping

Refer to Section 10 for specific guidance on trees and landscaping. The following principles should also be considered:

a) Safety Issues, including:
- shading of the road
- sight distances at intersections
- entrances and curves
- clarification of road definitions
- shade light effect of the planting
- frost shading
- clearance to high voltage power lines

b) Asset preservation, including:
- water channel and drain integrity
- seal and road surface integrity

c) Utility Protection, including:
- Water, wastewater, telephone
- stormwater, tile drainage, power and telephone
- high voltage power lines

d) Equity issues to ensure a fair approach to existing and new planting proposals.

e) Ownership and maintenance. There shall be clear demarcation and agreement identifying who will own and maintain the landscaping once the maintenance period is completed.

5.3.15 Road Lighting

All road lighting shall be designed and installed in compliance with the recommendations of AS/NZS 1158, Ausgrid technical specification for Public Lighting Equipment – LED luminaires, Oct 2014, Austroads road design chapter 6 guides, or other guidelines adopted by Council at the particular time of design.

A lighting design which shall include an Isolux diagram is to be submitted to Council, for checking and approval prior to construction. This shall include all the necessary certification documentation such as a Producer Statement.

Lighting designs are required to be completed with NZTA M/30 compliant luminaires that are appropriate to be used in the Council's lighting network. Luminaires shall be dark skies compliant (3000k).

All lighting shall be LED category PR3, PP3 or V3 and in compliance with AS/NZS 1158. All lighting is to be installed in compliance with NZTA M/26 specification for lighting columns unless approved by Council. Higher Standards may need to be applied based on the function of the road, path or car park in the roading network.

5.3.16 Bridges and Culverts

Bridges and culverts may require separate resource and building consents. All bridges and culverts shall be designed in accordance with the Waka Kotahi (NZTA) *Bridge manual*.

Particular features to be considered/covered include:

(a) Widths/lengths: All bridges and culverts shall be designed with a width to accommodate movement lane, cycle, and pedestrian needs of the road and guardrails which accommodate over width vehicles.

(b) Roadside barriers: See 5.3.5.

(c) Batter slope protection: All culverts shall have anti-scour structures to protect batter slopes, berms, and carriageways.

(d) Clearance over traffic lanes: Where passing above traffic lanes, bridges shall have the full clearance of 5.2 m to provide clearance for over dimension vehicles able to operate without a permit.

(e) Foundations: All bridges and culverts shall be founded to resist settlement or scour. Abutments shall be designed to ensure bank stability and provide erosion or scour protection as applicable.

(f) For waterway design see Section 6.

5.3.17 Private Ways, Private Roads, and Other Private Accesses

Access to all lots, dwellings, or multi-unit developments shall be considered at the time of subdivision/development and should where possible be formed at that time.

Where access to the lot is to a garage or car deck to be constructed as part of the buildings this shall be noted on the design drawings. This is likely to have been considered as part of the resource consent process.

Accesses shall be designed and constructed to the following requirements or in accordance with Council's specific requirements including those within District Plans (if applicable), unless alternative designs by the developer's professional advisor are approved by Council.

5.3.17.1 Plan and Gradient Design

Table 5-4 should be used as a guide to the width of elements required for accesses and crossings.

A maximum 3-point turning head in the common area shall be provided at the end of all accesses serving three or more rear lots or dwelling units. Circular, L, T, or Y shaped heads are acceptable. Suitable dimensions are shown in Figure 5-3 and Figure 5-4.

For accesses serving fewer than three lots or dwelling units, turning heads in the common area are not required where it can be shown that adequate turning area is available within each lot or private area.

Centre line grades should:

(a) Not be steeper than 1 in 5 although gradients of 1 in 4.5 may be used on straight lengths of access over distances of up to 20 m. The first 5 m of any access shall be not steeper than 1 in 8. A greater length of transition shall be provided where necessary on non-residential accesses.

(b) Not be less than 1 in 250.

(a) and (b)
Council may approve exceptions provided the design includes suitable vertical transitions and adequate safety at the point where the access meets the footpath or road.

All accesses shall be shaped with either crown or crossfall of not less than 2%.

To allow vehicles to pass, single lane accesses shall have widening to not less than 6 m over a 7.5 m

length (plus tapers) at not more than 50 m spacing. Rural accesses may have the same dimension passing bays at up to 100 m distances where visibility is available from bay to bay.

5.3.17.2 Stormwater Design

All shared urban accesses shall have their edges defined by a structural edge. The design shall demonstrate consideration of a sustainable approach to stormwater management rather than kerbed collection, channelling, and disposal, if possible.

Rural accesses shall be formed with safe water tables/edge drains along but adequately clear of each side of the access (minimum 1 m).

Accesses sloping up from the road shall have a stormwater collection system at the road reserve boundary so as to avoid stormwater run-off and debris migration onto the public road. Except in rural areas, stormwater shall discharge via an appropriately sized and designed stormwater system acceptable to Council. Rural side drains may discharge directly to the roadside drain or where accesses pass over the side drain they shall be provided with a culvert of size appropriate for the design flow and approved by Council.

Accesses that slope down from the road shall be designed to ensure that road stormwater is not able to pass down the access. Side drainage in context with the area shall be provided to stop the concentration and discharge of stormwater and debris onto adjacent properties or any land which could be at risk of instability or erosion. Where an overland flow path departs from the road reserve, accesses shall be designed to direct secondary flow away from building floors and to follow designed overland flow paths.

Commercial and industrial accesses shall drain from their sumps through a lead directly or through a stormwater treatment device to a public stormwater main.

5.3.17.3 Pavement Design

Private pavements shall be designed as for public roads, and residential/rural pavements shall have a minimum formation thickness in accordance with Austroads guidelines.

All road pavements shall be provided with adequate supporting design to ensure that it will have a life of 25 years.

Acceptable surfacing for accesses includes compacted gravel, asphaltic concrete (25 mm minimum thickness), chip seals, in situ concrete, or concrete pavers. Note that compacted gravel is not considered to be a hard surface as required by Table 5-4, Note 1.

Figure 5-3 Dimensions of No-Exit Road Turning Areas

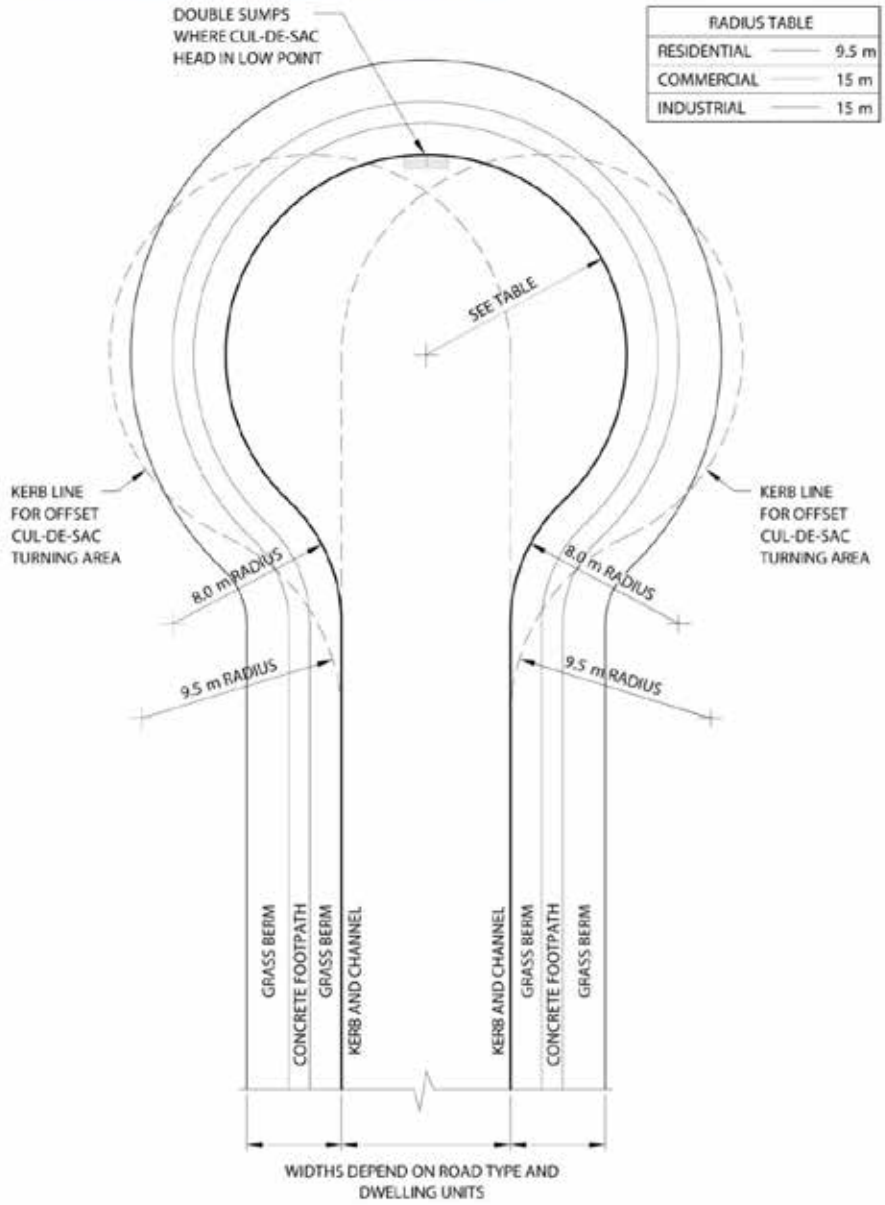
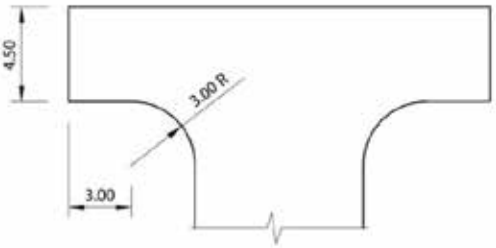


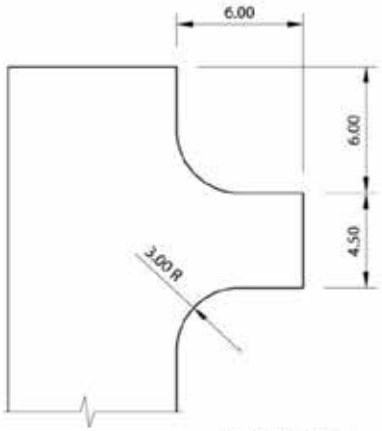
Figure 5-4 Turning Areas for No-Exit Roads



Y TURNING



T TURNING



L TURNING

ONLY FOR USE WHERE THE STANDARD CIRCULAR HEAD IS UNSUITABLE OR WHERE APPROVED BY THE TA

ALL DIMENSIONS ARE IN METRES

5.3.18 Vehicle Crossings

All regularly used vehicle crossings (e.g. urban, rural, residential, commercial and industrial) are formed, surfaced and drained to allow safe and effective vehicle access from carriageway to the property boundary and in locations giving visibility equal to the safe stopping distance for the carriageway speed limit.

Vehicle crossings shall be constructed in accordance with Standard Drawings R21 – R23 in urban areas, and R28 – R30 in rural areas.

The sight distances outlined in the "Sight Distances" figure in Section 5.5.1 shall be used as a guide when assessing the adequacy of visibility at new accessways. No access to an individual plot shall be located within a clear distance of 5m from any corner (channel line) or intersection in the road that it connects to. The preferred separation wherever possible is 9m from the tangent of the intersection.

At the time of subdivision or development, any existing crossing providing access to the road shall be assessed to determine whether upgrade to Council's standard is required, or if permanent removal is appropriate.

5.3.18.1 Urban

Vehicle crossings shall be provided between the edge of the movement lane and the road boundary at the entrance to all private ways and lanes to any lots, front or rear where access points are clearly identifiable at the subdivision or development stage, and in all commercial and industrial areas.

Where access points are not clearly identifiable at the subdivision or development stage, crossings shall be constructed at the building consent stage.

Vehicle crossings shall be designed to enable the 99th percentile car to use them without grounding any part of the vehicle, and shall be designed in accordance with the Waka Kotahi (NZTA) Pedestrian planning and design guide. Structural design shall be adequate to carry the loads to be expected over its design life. All crossings shall be surfaced with asphalt, concrete, or paving stone as approved by Council.

Where stormwater drainage is provided by swale or open drain, drainage crossings shall be provided as specified in 5.3.17.2.

5.3.18.2 Rural

All shared crossings and any crossings where the location is obvious at the design stage shall be installed at the development stage. Other crossings shall be provided at the building consent stage.

Crossings shall be provided between the surfaced road edge and the lot boundary at a defined and formed access point to every rural lot. The crossing shall be sealed to not less than the standard of the road surface and to the road boundary. If the access slopes up from the road the crossing shall be sealed to a minimum distance of 10 m from the edge of the carriageway.

The crossing shall not obstruct the side drain. Where the side drain is shallow and only carries small flows during rain, the crossing may pass through the side drain. Where the side drain is of an unsuitable shape or carries flows for significant parts of the year the side drain shall be piped under the crossing. Pipes and end treatments shall be sized appropriately for the catchment intercepted but shall be a minimum of 300 mm diameter. Culverts shall extend a minimum of 1 m beyond the edges of the crossing.

Rural crossings shall be designed so that vertical curvature transitions are suitable for the passage of the 99th percentile car and control of stormwater and debris run-off.

5.3.19 Fencing

Fencing shall be provided along the road reserve boundaries of all rural subdivisions unless agreed otherwise by Council. Standards and requirements shall be in accordance with Council's fencing policy at the time, or in the absence of a policy shall be agreed to with the Council. This shall also apply to fencing of pedestrian, cycle, and reserve accesses in rural areas.

5.3.20 Road Run-Off

5.3.20.1 Integration of Road Run Off With Development Stormwater System

Stormwater management for a subdivision needs to integrate the control of stormwater from the proposed roading network with the overall stormwater system for the land development phase and final subdivision layout. Such planning needs to integrate the control of stormwater peak flows and pollutant removal as set out in Section 6 of this CoP with the aim of minimising downstream negative effects and mitigating road instability and erosion problems. Some guidance on integrated catchment management is set out in Waka Kotahi (NZTA) *Stormwater treatment standard for state highway infrastructure*.

5.3.20.2 Design

Roads shall be shaped with cross fall to shed water off the carriageway. Roads shall have longitudinal fall sufficient to convey surface water to low points along kerb line or other surface water channels depending on the site context. For stormwater run-off design see Section 6 of this CoP.

5.3.20.3 Subsurface Drains

Where considered necessary by Council or the developer's professional advisor, piped subsurface drainage shall be provided to protect road formations from deterioration or loss of strength caused by a high watertable and as part of swale stormwater systems. Design shall be in accordance with Waka Kotahi (NZTA) specification F/2.

Piped subsurface drains shall be provided on each side of all urban roads where the natural subsoils have inadequate permeability or unacceptably high water table to enable long term strength of the new pavement to be maintained. Piped subsurface drains shall be provided on the upslope side of all urban roads in hill areas and on the down side also where the down slope is in cut.

All piped subsurface drains shall discharge by gravity into a suitable component of the public stormwater system or approved discharge point.

For two typical details of under-kerb drainage and subsoil drainage see Figure 5-5.

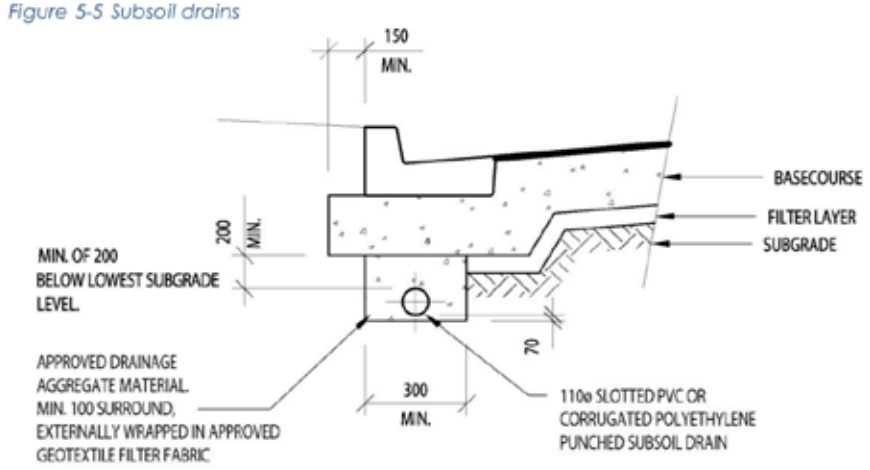
5.3.20.4 Side Drains/Water Tables

Rural roads shall have normal camber (see Standard Drawings) to side drains/water tables formed on each side of the carriageway except where the road is on embankment above adjacent land without available formed drains. In such cases the road may be designed so as to provide for sheet run-off to the adjacent land surface provided natural pre-existing drainage patterns are not altered.

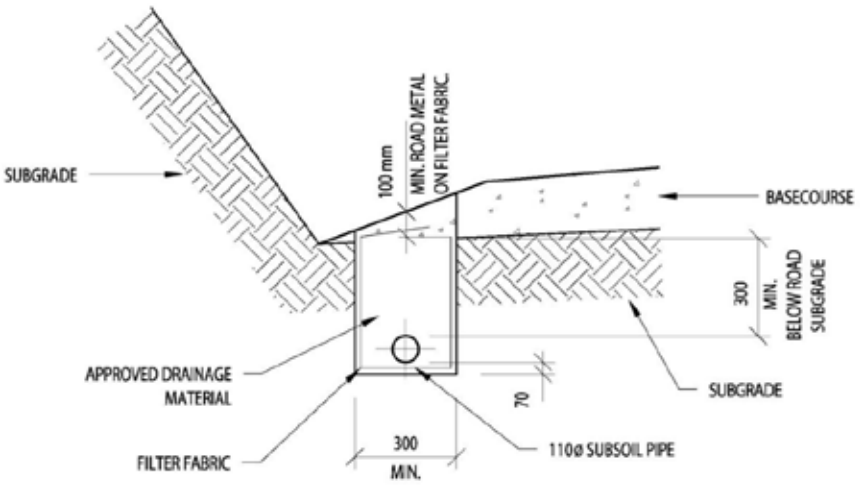
For all situations where side drains are required they shall be sized to suit the flows discharging to them. Side drains shall be intercepted at regular intervals and discharge via open drains or pipes to an appropriate discharge point. All discharge points shall have outlets protected from scour and shall be located to minimise the risk of slope instability.

Such discharges shall be subject to the approval of affected property owners and be shown to be neither diverting catchments nor significantly changing peak flows or flow patterns.

Figure 5-5 Subsoil drains



UNDER KERB DRAINAGE



SUBSOIL DRAINAGE

All dimensions are in millimetres.

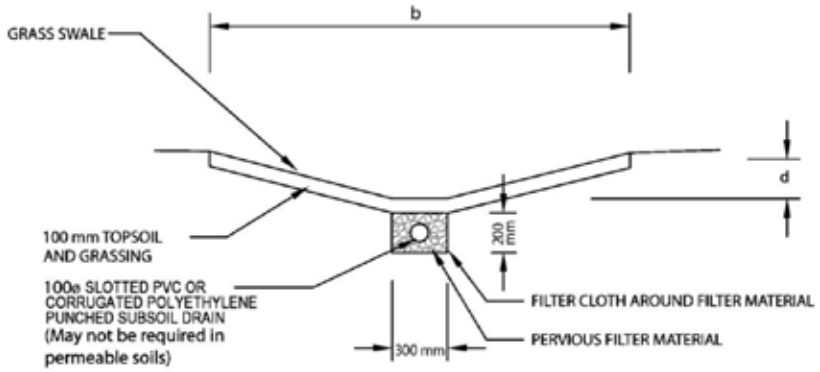
5.3.20.6 Swales

Swales should be used wherever appropriate to allow for infiltration to reduce peak discharge flows and to provide stormwater treatment. They can be located either in the berm area or in the centre of the road and must be of sufficient width to accommodate services (if needed), plant growth and maintenance.

Where swales are used, they shall be designed by a suitably qualified person in accordance with Council requirements or one of the publications listed in Referenced Documents or Related Documents that cover swale design. Typical details that may be used in swale design are shown in Figure 5-6 to Figure 5-8.

See Section 6.3.8.6 for swale design and Section 10 on landscaping design and practice.

Figure 5-6 Typical swale detail

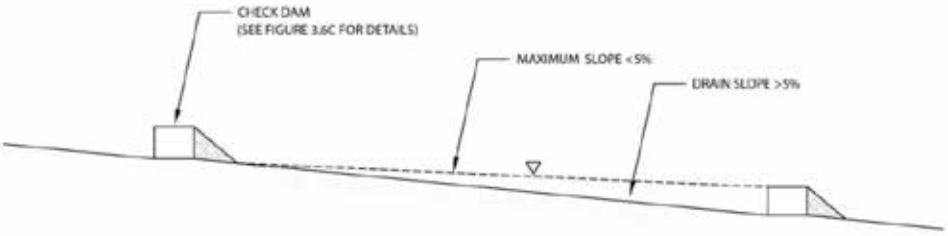


SWALE CROSS SECTION

NOTE –

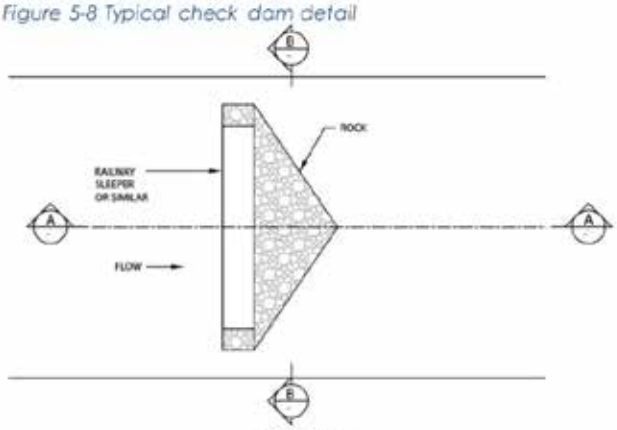
1. Effective catchment area drained = impervious area + 0.72 x pervious area.
2. Maximum swale slope up to 5%. Steeper swales require check dams (see figures 3.6(B) and 3.6(C)).
3. Dimensions 'b' and 'd' to be sized for conveyance of 10% AEP event.
4. Existing ground is regraded, compacted, topsoiled (100 mm depth), and grassed.
5. Side slopes no steeper than 1v:3h if planted (not mown).
6. Side slopes no steeper than 1v:5h if grassed (mown).

Figure 5-7 Typical check dams in swale detail

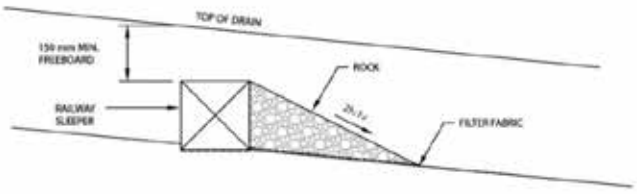


LOCATION OF CHECK DAMS IN SWALES

Figure 5-8 Typical check dam detail

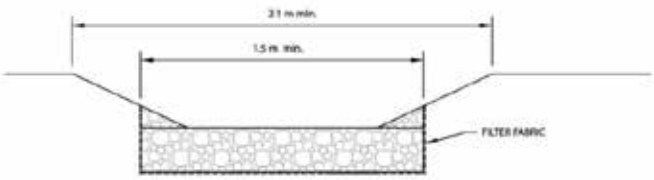


TYPICAL PLAN



ELEVATION A-A

ROCK TO BE SCORIA GRADED CLEAN (SGC) 75-70 OR EQUIVALENT.
FILTER FABRIC TO BE BIDIM A1 2 OR EQUIVALENT.



ELEVATION B-B

5.3.20.7 Kerbs and Channels

Where kerbs and channels are to be provided on carriageways they should comply with Standard Drawing R5 to R7. Mountable or nib kerbs, or their slip-formed equivalent may be used subject to the approval of Council. Mountable kerbs shall be constructed in accordance with Standard Drawing R7. Pedestrian crossings (pram crossing) should be provided for disability access at regular intervals and at locations where pedestrians are reasonably expected to transition between footpaths and the street, including all road intersections and pedestrian crossings.

The crossings shall be sited to facilitate normal pedestrian movements in the road and where possible sumps shall be sited so as to reduce the flow of stormwater in the channel at the crossing entrance. Pram and wheelchair crossings shall conform to Standard Drawing R5, and satisfy the Waka Kotahi (NZTA) Pedestrian planning and design guide.

5.3.20.8 Sumps

Sumps used in all public places shall comply with Council's current standard details.

Stormwater sumps are classified as three types according to the design of their inlets:

(a) Grated only inlet sumps: Grated inlets are effective in intercepting gutter flows. They also provide access openings for maintenance. Grated inlets are prone to blockage and problems of increased pavement maintenance in the immediate vicinity of the inlet, therefore, their use in street gutters are discouraged. They are suitable for non-kerbed situations such as yards, end of ditches, open car parks, accessways, driveways, medians, and ponding areas. Standard Drawings D12-14 show details of common types of grated inlet.

(b) Back entry inlet sumps: Back entry inlets are less affected by blockage, and they are more effective in intercepting flows in sag areas.

(c) Combined grates and back entry inlet sumps: This system of combining a back entry with the traditional grated inlet significantly improves flow intake and is less prone to blockage from debris. This type of inlet should be used in all situations where possible. Standard Drawing R13A shows a typical example of this type of inlet.

These diagrams are for typical Southland geometry and catchments. Where situations are atypical (steep hills, extreme rainfall), the Engineer may require a modification to or an alternative design to accommodate these needs.

5.3.20.8.1 Sumps shall be located:

(a) To ensure that the total system design flow enters the pipe system and that surface flows across intersections are minimised. In hill areas the total design flow shall include run-off from any upslope hillsides that are not specifically drained. In many cases this will mean the use of closely spaced or specially designed sumps to ensure that the flow to which the pipe system is designed can actually get into the system.

(b) At all points in a surface system where a change in gradient is liable to result in ponding due to change in flow velocities or on bends where there may be a tendency for water to leave the kerb and channel.

(c) Not further apart than 90 m along any surface system.

5.3.20.8.2 Sump design

Sumps should be designed to intercept and convey stormwater run-off flow from design storm of the AEP set out by Council, or otherwise stated in Section 6 of this CoP, while allowing a reasonable frequency and degree of traffic interference. Depending on the road classification, as specified by Council, portions of the road may be inundated during major storm events. See Section 6.3.4 secondary flows for allowable floodwater depths.

The following general guidelines should be used in the design of sumps:

(a) General safety requirements

(i) Provide for the safety of the public from being swept into the stormwater system; the maximum allowable opening shall not exceed 100 mm in width;

(ii) Openings are sufficiently small to prevent entry of debris that would clog the stormwater system;

(iii) Openings be sized and oriented to provide for safety of pedestrians and cyclists. Cycle-friendly sump grates shall be used where required by Council. These grates may be built either with bars transverse to the side channel direction or closely spaced bars in a wavy pattern in a longitudinal direction.

(b) Sump inlet capacities

Inlet capacities of any sump used should be determined using manufacturers' and suppliers' data which should be based on either rational analysis or first principle calculations, otherwise sump inlet capacities should be calculated using approved design methods where applicable. When no proper data is available, the capacity of the single 675 x 450 back entry sump with standard grating should be limited to 28 L/s.

The calculated sump inlet capacities should be reduced to account for partial blockage of the inlet with debris as follows:

On-grade grated back entry sump	10% reduction
On-grade grated sump	50% reduction
On-sag grated sump	50% reduction
On-sag grated back entry sump	Include back entry capacity only

(c) The use of silt traps is encouraged in all sumps to provide partial treatment to stormwater at the source, but in all cases, trapped sumps should be used where discharge to a soakage device is permitted.

5.3.20.8.3 Sump gratings

Sump grating areas shall be sized generously to allow for partial blockage to ensure that flows within the channel do not bypass sumps when velocities are high.

Cycle-friendly sump grates shall be used where cyclists can be expected or when required by Council. These gratings may be built either with bars transverse to the side-channel direction or closely spaced bars in a wavy pattern in a longitudinal direction.

5.3.20.8.4 Sump leads

Leads should be designed to be of sufficient size to convey all the design capacity of the sump to the system. The size of the lead for all types of sumps shall be 150 mm diameter.

5.3.20.8.5 Secondary flow provisions

At all points where sump blockage may occur, or where design capacity of the primary drainage network may be exceeded thereby leading to overland flows into private property, the provision of designed secondary flow paths protected by public ownership or easement shall be made (see Section 6.3.4).

5.4 Construction

5.4.1 Introduction

These requirements apply to flexible pavements. For rigid pavements, such as concrete pavements refer to Austroads guides, and the *Guide to residential streets and paths* as listed in Referenced Documents.

Roads shall be constructed to the alignments and standards detailed in the approved drawings using approved materials, using construction specifications to provide the required design life.

Road construction includes all associated construction required to complete adjacent footpaths, berms, and road reserve areas.

Road Construction shall comply with the requirements of Council and as a minimum to the Waka Kotahi standards set out in Section 5 of this CoP.

5.4.2 Materials for flexible pavements

5.4.2.1 Transition Layer

A transition layer may be required for traffic loading in excess of 1×10^5 ESA where the subgrade is soft, to prevent ingress of the soft soils into the pavement layers. The use of geogrid, geotextile filter fabric or similar for the transition layer shall only be used at the approval of Council. The transition layer shall be compatible with the grading of adjacent layers and be regarded as part of the total depth of the sub-base layer.

5.4.2.2 Sub-Base

The sub-base layer immediately beneath the basecourse shall have a permeability of at least 10^{-4} m/s for a depth of at least 100 mm.

The material used as sub-base shall be hard rock material with the largest aggregate size not larger than 60% of the depth of the layer or 65 mm. The material shall be sufficiently free draining so as not to be susceptible to undue weakening at highest in-service moisture content.

5.4.2.3 Basecourse

The thickness of the basecourse layer when used with other metal aggregate layers shall not be less than 100 mm.
Acceptable basecourse specifications are:

(a) Complying with M/4 specification.
(b) Local basecourse acceptable to Council (note: dunite will not be accepted except on roads that are confined by a kerb and channel).

This may be used for local roads in residential areas and footpaths, kerb crossings, and shared accessways.

5.4.2.4 Road Surfacing

Unless specified otherwise, all roads and private ways within city or township areas shall be finished with a chip sealed surface. Other accepted surface materials such as asphalt, paving blocks, or similar impervious treatments will require the approval of Council. The designer shall provide the whole of life cost for the surfacing selected. Note where chip seal is to be utilised, a second coat seal will be required between 12 – 24 months after the initial sealing date.

The carriageway of roads in rural lifestyle blocks shall be sealed if:

(a) The subdivision is immediately adjacent to an existing developed urban resource area and has the potential to create a dust nuisance.

(b) The longitudinal grade on roading is greater than 8% or scour is likely to be a problem because of the nature of the ground or of the construction materials.

(c) The number of allotments serviced by the road is greater than 10.

Council may also require the carriageway to be sealed if there is a strong possibility that the number of allotments serviced will exceed 10 through further subdivision within 10 years.

Council may waive sealing if the road servicing the development adjoins an existing unsealed road.

5.4.2.5 Acceptable Surfacing Materials

All movement lanes shall be provided with a permanent, hard wearing surfacing layer, which shall be either impermeable or formed over an impermeable base. The surfacing shall be capable of carrying all stresses expected during its lifetime. Acceptable surfacing options may include:

(a) Hot laid asphaltic concrete of minimum compacted thickness 40 mm, laid over a waterproofing sealcoat.

i. Asphaltic concrete of at least 25 mm, but subject to specific design, may be used as an alternative to chip sealing.

ii. The asphaltic concrete shall comply with Waka Kotahi Specifications M10 or M27.

(b) Other asphaltic concrete mixes such as friction course or macadam wearing mix laid over a waterproofing coat.

(c) Chip seals of various types, providing the equivalent of two bound chip coatings. A second coat seal will be required between 12 - 24 months after the first coat installation. The second coat seal sealing date will be subject to Council approval.

The following are less preferred but if promoted the Council will look for additional materials/contributions for maintenance of such.

(a) Concrete block pavers.

(b) Stone block surfacing where designed for aesthetic effects.

Interlocking paving blocks may be used on cul-de-sacs or wherever traffic speeds are generally less than 50 km/hr so that the tyre noise does not become obtrusive. Blocks shall be manufactured in accordance with NZS 3116 and shall be of minimum 50 MPa crushing strength and minimum 80 mm thickness. The blocks shall be laid in a herringbone pattern. The road design and block abrasion resistance shall be approved by the Engineer.

To resist scuffing and local load effects, minimum surfacing standards as given in Table 5-5 shall apply to the named facilities.

Use of concrete or stone block paving in public traffic areas shall require the specific approval of Council.

Table 5-5 Recommended surfacing standards

Facility	Minimum Surfacing
Residential turning head	Segmental concrete pavers, concrete, 40mm asphaltic concrete
Public carparks (excl. parallel parks)	Segmental concrete pavers, concrete, 40mm asphaltic concrete
Commercial and industrial turning head	Segmental concrete pavers, concrete, 50mm asphaltic concrete
Traffic islands and bus stops	Segmental concrete pavers, concrete, 50mm asphaltic concrete

5.4.2.6 Road Surface Tolerances and Texture

The finished surface of new roads shall meet the roughness requirments specified under the TNZ TM 7003 v1. This includes a maximum roughness no greater than 70 NAASRA counts/km to a 100m rolling average, with the target value being 60 NAASRA counts/km. No abrupt or abnormal deviations shall occur and no areas shall pond water. The surface shall be of uniform texture expected by best trade practice and satisfy density standards applicable to the surfacing being used. The skid resistance and surface texture of roads where design speeds exceed 70 km/hr, shall comply with Waka Kotahi (NZTA) specification T/10 and its accompanying notes.

Where hard surfacing is required for areas that are not movement lanes, alternative materials and porous pavements that achieve the durability, maintenance, and amenity requirements are acceptable with the approval of Council.

C5.4.2.6

In the cases of narrow traffic islands and bus stops, where loading is concentrated, the use of stabilised base course is also desirable.

5.4.2.7 Road Surfacing Materials

All materials used in road surfacing shall comply with the appropriate Waka Kotahi (NZTA) specifications. Proposed specification details shall be provided to Council prior to construction.

The following surfacing options will be acceptable for roads covered by this CoP.

5.4.2.8 Chip Seal Surfacing

A first coat seal is the initial seal on a prepared unsealed surface, which is usually a basecourse. The first coat seal may either be a:

a) Single coat chipseal: a single sprayed application of sealing binder followed immediately with a single application of chip which is spread and rolled into place or
b) Two coat chipseal: also known as a "first coat two coat" is a chipseal with two applications of binder and two applications of chip applied in the following sequence:
    a. an application of sprayed binder followed immediately with an application of a large size chip;
    b. a second application of sprayed binder, and another application of finer chip.

    Both coats are applied one after the other with little to no time delay between coats.

Two coat chip seals are usually constructed using grade 3 and 5 chips (Waka Kotahi M/6) and 180/200 penetration grade bitumen (Waka Kotahi M/1) in accordance with Waka Kotahi Specifications P/3 and P/4. The binder application rate for the seals shall be designed to suit the conditions and chip size.

Acceptable and compatible chip sizes for two coat chipseals are:

- Local roads: First coat: grade 4, second coat: grade 6
- Other roads: First coat: grade 3, second coat: grade 5 or 6.
- For cycle and parking lanes the chip size for the second application of chip for a two coat chipseal shall be a grade 6 size.

5.4.2.9 Reseals/Second Coat Seals

The developer shall allow for a second coat seal to be carried out between 12 - 24 months after the first coat installation. The second coat seal sealing date will be subject to Council approval. These are to be constructed in accordance with Waka Kotahi specifications M/6, M/1 and P/4.

A reseal is typically applied after a second coat seal on an existing sealed, asphalt, concrete or timber surface. These shall be constructed in accordance with Waka Kotahi specifications M/6, M/1 and P/4.

5.4.2.10 Hot Laid Asphaltic Concrete Surfacing

Hot laid asphaltic concrete surfacing shall comply with Waka Kotahi (NZTA) specification M/10, M/27 or equivalent approved by Council. The mix used shall be appropriate to the end use and thickness being placed. When using Waka Kotahi (NZTA) specification M/10 AC series mixes (AC10/AC14/AC20), these shall be paver laid to avoid an open or segregated surface.

A waterproofing seal coat, using asphaltic binder or emulsion, and grade 5 chip, with the requirement that the seal coat comprises a minimum of 1.0 L/m^2 of residual penetration grade bitumen, shall be laid prior to surfacing with asphaltic concrete of 50 mm or lesser thickness. No cut back shall be used in such coats as it can cause flushing of the asphalt overlay.

When using Waka Kotahi (NZTA) specification M/10 compliant mixes on roads of connector/collector class, Waka Kotahi (NZTA) guidelines on skid resistance and surface texture shall be incorporated in the mix design.

5.4.2.11 Other Asphalt Mixes

For special uses other asphalt-based hot mixes may be used such as open grade porous asphalt or macadam wearing mix. When used they shall be placed over a waterproof under layer and shall be designed according to current specifications and guides. In no case shall the laid thickness be less than 25 mm.

5.4.2.12 Concrete

All concrete for roads shall come from a special grade plant as defined in NZS 3109. Concrete of not less than 30 MP at 28-day strength shall be used for any road or crossing slabs.

Concrete for kerbs and channels shall be of not less than 20 MPa, 28-day strength except for vehicle crossings and mountable kerb, which require 30Mpa at 28-day strength.

5.4.2.13 Concrete Pavers

Design and material standards shall comply with NZS 3116. Paver thickness shall be as defined in NZS 3116 for the appropriate traffic loading classification.

When used in roads the basecourse underlayer shall be given a waterproofing seal coat before the sand and pavers are laid, except where part of a porous pavement is approved by Council.

When used for bus stops or at raised crossings the basecourse shall be cement stabilised under the raised zone and for at least 3 m on either side of the raised zone.
Pavers shall be laid to 5 mm above the lips of channels and other draining features.

5.4.3 Subgrade Preparation

The top of subgrade level should be formed to the road shape to ensure water drains effectively. For full details of subgrade preparation refer to Waka Kotahi (NZTA) F/1 specification.

Even in cases where the subgrade has been tested as part of the design its condition shall be reviewed on exposure during construction, by a suitably qualified person, and pavement thicknesses adjusted accordingly.

The results of such testing or review along with any consequent adjustments to pavement layer thicknesses shall be advised to Council before placing of pavement layers commences. Any adjustment of pavement layers shall not be less than the approved pavement design.

Any identified wet spots in the subgrade shall be drained to the under-channel drainage system. Where the wet area is below the level of the under-channel drain, it shall be drained using approved filter drainpipes connected to the nearest stormwater system.

Between the date the subgrade is completed and the application of the first metal-course aggregate, the subgrade shall be maintained true to grade and cross section. Should potholes, soft spots or ravelling develop in the subgrade, the area so affected shall be scarified and clean material added and recompacted.

5.4.4 Spreading And Compaction Of Metal Course Aggregates

The metal course aggregates shall be placed on the prepared subgrade in layers. The aggregate layers shall be of adequate thickness and stiffness to ensure that with adequate compaction the minimum required deflections are achieved.

5.4.5 Sub-Base

Sub-base material shall be placed in layers thin enough to ensure requisite compaction and CBR standards are achieved. Sub-base shall be compacted in accordance with Waka Kotahi (NZTA) B/2 specification to achieve a mean of 95% of maximum dry density (MDD) and a minimum of 92% of MDD.

The layers shall be so placed that when compacted they will be true to the grades and levels required. The laying procedure shall be arranged to minimise segregation. Grader use shall be restricted to essential shaping and final trimming, with minimum working of the final surface.

The sub-base layer may be used by construction traffic, but such traffic shall be managed to ensure no detrimental effects to the final road construction.

While not mandatory, it is recommended that the sub-base deflection be tested in addition to testing of the basecourse deflections.

5.4.6 Basecourse

Basecourse shall be placed in layers not exceeding 150 mm. It shall be placed and compacted to Waka Kotahi (NZTA) B/2 specification density requirements to achieve a mean of 98% MDD and a minimum of 95% MDD.

Where approved by Council, cement stabilised basecourses should be placed and compacted in accordance with the Waka Kotahi (NZTA) B/5 specification.

To assist compaction, water may be added as a fine mist spray to achieve optimum moisture content. Particular care shall be taken to avoid excess water reaching the formation or sub-base course.

Fine aggregate may be hand spread in a comparatively dry state over any open textured portion of the final compacted aggregate surface. The fine aggregate shall be vibrated or rolled into the interstices of the basecourse. The use of such surface choking material shall be kept to a minimum. Special attention shall be paid to the consolidation of the edges of the basecourse.

The construction of the basecourse shall be carried out in a manner that will ensure the production of a stone mosaic surface after sweeping.

5.4.7 Maintenance Of Basecourse

The finished aggregate surface shall be maintained at all times true to grade and cross section by placement of a 'running course', watering as required, trimming, planning, rolling, and taking appropriate measures to ensure the even distribution of traffic.

Every precaution shall be taken to ensure that the surface of the basecourse does not pothole, ravel, rut or become uneven, but should any of these conditions become apparent, the surface shall be patched with suitable aggregate and completely scarified and recompacted. The basecourse shall be maintained to the specified standards until covered with an impermeable surfacing layer.

5.4.8 Basecourse Preparation for Surfacing

Any loose or caked material shall be removed from the surface without disturbing the compacted base, and the material so removed shall be disposed of. The surface shall then be swept clean of any dust, dirt, animal deposits, or other deleterious matter. The surface of the road at the time of surfacing shall be clean, dry and uniform, tightly compacted, and shall present a stone mosaic appearance. Immediately prior to any form of surfacing a strip 600 mm wide contiguous to each channel or seal edge shall be sprayed with an approved ground sterilising weed killer at the manufacturer's recommended rate of application.

For second coat sealing, repairs shall be carried out prior to sealing. Areas to be patched shall be cleaned and loose material removed before application of an emulsion tack coat and asphaltic patching material. The repairs shall provide a finished surface flush with the levels and grades of the surrounding pavement, and shall not hold water.

Where repairs are required to the carriageway and dense graded hot mix asphalt is used, a texturing coat maybe required. Where it is required, a minimum stand down period of 6 months should be undertaken to limit the potential for flushing of the texturing coat.

Prior to commencement of sealing the surface preparation shall be inspected by Council. Shoulders are to be compacted to Waka Kotahi B/02 specifications.

5.4.9 Deflection testing prior to surfacing

Where required by Council prior to placing the surfacing layer (except for cast in situ concrete roads) deflections shall be tested by the Benkelman beam method (see Table 5-). At least 95% of all tests shall comply with the standards appropriate to the road type. Where Council does not have its own deflection standards Table 5-6 shall be considered as a minimum standard. In addition no test shall give deflections greater than 25% above the specified maximum.

Table 5-6 Benkelman beam standards

Residential	Deflections		Commercial Industrial Rural	Deflections	
	Average	Maximum		Average	Maximum
M5 – Low - Lane	1.50 mm	1.80 mm	Lane	1.00 mm	1.20 mm
M4 - Local road	1.50 mm	1.80 mm	Local road	1.00 mm	1.20 mm
Connector/ collector	1.25 mm	1.50 mm	Connector/ collector	1.00 mm	1.20 mm
Arterial	1.00 mm	1.20 mm	Arterial	1.00 mm	1.20 mm

Readings shall be taken in the wheel path in both lanes and at a maximum interval of 10 m. Other methods of determining deflection such as Falling Weight Deflectometer shall be acceptable if designed in accordance with the appropriate Austroads Guides.

5.4.10 Surfacing Specification

Chipsealing construction standards shall comply with Waka Kotahi (NZTA) specifications P/3 and P/4.

Asphaltic concrete construction standards shall comply with Waka Kotahi (NZTA) specification M/10.
Add section

5.4.11 Bitumen Application Rate

Bitumen application rate for chipseals and tack coats shall be assessed based on current Waka Kotahi (NZTA) design methods and ambient weather conditions at the time of construction.

5.4.12 Footpaths and Cycle Paths

Standard Drawing R5 provides a guide to Council footpath construction standards. Reference shall also be made to Waka Kotahi RTS 14 – Guidelines for facilities for blind and vision impaired pedestrians for the design and installation of tactile ground surface indicators. Footpaths shall have a minimum CBR test value of 5 (allowable bearing pressure of approximately 80 kPa).

5.4.12.1 Concrete

Concrete footpaths and cycle paths shall be formed over not less than 100 mm of compacted AP20 crushed gravel. The formation is to be thoroughly compacted by rolling before any concrete is placed. Porous areas shall be blinded with sand prior to placing concrete.

The foundation shall be evenly trimmed to a crossfall of 1 in 50. If the foundation is dry, it shall be moistened in advance of placing concrete.

The concrete paths shall be laid with construction joints at intervals of not greater than 3 m. If paths are constructed by continuous pour techniques, clean, true, well-oiled 5 mm thick steel strips at least 40 mm deep shall be inserted at 3 m intervals to facilitate controlled cracking. These strips shall be carefully removed after the concrete has set. Alternatively, the joints may be cut by means of a concrete-cutting saw. In this case the cutting shall be carried out not more than 48 hours after pouring and shall be to a depth of 40 mm. These joints may also be typically tooled into the concrete when the concrete is still plastic. Alternatively, the use of metal crack inducers may be used with the approval of Council.

Minimum concrete thickness for paths is 100 mm. Concrete in both footpaths and kerb and channel shall be cured for at least seven days during dry weather.

Concrete used in footpaths shall be of at least 20 MPa, 28-day strength. Concrete for crossings shall be 30 MPa, 28-day strength as detailed in 5.4.2.12.

Concrete used in footpaths shall be of at least 20 MPa, 28-day strength, except for the following situations that require minimum compressive strength of 30Mpa, with a 125 mm depth reinforced with SE72 mesh.

- Vehicle crossings,
- Where the mountable kerb is used
- Areas specified by the engineer

Where required, vehicle and pedestrian crossings shall be constructed in accordance with Council Standard Drawings. Tactile ground stud indicators may be required at pedestrian kerb crossings.

5.4.12.2 Asphaltic Concrete

Asphaltic concrete footpaths and cycle paths shall be placed over not less than 100 mm of compacted AP20 over AP40 (or AP65 where depths allow) crushed gravel sub-base as per table on Standard Drawing R11 after removal of all organic and soft subgrade. Asphaltic concrete shall be laid in a minimum layer thickness of 25 mm of DG7 M/10 material. Asphalt concrete paths shall not puddle water, and shall be edged with either concrete or ground treated timber where hand laid and abutting berms or other grassed areas.

5.4.12.3 Concrete Pavers

The designer must show the whole of life cost of concrete pavers in relation to concrete and asphaltic concrete footpath construction. Where concrete pavers are the preferred treatment, they shall be 80

mm depth of 50 MPa interlocking paving blocks shall be placed on 30 mm of sand with not less than 150 mm of compacted basecourse of AP40 crushed gravel after removal of all organic and soft subgrade. Laying shall be in accordance with NZS 3116. Pavers shall be laid to 5 mm above tops of channels and other drainage features.

Where a footpath is constructed around the head of a cul-de-sac turning head the depth of construction shall be increased to accommodate wheel loads from turning trucks as follows:

(a) 125 mm concrete reinforced with SE72 mesh.
(b) 50 mm of asphaltic concrete on 300 mm depth of AP 40 crushed compacted gravel.
(c) 80 mm paving blocks on 30 mm of sand on 250 mm of AP 40 with 150 mm x 250 mm concrete edgings.

5.4.12.4 Surface Finish Tolerances

Surface finish and tolerances on footpaths shall comply with the appropriate design requirements.

5.4.13 Construction - Vehicle Crossings

Residential

Residential crossings shall be 125 mm thick concrete reinforced with central SE72 mesh with a 30Mpa 28-day strength, on a compacted subgrade.

Commercial and Industrial

Construction shall be 150 mm thick concrete reinforced with one layer of SE72 mesh placed centrally with a 30Mpa 28-day strength. Channels across the entrance of commercial/industrial crossings shall incorporate two D12 reinforcing bars full length.

Alternative vehicle crossing designs for residential, commercial and industrial areas using hotmix may be used subject to specific approval. See Standard Drawing R21-R23.

Rural

Rural crossings shall be constructed with an appropriate depth of compacted granular hardfill. For typical situations the accepted depth is 250 mm, but this should be varied to suit local ground conditions and actual truck loading.

The primary purpose of rural crossings is to protect the edge of existing seal and prevent loose material migrating to the main road. Therefore the crossing shall be formed to cover the anticipated or (in the case of existing unsealed crossings) the existing swept vehicle area, with the full area of vehicle exit and entry from the carriageway to the legal boundary being covered.

5.4.14 Kerb And Channel

Kerb and channel may be either cast in situ or extruded.

For cast in situ kerb and channel, formwork shall be clean dressed timber or steel sections adequately oiled or otherwise treated to allow ease of striking without staining or damaging of the stripped concrete surface.

No formwork shall be stripped until at least two days have elapsed from time of pouring concrete.

For extruded kerb and channel, concrete used shall be of such consistency that after extrusion it will maintain the kerb shape without support. The extrusion machine shall be operated to produce a well compacted mass of concrete free from surface pitting.

Concrete used in kerbs and channels shall be of at least 20 MPa, 28-day strength. Concrete for kerbs and channels at crossings, and all mountable kerbs, shall be 30 MPa, 28-day strength. The use of mountable kerb will require the prior approval of Council.

Finished tolerances and standards shall satisfy the design standards. Standard kerb and channel shapes are provided later in this CoP. Refer to the standard detail drawings provided in Appendix B.

5.4.15 Berms and landscaping

Berms shall be formed after all other construction has been completed. Berms once formed to the required shape (including batter slopes of 2:1(H:V) or less) shall include a 100 mm thick layer of topsoil free of weeds, stones, and other foreign matter and shall finish 15 mm above adjacent footpath level to allow for settlement.

After placing and spreading topsoil, the berm shall be either sown or planted, or both, and maintained free of weeds for the contract maintenance period. The seed mix shall be approved by Council.

When sown, rather than planted, grass coverage of not less than 90% shall be achieved within 1 month of sowing and before completion documentation will be accepted for processing by Council.

For additional requirements for swales see Section 5.3.20.6.

Any landscaping in the road reserve shall be in accordance with Section 10 of this CoP.

Clear demarcation shall be required and agreed identifying who will own and hence maintain the berms and landscaping once the maintenance period is completed.

5.4.16 Surface Finish and Tolerances on Kerbs, Paths and Accessways

Kerbs and channel
All curves both horizontal and vertical shall be tangential to straights and the lines and levels of kerbs shall be such as to give the finished kerbs smooth lines free of kinks and angles. Construction joints shall be placed in all unreinforced kerb and channel at 10 m centres.

Workmanship standards shall be such that, on straights, kerbing shall not deviate from a straight line by more than 6 mm in any length of 3 m. Similar standards shall apply to the gradient line. No visible ponding in new channels shall occur.

The exposed faces of the kerb and channel shall present smooth, uniform appearance free from honey-combing or other blemishes to at least U3 standard in NZS 3114.

Paths And Accessways
Concrete paths and accessways shall be finished with a crossfall to shed water and an even non-skid brush surface to finish U5 in NZS 3114.

The surface of other paths/accessways shall be of uniform texture as would be expected from best trade standards for the surfacing used. Crossfalls of 2% shall be provided or by agreement with Council.

The surface of all paths/accessways shall not deviate by more than 6 mm from a 3 m straight edge at any point and no abrupt changes in line or level shall occur. No path/accessway shall pond water.

5.4.17 Progress Inspections

The contractor shall give notice to Council as appropriate to allow the conduct of all inspections required to facilitate eventual acceptance of the project by Council.

5.4.18 Installation of Traffic Services, Road Furniture, Benchmarks

Traffic lines and utility services shall be painted and marked after initial surfacing and sweeping has been completed. Road furniture and survey reference marks shall be installed, prior to final inspections being made by Council.

5.4.19 As-Built and Completion Documentation

On completion of construction, information and documents as required by Council shall be provided by the developer's professional advisor. (See Schedule 2D and Section 3.2.20 for further information.) The information provided shall provide sufficient detail to enable Council to complete the road assessment and maintenance management (RAMM) database input.

5.5 Parking and Access Layouts

Figure 5-9 Angled Parking Layout

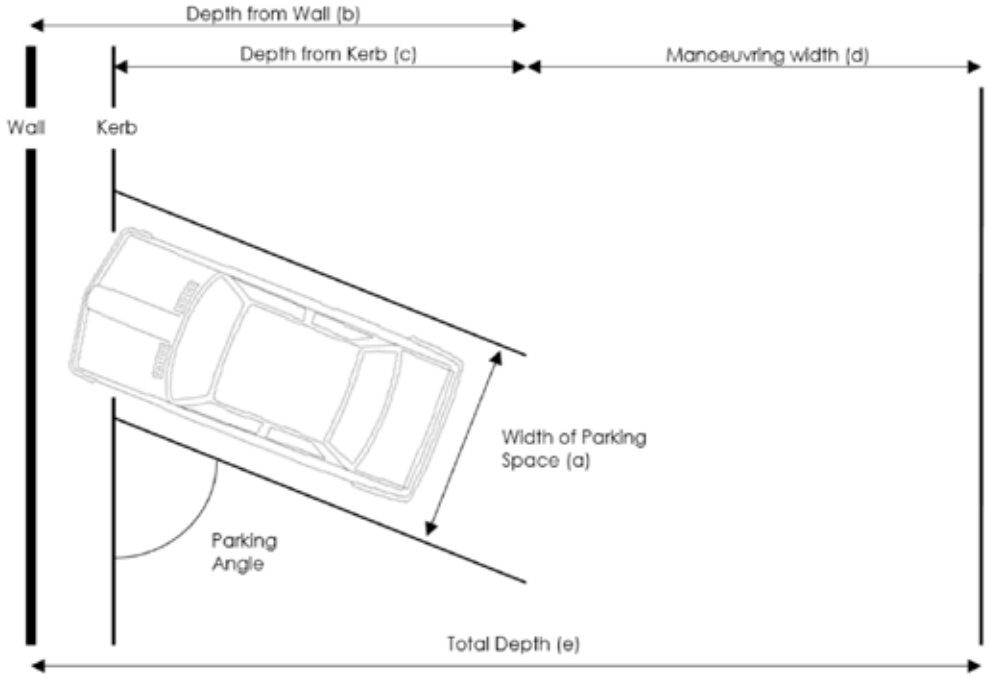


Table 5-7 Parking Dimensions

Type of Parking		Stall Width (a)	Stall Depth From wall (b)	Stall Depth From kerb (c)	Manoeuvre Width (d)	Total Depth (e) One row	Total Depth (e) Two rows
Parking Angle	Type	ALL MEASUREMENTS ARE IN METRES					
90°	Nose in	2.4 2.5 2.6 2.7	5.1	4.1	7.9 7.6 7.2 6.8	13.0 12.7 12.3 11.9	18.1 17.8 17.4 17.0
75°	Nose in	2.4 2.5	5.4	4.4	6.4 5.8	11.8 11.2	17.3 16.6

Type of Parking		Stall Width (a)	Stall Depth		Manoeuvre Width (d)	Total Depth (e)	
			From wall (b)	From kerb (c)		One row	Two rows
Parking Angle	Type	ALL MEASUREMENTS ARE IN METRES					
		2.6 2.7			5.2 4.6	10.6 10.0	16.0 15.4
60°	Nose in	2.4 2.5 2.6 2.7	5.4	4.5	4.5 4.2 3.9 3.6	9.9 9.6 9.3 9.0	15.3 15.0 14.7 14.4
45°	Nose in	2.4 2.5 2.6 2.7	5.0	4.2	3.6 3.5 3.4 3.3	8.6 8.5 8.4 8.3	13.6 13.5 13.4 13.3
30°	Nose in	2.4 2.5 2.6 2.7	4.3	3.7	3.0	7.3	11.6
0°	Parallel	2.5	Stall length 6.0 m		3.7	6.2	8.7

1. Parallel parking spaces (Parking angle – 0°) shall be 6.0 m long, except where one end of the space is not obstructed in which case the length of a space may be reduced to 5.0 m.
2. Minimum aisle and accessway widths shall be 3.0 m for one way flow and 5.5 m for two way flow. Recommended aisle and accessway widths are 3.5 m for one way flow and 6.0 m for two way flow.
3. Maximum kerb height = 150 mm.
4. In addition to the minimum requirements for a standard car, as shown above, a minimum stall width of 3.0 m shall be allowed for angled accessible parking.
5. The above table and diagram provide details on minimum car-park widths as a general guide. Consideration needs to be made of the use of the parking, for example where there are likely to be a high incidence of campervans or SUVs, parks may need to be wider. Guidelines on lighting, carpark surface and other issues may be found in the Traffic Control Devices Manual Part 13 (https://www.nzta.govt.nz/resources/traffic-control-devices-manual/) and should be considered in the overall scheme.
6. On-road parking requirements shall meet the requirements of the Traffic Control devices manual.

Accessible parking requirements and spaces shall comply with NZS 4121 Code of practice for design for access and use of buildings and facilities by disabled persons.

The following are the minimum number of accessible carparks required which must meet a minimum width of 3.0 m.

Table 5-8 Accessible Parking Numbers

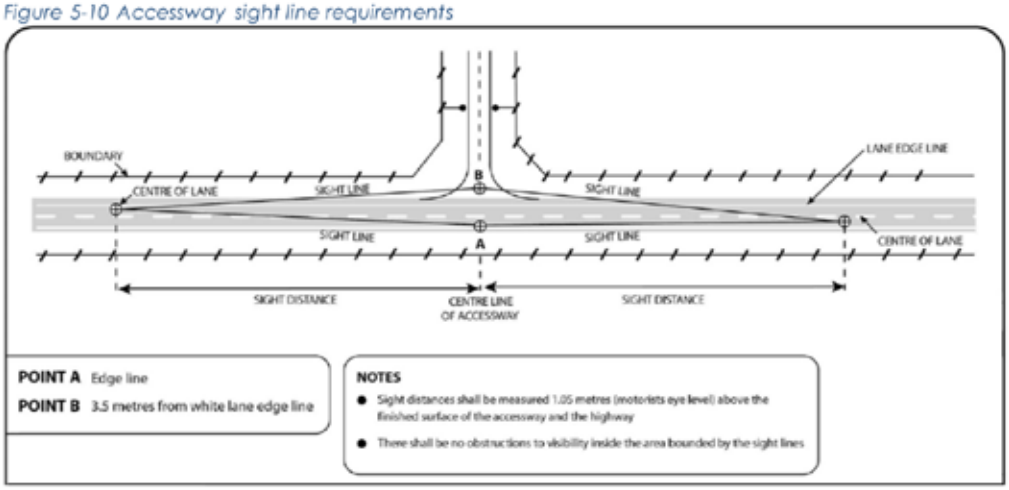
Total number of car parks	Number of accessible spaces
1 - 20	Not less than 1
21 - 50	Not less than 2
For every additional 50 parks	Not less than 1

5.5.1 Accessway Sight Lines

For new accessways onto existing roads, the location shall consider the available sight lines to approaching main road traffic to ensure safety for exiting and entering vehicles. Sightlines shall be provided in accordance to the operating speed of the main road. Wherever possible the sight line shall be created by clearing vegetation and other obstructions to the satisfaction of Council.

For both rural and urban locations sight lines shall be provided in accordance with Figure 5-10 below. Further review is required with Council if these requirements cannot be met.

Figure 5-10 Accessway sight line requirements

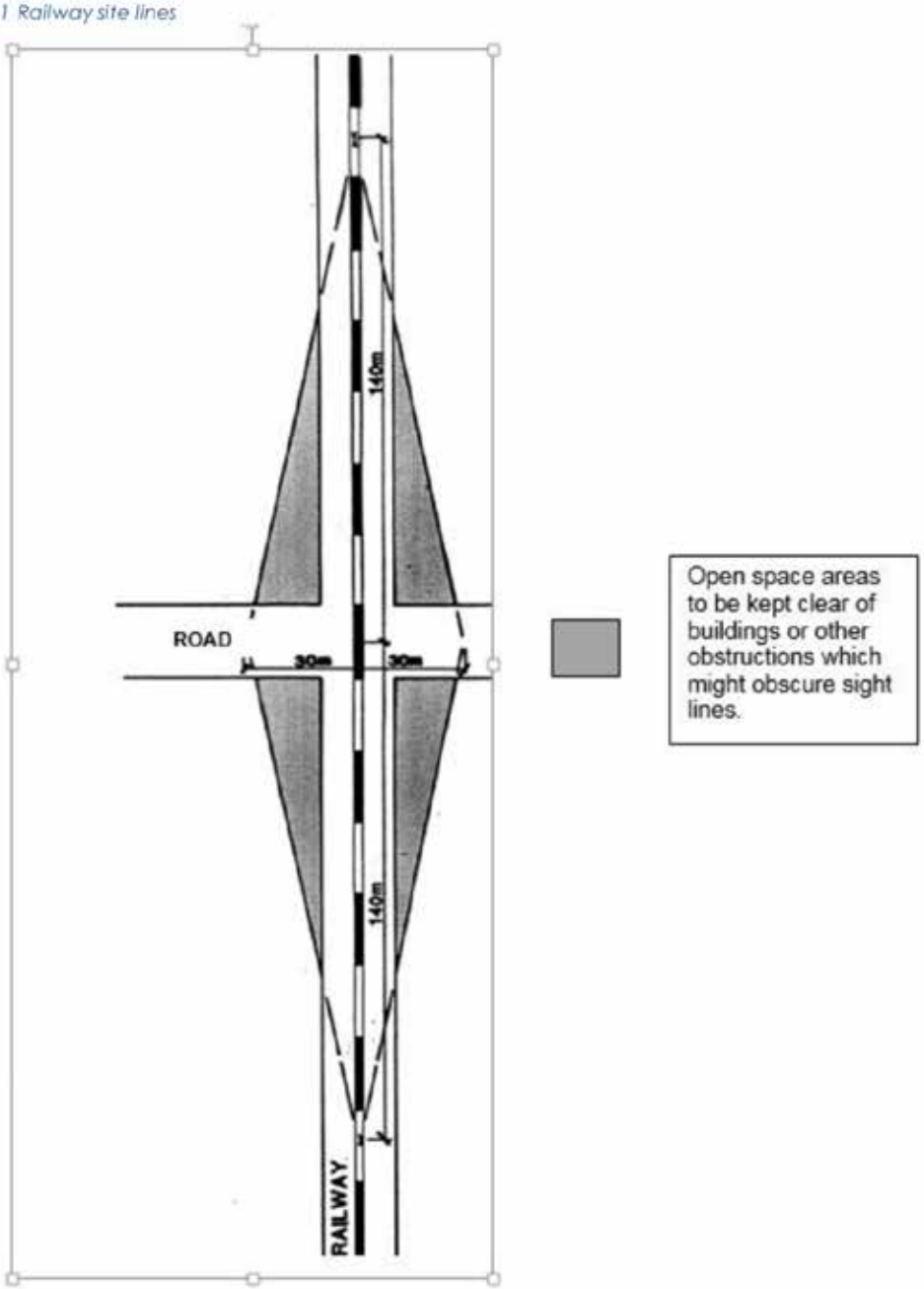


Operating Speed (km/h)	Minimum Sight Distance (m)		
	Local Road	Collector	Arterial
40	30	35	70
50	40	45	90
60	55	65	115
70	85	85	140
80	105	105	175
90	130	130	210
100	160	160	250
110	190	190	290
120	230	230	330

5.5.2 Railway Sight Line Restriction

Where a railway and a road intersect on the same level, the approval of the rail provider and the road controlling authority must be obtained in relation to the design of the level crossing. Generally, no building or vegetation which would block the sight lines shall be permitted within an area bounded by lines connecting points of 30 m along the centreline of the road measured in each direction from the centreline of the nearest railway track to points 140 m along the nearest railway track measured in each direction from the centreline of the road as more particularly shown in the Figure 5-11 below:

Figure 5-11 Railway site lines



Notes:

- Dispensation to dimensions given may be possible through application to KiwiRail and are dependent upon train movements or speeds in the area.
- Where there are two or more rail tracks the 30 m sight line applies from the centre line of the nearest track.

Sensitivity: General

Section 6. Stormwater

6.1 Scope

This section sets out requirements for the design and construction of stormwater systems for land development and subdivision. The significant issues for stormwater management are the protection of people, property, infrastructure, and the receiving environment. Stormwater management requires the integration of land use, roading, and ecological factors. A catchment-based approach is required with consideration of changes in catchment hydrology, rainfall patterns, and sea level rise from climate change effects.

Opportunities exist with stormwater design to use or replicate the natural drainage system. Grassed swales, natural or artificial waterways, ponds and wetlands, for example, may in certain circumstances be not only part of the stormwater system, but also a preferred solution especially if low impact on receiving waters downstream is critical. Low impact design is the preferred approach, particularly where there is a requirement to replicate the pre-development hydrological regime. Nevertheless piped stormwater systems will often be required either in support of low impact systems or as the primary system.

Sustainable drainage solutions aim to store, treat, dissipate, and reuse at source as much as is possible. Thereby reducing total volumes being transported via networks away from the development. The tools listed below all work towards this end.

Stormwater systems serve a number of purposes including the management of storm surface water run-off, treatment of such run-off, and groundwater control. All aspects need to be considered in design and achieved with minimal adverse effects on the environment.

6.2 General

6.2.1 Objectives

The primary objective of a stormwater system is to manage storm surface water run-off thereby to minimise adverse effects on the environment.

The stormwater system shall include provision for:

(a) A level of service to Council's customers in accordance with the authority's policies.
(b) Minimised adverse environmental and community impact.
(c) Protection from potential adverse effects to aquatic ecosystems.
(d) Compliance with environmental requirements.
(e) Adequate system capacity to service the fully developed catchment.
(f) Long service life with consideration of maintenance and whole life-cycle costs. Including resistance to tree root invasion, external corrosion, suitable structural strength.
(g) Application of low impact design solutions.

6.2.2 Legislation and Guidance Manuals

Referenced legislation is listed in Section 2 of this CoP.

A selection of guidance manuals which may provide a useful resource or basis for stormwater design and management is set out in the referenced documents. They are non-statutory but may be required to be complied with under this CoP and/or the Regional or District Plans.

6.2.3 Effects Of Land Use on Receiving Waters

Impervious surfaces and piped stormwater systems associated with development have an effect on catchment hydrology. Faster run-off of storm flows, reduction in base flows, and accelerated channel erosion and depositions alter the hydrology and adversely affect the quality of receiving waters. Development should aim to minimise the increase in the frequency at which pre-development discharges are exceeded across a range of design rainfall events as this has implications for the biodiversity of the aquatic biological community.

The effects of rural development on receiving waters are generally less significant. The modification to stream hydrology is generally minor. However, any reduction in riparian vegetation increases sediment loads and nutrient concentrations are likely to reduce aquatic biodiversity.

6.2.4 Catchment Management Planning

Stormwater management planning should be carried out on a subcatchment or catchment-wide basis. Where the proposed development is in an area covered by a local authority comprehensive catchment management plan, designers will be required to comply with the design philosophy in the plan.

If there is no catchment management plan for the area of the proposed development, the stormwater planning requirements should be discussed with the Las at an early stage.

The implications of future development on adjoining land should be on the basis of replicating the pre-development hydrological regime whereby the maximum rate of discharge and peak flood levels post-development are no greater than pre-development.

Any catchment management planning issues should be discussed with Council at an early stage.

6.2.5 System Components

The stormwater system conveys storm surface run-off and shallow groundwater from the point of interception to soakage areas, attenuation areas, or the point of discharge to receiving waters. Components of the primary system may include roadside channels, swales and sumps, stormwater pipelines, subsoil drains, outlet structures, soakage areas, wetlands, ponds, and water quantity and quality control structures. Secondary surface flow paths to convey primary system overflows will also be required.

These different system components are set out on standard construction drawings contained in Appendix B. The drawings are copyright waived and may be adapted by subdivision developers for incorporation into specific designs.

6.2.6 Catchments and Off-Site Effects

All stormwater systems shall provide for the management of stormwater run-off from within the land being developed together with any run-off from upstream catchments. In designing downstream facilities the upstream catchment shall be considered to be fully developed to the extent defined in the operative District Plan or structure plan unless Council advises that the upstream catchment will be required to be controlled for off-site effects at the time of its development.

For all land development infrastructure (including projects involving changes in land use or coverage) the design of the stormwater system shall include the evaluation of stormwater run-off changes on upstream and downstream properties. This evaluation will be required at the resource consent stage and may be linked to a requirement to replicate the pre-development hydrological regime.

Upstream flood levels shall not be increased by any downstream development unless any increase can be shown to have not more than a minor impact on the upstream properties.

Downstream impacts could include (but are not limited to) changes in flow peaks and patterns, flood water levels, contamination levels and erosion or silting effects, and effects on the existing stormwater system. Where such impacts are more than minor, mitigation measures such as peak flow attenuation, velocity control, and treatment devices will be required.

Fish passage shall be designed and maintained in accordance with the National Environmental Standards for Freshwater. This is also likely to be a requirement of any authorisation from Environment Southland.

6.2.7 Water Quality

Stormwater treatment devices may be required to avoid adverse water quality effects on receiving waters. The type of potential contaminants should be identified and then treatment devices designed to address the particular issues. The need for treatment devices should be considered for every discharge even when it is not a direct discharge to a receiving water, for instance where the discharge is to an existing network. In this instance specific approval from the Council will be required.

The type of potential contaminants should be identified, and treatment devices designed, to address the particular issues relevant to the receiving environment.

6.2.8 Climate Change

Climate change is expected to increase the intensity and frequency of heavy rainfall events, even in areas where mean annual rainfall is predicted to decrease. In low-lying coastal areas higher sea levels will also affect rivers, streams, and stormwater outfalls. The performance of stormwater systems in these areas will need to take into account higher predicted downstream sea levels.

Rainfall design charts shall be adjusted to take into account the predicted increase in rainfall intensities from the effects of climate change. To do this the designer shall use the following factors:

- Temperature increase of 1.5°C
- Design Horizon of 2050 – (NZ has signed up to the Kyoto agreement to limit to 1.5°C at 2050)
- RCP 6 (representative concentration pathway)
- Design event duration 6hrs

Using the NIWA – Hirds website = https://niwa.co.nz/information-services/hirds/help

A percentage increase on the design rainfall depth can be identified.

(Example 2020 design is a 30 year design horizon (up to 2050) which from the Hirds table for a 1°C increase gives a factor of 11.2%. This then needs to be multiplied by 1.5 (for the design temperature rise) which gives an overall climate change multiplication factor of 16.8%)

C6.2.8
Refer to the following Ministry for the Environment publications for guidance on climate change:
'Preparing for climate change - A guide for local government in New Zealand' for guidance on adjusting rainfall design charts at selected locations within each regional council area.
'Preparing for coastal change - A guide for local government in New Zealand' for guidance on coastal hazards and climate change.
'Tools for estimating the effects of climate change on flood flow - A guidance manual for local government in New Zealand' for incorporating climate change in flood flow estimation.
'Preparing for future flooding - A guide for local government in New Zealand' provides an overview of the expected impacts of climate change on flooding.

6.3 Design

Council should be consulted to confirm design requirements to suit each and any development site. The designer shall liaise with Council, prior to commencement of design, to ensure that sufficient prerequisite information is available to undertake the design.

6.3.1 Design life

All stormwater systems shall be designed and constructed for an asset life of at least 100 years. Some low impact design devices such as rain gardens and other soakage systems may require earlier renovation or replacement. In addition M&E systems have a finite design life depending upon the components.

6.3.2 Structure plan

Council may require a structure plan setting out certain information to be used in design, such as flows, sizing, upstream controls, pipe layout, treatment, or mitigation requirements. Environment Southland's Water Plan, and its future Water and Land Plan, detail the appropriate stormwater management options for the given structure plan area. Where a structure plan is not provided, the designer shall determine the information by investigation using any water plans for the area, this CoP, and any requirements of Council, as appropriate.

6.3.3 Future Development

Where further subdivision, upstream of the one under consideration, is provided for in the district or regional plan, Council may require stormwater infrastructure to be constructed to the upper limits of the subdivision.

Additionally, Council may require further capacity to be provided in the stormwater system to cater for existing or future development upstream.

6.3.4 System Design

Stormwater systems shall be considered as the total system protecting people, land, infrastructure, and the receiving environment.

A stormwater system consists of primary and secondary systems outlined as follows:

Primary systems

A primary system designed to accommodate flows up to a specified design rainfall event. In the Southland District this is defined as a 1 in 10 year event, also known as a 10% Annual Exceedance Probability (AEP) event. In the Invercargill City this is defined as a 1 in 5 year event, also known as a 20% AEP event.

In addition, depending upon the site, there is normally a requirement to limit the discharge from the site to a particular flow rate. This will need to be defined in discussion with Council as each catchment will have different objectives for attenuation (e.g. stream stability, flooding control or mitigation, pipe capacity limitations etc). The initial starting point for attenuating is typically to ensure the existing peak pre-development flow rate is not exceeded in the primary AEP storms. Further attenuation may be necessary to align with wider catchment time of concentration or other site-specific objectives .

Secondary systems

A secondary system is intended to manage excess runoff over and above the primary network capacity. Thereby ensuring that the effects of stormwater run-off from events that exceed the capacity of the primary system, are managed. This includes occasions when there are blockages in the primary system limiting its capacity. This is defined as being for flows between the 1 in 10 year for SDC or 1 in 5 year for ICC, and a 1 in 100 year events (i.e. between a 10% (SDC) or 20% (ICC), and a 1% AEP event).

Secondary systems shall consist of ponding areas and overland flow paths to manage excess run-off. Where possible, secondary systems shall be located utilising the development highways and/or on land that is, or is proposed to become public land. If located on private land, the secondary system shall be protected by legal easements in favour of Council or by other encumbrances prohibiting earthworks, fences, or other structures that may restrict the flows.

Secondary systems shall be designed so that erosion or land instability will not occur. Where necessary the design shall incorporate special measures to protect the land against such events.

Ponding or secondary flow on local roads shall be limited to a 100 mm maximum height at the centre line during the 1 in 100 year event and flows such that the carriageway is passable in a 1 in 20 year event (5% AEP) design storm.

C6.3.4
The Austroads 'Guide to road design - Part 5: Drainage design' provides more information on major and minor stormwater design and acceptable volume and velocity for surface flow.

6.3.5 Design Criteria

The designer should liaise with Council, prior to commencement of design, to ensure that sufficient prerequisite information is available to undertake the design.

When the design process includes the use of a hydrological or hydraulic model, all underlying assumptions (such as run-off coefficients, time of concentration, and catchment areas) shall be clearly stated so that a manual check of calculations is possible. A copy of the model may be required by Council for either review or records or both.

The designer shall undertake the necessary design and prepare design drawings compatible with Council's design and performance parameters. Designers shall ensure the following aspects have been considered and where appropriate included in the design:

(a) The size of pipes, ponds, swales, wetlands, and other devices in the proposed stormwater management system.
(b) How the roading stormwater design is integrated into the overall stormwater system.
(c) The type and class of materials proposed to be used.
(d) System layouts and alignments including:
    (i) Route selection;
    (ii) Topographical (defining sub-catchments) and environmental aspects (defining runoff coefficients) (see Section 7.3.4.3);
    (iii) Easements;
    (iv) Clearances from underground services and structures (see Section 7.3.7.9 and 7.3.7.10);
    (v) Provision for future extensions;
    (vi) Location of secondary flowpaths.
(e) Hydraulic adequacy (see Section 6.3.10.5).
(f) Property service connection locations and sizes (see Section 6.3.13)

For catchments less than 50 ha, surface water run-off using the Rational Method will generally be accepted. For larger catchments, or where significant storage elements (such as ponds) are incorporated, surface water run-off should be determined using an appropriate hydrological or hydraulic model.

The design shall be based on the Rational Formula:

ie: $Q=k*C*i*A$, where;

Q is the design flow rate in litres/sec
k is 2.78×10^{-3}
A is the area (hectares) of the catchment above the point being considered
i is the rainfall intensity (mm/hr)
C is the coefficient of run-off having the following values:

Table 6-1 runoff coefficients for various surface types

Description of surface	C
Natural surface types	
Bare impermeable clay with no interception channels or run-off control	0.70
Bare uncultivated soil of medium soakage	0.60
Heavy clay soil types:	
pasture and grass cover	0.40
bush and scrub cover	0.35
cultivated	0.30
Medium soakage soil types:	
pasture and grass cover	0.30
bush and scrub cover	0.25
cultivated	0.20
High soakage gravel, sandy and volcanic soil types:	
pasture and grass cover	0.20
bush and scrub cover	0.15
cultivated	0.10
Parks, playgrounds and reserves:	
mainly grassed	0.30
predominantly bush	0.25
Gardens, lawns, etc	0.25
Developed surface types	
Fully roofed and/or sealed developments	0.90
Steel and non-absorbent roof surfaces	0.90
Asphalt and concrete paved surfaces	0.85
Near flat and slightly absorbent roof surfaces	0.80
Stone, brick and precast concrete paving panels	
with sealed joints	0.80
with open joints	0.60
Unsealed roads	0.50
Railway and unsealed yards and similar surfaces	0.35
Land use types	
Industrial, commercial, shopping areas and town house developments	0.65
Residential areas in which the impervious area is less than 36% of gross area	0.45
Residential areas in which impervious area is 36% to 50% of gross area	0.55

Note:

- Where the impervious area exceeds 50% of gross area the chosen run-off coefficient shall be based on the conditions likely to exist after the full catchment development allowable by the District Plan.
- The run-off coefficient C is the variable in the rational formula least able to be precisely determined, and represents the integrated effects of such things as infiltration, storage, evaporation, natural retention and interception, all of which affect the time distribution and peak rate of run-off.
- The run-off coefficients given assume saturated ground conditions from previous rain and shall be used in the calculation of surface water run-off.

6.3.6 Design Storms

All new primary stormwater systems shall be designed to cope with climate change adjusted design storms (see Section 6.2.8 for definition) with a 1 in 10-year return period (10% AEP) for the Southland District Council, and a 1 in 5-year return period (20% AEP) for the Invercargill City Council. All new secondary systems shall be designed to cope with a 1 in 100-year return period (1% AEP) design storm.

Rainfall intensity design charts developed from local data should be used if available. High Intensity Rainfall Design Systems (HIRDS) data available from NIWA is considered a suitable source for rainfall design data.

6.3.6.1 Freeboard

The minimum freeboard height additional to the computed top water flood level of the 1 in 100yr (1% AEP) design storm should be as follows or as specified in the district or regional plan:

Freeboard	Minimum height
Habitable dwellings (including attached garages)	0.5 m
Commercial and industrial buildings	0.3 m
Non-habitable residential buildings and detached garages	0.2 m

The minimum freeboard shall be measured from the top water level to the building platform level or the underside of the floor joists or underside of the floor slab, whichever is applicable.

6.3.6.2 Tidal Areas

In tidal areas, design criteria should be discussed with Council at an early stage. Storm surge, tsunami hazards, climate change, and sea level rise need to be taken into account in accordance with the Ministry for the Environment guidance manual *Interim guidance on the use of new sea-level rise projection 2022*.

6.3.6.3 Hydraulic Design of Stormwater Systems

The hydraulic design of stormwater pipes should be based on either the Colebrook-White formula or the Manning formula. System capacity shall be determined from the Colebrook-White or Manning coefficient as shown in Table 6-2, though approximations of Colebrook-White may also be used where appropriate. The Colebrook-White and Manning formulae can be found in *Metrication: Hydraulic data and formulae* (Lamont). Manufacturers' specifications should also be referred to.

Refer to 'Roughness characteristics of New Zealand rivers' by D M Hicks and P D Mason for further guidance on the selection of Manning's 'n' values. This handbook emphasises that the Manning's 'n' values can vary significantly with flow and the selected value should be based on the graphs of Manning's 'n' versus discharge presented for each site.

Table 6-2 Guide to roughness coefficients for gravity stormwater pipes concentrically jointed and clean

Description	Colebrook-White coefficient k (mm)	Manning roughness coefficient (n)
Circular pipes		
PVC	0.6	0.011
PE Polypropylene	0.6	0.009 - 0.011
Vitreous clay	1.0	0.012

Description	Colebrook-White coefficient k (mm)	Manning roughness coefficient (n)
Concrete - machine made to AS/NZS 4058	1.5	0.012
Corrugated metal	-	0.024
GRP (glass reinforced plastic)	0.6	0.011
Culverts		
Concrete pre-cast (pipes and boxes)	1.5	0.012
Open channel		
Straight uniform channel in earth and gravel in good condition	-	0.0225
Unlined channel in earth and gravel with some bends and in fair condition	-	0.025
Channel with rough stony bed or with weeds on earth bank and natural streams with clean straight banks	-	0.030
Winding natural streams with generally clean bed but with some pools and shoals	-	0.035
Winding natural streams with irregular cross section and some obstruction with vegetation and debris	-	0.045
Irregular natural stream with obstruction from vegetation and debris	-	0.060
Very weedy irregular winding stream obstructed with significant overgrown vegetation and debris	-	0.100
NOTE - Refer to Metrication: Hydraulic data and formulae (Lamont).		

6.3.6.4 Energy Loss through Structures

Energy loss is expressed as velocity head:
Energy loss: $H_e = kV^2/2g$; where

- k is the entrance loss coefficient
- V is velocity (m/s)
- $g = 9.81 m/s^2$

The entrance loss coefficient table and energy loss coefficient graph in NZBC Clause E1/VM1 provide k values for flow through inlets and access chambers respectively.

For bends, see Table 6.3

6.3.6.5 Determination of Water Surface Profiles

Stormwater systems shall be designed by calculating or computer modelling backwater profiles from an appropriate outfall water level. On steep gradients both inlet control and hydraulic grade line analysis shall be used and the more severe relevant condition adopted for design purposes. For pipe networks at manholes and other nodes, water levels computed at design flow shall not exceed finished ground level while allowing existing and future connections to function satisfactorily.

In principle, each step in the determination of a water surface profile involves calculating a water level upstream (h_2) for a given value of discharge and a given start water level downstream (h_1).

This can be represented as:

$h_2 + V_2^2 / 2g = h_1 + V_1^2 / 2g + H_f + H_e$, where;

- V is velocity.
- H_f is head loss due to boundary resistance within the reach (for pipes, unit head loss is read from Manning's flow charts, for example).

- H_e is head loss within the reach due to changes in cross section and alignment (see Table 6-3 for loss coefficients).

Table 6-3 Loss coefficients for bends

Bends	k
MH properly benched with radius of bend	
1.5 x pipe diameter	0.5 to 1.0
Bend angle	
90 °	0.90
45°	0.60
22.5°	0.25

6.3.7 Stormwater Pumping

Stormwater pumping should be avoided wherever possible. However, in certain circumstances for low lying areas, and where gravity drainage is difficult to achieve, stormwater pumping may be required to achieve the appropriate levels of service and protection.

The consequences and risk of pump malfunction and power outages should be considered carefully.

Sea level rise scenarios may need to be assessed in line with the proposed NES on sea level rise and assessed in line with the Ministry for the Environment guidance manual *Coastal hazards and climate change - Guidance manual for local government, Dec2017*. Such assessments are likely to indicate the need to design for or at least plan for stormwater pumping in the future to ensure levels of service are maintained throughout asset life.

6.3.8 Low Impact Design

Low impact design (LID) aims to use natural processes such as vegetation and soil media to provide stormwater management solutions as well as adding value to urban environments. The main principles of low impact design are reducing stormwater generation by reducing impervious areas, minimising site disturbance, and avoiding discharge of contaminants. Stormwater should be managed as close to the point of origin as possible to minimise collection and conveyance. Benefits include limiting discharges of silt, suspended solids, and other pollutants into receiving waters, and protecting and enhancing natural waterways.

Effective implementation of LID principles typically requires more planning and design input than piped stormwater systems. Aspects in the design process requiring specific consideration include provision of Attenuation, Swales, soakaways, secondary flow paths, land requirements, and provision for effective operation and maintenance.

The developer shall implement low impact design principles for the treatment of stormwater. Where the developer does not believe that low impact design methods will be suitable the developer shall provide reasons for this for approval by the Council.

Useful guidance on low impact design practices can be found in the Christchurch City Council's *Waterways, Wetlands and Drainage Guide* which sets out a philosophy that encourages people to work with natural features and processes in the landscape.
Additional guides that may be useful are listed in Referenced Documents and Related Documents.

6.3.8.1 Low Impact Design Stormwater System

Low impact design is a type of stormwater system that aims to minimise environmental impacts by:

(a) Reducing peak flow discharges by flow attenuation.

(b) Eliminating or reducing discharges by infiltration or soakage (dependent upon ground conditions).

(c) Improving water quality by filtration.

(d) Installing detention devices for beneficial reuse (rainwater harvesting for irrigation and toilet flushing).

6.3.8.2 Low Impact Design Process

Key design considerations include:

(a) Design objective. The need to be clear about what is being designed for is important to informing decisions on the type of device and maintenance approach that is appropriate in a given context. Low impact devices offer many opportunities to deliver multiple outcomes in addition to their stormwater functionality.

(b) Device selection. The proper design and position of a product or device within the stormwater treatment train is important. It is critical to select a device or product that is fit for purpose, robust, and effective for delivering the design objective over its design life. Problems with the operation and maintenance of a device can occur when it is inappropriate for a given location or is undersized for its purpose. The respective position of the various components in the treatment train is an important consideration in ensuring the sustained effectiveness of the system.

(c) Integrated approach. Ensure that those who will become responsible for the ongoing operation and maintenance of low impact devices are involved in the design process. This is critical to informing the development of a practical design that will enable ease of maintenance and develop ownership for ensuring the device performs as it was intended.

(d) Design for maintenance. Maintenance of devices shall be considered early in the design process. This will assist in the identification of features that will facilitate the ease and efficiency of ongoing operation and maintenance of devices. Elements to consider in the design for the maintenance and operation of the systems include:

  (i) Access;

  (ii) Vegetation;

  (iii) Mulch;

  (iv) Sediment;

  (v) Mechanical components;

  (vi) Vandalism and safety.

6.3.8.3 Low Impact Design Devices

The types of low impact design devices that could be considered for use include:

(a) Detention ponds.

(b) Wetlands.

(c) Vegetated swales.

(d) Rain gardens.

(e) Rainwater tanks.

(f) Soakage devices (pits and soak holes).

(g) Filter strips.

(h) Infiltration trenches/basins.

(i) Permeable paving.

(j) Green roofs.

(k) Tree pits.

6.3.8.4 Detention Ponds

Stormwater ponds are an accepted method of improving stormwater quality and reducing peak downstream flow rates to replicate the pre-development hydrological regime.

Detention ponds can be of the 'dry' (detention) or 'wet' (retention) type and can be 'on-line' or 'off-line'. The type of pond required should be discussed with Council at an early stage.

Specific matters to be considered in pond design include:

(a) Side slope stability.
(b) Shallow ledges or batters for safety.
(c) Ease of access and maintenance including mowing and silt clean out.
(d) Shape and contour for amenity and habitat value.
(e) Effectiveness of inlet and outlet structures.
(f) Overflow design and scour protection.
(g) Fish passage.
(h) Pest control (for example mosquitoes and blue-green algae).
(i) Species to be planted.
(j) Potential effect on downstream aquatic ecology and habitat.
(k) Maintenance requirements.
(l) Lifetime costs do not exceed those of a fully piped network.

If Council is to be responsible for pond maintenance it shall be located on land owned by, or to be vested in, Council or protected by an appropriate easement.

6.3.8.5 Wetlands

Constructed wetlands can be designed to provide flood protection, flow attenuation, water quality improvement, recreational and landscape amenity, and provision for wildlife habitat.

Specific matters to be considered in wetland design include:

(a) Catchment area greater than 1 ha.
(b) Size calculated to achieve water quality volume.
(c) Forebay to capture coarse sediments.
(d) Depth not to exceed 1 m.
(e) Sufficient hydraulic capacity for flood flows.
(f) Sufficient detention time for sediment retention (Low velocity flows).
(g) Species to be planted.
(h) Lifetime costs do not exceed those of a fully piped network.

If Council is to be responsible for wetlands maintenance it shall be located on land owned by, or to be vested in, Council or protected by an appropriate easement.

Reference shall be made to Christchurch City Councils *Waterways, Wetlands and Drainage Guide* which sets out a philosophy that encourages people to work with natural features and processes in the landscape. Management of a waterway or wetland frequently includes its restoration and protection. Stormwater drainage is integrated with all other 'values' (ecology, landscape, recreation, heritage and culture) to form the foundation of a philosophy that is multi-disciplinary and sustainable.

One key item to highlight is the need for suitable consultation with local communities and mana whenua.

6.3.8.6 Vegetated Swales

Vegetated swales are stormwater channels that are often located alongside roads or in reserves. While their primary function is conveyance, filtration through the vegetation provides some water quality treatment.

Specific matters to be considered in swale design include:

(a) Catchment area not greater than 4 ha.
(b) Longitudinal slope 1% - 5%.
(c) Slopes flatter than 1% may require subsoil drainage.
(d) Slopes greater than 5% may require check dams to reduce effective gradient to less than 5%.
(e) Southland District Council: Capacity for a 1 in 10 yr (10% AEP) event.
Invercargill City Council: Capacity for a 1 in 5 yr (20% AEP) event.
(f) Velocity not greater than 1.5 m/s in the design primary storm event unless erosion protection is provided.
(g) Grass length 50 mm - 100 mm.
(h) Species to be planted.
(i) Lifetime costs do not exceed those of a fully piped network.

An option for swales with very flat longitudinal slopes and high watertables is a wetland swale.

Typical details that may be used in swale design are shown in Figure 5-6, Figure 5-7, and Figure 5-8.

6.3.8.7 Rain Gardens

Rain gardens are engineered bioretention systems designed to use the natural ability of flora and soils to reduce stormwater volumes, peak flows, and contamination loads. Rain gardens also provide value through attractive design and planting.

Specific matters to be considered in rain garden design include:
(a) System designed to manage a 1 in 10 yr (10% AEP) event in the Southland District, and 1 in 5 yr (20% AEP) event in Invercargill City, event without significant scour or erosion.
(b) Overland flow paths to accommodate flows in excess of the design storm.
(c) Entry and overflow positions to restrict short circuiting.
(d) Geotextile on side walls.
(e) An underdrain with a minimum of 50 mm gravel cover.
(f) Pavement design in vicinity of device.
(g) Soil composition.
(h) A ponding area.
(i) Species to be planted.
(j) Access for maintenance.
(k) Lifetime costs do not exceed those of a fully piped network.

6.3.8.8 Rainwater Tanks

Rainwater tanks can be designed to harvest water for non-potable uses such as toilet flushing and irrigation, or for potable water in rural areas where reticulated supply is not available. Rainwater tanks in urban areas can also significantly reduce the demand on the potable water supply from Council. Where required by Council, rainwater tanks can be configured to provide peak flow attenuation, to reduce stream channel erosion and the load on the stormwater system, with or without reuse.

Specific matters to be considered in rainwater tank design include:
(a) Capacity: Typically 2,000 L - 5,000 L for domestic reuse and 6,000 L - 9,000 L for dual reuse and attenuation.
(b) Primary screening to keep out leaves and other coarse debris.
(c) First-flush diverters to collect first 0.4 mm from roads and other potentially contaminated areas for treatment.
(d) Backflow prevention.
(e) Low level mains top-up valve.
(f) Overflow outlet.

(g) Gravity or pumped.
(h) Tight-fitting cover.
(i) Cool location.
(j) Aesthetics and convenience.
(k) Lifetime costs do not exceed those of a fully piped network.

6.3.8.9 Soakage Devices

Soakage devices such as soak pits and soak holes, filter strips, infiltration trenches/basins, permeable paving, green roofs, and tree pits can also be considered for managing stormwater from roofs, parking areas, and roads.

Specific matters to be considered in soakage system design include:

a) Southland District Council: Capacity adequate for a 1 in 10 yr (10% AEP) event; or
Invercargill City Council: Capacity adequate for a 1 in 5 yr (20% AEP) event.
b) Rate of soakage determined through a soakage test with an appropriate reduction (safety factor) (of at least 0.5) applied to accommodate loss of performance over time.
c) Capacity to accommodate the maximum potential impermeable area.
d) Overland flow paths to accommodate flows in excess of the design storm.
e) Confirmation that the soakage system will not have an adverse effect on surrounding land and properties from land stability, seepage, or overland flow issues.
f) Soakage system to be located above static groundwater level and away from other critical elements that may be susceptible to flooding.
g) Pre-treatment device to minimise pollution (interception of hydrocarbons) and silt ingress will be required.
h) Access for maintenance.
i) Interception of hydrocarbons

For guidance on disposal using soakage on individual lots refer to NZBC clause E1/VM1.

Council requires a geotechnical assessment to be carried out by a suitably qualified professional to determine the suitability of soil and groundwater characteristics for any proposed soakage system.

A discharge permit may be required from the regional council for discharge to soakage.

National and international references that may be able to be used in the design and maintenance of such systems are listed in Referenced Documents and Related Documents.

6.3.9 Natural and Constructed Waterways

Where waterways are to be incorporated in the stormwater system, they shall be located within a reserve of sufficient width to contain the full 1 in100yr return period (1% AEP) design storm flow with a minimum freeboard of 500 mm.

Grass berms in reserves shall have a side slope of 1 in 10 where possible. A maximum side slope of up 1 in 5 may be accepted in extraordinary situations, and will require agreement by the Council. Vehicular access to berms shall be provided for maintenance purposes.

Reserves should be designed to accommodate off-road pedestrian and cycle access for recreational use. Planted riparian margins should be provided each side of the waterway (see Section 10.2.4).

Where flow rates are going to change as a consequence of the works all channel infrastructure shall be assessed for the need for additional protection against scour and erosion of the stream banks and stream bed.

All stormwater infrastructure, where they traverse any vacant or occupied public or private properties, shall allow access for all equipment required for construction and future maintenance. If the watercourse is to be in private property and be maintained by Council it shall be protected by an easement.

6.3.10 Pipelines and Culverts

6.3.10.1 Location and Alignment Of Public Mains

The preferred location of public mains shall be within the road reserve or within other public land.

Where required easements shall be provided for stormwater pipelines located on private property.

A straight alignment between manholes (MHs) is required unless there are special circumstances. See Sections 7.3.7.6 and 7.3.7.7 for further guidance on curved alignments for pipelines.

6.3.10.2 Materials

Section 8.7 sets out acceptable system uses for various pipe materials. Stormwater pipe types as listed, or as amended may be used for stormwater infrastructure.

For materials for which there is no New Zealand or Australian Standard the specific approval of Council is required.

6.3.10.3 Minimum Pipe Sizes

Minimum pipe sizes for public mains and sump laterals unless otherwise specified shall be:

Single sump outlets	150 mm internal diameter
Public mains	150 mm internal diameter where only taking house laterals

6.3.10.4 Minimum Cover

Minimum cover shall be determined by the property connections which require a minimum depth at the property boundary of at least 1 m where the section contours grade to the road. Where there are no property connections to govern the cover over the main the minimum cover shall be 600 mm in private property and 900 mm in the road reserve.

6.3.10.5 Minimum Gradients and Flow Velocities

In flat areas gradients should be as steep as possible to control silt deposition. The minimum velocity should be at least 0.9 m/s at a 1 in 10 yr (10% AEP) design flow in the Southland District, or at least 0.9 m/s at a 1 in 5 yr (20% AEP) design flow in the Invercargill City. For velocities greater than 3.0 m/s see 0.

6.3.10.6 Culverts

In designing culverts the effects of inlet and outlet (tailwater) controls shall be considered.

Culverts under fills shall be of suitable capacity to cope with the 1 in 10 yr (10% AEP) design storm in the Southland District, and a 1 in 5 yr (20% AEP) design storm in Invercargill City, with no surcharge at the inlet, unless the fill is part of a stormwater detention device or has been designed to act in surcharge. All culverts shall be provided with adequate wingwalls, headwalls, aprons, scour protection, removable debris traps or pits to prevent scouring or blocking. Special consideration shall be given to the effects of surcharging or blocking of culverts under fill.

Fish passage through culverts shall always be maintained.

Refer to the Waka Kotahi (NZTA) *Bridge manual* for waterway design at bridges and culverts and Austroads guide to bridge Technology Part 8: Hydraulic design of Waterway Structures.

6.3.10.7 Inlets and Outlets

On site disposal of stormwater may be permitted where:

(a) No piped system is immediately available or will not be available within 10 years of the subdivision application.
(b) No piped system is available immediately adjacent or within a reasonable distance of the site.

For clarification of what constitutes a "reasonable distance" refer to Section 9.8 of this CoP.

Where a pipeline discharges into a natural or constructed waterway, or vice versa, consideration shall be given to energy dissipation or losses, erosion control, and land instability. This is often achieved by an appropriately designed headwall structure.

For outlets the design shall ensure non-scouring velocities at the point of discharge. Acceptable outlet velocities will depend on soil conditions, but should not exceed 2 m/s without specific provision for energy dissipation and velocity reduction.

Where inlets or outlets are located on or near natural waterways their appearance in the riparian landscape and likely effect on in-stream values shall be considered. Methods could include cutting off the pipe end at an oblique angle to match soil slope, constructing a headwall from local materials such as rock or boulders, planting close to the structure, and locating outlets well back from the water's edge.

Inlets and outlets shall include protection to prevent people entering them, especially during flood events. The design and approval of any flood gates, grills, and other such infrastructure shall be at the discretion of Council.

Direct discharge to a waterway or the sea may require a discharge consent from the regional council unless authorised by a comprehensive consent held by Council, or is a permitted activity in a regional plan. Refer to Environment Southland's stormwater Discharges Information Guide, February 2013.

6.3.10.8 Outfall Water Levels

Where a pipeline or waterway discharges into a much larger system the peak flows generally do not coincide. Backwater profiles should produce satisfactory water levels when assessed as follows:

Method 1

(a) Determine the time of concentration and set the design rainfall event for the smaller system.
(b) Determine the peak flow in the smaller system for the design event.
(c) Determine receiving waterway peak water level for the design rainfall event in (a).
(d) Starting with the level from (c) determine the smaller system profile at a flow of 75% of the flow from (b).

Method 2

(a) Determine the receiving waterway mean annual flood water level.
(b) Starting with the level from (e) determine the smaller system water profile at the flow from (b).

Results:

Select the higher of the two profiles determined for design purposes.

Similarly, for tidal outfalls, peak flow may or may not coincide with extreme high tide levels. A full dynamic analysis and probability assessment may be required. Sea level rise shall be taken into account (see Section 6.3.6.2).

6.3.10.9 Subsoil Drains

Subsoil drains are installed to control groundwater levels. Perforated or slotted pipe used under all areas subject to vehicular traffic loads shall comply with Waka Kotahi (NZTA) specification F/2 and Waka Kotahi (NZTA) F/2 notes. Alternative subsoil drainage pipes may be used, including smooth bore perforated drains, where approved by Council. It is good practice to provide regular inspection points.

Bedding and backfill material around a subsoil drain pipe shall be more free-draining than the in situ soil. If filter fabrics are used their susceptibility to clogging, thereby reducing the through flow, should be considered.

Groundwater control shall always be considered when an open drain is piped.

In the absence of any other more appropriate criterion the design flow for subsoil systems shall be based on a standard of 1 mm/hr which gives us a flow of 2.78 L/s/ha.
Refer to manufacturer's literature for information on pipe materials, filter fabrics, bedding, and filter design.

6.3.10.10 Bulkheads for Pipes On Steep Grades

Bulkheads, or anti-scour blocks, shall be detailed on the design drawings and shall be in accordance with drawing CM – 003 of NZS 4404. Spacing of bulkheads shall be:

Table 6-4 Spacing Of Bulkheads for Pipes on Steep Grades

Grade (%)	Requirement	Spacing (s)
15-35	Concrete bulkhead	S= 100/Grade (%)
>35	Special design	Refer to TA

6.3.10.11 Trenchless Technology

See Section 7.3.6.8 for guidance on the use of trenchless technology.

6.3.11 Manholes

6.3.11.1 Standard Manholes

Access chambers or Manholes (MHs) shall be provided at all changes of direction, gradient and pipe size, at branching lines and terminations and at a distance apart not exceeding 120 m unless approved otherwise. They shall be easily accessible and located clear of any boundary. All public mains shall terminate with a MH or Cleaning eye (CE) at the upstream end.

See Section 7.3.8.2 for further guidance on the location of MHs.

On pipelines equal to or greater than 1 m diameter, the spacing of MHs may be extended with the approval of Council.

Standard Drawings D12 - D21 for manholes shall be adopted for stormwater systems.

Manholes should not incorporate step irons or ladders on safety grounds, they tempt those un-trained in confined spaces to enter such chambers.

6.3.11.2 Manhole Materials

MHs may be manufactured in concrete, or from suitable plastics materials, including glass reinforced plastic (GRP), polyethylene, PVC or polypropylene, or from concrete/plastic lined composites.

MH materials selection shall be suitable for the level of aggressiveness of the surrounding groundwater.

6.3.11.3 Size of Manholes

The standard internal diameter of circular MHs is 1050 mm and preferred nominal internal diameters are 1050 mm, 1200 mm, and 1500 mm. However, for shallow systems, DN 375/400 or 600 mm minimum diameter (Inspection chambers) may be permitted (see Section 6.3.11.4).

When considering the appropriate MH diameter, consideration shall be given by the designer to the base layout to ensure hydraulic efficiency and adequate working space in the chamber. Where the effective working space is reduced by internal drop pipes, a larger diameter may be required. Where there are several inlets, consultation with Council on the layout of the chamber is recommended.

The base layout of MHs shall comply with Standard Drawings D12 - D21.

6.3.11.4 Shallow Manholes (or inspection chambers)

For shallow systems (less than 1.2 m to invert) a DN 375/400 or 600 mm minimum diameter MH may be permitted subject to approval by Council. Such small diameter MHs shall be classified as maintenance shafts (MSs) for the purposes of the spacing covered under this Standard. See Standard Drawing D22.

6.3.11.5 Manhole Connections

Open cascade is permitted into MHs over 2.0 m in depth and for pipes up to and including 300 mm diameter providing the steps are clear of any cascade. Other situations may be considered and require Council approval.

The bases of all MHs shall be benched and haunched to a smooth finish to accommodate the inlet and outlet pipe. No rendering/plastering within the MH is permitted.

New inlet pipes shall be cut back to the inside face of the MH and provided with a smooth finish. All chambers are to be made watertight with epoxy around all openings.

Minor pipelines connecting to a MH at or below design water level in the MH shall do so at an angle of not greater than 90° to the main pipeline direction of inflow.

Minor pipelines connecting at above design water level may do so at any angle.

6.3.11.6 Flotation

In areas where liquefaction during an earthquake is likely or the watertable is at a level that may adversely impact the infrastructure all Maintenance Structures shall be designed in accordance with *Underground Utilities – Seismic Assessment and Design Guidelines* and associated *Technical Note 15 – Manhole Flotation* (or applicable successor).

6.3.12 Connection to the Public System

Where the connection of individual lots and developments are to the public system they shall meet the following requirements:

(a) Connection shall be by gravity flow via laterals to public mains or waterways, or to a swale, or rainwater tanks. Where there is no other option connection can be made to a roadside kerb subject to approval of Council.

(b) All new urban lots shall be provided with individual service laterals, unless on-site disposal is approved by Council.

(c) Each connection shall be capable of serving the whole of the lot. Where, for physical reasons, this is not practicable a partial service to the building area only may be acceptable (subject to approval of Council).

(d) The minimum internal diameter of connections shall be:
  (i) 100 mm for residential lots;
  (ii) 150 mm for commercial and industrial lots and connections serving two dwellings or residential lots;
  (iii) The size of connections serving three or more dwellings or residential lots shall be based on calculations as per the design standards (unless otherwise approved by Council).

(e) The connection shall be of a type capable of taking the spigot end of an approved pipe.

(f) Where the stormwater pipeline is outside the lot to be served, a connection pipeline shall be extended to the boundary of the lot and be marked by a 50 mm x 50 mm timber stake extending to 600 mm above ground level and painted blue.

(g) Connection to stormwater systems such as vegetated swales, soakpits, or soakage basins is acceptable provided the system is approved by Council.

(h) All connections to pipelines or MHs shall be sealed by removable caps until such time as they are required.

(i) Connections shall be indicated accurately on as-built plans in accordance with the requirements set out in Section 3.

(j) The minimum depth of the connection at the property boundary shall be 1 m unless otherwise approved by Council.

6.3.13 Connection of Lateral Pipelines to Public Mains

All connections to 150 mm diameter mains shall be via 45° "Y" junctions. Mains greater than 150 mm diameter including 225 mm diameter shall be made using 45° "Y" junctions or saddles. For mains greater than 225 mm diameter, square (90°) saddles may be used. Cutting saddles into pipes shall be carried out via core drilling.

Saddles shall be specifically manufactured for the pipe they are being attached to, and appropriate allowances made for the pipe wall thickness. The saddle shall use epoxy, electro fusion, stainless steel bolts or straps to secure the saddle in place. Concrete encasement of the saddle to the exterior of the main pipe is required. Connection material shall protrude through to the inside of the main, and shall be flush with the inside wall of the main.

A hole may be made in a 900 mm diameter and larger main to effect a connection. The connection shall be properly dressed and patch repaired (epoxy) from inside the main to ensure that no protrusions exist.

When the lateral being connected is larger than 300 mm in diameter it shall be connected at a MH.

6.4 Approval Of Proposed Infrastructure

The approval process for land development and subdivision design and construction and documents and supporting information on stormwater drainage infrastructure to be provided at each stage of the process shall be in accordance with the requirements of this CoP (primarily specified in Section 3).

6.4.1 Information to Be Provided

(a) A plan showing the proposed location of existing and proposed stormwater infrastructure.

(b) Detailed long sections showing the levels and grades of proposed pipelines in terms of datum.

(c) Long sections shall include full details of pipe and manhole materials and sizes.

(d) Details and calculations prepared which demonstrate that agreed levels of service will be maintained.

(e) Details and calculations prepared which clearly indicate any impact on adjacent area or catchment that the proposed infrastructure may have.

(f) Appropriate operating manuals, pump information, and instructions for pump stations and pressure systems if proposed.]

6.5 Construction

6.5.1 Pipeline Construction

The construction of pipelines shall be carried out in accordance with the design and requirements of AS/NZS 2032 (PVC), AS/NZS 2033 (PE), AS/NZS 2566 Parts 1 and 2 (all buried flexible pipelines), or AS/NZS 3725 (concrete pipes).

6.5.2 Trenching

Guidance is provided in Standard Drawings D23-D24A.

Where a pipeline is to be constructed through areas with unsuitable foundations such material shall be removed and replaced with other approved material or alternatively, other methods of construction shall be carried out to the approval of Council to provide an adequate foundation, and side support, for the pipeline.

6.5.3 Reinstatement

Areas where construction has taken place shall be reinstated to the condition required by Council and shall be no less than the original condition pre-works.

6.5.4 Inspection and Acceptance

Pipe systems shall be inspected using closed circuit television (CCTV) prior to acceptance by Council.

CCTV inspections and deliverables shall be in accordance with New Zealand pipe inspection manual (or its successor) and the requirements of Council.

Council may, at its discretion, also require a water test to be carried out. Such testing shall be carried out as specified in Section 2 of this CoP and shall not use a hydrant for water supply for the test.

6.6 Acceptable Pipe and Fitting Materials

Table 6.5 gives information on acceptable pipe and fitting materials. The information is sourced with permission from the Water Services Association of Australia. Refer also to WSA 02 (Sewerage Code of Australia) and WSA 03 (Water Supply Code of Australia) for further information.

Sensitivity: General

NOTE - Refer also to WSA 02 (Sewerage Code of Australia) and WSA 03 (Water Supply Code of Australia)

Table 6-5 Acceptable pipe materials and Standards

Pipe materials	Standard applicable	Stormwater (Gravity)	Wastewater (Pressure sewer/ rising main)	Wastewater (Gravity)	Water supply (Pressure)	Notes
PVC-U	AS/NZS 1260 (Class SN 4, 8, or 16 as required by TA)	✓	-	✓	-	Gravity applications only. Well established methods of repair. Suitable for aggressive groundwater, anaerobic conditions and tidal zones. Can be used for trenchless installation with suitable end load resistant joints.
PVC-O	AS/NZS 4441 (Series 1 or Series 2, as required by Council)	-	✓	-	✓	Improved fracture toughness compared with PVC-U. Improved fatigue resistance compared with PVC-U and PVC-M. NOTE - Use only DI fittings in pumped mains to achieve full fatigue resistance. Has increased hydraulic capacity compared with PVC-U and PVC-M. Suitable for aggressive groundwater, anaerobic conditions, and tidal zones. Specific design for dynamic stresses (fatigue) required for pressure sewer applications.
PVC-U	AS/NZS 1477 (pressure) (Series 1 or Series 2, as required by Council)	-	✓	-	✓	Well established methods of repair. Alternative installation techniques possible, for example slip lining. Suitable for aggressive groundwater, anaerobic conditions, and tidal zones. Can be used for trenchless installation with suitable end load resistant joints. Specific design for dynamic stresses (fatigue) required for pressure sewer applications.
PVC-M	AS/NZS 4765 (Series 1 or Series 2, as required by Council)	-	✓	-	✓	Improved fracture toughness compared with PVC-U. Has increased hydraulic capacity compared with PVC-U. Inferior fatigue resistance compared with PVC-U and PVC-O. Suitable for aggressive groundwater, anaerobic conditions and tidal zones. Specific design for dynamic stresses (fatigue) required for pressure sewer applications.
PE (PE 80B or PE 100 as required by Council)	AS/NZS 4130	-	✓	-	✓	Generally for pressure applications. Can be easily curved to eliminate the need for bends. Alternative installation techniques possible, for example pipe cracking, direction drilling, and slip lining. Can be welded to form an end load resistant system. Compression couplings and end load resistant fittings are available in smaller diameters. Pipe longitudinal flexibility accommodates large differential ground settlement. Fusion jointing requires skilled installers and special equipment. Retrospective installation of fittings/repair complicated. Specific design for dynamic stresses (fatigue) required for pressure sewer applications. ≤ DN 125 available in long coiled lengths for fewer joints. Suitable for aggressive groundwater, anaerobic conditions or tidal zones. Suitable for ground with high subsidence potential, for example fill or mining areas.
PE (Stiffness Class SN 4, 8,	AS/NZS 5065	✓	-	✓	-	Only for gravity applications. Can be easily curved. Alternative installation techniques possible, for example pipe cracking and slip lining.

Pipe materials	Standard applicable	Stormwater (Gravity)	Wastewater (Pressure sewer/ rising main)	Wastewater (Gravity)	Water supply (Pressure)	Notes
10, or 16 as required by Council)						Can be welded to form an end load resistant system. Fusion jointing requires skilled installers and special equipment. Retrospective installation of fittings/repair complicated. Smaller diameters available in long coiled lengths for fewer joints. Suitable for aggressive groundwater, anaerobic conditions, or tidal zones.
GRP	AS 3571.1	✓	✓	✓	-	Alternative installation techniques possible, for example slip lining. UV resistant (special product). Custom made fittings can be manufactured. Suitable for use without additional corrosion protection in areas where stray electrical currents occur. Low impact resistance and ease of damage to thermosetting resin, makes GRP susceptible to damage during transportation, and installation, in above ground installations, from vandalism, or when damaged as a consequence of nearby excavation. Suitable for aggressive groundwater, anaerobic conditions or tidal zones.
GRP	AS 3571.2	-	-	-	✓	Alternative installation techniques possible, for example slip lining. UV resistant (special product). Custom made fittings can be manufactured. Suitable for use without additional corrosion protection in areas where stray electrical currents occur. Low impact resistance and ease of damage to thermosetting resin, makes GRP susceptible to damage during transportation, and installation, in above ground installations, from vandalism, or when damaged as a consequence of nearby excavation. Suitable for aggressive groundwater, anaerobic conditions, or tidal zones.
VC	BS EN 295	✓	-	✓	-	Gravity applications only. Has benefits for particularly aggressive industrial wastes. Not recommended for active seismic (earthquake) zones, or unstable ground.
RRRC/RCRRJ (rubber ring joint reinforced concrete)	AS/NZS 4058	✓	-	✓	-	Requires protection from hydrogen sulphide attack in sewer applications, by plastic lining or selection of appropriate cement additives.
CLS (SCL) (concrete lined welded steel)	NZS 4442 AS 1579	-	✓	-	✓	Cement mortar lined, PE coating below ground or heavy duty coating above ground High mechanical strength and toughness. Available in long lengths. RRJ and welded joints available. Custom made, specially configured steel fittings can be made to order. Can be welded to form a system that will resist end load and joint permeation. UV resistant/vandal proof/impact resistant (where PE coated). Cathodic protection (CP) can be applied to electrically continuous pipelines to

Pipe materials	Standard applicable	Stormwater (Gravity)	Wastewater (Pressure sewer/ rising main)	Wastewater (Gravity)	Water supply (Pressure)	Notes
						provide enhanced corrosion protection. PE lined and coated - RRJ As above for CLS (SCL). Suitable for conveying soft water. Corrosion resistant under all conditions. General notes Standard Portland cement mortar not resistant to H_2S attack, at any high points or discharge points in the main. High alumina cement has improved resistance. Welded joints require skilled installers and special equipment. Welded joints require reinstatement of protection systems on site. Special design required for welded installations parallel, and adjacent to high voltage (> 66 kV) transmission lines. Cathodic protection requires regular monitoring and maintenance. Seal coating may be required over cement mortar linings, when conveying soft water, or in low flow extremities of reticulation mains, to prevent potentially high PH. Suitable for high load applications such as railway crossings and major roads. Large diameters are available. Suitable for aerial or suspended pipeline applications.
DI (ductile iron pipe)	AS/NZS 2280 AS 3681	-	✓	-	✓	Fatigue analysis not normally required (pressure sewer applications). High mechanical strength and toughness. Ease of jointing. UV resistant/vandal proof/impact resistant. Well established methods of repair. Suitable for high pressure and above ground pipelines. Restrained joint systems available. Sufficient ring stiffness to not rely on side support, for structural adequacy for the usual water supply installation depths. Elevated PH may occur when conveying soft water, or in low flow extremities of reticulation mains. PE sleeving is required, and must be carefully applied and repaired when damaged. Standard Portland cement mortar not resistant to H2S attack, at any high points or discharge points in the main. (Wastewater applications. High alumina cement has improved resistance.) Not suitable for aggressive groundwater, anaerobic conditions, or tidal zones.
ABS	AS/NZS 3518 AS/NZS 3690 AS/NZS 3879	-	✓	-	✓	Specific design for dynamic stresses (fatigue required for pressure sewer applications).

Sensitivity: General

Section 7. Wastewater

7.1 Scope

This section sets out requirements for the design and construction of wastewater systems for land development and subdivision. Section 7 primarily addresses reticulated systems, but reference is also made to on-site wastewater systems where applicable.

If the scope of the development is sufficiently large to include its own pumping station, then reference should be made to the Water Services Association WSA 04-2005, Sewage Pumping Station Code of Australia – 2005.

7.2 General

7.2.1 Objectives

The objectives of the design are to ensure that the wastewater system is functional and complies with the requirements of Council's wastewater systems.
In principle the wastewater system shall provide:

(a) A single gravity connection for each property or where gravity is not feasible a pumped connection.
(b) A level of service to Council's customers in accordance with the authority's policies.
(c) Minimal adverse environmental and community impact.
(d) Compliance with environmental requirements.
(e) Compliance with statutory occupational, health and safety (OSH) requirements.
(f) Adequate hydraulic capacity to service the full catchment.
(g) Long service life with minimal maintenance and least life-cycle cost.
(h) Zero level of pipeline infiltration on commissioning of pipes.
(i) Low level of pipeline infiltration/exfiltration over the life of the system.
(j) Resistance to entry of tree roots.
(k) Resistance to internal and external corrosion and chemical degradation.
(l) Structural strength to resist applied loads.
(m) 'Whole of life' costs that are acceptable to Council.

7.2.2 Referenced Documents and Relevant Guidelines

Wastewater designs shall incorporate all the special requirements of Council and shall be in accordance with the most appropriate Standards, codes, and guidelines including those set out in Referenced Documents. Related Documents lists additional material that may be useful.

7.3 Design

7.3.1 Design Life

All wastewater systems shall be designed and constructed for an asset life of at least 100 years. Some components such as pumps, valves, and control equipment may require earlier renovation or replacement. Refer to WSA 02-2002 for the classification of life expectancy for various components in conventional gravity systems.

7.3.2 Structure Plan

Council may provide a structure plan setting out certain information to be used in design, such as flows, sizing, upstream controls, recommended pipe layout, or particular requirements of Council. Where a structure plan is not provided, the designer shall determine this information by investigation using this CoP and engineering principles.

7.3.3 Future Development

Where further subdivision, upstream of the one under consideration, is provided for in the district or regional plan, Council may require wastewater infrastructure to be constructed to the upper limits of the subdivision to provide for the needs of this development.

Additionally, Council may require additional capacity to be provided in the wastewater system to cater for existing or future development upstream. Peak flows (PF) and self cleansing velocities should be taken into account when designing for additional latent capacity.

All infrastructure proposed to service future development will require the approval of Council.

7.3.4 System Design

7.3.4.1 Catchment Design

Pipes within any project area shall be designed to be consistent with the optimum design for the entire catchment area and any future extension of the system shall be accommodated. This may affect the pipe location, diameter, depth, and maintenance structure location and layout. Designers shall adopt best practice to ensure a system with lowest life-cycle cost.

Pipes shall be designed with sufficient depth and capacity to cater for all existing and possible development of the catchment. Where future extension of the pipe is possible, it may be necessary to carry out preliminary designs for large areas of subdivided and un-subdivided land. This design shall use safety factors defined by Council for hypothetical subdivision and service for layouts to determine the necessary depth and diameter for an extension.

7.3.4.2 Extent of Infrastructure

Where pipes are to be extended in the future, the ends of pipes shall extend past the far boundary of the development by a distance equivalent to the depth to invert and be capped off, unless otherwise agreed to by Council. This ensures that a future extension of the pipe does not require unnecessary excavation within lots or streetscapes already developed.

7.3.4.3 Topographical Considerations

In steep terrain the location of pipes is governed by topography. Gravity pipelines operating against natural fall create a need for deep installations which may require trenchless installation. The pipe layout shall conform to natural fall as far as possible.

7.3.4.4 Geotechnical Investigations

The designer shall take into account any geotechnical requirements determined under Section 4 of this CoP.

7.3.5 Design Criteria

7.3.5.1 Design Flow

The design flow comprises domestic wastewater, industrial wastewater, infiltration, and direct ingress of stormwater.

The design flow shall be calculated based on 0.7 litre/second/hectare (l/s/ha).] Alternatively, the following design parameters can also be used if approval is granted by Council. Justification for the variables proposed must be provided as part of the approval submissions:

(a) Residential flows:
- (i) Average dry weather flow of 180 to 250 litres per day per person;
- (ii) Dry weather diurnal peaking factor (PF) of 2.5;
- (iii) Dilution/infiltration PF of 2 for wet weather;
- (iv) Number of people per dwelling 2.5 to 3.5.

C7.3.5.1
For small contributing catchments, PF's can be significantly higher but, due to the requirement for a minimum pipe size of DN 150, such flows will not govern the design.

(b) Commercial and industrial flows

Where flows from a particular industry or commercial development are known they should be used as the basis of design. Where there is no specific flow information available and Council has no design guide, Table 7-1 is recommended as a design basis. These flows include both sanitary wastewater and trade wastes and include peaking factors.

Table 7-1 Commercial and industrial flows

Industry type (water usage)	Design flow (litre/second/hectare)
Light	0.4
Medium	0.7
Heavy	1.3

Any commercial property that discharges anything other than sanitary waste shall require a trade waste agreement before connecting to the network.

7.3.5.2 Hydraulic Design of Gravity Pipelines

The hydraulic design of gravity wastewater pipes should be based on either the Colebrook-White formula or the Manning formula. The coefficients to be applied to the various materials are shown in Table 7-2. Gravity pipes should be designed to be between 25% and 75% full for the peak flow.

Table 7-2 Guide To Roughness Coefficients for Gravity Pipelines

Material	Colebrook-White coefficient k (mm)	Manning roughness coefficient (n)
VC	1.0	0.012
PVC	0.6	0.011
PE	0.6	0.009 - 0.011
GRP	0.6	0.011
Concrete machine made to AS/NZS 4058	1.5	0.012

Material	Colebrook-White coefficient k (mm)	Manning roughness coefficient (n)
PE or epoxy lining	0.6	0.011
PP	0.6	0.009 - 0.011
NOTE - (1) These values take into account possible effects of rubber ring joints, slime, and debris. (2) The n and k values apply for pipes up to DN 300. (3) For further guidance refer to WSA 02:1999 Table 2.4, Metrication: *Hydraulic data and formulae* (Lamont), or the *Handbook of PVC pipe* (Uni-Bell).		

7.3.5.3 Minimum Pipe Sizes

Irrespective of other requirements, the minimum sizes of property connection and reticulation pipes shall be not less than those shown in Table 7-3

For infill situations, particularly where upgrading of existing DN 100 connections in sound condition and at reasonable grades would be impractical, it is common practice for up to six dwelling units to use the existing connection. However, such connections would not normally be taken over as public pipes by Council.

Table 7-3 Minimum Pipe Sizes for Wastewater Reticulation and Property Connections

Pipe	Minimum size DN (mm)
Connection servicing 1 dwelling unit	100
Connection servicing more than 1 dwelling unit up to 10 units	100
Connection servicing commercial and industrial lots	150
Reticulation servicing residential lots	150
NOTE - In practical terms, in a catchment not exceeding 250 dwelling units, and where no pumping station is involved, DN 150 pipes laid within the limits of Table 7.4 and Table 7.5 will be adequate without specific hydraulic design.	

7.3.5.4 Limitation on Pipe Size Reduction

In no circumstances shall the pipe size be reduced on any downstream section.

7.3.5.5 Minimum Grades for Self-Care

Self-cleaning of grit and debris shall be achieved by providing grades that allow a minimum design velocity of 0.6m/s at peak dry weather flow.

Table 7-4 Minimum Grades for Wastewater Mains

Pipe size DN	Absolute minimum grade (%)
150	0.55
200	0.33
300	0.25

Table 7-5 Minimum Grades for Property Connections and Permanent Ends

Situation	Minimum grade (%)
DN 100 property connections	1.65
DN 150 property connections	1.20
Permanent upstream ends of DN 150, 200, and 300 pipes in residential areas with population ≤20 persons	1.00

7.3.5.6 Maximum Velocity

The preferred maximum velocity for peak wet weather flow is 3.0 m/s. Where a steep grade that will cause a velocity greater than 3.0 m/s is unavoidable refer to WSA 02 for precautions and design procedures.

7.3.5.7 Gravity Wastewater Applications

See Appendix B for appropriate gravity pipe standards for wastewater.

The pipe shall be designed to:

(a) Have adequate capacity and grade.
(b) Have adequate grade and hence velocity for self-cleaning.
(c) Be deep enough to provide gravity service to all lots.
(d) Comply with minimum depth requirements to ensure mechanical protection and safety from excavation.
(e) Avoid all underground services, while maintaining all the necessary clearances.
(f) Allow for various drops and losses through MHs.

7.3.5.8 Pressure and Vacuum Wastewater Applications

The introduction of pressure or vacuum systems into a network requires approval from Council. See also Section 7.3.12. Design of pressure and vacuum wastewater applications shall consider the following:

(a) Selection of pipe material and PN class shall take account of design for dynamic operation stresses (fatigue), and water temperature. Refer to Plastics Industry Pipe Association of Australia Ltd (PIPA) guidelines for PVC and PE pipes (http://www.pipa.com.au), or WSA-07.
(b) Sump and pump design.
(c) Maintenance requirements.
(d) Access for servicing and maintenance.

7.3.6 Structural Design

7.3.6.1 General

The structural design of piped systems shall be in accordance with AS/NZS 2566.1, or AS/NZS 3725, including the structural design commentary AS/NZS 2566.1 Supplement 1. Details of the final design requirements shall be shown on the drawings.

7.3.6.2 Seismic Design

All pipes and structures shall be designed with adequate flexibility and special provisions to minimise risk of damage during earthquake. Historical experience in New Zealand earthquake events suggests that suitable pipe options, in seismically active areas, may include rubber ring joint PVC or PE pipes. Rocker pipes with flexible joints shall be provided at all junctions between pipes and manholes and other rigid structures.

7.3.6.3 Structural Consideration

Pipelines shall be designed to withstand all the forces and load combinations to which they may be exposed including internal forces, external forces, temperature effects, settlement, and combined stresses.

7.3.6.4 Internal Forces

Pipelines shall be designed for the range of expected pressures, including transient conditions (surge and fatigue) and maximum static head conditions. For rising mains, surge analysis should be undertaken to assess transient conditions resulting from different pump stop and valve closure scenarios to assess the amplitude and frequency of positive and negative pressures. Rising mains should be designed to accommodate the transient pressure envelope.

7.3.6.5 External Forces

The external forces to be taken into account shall include:

(a) Trench fill loadings (vertical and horizontal forces due to earth loadings).
(b) Surcharge.
(c) Groundwater.
(d) Dead weight of the pipe and the contained water.
(e) Other forces arising during installation.
(f) Traffic loads.
(g) Temperature (expansion/contraction).

The consequences of external forces on local supports of pipelines shall also be considered.

7.3.6.6 Geotechnical Investigations

The designer should take into account any geotechnical requirements determined under Section 4 of this CoP. Where required, standard special foundation conditions shall be referenced on the drawings.

7.3.6.7 Pipe Selection For Special Conditions

Pipeline materials and jointing systems shall be selected and specified to ensure:

(a) Structural adequacy for the ground conditions and water temperature.
(b) Water quality considering the lining material.
(c) Compatibility with aggressive or contaminated ground.
(d) Suitability for the geotechnical conditions.

(e) Compliance with Council's requirements.

7.3.6.8 Trenchless Technology

Trenchless technology may be preferable or required by Council as appropriate for alignments passing through or under:

(a) Environmentally sensitive areas.
(b) Built-up or congested areas to minimise disruption and reinstatement.
(c) Railway and major road crossings.
(d) Significant vegetation.
(e) Vehicle crossings.

Wastewater pipes used for trenchless installation shall have suitable mechanically restrained joints, specifically designed for trenchless application, which may include integral restraint, seal systems, or heat fusion welded joints.

Trenchless installation methods may include:

For new pipes:

(f) Horizontal directional drilling (HDD) (PVC with restraint joint/fusion welded PE).
(g) Uncased auger boring/pilot bore microtunnelling/guided boring (PVC with restraint joint/fusion welded PE).
(h) Pipe jacking (GRP/vitrified clay (VC)/ reinforced concrete).

For pipe rehabilitation/renovation:

(i) Slip lining/grouting (PVC with restraint joint/fusion welded PE).
(j) Closefit slip lining (PVC with restraint joint/fusion welded PE).
(k) Static pipe bursting (PVC with restraint joint/fusion welded PE).
(l) Reaming/pipe eating/inline removal (PVC with restraint joint/fusion welded PE).
(m) Soil displacement/impact moling (fusion welded PE).
(n) Cured in place pipe (thermoset resin with fabric tube).

Any trenchless technology and installation methodology shall be chosen to be compatible with achieving the required gravity pipe gradient - refer to manufacturer's and installer's recommendations.

The following details including location of access pits and exit points shall be submitted to Council for approval:

(o) Clearances from services and obstructions.
(p) The depth at which the pipeline is to be laid to ensure minimum cover is maintained.
(q) The pipe support and ground compaction.
(r) How pipes will be protected from damage during construction.
(s) Any assessed risk to abutting surface and underground structures.

Further information on trenchless technologies may be found in 'Trenchless technology for installation of cables and pipelines' (Stein), 'Trenchless technology - Pipeline and utility design, construction, and renewal' (Najafi), and 'Guidelines for horizontal directional drilling, pipe bursting, microtunnelling and pipe jacking' (Australasian Society for Trenchless Technology).

7.3.7 System Layout

7.3.7.1 Pipe Location

The preferred layout/location of pipes within roads, public reserves, and private property may vary and shall be to the requirements of Standard Diagram R2.
Pipes should be positioned as follows:

(a) Within the street according to the locally applicable utilities allocation code. In the absence of a code, a location clear of carriageways is preferred.

(b) Within public land with the permission of the controlling authority.

(c) Within reserves but outside the 1 in 100 year flood area.

(d) Within private property parallel to front, rear, or side boundaries.

7.3.7.2 Materials

Section 6.6 sets out various acceptable pipe and fittings materials for wastewater system uses.

7.3.7.3 Pipes in Reserves and Public Open Space

Pipes in reserves and public open space shall be located in accordance with Council's requirements. Consideration for access to maintain, away from trees and other potential intrusions, and outside any areas defined for stormwater storage/flows should be made.

Crossings of roads, railway lines, waterways, and underground services shall, as far as practicable, be at right angles.

7.3.7.4 Pipes in Private Property

Where pipes are designed to traverse any vacant or occupied public or private properties, the design shall as far as practicable allow for possible future building plans, preclude maintenance structures and specify physical protection of the pipe within or adjacent to the normal building areas and all engineering features (existing or likely) on the site, such as retaining walls.

The design shall allow access for all equipment required for construction and future maintenance. Except where obstructions or topography dictate otherwise, pipes shall run parallel to boundaries at minimum offsets of 1.0 m.

Where pipes are designed to traverse properties containing existing structures such as retaining walls, buildings, and swimming pools, the current and future stability of the structure shall be considered. Pipes adjacent to existing buildings and structures shall be located clear of the 'zone of influence' of the foundations.

If this is not possible, protection of the pipe and associated structures shall be specified for evaluation and approval by Council.

Where pipes to be vested to Council are designed to traverse private properties, they should be protected by legal easements when required by Council.

7.3.7.5 Minimum Cover

Minimum cover shall be determined by the property connections which require a minimum depth at the property boundary of at least 1 m. Where there are no property connections to govern the cover over the main the minimum cover shall be 600 mm in private property and 900 mm in the road reserve.

7.3.7.6 Horizontal Curves

Horizontal curves shall only be used where authorised by Council.

The term 'curved pipes' is used to describe either cold bending of flexible pipe during installation or small deflections at joints for rubber ring jointed flexible and rigid pipes. The radius of curvature and pipe deflection shall meet manufacturer's specifications. Curved alignments are used in curved streets to conform with other services and to negotiate obstructions, particularly in easements. The

use of curves in locations other than curved street alignments shall be justified by significant savings in life-cycle cost. The straight line pipe is usually preferred as it is easier and cheaper to set out, construct, locate, and maintain in the future.

7.3.7.7 Vertical Curves

Vertical curves may be specified where circumstances provide a significant saving or where maintenance structures would be unsuitable or inconvenient. The curvature limitations for vertical curves are the same as those for horizontal curves in Section 7.3.7.6.

7.3.7.8 Underground Services

The location of underground services affecting the proposed pipe alignment shall be determined. Where pipes will cross other services, the depth of those services shall be investigated, and exposed where necessary. Services upstream of the project area may affect the design. A future extension of the pipe that will cross existing and proposed upstream services may determine the level for the current project infrastructure.

7.3.7.9 Clearance from Underground Services

Where a pipe is designed to be located in a road which contains other services, the clearance between the pipe and the other services shall comply with SNZ HB 2002, unless Council has its own specific requirements.

For normal trenching and trenchless technology installation, clearance from other service utility assets shall not be less than the minimum vertical and horizontal clearances shown in Table 7-6. Written agreement on reduced clearances and clearances for shared trenching shall be obtained from Council and the relevant service owner.

Table 7-6 Clearances between wastewater mains and laterals and other underground services

Utility (Existing service)	**Minimum horizontal clearance for new pipe size ≤DN 300** (mm)	**Minimum vertical clearance[1]** (mm)
Gas mains	300[2]	150
Telecommunication conduits and cables	300[2]	150
Electricity conduits and cables	500	225
Drains	300[2]	150
Water mains	1000[3]/600	500[4]

NOTE -

(1) Vertical clearances apply when wastewater pipes and other underground services cross one another, except in the case of water mains when a vertical separation shall always be maintained, even when the wastewater pipe and water main are parallel. The wastewater pipe should always be located below the water main to minimise the possibility of backflow contamination in the event of a main break.

(2) Clearances can be further reduced to 150 mm for distances up to 2 m when passing installations such as poles, pits, and small structures, providing the structure is not destabilised in the process.

Utility (Existing service)	Minimum horizontal clearance for new pipe size ≤DN 300 (mm)	Minimum vertical clearance[1] (mm)
(3) When the wastewater pipe is at the minimum vertical clearance below the water main (500 mm) maintain a minimum horizontal clearance of 1000 mm. This minimum horizontal clearance can be progressively reduced to 600 mm as the vertical clearance increases to 750 mm. (4) Where unable to be achieved, approval from Council must be obtained for alternative designs.		

7.3.7.10 Clearance from Structures

Pipes adjacent to existing buildings and structures shall be located clear of the 'zone of influence' of the building foundations. If this is not possible, a specific design shall be undertaken to cover the following:

(a) Protection of the pipeline.
(b) Long term maintenance access for the pipeline.
(c) Protection of the existing structure or building.

The protection shall be specified by the designer for evaluation and acceptance by Council.

7.3.7.11 Bulkheads for Pipes on Steep Grades

For bulkheads, or anti-scour blocks, see Section 6.3.10.10 and NZS 4404:2010 drawing CM – 003.

7.3.8 Maintenance Structures

7.3.8.1 General

This describes the requirements for structures which permit access to the wastewater system for maintenance.

Maintenance structures include:

(a) Manholes (MH's).
(b) Maintenance shafts (MS's).
(c) Cleaning eyes (CE's)

7.3.8.2 Location of Maintenance Structures

The selection of a suitable location for maintenance structures may influence the pipe alignment. Generally, a minimum clearance of 1.0 m should be provided around maintenance structures clear of the opening to facilitate maintenance and rescue. Council may determine other specific requirements subject to the individual site characteristics.

The design shall include maintenance structures at the following locations:

(a) Intersection of pipes except for junctions between mains and property connections.
(b) Changes of pipe size.
(c) Changes of pipe direction, except where horizontal curves are used.
(d) Changes of pipe grade, except where vertical curves are used.
(e) Combined changes of pipe direction and grade, except where compound curves are used.
(f) Changes of pipe invert level.
(g) Changes of pipe material, except for repair/maintenance locations.
(h) Permanent or temporary ends of a pipe.
(i) Discharge of a pressure main into a gravity pipe.

Table 7-7 Acceptable MH, MS, and TMS options for wastewater reticulation

Application	Acceptable options[1]		
	MH	MS	Cleaning Eye
Intersection of pipes[2]	YES	NO	NO
Change of pipe grade at same level	YES	YES for DN 150 pipe only and using vertical bend	NO
Change of grade at different level	YES MH with internal/external drops	NO	NO
Change in pipe size	YES MH is the only option	NO	NO
Change in horizontal direction	YES within permissible deflection at MH	YES MS prefabricated units or MS used with horizontal bends of max 33° deflection	NO
Change of pipe material	YES	NO	NO
Permanent end of a pipe[3]	YES	NO	YES
Pressure main discharge point	YES MH is the only option and shall include a vent	NO	NO

NOTE -

(1) Where person entry is required down to the level of the pipe, a MH is the only option.

(2) This table refers to reticulation mains. DN 100 connections can be made to any maintenance structure or, using a proprietary junction, at any point along the main.

(3) Some TAs permit the use of London Junction or Rodding Eye at the end of the pipe, but it is recommended that cleaning eyes are used.

7.3.8.3 Maintenance Structure Spacing

For reticulation pipes, the maximum distance between any two consecutive maintenance structures shall be 120 m.

Where a combination of MHs and MSs is used along the same pipe, the maximum spacing between any two consecutive MHs shall not exceed 400 m irrespective of how many MSs are used between the two MHs (see Figure 7-1).

7.3.8.4 Manholes

7.3.8.4.1 Manhole Materials

MH's may be manufactured in concrete, or from suitable plastics materials, including GRP, polyethylene, PVC or polypropylene, or from concrete/plastic lined composites.

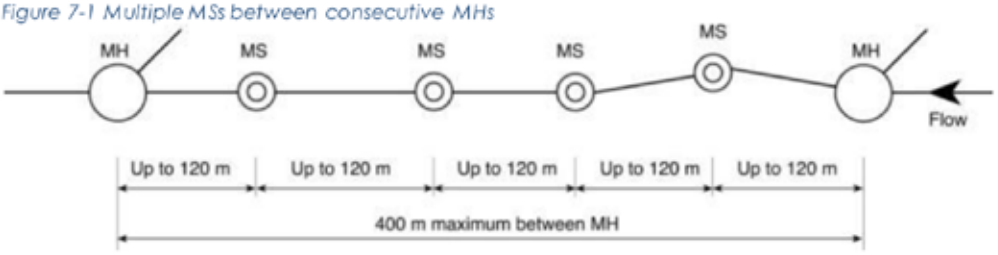
MH materials selected shall be suitable for the level of aggressiveness of the wastewater and surrounding groundwater.

There is to be no rendering/plastering to be done on the inside of manholes. Acceptable alternatives include concrete with a smooth finish, granolithic mortar or using epoxy products.

7.3.8.4.2 Preferred Layout

Each MH base shall be formed as shown in Standard Drawings D12-D21:

Figure 7-1 Multiple MSs between consecutive MHs



7.3.8.4.3 Allowable Deflection Through MHs

A maximum allowable deflection through a MH shall be no more than 90 degrees.

7.3.8.4.4 Internal Falls Through MHs

Where the outlet diameter at a MH is greater than the inlet diameter, the minimum fall through the MH shall be not less than the difference in diameter of the two pipes, in which case the pipes shall be aligned soffit to soffit.

On pipes where the internal fall across the base of the MH is not achievable due to a large difference between the levels of incoming and outgoing pipes (see Standard Drawing - D13), then internal or external drops shall be provided.

7.3.8.4.5 Effect of Steep Grades on MHs

Where a pipe of grade >7% drains to a MH, the following precautions shall be taken if the topography and the connection pipes allow for:

(a) No change of grade is permitted at inlet to a MH.
(b) Steep grades are to be continuous through the MH at the same grade.
(c) Depth of MH is to exceed 1.5 m to invert for DN 150, DN 200, and DN 225 pipes.
(d) Depth of MH is to exceed 2.0 m deep for DN 300 pipes.
(e) Change of direction at the MH is not to exceed 45°.
(f) No drop junctions or verticals are to be incorporated in the MH.
(g) Inside radius of channel inside the MH is to be greater than 6 times the pipe diameter.
(h) Benching is to be taken 150 mm above the top of the inlet pipe.

To avoid excessively deep channels within MHs, steep grades (>7%) shall be 'graded-out' at the design phase where practicable. Grading the channel of the MH shall be limited to falls through MHs of up to

0.15 m. Where the depth of the channel within the MH would be greater than 2 x pipe diameter, then an internal or external drop structure shall be provided.

C7.3.8.4.5
For further guidance on handling steep grades, refer to WSA 02.

7.3.8.4.6 Flotation

In areas where liquefaction during an earthquake is likely or the watertable is at a level that may adversely impact the infrastructure all Maintenance Structures shall be designed in accordance with *Underground Utilities – Seismic Assessment and Design Guidelines* and associated *Technical Note 15 – Manhole Flotation* (or applicable successor).

7.3.8.4.7 Covers

Watertight MH covers with a minimum clear opening of 600 mm in diameter, complying with AS 3996, shall be used, unless Council has an alternative standard. AS 3996 gives direction for the class of cover for particular locations and applications (see Standard Drawing - D11).

7.3.8.4.8 Bolt-Down Covers

Where required by Council, bolt-down metal access covers (watertight type) shall be specified on MHs:

(a) In systems where the possibility of surcharge exists.

(b) Along creeks subject to flooding above the level of the cover, in tidal areas, or in any location where surface waters could inundate the top of a MH.

Sealed entry holes with restricted access should be used in geothermal conditions and for deep manholes.

MHs should, where practicable, be located on ground that is at least 300 mm above the 1 in 100-year flood level. Where this is not practicable, bolt-down access covers may be specified by Council. It will also be necessary to specify the tying together of MH components where bolt-down covers are specified and precast components are used.

7.3.8.5 Maintenance Shafts

Where maintenance shafts (MSs) have been approved by Council, and where it is expected that human access below ground will not be required, MSs can be used on DN 150, DN 200, and DN 225 pipes as an alternative to MHs, providing Sections 7.3.8.5.1 and 7.3.8.5.2 are satisfied. See Standard Drawing - D22.

Typical MS configurations are:

(a) Straight through MSs.

(b) Angled MSs (see 7.3.8.5.1a).

MSs can also be used in conjunction with an inspection chamber.

7.3.8.5.1 Limiting Conditions

The following conditions apply to the use of MSs:

(a) MSs shall only be used on DN 150, DN 200, and DN 225 pipes.

(b) MSs shall not be used instead of MHs at junctions.

(c) Depth of MSs shall:

  (i) Be within the allowable depth limit for the particular pipeline system;

  (ii) Not exceed the MS manufacturer's stated allowable depth limit;

(iii) Be within the depth limit imposed by Council.

(d) MSs shall be restricted to pipeline gradients and depths where the deviation from vertical of the MS riser shaft (that is, projected centre line of base to centre line at surface) is a maximum of 0.3 m measured at the surface.

(e) MSs shall not be used at discharge points of pumping mains.

7.3.8.5.2 Design parameters

MSs shall only be used at the design locations detailed in Figure 7-1. The following requirements shall apply:

(a) Directional and gradient changes at MSs shall be achieved by using either:

(i) close-coupled horizontal or vertical manufactured bends immediately adjacent to the MS

(ii) MS units specially manufactured with internal horizontal or vertical angles to suit design requirements (maximum horizontal deviation of 90°).

(b) MSs at changes of grade shall be located on the pipe with the lesser of the two gradients to minimise the deviation from the vertical of the riser shaft.

(c) Straight through type and angled MSs can incorporate up to two higher level property connections discharging directly into the riser shaft.

For construction details see Standard Drawing - D22.

7.3.8.6 Cleaning eyes

Where terminal maintenance shafts (TMSs) and/or cleaning eyes have been authorised by Council and where it is expected that human access below ground will not be required, TMSs/CEs may be used on DN 150, DN 200, and DN 225 pipes as an alternative to MHs, providing the conditions detailed in this Standard are satisfied.

For construction details see Standard Drawing D7.

7.3.8.6.1 Design Parameters

A TMS may only be used as a terminating structure under the following conditions:

(a) At the permanent end of a wastewater pipe.

(b) On DN 150, DN 200, and DN 225 pipes.

(c) After the last MH (with no intermediate MS) provided it is spaced no further than 120 m from that MH, as shown in Figure 7.1.

(e) Subject to the limiting conditions detailed in Section 7.3.8.

7.3.8.6.2 Property Connections into a Permanent End

Where a property connection is required directly ahead of the permanent end of the pipe (for example, a connection at the end of a no-exit road), a MS shall be used to accommodate the straight through connection. In such a case, a DN 100 connection will require a reducer immediately adjacent to the MS.

7.3.8.6.3 Dead Ends

Pipes need not terminate at a MH or MS, if the pipe is to be extended in the future.

7.3.9 Venting

In urban developments, pipes will normally be adequately ventilated within private property. However, there are some situations where vent shafts will be required such as:

(a) At pumping stations.

(b) At MHs where pumping stations discharge to a gravity pipe.

In such situations vent shafts shall be installed as per the requirements of WSA 02 and WSA 04, and shall incorporate odour filtration.

7.3.10 Connections

Connections link private systems to the public system or other approved outlet point. Private systems extend through to the public system, except where Council accepts responsibility for that part of the pipe outside private property.

7.3.10.1 General Considerations

The property connection should be designed to suit the existing situation and any future development. Each connection shall be capable of serving the entire building area of the property (unless specific approval is obtained from Council).

7.3.10.2 Requirements of Design

The design shall specify the requirements for the property connections including:

(a) Plan location and lot contours.

(b) Invert level at property boundary or junction with the main as applicable.

7.3.10.3 Number of Connections

It is normal practice to provide one connection per lot. Provision of additional connections shall be subject to justification by the developer and approval by Council.

For multiple occupancies (unit title, cross lease, or company lease), service of the whole property is normally achieved by providing a single point of connection to a Council system. Connection of the individual units is by joint service pipes owned and maintained by the body corporate, tenants in common or the company as the case may require. In this instance the whole of the multiple occupancy shall be regarded as a single lot.

Alternatively, if authorised by Council, developers have the option of providing wastewater facilities to the individual titles or tenements in new developments by:

(a) Constructing individual connections which shall be owned and maintained by the body corporate, tenants in common or the company.

(b) Extending the public line into the lot and providing a separate connection to each unit.

For multi-lot developments, service of the rear sites is normally achieved by providing a single point of connection to a Council system via a common drain within private property, with appropriate easements outlining ownership and maintenance responsibilities between the property owners.

7.3.10.4 Location of connection

The connection shall be located to service the lowest practical point on the property and where possible:

(a) Be clear of obstructions, such as trees, tree roots, paved areas.

(b) Be easily accessible for future maintenance.

(c) Be clear of any known future developments, such as swimming pools or driveways.

(d) Avoid unnecessarily deep excavation >1.5 m where practicable.

(e) Be within or on the property boundary.

7.3.10.5 Connection Depth

Connection depths shall be set to drain the whole serviced area recognising the following factors:

(a) Surface level at plumbing fixtures of buildings (existing or proposed).

(b) Depth to invert of pipe at plumbing fixture or intermediate points.
(c) Minimum depth of cover over connection for mechanical protection.
(d) Invert of public main at junction point.
(e) Allowance for crossing other services (for clearances see Table 7-6).
(f) Provision for basements.
(g) Allowance for head loss in traps and fittings.
(h) Minimum depth of the connection at the property boundary shall be at least 1 m.

The designed invert level at the end of the connection shall be not higher than the lowest calculated level consistent with these factors.

7.3.11 Pumping Stations

Pump stations to service new subdivision areas will be permitted only where there is prior agreement with Council on need, positioning and requirements. It is noted that with all mechanical and electrical equipment designs and requirements are frequently change hence the need to refer to Council prior to design and construction to ensure up to date requirements are agreed and covered. Generally, standard reference to WSA 04 shall be used as the basis of design. The following are also matters that should be considered in design of the pumping station.

Pump stations shall meet the following performance standards:

- The pump well shall be underground and have lockable aluminium or stainless steel lids complete with the supply of standard Council padlocks for all opening lids.
- Valve chambers shall be below ground level, attached but separate to the pump well. provision shall be made to bypass the pumps in case of breakdown. Non-return valves shall be ball-valves full-bore opening. Valve chambers shall have lockable aluminium or stainless steel lids complete with the supply of standard Council padlocks.
- Residential pump stations shall be designed for the peak flow as calculated in Section 7.3.5.1. Pump stations with non-residential catchments will be subject to specific design and must be approved by the Engineer.
- The capacity of the wet-well between start and stop levels shall be such as to limit pump starts to no more than 10 per hour.
- Pump stations shall have emergency storage in case of mechanical or electrical failure or blockage of the pumps or rising main. The storage must be located at such a level as to prevent overflow from any manholes, gully traps, pump station lids or any other outlet from the system. Emergency storage capacity shall be the average flow calculated from Section 7.3.5.1.
- All pump stations shall have an approved and controlled overflow system which discharges in such a manner to ensure maximum storage is used prior to discharge. A risk assessment shall be provided to identify where the system would surcharge, and identify controls to minimise overflow effects.
- A rigid ventilation pipe shall be provided with breather cap at least 3 m above ground level.
- A 25 mm diameter water supply shall be provided to the immediate vicinity of the station. The supply shall be fitted with an above-ground backflow preventer in accordance with the requirements of the Water Supply Protection Regulations and the Engineer.
- If required (for larger pump stations servicing more than 15 properties) a Mag Flow meter complete with all electrical and data cables shall be fitted to the main outlet of the pump station.
- The actual site of the pumping station shall be on a separate lot with an accessway (if required) to a formed road. Resource consent may be required for the installation, and where necessary must be obtained by the developer prior to the commencement of engineering works. The site shall be developed to prevent entry of surface runoff into the station.
- Permanently surfaced vehicle access and manoeuvring areas shall be provided to the station.
- The area around the pumping station shall be fenced if required to the Engineer's satisfaction, and such that Council shall not become a party to fencing costs.
- The power supply to the station shall be underground.

- The main switchboard shall be mounted on a concrete plinth which extends at least 1,200 mm from the front of the switchboard and 300 mm on the other three sides.

A design drawing of a typical pumping station is available at Council's Invercargill office and may be used for reference purposes. The proposed pump station and its components shall be approved by Council prior to construction. Pumps shall include the following as a minimum:

- There shall be a minimum of two pumps in all pump stations.
- Pumps shall be of a make approved by the Engineer, three phase submersible type designed for each to take the full flow and be capable of passing a 75 mm diameter solid.
- Pumps shall be controlled so that while one pump is acting as duty pump, the other is on automatic stand-by.
- Each pump shall have power factor correction to 0.95 or better.
- Each pump shall have a multi-pin plug for cable connection/disconnection.
- If available each pump shall also have oil seal monitoring and thermistor or micro-therm protection (oil seal monitors supplied by pump supplier).
- Pump control shall include:
- Multi-trode level stick with 3 x floatless relay switches (Omron or similar approved). Alternatively an ultrasonic level transducer with pump controller unit or a pressure transducer with pump controller unit can be used (prior approval from Council Engineer required). Multi-trode to have "Start", "Stand-by", and "High" switches. That is duty pump starts at "Start" and stand-by pump starts at "Stand-by". Both run together until stop level. "High" switch triggers alarm.
- 2 x back-up float switches for "High-high" (overflow) (to be back-up supplied from back-up 12V DC battery) and "Low" levels. Floats to be hard wired to start both pumps if "High-high" tripped and both stop at stop level or when "Low" float tripped.
- The electrical control cabinet shall be above ground level, constructed from a powder-coated stainless steel, weather proof, lockable enclosure (to IP 56 rating). The internal main switchboard metalwork arranged into cubicles (layout to be approved by Council Engineer).

The enclosure shall be large enough to house the following items:

- The internal main switchboard metalwork, including supply authority metering.
- 1 x selector switch for Mains/Off/Generator.
- 1x load break main switch isolator appropriately sized, minimum 63A and HRC or circuit breaker type distribution board.
- 1 No. direct on line motor starter per pump (may need to be reduced voltage starter based on the supply authorities requirements) complete with overload protection, ammeter, hours run, run and fault light indication and auto/off/manual selector switches.
- Phase failure protection for each pump motor.
- High and low well level indication lights.
- Each pump shall have a multi pin plug and socket for cable connection/ disconnection.
- 1 x 10A single phase RCD protected switch socket.
- 1 x 72 mm voltmeter c/w phase selector switch.
- 1 x portable generator appliance 3 phase plus neutral inlet and plug. Door to be lockable whilst under emergency power.
- 1 x light complete with switch.
- 1 x anti condensation heater and thermostat.
- All electrical work will be carried out by a suitably qualified electrical contractor.
- The control system shall be as agreed:
- Council's standard padlock and latch.

7.3.12 Pressure Sewers and Vacuum Sewers

Pressure sewers shall be designed and installed in accordance with the standards of Council, with consideration in the design for cyclic dynamic stresses. Refer to Water New Zealand, Pressure Sewer National Guidelines on Ownership Models, Design Requirements, Technical Specifications and Operation & Maintenance, Feb 2020, reference can also be made to the PIPA design guidelines (http://www.pipa.com.au). If Council has no applicable standards, then they shall be designed in accordance with WSA 02 and WSA 07

Vacuum sewers shall be designed and installed in accordance with the standards of Council. If Council has no applicable standards, then they shall be designed in accordance with WSA 06. Pressure and vacuum sewers shall be installed with marking tape or detection tape at the top of the embedment zone, or tied to the pipe during HDD, to aid future location of the pipe. Refer to Figure 5.1 of AS/NZS 2032.

7.3.13 On-Site Wastewater Treatment and Disposal

On-site wastewater treatment and disposal shall be designed and installed in accordance with the standards of Council. If Council has no applicable standards, then they shall be designed in accordance with AS/NZS 1546.1 and AS/NZS 1547.

7.4 Method of Disposal

On-site disposal of wastewater may be permitted where:

(a) No piped system is immediately available or will not be available within 10 years of the subdivision application.

(b) No piped system is available immediately adjacent or within a reasonable distance of the site. For clarification of what constitutes a "reasonable distance" refer to Section 9.8 of this CoP.

(c) The site is capable of disposing of treated effluent without harmful effects on the environment or to public health.

In all other cases wastewater is to be collected and disposed of to an existing Council system, via a localised pump station if necessary.

7.5 Private On-Site Disposal Systems

Septic tanks for on-site domestic wastewater treatment must be designed in accordance with AS/NZS 1546.1:1998, On-Site Domestic Wastewater Treatment Units, Part 1, Septic Tanks.

On-site disposal systems shall be designed and constructed in accordance with AS/NZS 1547: 2000, On-Site Domestic Wastewater Management or its applicable successor.

Where on-site disposal is proposed the developer will be required to demonstrate the ability of the ground to accept and dispose of the treated effluent in accordance with the above standard.

The disposal area shall be wholly contained within the allotment serviced.

If ground conditions are considered to be marginal in any way Council will require a specific design, based on-site investigations, to be submitted at the time of subdivision application.

On site treatment/disposal systems must comply with the Regional Effluent Land Application Plan, and the proposed Water and Land Plan, for Southland.

Wastewater/effluent must not contaminate drinking water supplies or adversely affect water used for recreational use or the gathering of food.

7.6 Approval of Proposed Infrastructure

7.6.1 Information to Be Provided

Applications for design approval shall include the information outlined in Section 3 of this CoP. In addition the following information shall be provided:

(a) A plan showing the proposed location of existing and proposed wastewater infrastructure.

(b) Detailed long sections showing the levels and grades of proposed wastewater pipelines in terms of datum.

(c) Long sections shall include full details of pipe and manhole materials and sizes.

(d) Details and calculations prepared which demonstrate that agreed levels of service will be maintained.

(e) Details and calculations prepared which clearly indicate any impact on adjacent area or catchment that the proposed infrastructure may have.

(f) Appropriate operating manuals, pump information, and instructions for pump stations and pressure systems if proposed.

7.7 Construction

7.7.1 Pipeline Construction

The construction of pipelines shall be carried out in accordance with the requirements of AS/NZS 2032 (PVC), AS/NZS 2033 (PE), AS/NZS 2566 Part 1 and 2 (all buried flexible pipelines), AS/NZS 3725 (concrete pipes), or AS 1741 or BS EN 295 (VC).

7.7.2 Trenching

See Standard Drawings D23 and D24 for guidance.

Where a pipeline is to be constructed through areas with unsuitable foundations such material shall be removed and replaced with other approved material or alternatively, other methods of construction shall be carried out to the approval of Council to provide an adequate foundation and side support if required for the pipeline.

7.7.3 Reinstatement

Areas where construction has taken place shall be reinstated to the condition required by Council and shall be no less than the original pre-works condition.

7.7.4 Inspection and Acceptance

Pipeline inspection and recording by closed circuit television (CCTV) shall be carried out prior to acceptance by Council.

CCTV inspections and deliverables shall be in accordance with *New Zealand pipe inspection manual* and the requirements of Council.

7.7.5 Leakage Testing Of Gravity Pipelines

Before a new pipeline is connected to the existing system, a successful field test shall be completed. The test shall be carried out as specified in Section 8.7.2.

7.7.6 Leakage Testing Of Pressurised Sewers

Requirements for field testing of pressurised sewers are given in Section 8.7.3.

Sensitivity: General

Section 8. Water Supply

8.1 Scope

This section sets out requirements for the design and construction of drinking water supply systems for land development and subdivision. It covers the design of both the localised reticulation system and the larger distribution network.

Water reticulation design is generally described in 'performance based' terms combined with 'deemed to comply' solutions. The designer is responsible for all aspects of the water system design, excepting those aspects nominated and provided to the designer by Council.

If the scope of the development is large and includes its own water source, treatment or reservoirs, reference should be made to the Water Services Association - WSA 03.

Detailed plans and design calculations (where appropriate) shall be submitted to Council. In addition the requirements outlined in Section 3 of this CoP shall be met.

8.2 General Requirements

8.2.1 Objectives

The objectives are to ensure that the water reticulation system is functional, the required quality and quantity of water is supplied to all customers within Council's designated water supply area, and Council's requirements are satisfied.
The design shall ensure an acceptable water supply for each property including fire flows, depending on Council policies by providing either:

(a) A water main allowing an appropriate point of supply to each property.
(b) A service connection from the main for each property.

The designer shall consider:

(c) Council's policies, customer charters, and contracts.
(d) The hydraulic adequacy of the system.
(e) The ability of the water system to maintain acceptable water quality.
(f) The structural strength of water system components to resist applied loads.
(g) The requirements of SNZ PAS 4509.
(h) Environmental requirements.
(i) The environmental and community impact of the works.
(j) The 'fit-for-purpose' service life for the system.
(k) Optimising the 'whole-of-life' cost.
(l) Each component's resistance to internal and external corrosion or degradation.

8.2.2 Referenced Documents and Relevant Guidelines

Relevant legislation is listed in the Referenced Documents Section 2 of this CoP.

Water designs shall incorporate all the special requirements of Council and shall be in accordance with the most appropriate Standards, codes, and guidelines including those set out in Referenced Documents, the Civil Defence Emergency Management Act 2002, and *Drinking-water standards for New Zealand 2005* (Revised 2018).

8.3 Design

8.3.1 Design Life

All water supply systems shall be designed and constructed for an asset life of at least 100 years. Some components such as pumps, metering, control valves, and control equipment may require earlier renovation or replacement. Refer to WSA 03 for the classification of life expectancy for various components of water supply systems.

8.3.2 System Design

Water mains shall be designed with sufficient capacity to cater for all existing and predicted development within the area to be served and to meet the requirements of SNZ PAS 4509, and NZ Fire Service, Fire Fighting Water Supplies Code of Practise.

The water demand allowance in the subdivision design shall include provision for:

(a) Population targets.

(b) The area to be serviced.

(c) Individual properties proposed by the developer.

Adjustment may be required to cater for the known performance (demand-based flows) of the existing parts of the water system.

The water supply system for any development shall also be designed to supply:

(b) Any properties that lie between that development and the extent of the existing supply system and

(c) Properties beyond that development which form part of the zone council wishes to eventually reticulate.

For capacity beyond that required for the development in question, Council may contribute monies being the actual difference in cost between pipe and fittings required for the ultimate development and that for the particular development.

8.3.3 Design Criteria

8.3.3.1 Hydraulic Design

The diameter, material type(s), and class of the water main shall be selected to ensure that:

(a) The main has sufficient capacity to meet peak demands while maintaining minimum pressure.

(b) All consumers connected to the main receive at all times an adequate water supply and pressure.

The hydraulic design shall meet:

(a) A peak hourly demand pressure no less than 250Kpa; and

(b) Firefighting demand plus two thirds of peak hourly demand no less than 100Kpa.

8.3.3.2 Network Analysis

Where required by Council, a network analysis of the system shall be undertaken. The system shall be analysed using a mathematical model of the network to ensure adequate water supply is available to all consumers connected to the system for all defined modes of operation. The analysis shall include all elements within the system and shall address all demand periods including peak demand, low demand flows, and fire flows.

8.3.3.3 Peak Flows

Water demands vary on a regional basis depending on a variety of climatic conditions and consumer use patterns. Council should be able to provide historically-based demand information appropriate for design. Where peak demands are required for the design of a distribution system, the value shall be calculated from the following formulae:

Peak Day Demand (over a 12-month period) = Average Day Demand x PF

Unless specified otherwise by Council:

(a) PF = 1.5 for populations over 10,000.

(b) PF = 2 for populations below 2,000.

Peak Hourly Demand = Average Hourly Demand (on peak day) x PF (over a 24-hour period)

Unless specified otherwise by Council:

(a) PF = 2 for populations over 10,000.

(b) PF = 5 for populations below 2,000.

8.3.3.4 Head Losses

The head loss through pipe and fittings at the design flow rate shall be less than:

(a) 5 m/km for DN ≤150.

(b) 3 m/km for DN ≥200.

Head loss can be calculated using one of a number of standard hydraulic formulae. The final calculation method and formulae used to calculate head loss shall be determined by Council.

8.3.3.5 Hydraulic Roughness Values

The hydraulic roughness values considered in the analysis shall take account of the pipe material proposed, all fittings and other secondary head losses, and the expected increase in roughness over the life of the pipe. The designer should check with Council to ascertain if it has any requirements to use a specific formula and or roughness coefficients. If there are no specific requirements then it is recommended that the Colebrook-White formula is used (see Table 8-1).

Table 8-1 Hydraulic roughness values

Material	Colebrook-White coefficient **k** (mm)]	Manning roughness coefficient (n)
PVC	0.003 - 0.015	0.008 - 0.009
PE	0.003 - 0.015	0.008 - 0.009
Ductile iron cement mortar lined	0.01 - 0.06	0.006 - 0.011
Mild steel cement mortar lined	0.01 - 0.06	0.006 - 0.011
GRP	0.003 – 0.015	0.008 - 0.009

NOTE -
The values show a range of roughness coefficients. The lower value in the range represents the expected value for clean, new pipes laid straight. The higher value in the range represents the typical maximum expected for the product. It cannot be an absolute maximum, as the factors detailed in AS 2200 can lead to even higher roughness values in some circumstances. Recommendations on the appropriate roughness coefficient for a particular fluid may be obtained from the pipe supplier. Refer also to AS 2200 Table 2 and notes.

8.3.3.6 Minimum Flows

The minimum flow shall be the greater of:

(a) 25 L/min for normal residential sites.

(b) Fire flows as specified in SNZ PAS 4509.

8.3.3.7 Minimum Water Demand

The minimum peak domestic demand shall be specified by Council, or:

(a) Daily consumption of 250 L/p/day, applied to an occupancy rate of at least 2.5 persons / dwelling.

(b) Peaking factor of up to 5.

(c) Firefighting demands as specified in SNZ PAS 4509.

(d) The network should be designed to maintain appropriate nominated pressures for both peak demand (average daily demand in L/s x peaking factor) and firefighting demand scenarios. These figures should be applied to mains of 100 mm diameter or greater. Mains less than 100 mm in diameter can be sized using the multiple dwellings provisions of AS/NZS 3500.1 Table 8-2

The network is to be designed to suit both scenarios of:

- Peak hourly demand no less than 250Kpa; and
- Firefighting (as specified in SNZ PAS 4509) plus two thirds of peak hourly demand no less than 100Kpa.

8.3.3.8 Sizing of Mains

Table 8-2 and Table 8-3 may be used as a guide for sizing mains.

Table 8-2 Empirical guide for principal main sizing

Nominal diameter of main DN	**Capacity of main (single direction feed only)**			
fixed	**Residential** (lots)	**Rural residential** (lots)	**General/ light industrial** (ha)	**High usage industrial** (ha)
100	40	10	-	-
150	160	125	23	-

Table 8-3 Empirical guide for sizing rider mains

DN 63 Rider mains		
Pressure	**Maximum number of dwelling units**	
	One end supply	**Two end supply**
High > 600 kPa	20	40
Medium 400 - 600 kPa	15	30
Low < 400 kPa	7	15

8.3.3.9 Pressure Zones

In some cases, a 'PRV zone' may be used to control the pressure delivered to an area. In these cases the designer shall consult with Council to confirm pressure requirements.

8.3.3.10 Maximum Pressure Requirements

An output of the hydraulic design of a pipeline is the specification of the maximum pressure that may be imposed on the pipeline during operation.

Inputs to the design process include:

(a) Static head of supply.

(b) The range of pressure and flows required to provide an acceptable level of service to the end-user (minimum pressure) and to avoid water leakage (maximum pressure).

The outputs of water main hydraulic design shall include:

(c) Size of mains.

(d) Maximum and minimum design pressure.

(e) The pressure class/rating of pipeline system components.

(f) Surge analysis results.

(g) Hydraulic loss functions.

(h) Specification of the maximum allowable operating pressure.

(i) Flow and pressure compliance with peak demand and firefighting demand scenarios.

8.3.3.11 Design Pressure

The design pressures are the limiting pressures for operation of a pipeline system including any allowance for variation of usage in the future.

The minimum design pressure is either the minimum pressure defined by Council or some higher pressure selected to control (minimise) the range of pressures experienced over the normal diurnal variation in the system.

Unless otherwise specified by Council, the design pressure shall be between 250 kPa and 800 kPa (25 m to 80 m).

A minimum pressure rating of each pipeline component is to be provided to Council with the as-built details.

C8.3.3.11

A design pressure of 250 kPa to 800 kPa is set as this provides for approximately 200 kPa for two-storey dwellings at the upper floor and less than excessive pressures for dwellings constructed on lots below the position of the main. Specific additional consideration to these pressures may be needed in areas of significant contour.

8.3.3.12 Operating Pressure/Working Pressure

The operating pressure shall not exceed the rerated pressure class/rating or the operating pressure limit of the pipeline components at that location.

The design pressure (head) for the mains to be installed shall be based on the following:

Design pressure, (m) = Maximum Supply Pressure, (m above the level datum used for the ground level) + Surge Allowance, (m) - Lowest Ground Level (GL) of the proposed main, (m above datum).

The design pressure (m head) shall be used for:

(a) Selection of pipe materials and classes.
(b) Selection of pipe fitting types and classes.

The minimum pressure for design scenarios shall be in accordance with Section 8.3.3.7.

8.3.3.13 Pipe PN Class (Pressure Rating)

Pipe PN class is selected on the basis of the design pressure (head) calculated for the various sections of the reticulation network. This may be varied by specific operational requirements specified by Council but is normally defaulted to a minimum PN12 (12 bar).

8.3.3.14 Water Quality

A number of factors in a network can adversely affect the quality of the water in the system. The network design shall ensure that the water quality at each property complies with Taumata Arowhai standards. Also applicable are the *Drinking-water standards for New Zealand 2005* (Revised 2008). The requirement to protect water supplies from the risk of backflow is stated in the Health (Drinking Water) Amendment Act Section 69ZZZ and this shall be adhered to.

8.3.3.15 Materials

All parts of the water supply system in contact with drinking water shall be designed using components and materials that comply with AS/NZS 4020.

8.3.3.16 Prevention of Backflow

Drinking water supply systems shall be designed and equipped to prevent backflow. The location and operation of hydrants, air valves, and scours shall ensure no external water enters the system through negative pressure from normal operation. All connections shall be fitted with backflow prevention devices.

8.3.3.17 Water Age

Drinking water supply systems shall be designed to minimise water age to ensure no unacceptable deterioration of water quality. This shall include:

(a) Mains with dead ends should be avoided by the provision of linked mains or looped mains. Particular care shall be taken at the boundaries between supply zones where dead ends shall be minimised.
(b) Mains for short runs shall be reduced in size or looped, for example no-exit roads (see Figure 8.5).
(c) Provision of large diameter mains capacity shall be staged by the initial provision of a smaller main, followed by additional mains as the demand increases. Discussions should be held with Council on staging, as multiple mains may not be desirable and larger mains with a scouring programme may be preferred instead.

8.3.4 Flow Velocities

In practice it is desirable to avoid unduly high or low flow velocities. Pipelines shall be designed for flow velocities within the range of 0.5 to 2.0 m/s. In special circumstances, velocities of up to 3.0 m/s may be acceptable.

For pumping mains an economic appraisal may be required to determine the most economical diameter of pumping main to minimise the combined capital and discounted pumping cost. The resulting velocity will normally lie in the range 0.8 m/s to 3.0 m/s.

The following factors shall be considered in determining flow velocity:

(a) Stagnation.
(b) Turbidity (large fluctuations in flow rates can dislodge the biological slime or stir up settled solids in pipelines).

(c) Pressure.
(d) Surge.
(e) Pumping facilities.
(f) Pressure reducing devices.
(g) Pipe lining materials.

8.3.4.1 Surge Analysis

During the design stage a surge analysis shall be undertaken for any pipeline within a pumped system or system containing automated valves. The source of any significant pressure surges or high-pressure areas shall be identified and remedial measures to minimise pressure surges designed and specified.

For water mains in pumped systems, a detailed surge analysis shall be conducted unless otherwise directed by Council to ensure:

(a) The appropriate surge pressure is included in the calculated design head.
(b) Surge control devices are included in the system design, where identified by the detailed analysis, to protect the network or control pressure fluctuations in the supply to customers, or both.

NOTE - Surge can also be managed by soft starts on pump motors, variable speed drives, and speed controls on valve closures, for example.

8.3.5 System Layout

8.3.5.1 General

Water mains are usually located in the road. The location shall be in accordance with Standard Drawing R2. Where approved by Council water mains may be located in private property or public reserve, where in this case easements shall be required.

Water mains should:

(a) Be aligned parallel to property boundaries.
(b) Should not traverse steep gradients.
(c) Should be located to maintain adequate clearance from structures and other infrastructure.

8.3.5.2 Reticulation Layout

A principal water main of not less than nominal internal diameter (DN) 100, fitted with fire hydrants, shall be laid on one side of all public roads and no-exit roads in every residential development. A DN 50 rider main may be laid to lots not fronted by the principle main but still within fire protection of a hydrant subject to approval by Council. The principal mains serving commercial and industrial areas shall be at least DN 150. This requirement may be relaxed in short no-exit roads as long as adequate firefighting coverage is available.

8.3.5.3 Mains Layout

In determining the general layout of mains, the following factors shall be considered:

(a) Main location to allow easy access for repairs and maintenance.
(b) Whether system security, maintenance of water quality, and ability to clean mains meet operational requirements.
(c) Location of valves for shut-off areas and zone boundaries (see Section 8.3.14).
(d) Avoidance of dead ends by use of looped mains or rider mains.
(e) Provision of dual or alternate feeds to minimise service risk.

8.3.5.4 Water Mains in Private Property

Water mains are not normally permitted within private property. In extraordinary circumstances when their presence has been agreed by the Council, then they will require a registered easement. Water mains located within private property will require an appropriately sized and registered easement in accordance with Council's requirements.

C8.3.5.4
For some TAs, an easement over private property is not the preferred option and may only be used as a temporary solution for landlocked subdivisions pending future permanent supply within a road. A typical situation where Council may approve water mains in easements is a fire main in a right of way.

8.3.5.5 Types of System Configuration

Network layouts shall be established in accordance with Council practice. Interconnected ring systems should be provided when feasible. Refer to WSA 03 for further information.

8.3.5.6 Water Mains Near Trees

Locating water mains within the root zone of trees should be avoided if possible. Where this is not practicable, careful attention to pipe material selection is necessary to minimise risk of pipe failure due to root intrusion.

8.3.5.7 Shared Trenching

Where shared trenching is approved by Council and utility service owners, a detailed design shall be submitted for approval by those parties and shall include:

(a) Relative location of services (horizontal and vertical) in the trench.
(b) Clearances from other services.
(c) Pipe support and trenchfill material specifications.
(d) Embedment and trenchfill compactions.
(e) Trench and / or individual service] markings.
(f) Services' location from property boundaries.
(g) Any limitations on future maintenance.
(h) Special anchoring requirements, such as for bends and tees.

Where approved by Council and utility service owners, shared trenching may also be used for property service connections.

8.3.5.8 Rider Mains and Duplicate Mains

A rider main may be laid to lots not fronted by the principle main but still within fire protection of a hydrant subject to approval by Council. Duplicate mains are required to provide adequate fire protection in the following cases:

(a) Arterial roads or roads with a central dividing island.
(b) Roads with split elevation.
(c) Roads with rail or tram lines.
(d) Urban centres.
(e) Parallel to large distribution mains that are not available for service connections.
(f) Commercial and industrial areas nominated by Council.
(g) Where required by SNZ PAS 4509.

8.3.5.9 Crossings

Water main crossings of roads, railway lines, and underground services shall, as far as practicable, be at right angles. Mains should be located and designed to minimise maintenance and crossing

restoration. Council may require extra mechanical protection for the pipes or different pipe materials to minimise the need for future maintenance.

8.3.5.10 Crossings of Waterways Or Reserves

All crossings of waterways or reserves shall be specific designs to suit Council's requirement.

Crossings shall, as far as practicable, be at right angles to the waterway or reserve. Reference should be made to Council to establish whether it prefers elevated crossings or below waterway invert crossings. When the pipeline is placed under the invert level of a waterway it may require mechanical protection by concrete encasement or steel or other acceptable pipe duct. Different pipeline materials may need to be used for the crossing.

8.3.5.11 Location Marking Of Valves and Hydrants

Hydrant location markings shall be according to SNZ PAS 4509. Additionally reinforced concrete marker posts shall be set in the ground opposite the hydrant or valve and close to property boundaries. Marker posts shall have inscribed letters as below.

- "V" to indicate sluice valves, painted white
- "AV" to indicate air valves, painted red
- "SV" to indicate scour valves, painted blue]
- The location marking of stop valves, service valves, and fire hydrants shall be to SNZ PAS 4509 and CoP Standard Drawings.

8.3.5.12 Connection to the Council's reticulated water supply

Subject to engineering constraints, connection to the Council's reticulated water supply will be required unless:

(a) No piped system is immediately available or will not be available within 10 years of the subdivision application.

(b) No piped system is available immediately adjacent or within a reasonable distance of the site.

For clarification of what constitutes a "reasonable distance" refer to Section 9.8 of this CoP.

8.3.6 Clearances

8.3.6.1 Clearance from Underground Services

Where a pipe is designed in a road the location of the pipe from other services shall comply with the Code as defined in Section 9.2.2, unless Council has its own requirements.

For normal trenching and trenchless technology installation, clearance from other service utility assets shall not be less than the minimum vertical and horizontal clearances shown in Table 8-4. Written agreement on reduced clearances and clearances for shared trenching shall be obtained from Council and the relevant service owner prior to the commencement of construction.

Table 8-4 Clearances between water mains and underground services

Utility (Existing service)	Minimum horizontal clearance (mm)		Minimum vertical clearance[1] (mm)
	New main size		
	DN ≤200	DN >200	
Water mains DN >375	600	600	500

Utility (Existing service)	Minimum horizontal clearance (mm)		Minimum vertical clearance[1] (mm)
	New main size		
	DN ≤200	DN >200	
Water mains DN ≤375	300[2]	600	150
Gas mains	300[2]	600	150
Telecommunications conduits and cables	300[2]	600	150
Electricity conduits and cables	500	1000	225
Public mains	300[2]	600	150[3]
Wastewater pipes	1000/600[4]	1000/600[4]	500[3]
Kerbs	150	600[5]	150 (where possible)

NOTE -

(1) Vertical clearances apply when water mains cross another utility service, except in the case of wastewater when a vertical separation shall always be maintained, even when the main and wastewater pipe are parallel. The main should always be located above the wastewater pipe to minimise the possibility of backflow contamination in the event of a main break. Where unable to be achieved, approval from Council must be obtained for alternative designs.

(2) Clearances can be further reduced to 150 mm for distances up to 2 m when passing installations such as poles, pits, and small structures, providing the structure is not destabilised in the process.

(3) Water mains should always cross over wastewater and stormwater drains.

(4) When the wastewater pipe is at the minimum vertical clearance below the water main (500 mm), maintain a minimum horizontal clearance of 1000 mm. This minimum horizontal clearance can be progressively reduced to 600 mm as the vertical clearance is increased to 750 mm.

(5) Clearance from kerb and channel shall be measured from the nearest edge of the concrete. For water mains ≤375 clearances can be progressively reduced until the minimum of 150 mm is reached for mains DN ≤200.

(6) Where a main crosses other services, it shall cross at an angle as near as possible to 90°.

8.3.6.2 Clearance from Structures

Pipes adjacent to existing buildings and structures shall be located clear of the 'zone of influence' of the building foundations. If this is not possible, a specific design shall be undertaken to cover the following:

(a) Protection of the pipeline.

(b) Long term maintenance access for the pipeline.

(c) Protection of the existing structure or building.

The protection shall be specified by the designer for evaluation and acceptance by Council.

Sufficient clearance for laying and access for maintenance is also required. Table 8-5 may be used as a guide for minimum clearances for mains laid in public streets.

Table 8-5 Minimum clearance from structures

Pipe diameter DN	Clearance to wall or building (mm)
<100	600
100 - 150	1000
200 - 300	1500
375	2000
NOTE - These clearances should be increased for mains in private property (even with easements) as access is often more difficult and damage risk greater.	

8.3.6.3 Clearance from High Voltage Transmission Facilities

Water mains constructed from metallic materials shall generally not be located close to high voltage transmission lines and other facilities. Special design shall be undertaken if it is necessary to locate such mains close to such facilities.

8.3.6.4 Deviation of Mains Around Structures

Deviation of a pipeline around an obstruction can be achieved by deflection of the pipeline at joints, to the angular deflection limits stated by the pipe joint manufacturer and with suitably restrained fitting bends. Permitted angular deflection varies with pipe material, pipe wall thickness, pipe PN class, joint type, design and geometry. Some joint types are specifically designed to accommodate angular deflection. Butt welded or electrofusion collared PVC and PE pipes may also be curved along the pipe barrel, between joints, to a minimum radius of curvature not less than that stated by the pipe manufacturer.

8.3.7 Pipe Selection

The selection of the appropriate pipe material, sizes, and classes shall be based on the designed system demands.

8.3.7.1 Standard Pipe Sizes

The principal main shall be standardised as DN 100, 150, 200, 250, 300, 375, 450, 525, 575, or 600 mm diameter only. Pipe sizes shall be in accordance with the table below:

Standard pipe size according to material type			
Internal diameter (mm)	Polyethylene (PE)	Polyvinylchloride (PVC)	
		uPVC	PVC-O
50	DN63	DN50	DN50
100	DN125	DN100	DN100
150	DN180	DN150	DN150
200	DN250	DN200	DN200
250	DN315	DN250	DN250
300	DN355	DN300	DN300

Note:

1. For PE pipe: Comply with AS/NZS 4130, pressure rating PN12.5Mpa
2. For uPVC pipe: Comply with AS/NZS 1477 series 1 or 2, pressure rating PN12Mpa
3. For PVC-O: Comply with AS/NZS 4441 series 1 or 2, pressure rating PN12

8.3.7.2 Minimum Pipe Sizes

Minimum pipe diameters shall be as follows, where DN is the pipe diameter:

(a) DN 50 for rider mains in residential zones.

(b) DN 100 for residential zones.

(c) DN 150 for industrial or commercial zones.

Council may also specify minimum pipe diameters for other identified areas such as CBDs.

8.3.7.3 Pipe Materials

For acceptable pipe materials and Standards see Section 7.7.1.

8.3.8 Fire Flow

The water reticulation system shall be designed to comply with SNZ PAS 4509.

8.3.9 Fire Protection Services

Many commercial and industrial developments require installation of special fire protection services. While it is the responsibility of the site owner to provide these fire services, the developer shall design the water reticulation system to meet the required demands, where these are known in advance.

Where a development cannot be connected to a high pressure supply the following will apply for each dwelling ≤ 200m^2 (any larger dwelling shall have a specifically designed system for fire protection services).

Each allotment will require:

(a) A minimum of 20,000 litres shall be maintained at all times as a static fire fighting reserve within a 30,000 litre tank. Alternatively, a 7,000 litre fire fighting reserve is to be made available for each dwelling in association with a domestic sprinkler system. Underground tanks or tanks that are partially buried (provided that the top of the tank is no more than 1 metre above ground level) may be accessed by an opening in the top of the tank and couplings are not required.

A fire fighting connection in accordance with SNZ PAS 4509:2008 is to be located within 75 m of any proposed building site. The Fire Service connection point/coupling/fire hydrant must be located so that it is not compromised in the event of a fire.

(b) Heavy-duty vehicle access a minimum of 4 m wide to a connection site on a hardstand area suitable for fire service appliance parking. Access shall be maintained at all times to the hardstand areas. The connection site shall be within 6 m of the water source.

(c) Fire Service coupling connections that are compatible with Fire Service equipment. The fittings are to comply with the following standard, being either:

70 mm instantaneous couplings (female) to SNZ PAS 4509, or

100 mm and 140 mm suction coupling (female) to SNZ PAS 4509 with the hose tail of the same diameter as the threaded coupling, eg 140 mm coupling to have 140 mm hose tail.

Alternatively, communal water supply tanks servicing a number of properties may be utilised provided that:

- At least two tanks are located within 135 m of each building.
- Each tank has at least 45 m^3 capacity.
- Permanent couplings as detailed above for private tanks are installed at each tank.

8.3.10 Structural Design

8.3.10.1 General

For installation conditions beyond those shown on the drawings, the pipeline installation shall be specifically designed to resist structural failure. The design shall be in accordance with AS/NZS 2566.1 including the structural design commentary AS/NZS 2566.1 Supplement 1. Details of the final design requirements shall be shown on the drawings.

8.3.10.2 Seismic Design

All pipes and structures shall be designed with adequate flexibility and special provisions to minimise risk of damage during earthquake. Historical experience in New Zealand earthquake events suggests that suitable pipe options, in seismically active areas, may include rubber ring joint PVC pipes, or PE pipes. Specially designed flexible joints shall be provided at all junctions between pipes and rigid structures (such as reservoirs, pump stations, bridges, and buildings) in natural or made ground.

8.3.10.3 Structural Consideration

Pipelines shall be designed to withstand all the forces and load combinations to which they may be exposed including internal forces, external forces, temperature effects, settlement, and combined stresses. The water main design shall include the selection of the pipeline material, the pipe class, and selection of appropriate bedding material to suit site conditions.

8.3.10.4 Internal Forces

Pipelines shall be designed for the range of expected pressures, including transient conditions (surge and fatigue) and maximum static head conditions. In the case of transient conditions the amplitude and frequency shall be estimated. The allowance for surge included in the maximum design pressure shall not be less than 200 kPa. Transfer and distribution mains subject to negative pressure shall be designed to withstand a transient pressure of at least 80 kPa below atmospheric pressure. A surge safety factor of 2 may be applied to the normal operating pressure to estimate the surge pressure in lieu of a detailed surge analysis.

8.3.10.5 External Forces

The external forces to be taken into account shall include:

(a) Trench fill loadings (vertical and horizontal forces due to earth loadings).
(b) Surcharge.
(c) Groundwater.
(d) Dead weight of the pipe and the contained water.
(e) Other forces arising during installation.
(f) Traffic loads.
(g) Temperature (expansion/contraction).

The consequences of external forces on local supports of pipelines shall also be considered.

8.3.10.6 Geotechnical Investigations

The designer should take into account any geotechnical requirements determined under Section 4 of this CoP.

Where required, standard special foundation conditions shall be referenced on the drawings.

8.3.10.7 Pipe Selection for Special Conditions

Pipeline materials and jointing systems shall be selected and specified to ensure:

(a) Structural adequacy considering ground conditions and water temperature.
(b) Water quality considering lining material.
(c) Compatibility with aggressive or contaminated ground.

(d) Suitability for the geotechnical conditions.
(e) Compliance with Council's requirements.

8.3.10.8 Above-Ground Water Mains

The design of above-ground water mains shall include the design of pipeline supports, maintenance and access requirements, control of unbalanced thrusts, and shall address exposure conditions, such as corrosion protection, UV protection, freezing of water mains, and temperature derating.

In such situations the pipe materials, support, and restraint for the pipes and fittings shall be detailed on the drawings.

8.3.10.9 Trenchless Technology

Trenchless technology may be required for alignments passing through or under:
(a) Environmentally sensitive areas.
(b) Built-up or congested areas to minimise disruption and reinstatement.
(c) Railway, water course and major road crossings.
(d) Significant vegetation.
(e) Vehicle crossings.

Pressure pipes used for trenchless installation shall have suitable mechanically restrained joints, specifically designed for trenchless application, which may include integral restraint seal systems, or heat fusion welded joints.

For information on trenchless installation methods see Section 7.3.6.8.

C8.3.10.9
Further information on trenchless technologies may be found in 'Trenchless technology for installation of cables and pipelines' (Stein), 'Trenchless technology - Pipeline and utility design, construction, and renewal' (Najafi), and 'Guidelines for horizontal directional drilling, pipe bursting, microtunnelling and pipe jacking' (Australasian Society for Trenchless Technology).

8.3.10.10 Embedment

8.3.10.10.1 Minimum Pipe Cover

Pipelines shall have minimum cover in accordance with Council or utility owner's requirements. Where Council does not have specific requirements, the minimum covers as described in AS/NZS 2566.2 may be used.

8.3.10.10.2 Minimum Trench Width

Pipe trench width design considerations shall be based on the minimum side clearances detailed in Standard Drawing – W10.

8.3.10.11 Pipeline Restraint

Anchorage shall be provided at bends, tees, reducers, valves, and dead ends where necessary.

C8.3.10.11
In-line valves, especially those DN 100 or larger, should be anchored to ensure stability under operational conditions. See NZS 4404 WS-005.

8.3.10.11.1 Thrust Blocks

The design of thrust blocks shall be based on the maximum test pressure.

Thrust blocks shall be designed to resist the total unbalanced thrust and transmit all load to the adjacent ground. Calculation of the unbalanced thrust shall be based on the maximum design pressure, or as otherwise specified by Council.

Restraint joint systems, specifically designed to resist the total unbalanced thrust, and support all thrust load, may be used, instead of thrust blocks. These may include mechanical restraint coupling joints, or integral restraint seal systems.

Typical contact areas for selected soil conditions and pipe sizes are shown in Standard Drawings W9-W9B.

Thrust blocks for temporary infrastructure shall be designed to the requirements for permanent thrust blocks.

8.3.10.11.2 Anchor Blocks

Anchor blocks are designed to prevent movement of pipe bends in a vertical direction. They shall consist of sufficient mass concrete to prevent pipe movement as shown in Standard Drawings W9-W9B.

8.3.10.11.3 Restrained Joint Water Mains

Commercially available mechanically restrained jointing systems may be used to avoid the need for thrust and anchor blocks subject to the approval of Council.

8.3.11 Reservoirs and Pumping Stations

Where reservoirs or pumping stations are required, reference shall be made to Council for its specific requirements.

WSA 03 contains design criteria for pumping stations and reservoirs.

8.3.12 Valves

8.3.12.1 General

Valves are used to:

(a) Isolate reticulation mains from distribution mains.
(b) Isolate smaller reticulation mains from larger reticulation mains.
(c) Isolate planning zone boundaries, for example, industrial, residential, or commercial.

Valves shall be provided:

(d) Each side of state highways, arterial roads, and railway and tram crossings.
(e) Adjacent to street intersections (for ease of location).
(f) In the footway, clear of roadway, where possible.
(g) Valves shall generally be placed on two of the three legs at a tee intersection or on three of the four legs of a four way intersection so as to limit the number of properties without water during shutdown.

Subject to these considerations, valve numbers shall be minimised.

Council should be consulted to establish the local requirement for connection type (flange or socket), as well as any other issues such as valve anchoring requirements.

8.3.12.2 Siting Of Valves

For standardization, valves shall be placed as safe a location as possible, and in line with transverse street boundaries. The siting of valves shall take a holistic view of the existing infrastructure and proposed additions, and safety in design for future maintenance. General principles to be considered shall include:

(a) Valves shall be sited to provide the control (such as flow, pressure, isolation, and diversion) required by Council.

(b) Ready access to valves to enable their safe operation. Account shall be taken of traffic and other site peculiarities.

(c) Minimisation of inconvenience to the public by avoiding clustering of surface fittings in the footpath at intersections.

(d) Optimisation of the number and location of valves to meet Council's operation and maintenance requirements, safe working, and to minimise the effect of a shutdown on Council's customers.

8.3.12.3 Gate valves

Valves shall have anti-clockwise rotation of the input spindle for closure, unless otherwise specified by Council. Gate valves DN ≤50 (commonly called peet valves) shall be clockwise closing unless otherwise specified by Council.

Buried gate valves shall be operated from above ground and shall be designed to facilitate the use of a standard key and bar. An extension spindle shall be incorporated as necessary to ensure the top of the spindle is 350 mm below the FSL.

Valves DN ≥80 shall be gate valves. In-line valves shall be the same diameter as the reticulation main.

8.3.12.3.1 Gate Valve Spacing Criteria

For Diameters than 80mm, the number of property service connections in a shut-off area shall be in accordance with Table 8-6. When assessing property service numbers, unit title and strata title properties such as apartment buildings and multi-unit developments shall be counted as multiple connections. All connections having an alternative supply may be excluded when assessing property service numbers. The overriding maximum spacing between in-line valves shall be in accordance with Table 8.6.

Table 8-6 Valve spacing criteria

Water main size DN	**Number of property service connections (nominal)**	**Maximum spacing** (m)
≤150	40	300*
200-300	100	750
375	150	1000
* In rural areas, the maximum spacing is 500 m.		

8.3.12.3.2 Pressure Zone Dividing Valves

Pressure zone dividing valves and hydrants shall be installed in one of the following arrangements (see
Figure 8-2):

(a) Valves in a paired configuration with a standard fire hydrant located between them. Installation in this manner permits the valves to be checked for leakage. The valve on the low pressure side of the pair will normally be closed in order for the fire hydrant to be used for firefighting purposes with the supply from the higher pressure zone.

(b) A valve with a standard fire hydrant on each side.

8.3.12.3.3 Secure Service Connections for Maintaining Supply to Critical Users

Additional stop valves may be provided at a service connection to a customer requiring a greater security of supply such as hospitals and large industrial or commercial developments. Figure 8-3 illustrates typical arrangements to facilitate partial isolation of the main while maintaining supply to the customer.

Figure 8-1 Branch valve adjacent to main

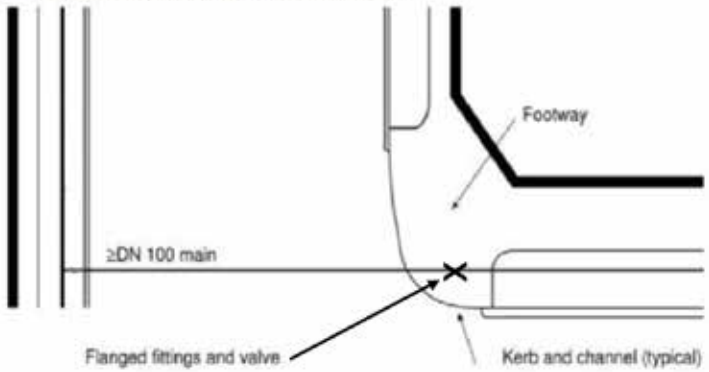


Figure 8-2 Valve and hydrant combinations for pressure zone dividing valves

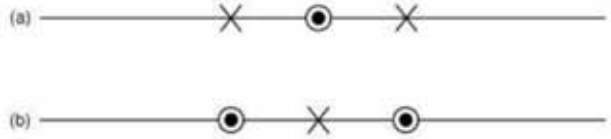
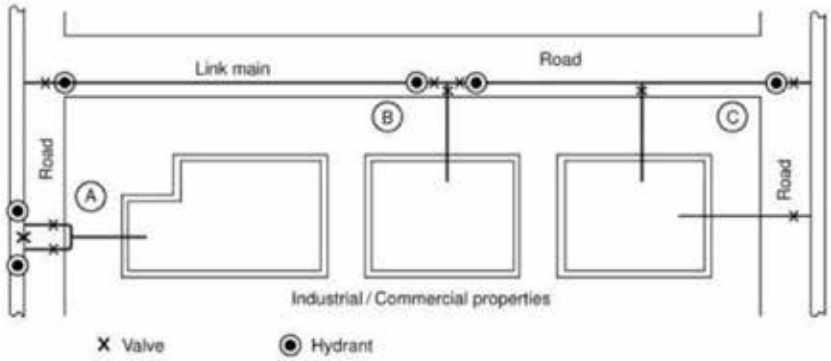


Figure 8-3 Secure connection for critical users



NOTE:

(1) Example A - feed from two directions off a large diameter water main. The arrangement is more complicated than Example B, but is justified by the cost of an additional large diameter stop valve which would be required if using Example B.

(2) Example B - feed from two directions off a smaller diameter main. This is a simpler arrangement than Example A, but requires two valves on the main.

(3) Example C - feed from two separate mains.

8.3.12.4 Butterfly Valves

Butterfly valves shall only be used with the approval of Council.

C8.3.12.4
Butterfly valves are not normally used in reticulation mains as they hinder swabbing operations, and the quick closing action can induce high surge pressures.

8.3.12.5 Pressure Reducing Valves

Pressure reducing valves (PRV) are outside the scope of this Standard. Refer to WSA 03.

C8.3.12.5
A PRV is used to reduce the pressure upstream of the PRV to a desired lower downstream pressure. The PRV works automatically to maintain the desired downstream pressure. Refer to WSA 03 for design criteria.

8.3.12.6 Air Valves

8.3.12.6.1 Installation Design Criteria

Investigation into the need for air valves (AVs) shall be made for all high points on mains, particularly at points more than 2 m higher than the lower end of the section of water main and particularly if the main has a steep downward slope on the downstream side.

Where the hydraulic head is less than 10 m, special consideration shall be given to the type of AV to prevent water leakage from the valve. AVs shall be installed with an isolating valve to permit servicing or replacement without having to shutdown the main.

Combination AVs, that is (dual) AVs incorporating an AV (large orifice) and an air release valve (small orifice) in a single unit, are generally the preferred type for distribution and transfer mains, and where required on reticulation mains.
The nominal size of the large orifice of air valves shall be DN 80 for installation on mains. This size has an exhaust capacity of approximately 0.3 m^3/s.

C8.3.12.6.1
Water mains with only a few service connections or a configuration that leads to air accumulation may require combination air valves to automatically remove accumulated air that may otherwise cause operational problems in the water system.
The configuration of the distribution network for both the change in elevation and the slope of the water main governs the number and location of air valves required.

8.3.12.6.2 Air Valves Location

Air valves shall not be located in major roadways or in areas subject to flooding. When required, air valves shall be located:

(a) At summits (high points).
(b) At intervals of not more than 800 m on long horizontal, ascending, and descending sectors.
(c) At every increase in downward slope.
(d) At every reduction in upward slope.
(e) On the downstream side of PRVs.
(f) On the downhill side of major isolating valves.

(g) At blank ends.

Where the air valve is in a valve chamber, the design shall ensure adequate venting for effective operation and drainage to prevent backflow contamination.

8.3.12.7 Scours and pump-out branches

Scours and pump-out branches are provided in the distribution network for maintenance purposes. They are designed to allow draining of water from the mains by gravity or use of a mobile pump.

Hydrants may be used for flushing and draining on water mains DN <300.

C8.3.12.7
On mains DN ≥300, scours are more effective in draining and provide greater flushing velocities than hydrants.

Scours and pump-out branches shall incorporate appropriate measures to prevent back siphonage into the water supply system.

There shall be adequate drainage facilities to receive the flow resulting from flushing and draining operations.

Scours shall:

(a) Drain the water main by gravity or have provision for pump-out within a period of one hour, or both.
(b) Have a diffuser fitted at the discharge point if there is a likelihood of environmental or asset damage.
(c) Not be subject to inundation.

8.3.12.7.1 Scour Sizes

Scours shall be sized in accordance with Table 8-7.

Table 8-7 Minimum scour size

Main size DN	Scour size DN
DN ≤200	80
DN >200 - DN ≤300	100
DN >300 - DN ≤375	150

8.3.12.7.2 Scour locations

Scours shall be located at:

(a) Low points at the ends of water mains.
(b) Low points between in-line stop valves.

Scours shall drain to a point where the discharge is readily visible to prevent the scour valve inadvertently being left open.

Typical discharge locations include:

(a) An approved pit that is to be pumped out each time the scour is operated (called a pump scour).
(b) A kerb and channel.
(c) An open-grated street drainage sump.
(d) A natural water course (with energy dissipater).
(e) Scours shall not:
(f) Cause damage when operated.
(g) Discharge to closed stormwater structures.
(h) Discharge across roadways.
(i) Discharge directly to waterways, unless in compliance with the appropriate consent requirements.

8.3.12.8 Flushing Points

Flushing points, in the form of a hydrant, shall be installed at the end of reticulation mains (see Standard Drawing W1).

8.3.13 Hydrants

8.3.13.1 General

Hydrants are installed on reticulation mains for firefighting or operational purposes. Operational purposes include mains flushing, chlorination, to allow the escape of air during charging, and the release of water during dewatering of the water main, where air valves and scours are not installed.

8.3.13.2 Hydrants for Firefighting

The spacing of hydrants for firefighting shall be in accordance with SNZ PAS 4509.

8.3.13.3 Hydrant Installation

Fire hydrants shall not be fitted to reticulation mains DN <100 or to distribution or transfer mains without the prior written approval of Council.

8.3.13.4 Hydrants for Reticulation System Operational Requirements

Additional to firefighting requirements, hydrants shall be provided at:

(a) High points on reticulation mains to release air during charging, to allow air to enter the main when dewatering, and for manual release of any build-up of air, as required, where automatic combination AVs are not installed.
(b) Localised low points on water mains to drain the water main where scours are not installed.

Adequate drainage facilities shall be provided to receive the hydrant flows from dewatering and flushing operations.

C8.3.13.4
AVs are not normally required on reticulation mains in residential areas where the configuration of mains and service connections will usually eliminate small amounts of air accumulated during operation; hydrants should be placed as close as possible to stop valves to facilitate maintenance activities such as cleaning of water mains.

8.3.13.5 Hydrants at Ends of Mains

If a scour is not provided, a hydrant shall be installed as close as possible to the end of every main DN ≥100.

C8.3.13.5
Apart from the firefighting function, a hydrant also allows the section of dead end main to be flushed regularly to ensure acceptable on-going water quality. This is particularly important in new subdivisions where only a small number of properties may be connected initially and where the main has been laid in a larger than required size with the expectation that it will be extended at a future date.

8.3.14 Connections

8.3.14.1 Connection of New Mains to Existing Mains

In specifying connection detail the designer shall consider:

(a) Pipe materials, especially potential for corrosion.
(b) Relative depth of mains.
(c) Standard fittings.
(d) Pipe restraint and anchorage.
(e) Limitations on shutting down major mains to enable connections.
(f) Existing cathodic protection systems.

Connections from the end of an existing main shall be designed to address any differing requirements for the pipes being connected, particularly restraint, spigot/socket joint limitations, and corrosion protection. The designer shall consider the potential for insufficiently restrained/ anchored stop valves near the connection.

All connections to the existing reticulation shall be made by a contractor approved by Council.

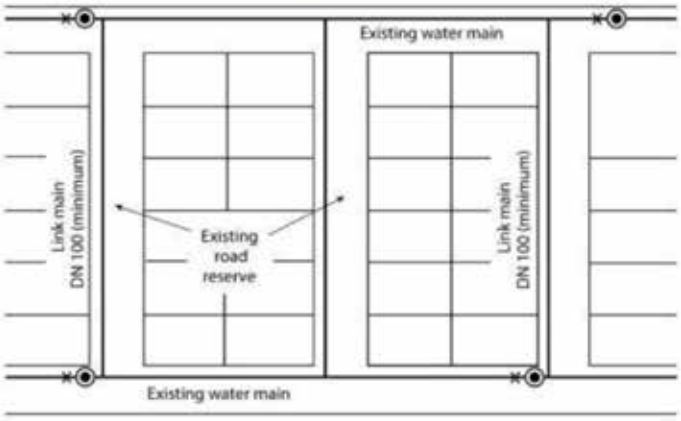
8.3.14.2 Property Service Connections

Property service connections shall be DN25mm PE pipe installed perpendicular to the main, terminating 1.0 m inside the property boundary (refer Standard Drawings W20-W21). Each property connection shall be fitted with an Accuflow manifold system complete with stopcock and backflow protection. Pipe shall be PE80B of pressure rating 12.5 bar. Tapping bands shall be the full encirclement type to AS/NZS 4793 for all pipes except PE. For PE pipes, approved thermoplastic tapping saddles shall be used.

8.3.14.3 Termination Points

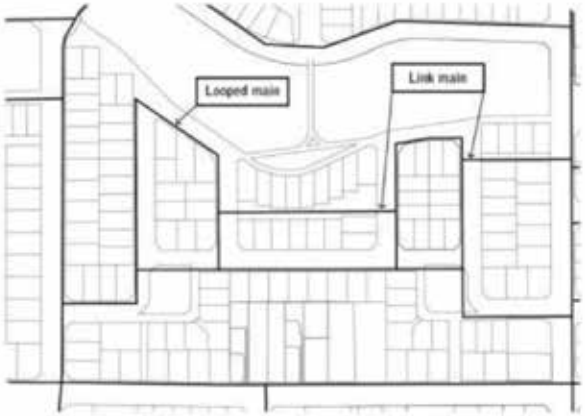
Termination points or dead ends should be avoided to prevent poor water quality. Alternative configurations such as a continuous network, link mains, looped mains, and the use of reticulation mains smaller than DN 100, particularly in no-exit roads, should be considered (see Figure 8-4 and Figure 8-5).

Figure 8-4 Elimination of termination points



NOTE – Rider mains are not shown.

Figure 8-5 Looped and link principal mains



Note - Rider mains are not shown

8.3.14.4 Permanent Ends of Water Mains

The DN 100 main shall be laid to a point where all properties are provided with the fire protection required by SNZ PAS 4509.

A method of flushing shall be provided at the end of the water main, which shall be suitably anchored.

8.3.14.5 Temporary Ends of Water Mains

Water mains shall be laid to within 1 m of the boundary of a subdivision where the main is to be extended in the future.

Temporary dead-end mains shall terminate with a hydrant followed by a gate valve. The valve and hydrant shall be suitably anchored so that the future extension can be carried out without the need to disrupt services to existing customers.

Where a development is staged, mains shall be constructed to terminate approximately 2 m beyond the finished road construction to ensure that future construction does not cause disruption to finished installations.

8.4 Approval of Proposed Infrastructure

8.4.1 Information to be provided

Design drawings compatible with Council's concept plan and the design parameters included in this CoP shall be provided to Council for approval. Applications for design approval shall include the information outlined in Section 3 of this CoP. Designers shall ensure the following aspects have been considered and where appropriate included in the design:

(a) The size (or sizes) of pipework throughout the proposed reticulation system.

(b) Selection of appropriate pipeline material type/s and class.

(c) Mains layouts and alignments including:
  (i) Route selection;
  (ii) Topographical and environmental aspects;
  (iii) Easements;

(iv) Foundation and geotechnical aspects;

(v) Clearances, shared trenching requirements;

(vi) Provision for future extensions.

(d) Hydraulic adequacy including:
  (i) Compliance with the required maximum and minimum operating (working) pressure;
  (ii) Acceptable flow velocities;
  (iii) Compliance with the estimated water demand, including firefighting.

(e) Property service connection locations and sizes.

(f) Types and locations of appurtenances, including:
  (i) Stop valves;
  (ii) Pressure reducing valves (PRVs);
  (iii) Hydrants and fire services;
  (iv) Scours and pump-out branches;
  (v) Termination details.

(g) Locations and details of thrust blocks and anchors, see NZS 4404 WS-004 and WS-005.

(h) Preparation of final design drawings, plans (and specifications if applicable).

8.5 Construction

8.5.1 Excavation

Excavation of existing carriageways shall conform to Council's road opening procedures where these exist. Excavation in existing carriageways shall be carried out in a safe manner with the minimum disruption to traffic and pedestrians.

8.5.2 Embedment

Pipes and fittings shall be surrounded with a suitable bedding material in accordance with NZS 4404 CM-001 and NZS 2566.

8.5.3 Backfilling and reinstatement

8.5.3.1 Carriageways

Backfilling shall be in accordance with the requirements of Council.

Pipe trenches within a carriageway shall be backfilled using an approved hardfill placed immediately above the pipe embedment and compacted in layers not exceeding 200 mm in loose depth.

In existing sealed roads, the top section of the trench shall be backfilled as specified by Section 5.4.2.3. The depth of base course and type of finishing coat seal shall conform to the standard of the existing road construction.

8.5.3.2 Berms

Pipe trenches under grass berms and footpaths shall be backfilled in accordance with the requirements of NZS 4404 CM-001.

8.5.3.3 Detector Tape

Open trenching - backfill shall be placed up to the bottom of the existing road basecourse. At this point, where required by Council, the contractor shall provide and lay metallic 'detector' tape coloured blue, stipulating 'Danger - Water Main Below' (or similar).

8.5.4 Pressure Testing of Water Mains

Before a new water main is connected to the existing reticulation, a successful pressure test shall be completed. The system test pressure is applied to test the integrity of construction of the pipeline system. The system test pressure will be the pressure rating of the pipe used, generally exceeds the actual design pressure of the system (maximum 1.25 times the maximum rated operating pressure of the lowest rated component in the system). See Section 7.7 for the appropriate testing procedure.

8.5.5 Disinfection of Water Mains

Disinfection of the water mains shall be carried out following successful pressure testing and backfilling as specified in Section 5. The disinfection solution shall be collected and disposed of in an appropriate manner to an approved disposal site.

8.5.6 Discharge of Testing Water

Discharge of testing or chlorinated water from pipelines may require a resource consent from the regional council.

8.5.7 Water Sampling

Council may require water samples to be taken for water quality compliance purposes.

8.6 Rural Water Supplies

Sufficient information shall accompany subdivision applications to ascertain:

(a) If the property is connected to any rural water supply scheme.

(b) If the new allotments will be connected to any scheme.

The application process to connect to any scheme is independent of the subdivision process: a connection is not compulsory and if a connection cannot be made this does not negate the subdivision application.

Prior to making application for the issue of the Section 224(c) certification by the Council, the consent holder shall:

(a) Apply to Council for installation of separate water connections to each allotment requiring a supply. A scheme plan for any alterations to the rural water scheme shall be included with the application, and all applications shall be subject to Council's usual terms, conditions and fees, and any special conditions that may apply.

Note (a): Only applies when the water allocated to the property is to be redistributed.

(b) Arrange for all existing internal water supply lines that cross the new subdivisional boundaries to be disconnected. The disconnections shall be left uncovered until they have been inspected by Council or its representative, to verify that disconnection has been completed. The consent holder shall notify Council. At least two working days prior notice is required.

(c) Arrange for a surveyor to prepare as-built drawings showing the revised water reticulation layout, detailed within an accuracy of +/- 0.5 m. Certification of the scheme plan will not be completed until this verification has been made.

Note (c): Only applies when the water allocated to the property is to be redistributed.

(d) Pay Council's fees to cover processing, inspection costs and updating of records by Water and Waste Services.

(e) Arrange for Council's maintenance contractor to install any new connection to an existing main and any new tank fittings.

Any internal reticulation crossing a proposed boundary shall be disconnected. The Surveyor shall be required to confirm, when lodging the survey plan of subdivision for seal that this has been done.

This condition will be imposed on all consents where the existing property is connected to a rural water scheme. This condition protects the owner of an allotment connected to a scheme from having other properties connect via their property, as well as ensuring continuation of supply for all consumers.

Where water allocations are assigned to new parties through a subdivision process, Council will continue to bill the previously designated parties until a change of ownership is formally advised.

Where a property is within a rural water supply scheme area but is not connected no condition will be imposed requiring the property to be connected. However, applicants are encouraged to consider the benefits of connecting to a scheme. Applications for connection to any rural water supply scheme shall be made by a separate application through Council's Strategic Water and Waste Department.

There must be a minimum of **TWO DAYS** storage of water on each lot. Some water schemes are for the purpose of supplying stock only (not for human consumption or irrigation).

8.7 Field Testing Of Pipelines

8.7.1 Scope

This Section is based on some of the test methods in AS/NZS 2566.2, Section 6, and associated appendices. It specifies suggested methods of test and their application to field testing of pipelines for the purpose of determining pipeline acceptability. Field testing includes leak or hydrostatic pressure testing, as appropriate, for pressure and non-pressure pipelines. Testing may also be carried out in accordance with the material-specific and application-specific test methods of AS/NZS 2032, AS/NZS 2033, and AS/NZS 2566.2.

8.7.1.1 Purpose Of Field Testing

The purpose of field testing is to:

(a) Reveal the occurrence of faults in the laying procedure, for example, joints incorrectly installed or pipes damaged.

(b) Reveal the occurrence of faults in the assembly procedure of pipeline components, for example, tapping bands, maintenance structures, frames, and covers.

(c) In the case of pressure pipelines, determine that the pipeline will sustain a pressure greater than its design pressure without leakage.

(d) In the case of non-pressure pipelines, determine that the pipeline satisfies the requirements for infiltration and exfiltration.

(e) Test the installed structural integrity of the pipeline.

Field testing is not intended to supplement or replace the test requirements of product standards.

8.7.2 Non-pressure pipelines - Field leakage testing

Leakage testing is used to reveal locations of potential infiltration and exfiltration due to the inclusion of damaged pipes, seals, or incorrectly made joints in the pipeline at the completion of installation.

Leakage testing for acceptance of non-pressure pipelines shall be carried out by at least one of the following methods:

(a) Low pressure air testing.

(b) Hydrostatic testing.

NOTE - Air tests provide qualitative data only, as air pressure losses cannot be related directly to water leakage rates.

For pipeline test sections installed below the watertable, and for submarine pipelines, the test pressure used for the hydrostatic test, and for the air test, shall be increased to maintain the required differential between internal and external pressure.

A pipeline failing to meet the requirements of the air tests may be retested using the hydrostatic test method.

NOTE - Failure is still probable.

8.7.2.1 Low pressure air test

The test length shall be acceptable where the gauged pressure exceeds 18 kPa (or not more than 7 kPa less than the pressure at the start of the test) for the time interval shown in Table 8-8 after the shut-off of the air supply.

Table 6.8 is based on an air test pressure of 25 kPa (in excess of any external hydrostatic pressure due to groundwater) and, on this basis, air volume losses shall not exceed the greater of:

(a) A rate of 0.0009 $m^3/(min \times m^2)$ of pipe wall area.

(b) A rate of 0.056 m^3/min, which is regarded as the lowest detectable individual air leak.

Column 2 and column 3 of Table 6.8 give the times and lengths up to which (b) prevails over (a).

NOTE - For safety reasons air test pressures in excess of 50 kPa should not be applied.

Table 8-8 Low pressure air and vacuum tests - Minimum time intervals for 7 kPa pressure change in pipeline

DN	Minimum time (minutes)	Maximum length for minimum time to apply (metres)	Test length (metres)				
			50	100	150	200	250
			Minimum test duration (minutes)				
80	1.5	231	1.5	1.5	1.5	1.5	1.6
100	2	185	2	2	2	2	3
150	3	123	3	3	3	5	6
225	4	82	4	5	8	10	13
300	6	62	6	9	14	18	23
375	7	49	7	14	22	29	36

DN	Minimum time (minutes)	Maximum length for minimum time to apply (metres)	Test length (metres)				
			50	100	150	200	250
			Minimum test duration (minutes)				
450	9	41	10	21	31	41	52
525	10	35	14	28	42	56	70
600	11	31	18	37	55	73	92
675	13	27	23	46	70	93	116
750	14	25	29	57	86	115	143
900	17	21	41	83	124	165	207
1000	19	19	51	102	153	204	255
1050	20	18.8	56	112	169	225	281
1200	23	15	73	147	220	294	367
1500	28	12	115	230	344	459	574

NOTE -
The time interval may be reduced for a proportionate reduction in the allowable pressure drop. Where there is no detectable change in pressure after 1 hour of testing, the section under test shall be deemed acceptable.
This table is based on the following equation:

$T = 1.02 D_i k L q$

where
T = time for a 7 kPa pressure drop, in seconds
D_i = pipeline internal diameter, in metres
q = allowable volume loss in cubic metre/minute/square metre taken as 0.0009 $m^3/min.m^2$
$k = 0.054DL$ but not less than 1
L = length of test section, in metres.
Columns 2 and 3 have been calculated with $k = 1.0$.
The appropriate air or vacuum test/pressure method for pipes larger than DN 750 should be established by reference to the specifier.

8.7.2.1.1 Low Pressure Air Test Procedure

The procedure shall be as follows:

(a) Pump in air slowly until a pressure of 25 +5,−0 kPa is reached. Where the pipeline is below the watertable this pressure shall be increased to achieve a differential pressure of 25 kPa. In no circumstances should the actual pressure exceed 50 kPa.

NOTE - Rapid pressurisation may cause significant air temperature changes, which will affect the testing accuracy.

(b) Maintain the pressure for at least 3.0 minutes.

(c) Where no leaks are detected, shut off the air supply.

(d) Where the pipeline fails the test, repressurise to 25 +5,−0 kPa and check for leaks by pouring a concentrated solution of soft soap and water over accessible joints and fittings.

(e) Repair any defects, then repeat steps (a) to (c).

(f) With the air supply shut off, monitor the pressure for the time intervals given in Table 8.8.

The test length shall be acceptable where the pressure drops by 7 kPa, or less, over the required (tabulated) test period.

NOTE -

(1) The test length of pipeline should be restricted to pipeline sections between maintenance holes (the most convenient places for inserting test plugs or fixing temporary bulkheads). The method should not be used for test lengths in excess of 250 m and for pipe diameters larger than 1500 mm.

(2) The procedure for low pressure air testing of large diameter pipelines is potentially hazardous because of the very large forces to be resisted by temporary plugs or bulkheads and the serious consequences of accidental bulkhead blow-out. A relief valve, with a 50 kPa maximum setting, should be installed on all pressurising equipment.

8.7.2.2 Hydrostatic Test

The test length shall be acceptable where the specified allowable make up water is not exceeded. Where not specified, the allowable make up water shall be 0.5 L/hour per metre length per metre diameter.

8.7.2.2.1 Hydrostatic Test Procedure

The procedure shall be as follows:

(a) The test pressure shall be not less than 20 kPa, or 20 kPa above the groundwater pressure at the pipe soffit at its highest point, whichever is the greater, and not exceed 60 kPa at the lowest point of the section.

(b) Steeply graded pipelines shall be tested in stages where the maximum pressure, as stated above, will be exceeded if the whole section is tested in one length.

(c) The pressure shall be maintained for at least two hours by adding measured volumes of water where necessary.

(d) Any visible leaks detected shall be repaired and the pipeline shall be retested.

8.7.3 Pressure Pipelines-Field Hydrostatic Pressure Testing

The hydrostatic pressure test method shall be as specified.

Hydrostatic pressure testing requires selecting an appropriate configuration of method, pressure, and length of test section.

Test parameters and details shall be determined with due consideration to the following:

(a) Pipe material.
(b) Pipe diameter.
(c) Length of test section.
(d) Duration of the test.
(e) Magnitude of test pressure and rate of pressurisation.
(f) Presence of air in the pipeline.
(g) Time required for saturation of porous liners.
(h) Potential movement of pipeline thrust restraints.
(i) Design pressure for thrust and anchor supports.
(j) Accuracy of test equipment.
(k) Ambient temperature changes during testing.
(l) Presence of leaks in equipment used for testing or equipment attachment points (such as sealing plugs).
(m) Potential for leaks in the pipeline.

NOTE - It is advisable to begin testing early in the pipeline installation to confirm adequacy of laying procedures and, where appropriate, to increase the length tested progressively as experience is gained.

8.7.3.1 Selection of Test Pressure

The hydrostatic test pressure at any point in the pipeline shall be:

(a) Not less than the design pressure.

(b) Not more than 25% above the rated pressure of any pipeline component.

NOTE - The design pressure is the maximum system pressure at a point in the pipeline, considering future developments, static pressure, dynamic pressure, and an allowance for short-term surge pressure (water hammer), as determined by analysis. Compressed air testing shall not be permitted for pressure pipe.

8.7.3.2 Selecting Test Lengths

The pipeline length tested shall be either the whole, or a section (capable of being isolated), of the pipeline depending on the length and diameter, the availability of water, and the spacing between sectioning valves or blank ends.

The pipeline shall be divided into test sections such that:

(a) The hydrostatic test pressure at any point in the pipeline is:

  (i) Not less than the design pressure; and

  (ii) Not more than 25% above the rated pressure of any pipeline component; and

(b) Water is available for the test together with facilities for its disposal, in accordance with regulatory requirements, after the test.

NOTE -

(1) Pipelines longer than 1000 m may need to be tested in several sections. Where long lengths are to be tested, radio or other electronic means of communication between test operatives, to coordinate test procedures and thus minimise the test duration, is desirable.

(2) Long test sections may incorporate a large number of mechanical (that is, flanged) joints, which should be checked for leakage. The longer the test section the harder it is to locate a leak, or discriminate between a leak and the other effects, such as the absorption of air into solution under pressure.

8.7.3.3 Pre-Test Procedures

The pre-test procedures are as follows:

(a) All required temporary and permanent thrust blocks, or other pipeline thrust-resisting methods, including integral joint-restraint systems, shall be in place, and all concrete shall be adequately cured (normally a minimum of seven days).

(b) Blank flanges or caps shall be installed at the beginning and end of the test section. Testing shall not take place against closed valves unless they are fully restrained and it is possible to check for leakage past the valve seat. Mechanical ends that are not end load resistant shall be temporarily strutted or anchored, to withstand the test pressures without movement.

  NOTE - Temporary supports should not be removed until the pipeline has been depressurised. All test personnel should be informed of the loading limits on temporary fittings and supports.

(c) Where practicable, all bolted joints shall be left exposed to allow for re-tensioning during or after testing.

(d) Compacted embedment and fill material shall be placed to leave all joints, service connections and ball valves exposed wherever possible.

(e) For PE pipelines, the pressurising time shall not exceed 45 minutes:

  NOTE - The pressurising time affects the duration of the PE pipeline test.

(f) The test equipment shall be placed in position and checked for satisfactory operation.

(g The pump shall be of adequate size to raise and maintain the test pressure:

NOTE - A pump that is too small may increase the test duration or where too large it may be difficult to control the pressure.

(h) Two calibrated test gauges shall be used to cross check gauge accuracy.

(i) Slowly fill the test length of pipeline with water, preferably from the lowest point, ensuring air is vented at the high point valves. Allow a period, in the range of three hours to 24 hours, for the temperature of the test length and the test water to stabilise and for dissolved air to exit the system. The recommended rate of filling shall be based on a flow velocity of 0.05 m/s, calculated from the following equation:

$Qf \leq 12.5\pi D^2$, where;

Qf = filling rate, in litres per second

D = pipe diameter, in metres

NOTE - The slow rate of 0.05 m/s avoids air entrainment when the filling water is cascading through downward gradients along the pipeline. The period of stabilisation will depend on pipe dimensions, length, material, longitudinal profile, and air exit points. For cement-mortar lined pipe, the pipeline shall be filled at least 24 hours before the commencement of the test, to allow the lining to become saturated.

NOTE - A firm foam swab may be used ahead of the fill water to assist air removal especially where the pipeline undulates. Extract the swab at a high-point wash-out.

Typical pressure test equipment and location are shown in Figure 8-6 and Figure 8-7.

8.7.3.3 Post-Test Procedures

After testing, pipelines shall be depressurised slowly. All air venting facilities shall be open when emptying pipelines. The test water shall be drained to an approved waterway and all connection points shall be reinstated.

Figure 8-6 Typical pressure pipeline under field hydrostatic test

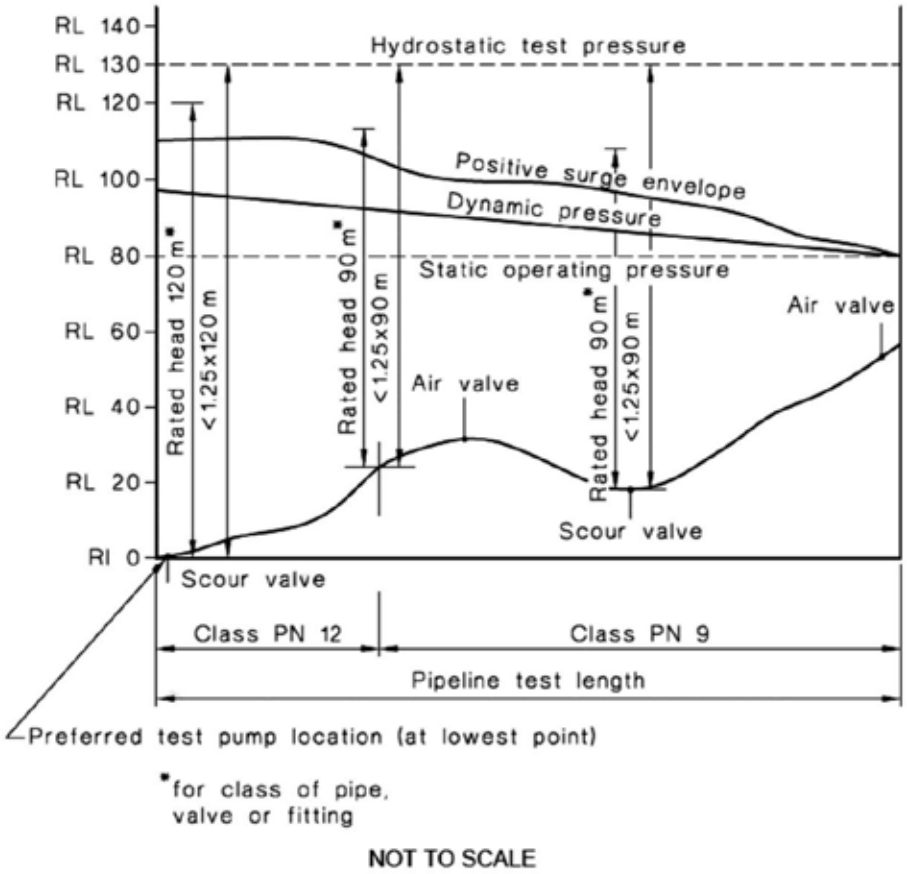
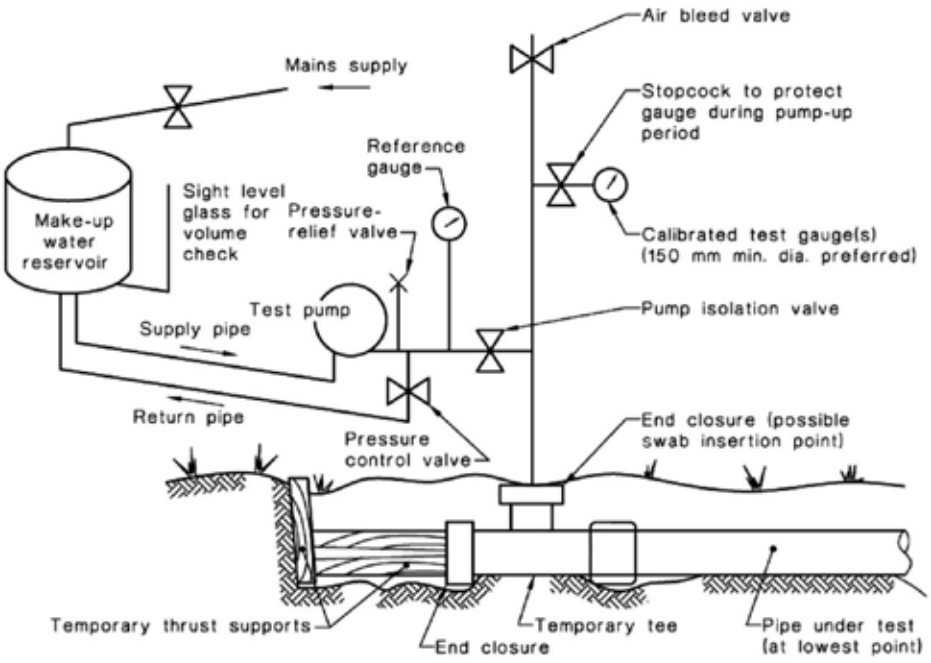


Figure 8-7 Typical field pressure test equipment layout



8.7.3.5 Constant pressure test (water loss method) - PVC, DI, GRP, and steel pipelines

This test is applicable for PVC, DI, GRP, and steel pipelines. The test length may be several kilometres in length.

8.7.3.3.1 Details of Procedure

The procedure shall be as follows:

(a) Close all valves apart from the test pump input and pressurise the test length to the specified test pressure (STP) - see Section 8.7.3.1.

(b) Apply and then maintain the test pressure by the addition of measured and recorded quantities of make-up water at regular intervals over a period, in the range of 1 hour to 12 hours.

(c) Where pressure measurements are not made at the lowest part of the test length, make an allowance for the static head, between the lowest point of the pipeline and the point of measurement, to ensure that the test pressure is not exceeded at the lowest point.
The quantity of make-up water necessary to maintain the test pressure shall comply with the following equation:

$Q \leq 0.14LDH$, where:

Q = allowable make-up water, in litres per hour
L = length of the test length, in kilometres
D = nominal diameter of the test length, in metres
H = average test head over length of pipeline under test, in metres

NOTE - The make-up water is not a leakage allowance, but is an allowance to cover the effects of the test head forcing small quantities of entrapped air into solution. Normally the test should last for a minimum of two hours and be concluded within five to eight hours. The make-up water requirement should reduce with time as air goes into solution. Where, after 12 hours the make-up water still exceeds the allowable limit, testing should cease and the cause of loss investigated.

8.7.3.3.2 Acceptance

(a) The test length shall be acceptable where there is no failure of any thrust block, pipe, fitting, joint, or any other pipeline component.

(b) There is no physical leakage.

(c) The quantity of make-up water necessary to maintain the test pressure complies with Section 8.7.3.5.1.

8.7.3.4 Constant Pressure Test (Water Loss Method) For Viscoelastic Pressure Pipelines

This test is applicable to PE, PP, and ABS pressure pipelines. The test lengths may be several kilometres in length.

NOTE - This method is based on VAV P78, as outlined in AS/NZS 2566.2, Appendix A
The procedure shall be as follows:

(a) Purge the air from pipeline.

(b) Apply the specified test pressure (STP) (see Section 8.7.3.1) to the test length.

(c) Shut off main and allow pressure to settle for 12 hours (pressure will drop significantly).

(d) Re-apply and maintain test pressure for 5 hours by successively pumping a sufficient amount of water.

(e) Measure and record water volume (V_1 in litres) required to maintain this pressure between Hour 2 and Hour 3.

(f) Measure and record water volume (V_2 in litres) required to maintain this pressure between Hour 4 and Hour 5.

(g) Calculate:

$0.55V_1 + Q$

where Q is the allowable make-up volume obtained from Section 8.7.3.3.1.

Acceptance:
The test length shall be acceptable where:

(a) The test length shall be acceptable where there is no failure of any thrust block, pipe, fitting, joint, or any other pipeline component.

(b) There is no physical leakage; and

(c) $V_2 \leq 0.55\ V_1 + Q$.

8.7.3.5 Pressure Rebound Method for Viscoelastic Pressure Pipelines

This test is applicable to PE, PP, and ABS pressure pipelines up to and including DN 315, where a short test time is required.

NOTE - This test is based on BS EN 805:2000, Appendix A (refer to AS/NZS 2566.2).

8.7.3.5.1 Pressure Measurement rig

The test rig shall be a recently calibrated pressure transducer, data logger, and check pressure gauge that has a dial of at least 100 mm diameter and a pressure range that places the specified test pressure (STP) (see Section 8.7.3.1) in the range 35% to 70% of the gauge's full scale. The transducer and the check gauge shall read within ±5% of each other. If they do not agree within this tolerance, the equipment shall be recalibrated or replaced.

8.7.3.5.2 Procedure

The test procedure has the following three phases:

(a) A preliminary phase in which the pipeline is —

(i) Depressurised and allowed to relax after the pre-test procedure in Section 8.7.3.3;

(ii) Pressurised quickly to the test pressure and maintained at this pressure for a period of time without further water being added;

(iii) The pressure is allowed to decay by viscoelastic creep;

(iv) Provided the pressure drop does not exceed a specified maximum, the pressure test can proceed to the second phase.

(b) A phase in which the volume of air remaining in the pipeline is assessed against an allowable maximum.

(c) The main test phase in which the pipeline is maintained at the test pressure for a period of time and decay due to viscoelastic creep commenced. The creep is interrupted by a rapid reduction of the pressure in the pipeline to a specified level. This rapid reduction in pressure results in contraction of the pipeline with an increase (rebound) in pressure. If, during the rebound period, the pressure versus time record shows a fall in pressure, the pipeline fails the test.

8.7.3.5.3 Preliminary Phase

The procedure shall be as follows:

(a) Reduce pressure to just above atmospheric at the highest point of the test length, and let stand for 60 minutes. Ensure no air enters the line.

(b) Raise the pressure smoothly to STP in less than 10 minutes. Hold the pressure at STP for 30 minutes by pumping continuously, or at short intervals as needed. Do not exceed STP.

(c) Inspect for leaks during the 30 minute period, then shut off pressure.

(d) Allow the pressure to decay for 60 minutes.

(e) Measure the pressure remaining at 60 minutes (P_{60}).

(f) If $P_{60} \leq 70\%$ of STP the test is failed. The cause shall be located and rectified. Steps (a) to (e) shall be repeated. If $P_{60} > 70\%$ of STP, proceed to the air volume assessment.

8.7.3.5.4 Air Volume Assessment

The procedure shall be as follows:

(a) Quickly (<5 min) reduce pressure by ΔP (10%-15% of STP).

(b) Measure water volume bled out (ΔV).

(c) Calculate $\Delta V_{max\ allowable}$ as follows:

$\Delta V_{max\ allowable} = 1.2 \times V \times \Delta P(1/E_W + D/E_R)$

where

1.2 = air allowance

V= pipe volume, in litres

ΔP = measured pressure drop, in kilopascals

D= pipe internal diameter, in metres

E_R = pipe material modulus, in kilopascals (see Table 8-9)

E_W = bulk modulus of water, in kilopascals (see Table 8-10);

(d) If $\Delta V > \Delta V_{max\ allowable}$ the test has failed. The cause shall be located and rectified. The preliminary phase shall be repeated. If $\Delta V \leq \Delta V_{max\ allowable}$, proceed to the main test phase.

NOTE - ΔV and ΔP should be measured as accurately as possible, especially where the test length volume is small.]

8.7.3.5.5 Main Test Phase

Observe and record the pressure rise for 30 minutes.

In the event of failure, locate and repair leaks. If failure is marginal or doubtful, or if it is necessary to determine leakage rate, use a reference test (see Section 8.7.3.4).

NOTE - Figure 8-7 gives an example of a full pressure test with the main test phase extended to 90 minutes.

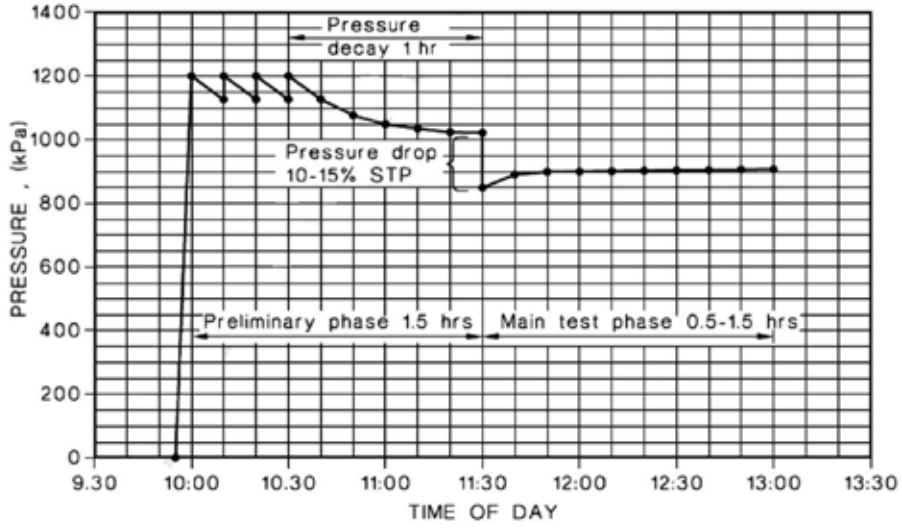
Table 8-9 Pipe E material modulus for PE 80B and PE 100

Temp (°C)	PE 80B - *E* Modulus (kPa×10³)			PE 100 - *E* Modulus (kPa×10³)		
	1 h	2 h	3 h	1 h	2 h	3 h
5	740	700	680	990	930	900
10	670	630	610	900	850	820
15	600	570	550	820	780	750
20	550	520	510	750	710	680
25	510	490	470	690	650	630
30	470	450	430	640	610	600

Table 8-10 Bulk modulus Ew - Water

Temperature (°C)	Bulk Modulus (kPa×10³)
5	2080
10	2110
15	2140
20	2170
25	2210
30	2230

Figure 8-8 Typical successful modified rebound test for a PE pipeline



8.7.3.5.6 Acceptance

The test length shall be acceptable if:

(a) There is no failure of any thrust block, pipe, fitting, joint, or any other pipeline component.

(b) There is no physical leakage.
(c) The pressure rises or remains static in the 30-minute period.

If doubt exists about the pressure recovery, the monitoring period may be increased to 90 minutes, and any pressure drop that does occur shall not exceed 20 kPa over the 90-minute period.

If the pressure drops by more than 20 kPa during the 90-minute extended period, the test fails.

Repetition of the main test phase shall only be done by carrying out the whole test procedure, including the relaxation period of 60 minutes described in Section 8.7.3.5.3.

8.7.3.6 Visual Test for Small Pressure Pipelines

This test is applicable for small pipelines of all materials (less than 200 m in length), and pipelines where pipeline joints have been left exposed for the test operation (such as coiled pipe).

8.7.3.6.1 Procedure

The procedure shall be as follows:

(a) The test pressure (see Section 8.7.3.1) shall be applied and the test section isolated by closing the high point air release valves and the pump feed valve.
(b) The test section shall be visually inspected for leakage at all joints, especially bolted joints, all fittings, service connections, and ball valves.
(c) Pressure gauges shall be checked to ensure that pressure has not fallen significantly indicating an undetected leak.
(d) Any detected leak shall be repaired and the section shall be retested.
(e) Where no leak is detected, high point air release valves shall be opened, the pipeline shall be depressurised to slowly drain the line into an approved waterway and all connection points shall be reinstated.

8.7.3.6.2 Acceptance

The test length shall be acceptable where:

(a) There is no failure of any thrust block, pipe, fitting, joint, or any other pipeline component.
(b) There is no physical leakage.
(c) There is no pressure loss indicative of a leak.

8.8 Water Supply Disinfection Specification

8.8.1 Disinfection of Pipelines and Fittings

After flushing the main to remove all debris and air, the main shall be filled with water containing a free available chlorine concentration of 15 g/m^3 ± 5 g/m^3 and allowed to stand for a minimum of 12 hours for all new mains. At the end of the disinfection period, the free available chlorine (FAC) concentration shall be at least 5 g/m^3. If the FAC is less than 5 g/m^3 at the completion of the period, the disinfection shall be repeated until a satisfactory result is obtained. Note that the main should not be drained after flushing unless all high points are 'vented' to allow for complete removal of air.

Under no circumstances will the use of handfuls of hypochlorite powder or chlorine tablets dumped into the pipe and hydrant tees be an acceptable practice.

The sterilising solution should be fed by gravity or pumped into one end of the main and the 'flushing' water in the pipe displaced out of the opposite end of the main until tests carried out show that the water being displaced contains the full FAC concentration. The authorised officer will arrange for testing of the FAC concentration and, to this end, the contractor shall give 24 hours' notice of intention to sterilise.

The contractor shall provide all temporary fittings necessary to allow for the introduction of the sterilising solution to and its removal from the main.

See also Section 8.8.3.

8.8.2 Methods Of Introducing The Sterilising Solution

Methods of introducing sterilising solution will depend on the volume of solution required for the particular main and the availability of appropriate equipment.

In general, wherever the pipe volume is less than 10 m^3, the most practical method is to add sufficient calcium or sodium hypochlorite (powder or solution) to a potable water tanker suitable for carrying potable water to achieve the desired 15 g/m^3 FAC concentration. (This may require two tankers full).

For greater quantities, the sterilising solution may be injected into the main using a portable gas chlorinator or a hypochlorinator. An approved backflow preventer shall be installed if either of these options is used.

8.8.3 Disposal Of Sterilising Solution

After the satisfactory completion of the sterilising process, the chlorine solution shall be flushed into the sanitary wastewater pipe or, alternatively, retained in a temporary surface storage pond until Council's authorised officer is satisfied that the FAC has reduced to a satisfactory concentration before being allowed to flow down the stormwater drainage system or into a natural watercourse.

8.8.4 Acceptable Method For Sterilising Mains

(a) Use sodium hypochlorite solution. This solution usually has 10% or 15% FAC.

(b) Obtain a clean water tanker, as used for potable drinking water. The tanker should have a known water capacity.

(c) Measure the required amount of sodium hypochlorite solution into a beaker and pour it into the empty tanker.

NOTE - The final strength of the chlorine to water is to be 15 $g/m^3 \pm 5$ g/m^3.

(d) Fill the tanker to the appropriate volume and ensure the solution is well mixed.

(e) Charge the new main with the chlorinated water from the tanker at one end of the main or into a new hydrant through a standpipe. All service pipes and hydrants shall be left open and allowed to run for a couple of minutes. The services and hydrants shall then be closed to allow the highest end of the main to fill completely.

NOTE - The main should ideally be charged from the highest point. This will allow the water to be gravity fed into the main. If this is not possible the water tanker shall have a truck mounted pump to pump the chlorinated water in.

(f) Seal off the main and leave it charged with the chlorinated water for 24 hours.

(g) Take samples and test for residual chlorine.

(h) After 24 hours flush the main well until the chlorine smell is gone. Once the main is connected into the reticulation system it should be flushed thoroughly before the services are connected up.

NOTE - For large mains, a water tanker may not have the required capacity so a dose pump system shall be used and approved by the authorised officer.

Example:

A. Calculate the volume of the mains to be chlorinated, that is, 85 m of 100 mm dia. main

$$\text{Vol.} = \frac{85 \times \pi \times 0.1^2}{4} = 0.67\ m^3$$

$$= 667.6\ \text{litres}$$

Plus 110 m of 150 mm dia. main

$$\text{Vol.} = \frac{110 \times \pi \times 0.15^2}{4} = 1.944\ m^3$$

$$= 1.944 \text{ litres}$$

Total volume = 1,944 + 667.6 = 2,611.6 litres

B. The total volume of 2,611.6 litres is less than the volume of the water tanker (say 5,000 litres) so calculate how many millilitres of sodium hypochlorite is required for the 5,000 litre tanker to give a final solution of 15 g/m³.

$$v = \frac{V \times c}{s \times 10}$$

v = volume of sodium hypochlorite in ml
V = volume of water tanker
c = concentration of final solution in g/m³
s = strength of concentrated hypochlorite in % FAC

$$v = \frac{5000 \times 15}{15 \times 10} = 500 \text{ ml}$$

Sensitivity: General

Section 9. Network Utility Services

9.1 Scope

This section sets out requirements for the provision of stormwater, wastewater, and water supply systems, power, telecommunications and gas, and their locations in the road. The scope of these provisions applies to both future and existing roads and applies equally to all network utility services.

The developer shall provide satisfactory evidence to Council's Corridor Manager that the network utility operators are prepared to reticulate the subdivision and that agreement on the financial arrangements for the installation of each supply has been reached.

Note - Network utility services in roads are subject to the Utilities Access Act 2010 and the Infrastructure (Amendments Relating to Utilities Access) Act 2010. The national code of Practise for Utility Operators Access to Transportation corridors July 2019.

9.2 General

9.2.1 Legislation

Referenced legislation and documents are listed in the Referenced Documents Section 2 of this CoP.

9.2.2 Definitions

For the purpose of Section 9 the following definitions shall apply:
Code means the national code of practice approved in accordance with the Utilities Access Act 2010.

Corridor Manager has the same meaning given to it by the Utilities Access Act 2010.

9.2.3 Context

The developer is required to make all arrangements with the appropriate network utility operators for the supply and installation of stormwater, wastewater, water supply, and electric power and to the extent applicable for the provision of telecommunication and gas reticulation.

The developer shall provide satisfactory evidence to Council's Corridor Manager that the network utility operators are prepared to reticulate the subdivision and that agreement on the financial arrangements for the installation of each supply has been reached. The following applies to each utility:

(a) Stormwater, wastewater, and water supply. Where water supply and wastewater pipes, and stormwater systems are in the road reserve, they shall be installed at the time of road construction to the requirements of Council's Corridor Manager and Council's Strategic Water and Waste Department.

(b) Electricity. The supply of electricity will generally be by means of an underground system. Ducts shall be installed at the time of road construction to the requirements of the electrical supply authority and Council's Corridor Manager. Where the developer is intending to provide electricity other than by underground connections, the developer shall provide alternative supply arrangements for approval by Council.

c) Telecommunications. Arrangements shall be made with the telecommunication supplier for the reticulation of telecommunication facilities. Where only part of this reticulation is being supplied initially, the arrangements shall include the requisite space being maintained for the installation of the remainder of the reticulation at a later date. Ducts will be installed by the developer at the time of carriageway formation to the requirements specified by the telecommunications supplier and be approved by Council's Corridor Manager.

(d) Gas. Where a reticulated gas supply is proposed to service a development the developer shall provide plans to the gas supply authority and Council's Corridor Manager. All pipes/ducts shall be installed at the time of road construction in accordance with the approved plans.

The developer shall follow the requirements of the Code to the extent that they apply to the utility installation for the development.

9.3 Design

9.3.1 Plans

Copies of the plans of the development/subdivision shall be forwarded by the developer to all of the affected network utility operators at an early date to facilitate the design of the reticulation.

> ***NOTE***
> *It is important that all of the affected network utility operators are advised by the developer of any amendments to the development plan. Information when available on the type of dwellings and likelihood of more than one dwelling on any lot, will be valuable for design purposes.*

9.3.1.1 In preparing the engineering plans consideration shall be given to the requirements of the network utility operators and Council's Corridor Manager for

(a) The minimum depth of cables and pipes.

(b) The network utility operator's desired position for the cable and piping within the road berm as agreed with Council's Corridor Manager.

(c) The minimum separation distances between power or telecommunication cables, and gas or water mains.

(d) The width of berm which shall be clear of other services and obstructions to enable efficient cable-laying operations.

Common trenching for power and telecommunication cables is commonly adopted at a distance of between 0.6 m and 1.2 m from the boundary. The possibility of common trenching should be discussed with each of the network utility operators during the design phase.

> ***NOTE:***
> *Reference should be made to each network utility operator and Council's Corridor Manager for their specific requirements. Refer to the Code for further information.*

9.3.2 Utilities above ground

Utilities should preferably be sited within the road berm or on land which will legally become part of the road but which is set back outside the normal road line. Alternatively but significantly less preferred hence requires suitable justification, separate lots (public utility reserves) or easements over private property may be used. If there are any concerns raised about the safety of above ground structures, the risk should be assessed in accordance with the requirements of the Code and any significant risks mitigated.

Similarly the locations of mail boxes and refuse collections and refuse storage must be carefully considered during the design development to ensure that safe access for the provider and normal road user is maintained. These shall be within the road right of way but set back from the road line.

9.4 Construction

9.4.1 Underground Cabling

Underground cable laying shall be achieved by the most appropriate method considering the nature of subsoil and potential damage to infrastructures and shall be to the approval of Council's Corridor Manager.

9.4.2 Materials

Materials and sizes of ducts and pipes shall comply with the requirements of the network utility operators and the colours should be in accordance with the Department of Labour's *Guide for safety with underground services.*

9.4.3 Conversion To Underground On Existing Roads

Where a proposed subdivision fronts on to an existing road, the conversion of overhead reticulation to underground will in some instances be desirable. Agreement on the feasibility and benefit shall first be agreed between the network utility operator and Council.

9.4.4 Commercial And Industrial Subdivisions

The servicing requirements for commercial and industrial areas are often indeterminate. Close liaison between the developer and the network utility operator is advisable, particularly immediately before cabling is installed so that changes can be incorporated to accommodate extra sites or the requirements of a particular industry.

9.4.5 Location of services

9.4.5.1 Position In The Road

Position and depth shall be agreed with the appropriate network utility operator and Council's Corridor Manager in accordance with the provisions of the Code.

9.4.5.2 Recording Of Underground Services

Council shall maintain a procedure for recording the location of their underground services on plans which are readily available to the public at Council's main office. It is unlikely that Council will be able to provide a service for utility services other than those for which it is immediately responsible.

These will usually be stormwater, wastewater, and rural and urban water supply. Other authorities or network utility operators are required to maintain similar records of the existence and detailed location of their services for ready reference.

9.4.5.3 Accuracy And Tolerance

It is essential that all services be laid to predictable lines if there is to be a reasonable opportunity of laying new services in existing systems. In addition to specifying the location of any service in the road berm, there should also be a tolerance which shall on no account be exceeded without proper measurement and recording on the detailed record plan. Tolerance of ±300 mm in the horizontal and ±100 mm in the vertical is a practicable requirement.

9.4.6 Trenches

When new subdivision construction is undertaken the backfilling and compaction of trenches to a state of stability consistent with the future of the surface shall be carried out in accordance with the Code and to the satisfaction of Council's Corridor Manager.

Where underground services are laid after the initial construction of the subdivision or where they are extended from an existing area into a new one, special attention shall be given to the opening and reinstatement of trenches in accordance with the Code and to the satisfaction of Council's Corridor Manager.

9.5 Connection to Electricity Services

Unless otherwise approved by Council through a resource consent decision, all new allotments shall have physical connections to power utilities.

9.6 Positioning of Lateral Connections

Wherever possible connections shall be made at the following positions on the road frontage of each property as identified below, unless otherwise approved by Council:

Power and Telephone	immediately adjacent to the boundary
Stormwater	1 m from lower elevation side boundary
Sewer	1.5 m from lower elevation side boundary
Water	centre of road frontage
Gas	centre of road frontage

All piped connections shall extend to 0.5 m inside the property boundary.

The depth of connection at the property frontage shall be:

Power and Telephone	minimum 600 mm cover, if installed
Stormwater and Sewer	minimum 750 mm cover, preferred depth 900 mm cover, but sufficient to service all future building connections at grades set out in the Building Code
Water	450 mm cover
Gas	Minimum 450 cover (low pressure) Minimum 600 cover (intermediate pressure)

The position of stormwater and sewer laterals shall be shown by incorporating a vertical riser on the service line and extending to 200 mm above ground level. The top of the riser shall be securely capped. Sewer laterals are to be painted red to clearly distinguish them from storm laterals.

Water connections shall include a toby valve clearly marked with a cover. See Standard Drawing W06.

9.7 Status of Laterals

All services within the boundaries of the road reserve shall be property of Council or other utility company once formally taken over by that organisation.

Unless specifically arranged otherwise and protected by an easement, services through privately owned allotments shall be the responsibility of the landowner.

Accordingly, in the construction of new services to rear allotments, Council's policy is as follows:

(a) A separate connection to be provided to each allotment wherever possible.

(b) Where various allotments are serviced by a common right of way or access lot, a public drain is to be constructed along the right of way. The public drain is to be constructed to Council's standards with manholes at each end (or manhole and cleaning eye where permitted by the Engineer) and maintenance access for Council is to be provided via a registered easement in gross.

(c) Where a separate connection is not possible or not easily achievable, then a drain in common may be constructed provided that:
  (i) All of the affected landowners are in agreement with this option;
  (ii) The common drain is to be registered against the affected titles;
  (iii) No more than seven lots are to be serviced by any one common private drain.

(d) The costs of registering easements and agreements against titles shall be borne by the developer.

In the case of common sewers or storm drains, Council will require manholes at each end of the service, or one manhole and one cleaning eye depending on the length, in order to maintain the line and remedy any blockage. In the case of common water supplies Council will require the installation of appropriate valving in order to isolate the supply.

9.8 Definition of "Reasonable Distance"

The definition of "a reasonable distance" shall be assessed on a case-by-case basis and take into consideration such factors as the relative cost of the in-property reticulation and the extensions to connect to the existing services, the lengths of connections and any difficulties in making a connection at grade. However, in general terms, an application is expected to include connection to existing services where any of the following apply:

(a) The subdivision is wholly or partially within the Urban Zone as defined by the Southland District Plan, or wholly or partially within any zone except the Rural Zone as defined by the Invercargill City District Plan.

(b) The centre of the subdivision is within 500 m of the boundary of the Urban Zone in the Southland District, or any zone except the Rural Zone in Invercargill City.

(c) The centre of the subdivision is within 500 m of an existing service.

Sensitivity: General

Section 10. Landscape

10.1 Scope

This section sets out requirements for the design and construction of landscape and planting for land development and subdivision. This section applies to all landscape areas requiring planting and revegetation whether in road reserves, swales, rain gardens, ponds/wetlands, recreation reserves, or other public reserves, and private land.

10.2 General

10.2.1 Approval

Consultation with Council on landscape design and construction at an early stage of the design development is required. The Council may seek input from the relevant Community Board in relation to landscape issues, prior to its approval of any proposed landscaping. If landscape infrastructure proposed is over and above the minimal level of service, Council has to agree to the increase in cost.

Stormwater systems including secondary flow paths shall be considered when landscape designs are determined, so as to avoid conflict or failure of these systems. Note that these become stormwater assets under the Three Waters legislation.

10.2.2 Environmentally Responsible Design

Landscape design has application throughout the subdivision and development process. Landscape design should be considered in the early stages of a development and at this initial concept stage it is important to establish objectives for overall landscape design involving the appropriate professionals to assess the natural systems, vegetation, and landscape features. This includes consideration of protecting, maintaining, and restoring existing natural ecosystems, vegetation, and landscape features; responding to the surrounding landscape character and context; and cultural and heritage elements; and contributing to ecological and habitat biodiversity. Provision of amenity open space and access is required to make open space connections, access to and location of watercourses, and provision of reserves and streetscape to provide a framework of coherence and amenity.

10.2.3 Reserves and Land Protection Covenants

Layout plans and location of reserves and land protection covenants must be discussed with Council prior to the lodgement of finalised plans. Development plans for all future reserves shall be submitted with the application for engineering approval, no work is to be carried out on site before Council approval is issued.

All reserve development works shall be completed in accordance with the plans approved by Council. Development may include earthworks, drainage, planting, paths, structures (such as seating, tables, litter bins, fencing, barriers, signs, and play equipment) and facilities (such as toilets, changing sheds and footpath lighting) as specified by Council.

10.2.4 Ecological, Functional, and Aesthetic Opportunities

Planting provides a range of ecological, functional, and aesthetic opportunities for environmental enhancement:

(a) Ecological:
  (i) Provides, protects, and maintains terrestrial biodiversity and habitat;
  (ii) reduces the amount of sediment and pollutants entering waterways;
  (iii) Maintains and enhances water quality and habitat;

(iv) Reduces surface water flooding;
(v) Increases stability and contributes to erosion control;
(vi) Supports carbon sequestration;
(vii) Supports ecosystem functioning including nutrient recycling, water retention, purification, and sediment control;
(viii) Provides wildlife habitat value.

(b) Functional:
(i) Defines space;
(ii) Provides shade, shelter, and privacy;
(iii) Screens unsightly outlooks and provides visual barriers;
(iv) Ameliorates sound and reduces pollution;
(v) Assists driver recognition of road link and place context;
(vi) Reduces glare and reflection and provides urban cooling;
(vii) Assists in the control of erosion;
(viii) Creates physical barriers;
(ix) Provides recreation and amenity value;
(x) Provides edible species;
(xi) Provides opportunities for enhancing health, and should not be detrimental to it.

(c) Aesthetic:
(i) Frames views;
(ii) Emphasises landform and landscape features;
(iii) Provides visual unity in the environment;
(iv) Reduces the visual impact of the roadway;
(v) Softens hard surfaces and bare areas;
(vi) Provides colour, form, and texture;
(vii) Provides visual lineage within and between regions;
(viii) Provides identity and environment.

10.2.5 Landscape and Planting Opportunities

Opportunities for landscaping are diverse, ranging from specimen tree planting to planting associated with existing indigenous vegetation, traffic management devices, riparian margins, wetlands, swales, rain gardens, ponds, reserves, and specific landscape features in the development.

10.3 Design

10.3.1 Location

The design shall be submitted to Council, in line with Council's Tree Plan (or applicable successor) for approval prior to installation.

Landscaping and planting should be designed to respond to the overall environmental context such as vegetation and water bodies, cultural and heritage elements, local road geometry, stormwater and reserve design, and utilities placement. Planting may include specimen trees, edible gardens, rain gardens, swales, and other amenity garden features.

Infrastructural services should be planned at the same time as the landscape design so that tree and garden planting location does not compromise the integrity and efficient operation of services. If particular landscape conditions or objectives are required for a subdivision or development then these will need to be taken into account prior to undertaking detailed engineering design. Root barriers to protect infrastructure should be considered by the designer as appropriate.

Consideration shall be given to the location of trees that will grow into large specimens and paved surfaces, as root migration/growth can adversely impact on the sub-base and levelness of the paving. In addition consideration must be given to the potential long term impacts to the neighbouring properties, including Aspects such as shade, maintenance access, falling leaves and the like.

10.3.2 Reserve Location and Layout

Reserve location and layout design shall take into account adjoining land uses and areas to ensure there is an appropriate provision of recreation assets and landscaping in accordance with Council's plans and policies. The design of access routes into and through a reserve should ensure linkages with existing networks, consider future developments both of the reserve and adjoining areas, take into account topography, and shall follow Crime Prevention through Environmental Design (CPTED) principles.

10.3.3 Existing Vegetation and Trees

All existing vegetation and trees to be retained shall be cordoned off to protect the root zone and vegetation, prior to the commencement of construction and the cordon shall remain in place until completion of construction.

Existing trees to be retained are to be protected by temporary fencing in a circle with a radius equal to the maximum crown extension (drip line). A qualified person shall be used to determine the protected area and supervise construction.

At no time shall anything be deposited in the root zones of protected vegetation and trees. If installation is required under existing vegetation trenchless technology should be considered, if this is not practicable advice from a suitably qualified person should be sought to minimise damage to the vegetation.

A tree or vegetation plan and construction methodology shall be supplied to Council including:

(a) Position and design of temporary protective fencing or other methods of protection.
(b) Arboricultural maintenance required.
(c) Methods of protection of the tree and root zone where construction is to occur near the root zone and tree canopy.
(d) Maintenance required for long term health and stability of the tree or vegetation.

10.3.4 New trees and road geometry

Separation and sight distances should be considered when planting on roads. Vegetation shall not be planted or allowed to grow in a position which will prevent the driver of a vehicle from having a clear and unobstructed view of official traffic signs or signals, rapid number, approaching or merging traffic or any corner, bend, intersection or vehicle crossing.

Vegetation shall not be planted or allowed to grow in a position that will reduce the effectiveness of road management.

In areas where ice can form on roads, vegetation shall not be planted, in a position that will shade a road between the hours of 10.00 am and 2.00 pm on the shortest day of the year. The exception to this standard is where topography is already preventing the direct access of sunlight on to the road or where the vegetation existed at the time of notification of the Plan.

Alternative location and design proposals shall also be considered, such as provision of trees in a dedicated area or 'non-services' berm in the road reserve. Tree planting in groups can help accentuate road perception (see Section 3.3.14). Strategically placed, grouped plantings of trees are often of greater benefit and impact than individual trees placed linearly in a roadside berm.

10.3.5 Planted Grass Areas, Berms, Swales, or Rain Gardens

Berms, swales, or rain gardens shall be of sufficient width to allow for adequate growth of the plants and ease of maintenance. Narrow grass strips should be avoided. It is important to provide adequate means for tree growth and ongoing tree health at the same time as allowing for infiltration of water.

10.3.6 Quality Control

All plants shall be sound, healthy, vigorous, and free of any defects which may be detrimental to plant growth and development. In addition, plants should have vigorous root and branch systems and plants supplied in pots should not be root bound. To ensure that plants adapt and thrive once planted they should be 'hardened off' prior to planting. Only species adapted to the site conditions shall be planted.

10.3.7 Landscaping structures

Landscaping structures include (but are not limited to) sculptures, walls, fences, screens, bollards, entranceways, and posts. The materials should be robust to suit their purpose and ideally reflect the local character. The design of the landscape structure shall be considered as an integral part of the development and surroundings to fulfil both functional and aesthetic requirements. Durability and maintenance requirements shall be considered. Structures shall not:

(a) Inappropriately limit safe sight lines.
(b) Be a hazard to pedestrians, people with disabilities, cyclists, or vehicle traffic.

Entranceway wall structures shall be located fully on private land unless Council approval is obtained. Any other immovable landscape structure (for example boulders) shall be located to prevent obstructing access to underground services.
Structures shall be designed to safely withstand appropriate loadings. Structures not exempt under the Building Act shall only be constructed on receipt of a building consent.
Playground equipment shall comply with NZS 5828 and Standards NZ Handbook 5828.1.

All retaining walls including those not requiring a building consent should be constructed to resist lateral earth pressures and those from any surcharge loading that may be present.

10.3.8 Walkways and Cycleways

Any paving though reserves shall be constructed to the same standard and composition as set out for street footpaths in the locality, unless otherwise authorised by Council as per Standards NZ Handbook 8630:2004.

10.3.9 Fencing of Reserves

The permanent fencing of common boundaries of any reserve including esplanade, reserve accessways, and road boundaries, may be required. Standards and requirements shall be in accordance with the Fencing Act 1978 and/or any replacement versions. Under normal circumstances Council do not require fencing between a reserve and the public Road. However, Council will require a fencing covenant to be registered on all titles of properties with a common boundary to reserve land, absolving the Council against all costs of erection and maintenance of fences on common boundaries.

10.3.10 Planting Period and Irrigation

Planting programmes where possible shall occur in the season that optimises growing conditions for plants and trees and maximises plant establishment.

Council may require provision for permanent or temporary irrigation of specimen trees, gardens, or plantings. Irrigation of trees shall be required by the developer during the first two summer seasons following planting. Provision for watering during the establishment of plants may be required for gardens that are not otherwise irrigated.

10.4 Construction and Maintenance

10.4.1 Introduction

It is the developer's responsibility to ensure that the landscaping meets the required standards at the termination of the two year maintenance period, unless otherwise agreed with Council. The developer is responsible (and may be bonded) for the routine maintenance and replacement of the planting including dead wooding, weed control, mulching, replacing dead trees, shrubs, and plants, and watering for a defined period from the date Council issues the Section 224 completion certificate under the RMA.

10.4.2 Soil and Fertility

The developer shall be responsible for the supply and spreading of soil. Topsoil should be correctly stored and handled when stripped and respread.

All soil used for landscaping shall be free from any contaminants that may affect human health. Any soil which is to be utilised for landscaping purposes, that has been on a site used for Hazardous Activities or Industries, shall be tested for levels of contamination, which shall prove that it is suitable prior to use.

A soil test shall be undertaken to determine the composition and type of fertiliser to be applied to the area being developed. A proprietary fertiliser or soil ameliorant suited to the species shall be applied where the existing soil is deficient in minerals and nutrients, plants are showing signs of lack of fertility, or to ensure maximum health and vigour.

Application rates and type of fertiliser or soil ameliorant should be selected according to species and soil fertility.

10.4.3 Weeds and Litter Control

At the end of the maintenance period there shall generally be no weeds within 2 m of any tree planting or in garden beds. Weeds should be controlled in an appropriate manner. When hoeing/pulling weeds care shall be taken to avoid damage to plants and their roots. The soil shall not be mixed with mulch when removing weeds. Any spraying should be kept to a minimum near swales, rain gardens, ponds, riparian margins, and adjacent properties.

All areas once established shall be kept free of litter and debris, including paper, plastic, stones, bricks, bottles, glass, cans, and other forms of inorganic matter.

10.4.4 Planting Grass Areas

Grass areas and berms shall be formed after all other construction has been completed. The grass areas and berms shall incorporate not less than 100 mm compacted thickness of friable weed and stone free topsoil (generally made up of a compositions of approximately 1 - 5% sand, 7 - 16% humus or organic material, and no more that 30% weight in clay) placed over a base material capable of allowing root penetration and sustaining growth. The maximum slope for grass areas intended to be mown is 1:5.

Heavily compacted soils shall be ripped to a depth of 300 mm with rip lines 1 m apart, and rolled, before any laying of topsoil. The ground profile shall be smooth and free of ruts and depressions prior to grassing. Ripping to decompact soils should not be undertaken within the dripline of trees to be retained. Grass areas and berms shall be graded to edges (for example, pavement or footpath) allowing for approximately 15 mm of settlement.

Rural berms shall be topsoiled to the same standards as urban berms unless they make use of already grassed undisturbed ground.

The area for grass seeding shall be free of all weed species. Grass seed mixes shall be either an approved dwarf cultivar rye grass or an approved turf species blend. Other special purpose grass seed and plant species may be used in special areas such as swales and rain gardens.

A sward coverage of not less than 90% shall be achieved within one month of sowing, and before completion documentation shall be provided for processing by Council. All established grass shall be mown to a range specified by Council. A common mowing height range is a minimum height of 50 mm and maximum height of 100 mm. All grass edges shall be maintained in a neat and tidy manner.

10.4.5 Mulch

Mulch shall be applied to tree and garden areas to conserve moisture and reduce weed growth, except in riparian margins. Typically, mulch will be cambium grade bark mulch, clean, free of sawdust and dirt, and with individual pieces no larger than 100 mm; mulched trees/branches that have no viable seeds; or stone mulches. Mulch must not be older than 3 months. Mulch for planting beds shall be a uniform 100 mm in final depth. Edges shall be formed to hold the mulch without spillage on to adjacent surfaces.

Before mulching soil should be damp to a depth of 300 mm. Mulching should be carried out on an ongoing basis to all garden beds and juvenile trees to maintain specified depth at end of maintenance period.

Mulch shall only be spread after the soil surface is levelled off to remove bumps and hollows. Weeds and grass are to be removed prior to mulching. Plants shall not be damaged or buried during the mulching process. Where it is known that bark mulch affects certain species or will be lost due to wind, slope of the land, or for some other reason, alternative mulches shall be considered and used.

10.4.6 Specimen Tree Planting

Specimen trees are defined as trees with a trunk diameter of 25 mm to 100 mm when measured at 1400 mm above ground level. Larger trees can be used with the approval of Council.

Those contractors involved in specimen tree planting and maintenance should be competent horticultural/arboricultural practitioners and therefore follow accepted industry standard procedures for tree planting. Establishment and initial maintenance are critical to the long-term viability of the specimen tree.

Specimen trees shall be sound, healthy, vigorous, and free of any defects (relative to the species). Specimen trees are to be a minimum of PB 95 (planter bag of 95 pint capacity approximately 54 L) grade when planted. A recommended minimum height for specimen trees is 2.5 m at the time of planting to aid early establishment unless the local conditions of a site require consideration of alternatives, for example, an exposed site may require small, well-hardened trees. Specimen trees between 1.5 - 2.5 m may be allowed with the approval of Council.

Given the generally modified nature of soil in subdivisions it is essential that a suitable tree planting pit be prepared. The approach shall be to have:

(a) Ground free from debris and rubbish.
(b) Ground cultivated to a depth of 1 m and a width of 1 m to break up any compaction, fracture subsoil, and afford drainage to hard rock areas.
(c) Sides of planting holes crumbled and not smooth.
(d) Topsoil incorporated into the upper level of planting holes.
(e) Each tree fertilised with an appropriate amount of slow release fertiliser, as per the manufacturer's recommendations.
(f) Final planted depth consistent with finished ground level.
(g) Each tree adequately staked to withstand movement in natural wind conditions and to meet Council standards.
(h) Trees secured with expandable ties at approximately 1/3 of their height or as high as required to support the tree (to be checked every six months) or anchored below ground with a root ball anchor.

(i) Soil firmed sufficiently to force any air pockets from planting holes.
(j) Trees watered immediately following planting.
(k) Trees radially mulched to a distance of 500 mm or to drip line, whichever is the greater area and a depth of 100 mm.
(l) Staking uniformly low and visually consistent throughout the subdivision stage.
(m) Ground-treated timber stakes should only be used if the stakes are to be removed once the trees are stable that is at the end of a maintenance period.

The onus is on the developer to ensure that trees are protected during the further development of the subdivision (that is, the construction of dwellings/buildings) and during the defined maintenance period.

10.4.7 General Amenity Planting

Before topsoil is added all stripped and graded ground intended for planting should be cultivated to a depth appropriate to the plant species including a sufficient depth to break up any compaction. There should be friable topsoil for shrubs and ground cover appropriate to the depth of the root ball.

10.4.8 Revegetation Planting and Existing Vegetation

Revegetation planting shall be a minimum grade of PB3 (planter bag) or root trainers and shall be planted at a density and size of plant that achieves a coverage ratio specified by Council's Tree Plan Plants shall be spaced unevenly in the planting layout to encourage a natural appearance and setting.

Assisted natural revegetation is a technique using native seedling establishment complemented with weeding, thinning, and mulching and is an option that may be considered.

Edges of existing vegetation, to be retained where appropriate, shall be planted to mitigate the effects of wind funnelling. Mulches can be used in these areas to minimise the establishment of weed species.

10.4.9 Ponds, Wetlands, and Riparian Margins Planting

Ponds, wetlands, and riparian margins should have site specific planting plans prepared by a suitably qualified person and submitted to Council for approval of designs. Access shall be provided for future removal and/or maintenance.

Any water body (not including natural lakes) shall take into consideration the likelihood of people falling into the pond. Furthermore, the design shall provide appropriate access that a person who has fallen into the pond can climb out.

10.4.10 Pruning

Trees should be selected and located to minimise ongoing pruning costs and requirements. All pruning of street trees shall be undertaken by a suitably qualified arborist. All pruning shall be undertaken to recognised arboricultural practices.

Pruning should be carried out on shrubs to maintain a high standard of presentation, display, and plant vigour. Paths, roads, and all other accessways should be kept clear of excess growth. Pruning may also be necessary to ensure signs are not obscured. Where appropriate, pruning should allow for adequate sight visibility to ensure the safety of road and footpath users. However, there are situations where planting should be used to restrict visibility and slow traffic or frame views.

Vegetation shall not be allowed to grow in a position which will prevent the driver of a vehicle from having a clear and unobstructed view of official traffic signs or signals, rapid number, approaching or merging traffic or any corner, bend, intersection or vehicle crossing.

Vegetation shall not be allowed to grow in a position that will reduce the effectiveness of road management.

In areas where ice can form on roads, vegetation shall not be allowed to grow, in a position that will shade a road between the hours of 10.00 am and 2.00 pm on the shortest day of the year. The exception to this standard is where topography is already preventing the direct access of sunlight on to the road or where the vegetation existed at the time of notification of the plan.

Vegetation shall be maintained in a condition which prevents damage to the road surface, road structures or drainage devices.

All weak, dead, diseased, and damaged growth should be removed, and pruning carried out to maintain the desired shape and size. Pruning should not be carried out during leaf burst or leaf fall. The following pruning techniques (for shrubs) should be employed where appropriate:

(a) Tips to be pinched or purged as appropriate for species to give desired shape and size.

(b) Form pruning of young plants to ensure compact form and shape.

(c) Undercutting of groundcovers at edges generally.

(d) Plants are to be pruned so that they do not smother neighbouring plants.

10.4.11 Maintenance

Landscape plans shall ensure that future maintenance requirements have been considered so that ongoing costs are minimised. The maintenance period will vary depending on the nature and type of planting and should be covered in specifications and as required by Council.

The developer shall:

(a) Remove from the area all temporary services, machinery, and surplus materials that have been used for the construction, and leave the site in a tidy condition.

(b) Clean all paths and surrounding areas.

(d) Clear and weed all channels.

(e) Ensure that all damaged, vandalised, stolen, or dead plants are replaced to maintain numbers and unity of display.

(f) Ensure that amenity planting beds are cleaned to remove prunings, dead or damaged leaves, and any other object or material, including retail attachments such as plant labels. The edges of the beds shall be left evenly shaped and sloped.

Land to be vested for reserves purposes shall as a minimum meet the following general requirements:

(g) The land is to be free of noxious weeds, tree stumps (above ground) and other specified vegetation.

(h) All previous fences, farm utilities, building remains, and rubbish are to be removed or disposed of to the satisfaction of Council.

(i) Land to be mown shall be accessible to suitable mowing equipment, and is to have an established turf type seed grass cover.

(j) Drainage reserves, ponds, lakes, channels, and streams requiring maintenance shall have suitable access for machinery.

(k) All boundaries are to be surveyed and clearly pegged.

(l) Any proposed landscape planting or furniture/structures shall be completed.

(m) The land is to be free of easements/services unless previously agreed in writing by Council.

(n) Any rights of way or easements are to be formalised at no cost to Council.

Sensitivity: General

Section 11. Community Facilities

11.1 Purpose

The purpose of this chapter is to outline the standards for the design and creation of community facilities that are to be vested in the Council. The aim is to achieve a high standard of accessibility, public health and safety, variety, multifunctional use, and environmental value, whilst maintaining whole-of-life affordability.

The community facilities covered in this CoP include parks, reserves, council-owned buildings (e.g., library, hall), playground, public toilets, sport fields, cemetery, and water facilities. These assets provide the community and visitors with access to Council services and activities.

11.2 Performance Outcomes

Community facilities play an important role in serving communities by provides them with the opportunity to access services, activities and interact socially with other members of the community. The facilities enable the communities to be more socially connected and active and makes Southland a desirable place to live. The way a subdivision relates to community facilities is very important for their usability, amenity and public safety.

The performance outcomes for the design and creation of community facilities and associated assets sought by this CoP are as follows:

- Providing a local hub where residents and visitors can access services or engage in social activities, catering for the changing demand
- Providing accessible facilities and safe public places for communities, clubs, organisations and individuals to enjoy sporting, social, cultural, educational and recreational pursuits
- Providing safe, clean and accessible public toilets and dump stations across Southland District and Invercargill City for both residents and visitors
- Providing benefits to both the environment and public health in Southland District and Invercargill City by reducing the likelihood of human waste impacts and raising community appreciation and use of Council's facilities.
- Providing facilities that are affordable and accessible to operate and maintain
- Providing facilities and assets that are completed to a high standard of presentation prior to vesting in the Council; and
- Providing plantings that meet amenity, natural character, beautification (including colour), ease of maintenance whilst avoiding off-site effects.

11.3 Referenced Documents

11.3.1 District Plan Requirements

This section addresses matters that are specific to the Council asset creation or activities that may have an impact on an asset. They are subject to Activity Management Plans. Key provisions of the Activity Management Plans that preside over the design and creation of community facilities are urban design, subdivision and reserves and open space sections.

11.3.2 Internal Standards

Table 11-1 sets out additional documents that may be useful references for designers

Table 11-1 Useful references for Community Facilities and Associated Asset Design and Provision

Reserves Management Plan
Activity Management Plans
Tree Plan
Donations Guidelines (ICC)

11.3.3 External Standards

Community facilities and associated assets will be designed and created in a manner consistent with this document. Additional requirements may be specified from the documents set out in Section 1 of this CoP. Where an Act or National Standards document is referenced, this will be the current version including any associated amendments.

Recreation Aotearoa Open Spaces Maintenance Specification
NZS 5828 Playground Standards
Standards NZ Handbook 5828.1 Playground Standards
Standards NZ Handbook 8630:2004 Track and Structure Handbook

11.3.4 General

Gaps in neighbourhood park/reserve provision identified in Activity Management Plans or an indicative reserve is identified in a structure plan or outline development plan (including the need to protect natural or archaeological features, linkages, viewpoints or rest areas) must be used to assist in determining appropriate sites for community resource.

11.3.5 Financial Contributions – (Southland District Council only)

Refer to the Southland District Plan Section Financial Contributions, (or applicable successor).

11.3.6 Process of determining design purpose

Prior to lodging subdivision applications, developers must undertake pre-application workshop with the relevant team members within the Council. The teams could include planners, Transport team, 3 waters team and community facilities team and any other teams that may be relevant. The purpose of these discussions is to form the agreement on the matters relevant to the subdivision or adjacent areas and ensure that urban design goals are met in the design of both private and public spaces, and any areas for utility or transportation purposes.

Following pre-application workhops with the Council's teams, the location and size of community resource (e.g., a reserve) will be included in the scheme plan submitted with the subdivision application. The vesting of the community resource, its classification and any development requested by or agreed to be the Council will be a condition of the consent. There is a requirement for a concept plan to be submitted for the development of community resource. The community resource is required

to be presented for vesting in accordance with these standards. Development of the community resource will generally be undertaken following vesting and in consultation with the community.

11.4 Community Facilities

All built assets (e.g. signs, fences, artworks, lighting, structures and furniture) must be approved by Council prior to installation. They must be robust, low-maintenance, and safe for use by the public. Consider the life-cycle of built assets, to reduce the frequency of renewing or replacing such assets in the future. Consider colours and construction materials in aesthetic terms, for built assets that form part of a reserve.

Note that the developer is responsible for gaining all necessary building consents required under the Building Act.

11.4.1 Sport fields

The Council objectives are to provide and develop sports fields that meet the needs of the local community and, in the case of district facilities, the needs and aspirations of the greater community. Provide fully accessible sports fields with surfacing that allows easy access where specified. Not all sites will be suitable and some that are may not require such facilities.

Obtain approval from the Council for the design proposal for the sports field within a reserve, including the types of recreation opportunity. This prevents oversupply of facilities in other reserves nearby. It should also simplify the numbers and options and hence simplify operations and maintenance costs.

All play facilities must comply with:

- Sports Field Development Guide 2020 (Recreation Aotearoa) ;
- Open Spaces Maintenance Specification 3.2-3.7 (Recreation Aotearoa)

11.4.2 Playgrounds and Play Structures

The Council's objective is to provide and develop interesting and exciting playgrounds that meet the needs of the local community and, in the case of district facilities, the needs and aspirations of the greater community. Provide fully accessible playgrounds with surfacing that allows easy access where specified. Not all sites will be suitable and some that are may not require formal play facilities.

Approval shall be obtained from the Council for the design proposal for the play space including the types and style of equipment.
All play facilities must comply with:
NZS 5828:2015 Playground equipment and surfacing;
Parks and Waterways Access Policy.

Use the following resources for the design of playgrounds:

- Barrier Free NZ
- Sport and Recreation Victoria The Good Play Space Guide: "I can play too"

11.4.3 Seats and picnic tables

The design of proposed seating and tables must be consistent with the character of the reserve and its locality, in accordance with Recreation Aotearoa Open Spaces Maintenance Specifications.

11.4.4 Boundary Fencing

The Council promotes the concept of open frontages onto reserves. Funding of boundary fencing must comply with the Fencing Act 1978. The Act does not apply to fences alongside legal roads or esplanade reserves. Funding of boundary fences will also be in accordance with any registered fencing covenants

11.4.5 Public Toilets

The provision of toilet facilities is essential to allow people with disabilities to use parks. Consider the needs of that locality and the numbers of expected visitors at any one time when determining the requirement for toilet facilities. Locate toilets to be easily and in close proximity to playgrounds.

Design the toilet and its access to conform to NZBC / G1, Public Toilets and Design for Access and Mobility.

11.5 Open Space

11.5.1 Parks and Reserves

Parks and reserves shall be located and designed so that they are connected with the existing roading network and, where possible, existing reserves, access ways and open spaces to provide routes and return loops for recreational use, encourage sustainable transport choices by allowing for continuous off-road journeys and contribute to creating larger open space areas. Consideration should be given to how the development will link to the surrounding landscape, including existing areas of open space, and to other public areas, such as schools, town centres, community facilities or public transport. They must not be made of "left over" land, the location and design must be informed by the neighbourhood context and the particular aspects of the sites. Parks and reserves must be designed and presented in accordance with these standards prior to the application for section 224(c) certificate approval.

The level of service for the location of community parks and reserves in relation to residential properties shall be in accordance with relevant Council activity management plans. Parks and reserves shall be of an even and regular shape that allows for maximum usable space and ease of maintenance. They shall be highly visible in order to maximise amenity, safety and open space benefits for the surrounding community and to allow the parks and reserves to be easily found by users, and meet the following standards:

- Have a minimum 30 metre road frontage on at least one side;
- Have additional access points provided to connect to the road network within the subdivision and adjoining areas;
- Have access crossings provided for maintenance vehicles and equipment;
- Be located and orientated to maximise daylight and sunlight hours;
- Located to ensure that potential hazards to public safety (such as site stability or contamination) do not exist or it is possible to remedy or mitigate any hazard.

Natural features or features of local and/or cultural interest or significance such as streams, remnant native forest or specimen trees will be identified and included within the reserve where appropriate and agreed to by the Council.

11.5.2 Esplanade Reserves

The circumstances, where esplanade reserves and or esplanade strips under this chapter must be provided or considered adjoining lakes, rivers or the coast, are prescribed within the District Plans. The Council may seek to purchase additional areas to add to the environmental, amenity and recreational value of the reserve network. Paths on esplanade reserves must be provided where they are an integral part of a walking/cycling connection within the subdivision or wider area. Given the generally long and linear nature of these reserves, visibility and accessibility must be maximised to enhance the amenity, safety and open space benefits for the surrounding community and to allow them to be easily located. Where possible conservation and landscape reserves/special interest site reserves must have a minimum of 20 metres road frontage, with good access for pedestrians and maintenance vehicles.

11.5.3 Public Gardens/Formal Gardens

Public gardens and formal gardens must have a minimum 30 metre road frontage, with good pedestrian and maintenance vehicle access. Prior to any construction a detailed landscaping plan highlighting the proposed species of plants shall be submitted to Council for approval. Areas to be considered include not only the visual appearance but the type and scale of long term maintenance required in accordance with Recreation Aotearoa Open Spaces Maintenance Specifications.

11.5.4 Other Facilities

The Council requires the following standards to be met in the design and location of other community resource facilities.

If lighting is required for community parks, the design shall be consistent with AS/NZS1158 Lighting for Roads and Public Spaces and must be approved by the Council prior to construction. Where reserve signage is required, it will be approved by Council.

11.6 Water Facilities

11.6.1 Structures

Structures are installed at the discretion of the Council. These include: jetties, wharves, boatramps and swimming pontoons. The design of structures must fulfil both functional and aesthetic requirements. They must be durable and not require a high level of maintenance.

Note that the developer is responsible for gaining all necessary building consents required under the Building Act.

11.7 Community Services

11.7.1 Cemeteries

The Council may seek to purchase additional land for the purpose of Cemeteries, particularly land adjacent to existing cemeteries to meet identified levels of service.

11.8 Construction - Access and Boundary Treatment

This section outlines the standards and design for access to and within reserves and boundary treatments. The following standards are required in the design of access to and within reserves.

11.8.1 Access

The design and standards of formation for paths and tracks within reserves are outlined in Table 11-3.

The location of paths and plantings on reserve access ways and walkways must be designed to ensure the path receives maximum sunlight hours in winter and minimises frosting. A vehicle crossing access permit is required or the crossing needs to be approved through the submission of Engineering Plans as part of the subdivision process. Consultation with the Council must be undertaken to determine if parking areas and access roadways are required.

Sensitivity: General

Track Type	Markers	Gradient	Steps	Width	Surface	Structure	Furniture	Vegetation Clearance
Path / Accessway Our intention is that these will be multi-use, accessible paths	Requires signage stating they are multi-use, accessible paths. Signage required at entrances & junctions	Maximum: 5° (1 in 11.4)	No steps	Minimum: 2m	Even & well-formed of Durable material. Maximum Discontinuity height: 5mm	Minimum: 2m No stiles, turnstiles or kissing gates	Seats & tables may be provided	Minimum Width: equal to path width Minimum height: 2.5m Windfall and hangers cleared with 48 hours of notice

Table 11-3 Path, Track, and Road Category Standards within Reserves

Sensitivity: General

Appendix A – Designer Check List

The designer checklist for subdivision application and construction:

Note: This list is produced to clarify the design requirements and holding points in the subdivision application process. The aim of this list is to guide the developer/developer's advisor to follow the correct and effective steps to be efficient in the subdivision application and construction. The implementation of the steps listed in this document will ensure that delays are kept to a minimum. Please inquire with the Council when in question.

Activities Developer to follow:

REFERENCE FROM COP	ACTIVITY REQUIRED	Y/N/NA
Section 1 – General requirements and Procedures		
3.2.1	Appoint a designer of the work.	
3.2.2	Preliminary Discussions to define Council requirements prior to design	
3.2.4.3	Consultation with Regional Council (Environmental Southland) on Stormwater impacts to the natural environment aspects	
3.2.4.8	Design Approval docs to include: • Earthworks and geotechnical requirements; • Roading and site access including a design and access statement and a road safety audit • Stormwater infrastructure shall include details such as proposed design parameters, primary systems capacities, storage, secondary systems including overland flow paths, and structural details of components • Wastewater infrastructure design drawings compatible with Council's requirements and the design parameters included in the CoP shall be provided. • Water supply infrastructure design drawings compatible with Council's requirements and the design parameters included in the CoP shall be provided. Landscape: • All proposed planting to be located within the publicly vested areas shall be agreed with Council prior to installation. • Proposed network utility service designs. • Safety in Design register	
3.2.4.8	A geo-professional's report on the suitability of the land for subdivision or development.	
3.2.4.8	Other reports as considered necessary by Council in the circumstances of the proposed infrastructure in order to meet the requirements of the CoP.	
3.2.4.8	A design certificate in the form of the certificate in Schedule 2A.	
3.2.6	Design drawings complying with requirements spelled out in the CoP	
3.2.8	Climate change – confirmation of impacts to design such as sea level change and increased stormwater events	

3.2.10	Construction Pre- construction Permits are in place Notification of the Construction Programme in writing Suitable qualification/experience of Construction Personnel Documentation to be held on site Variations to the approved design Inspections and Hold Points – Notification to Council Completion Certification Services Connections Testing Pre-vesting maintenance Reinstatements	
Section 2 - Geotechnics		
4.1	The designer shall take account of all relevant standards and Council requirements in terms of construction requirements, or development limitations.	
2.2.3	A geo-professional shall be appointed by the developer to carry out the defined functions.	
4.4.1	Preparation of a Geotechnical Completion Report	
4.4.2	As built drawings for Earthworks and subsoil drains	
4.5	Schedule 4A	
Section 3 - Roads		
0	Design Philosophy/design report including design drawings and detailing proposed materials.	
5.2.4 5.3.1	The Waka Kotahi NZTA One Network Framework should be used as the basis for the definition of the road design.	
5.2.6	Prepare and submit a design Access Statement	
0	Proposals that provide for new roads to vest in Council shall be subject to the Waka Kotahi (NZTA) Road safety audit procedures for projects unless Council decides that audits are not required at any or all of the stages.	
5.3.1	Design Requirements	
5.3.3	Geometric design	
5.3.4	Pavement Structural Design	
5.3.12.1	Footpath design – Council confirmation of requirements	
0	Road construction shall be carried out to the alignments and standards detailed in the approved drawings and with the specified materials so as to provide the intended design life.	
5.4.17	Progress Inspections at key construction stages.	
5.4.19	As built handover documentation	
Section 4 – Storm water		
6.2.1	Compliance with design objectives	
6.2.6	All stormwater systems shall provide for the management of stormwater run-off from within the land being developed together with any run-off from upstream catchments.	

6.2.8	Rainfall design charts shall be adjusted to take into account the predicted increase in rainfall intensities from the effects of climate change.	
0	Design – Council shall be consulted for the design requirements for a particular site	
0	The designer shall undertake the necessary design and prepare design drawings compatible with Council's design and performance parameters.	
0	The developer shall implement low impact design principles for the treatment of stormwater. Where the developer does not believe that low impact design methods will be suitable the developer shall provide reasons for this for approval by the Council.	
6.4	Approval of proposed Stormwater infrastructure	
6.5.4	Inspection and Acceptance	
Section 5 - Wastewater		
7.2.1	Objectives	
7.2.2	Wastewater designs shall incorporate all the special requirements of Council and shall be in accordance with the most appropriate Standards, codes, and guidelines including those set out in Referenced Documents.	
0	Applications for design approval shall include the information outlined in Section 2 of this CoP. In addition the following information shall be provided: A plan showing the proposed location of existing and proposed wastewater infrastructure. Detailed long sections showing the levels and grades of proposed wastewater pipelines in terms of datum. Long sections shall include full details of pipe and manhole materials and sizes. Details and calculations prepared which demonstrate that agreed levels of service will be maintained. Details and calculations prepared which clearly indicate any impact on adjacent area or catchment that the proposed infrastructure may have. Appropriate operating manuals, pump information, and instructions for pump stations and pressure systems if proposed.	
Section 6– Water Supply		
0	Detailed plans and design calculations (where appropriate) shall be submitted to Council.	
0	Objectives	
8.4	Approval of Proposed Infrastructure	
8.5.4	Pressure Testing of Mains	
8.5.5	Disinfection of Mains	
8.5.6	Discharge of Test water	
8.5.7	Water Sampling	
8.7	Field Testing of Pipelines	

Section 7 – Network Utility Services		
1	The developer shall provide satisfactory evidence to Council's Corridor Manager that the network utility operators are prepared to reticulate the subdivision and that agreement on the financial arrangements for the installation of each supply has been reached.	
9.2.3	The developer is required to make all arrangements with the appropriate network utility operators for the supply and installation of stormwater, wastewater, water supply, and electric power and to the extent applicable for the provision of telecommunication and gas reticulation.	
9.3.1	Copies of the plans of the development/subdivision shall be forwarded by the developer to all of the affected network utility operators at an early date to facilitate the design of the reticulation.	
0	In preparing the engineering plans consideration shall be given to the requirements of the network utility operators and Council's Corridor Manager for: • The minimum depth of cables and pipes. • The network utility operator's desired position for the cable and piping within the road berm as agreed with Council's Corridor Manager. • The minimum separation distances between power or telecommunication cables, and gas or water mains. • The width of berm which shall be clear of other services and obstructions to enable efficient cable-laying operations. Common trenching for power and telecommunication cables is commonly adopted at a distance of between 0.6 m and 1.2 m from the boundary. The possibility of common trenching should be discussed with each of the network utility operators during the design phase.	
9.4.1	Underground cable laying shall be achieved by the most appropriate method considering the nature of subsoil and potential damage to infrastructures and shall be to the approval of Council's Corridor Manager.	
9.5	Unless otherwise approved by Council through a resource consent decision, all new allotments shall have physical connections to power and telecommunications utilities.	
Section 8 - Landscaping		
10.2.1	Consultation with Council on landscape design and construction at an early stage of the design development is required. The Council may seek input from the relevant Community Board or Community Development Area Subcommittee in relation to landscape issues, prior to its approval of any proposed landscaping.	
10.2.3	Layout plans and location of reserves and land protection covenants must be discussed with Council prior to the lodgement of finalised plans. Development plans for all future reserves shall be submitted with the application for engineering approval, no work is to be carried out on site before Council approval is issued.	
10.2.3	All reserve development works shall be completed in accordance with the plans approved by Council.	
10.3	The design shall be submitted to Council for approval prior to installation	

10.3.2	Reserve location and layout design shall take into account adjoining land uses and areas to ensure there is an appropriate provision of recreation assets and landscaping in accordance with Council's plans and policies.	
10.3.3	All existing vegetation and trees to be retained shall be cordoned off to protect the root zone and vegetation, prior to the commencement of construction and the cordon shall remain in place until completion of construction	
10.3.4	In selecting species for planting, take into account the overall composition, low maintenance, and longevity, as well as the need to comply with Council's planting policies. The relevant Community Board, Community Development Area Subcommittee or Council shall approve the species to be planted before the planting is undertaken.	
10.3.8	Any paving though reserves shall be constructed to the same standard and composition as set out for street footpaths in the locality, unless otherwise authorised by the relevant Community Board or Community Development Area Subcommittee.	
0	Landscape plans shall ensure that future maintenance requirements have been considered so that ongoing costs are minimised.	
Section 9 – Community Facilities		
11.3.6	Process of determining design purpose Prior to lodging subdivision applications, developers must undertake pre-application workshop with the relevant team members within the Council. The teams could include planners, Transport team, 3 waters team and community facilities team and any other teams that may be relevant. The purpose of these discussions is to form the agreement on the matters relevant to the subdivision or adjacent areas and ensure that urban design goals are met in the design of both private and public spaces, and any areas for utility or transportation purposes. Following pre-application workshops with the Council's teams, the location and size of community resource (e.g., a reserve) will be included in the scheme plan submitted with the subdivision application. The vesting of the community resource, its classification and any development requested by or agreed to be the Council will be a condition of the consent. There is a requirement for a concept plan to be submitted for the development of community resource. The community resource is required to be presented for vesting in accordance with these standards. Development of the community resource will generally be undertaken following vesting and in consultation with the community	
11.4	All built assets (e.g. signs, fences, artworks, lighting, structures and furniture) must be approved by Council prior to installation.	
11.4	Maintenance required during establishment	
11.4	Presentation of community facilities for vesting	

Sensitivity: General

Appendix B – Standard Drawings

SOUTHLAND DISTRICT PLAN

PROPOSED PLAN CHANGE 2

SUBDIVISION, LAND USE, AND DEVELOPMENT

CODE OF PRACTICE 2023

The purpose of this plan change is to facilitate the incorporation of material by reference into the district plan and to make amendments to the district plan to implement and give effect to the Subdivision, Land Use and Development Code of Practice 2023.

New text to be inserted into the district plan is shown underlined.

Text to be deleted is shown with ~~strikethrough~~.

The Sections of the District Plan are organized by the National Planning Standards order of chapters, as they would appear in the District Plan and follows the following order:

- Infrastructure
- Transport
- Land Use and Development
- Subdivision
- Financial Contributions
- General Rural Zone
- General Residential Zone
- General Industrial Zone
- Natural Opens Spaces Zone
- Special Eweburn Zone
- Development Area 1 –
  Edendale Dairy Industrial Development Concept plan
- Information for Resource Consents

INF – Infrastructure

Infrastructure provides services essential to the maintenance and enhancement of social and economic well-being at local, regional and national levels. It plays a key role in enabling effective and efficient functioning of the District. Given its strategic importance, it is vital that **infrastructure** is developed, operated, maintained and upgraded in a safe, effective and efficient manner. While **infrastructure** provides wide-ranging benefits, it also has the potential to generate adverse environmental **effects**. These **effects** may be in the form of visual intrusion or the generation of odour, **dust** or **noise**. Typically, adverse **effects** arise where **infrastructure** is of a scale, or at a location, which is incompatible with neighbouring **land** use or the surrounding **environment**. In some cases, **infrastructure** is not well integrated with **subdivision**, **land** use and development. Infrastructure can be subject to the **effects** of climate change and **natural hazards** events and it is important that it is developed, operated, maintained, upgraded or relocated to take account of the risks posed. This will ensure that the provision of services is not compromised. The strategic importance of **infrastructure** should be recognised and provided for by Council. In many cases, this will be by way of a Designation. Council must balance an enabling approach while ensuring that any adverse **effects** associated with **infrastructure** are avoided, remedied, or mitigated. To carry out this function, controls on the **effects** of **infrastructure** and the **effects** on **infrastructure**, are required.

The importance of enabling existing electricity transmission activities is acknowledged through the National Environmental Standard for Electricity Transmission Activities which came into effect on 14 January 2010. This National Environmental Standard takes precedence over any rules in the District Plan relating to the operation, maintenance, upgrading, relocation and removal of **national grid** electricity transmission facilities that existed on 14 January 2010. This applies to all zones in the Southland District Plan.

The National Policy Statement on Electricity Transmission 2008 (NPS-ET) recognises the national significance of the need to operate, maintain, develop and upgrade the electricity transmission network and section 75(3) of the RMA requires district plans to give effect to the NPS-ET. In particular, the NPS-ET requires decision-makers to recognise and provide for the national, regional and local benefits of sustainable, secure and efficient electricity transmission, and to recognise and provide for the effective operation, maintenance, upgrading and development of the network.

The importance of providing for enhanced telecommunication activities is acknowledged through the National Environmental Standard for Telecommunications Facilities which came into effect on 9 October 2008 and was updated in 2016. The National Environmental Standard is primarily about telecommunication equipment in the **road** reserve and also deals with radio frequency fields, **noise** from telecommunications cabinets and the installation of masts or **antennae** on existing **structures**.

Objectives

INF-O1

To ensure that **infrastructure** meets the current and foreseeable needs of the District whilst ensuring that the adverse **effects** on the **environment** are avoided, remedied or mitigated.

Southland District Council Plan Change 2: Subdivision, Land Use and Development Code of Practice

Policies

INF-P1

Recognise and provide for the development, operation, maintenance upgrading or relocation of **infrastructure**, particularly **regionally significant infrastructure**, whilst avoiding, remedying or mitigating the adverse **effects** of that **infrastructure** on the **environment**.

Explanation: Infrastructure plays a key role in the functioning of the district. However, it can give rise to adverse **effects** on the **environment**, in particular on character and amenity. Adverse **effects** on **amenity values** should be avoided, remedied or mitigated. Particular consideration should be given to the avoidance of adverse **effects** on public health and safety. Consideration should be given to the consolidation of **infrastructure** where practicable.

INF-P2

Recognise that **infrastructure** can have a **functional**, technical or **operational need** to be sited at a particular location.

Explanation: Typically, **infrastructure** is located where it will achieve optimal operational efficiencies and often the **functional**, technical and **operational needs** of **infrastructure** dictate the location of that **infrastructure**. In some cases, this location may not achieve the best fit with the character or amenity of the surrounding **environment**. Therefore, careful consideration must be given to the design, operation, maintenance and upgrading of that **infrastructure** to avoid, remedy or mitigate any adverse **effects**.

INF-P3

Protect **infrastructure**, particularly **regionally significant infrastructure**, from incompatible **subdivision**, **land** use and development.

Explanation: A common adverse **effect** associated with **infrastructure** is **reverse sensitivity**. Typically, this arises where inappropriate **subdivision**, **land** use or development occurs in the vicinity of existing or proposed **infrastructure**. To ensure the ongoing operation, maintenance and upgrading of **infrastructure**, the presence and function of the **infrastructure** should be recognised and careful consideration should be given to **subdivision**, **land** use and development where it is to be located in the vicinity of existing or proposed **infrastructure**.

INF-P4

Infrastructure, particularly **regionally significant infrastructure**, should be located so that the **effects** of climate change and **natural hazards** are avoided or mitigated.

Explanation: Infrastructure is subject to the **effects** of climate change and **natural hazards**. The development, operation, maintenance and upgrading of **infrastructure** should take account of the risks posed by climate change and **natural hazards** to ensure that the provision of **infrastructure** services is not compromised. These considerations are particularly important for **regionally significant infrastructure**. It is acknowledged in INF-P2 that some **regionally significant infrastructure** will have technical requirements to be located in areas that may be subject to **natural hazards**, for example, hydro-generation facilities.

Rules

~~**Note:** The rules in the Infrastructure section override Zone and district-wide rules of the District Plan with the exception of Performance Standards – Infrastructure.~~

Note: The National Environmental Standard for Electricity Transmission Activities contains rules for the operation, maintenance, upgrading, relocation or removal of existing transmission lines. Except as provided for by the regulation, no rules in this plan apply to such activities.

The National Environmental Standards for Telecommunications Facilities provides standardised rules for certain low-impact telecommunications equipment within legal **road** boundaries, and radio frequency exposures in accordance with New Zealand Standard NZS 2772.1.1999. This standard establishes a baseline when considering the potential **effects** from the development of telecommunications facilities.

INF-R1	Permitted Activities
The following activities are Permitted Activities, provided they meet the Performance Standards – Infrastructure: 1. The operation, maintenance, minor upgrading, repair or removal of any existing network utility operation including the clearance, modification or removal of indigenous vegetation, undertaken by any network utility operator, for the purpose of ensuring the safety and integrity of existing infrastructure or to maintain access to that infrastructure.	**Activity Status when compliance not achieved:** RDIS
2. Development, installation, maintenance and upgrading of network utility operation located underground not otherwise provided for.	**Activity Status when compliance not achieved:** DIS
3. Deleted ~~The maintenance and repair of existing formed roads including street furniture within the existing legal road, accessways and rights of way.~~ ~~**Note:** Works to accessways and rights of way may require a permit under the Southland District Council Subdivision, Land Use and Development Bylaw 2012.~~	~~**Activity Status when compliance not achieved:** DIS~~

4. Deleted ~~The construction or realignment of a road by Council, not within the Outstanding Natural Features and Landscapes Overlay or an area of significant indigenous vegetation or habitat of indigenous fauna.~~	~~**Activity Status when compliance not achieved:** DIS~~
5. The trimming and pruning of vegetation necessary to protect electric lines (required to meet the Electricity (Hazards from Trees) Regulations 2003) or telecommunication lines.	**Activity Status when compliance not achieved:** DIS
6. Minor upgrading of existing above-ground transmission and distribution lines and support structures.	**Activity Status when compliance not achieved:** DIS
7. Addition of telecommunications cables and lines to existing support structures.	**Activity Status when compliance not achieved:** DIS
8. Buildings housing network utility operation (including cabinets, electricity transformers and switching stations) above-ground not exceeding 30 m2 in area.	**Activity Status when compliance not achieved:** DIS
9. Dish antennae not exceeding 5 m2 in area	**Activity Status when compliance not achieved:** DIS
10. Extensions to, or new above-ground electricity or telecommunication distribution and transmission lines and single-pole support structures, where the existing distribution is overhead.	**Activity Status when compliance not achieved:** DIS
11. Generators including Emergency Generators provided that they shall only operate: a. during emergency situations; or b. for standard performance testing procedures as required by law or by the engine manufacturer for emergency generators, or as a backup when the main power supply is undergoing maintenance, up to a maximum of 500 hours per calendar year; or c. where they are required by network utility operators for maintenance works.	**Activity Status when compliance not achieved:** DIS
12. Wind monitoring masts provided that: a. The mast does not exceed a height of 100 metres. b. The mast is setback 500 metres from any dwelling and 100 metres from any property boundary.	**Activity Status when compliance not achieved:** RDIS **Matters of Discretion:** INF-MAT1 Degree of Compliance

c. A notice of commencement is provided to Council prior to the construction of the mast. d. The mast is removed and the land remediated within five years of the notice of commencement. e. The mast is not within 50 metres of the highest point of the landscape on which it is located. f. The mast is not located within the Visual Amenity Landscape or Outstanding Natural Features and Landscapes as identified on the Planning Maps.	INF-MAT5 Navigational and safety requirements INF-MAT6 The visual effects of the structure INF-MAT7 The location and height of the structure INF-MAT8 The duration of the structure
13. Earthworks provided that: a. the works are greater than 20 metres from a waterbody and do not alter the existing ground level by more than 5 metres in depth or 2 metres in height; b. where the works are within 20 metres of a waterbody they do not alter the existing ground level by more than 2 metres in depth or height.	**Activity Status when compliance not achieved:** DIS

INF-R2	Permitted Activities
The following activities are permitted: 1. In the case of masts, poles and towers including associated telemetry equipment (except as provided for under INF-R2.3 and INF-R2.4, these shall comply with a maximum height of: a. 25 metres in General Rural Zone, Eweburn Zone and General Industrial Zone. b. 15 metres in the General Residential Zone. c. 20 metres in the Natural Open Space (Fiordland/Rakiura) Zone.	**Activity Status when compliance not achieved:** DIS
2. The construction of hose drying towers associated with Fire Stations up to a maximum height of 15 metres, provided they comply with the relevant zone minimum yards.	**Activity Status when compliance not achieved:** DIS
3. Aerials and antennae attached to masts, poles and towers may exceed the maximum height for masts, poles and towers as set out in INF-R2.1 above and the maximum height for the Zone in which they are located, by up to 5 metres.	**Activity Status when compliance not achieved:** DIS

4. In the case of aerials and antennae and their brackets or attachments, that are located on buildings, these may exceed the maximum height to boundary standards for the Zone in which they are located by up to 5 metres.	**Activity Status when compliance not achieved:** DIS

INF-R3	Restricted Discretionary Activities
The following activities are **Restricted Discretionary Activities** 1. The establishment, operation and maintenance of telecommunication lines, cables and support structures, aerials and antennae and telecommunications buildings that are not provided for in INF-R1, INF-R2 or INF-R4.	**Matters of Discretion:** INF-MAT1 Degree of Compliance INF-MAT2 The visual effects of the utility structure INF-MAT3 The location of the infrastructure INF-MAT4 Outstanding Natural Features and Landscapes
2. Wind Monitoring Masts that fail to comply with the permitted activity criteria.	**Matters of Discretion:** INF-MAT5 Navigational and safety requirements INF-MAT6 The visual effects of the structure INF-MAT7 The location and height of the structure INF-MAT8 The duration of the structure

INF – R4	Discretionary Activities
The following activities are **Discretionary Activities:** 1. Any activity that cannot be undertaken as a Permitted, Controlled or Restricted Discretionary Activity and is not listed as a Non-Complying Activity.	**Activity Status when compliance not achieved:** N/A
2. New transformers, substations and switching stations distributing electricity (including their ancillary buildings) that exceed 30 m2 in area.	**Activity Status when compliance not achieved:** N/A

3. Underground gas transmission pipelines at a pressure of 2,000 kilopascals or greater.	**Activity Status when compliance not achieved:** N/A
4. New water treatment facilities.	**Activity Status when compliance not achieved:** N/A
5. New wastewater treatment facilities provided that the facility is: a. located a minimum of 150 metres from residential buildings and approved residential building platforms or buildings primarily occupied by people for whatever purpose, on adjacent properties. b. located a minimum of 300 metres from the General Residential Zone.	**Activity Status when compliance not achieved:** N/A
6. The development of a railway line or siding.	**Activity Status when compliance not achieved:** N/A
~~7. The realignment of a formed road within the Outstanding Natural Features and Landscapes Overlay or within an area of significant indigenous vegetation or habitat of indigenous fauna.~~	~~**Activity Status when compliance not achieved:** N/A~~

INF -R5	Non-Complying Activities
The following activities are Non-Complying Activities: 1. Wastewater treatment facilities other than those identified as Discretionary Activities.	**Activity Status when compliance not achieved:** N/A
2. Any activity that does not comply with standards for telecommunication facilities generating radiofrequency fields.	**Activity Status when compliance not achieved:** N/A
~~3. The construction of a road within the Outstanding Natural Features and Landscapes Overlay or an area of significant indigenous vegetation or habitat of indigenous fauna.~~ ~~**Note:** this rule applies regardless of whether the road is to be constructed within or outside of the legal road.~~	~~**Activity Status when compliance not achieved:** N/A~~

Southland District Council Plan Change 2: Subdivision, Land Use and Development Code of Practice

Performance Standards – Infrastructure

All Infrastructure Activities shall comply with the following Performance Standards:

INF-PS1	Zone	
	1. The relevant noise, lighting and glare provisions of the Zone they are located in.	**Activity Status when compliance not achieved:** DIS

INF-PS2	Height Standards	
	1. All above-ground network utility operation and meteorological structures shall comply with the maximum height standards, maximum height to boundary and minimum yards (except where they relate to roads), for the Zone in which they are located, except as provided for in INF-R2	**Activity Status when compliance not achieved:** DIS

INF-PS3	Earthworks	
	~~1. Earthworks that:~~ ~~a. are greater than 20 metres from a waterbody that do not alter the existing ground level by more than 5 metres in depth or 2 metres in height;~~ ~~b. are within 20 metres of a waterbody that do not alter the existing ground level by more than 2 metres in depth or height; or~~ ~~are permitted provided that the activity:~~ Any earthworks activity: 1. shall not be undertaken at an elevation greater than 700 metres above mean sea level, with the exception of earthworks ancillary to fencing activities;	**Activity Status when compliance not achieved:** DIS

	2. shall not be undertaken on slopes of more than 20° except cultivation; and/or cause slope instability; 3. shall protect any stockpiles of material and all areas of bare ground created by the activity from soil erosion as soon as practicable; 4. shall not be undertaken within 5 metres of any waterbody, including wetlands and coastal water, or flood protection works, except cultivation of a field or domestic gardening; 5. shall not be undertaken on a contaminated or potentially contaminated piece of land unless it is in accordance with the National Environmental Standard for Assessing and Managing Contaminants in Soil to Protect Human Health 2011 contained in SCHED3; 6. does not affect the site of items listed in the Historic Heritage in HH-SCHED1; 7. is not undertaken in an area of Outstanding Natural Features and Landscapes as shown on the District Plan Maps.	

INF-PS4	Earthworks Within National Grid Yards	
	1. Earthworks within National Grid Yards are permitted provided that: a. earthworks within 2.2 metres of a pole support structure or stay wire shall not be greater than 300 mm in depth; b. earthworks between 2.2 metres and 5 metres of a pole support structure or stay wire shall not be greater than 750 mm in depth; c. earthworks within 12 metres of the outer edge of the visible foundation of a tower support structure shall not be greater than 300 mm in depth; d. earthworks shall not compromise transmission support structure stability; e. earthworks shall not result in a reduction of the existing conductor clearance distance above the ground as required in NZECP 34:2001;	**Activity Status when compliance not achieved:** DIS

	f. provided that the following activities are exempt from INF-PS4.1.a and INF-PS4.1.b above: i earthworks undertaken by a Network Utility Operator; or ii earthworks undertaken as part of agricultural or domestic cultivation, or repair, sealing or resealing of a road, footpath or driveway.	

Matters of Discretion or Control – Infrastructure

INF-MAT1	Degree of Compliance
	The degree and effects of non-compliance with the permitted activity standards.

INF-MAT2	The visual effects of the utility structure

INF-MAT3	The location of the infrastructure

INF-MAT4	Outstanding Natural Features and Landscapes
	The effects on any Outstanding Natural Features and Landscapes.

INF-MAT5	Navigational and safety requirements

INF-MAT6	The visual effects of the structure
INF-MAT7	The location and height of the structure
INF-MAT8	The duration of the structure

TRAN – Transport

The District's transport network provides for the movement of people, goods and services and includes **land**, air and water-borne forms of transportation. The key elements of the transport network are transport **infrastructure**, transport modes and transport movements. The network plays a vital role in enabling the effective and efficient functioning of the District and supports socio-economic well-being and growth through facilitating connections between home, employment, commercial, educational, recreational and cultural activities, as well as routes for visitors to or through the District. The transport network is an essential element of the region's engineering lifelines and provides essential access both during and following a **natural hazard** event. The benefits of maintaining an efficient transport network should be balanced with the adverse **effects** that can arise through development, operation, maintenance and upgrading.

Objectives

TRAN-O1

An integrated, safe, responsive and sustainable transport network.

Policies

TRAN-P1

Recognise the benefits of a safe and efficient transport network.

Explanation: The transport network gives rise to a range of positive socio-economic **effects** which can be maintained and potentially enhanced, through the provision of safe and efficient transport movements. This includes the reduction of potential hazards or distractions to users and the provision of **infrastructure** which suitably reflects transport modes and movements.

TRAN-P2

Recognise benefits from the development, operation, maintenance and upgrading of the transport network, whilst avoiding, remedying or mitigating adverse **effects** on the **environment**.

Explanation: The transport network plays a vital role in the functioning of the District however, it can give rise to adverse **effects** on the environment, including **effects** on water quality, natural character, amenity values and community severance. The development, operation, maintenance and upgrading of every facet of the transport network should carefully consider the reduction of any such effects. Particular consideration should be given to adverse effects on public health and safety. The consideration of impact of natural hazards on the transport network is considered under INF-P4 and NH-O1

TRAN-P3

Manage subdivision, land use and development to achieve integration with the transport network, roads that are designed to the context of their environment, roads that are capable of carrying all utility services, and roads that provide for the management of stormwater.

Explanation: Careful consideration should be given to the location, nature and design of subdivision, land use and development to ensure appropriate integration with the transport network. Activities should achieve appropriate accessibility and connectivity, to and from the network.

The New Zealand Building Code, District Plan and Southland District Council and Invercargill City Council Subdivision, Land Use, and Development Code of Practice 2023 ~~Southland District Council's Subdivision, Land Use and Development Bylaw 2012~~ provide guidance on this. The integration of activities and the transport network support best practice urban design. Where appropriate integration is not achieved, adverse effects on the transport network can arise.

TRAN-P4

Protect the transport network from incompatible **land** use, **subdivision** and development.

Explanation: The transport network can give rise to **reverse sensitivity** issues. Typically, this arises where incompatible land use, **subdivision** or development occurs in the vicinity of the transport network. Often it may be inappropriate for noise-sensitive activities to be located adjacent to the transport network. To ensure the ongoing development, operation, maintenance and upgrading of the transport network, the presence and function of the network should be recognised and, where possible, adverse **effects** should be reduced.

TRAN-P5

Recognise the benefits of transport choice.

Explanation: **Land** use, **subdivision** and development should provide transport choices through connections and accessibility to a range of transport modes such as cycling and walking networks, **road** and rail corridors and public transport routes. Transport choice can promote the efficient development and operation of the transport network and the movement of people, goods and services.

Rules

~~Rules relating to Transportation are contained within the GRZ - General Residential Zone, GRUZ - General Rural Zone, NOSZ - Natural Open Space Zone (Fiordland/Rakiura) Zone, and GIZ - General Industrial Zone, including the DEV1 - Edendale Development Concept Plan, INF - Infrastructure and SUB - Subdivision sections of the District Plan.~~

Southland District Council Plan Change 2: Subdivision, Land Use and Development Code of Practice

TRAN-R1	Permitted Activities
The following activities are Permitted Activities 1. The maintenance and repair of existing formed roads, including street furniture, within the existing legal road, accessways and rights of way, provided the works comply, as applicable, with: a. INF-PS1: Zone, b. INF-PS3: Earthworks, c. INF-PS4: Earthworks Within National Grid Yards	**Activity Status when compliance not achieved:** DIS
2. The construction by Council of: a. a new road not within an Outstanding Natural Features and Landscapes Overlay or area of significant **indigenous vegetation** or habitat of **indigenous** fauna, and b. a **road realignment** not within an Outstanding Natural Features and Landscapes Overlay or area of significant **indigenous vegetation** or habitat of **indigenous** fauna	**Activity Status when compliance with 2.a not achieved:** NC **Activity Status when compliance with 2.b not achieved:** DIS
3. Any activity or work relating to roads managed by the Crown within a National Park or Public Conservation Land that is consistent with the relevant National Park Management Plan or Conservation Management Strategy.	**Activity Status when compliance not achieved:** DIS

TRAN-R2	Discretionary Activities
The realignment of a road that is not within a National Park or Pubic Conservation Land but is within the Outstanding Natural Features and Landscapes Overlay or within an area of significant indigenous vegetation or habitat of indigenous fauna	**Activity Status when compliance not achieved:** N/A

TRAN-R3	Non-Complying Activities
The construction of a road that is not within a National Park or Public Conservation Land but is within the Outstanding Natural Features and Landscapes Overlay or within an area of significant indigenous vegetation or habitat of indigenous fauna.	**Activity Status when compliance not achieved:** N/A

Southland District Council Plan Change 2: Subdivision, Land Use and Development Code of Practice

Southland District Council Plan Change 2: Subdivision, Land Use and Development Code of Practice

LAN – Land Use and Development

The sustainable management of land use and development within Southland District has wide-ranging implications for the economic, social and cultural wellbeing of the people of the district and for the activities of infrastructure managers (particularly the provision and maintenance of three-waters assets, parks and reserves, and the roading network). It is also a positive contributor to the quality and sustainability of the Southland environment.

Objectives

LAN – O1

Land use and development within the Southland District promotes positive community and environmental outcomes alongside economic gains, and takes place in a manner which is environmentally, socially and culturally sustainable whilst balancing the need to be technically robust.

LAN – O2

Works undertaken as part of new developments are future focused, resilient, and will not impose environmental and financial costs and inequitable difficulties onto future generations, nor expose infrastructure providers and the communities of Southland to undue future liabilities and costs.

Policies

LAN – P1

Establish and implement best practice with consistent standards for assets that infrastructure managers will accept as part of their network, including requirements suitable for ongoing operations and maintenance of these assets, and requirements relevant to network assets which will remain in private ownership but connect to public assets.

LAN – P2

Recognise that all situations are not equal and respond to this by providing an avenue for alternative design solutions where the implications for the ongoing operation and management of Council's assets will not be compromised and where the environmental effects of the alternative design solution are less than minor.

LAN – P3

Development design considers low impact design principles, and the final choice of landform following earthworks represents the most desirable fit between the requirements of the development and the preservation of natural features and the natural character and landscape amenity values of the site including the retention of natural watercourses.

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LAN – P4

Require that in new developments or land use activities the water supply system is appropriate and functional and the required quality and quantity of water is supplied to all end users, that the adverse effects of land use and development on the environment are minimised by managing storm surface water run-off, and ensuring that wastewater systems are appropriate, properly functional and integrated with any existing systems.

Southland District Council Plan Change 2: Subdivision, Land Use and Development Code of Practice

Rules

LAN-R1	All Activities	
	1. All activities, in addition to complying with any performance standards listed in the relevant Zone or Activity rule, must comply with the LAN performance standards that are applicable to the land use, subdivision or development activity AND all activities or applications for resource consent must - a. demonstrate that there is no requirement for any one or more of the following services i. Water supply ii. Stormwater management system iii. Wastewater management system iv. Access provision to the site or development v. The road network serving the site or development or b. demonstrate that there is no requirement for any upgrading of any of those services or c. provide evidence of all required asset manager approvals for any necessary upgrade of those services.	**Activity Status when compliance with a performance standard is not achieved:** Refer to relevant Performance Standard

LAN-R2	Restricted Discretionary Activities	
	Any activity that does not comply with one or more of the performance standards applicable to the land use or development shall be a restricted discretionary activity.	**Matters of Discretion:** Refer to relevant Performance Standard

Performance Standards

LAN-PS1	Stormwater	
All Zones	1. The collection, treatment and disposal of stormwater, either to a reticulated network or on-site, arising from any subdivision, land use or development shall comply in all respects with the relevant provisions set out in Section 3, Section 4 and Section 6 of the Southland District Council and Invercargill City Council Subdivision, Land Use, and Development Code of Practice 2023. 2. If an alternative solution is proposed or required a. the alternative solution must meet the standards set out in Section 3.2.4, Section 4.2 and Section 6.2 of the Southland District Council and Invercargill City Council Subdivision, Land Use, and Development Code of Practice 2023, and b. evidence is provided that the alternative solution has been approved by all relevant departments of Council. 3. For on-site collection, treatment and disposal systems evidence must be provided by the applicant that a satisfactory on-site stormwater system can be provided for the proposed activity, and that there is no impact on the operation of any on-site wastewater collection, treatment and disposal system.	**Activity Status when compliance not achieved:** RDIS **Matters of Discretion:** LAN-MAT1: Degree of Compliance LAN-MAT3: Stormwater LAN-MAT8: Allotments LAN-MAT9: Flood Hazards

LAN-PS2	Wastewater - Collection, Treatment and Disposal to a Reticulated Network	
All Zones	1. Where the proposal is for disposal of wastewater to a reticulated network the collection, treatment and disposal of wastewater arising from any subdivision, land use or development shall comply in all respects with the relevant provisions set out in Section 3, Section 4, and Section 7 of the Southland District Council and Invercargill City Council Subdivision, Land Use, and Development Code of Practice 2023. 2. If an alternative solution is proposed or required a. the alternative solution must meet the standards set out in Section 3.2.4, Section 4.2 and Section 7.2 of the Southland District Council and Invercargill City Council Subdivision, Land Use, and Development Code of Practice 2023, and b. evidence is provided that the alternative solution has been approved by all relevant departments of Council. **Note:** Additional information or details may be requested when assessing the alternative solution to ensure the solution meets the standards contained within the Southland District Council and Invercargill City Council Subdivision, Land Use, and Development Code of Practice 2023.	**Activity Status when compliance not achieved:** RDIS **Matters of Discretion:** LAN-MAT1: Degree of Compliance LAN-MAT4: Reticulated Wastewater Systems LAN-MAT8: Allotments

Southland District Council Plan Change 2: Subdivision, Land Use and Development Code of Practice

LAN-PS3	Wastewater - On-Site Wastewater Collection, Treatment and Disposal at Subdivision Application	
All Zones	1. Where application for a subdivision consent is being made and the collection, treatment and disposal of wastewater is proposed to be on-site, the proposal shall comply, on a per allotment basis, in all respects with the relevant provisions set out in Section 3, Section 4, and Section 7 of the Southland District Council and Invercargill City Council Subdivision, Land Use, and Development Code of Practice 2023 and shall be suitable for any existing or intended land use activities. 2. If an alternative solution is proposed or required a. the alternative solution must meet the standards set out in Section 3.2.4, Section 4.2 and Section 7.2 of the Southland District Council and Invercargill City Council Subdivision, Land Use, and Development Code of Practice 2023, and b. evidence is provided that the alternative solution has been approved by all relevant departments of Council. 3. Evidence must be provided that a satisfactory on-site wastewater system can be provided for each new allotment and that there is no impact on the operation of any on-site stormwater treatment and disposal system. 4. Evidence must be provided of all fieldwork undertaken to establish the suitability of the site to receive and treat the volume and flow of wastewater to be discharged, including but not limited to soil conditions, water table depth and survey where necessary to accurately locate waterways and ditches. 5. Drawings must be provided to show how the facility will be laid out on site, distances from adjacent waterways, water bores and property boundaries, and a feasible location for a reserve area of 100% of the disposal area size, and any actual or proposed on-site stormwater disposal facility.	**Activity Status when compliance not achieved:** RDIS **Matters of Discretion:** LAN-MAT1: Degree of Compliance LAN-MAT5: On-Site Wastewater Systems LAN-MAT8: Allotments LAN-MAT9: Flood Hazards

LAN-PS4	Wastewater - On-Site Wastewater Treatment and Disposal at Land Use Consent or Building Consent	
All Zones	1. Where an application is made for land use consent, or a building consent under the Building Act 2004, on an allotment that existed in a Computer Freehold Register as at 22 March 2025 the collection, treatment and disposal of wastewater arising from the land use or development shall comply in all respects with the relevant provisions set out in Section 3, Section 4, and Section 7 of the Southland District Council and Invercargill City Council Subdivision, Land Use, and Development Code of Practice 2023. 2. If an alternative solution is proposed or required 1. the alternative solution must meet the standards set out in Section 3.2.4, Section 4.2 and Section 7.2 of the Southland District Council and Invercargill City Council Subdivision, Land Use, and Development Code of Practice 2023, and 2. evidence must be provided that the alternative solution has been approved by all relevant departments of Council. 3. Evidence is provided that a satisfactory on-site wastewater treatment and disposal system can be provided for the proposed activity. 4. Evidence is provided of all fieldwork undertaken to establish the suitability of the site to receive and treat the volume and flow of wastewater to be discharged, including but not limited to soil conditions, water table depth and survey where necessary to accurately locate waterways and ditches. 5. Evidence is provided to demonstrate that there will be no impact on the operation of any on-site stormwater treatment and disposal system. 6. Drawings must be provided to show how the facility will be laid out on site, distances from any down-grade waterways, water bores and property boundaries, and a feasible location for a reserve area of 100% of the disposal area size, and any actual or proposed on-site stormwater disposal facility.	**Activity Status when compliance not achieved:** RDIS **Matters of Discretion:** LAN-MAT1: Degree of Compliance LAN-MAT5: On-Site Wastewater Systems LAN-MAT8: Allotments LAN-MAT9: Flood Hazards

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LAN-PS5	**Water Supply**	
All Zones	1. The supply quantities and supply system of potable water required by any subdivision, land use or development shall comply in all respects with the relevant provisions set out in Section 3, Section 4, and Section 8 of the Southland District Council and Invercargill City Council Subdivision, Land Use, and Development Code of Practice 2023. 2. If an alternative solution is proposed or required a. the alternative solution must meet the standards set out in Section 3.2.4, Section 4.2 and Section 8.2 of the Southland District Council and Invercargill City Council Subdivision, Land Use, and Development Code of Practice 2023, and b. evidence is provided that the alternative solution has been approved by all relevant departments of Council. 3. For all subdivisions where a reticulated water supply is not available a consent notice shall be imposed on all new allotments requiring that when development occurs a firefighting reserve of water shall be installed and maintained on site and the storage and access to the storage shall meet the NZ Fire Fighting Water Supplies Code of Practice SNZ PAS 4509:2008. 4. For all land uses or developments where a reticulated water supply is not available a firefighting reserve of water shall be installed and maintained on site and the storage and access to the storage shall meet the NZ Fire Fighting Water Supplies Code of Practice SNZ PAS 4509:2008. **Note:** Additional information or details may be requested when assessing the alternative solution to ensure the solution meets the standards contained within the Southland District Council and Invercargill City Council Subdivision, Land Use, and Development Code of Practice 2023.	**Activity Status when compliance not achieved:** RDIS Matters of discretion: LAN-MAT1: Degree of Compliance LAN-MAT2: Water Supply LAN-MAT8: Allotments

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LAN-PS6	Transport	
All Zones	1. Any activity involving a. the planning and development of new roads; b. the planning and development of new accessways to allotments or activities; c. the upgrading of roads and accessways required for new land use activities, subdivision or development; or d. the provision of required parking as specified in LAN-TABLE1: Parking Requirements, or appropriate parking, loading and maneuvering as a result of new or changed land use activities, subdivision or development shall comply in all respects with the relevant provisions set out in Section 3, Section 4 and Section 5 of the Southland District Council and Invercargill City Council Subdivision, Land Use, and Development Code of Practice 2023, except that this performance standard shall not apply to the maintenance, construction or realignment of a road where the work is undertaken by the Department of Conservation or New Zealand Transport Agency. 2. If an alternative solution is proposed or required a. the alternative solution must meet the standards set out in Section 3.2.4, Section 4.2 and Section 5.2 of the Southland District Council and Invercargill City Council Subdivision, Land Use, and Development Code of Practice 2023, and b. evidence must be provided that the alternative solution has been approved by all relevant departments of Council and road controlling authorities.	**Activity Status when compliance not achieved:** RDIS **Matters of Discretion:** LAN-MAT1: Degree of Compliance LAN-MAT6: Transport LAN-MAT8: Allotments
	LAN-TABLE1: Parking Requirements	
	Accessible Spaces	

Total number of carparks	Number of Accessible Spaces
1 – 20	Not less than 1
21 – 50	Not less than 2
For every additional 50	Not less than 1

Activity Parking Requirements	
Activity or Use of Land or Building	**Spaces Required**
Dwellings or Residential Units	2 per unit
Elderly Persons and Kaumatua Housing Unit	1 per unit
Visitor Accommodation utilizing Dwellings	2 per unit
Visitor Accommodation	1 per unit
Commercial Activities	1 per 25m^2 gross floor area
Industrial Activities	1 per 100m^2 gross floor area or every two principals and employees, whichever is the greater
Industrial storage, internal or external	1 per 40m^2 gross floor area
Educational Activities	2 for every three staff

LAN-PS7	Network Utilities	
All Zones	The planning and development of network utility services required by any subdivision, land use or development shall comply in all respects with the relevant provisions set out in Section 3, Section 4, and Section 9 of the	**Activity Status when compliance not achieved:** RDIS Matters of discretion:

	Southland District Council and Invercargill City Council Subdivision, Land Use, and Development Code of Practice 2023.	LAN-MAT1: Degree of Compliance LAN-MAT7: Network Utilities

LAN-PS8	Landscape	
All Zones	The planning and development of landscaping to be provided within or required by any subdivision, land use or development shall comply in all respects with the relevant provisions set out in Section 3, Section 4, and Section 10 of the Southland District Council and Invercargill City Council Subdivision, Land Use, and Development Code of Practice 2023.	**Activity Status when compliance not achieved:** RDIS Matters of discretion: LAN-MAT1: Degree of Compliance LAN-MAT8: Allotments

LAN-PS9	Community Facilities	
All Zones	The planning and development of community facilities shall comply in all respects with the relevant provisions set out in Section 3, Section 4, and Section 11 of the Southland District Council and Invercargill City Council Subdivision, Land Use, and Development Code of Practice 2023.	**Activity Status when compliance not achieved:** RDIS Matters of discretion: LAN-MAT1: Degree of Compliance

Southland District Council Plan Change 2: Subdivision, Land Use and Development Code of Practice

Matters of Discretion – Land use and Development

LAN-MAT1	Degree of Compliance
	1. The degree of, the effects of, and the reasons for non-compliance with the standards set out in the Southland District Council and Invercargill City Council Subdivision, Land Use, and Development Code of Practice 2023. 2. Any implications for the attainment of the outcomes set out in the objectives and policies in the LAN Chapter and the objectives in Southland District Council and Invercargill City Council Subdivision, Land Use, and Development Code of Practice 2023.

LAN-MAT2	Water Supply
	1. Adverse effects on existing reticulated water supply networks. 2. The capacity of existing reticulated water supply networks and whether the servicing needs of the proposal require upgrades to existing infrastructure. 3. Feasibility of connection to and logical extension of the existing reticulated water supply networks. 4. Provision of suitable drinking water. 5. The efficient provision of services to the land. 6. Any effects on existing or proposed on-site reticulation networks, including actual or potential effects on the environment.

LAN-MAT3	Stormwater
	1. Adverse effects on existing reticulated stormwater networks. 2. The capacity of existing reticulated stormwater networks and whether the servicing needs of the proposal require upgrades to existing infrastructure. 3. Feasibility of connection to and logical extension of the existing reticulated stormwater networks. 4. Adverse effects on the surrounding environment and neighbouring properties from the collection, treatment and disposal of stormwater. 5. The efficient provision of services to the land. 6. The appropriate level of attenuation within the allotment based on surrounding and downstream flooding risks.

	7. The ability of the stormwater system to ensure that the peak discharge flow rates from the land are not increased beyond the levels that exist prior to the proposed subdivision land use or development. 8. Any effects on existing or proposed on-site reticulation networks, including actual or potential effects on the environment.

LAN-MAT4	Reticulated Wastewater Systems
	1. The capacity of existing reticulated wastewater networks and whether the servicing needs of the proposal require upgrades to existing infrastructure. 2. Feasibility of connection to and logical extension of the existing reticulated wastewater networks. 3. The efficient provision of services to the land. 4. Any effects on existing or proposed on-site reticulation networks, including actual or potential effects on the environment.

LAN-MAT5	On-Site Wastewater Systems
	1. The demonstrated capability of the site to receive and treat all wastewater associated with the proposed activity. 2. Where reticulated wastewater services are not available, the provision of adequate and suitable land area on each new allotment, at the time of subdivision, for on-site wastewater treatment and disposal. 3. The capacity of any existing wastewater treatment and disposal infrastructure and whether the servicing needs of the proposal require upgrades to existing treatment and disposal infrastructure. 4. The extent to which the proposal includes the sustainable design of the systems to protect public health and safety on the site and on neighbouring sites. 5. The adequacy of proposed maintenance schedules, advice to subsequent owners and overall provision for ongoing maintenance of systems. 6. Any effects on existing or proposed on-site reticulation networks, including actual or potential effects on the environment.

LAN-MAT6	Transport
	1. Adverse effects on existing or proposed roading networks including state highways or arterial roads.

	2. The capacity of existing roading networks, on-site driveways or accessways, accesses to the property and whether the needs of the proposal and the cumulative effects of the proposal require upgrades to any of these. 3. Feasibility of connection to and logical extension of the existing roading network. 4. Adverse effects on the surrounding environment and neighbouring properties from the proposed access, parking provision, loading provision, and on-site manoeuvring. 5. The adequacy of the number and design of the proposed parking, on-site access and manoeuvring, and loading provision for the activity, taking into account the current and foreseeable state of the surrounding traffic environment. This includes financial contributions to off-set adverse effects of inadequate parking, on-site access, manoeuvring and loading. 6. The standard of vehicular access to the site of the activity and the standard of the approach road(s). 7. The ability of all vehicles associated with the activity to safely access and exit the site. 8. The types of vehicles accessing the site, the projected maximum number of vehicle movements for each vehicle type, and the time of day these vehicle movements will occur. 9. The cumulative effects on the frontage road and vehicles using that road of the number of vehicle crossings associated with the property and activity. 10. The extent to which any existing landscaping, stormwater management or other infrastructure will be affected by the formation of vehicle crossings.

LAN-MAT7	Network Utilities
	The feasibility of connection to, logical extension of, and the provision and adequacy of services for access, wastewater, water supply, stormwater, electricity and telecommunications (landline or otherwise).

LAN-MAT8	Allotments
	Whether the allotments are of sufficient size and configuration to accommodate any intended activity, development or use and the effective and efficient servicing (access, water supply, stormwater, wastewater) of any intended activity, development or use.

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LAN-MAT9	Flood Hazards
	1. Any risk of the proposed infrastructure failing due to any potential flood hazard. 2. Any risk of failure because the design of the proposed infrastructure does not incorporate any features to avoid or mitigate the effects of any potential flood hazard. 3. Any potential of the proposal to exacerbate flood hazard risk, including transferring risk to another site, and any practicable mitigation measures. 4. The location and design of proposed sites, buildings, structures, vehicle access in relation to any flood risk. 5. The adequacy of any risk assessment and the level of risk as assessed by a suitably qualified and experienced person. 6. Any functional, technical or operational constraints of the proposed infrastructure.

SUB – Subdivision

Subdivision is a process of defining and redefining **land** parcel boundaries and can provide a framework for future **land** use and development. Integrated, well-planned **subdivision** can enhance character and **amenity values** by creating safe, healthy and pleasant **environments**. In contrast, inappropriately designed or located **subdivision** can result in the inefficient use of **natural and physical resources** and can give rise to adverse environmental **effects**.

Subdivision design should be responsive to its context and integrating with and reflecting the **site** and wider **environment**. It should recognise anticipated future **land** use or development to ensure that the size, shape and configuration of the resultant **allotments** and access to utility services, **infrastructure**, transport and facilities, are appropriate.

This chapter is focused on the location, nature and design of **subdivision**, the connection of resultant **allotments** to **infrastructure** and vehicular and public access. However, **subdivision** has a direct relationship with **land** use and this chapter is complemented by provisions of other sections in the District Plan including the GRUZ - General Rural Zone, GRZ - General Residential Zone, GIZ - General Industrial Zone and the NOSZ - Natural Open Space (Fiordland/Rakiura) Zone.

To enable **subdivision** and future **land** use and development to be comprehensively considered, Council encourages the concurrent lodgement of **subdivision** and **land** use resource consent applications. The **subdivision** provisions of the District Plan are linked to the Southland District Council and Invercargill City Council Subdivision, Land Use, and Development Code of Practice 2023 ~~Southland District Council Subdivision, Land Use and Development Bylaw 2012~~. The ~~Bylaw~~ Code of Practice sets minimum standards required by Council and ensures there is a consistent approach to **subdivision** and development across the District.

Objectives

SUB-O1

Subdivision is integrated and well-planned and gives particular consideration to the anticipated future **land** use and development.

SUB-O2

Allotments are provided with connections to utility services and **infrastructure**, where they are available.

SUB-O3

Subdivision enables public access and recreational opportunities to and along the District's coastline, **lakes**, **rivers** and public spaces, where appropriate.

Southland District Council Plan Change 2: Subdivision, Land Use and Development Code of Practice

Policies

SUB-P1

Recognise that integrated and well-planned **subdivision** design:

1. creates desirable places to live.
2. results in efficient and effective **land** use.
3. provides for anticipated future **land** use and development.
4. recognises the physical layout and underlying topography of the **site**.
5. integrates with existing utility services and **infrastructure**.
6. gives **effect** to any relevant outline development plan or **structure** plan.
7. implements best practice urban design principles.

Explanation. **Subdivision** design and the resultant pattern of **allotments**, **infrastructure** and open spaces linkages influence the character of the **environment**. The form and design of **subdivision** should reflect and respond to the physical characteristics and topography of the **site** and recognise anticipated future **land** use and development. This can enable appropriate access to utility services and **infrastructure**.

Integrated and well-planned **subdivision** provides a platform for sustainable growth, **land** use and development. Urban design is a key tool in achieving this and appropriate implementation of design principles can create safe, healthy and pleasant **environments**. **Subdivision** design should also consider the implementation of Crime Prevention Through Environmental Design measures. Where any outline development plan or **structure** plan for the **site** exists, this should be given effect to.

SUB-P2

Have regard to the following matters through the **subdivision** process where relevant:

1. The protection of areas of Outstanding Natural Features and Landscapes.
2. The protection of significant indigenous vegetation and significant habitats of indigenous fauna.
3. The protection of **historic heritage** and **sites** of significance to Iwi.
4. Risks associated with **natural hazards**.
5. Risks associated with areas of **land** identified as **contaminated** or **potentially contaminated**.
6. The preservation of natural character of the coastal **environment** and the margins of **lakes**, **rivers** and **wetlands**.

Explanation: **Subdivision** has a direct relationship with **land** use and can provide a framework for future use and development. Consideration of the resource management matters listed above can ensure that potential **effects** from **land** use and development are adequately assessed at the time of **subdivision**. The resource management issues outlined in this policy are detailed further in the following sections of the District Plan – ECO - Ecosystems and Biodiversity, NFL - Natural Features and Landscapes, CE - Coastal Environment, HH - Historic Heritage, NH - Natural Hazards and WASTE - Waste, HAZS - Hazardous Substances and CL - Contaminated Land.

SUB-P3

Recognise the benefits of an outline development plan or **structure** plan where large areas of **land** are to be rezoned or redeveloped.

Explanation: Outline development plans and **structure** plans provide a framework for areas of **land** that are to be rezoned or redeveloped. This includes the indicative type and density of development, its layout, connections to transport **infrastructure**, provision of and/or connection to reticulated **infrastructure**, open space linkages and any **site** constraints. These can provide the community with a level of certainty of the nature of future development and can assist in avoiding ad-hoc or un-coordinated development. Particular consideration to the provision of an outline development plan or **structure** plan should be given where rezoning or large-scale green-field development occurs.

SUB-P4

Recognise the benefits of a compact urban form and infill **subdivision** that provides for:

1. The protection of the high-value soils in the GRUZ - General Rural Zone.
2. The effective connection and efficient use of existing **infrastructure**, including reticulated utility services and the transport network.

Explanation: Council is seeking to consolidate **subdivision** and future growth around existing settlements, existing reticulated utility services and existing **infrastructure**. This approach can provide for the protection of **farming** activities utilising high-value soils for productive use. This manner of **subdivision** can promote coordinated, integrated and compact urban form and optimise the efficient use of utility services and **infrastructure**. It can also discourage urban sprawl, ad-hoc and ribbon development and the unviable extension of **infrastructure**. However, the cumulative **effects** of infill **subdivision** need to be addressed, including additional demands on utility services and **infrastructure** and the maintenance and enhancement of **amenity values**.

SUB-P5

Recognise that **rural-residential subdivision** may be appropriate in locations where:

1. **Allotment** size, shape and configuration maintain an open rural character.
2. Soils are not identified as being of high value.

3. **Sites** are not subject to significant risk from **natural hazards**.
4. Integration can be achieved with existing available reticulated utility services and transport **infrastructure**.
5. Consolidation can be achieved within and around existing residential areas.

Explanation: **Rural-residential subdivision**, independent of any **farming** or **intensive farming** activity, may be appropriate in some locations of the District, particularly in locations in close proximity to existing settlements. However, it must be undertaken in a manner that maintains an open rural character, achieves the efficient use of soil and **land** resources and connectivity with existing available utility services and transport **infrastructure**. **Rural-residential subdivision** applications should not be considered in isolation, cumulative **effects** should also be considered. **Rural-residential** development should only be undertaken in areas that are not subject to significant risk from **natural hazards**.

SUB-P6

Subdivision is undertaken in compliance with the Southland District Council and Invercargill City Council Subdivision, Land Use, and Development Code of Practice 2023 (Code of Practice) ~~Southland District Council Subdivision, Land Use and Development Bylaw 2012~~.

Explanation: The subdivision process is the appropriate time to ensure that connections to utility services and transport infrastructure are created. Requirements relating to vehicle access and connections to utility services are set out in Council's Code of Practice ~~Subdivision, Land Use and Development Bylaw 2012~~. The Code of Practice ~~Bylaw~~ sets minimum standards required by Council and ensures there is a consistent approach to subdivisions and developments across the District.

SUB-P7

Allotments are provided with a connection to the following utility services where they are available:

1. A reticulated potable **water** supply;
2. A reticulated stormwater system.;
3. A reticulated sewer system;
4. A reticulated energy supply;
5. **Telecommunications**;
6. **Trade waste** disposal in the General Industrial Zone only.

Explanation: Council considers that the **subdivision** process provides an appropriate opportunity to provide connections to utility services, where such services are available and the location of the development within the **site** is known. Within the GRZ - General Residential Zone, **allotments** should be connected to utility services.

Within the General Rural Zone, it is acknowledged that connections would only be practical where the **site** of the future development has been identified. Where this has not been identified, it is recognised that connections would best be provided at the development stage and consent notices on **subdivision** consents can provide for this. Where possible, the nature of the connection should reflect the level of service required by anticipated future **land** use or development. Where **water** supply, wastewater and stormwater disposal reticulations are not available, these shall be provided on-site or as part of a communal scheme. Where a **subdivision** is staged, careful consideration should be given to the coordinated and efficient provision of connections.

Additional demands on reticulated services can be a burden on ratepayers and development contributions ensure that costs are appropriately apportioned. Development costs associated with the connection to and any development or upgrading of reticulated services associated with **subdivision** shall be met by the applicant of the **subdivision** consent, under the Local Government Act 2002 (LGA). Council's Long-Term Plan outlines the contributions required.

SUB-P8

Recognise that alternative means of **telecommunication** and energy supply may be available and may be appropriate in certain circumstances where **subdivision** is proposed in the GRUZ - General Rural Zone and NOSZ - Natural Open Space (Fiordland/Rakiura) Zone.

Explanation. Modern broadband and satellite **telecommunication** technologies provide opportunities for alternative **telecommunication.** The use of alternative means of communication in remote areas of the District should be undertaken in a manner that ensures that access to essential emergency services is provided and will be maintained at the time of **subdivision**.

SUB-P9

Maintain or enhance public access to the coastline, **lakes**, **rivers** and public spaces by integrating pedestrian and cycle linkages, through the **subdivision** process.

Explanation. The **subdivision** process provides an appropriate opportunity to facilitate and coordinate this access and associated linkages. This can be provided via a range of mechanisms, including **esplanade reserves** and strips provided for under the RMA and access easements. Public access and pedestrian and cycle networks provide recreational and open space opportunities, promote a sense of place and identity and support public health and wellbeing.

SUB-P10

Provision of esplanade mechanisms to and along the coastline, **lakes** and **rivers**.

Explanation. The Act enables Council to require **esplanade reserves** or strips through provisions in the District Plan, at the time of **subdivision**. Esplanade mechanisms provide for the protection of conservation values of **riparian margins**, the maintenance of **water** quality and aquatic habitats and the enhancement of public access and recreational opportunities. In addition, **esplanade reserves** can provide access for waterway maintenance or bank stability works.

Esplanade requirements vary, but generally reflect the nature and width of the waterway, its value for public access and recreation, its conservation value and the nature of **adjoining land** use. SCHED1 -Rivers and Streams Requiring Esplanade Mechanisms of the District Plan lists the areas of coastline, **lakes** and **rivers** where esplanade mechanisms are required and the nature of that esplanade.

SUB-P11

Costs associated with the extension of existing **infrastructure** services are to be borne by the developer.

Explanation: **Subdivision** and development can adversely affect the sustainability of reticulated services. The full cost associated with the connection to and any upgrading of existing reticulated services that is brought about by **subdivision** and subsequent development should, in Council's view, be met by the developer. Additional demands on transport **infrastructure** from **subdivision** can be a burden on ratepayers and financial contributions ensure that costs are appropriately apportioned.

Costs associated with access to and any development, upgrading or maintenance of, existing transport **infrastructure** associated with **subdivision** shall be met by the applicant of the **subdivision** consent, by way of financial contributions under the Resource Management Act 1991. FIN – Financial Contributions of the District Plan outlines the situations where contributions are required.

SUB-P12

Adopt a precautionary approach where **subdivision** is proposed on **contaminated land** or **potentially contaminated land**.

Explanation: Determining the absence, presence, extent and degree of any contamination in or on areas of **land** provides a baseline when assessing applications for **subdivision** and development activities. The presence, extent and nature of contamination should be determined in accordance with the Ministry for the Environment's Contaminated Land Management Guidelines No. 1 to No. 5 and the Resource Management Act 1991 National Environmental Standard for Assessing and Managing Contaminants in Soil to Protect Human Health 2011. Applications for **subdivision** may also require consent under the National Environmental Standard for Assessing and Managing Contaminants in Soil to Protect Human Health 2011.

SUB-P13

Adopt a precautionary approach where **subdivision** is proposed in areas at significant risk of **natural hazards**.

Explanation: Our knowledge of **natural hazards** is incomplete, evolving and inherently uncertain to some degree. Where there is uncertainty about **natural hazard** risks, a precautionary approach should be adopted.

SUB-P14

Avoid or mitigate the potential adverse **effects** of **natural hazards** on new **allotments** created through the **subdivision** process.

Explanation: **Effects** can be avoided by ensuring each new **allotment** provides a natural hazard-free area suitable for future development. Where **effects** cannot be avoided, it may be appropriate to decline the activity. Where consent is granted, **effects** should be appropriately mitigated through **land** use controls.

SUB-P15

Recognise that **subdivision** in areas of significant **natural hazard** risk, should not create a density of development that exacerbates the risk of the hazard to people or property.

Explanation: It is not appropriate to exacerbate risks to people by allowing intensive **subdivision** to occur in an area of known significant flood hazards. A larger lot size will assist in reducing potential housing density in these areas and therefore the number of people and properties at risk whilst at the same time enabling the use of **land** for social and economic benefit. Where appropriate mitigation of the potential hazard risk through larger lot sizes cannot be achieved, it may be appropriate to decline the activity.

SUB-P16

Avoid, remedy or mitigate **reverse sensitivity effects** on **infrastructure**.

Explanation: **Subdivision** and subsequent **land** use and development can increase the potential for **reverse sensitivity effects** on **infrastructure**. Infrastructure and **network utility operators** provide an important, essential service to the Southland District and Wider National Networks. To ensure the continuation of this essential service the presence and function of the **infrastructure** should be recognised and careful consideration given to preventing the establishment and expansion of **sensitive activities** located in the vicinity of **infrastructure**. With regard to the **National Grid** Lines and Support **Structures** in particular, Council has adopted a **National Grid corridor** approach with associated **land** use rules contained with the GRUZ - General Rural and GRZ - General Residential Zone sections of the District Plan to manage these potential **effects** on **National Grid** Lines and Support **Structures**. Any **subdivision** design adjacent to or within a **National Grid corridor** will be required to address the extent to which the **subdivision** design provides for roading, reserves, landscaping and **building platforms** that do not affect or are not affected by the **transmission line**.

Rules

The Zone Sections of the District Plan apply in addition to any relevant district-wide rules such as those relating to **Subdivision**. If any of the Zone or District Wide Rules detailed in the following sections are breached, the activity will require resource consent:

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- LAN – Land Use and Development
- GRUZ - General Rural Zone
- GRZ - General Residential Zone
- GIZ - General Industrial Zone
- NOSZ - Natural Open Space Zone – (Fiordland/Rakiura)
- LDRZ-TRZB Low-Density Residential Zone - Te Anau Residential Zone B
- SPZ-EWE - Special Purpose Zone - Eweburn Zone

SCHED11 should also be referred to for guidance on what to include in applications.

SUB-R1	Permitted Activities
Applications for certification of **allotments** on an existing Survey Plan under section 226(1)(e)(ii) of the RMA must ensure all **allotments** for certification comply with the following criteria: 1. Access must comply with minimum sight distances and formation standards set out ~~outlined in the~~ in Section 5.3.18 and Section 5.5.1 of the Southland District Council and Invercargill City Council Subdivision, Land Use, and Development Code of Practice 2023. ~~Subdivision, Land Use and Development Bylaw.~~	**Activity Status when compliance not achieved:** ~~DIS~~ As set out in the LAN-PS6: Transport
2. No **buildings** are within 1 metre of the title boundaries to be created by the certification.	**Activity Status when compliance not achieved:** DIS
3. The property is not located within the Flooding Inundation **Natural Hazard Overlay** on the Planning Maps.	**Activity Status when compliance not achieved:** DIS

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4. ~~In addition to a. - c., lots~~ Lots of less than 2,000 m² in the GRZ - General Residential Zone, Rural Settlement Overlay and GRUZ - General Rural Zones must comply with LAN-R1. ~~also:~~ a. ~~Have power and telephone services connected to the boundary~~ ~~in accordance with LAN-PS5.~~ b. ~~Have water, wastewater and surface water infrastructure connected to the boundary where that infrastructure is provided in that zone or where the lot is within 500 metres of a reticulated network, in accordance with the requirements of the Subdivision, Land Use and Development Bylaw.~~ c. ~~Be able to comply with NZS 1547:2012 "On-Site Domestic Wastewater Management' where the lot is greater than 500 metres from reticulated wastewater~~ **infrastructure**.	**Activity Status when compliance not achieved:** ~~DIS~~ As set out in the LAN-Land Use and Development Section

SUB-R2	Controlled Activities
The following **subdivision** activities are **Controlled Activities**: 1. **Subdivision** of **land** to provide for an unmanned **network utility operator**.	**Activity Status when compliance not achieved:** DIS **Matters of Control:** ~~SUB-MAT1: On-site Wastewater~~ SUB-MAT2: Financial Contributions and Bonds
2. **Boundary adjustments**	**Activity Status when compliance not achieved:** DIS **Matters of Control:** ~~SUB-MAT1: On-site Wastewater~~ SUB-MAT2: Financial Contributions and Bonds

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3. Amendments to cross-lease **subdivisions**; where they comply with the following criteria: a. The Standards as required to be achieved by LAN – R1 ~~set out in the Southland District Council Subdivision, Land Use, and Development Bylaw 2012.~~ b. The **site** on which the activity is to be undertaken does not contain an item of **Historic Heritage** as listed in HH-SCHED1. c. The **subdivision** boundaries of any **allotments**, which have existing **buildings**, are aligned to ensure that the **buildings** comply with the requirements of: i. the Building Act 2004 and the Building Code 2004; and ii. the bulk and location requirements of the relevant Zone.	**Activity Status when compliance with 3a not achieved:** As set out in LAN-Land Use and Development Section **Activity Status when compliance with 3b and 3c not achieved:** DIS **Matters of Control:** ~~SUB-MAT1: On-site Wastewater~~ SUB-MAT2: Financial Contributions and Bonds
4. **Subdivision** within the GRZ - General Residential Zone, where each **allotment** complies with the following criteria: a. There is a minimum buildable area of 15 metres x 12 metres free of impediments and capable of meeting bulk and location requirements of the GRZ - General Residential Zone. b. In respect of all **infrastructure** (including **water**, stormwater, wastewater, electricity, and **telecommunications**) compliance with LAN-R1 is demonstrated. ~~All **infrastructure** (including **water**, stormwater, wastewater, electricity, and **telecommunications**) will be installed to the boundary as a minimum by the developer, as part of the **subdivision** consent, where that **infrastructure** is provided within that GRZ - General Residential Zone. OR be capable of accommodating a suitable **on-site wastewater disposal system** that complies with the relevant New Zealand Standard, where that residential zone does not have a reticulated wastewater system.~~ c. There is no new access off a State Highway. d. No **allotment** is identified as being subject to **natural hazards** as shown in the Hazard Overlay on the District Plan Maps. e. No **allotment** includes part or all of the **National Grid Yard** or **National Grid Corridor**. f. The standards set out in ~~the Southland District Council Subdivision, Land Use and Development Bylaw 2012.~~ LAN-PS6: Transport. g. The **site** on which the activity is to be undertaken does not contain an item of **Historic Heritage** as listed in HH-SCHED1.	**Activity Status when compliance with 4b not achieved:** As set out in LAN-Land Use and Development Section **Activity Status when compliance with 4f not achieved:** As set out in LAN-PS6: Transport **Activity Status when compliance with 4a, 4c to 4e, 4g and 4h not achieved:** DIS **Matters of Control:** As set out in LAN-Land Use and Development Section SUB-MAT2: Financial Contributions and Bonds SUB-MAT3: Esplanade Mechanism Requirements

h. The **subdivision** boundaries of any **allotments**, which have existing **buildings** are aligned to ensure that the **buildings** comply with the requirements of the Building Act 2004 and the Building Code 2004. Notwithstanding SUB-R4, SUB-R5 and SUB-R6, where an activity described in SUB-R2 does not comply with any of the specified criteria, except SUB-R2.4.f, that activity is a **Discretionary Activity** **Note:** Impediments are considered to include easements, **infrastructure** not covered by easements but protected under the LGA, right of way, or an area of contamination.	

SUB-R3	Restricted Discretionary Activities	
Subdivision within the Eweburn Zone shall be a **Restricted Discretionary Activity**. **Note:** Any subdivision within Activity Areas 1, 2 or 3 and Activity Clusters A and B shall be submitted outlining how the remaining site coverage allowance will be apportioned to each new allotment created. Council will then issue a Consent Notice on the Computer Freehold Register for each respective allotment which outlines the site coverage allowance.		**The matters over which Council's discretion is restricted to:** ~~SUB-MAT4: Infrastructure~~ ~~SUB-MAT5: Wastewater~~ ~~SUB-MAT6: Potable Water~~ LAN-MAT1: Degree of Compliance LAN-MAT2: Water Supply LAN-MAT3: Stormwater LAN-MAT4: Reticulated Wastewater Systems LAN-MAT5: On-Site Wastewater Systems LAN-MAT6: Transport LAN-MAT7: Network Utilities SUB-MAT7: Site Coverage and Dwellings SUB-MAT8: Allotments ~~SUB-MAT9: Aspects outlined in Council's Subdivision, Land Use and Development Bylaw.~~ SUB-MAT10: Buffer Landscape Strips

SUB-R4	Discretionary Activities	
The following subdivision activities are Discretionary Activities: 1. Any subdivision activity not provided for by SUB-R1, SUB-R2 or SUB-R5 or prohibited by SUB-R6.		**Activity Status when compliance not achieved:** N/A
2. Subdivision of land within the NOSZ - Natural Open Space (Fiordland/Rakiura) Zone Transitional Area.		**Activity Status when compliance with SUB-R5.1 not achieved:** NC
3. Subdivision of land within the NOSZ - Natural Open Space Zone but outside of the Transitional Area and National Parks, provided that the resultant lots are all greater than 10 hectares.		**Activity Status when compliance with SUB-R5.1 not achieved:** NC
4. Subdivision that creates allotments that include the National Grid Corridor but not the National Grid Yard.		**Activity Status when compliance not achieved:** N/A

SUB-R5	Non-Complying Activities	
The following subdivision activities are Non-Complying Activities: 1. Except as provided in SUB-R1 and SUB-R2, any subdivision in the NOSZ - Natural Open Space Zone outside of a National Park and the Transitional Area, where any resultant lot is less than 10 hectares.		**Activity Status when compliance not achieved:** N/A
2. Subdivision in an area identified as an Outstanding Natural Feature or Landscape.		**Activity Status when compliance not achieved:** N/A
3. Subdivision that creates allotments that include the National Grid Yard.		**Activity Status when compliance not achieved:** N/A

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SUB-R6	Prohibited Activities
The subdivision of any land within a National Park is a Prohibited Activity. **Note:** Any lease granted by the Minister of Conservation on Conservation Land is exempt from the subdivision provisions of this plan in accordance with section 17P of the Conservation Act 1987.	**Activity Status when compliance not achieved:** N/A

SUB-R7	
Esplanade mechanisms shall apply to the following subdivision activities: 1. Where an allotment of less than 4 hectares is created when land is subdivided adjoining a lake or river identified in SCHED1 Rivers and Streams Requiring Esplanade Mechanisms, an esplanade strip or reserve up to 20 metres in width shall be required within the allotment along the bank of the river or lake. 2. Where an allotment greater than 4 hectares is created when land is subdivided adjoining a lake or river identified in SCHED1, the Council may require an esplanade strip in the following circumstances: a. Where strips/reserves already exist adjacent to or in the general vicinity of the subdivision and the creation of an esplanade strip would complement or increase the area of land available for public access. b. On land adjacent to any waterbody where such a strip or reserve may be necessary to provide for the purposes set out in section 229 of the Act.	

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Matters of Discretion or Control

SUB-MAT1	~~On-site Wastewater~~ Deleted
	~~The provision of services including adequate provision of on-site wastewater systems where required.~~

SUB-MAT2	Financial Contributions and Bonds
	The need for financial contributions and/or bonds.

SUB-MAT3	Esplanade Mechanism Requirements

SUB-MAT4	~~Infrastructure~~ Deleted
~~SPZ-EWE~~	~~Connection to infrastructure services including electricity and telecommunications (landline or otherwise).~~

SUB-MAT5	~~Wastewater~~ Deleted
~~SPZ-EWE~~	~~Suitable disposal of wastewater (either through onsite disposal or through a communal disposal system).~~

SUB-MAT6	~~Potable Water~~ Deleted
~~SPZ-EWE~~	~~Potable water and fire-fighting water supply.~~

SUB-MAT7	Site Coverage and Dwellings

SPZ-EWE	The apportioned site coverage allowance and number of dwellings (based on SPZ-EWE-R6 – Non-Complying Activities) within the Activity Cluster or Activity Area.

SUB-MAT8	Allotments
SPZ-EWE	That the allotments are of sufficient size to accommodate any intended activity, development and use.

SUB-MAT9	~~Aspects outlined in Council's Subdivision, Land Use and Development Bylaw.~~ Deleted

SUB-MAT10	Buffer Landscape Strips
SPZ-EWE	The timing and completion of planting within the State Highway Buffer Landscape Strip.

FIN—Financial Contribution

Subdivision, land use and development can increase demands on infrastructure and of particular concern to Council, is any increased pressure on roading and reserve infrastructure. The RMA enables the Council to require financial contributions through the resource management process, which can ensure that costs associated with the development, maintenance and upgrading of roading and reserves infrastructure, necessitated by subdivision, land use and development, are met by the developer. Costs attributed to the developer shall be fair and reasonable and reflect the actual adverse environmental effects that the subdivision, land use or development imposes on natural and physical resources. Financial contributions can offset adverse effects and relieve the burden on ratepayers to meet those costs. The LGA also enables the Council to require development contributions for community infrastructure, network infrastructure and reserves. The reserve contribution framework is in both the Council's Long-Term Plan (LTP)- developed under the LGA and District Plan (developed under the RMA). However, the Council cannot double-up and impose contributions towards the same asset or infrastructure under both Acts. The Council's LTP outlines the circumstances where development contributions are required.

Objectives

FIN-O1

The developer shall meet the fair and reasonable costs of developing, maintaining and upgrading roading infrastructure, necessitated by the subdivision, land use or development.

FIN-O2

Reserves managed by the Council are appropriately located and adequately developed and maintained to meet the needs of the community.

Policies

FIN-P1

Financial contributions shall be applied in a fair and equitable manner that:

1. is financially transparent;
2. reflects the adverse effects generated by the subdivision, land use or development;
3. is complementary to the Council's other financial management policies;
4. takes into account the Council's maintenance and operational obligations;
5. takes into account any costs incurred in the taking, holding and allocating of the financial contribution, including, but not limited to:
    a. The reimbursement of legal costs incurred by the Council in providing easements, encumbrances, covenants and the like.
    b. The reimbursement of fees charged to the Council by Government Departments, local authorities and the suppliers of public utilities.

c. Survey work.
d. Any other administration fees.

Explanation: Subdivision, land use and development can give rise to significant adverse effects on the District's roading and reserve infrastructure. To ensure that the rate-payer's interests are protected, the maximum financial contributions payable are the full actual monetary cost, but the actual amount levied must be determined on a case-by-case basis.

FIN-P2

Make provision for reserve acquisition, improvement and development, either via land or a financial contribution at the time of subdivision, land use or development.

Explanation: The RMA enables the taking of a financial contribution in the form of cash, land or any combination of these. The contribution is intended to go towards providing for public open space and recreation areas, including parks and sports fields, where this will effectively maintain or add to the quality and diversity of open spaces and recreation areas in the District.

The Zone sections of the District Plan apply in addition to any relevant district-wide rules such as those relating to financial contributions. If any of the Zone Rules detailed in the following sections are breached, the activity will require resource consent:

- GRUZ - General Rural Zone
- GRZ - General Residential Zone
- GIZ - General Industrial Zone
- NOSZ - Natural Open Space Zone – (Fiordland/Rakiura)
- LDRZ-TRZB - Low-Density Residential Zone - Te Anau Residential Zone B
- SPZ-EWE - Special Purpose Zone - Eweburn Zone

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Rules

FIN-R1	General Rule
	All Non-Complying and Discretionary Activity resource consents are subject to the potential imposition of a financial contribution in accordance with the financial contribution provisions 1 to 6 specified below. Controlled and Restricted Discretionary Activity resource consents are subject to the potential imposition of a financial contribution only where specifically stated as a matter of control or discretion.
	Purpose of Financial Contributions 1. The Council may require financial contributions for the purposes of: a. Offsetting the effects of a subdivision, land use or development on roading and reserve infrastructure. b. To secure environmental compensation for adverse effects on roading and reserve infrastructure associated with the subdivision, land use or development that cannot be avoided, remedied or otherwise mitigated, so that a positive environmental outcome is achieved. c. To add to the quality and diversity of open spaces and recreation areas available to communities within the District.
	2. Calculation of Financial Contributions a. Roading Infrastructure The maximum contribution required for the development, maintenance and upgrading of roading infrastructure that serves a subdivision, land use or development shall be 100% of the estimated cost provided that the actual contribution levied shall be a fair and reasonable contribution having regard to the following matters: i. The current status and standard of the roading infrastructure both leading to and fronting the site and the adequacy of that roading infrastructure for its current and proposed use. ii. The benefit to the subdivision, land use or development arising from the improvement to the roading infrastructure relative to the benefit to existing users and other members of the public. iii. The standard and classification of the road required as a result of the subdivision, land use or development. iv. The expenditure required to meet this standard. v. The use or likely future use of the road by other parties and the contributions (if any) to be made or already made by such parties.

vi. The contributions made by central government or other agencies or organisations towards the development of the road and any contribution (if any) already made by the developer.

vii. Any equitable contribution toward work for which a financial contribution has previously been taken where the developer will benefit from that work.

viii. Development and upgrading costs shall be calculated as per the standards in the Southland District Council and Invercargill City Council Subdivision, Land Use, and Development Code of Practice 2023 ~~Southland District Council Subdivision, Land Use and Development Bylaw 2012~~.

Note: Roading infrastructure may include more than one road where these are significantly affected by the subdivision, land use or development.

Cost calculations and associated financial contributions payable should reflect the New Zealand Transport Agency's Construction Index. Due to the volatile nature of bitumen prices, costs can vary from the standard rate of inflation and if not taken into consideration can result in a significant shortfall for the Council.

b. Reserves

Reserve contributions shall be required as follows:

i. Where existing reserves in the locality are unable to absorb the additional demand resulting from the proposed development then the following reserves contribution will be required:
   - 2% of the value of additional allotments, at the time of subdivision consent (either in cash or land equivalent, at Council's option) up to a maximum of 2% of the value of 1,000 m2 of the land within each additional allotment.

ii. Where minor improvements to existing reserves in the locality would enable absorption of the additional demand resulting from the proposed development then the following reserves contribution will be required:
   - 1% of the value of additional allotments, at the time of subdivision consent (either in cash or land equivalent, at Council's option) up to a maximum of 1% of the value of 1,000 m2 of the land within each additional allotment.

iii. Cash equivalent of the value of 20 m2 of land for each additional residential unit created, at the time of resource consent less any contribution made at the time of previous subdivision within the preceding 10 years.

iv. Cash equivalent of the value of 4 m2 of land for each additional 100 m^2 of new, net, non-residential, building floor area created in the General Residential Zone, Commercial Precinct or General Industrial Zone, at the time of resource consent, less any contribution made at the time of previous subdivision within the preceding 10 years.

	v. Where the contribution is given as land, the location shall be suitable for the reserve purposes of the area and shall be no less than 1,000 m2 in each separate title. Acceptance of land is at the discretion of the Council. vi. No reserve contribution shall be required for any allotment exceeding 4 hectares in area. For the purposes of this policy, the land value used is to be the current market value, exclusive of GST, at the time of the application for consent or approval to connect to utility services. Where an agreed current market value cannot be established by mutual agreement between the Council and the developer, then the value will be that established by a registered valuer agreed by both parties and jointly retained, with the cost of the valuation fees being shared equally by the Council and the developer.
	3. Circumstances When Financial Contributions May Be Taken The Council may require as a condition or conditions of a subdivision or land use consent the payment of financial contributions where the subdivision, land use or development necessitates the development, maintenance or upgrading of roading or reserve infrastructure. a. Where any financial contribution is, or includes the payment of money, the Council may specify any one or more of the following in the conditions of the resource consent: i. The amount to be paid by the developer. ii. How the payment is to be made, including whether payment is to be made by instalment and whether bonding or security can be entered into. iii. When the payment is to be made: 1. Generally, in the case of subdivision, prior to uplifting the section 224 certificate; and 2. Generally, in the case of land use, prior to the consent being given effect to. iv. If the amount of the payment is to be adjusted to take account of inflation and if so, how the amount is to be adjusted. v. Whether any penalty is to be imposed for default in payment and if so, the amount of the penalty or formula by which the penalty is to be calculated. b. Where any financial contribution is, or includes land, the Council may specify any one or more of the following in the conditions of the resource consent: i. The location and area of the land. ii. The state the land is to be in prior to vesting in or transferring to the Council. iii. The purpose of the land if it is to be classified under the Reserves Act 1977, or the general purpose of the land.

	iv. When and how the land is to be vested in, or transferred to the Council. In the case of subdivision consent the land shall be vested on the deposit of the survey plan under section 224 of the RMA, or transferred as soon as the certificate of title or computer freehold register is available.
	4. Review of Calculation of Costs Where a developer requests that the calculation of costs be reviewed, any costs incurred in reviewing Council's cost calculations shall be met by the developer. **Note:** If the Council agrees with the appeal on costs, then the Council will not charge for staff time spent in reviewing the calculation.
	5. Credits and Refunds Financial contributions may be credited or refunded by the Council in circumstances where: a. A resource consent which includes a condition requiring a financial contribution, lapses or is cancelled or surrendered in accordance with the provisions of the RMA. b. The Council does not undertake the works or infrastructure for which the contribution was required. c. The Council does not utilise the contribution for the specified reserves purposes within 10 years. The Council shall, on notice, pay or return to the person entitled to the financial contribution less a value equivalent to the costs incurred by the Council in relation to the activity and its discontinuance PROVIDED THAT the Council shall not pay for or credit the value of any work or services provided as a financial contribution before the resource consent lapses or is cancelled or surrendered or does not proceed. No interest will be paid. The amount of any previous payment shall be deducted from the level of the financial contribution payable in respect of any subdivision or land use consent in the following circumstances: a. Where the financial contributions previously paid was to provide capacity in roading and reserve infrastructure. b. If a financial contribution has previously been paid to the Council in respect of a land use consent subject to an application for subdivision consent. c. If a financial contribution has previously been paid to the Council in respect of a subdivision consent for the land subject to an application for a land use consent.

	6. Administration The Council shall keep a register of all financial contributions made which shall contain the following information: a. The amount of the financial contribution. b. The name of the person making the contribution and the date on which the financial contribution was made. c. The purpose for which the financial contribution was imposed and made. d. The name of the person entitled to any refund or credit.

GRUZ – General Rural Zone

The District's rural areas, defined as the General Rural Zone, predominantly support farming-related activities but also provide for a range of land uses, such as infrastructure and renewable electricity generation activities. The character of the rural area is one where there is a mix of activities that require a rural location. The protection and maintenance of the life-supporting capacity and productive value of the land resource is of critical importance to the District's socio-economic and cultural well-being. Inappropriate land use and development can give rise to a range of adverse effects and careful consideration should be given to the location and nature of activities to promote sustainable land use and development. Many areas within the General Rural Zone are valued for their rural character and amenity and the General Rural Zone can be an attractive location for residential activities.

The Rural Settlement Areas provide for the consolidation or clustering of development around those existing established areas. Inappropriate subdivision, land use and development can give rise to a range of adverse effects on the District's rural environments and can result in the inefficient use of natural and physical resources. The location and nature of activities, particularly those that can be sensitive to farming activities, should be given careful consideration in order to promote sustainable growth and development and ensure integration with rural environments.

Objectives

GRUZ-O1

Subdivision, land use and development in the General Rural Zone shall be undertaken in a manner that maintains the life-supporting capacity and productive value of the land resource.

GRUZ-O2

Maintain amenity values, including rural character.

Policies

GRUZ-P1

Recognise the benefits of subdivision, land use and development in providing for the growth and development of the District, whilst avoiding, remedying or mitigating adverse effects on the environment.

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Explanation: Well-planned subdivision, land use and development can provide a framework for the sustainable growth and development of the District. Farming and non-farming activities are key contributors to the socio-economic well-being of the District. However, adverse effects can arise from the nature and scale and the physical or built form, of some rural activities. Land use and development should integrate with infrastructure and transportation networks and careful consideration should be given to the location and nature of activities in order to avoid, remedy or mitigate adverse environmental effects. The District contains a diverse range of activities within the rural area that contribute to the continued growth and development of agriculture, such as the Woodlands Research Farm and other industry monitor farms.

GRUZ-P2

Manage subdivision, land use and development in a manner that maintains or enhances amenity values, including rural character and landscapes.

Explanation: Subdivision, land use and development should be sympathetic to rural character and amenity values, and enhance these where possible.

The dominant character of the District's rural working landscapes includes reasonable separation between dwellings to maintain privacy and a sense of openness, the clustering of dwellings with other farm buildings and structures, a generally low background noise level but with some intermittent and/or seasonal noise from rural activities, clean air but with some significant short term and/or seasonal odour associated with farming activities.

GRUZ-P3

Avoid, remedy or mitigate reverse sensitivity effects.

Explanation: The General Rural Zone provides for a range of activities that may at times be incompatible with each other. Further, rural character and amenity values can serve as an attraction for residential activity in the General Rural Zone. However, character associated with working rural environments can give rise to conflict between land use activities and result in reverse sensitivity. Conflict between land use activities can occur where neighbouring or nearby land uses are not compatible. In the General Rural Zone, some farming and intensive farming activities can generate significant noise, lighting, odour and dust effects. In many cases, these effects should be avoided, remedied or mitigated. Such effects should be reasonably expected within the General Rural Zone and it is preferable that the management of these effects do not result in undue restrictions on farming and intensive farming activities.

GRUZ-P4

Subdivision, land use and development shall be undertaken in a manner that:

1. Promotes sustainable land use and soil management practices.
2. Maintains the life-supporting capacity and productive value of the land resource.
3. Avoids or mitigates erosion, sedimentation and instability of soils, particularly on hill country land.

Explanation: The District's land and soil resources are a key contributor to the socio-economic well-being of the District. The control of inappropriate subdivision, land use and development of land and soil resources can protect and maintain the productive use of land and ensure that the economic value of these resources is preserved. Land use practices should ensure soil properties are maintained or enhanced and erosion, compaction, nutrient loss and soil disturbance are avoided or minimised, this is particularly critical for high-value soils and soils on hill country land. These soils provide highly productive farming land, suitable for a range of rural production activities. The District's hill country can be prone to erosion and instability and inappropriate activities can give rise to adverse effects including sedimentation and slips. Fragmentation of rural properties for rural-residential subdivision can potentially reduce the productive use of land in the General Rural Zone.

GRUZ-P5

Recognise that rural-residential activity may be appropriate in locations where:

1. Soils are not identified as being of high value.
2. Integration can be achieved with infrastructure and transportation networks.
3. Sites are not subject to significant risk from natural hazards.
4. Allotment size, shape and configuration maintains open rural character.
5. Consolidation can be achieved within and around existing residential areas and Rural Settlement Areas.

Explanation: There are townships in the District that are zoned General Rural but are essentially residential in their layout. Many of these have been shown on the planning maps as Rural Settlement Areas. This policy recognises that it may be appropriate to provide for ongoing residential development and growth in these areas. Other rural-residential activity independent of any farming or intensive farming activity may be appropriate, however, it must be undertaken in a manner that maintains an open rural character, achieves the efficient use of soil and land resources and connectivity with existing infrastructure.

GRUZ-P6

Avoid rural-residential activity in locations where the ongoing cost of maintenance of roading infrastructure will have adverse effects on the wider community.

Explanation: Additional demands on roading infrastructure associated with rural-residential activity can place costs on local communities and ratepayers. Council's role is to maintain infrastructure in accordance with the relevant Asset Management Plans and rural-residential activity can in some situations lead to an unsustainable demand for funding. Funding maintenance of infrastructure whilst trying to limit costs on ratepayers can result in Council having to prioritise spending and other activities missing out. Refusal of consent applications that adversely affect the economic well-being of the wider community and ratepayers is consistent with the sustainable management of natural and physical resources.

GRUZ-P7

Recognise the benefits of gravel extraction, whilst ensuring that adverse effects are avoided, remedied or mitigated.

Explanation: On-site mineral extraction can provide for socio-economic well-being by reducing the time and financial costs of sourcing gravel from elsewhere, while minimising the transport of rock or gravel for activities which assist in reducing the wear on the roading network. However, these extractions and associated processing activities can give rise to adverse environmental effects. Careful consideration should be given to the location and nature of these activities to manage any adverse effects and should include the implementation of a robust management and monitoring plan as part of any resource consent application.

GRUZ-P8

Avoid, remedy or mitigate the adverse effects of earthworks.

Explanation: Earthworks are often necessary as part of day-to-day farming activities or land use and development activities. Earthworks can give rise to a range of adverse effects, including effects on slope and soil stability, biological diversity, visual amenity, water quality and heritage (including archaeological) values. Earthworks should be managed through the implementation of a robust methodology and works supervision procedures to avoid adverse effects. Industry-specific Standards and Guidelines provide one way of demonstrating these methods and procedures and achievement of the required environmental outcomes. Particular consideration should be given to the avoidance of effects on water and solid quality and public health.

GRUZ-P9

Avoid, remedy or mitigate reverse sensitivity effects on infrastructure and network utility operations.

Explanation: Infrastructure and network utility operations provide an important essential service to the Southland District and wider national networks. To ensure the continuation of this essential service the presence and function of the infrastructure should be recognised and careful consideration given to preventing the establishment and expansion of sensitive activities where they are to be located in the vicinity of existing or proposed infrastructure.

The National Grid network has been identified on planning maps and rules established to provide for minimum setbacks to address safety, operation and maintenance of the Lines and Support Structures. This will enable Council to prevent sensitive activities, or the expansion of existing sensitive activities, from locating where they would affect or be affected by the National Grid network.

GRUZ-P10

Manage subdivision, land use and development in a manner that maintains or enhances the residential amenity values within the Rural Settlement Areas.

Southland District Council Plan Change 2: Subdivision, Land Use and Development Code of Practice

Explanation: The amenity and character of the Rural Settlement Areas are distinct from the rest of the General Rural Zone in that it provides for more consolidated development while still ensuring amenity values on neighbouring properties are managed through controls such as the height in relation to boundary requirements.

Rules

Note: District-wide rules

The following district-wide sections of the District Plan may apply in addition to any relevant General Rural Zone Rules to activities undertaken in the General Rural Zone. If one or more of the district-wide rules is breached, the activity will require consent in respect of those rules:

- EM - Energy and Minerals
- INF - Infrastructure
- TRAN - Transport~~ation~~
- CL - Contaminated Land
- NH - Natural Hazards
- WASTE - Waste
- HAZS - Hazardous Substances
- HH - Historic Heritage
- ECO - Ecosystems and Indigenous Biodiversity
- PA - Public Access
- SUB - Subdivision
- LAN – Land Use and Development
- ASW - Activities on the Surface of Water
- FIN - Financial Contributions
- NOISE - Noise
- SIGN - Signs
- TEMP - Temporary Activities

The rules in INF Chapter override zone and district-wide provisions of the District Plan in relation to the activities to which the section applies. Other than in relation to the Definitions Section in the District Plan, no rule in any other section shall apply to any activity dealt with by INF-Infrastructure, unless a specific cross-reference is made.

GRUZ-R1	Permitted Activities	
The following activities are **Permitted Activities** in the General Rural Zone provided they meet the General Rural Performance Standards: 1. Farming Activity and any other activity that utilises the productive value of the soil resource (excluding those activities specified below) is a permitted activity.		**Activity Status when compliance one performance standard is not achieved:** RDIS **Matters of Discretion:** GRUZ-MAT1 Degree of Compliance GRUZ-MAT2 Financial Contributions GRUZ-MAT4 Natural Hazards **Activity Status when compliance with two or more performance standard is not achieved:** DIS
2. a. Dwellings outside of Rural Settlement Areas are permitted provided that: i. Maximum number is one dwelling per Computer Freehold Register, with Additional Staff Dwellings as follows: 1. one dwelling per 50-hectare – 100-hectare property; 2. two dwellings per 101-hectare – 150-hectare property; 3. three dwellings per 151-hectare – 300-hectare property; 4. four dwellings per 301-hectare – 1,000-hectare property; 5. five dwellings per 1,001-hectare property. ii. Setbacks Any dwelling complies with the following setbacks: 1. 150 metres from any existing dwelling, or consented dwelling or building platform, not in the same ownership. For the avoidance of doubt, dwellings on the same property can be closer to each other than 150 metres; 2. 20 metres from the boundary of a State Highway where the speed limit exceeds 80 km/hr; 3. 4.5 metres from a boundary with any other road; 4. 30 metres from a wetland or bed of a river or lake; 5. 300 metres from the property boundary of an intensive farming activity in separate ownership;		**Activity Status when compliance one performance standard is not achieved:** RDIS **Matters of Discretion:** GRUZ-MAT1 Degree of Compliance GRUZ-MAT2 Financial Contributions GRUZ-MAT4 Natural Hazards **Activity Status when compliance with two or more performance standard is not achieved:** DIS

	6. 300 metres from a consented milking shed or wintering shed in separate ownership; 7. 150 metres from a wastewater treatment facility property boundary (excluding waste disposal areas associated with domestic on-site wastewater disposal system); 8. 200 metres from a gravel or mineral extraction activity where the consented volume to be extracted is more than 50,000 m^3; 9. within the Visual Amenity Landscape Overlay 20 metres from the boundary of any formed road; and 4.5 metres from the boundary of an unformed road; 10. complies with GRUZ-PS7 National Grid Yards.	
iii.	Height 1. the maximum height of the dwelling is 9 metres above natural ground level; 2. the height of the building in relation to the external property boundaries complies with Height in Relation to Boundaries and the Height Recession Diagram in General Rural Performance Standards GRUZ-PS6; 3. within the Visual Amenity Landscape Overlay the maximum height of the dwelling is 6.5 metres above natural ground level.	
iv.	The building site and access to that site are not identified as being seaward of the Coastal Hazard Line as shown on the District Plan Maps.	
v.	The site is not identified as being within an area of Outstanding Natural Features and Landscapes as shown on the District Plan Maps.	
vi.	Materials – Within the Visual Amenity Landscape Overlay, external building materials and colours are to be recessive with a maximum reflectance value of 40%. (Note: this does not apply to glazing, natural or stained timber, solar panels or building trims such as fascia boards, soffits and window frames.)	
vii.	Any new or relocated dwelling, located within: 1. 40 metres of the closest railway track; 2. where there is no track in place, 35 metres from the nearest boundary of the railway designation; 3. 80 metres of the seal edge of a State Highway that has a speed limit of 70 km/hr and greater or 40 metres of the seal edge of a State Highway that has a speed limit of less than 70 km/hr; shall be designed, sited and constructed to ensure that the internal noise	

levels for dwellings do not exceed 35 dB $L_{Aeq\ (1\ hr)}$ inside bedrooms or 40 dB $L_{Aeq\ (1\ hr)}$ inside other habitable rooms.

b. Dwellings within a Rural Settlement Area are permitted provided that:
   i. Any dwelling is setback 4.5 metres from a boundary with any road.
   ii. Any new or relocated dwelling, located within:
      1. 40 metres of the closest railway track;
      2. where there is no track in place, 35 metres from the nearest boundary of the railway designation;
      3. 80 metres of the seal edge of a State Highway that has a speed limit of 70 km/hr and greater or 40 metres of the seal edge of a State Highway that has a speed limit of less than 70 km/hr;
   iii. shall be designed, sited and constructed to ensure that the internal noise levels for dwellings do not exceed 35 dB $L_{Aeq\ (1\ hr)}$ inside bedrooms or 40 dB $L_{Aeq\ (1\ hr)}$ inside other habitable rooms.

   iii. Height
      1. the maximum height of the dwelling is 9 metres above natural ground level;
      2. within the Visual Amenity Landscape Overlay the maximum height of the dwelling is 6.5 metres above natural ground level;
      3. the height of the building in relation to the external property boundaries complies with Height in Relation to Boundaries and the Height Recession Diagram in General Rural Performance Standards GRUZ-PS6.
   iv. Materials - Within the Visual Amenity Landscape Overlay external building materials and colours are to be recessive with a maximum reflectance value of 40%. (Note: this does not apply to glazing, natural or stained timber, solar panels, or building trims such as the fascia boards, soffits and window frames.)
   v. The building site and access to that site are not identified as being seaward of the Coastal Hazard Line as shown on the District Plan Maps.

~~**Note:** Where a reticulated system is not provided, dwellings will need to ensure they can adequately dispose of wastewater in accordance with the relevant Regional Council rules and AS/NZS 1547:2012 On-Site Domestic Wastewater Management. It should not be assumed that an area of land held in an individual Computer Freehold Register/Certificate of Title is suitable for on-site wastewater disposal.~~

~~Site restrictions including the lack of suitable land may preclude the site from being used for on-site wastewater disposal. Further guidance on on-site wastewater requirements in the Rural Settlement Areas is available from Council.~~	
3. Residential Accessory Buildings are permitted provided that: a. The residential accessory building complies with the following setbacks: i. 1 metre from the side property boundaries; ii. the height of the building in relation to the external property boundaries complies with Height in Relation to Boundaries and the Height Recession Diagram in General Rural Performance Standards GRUZ-PS6; iii. 4.5 metres from the boundary of a road or State Highway; iv. within the Visual Amenity Landscape Overlay (except within a Rural Settlement Area/Overlay) is set back at least 20 metres from the boundary of a formed road or State Highway, and 4.5 metres from the boundary of an unformed road; v. within the Visual Amenity Landscape Overlay the maximum height of the residential accessory building is 6.5 metres above natural ground level; vi. within the Visual Amenity Landscape Overlay external building materials and colours are to be recessive with a maximum reflectance value of 40%. (Note: this does not apply to glazing, natural or stained timber, solar panels or building trims such as fascia boards, soffits and window frames.); vii. compliance with GRUZ-PS7 National Grid Yards. b. The maximum height of the residential accessory building is 9 metres above natural ground level. c. The site is not identified as being within an area of Outstanding Natural Features and Landscapes as shown on the District Plan Maps.	**Activity Status when compliance one performance standard is not achieved:** RDIS **Matters of Discretion:** GRUZ-MAT1 Degree of Compliance GRUZ-MAT2 Financial Contributions GRUZ-MAT4 Natural Hazards **Activity Status when compliance with two or more performance standard is not achieved:** DIS
4. Accessory Buildings are permitted provided that: a. The maximum height of the building is 12 metres above the natural ground level. b. The height of the building in relation to the external property boundaries complies with Height in Relation to Boundaries and the Height Recession Diagram in General Rural Performance Standards GRUZ-PS6. c. Above ground agricultural effluent ponds shall be setback:	**Activity Status when compliance one performance standard is not achieved:** RDIS **Matters of Discretion:** GRUZ-MAT1 Degree of Compliance GRUZ-MAT2 Financial Contributions GRUZ-MAT4 Natural Hazards

i. at least 200 metres from a dwelling, a consented dwelling or an approved building platform in separate ownership; ii. at least 50 metres from the boundary of any other property; iii. at least 50 metres from any water body, artificial watercourse or coastal marine area; iv. at least 100 metres from a water abstraction point. d. Milking sheds, and wintering sheds shall be set back at least: i. at least 300 metres from a dwelling; a consented dwelling or an approved building platform in separate ownership; ii. at least 300 metres from the GRZ - General Residential Zone; iii. at least 100 metres from a State Highway or Regional Arterial Road, 50 metres from any other formed road and 4.5 metres from the boundary of an unformed road; iv. at least 100 metres from the boundary of any land managed under the Conservation Act 1987, Reserves Act 1977, and National Parks Act 1980; v. at least 100 metres from the marine coastal area, or wetland lake or river; vi. within the Visual Amenity Landscape Overlay external building materials and colours are to be recessive with a maximum reflectance value of 40%. (Note: this does not apply to glazing, natural or stained timber, solar panels or building trims such as fascia boards, soffits and window frames.) e. The building shall not exceed 1,500 m^2 in gross floor area. f. Within the Visual Amenity Landscape Overlay the maximum height of the building is 7.5 metres above the natural ground level. g. Within the Visual Amenity Landscape Overlay it is setback at least 100 metres from a State Highway or Regional Arterial Road and 50 metres from any other road. h. Within the Visual Amenity Landscape Overlay the Maximum footprint of the building does not exceed 1,000 m^2. i. Compliance with GRUZ-PS7 National Grid Yards. j. The site is not identified as being within an area of Outstanding Natural Features and Landscapes as shown on the District Plan Maps. k. The building shall be setback 4.5 metres from the boundary of any road. l. The building shall not shade a road between 10.00 am and 2.00 pm on the shortest day of the year.	**Activity Status when compliance with two or more performance standard is not achieved:** DIS

5. Cleanfill Areas are a permitted activity provided that: a. They involve less than 500 m^3 (volume) of cleanfill material per property. b. They do not alter the existing ground level by more than 2 metres in height and more than 5 metres in depth. c. Prior to any deposition of cleanfill material, notice in writing of the location where the cleanfill material will be deposited is given to Council. d. No cleanfill material is deposited within 20 metres of any waterbody, including wetlands and coastal water. e. The cleanfill area operation complies with the permitted activity standards for noise. f. No cleanfill material is deposited within 50 metres of any site listed in HH-SCHED1 – Historic Heritage Items. g. No cleanfill material is deposited within 50 metres of any property boundary if above ground, and 20 metres if below ground. h. The activity is not undertaken in an area of Outstanding Natural Features and Landscapes as shown on the District Plan Maps. i. The area of cleanfill activity is reinstated as soon as practicable after the fill has been completed. **Note:** Southland Regional Council also has requirements regarding the disposal of waste in these sites. Please check the Regional Water Plan to ensure compliance with these is achieved.	**Activity Status when compliance one performance standard is not achieved:** RDIS **Matters of Discretion:** GRUZ-MAT1 Degree of Compliance GRUZ-MAT2 Financial Contributions GRUZ-MAT4 Natural Hazards **Activity Status when compliance with two or more performance standard is not achieved:** DIS
6. a. Extraction of gravel or rock is permitted provided that: i. The volume extracted shall not exceed 1,500 m^3 in any 12-month period per property. ii. The extracted material is used on the same property. iii. The material is not transported on a formed legal road. iv. The extraction site (excluding the working face of the extraction) is progressively rehabilitated and rehabilitation is completed within 12 months upon the completion of the maximum permitted volume or by 31 March each year, whichever occurs the earliest. v. The extraction site is set back a minimum of 100 metres from a site containing any existing dwelling other than a dwelling on the same property.	**Activity Status when compliance one performance standard is not achieved:** RDIS **Matters of Discretion:** GRUZ-MAT1 Degree of Compliance GRUZ-MAT2 Financial Contributions GRUZ-MAT4 Natural Hazards **Activity Status when compliance with two or more performance standard is not achieved:** DIS

vi. The extraction site and stockpiles are not within 20 metres of a waterbody greater than 1 metre in width, wetland, coastal water or flood protection works, or a property boundary. vii. Sufficient sediment control is provided to prevent sedimentation from entering a waterbody, or wetland or coastal water. viii. The extraction site does not affect any archaeological site identified on the District Plan Maps, except where an Archaeological Authority has been granted by Heritage New Zealand pursuant to the Heritage New Zealand Pouhere Taonga Act 2014, or confirmation is provided that no archaeological authority is required. ix. The activity is not undertaken in an area of Outstanding Natural Features and Landscapes as shown on the District Plan Maps. b. Extraction of Gravel or Rock between 1,500 m^3 - 5,000 m^3 is permitted provided that: i. The volume extracted shall not exceed 5,000 m^3 in any 12-month period per property. ii. The extracted material is used on the same property. iii. The material is not transported on a formed legal road. iv. The extraction site (excluding the working face of the extraction) is progressively rehabilitated and rehabilitation is completed within 12 months upon the completion of the maximum permitted volume or by 31 March each year, whichever occurs the earliest. v. The extraction site is set back a minimum of 300 metres from a site containing an existing dwelling other than a dwelling on the same property. vi. The extraction site and stockpiles are not within 100 metres of a property boundary. vii. The extraction site and stockpiles are not within 20 metres of a waterbody greater than 1 metre in width, wetland, coastal water or flood protection works. viii. Sufficient sediment control is provided to prevent sedimentation from entering a watercourse, or wetland or coastal water. ix. The extraction site does not affect the site of any item listed in HH-SCHED1 – Historic Heritage Items except where an Archaeological Authority has been granted by Heritage New Zealand. x. The activity is not undertaken in an area of Outstanding Natural Features and Landscapes as shown on the District Plan Maps.	

xi. The extraction site is not visible from a public place. **Note:** Southland Regional Council also has requirements regarding the disposal of waste in these sites. Please check the Regional Water Plan to ensure compliance with these is achieved. Note: Gravel extraction associated with any plantation forestry activity is managed under the NES-CF, except where it is within an Outstanding Natural Features and Landscapes Overlay, in which case the rules in this Plan prevail over the NES-CF.	
7. Earthworks within a Riparian Margin are permitted provided that: a. The volume of earthworks in the riparian margin must not exceed 25 m^3 and must not include the cumulative disturbance of more than 20 linear metres in any 200-metres length of riparian margin per property. b. Earthworks are carried out such that: i. trenches for the purpose of installing pipes, lines or cables are backfilled and compacted within 48 hours of excavation; and ii. all areas of bare ground created by the activity are protected from soil erosion as soon as practicable. **Note:** For the avoidance of doubt, this rule can be used to undertake 20 metres of work on each side of the waterbody. **Note:** Southland Regional Council also has requirements regarding activities in close proximity to waterbodies. Please check the Regional Water Plan to ensure compliance with these is achieved.	**Activity Status when compliance one performance standard is not achieved:** RDIS **Matters of Discretion:** GRUZ-MAT1 Degree of Compliance GRUZ-MAT2 Financial Contributions GRUZ-MAT4 Natural Hazards **Activity Status when compliance with two or more performance standard is not achieved:** DIS
8. a. Earthworks that: • In any 12-month period, do not exceed, the disturbance of more than 1,000 m^3 (volume) of land per property and 1. is greater than 20 metres from a waterbody that do not alter the existing ground level by more than 5 metres in depth or 2 metres in height; 2. is within 20 metres of a waterbody that do not alter the existing ground level by more than 2 metres in depth or height; or • Are required for construction and maintenance of tracking under GRUZ-R1.1 Farming, are permitted provided that the activity:	**Activity Status when compliance one performance standard is not achieved:** RDIS **Matters of Discretion:** GRUZ-MAT1 Degree of Compliance GRUZ-MAT2 Financial Contributions GRUZ-MAT4 Natural Hazards **Activity Status when compliance with two or more performance standard is not achieved:** DIS

1. shall not be undertaken at an elevation greater than 700 metres above mean sea level, with the exception of earthworks ancillary to fencing, track construction, maintenance and firebreak activities; 2. shall not be undertaken on slopes of more than 20° except for cultivation, tracking or domestic gardening; and/or cause slope instability; 3. shall protect any stockpiles of material and all areas of bare ground created by the activity from soil erosion as soon as practicable; 4. shall not be undertaken within 5 metres of the bed of any surface waterbody, including wetlands and coastal water, or flood protection works, except for cultivation of a field or domestic gardening; 5. shall not be undertaken on a contaminated or potentially contaminated piece of land unless it is in accordance with the National Environmental Standard for Assessing and Managing Contaminants in Soil to Protect Human Health 2011 contained in SCHED3; 6. does not affect any archaeological site identified on the District Plan Maps, except where an Archaeological Authority has been granted by Heritage New Zealand pursuant to the Heritage New Zealand Pouhere Taonga Act 2014, or confirmation is provided that no archaeological authority is required; 7. is not undertaken in an area of Outstanding Natural Features and Landscapes as shown on the District Plan Maps; 8. where earthworks are required for, or in conjunction with, GRUZ-R1.8.a.ii "Construction and maintenance of tracking under GRUZ-R1.1 Farming": ▪ all formation surfaces with an inwards cross fall shall be drained by water table; ▪ cut-offs or culverts shall be constructed or installed so as to prevent scour, gullying, or other erosion of the formed or constructed surface; ▪ fill shall not be placed over woody vegetation; ▪ all areas of fill including any formation surface overlying fill but excluding side casting shall be compacted; ▪ fill batters shall be constructed and vegetated where appropriate, to a standard that is adequate to avoid batter erosion or failure;	

▪ spoil shall be disposed of by end-hauling where the formation by side casting of any road or track crosses any unstable site or crush zone. b. Earthworks within National Grid Yards are permitted provided that: • Earthworks within 2.2 metres of a pole support structure or stay wire shall not be greater than 300 mm in depth. • Earthworks between 2.2 metres and 5 metres of a pole support structure or stay wire shall not be greater than 750 mm in depth. • Earthworks within 12 metres of the outer edge of the visible foundation of a tower support structure shall not be greater than 300 mm in depth. • Earthworks shall not compromise transmission support structure stability. • Earthworks shall not result in a reduction of the existing conductor clearance distance above the ground as required in NZECP 34:2001. Provided that the following activities are exempt from i. and ii. above: i. Earthworks undertaken by a Network Utility Operator; or ii. Earthworks undertaken as part of agricultural or domestic cultivation, or repair, sealing or resealing of a road, footpath or driveway. **Note:** Southland Regional Council also has requirements regarding activities in close proximity to waterbodies. Please check the Regional Water Plan to ensure compliance with these is achieved. **Note:** These standards do not apply to the removal and replacement of underground petroleum storage tanks undertaken in accordance with the National Environmental Standard for Assessing and Managing Contaminants in Soil to Protect Human Health 2011. **Note:** District-wide rules relating to the clearance of indigenous vegetation are contained in the Ecosystems and Indigenous Biodiversity chapter of the District Plan.	
9. Prospecting for Minerals is permitted provided that: a. The volume extracted shall not exceed 200 m^3 per 5 hectares for pits and 1,000 m^3 per 5 hectares for trenches.	**Activity Status when compliance one performance standard is not achieved:** RDIS **Matters of Discretion:**

b. Within 12 months of the completion of the extraction activity areas disturbed by such activities shall be restored and rehabilitated to a standard not less than that previously existing. c. The extraction site and stockpiles are not within 20 metres of a waterbody greater than 1 metre in width, wetland, coastal water or flood protection works. d. Sufficient sediment control is provided to prevent sedimentation from entering a waterbody, or wetland or coastal water. e. The extraction site does not affect any archaeological site identified on the District Plan Maps, except where an Archaeological Authority has been granted by Heritage New Zealand pursuant to the Heritage New Zealand Pouhere Taonga Act 2014, or confirmation is provided that no archaeological authority is required. f. The activity is not undertaken in an area identified as being an area of Outstanding Natural Features and Landscapes. g. It shall not be undertaken on a contaminated or potentially contaminated piece of land unless it is in accordance with the National Environmental Standard for Assessing and Managing Contaminants in Soil to Protect Human Health 2011 contained in Section SCHED5.	GRUZ-MAT1 Degree of Compliance GRUZ-MAT2 Financial Contributions GRUZ-MAT4 Natural Hazards **Activity Status when compliance with two or more performance standard is not achieved:** DIS
10. Visitor Accommodation (involving five or less paying guests) is permitted.	**Activity Status when compliance one performance standard is not achieved:** RDIS **Matters of Discretion:** GRUZ-MAT1 Degree of Compliance GRUZ-MAT2 Financial Contributions GRUZ-MAT4 Natural Hazards **Activity Status when compliance with two or more performance standard is not achieved:** DIS
11. Home Occupations are permitted provided that: a. A maximum of 30 m^2 of the gross floor area of the residential unit or accessory buildings on the property is used for the operation of the home occupation.	**Activity Status when compliance one performance standard is not achieved:** RDIS **Matters of Discretion:**

b. No more than 10 m² of the property shall be used as an outdoor display area for the operation of the home occupation and associated storage of goods, materials or equipment at any one time. c. The home occupation is not operated outside of the hours of: • 7.30 am - 9.00 pm, Monday to Saturday; and • 7.30 am - 6.00 pm, Sundays and public holidays.	GRUZ-MAT1 Degree of Compliance GRUZ-MAT2 Financial Contributions GRUZ-MAT4 Natural Hazards **Activity Status when compliance with two or more performance standard is not achieved:** DIS
12. Produce Stalls are permitted provided that: a. There is only one produce stall per property. b. The stall is no greater than 10 m² in area. c. The produce displayed for sale has been produced on the property on which it is offered for sale.	**Activity Status when compliance one performance standard is not achieved:** RDIS **Matters of Discretion:** GRUZ-MAT1 Degree of Compliance GRUZ-MAT2 Financial Contributions GRUZ-MAT4 Natural Hazards **Activity Status when compliance with two or more performance standard is not achieved:** DIS
13. Markets and car boot sales not exceeding 20 stall holders/sellers are permitted provided that: a. The farmers' market or car boot sale shall not operate outside the hours of: • 7.30 am - 6.00 pm, Monday to Sunday and public holidays. b. The farmers' market or car boot sale shall not occur more than 12 times per calendar year. c. The site on which the farmers' market or car boot sale occurs shall be returned to its original condition the day of the event. d. There shall be no direct access to sites of farmers' markets or car boot sales from a State Highway or Regional Arterial Road. e. Adequate provision is made for carparking, waste collection and disposal including provision of toilet facilities. f. A Traffic Management Plan prepared in accordance with the Code of Practice for Temporary Traffic Management has been submitted to Council.	**Activity Status when compliance one performance standard is not achieved:** RDIS **Matters of Discretion:** GRUZ-MAT1 Degree of Compliance GRUZ-MAT2 Financial Contributions GRUZ-MAT4 Natural Hazards **Activity Status when compliance with two or more performance standard is not achieved:** DIS

14. Temporary Events are permitted provided that: a. The temporary event does not exceed six days in any calendar year. b. The temporary event shall not operate outside of the hours of: ▪ 7.30 am - 10.00 pm, Monday to Saturday; and ▪ 7.30 am - 6.00 pm, Sundays and public holidays. c. Any structures associated with that event shall be erected: i. no more than seven days before the event occurs; and ii. removed no more than seven days after the end of the event. d. The site on which the temporary event occurs shall be returned to its original condition no more than three days after the end of the event. e. Adequate provision is made for waste collection and disposal including provision of toilet facilities. **Note:** Any access for temporary events shall require approval from the relevant road controlling authority (Southland District Council or New Zealand Transport Authority), this will require submission and approval of a Traffic Management Plan.	**Activity Status when compliance one performance standard is not achieved:** RDIS **Matters of Discretion:** GRUZ-MAT1 Degree of Compliance GRUZ-MAT2 Financial Contributions GRUZ-MAT4 Natural Hazards **Activity Status when compliance with two or more performance standard is not achieved:** DIS
15. Forestry Activities are permitted provided that: a. No forestry activity shall affect any archaeological site identified on the District Plan Maps, except where an Archaeological Authority has been granted by Heritage New Zealand pursuant to the Heritage New Zealand Pouhere Taonga Act 2014, or confirmation is provided that no archaeological authority is required. b. The activity is not undertaken in an area identified as being an area of Outstanding Natural Features and Landscapes. **Note:** Useful resources for anyone undertaking Forestry Activities are the Environmental Code of Practice for Plantation Forestry (ECOP) 2007 and the New Zealand Forest Road Engineering Manual (2012). **Note:** The National Environmental Standards for Commercial Forestry (NES-CF) provides for Forestry Activities including earthworks. However, the District Plan may be more stringent than the NES with regard to Outstanding Natural Features and Landscapes and Archaeological Sites. This rule, therefore, prevails over the NES-CF.	**Activity Status when compliance one performance standard is not achieved:** RDIS **Matters of Discretion:** GRUZ-MAT1 Degree of Compliance GRUZ-MAT2 Financial Contributions GRUZ-MAT4 Natural Hazards **Activity Status when compliance with two or more performance standard is not achieved:** DIS

Note: District-wide rules relating to the clearance of indigenous vegetation are contained in ECO—Ecosystems and Biodiversity chapter of the District Plan and apply to the clearance of vegetation prior to afforestation.	
16. Activities on Council Reserves and Taramea (Howells Point) that comply with an approved management plan. **Note:** Any activity on a reserve will still require authority from the administering body responsible for managing the reserve. This rule overrides specific Zone and Overlay requirements and all General Performance Standards.	**Activity Status when compliance one performance standard is not achieved:** RDIS **Matters of Discretion:** GRUZ-MAT1 Degree of Compliance GRUZ-MAT2 Financial Contributions GRUZ-MAT4 Natural Hazards **Activity Status when compliance with two or more performance standard is not achieved:** DIS
17. Existing Electricity Generation Facilities The operation, maintenance, refurbishment, enhancement and minor upgrading and any associated earthworks for any existing electricity generation facilities.	**Activity Status when compliance one performance standard is not achieved:** RDIS **Matters of Discretion:** GRUZ-MAT1 Degree of Compliance GRUZ-MAT2 Financial Contributions GRUZ-MAT4 Natural Hazards **Activity Status when compliance with two or more performance standard is not achieved:** DIS
18. Soil Conservation and River Protection Works The planting of Crack Willow (Salix fragilis) for the purpose of the repair and/or maintenance of existing soil conservation and river protection works undertaken by Southland Regional Council within the reaches shown in SCHED7 is permitted provided that the planting is sourced from that reach. **Note:** In relation to GRUZ-R1.18, repair and/or maintenance includes lopping, layering (process of felling the existing tree on the ground while maintaining adequate connection with the stump such that vigorous regrowth	**Activity Status when compliance one performance standard is not achieved:** RDIS **Matters of Discretion:** GRUZ-MAT1 Degree of Compliance GRUZ-MAT2 Financial Contributions GRUZ-MAT4 Natural Hazards

is encouraged), retrieval and replanting or removing whole trees to fill gaps in river edge protection as a result of flood events.	**Activity Status when compliance with two or more performance standard is not achieved:** DIS
19. Intermittent Aircraft Activity Intermittent aircraft departures and landings that do not meet the definition of an airport under the RMA.	**Activity Status when compliance one performance standard is not achieved:** RDIS **Matters of Discretion:** GRUZ-MAT1 Degree of Compliance GRUZ-MAT2 Financial Contributions GRUZ-MAT4 Natural Hazards **Activity Status when compliance with two or more performance standard is not achieved:** DIS
20. Feed pads are permitted provided that: a. They shall be set back at least 200 metres from an existing dwelling, consented dwelling or building platform in separate ownership.	**Activity Status when compliance one performance standard is not achieved:** RDIS **Matters of Discretion:** GRUZ-MAT1 Degree of Compliance GRUZ-MAT2 Financial Contributions GRUZ-MAT4 Natural Hazards **Activity Status when compliance with two or more performance standard is not achieved:** DIS
21. Woodlands Agricultural Research Farm as shown on Planning Map 38 and in SCHED9: a. Farming for the purposes of Agricultural Research Activities. b. Buildings associated with Agricultural Research Activities within the Research Building Area shown on the Plan in SCHED9 provided that: ▪ the maximum height of the building does not exceed 12 metres above the natural ground level;	**Activity Status when compliance one performance standard is not achieved:** RDIS **Matters of Discretion:** GRUZ-MAT1 Degree of Compliance GRUZ-MAT2 Financial Contributions

▪ the building does not exceed 1,500 m^2 in gross floor area. **Note:** Farm landfills and dead holes (offal pits) in the General Rural Zone are activities managed through the Southland Regional Council's Regional Water Plan. Anyone undertaking these activities should consider the applicable rules.	GRUZ-MAT4 Natural Hazards **Activity Status when compliance with two or more performance standard is not achieved:** DIS

GRUZ-R2	**Controlled Activities**
The following activities are **Controlled Activities** in the General Rural Zone provided they comply with the General Rural Performance Standards: 1. Forestry that does not meet GRUZ-R1.15 - Forestry Activities and is not undertaken in an area identified as being an area of Outstanding Natural Features and Landscapes; **Note:** This rule prevails over the NES-CF regulations.	**Matters of control:** GRUZ-MAT11 Historic Heritage
2. Papakāinga Housing provided that: a. the maximum building coverage of the property shall be 35%. b. the General Rural Performance Standards are complied with.	**Matters of control:** GRUZ-MAT3 Financial Contributions and Bonds ~~GRUZ-MAT6 Vehicle Access~~ ~~GRUZ-MAT7 Waste~~ GRUZ-MAT12 Visual Effects GRUZ-MAT13 Height and Setback ~~GRUZ-MAT14 Power and Telecommunication~~
3. Animal Boarding Activity not exceeding 10 dogs and catteries not exceeding 20 cats provided that: Buildings or any part of a building used for Animal Boarding Activity shall be set back a minimum of 50 metres from: a. A dwelling in separate ownership. b. A consented dwelling in separate ownership.	**Matters of control:** GRUZ-MAT3 Financial Contributions and Bonds GRUZ-MAT5 Noise ~~GRUZ-MAT6 Vehicle Access~~ ~~GRUZ-MAT7 Waste~~

c. An approved building platform in separate ownership. d. The General Residential Zone.	GRUZ-MAT8 Hours of Operation GRUZ-MAT9 Lighting GRUZ-MAT10 Signs
4. Plant nurseries/garden centres not exceeding 1,000 m^2 of retail floor area	**Matters of control:** GRUZ-MAT3 Financial Contributions and Bonds GRUZ-MAT5 Noise ~~GRUZ-MAT6 Vehicle Access~~ ~~GRUZ-MAT7 Waste~~ GRUZ-MAT8 Hours of Operation GRUZ-MAT9 Lighting GRUZ-MAT10 Signs

GRUZ-R3	**Restricted Discretionary Activities**
1. Any permitted activity that fails to comply with only ONE performance standard: a. within that permitted activity rule; OR b. Performance Standards - General Rural Zone; and c. is not located within a National Grid Yard or area of Outstanding Natural Features and Landscapes as shown on the District Plan Maps; is a 'Restricted Discretionary Activity'	The matters over which Council has restricted its discretion are: GRUZ-MAT1 Degree of Compliance GRUZ-MAT2 Financial Contributions GRUZ-MAT4 Natural Hazards

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GRUZ-R4	Discretionary Activities
The following activities are **Discretionary Activities** in the General Rural Zone: 1. Any activity that cannot be undertaken as a Permitted, Controlled or Restricted Discretionary Activity and is not listed as a Non-Complying or Prohibited Activity is a Discretionary Activity	**Activity Status when compliance not achieved:** N/A

GRUZ-R5	Non-Complying Activities
1. Buildings to be erected in an area of Outstanding Natural Features and Landscapes are Non-Complying Activities.	**Activity Status when compliance not achieved:** N/A
2. Any activity that fails to comply with any of the performance conditions in relation to: a. GRUZ-R1.8.b - Earthworks in relation to Earthworks adjacent to the National Grid Yards; b. GRUZ-PS7 - National Grid Yards; shall be a Non-Complying Activity and Transpower New Zealand will be considered an affected party.	**Activity Status when compliance not achieved:** N/A

GRUZ-R6	Prohibited Activities
The following activities are Prohibited Activities in the General Rural Zone: 1. Noise Sensitive Activities - Manapouri Airport Noise Sensitive Activities within a Noise Sensitive Activity Exclusion Zone as shown on the District Plan Maps, excluding activities ancillary to the principal use of the land as an airport.	**Activity Status when compliance not achieved:** N/A

2. Buildings in the Lakeside Protection Area over 12 metres in height are Prohibited Activities.	**Activity Status when compliance not achieved:** N/A

Performance Standards - General Rural Zone

GRUZ-PS1	Lighting and Glare	
	1. All on-site lighting shall be designed and maintained so there is no spill of light above the horizontal plane and it is directed away from adjacent properties and roads. 2. The spill of light from artificial lighting (excluding street lights and traffic signals) onto any other site shall not exceed 8 lux (horizontal and vertical) when measured at the boundary of any other site. 3. Artificial lighting shall not dazzle or distract road users or interfere with any traffic aids or signals.	**Activity Status when compliance not achieved:** RDIS **Matters of Discretion:** GRUZ-MAT1 Degree of Compliance GRUZ-MAT2 Financial Contributions GRUZ-MAT4 Natural Hazards

GRUZ-PS2	~~Transportation Standards including Access~~ Deleted	
	~~All activities shall comply in all aspects with the provisions set out in the Southland District Council Subdivision, Land Use and Development Bylaw 2012 - relating to car parking numbers, dimensions, access, loading and manoeuvring.~~	~~**Activity Status when compliance not achieved:** RDIS~~ ~~**Matters of Discretion:**~~ ~~GRUZ-MAT1 Degree of Compliance~~ ~~GRUZ-MAT2 Financial Contributions~~ ~~GRUZ-MAT4 Natural Hazards~~

GRUZ-PS3	Vegetation

	1. Vegetation shall not be planted or allowed to grow in a position which will prevent a driver of a vehicle from having a clear and unobstructed view of official traffic **signs** or signals, rapid numbers, approaching or merging traffic or any corner, bend, intersection or vehicle crossing. 2. Vegetation shall not be planted or allowed to grow in a position that will reduce the effectiveness of **road** lighting. a. vegetation shall not be planted, or allowed to grow, in a position that will continuously shade a **road** between the hours of 10.00 am and 2.00 pm on the shortest day of the year; b. vegetation shall not be allowed to grow in a position that will continuously shade an existing **dwelling**, consented **dwelling**, **building platform** or **building** between the hours of 10.00 am and 2.00 pm on the shortest day of the year; c. the exception to this standard is where the topography is already preventing the direct access of sunlight onto the **road** or where the vegetation existed at the time of notification of the District Plan. 3. Vegetation shall be maintained in a condition which prevents damage to the **road** surface, **road structures** or drainage devices.	**Activity Status when compliance not achieved:** RDIS **Matters of Discretion:** GRUZ-MAT1 Degree of Compliance GRUZ-MAT2 Financial Contributions GRUZ-MAT4 Natural Hazards

GRUZ-PS4	Noise	
	Except as provided in NOISE-R3 and NOISE-R4 to NOISE-R11, noise from all activities shall not exceed the following limits: Note: The daytime noise limits are intended to provide amenity for outdoor activities. Night-time noise limits are intended to allow for sleep amenity. Where an activity shares a boundary with another Zone, the activity must comply with the more restrictive noise limit.	**Activity Status when compliance not achieved:** RDIS **Matters of Discretion:** GRUZ-MAT1 Degree of Compliance GRUZ-MAT2 Financial Contributions GRUZ-MAT4 Natural Hazards

Note: Noise and Vibration associated with plantation forestry activities are managed under regulation 98 of the NES-CF and prevail over the District Plan rules.

Table 14 - - GRUZ Noise Limits Within Property Boundary

When measured at the boundary of any property zoned:	Day time (7.00 am - 10.00 pm inclusive)		Night time (All other times)	
	L_{Aeq} (15 min)	L_{AF}, max	L_{Aeq} (15 min)	L_{AF}, max
General Rural Zone (including MTO - Mountains Overlay)	65 dB	85 dB	45 dB	70 dB

Table 15 - GRUZ Noise Limits Within Adjoining Property Boundary

When measured at any point within the notional boundary of any dwelling on an adjoining property zoned:	Day time (7.00 am - 10.00 pm inclusive)		Night time (All other times)	
	L_{Aeq} (15 min)	L_{AF}, max	L_{Aeq} (15 min)	L_{AF}, max
General Rural Zone	50 dB	75 dB	40 dB	70 dB

GRUZ-PS5	Signs	
	Compliance with the relevant signs standards as set out in SIGN - Signs.	**Activity Status when compliance not achieved:** RDIS **Matters of Discretion:** GRUZ-MAT1 Degree of Compliance

GRUZ-MAT2 Financial Contributions
GRUZ-MAT4 Natural Hazards

GRUZ-PS6	Height of Buildings in Relation to Boundaries

1. The maximum height of any structure shall be determined by a recession plane which commences at 2 metres above the line of each boundary and then slopes at an upward angle as determined by the Height Recession Diagram below, up to the maximum height specified, except that:
    a. a minor breach of the recession plane is permitted provided the parts of the structure that protrude through the recession plane do not exceed 1.5 metres in height and a total area of 6 m^2 on each elevation. The area and height of the breach shall be measured as outlined in the Figure 6 - GRUZ Recession Allowances and include solar heating devices that breach the recession plane;
    b. no account shall be taken of those items outlined in Clause 2 of the height definition.
2. In determining height, the rolling height method shall be used (see definition of Height).

Activity Status when compliance not achieved: RDIS

Matters of Discretion:

GRUZ-MAT1 Degree of Compliance
GRUZ-MAT2 Financial Contributions
GRUZ-MAT4 Natural Hazards

Height Recession Diagram

With both the site plan and the clock diagram below pointing north, place the edge of the clock on the inside of the site boundary. Where the 'clock' touches the boundary indicates the recession angle for that boundary. An example has been provided to assist with the interpretation of the rule.

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Figure 5 - GRUZ Height Recession Diagram

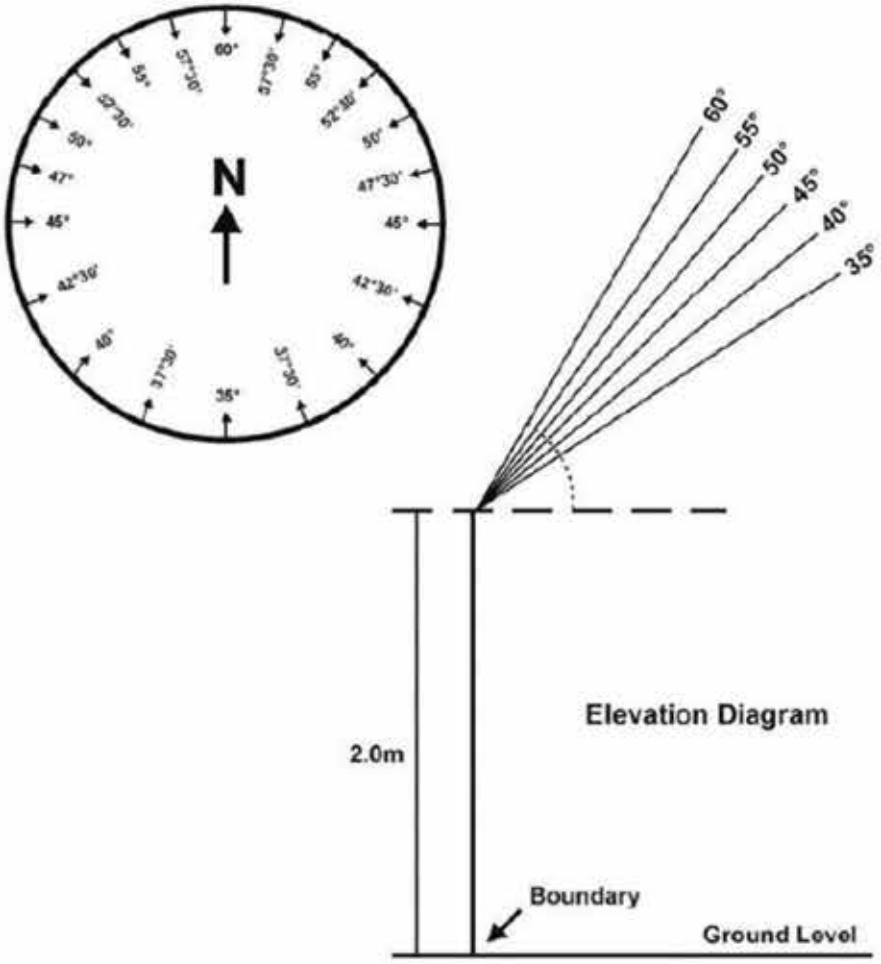

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Figure 6 - GRUZ Recession Allowance

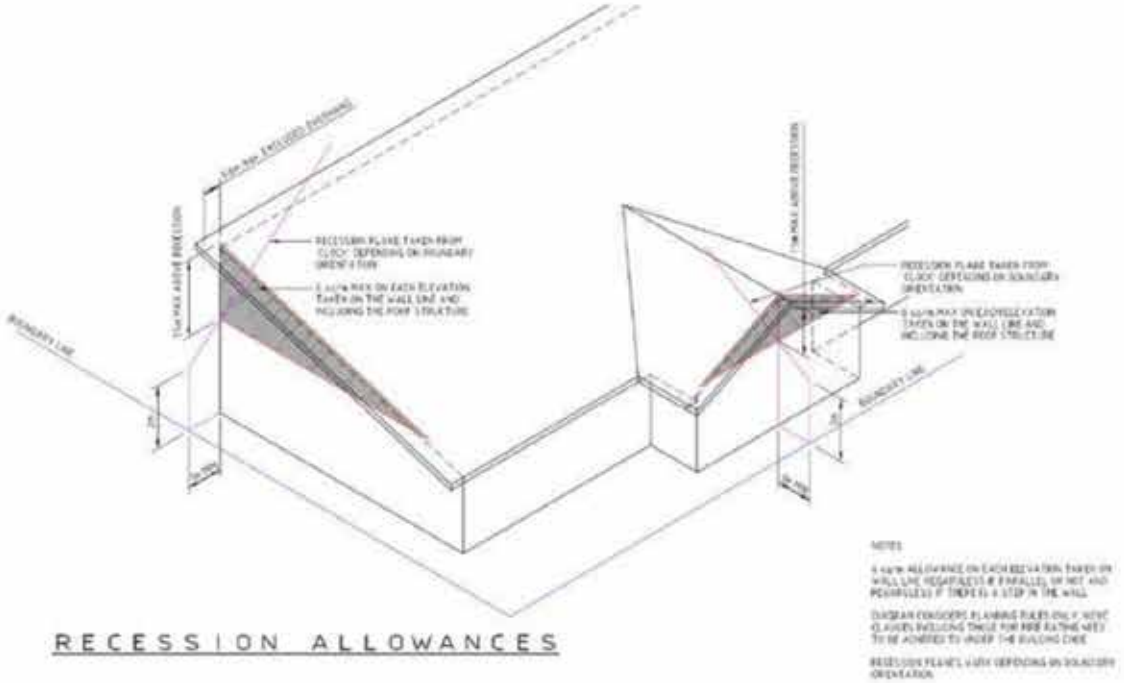

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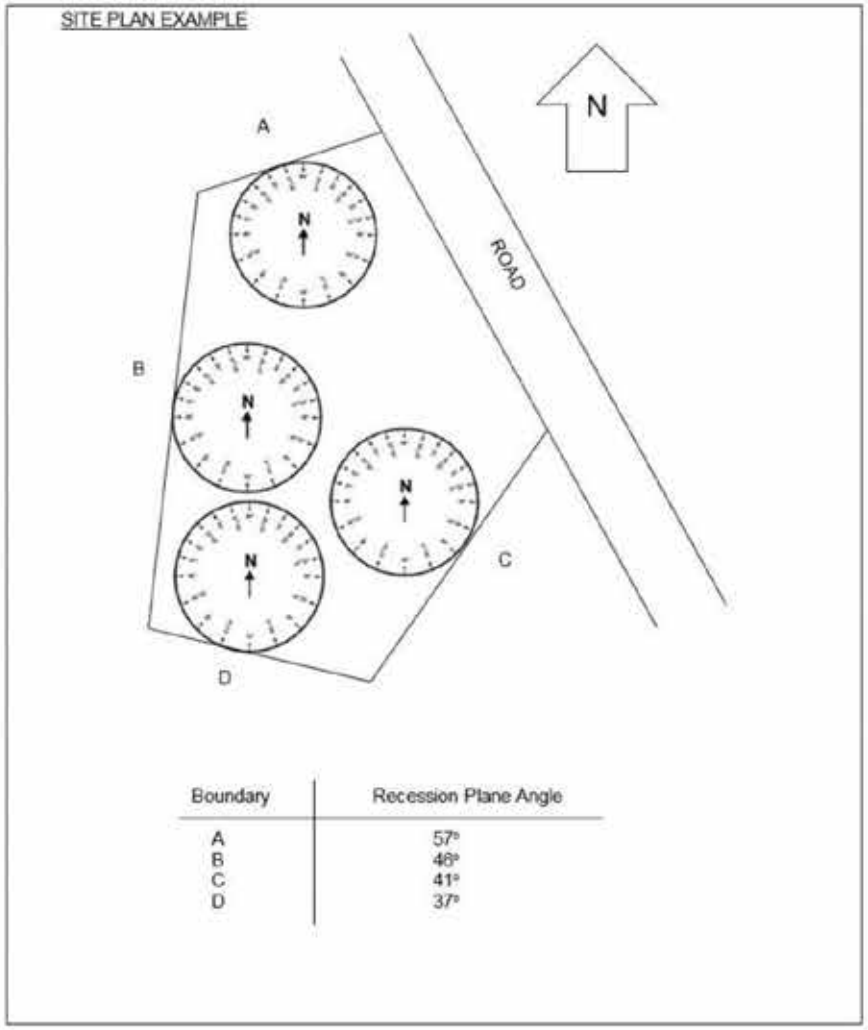
Figure 7 - GRUZ Site plan Example



Boundary	Recession Plane Angle
A	57°
B	46°
C	41°
D	37°

GRUZ-PS7	National Grid Yards	
	1. Setback from National Grid Support Structures – No building or structure shall be located within 12 metres (in any direction) of the visible outer edge of a National Grid support structure, with the following exceptions: a. fencing up to 2.5 metres in height that is at least 5 metres from the outer edge of any support structure; b. network utilities within a transport corridor or any part of electricity infrastructure that connects to the National Grid. 2. Setbacks from the centreline of National Grid Lines – No building or structure shall be erected within 12 metres from the centreline of a National Grid Line that is designed to operate at or over 110 kV provided that this rule does not apply to: a. accessory buildings (excluding swimming pools) and structures associated with residential activities that are: i. less than 10 m² in area, ii. under 2.5 metres in height, iii. at least 12 metres from the visible outer edge of any support structures, and iv. not used for habitation. b. fencing of up to 2.5 metres in height that is at least 5 metres from the visible outer edge of any support structure; c. alterations to existing buildings that do not increase the building envelope or footprint provided that they are at least 12 metres from the visible outer edge of any support structure; d. network utility operators within a transport corridor or any part of electricity infrastructure that connects to the National Grid; e. buildings and structures associated with permitted farming or horticultural activities provided that they are: i. sited at least 12 metres from the visible outer edge of any support structure; ii. not a milking shed (excluding the stockyards and ancillary platforms), a wintering shed or other intensive farming	**Activity Status when compliance not achieved:** NC

building, a commercial glasshouse/ hothouse, or packing shed;

iii. no closer than 10 metres vertically from the lowest point of a conductor associated with a National Grid line, or otherwise maintain a safe separation distance as set out in the New Zealand Code of Practice for Electrical Safe Distances (NZECP34);

iv. not a dwelling.

3. Sensitive Activities shall be at least 12 metres from a National Grid support structure and centreline of a National Grid line shown on the planning maps as High Voltage Line.

Note: NZECP 34:2001 was prepared under the Electricity Act 1992 and sets minimum safe electrical distance requirements primarily to protect persons and property, vehicles and mobile plants. Compliance with this code is mandatory. Compliance with these provisions will not necessarily ensure compliance with this code.

Matters of Discretion or Control - General Rural Zone

GRUZ-MAT1	Degree of Compliance
	The degree and effects of non-compliance with the condition or the performance standard.

GRUZ-MAT2	Financial Contributions
	The need for financial contributions.

GRUZ-MAT3	Financial Contributions and Bonds

	The need for financial contributions and bonds.

GRUZ-MAT4	Natural Hazards
	The risk of natural hazards.

GRUZ-MAT5	Noise

GRUZ-MAT6	~~Vehicle Access~~ Deleted
	~~The standard of vehicular access to the site of the activity, on-site parking and the standard of the approach road(s).~~

GRUZ-MAT7	~~Waste~~ Deleted
	~~The provision of adequate on-site disposal of waste.~~

GRUZ-MAT8	Hours of Operation

GRUZ-MAT9	Lighting

GRUZ-MAT10	Signs

GRUZ-MAT11	Historic Heritage
	Effects on items listed in the District Plan Historic Heritage HH-SCHED1.

GRUZ-MAT12	Visual Effects

GRUZ-MAT13	Height and Setback
	Building height and location including setbacks from boundaries.

GRUZ-MAT14	~~Power and Telecommunication~~ Deleted
	~~The provision of adequate power and telecommunication services.~~

GRZ — General Residential Zone

Residential areas function as the Southland District's main centres of population, culture and socio-economic activity. Integrated, sustainable and well-planned residential areas enhance people's communities' quality of life by creating and maintaining safe, healthy and pleasant **environments** with appropriate access to services, **infrastructure**, transport and facilities. Sporadic and uncoordinated **subdivision, land** use and development can result in ad-hoc urban growth and the inefficient use of **natural and physical resources** and can give rise to adverse environmental **effects**.

The District's residential areas, defined as the General Residential Zone, encompass the principal towns of Winton, Te Anau and Riverton/Aparima and the smaller townships of Balfour, Browns, Colac Bay/Oraka, Edendale, Lumsden, Manapouri, Mossburn, Nightcaps, Ohai, Otautau, Riversdale, Oban, Tokanui, Tuatapere, Waikaia, Wallacetown and Wyndham. The District's Residential Zones are recognised as predominantly residential areas but provide for a range of activities. The form, function, character and **amenity** of the District's General Residential Zones vary. Urban development pressures within the General Residential Zone also vary with some townships experiencing steady growth, while others are static or in decline.

Commercial Precincts are defined within the General Residential Zones in Te Anau, Winton, Riverton/Aparima, Otautau, Edendale, Lumsden, Tuatapere, Riversdale and Wyndham as key locations within which the Council seeks to encourage **commercial activities**. The Commercial Precincts enable the co-location of **commercial activities**, which can enhance the function, integrity, convenience and viability of the **commercial** centres of these townships. Commercial Precincts can also reduce the likelihood of **land** use conflicts with non-**commercial land** uses.

The Low-Density Residential Zone — Te Anau Residential Zone B (LDRZ-TRZB) was created through a private plan change and has specific zone provisions that provide for **residential** development on **properties** to which it relates.

Objectives

GRZ-O1

Subdivision, land use and development in the General Residential Zone shall maintain or enhance residential amenity.

GRZ-O2

Where they are defined, Commercial Precincts shall accommodate the principal retail and service functions of the General Residential Zone.

Policies

GRZ-P1

Subdivision, land use and development in the General Residential Zone shall:

1. reflect the needs of the community;
2. integrate with existing **land** use activities and **infrastructure**;
3. create desirable places to live and vibrant and functional Commercial Precincts;
4. achieve compact urban form; whilst avoiding, remedying or mitigating adverse **effects** on the **environment**.

Explanation: Well-planned urban areas can provide for sustainable growth and development which reflect the needs of local communities. Council has identified areas suitable for **subdivision**, **land** use and development to provide for urban growth by defining a General Residential Zone. Urban growth, including intensification and redevelopment, within the General Residential Zone, can promote coordinated, integrated and compact urban form. This can optimise the efficient use of and accessibility to, **infrastructure** whilst discouraging urban sprawl and ribbon development outside of the General Residential Zone.

GRZ-P2

Encourage the implementation of best practice urban design principles.

Explanation: Urban design is a key tool in achieving good quality outcomes in the built **environment**. Appropriate implementation of urban design principles will enhance identity and **amenity values**, promote diversity, choice, innovation and sustainability and ensure vibrant and cohesive residential areas. It can also support public health and well-being, including through the implementation of Crime Prevention through Environmental Design measures.

GRZ-P3

Manage **subdivision**, **land** use and development in a manner that maintains or enhances the **amenity values** of residential areas within the General Residential Zone.

Explanation: **Subdivision**, **land** use and development within the General Residential Zone should be sympathetic to **amenity values** and the character of residential areas and enhance this where possible. Outside of the Commercial Precinct, the **amenity** and character of the General Residential Zone are influenced predominantly by **residential activity** reflected in greater **yard** setbacks, landscaped **residential** sections, off-street car parking, low ambient **noise** levels, lower levels of **signs** and lower **building heights.** Limited levels of **commercial activity** including **home occupations** and local service activities such as hairdressers and dairies are located throughout the General Residential Zone. These types of **commercial activities** are generally consistent with the **amenity** of residential areas.

GRZ-P4

Give priority to Commercial Precincts as the principal areas for **commercial activities**.

Explanation: The **commercial** centres of the principal urban areas Te Anau, Winton, Riverton Aparima and the townships of Otautau, Edendale, Lumsden, Tuatapere, Riversdale and Wyndham are a focus for **commercial activities** and also support **community**, **educational** and **entertainment**

activities. The co-location of **commercial activities** within Commercial Precincts can reduce the likelihood of **land** use conflicts and can maintain and enhance the function, integrity, convenience and viability of the **commercial** centres of these urban areas.

GRZ-P5

Avoid, remedy or mitigate **reverse sensitivity effects**.

Explanation: The General Residential Zone provides for a range of **land** use activities, however, there is potential for conflict where neighbouring or nearby **land** uses are not compatible. **Subdivision**, **land** use and development should integrate with existing **land** use activities that adjoin or are in close proximity to the **site**. Adverse **effects** on **residential amenity** should be appropriately managed. Particular consideration should be given to those **residential activities** to be located on the perimeter of the Commercial Precinct, the interface between the GRZ - General Residential Zone and GRUZ - General Rural or GIZ - General Industrial Zones or adjacent to the roading and rail networks, transmission or other forms of **infrastructure**.

GRZ-P6

Avoid, remedy or mitigate the adverse **effects** of **earthworks**.

Explanation: **Earthworks** can give rise to a range of adverse **effects** on the **environment**, including **effects** on slope and soil stability, biological diversity, visual **amenity**, **historic heritage** (including **archaeological sites**), and changes to stormwater flows and **water** quality. **Earthworks** should be managed through the implementation of a robust methodology and works supervision procedures to avoid adverse **effects**. Particular attention should be given to appropriate **site** remediation.

GRZ-P7

Avoid, remedy or mitigate **reverse sensitivity effects** on **transmission lines**.

Explanation: Transmission corridors have been established to provide for minimum corridors able to address safety, operation and maintenance of the **transmission lines** within them. This will enable Council to prevent **sensitive activities**, or the expansion of existing **sensitive activities**, from locating within a transmission corridor where they would affect or be affected by the **transmission line**.

GRZ-P8

Manage **subdivision**, **land** use and development in a manner that maintains or enhances the dark quality of the Stewart Island/ Rakiura night sky (excludes offshore islands).

Explanation: The Stewart Island/ Rakiura night sky is considered to be of exceptional dark quality and this is formally recognised via the Island's Dark Sky Sanctuary accreditation status. It is considered that **subdivision**, **land** use and development have the potential ability to erode this unique quality if not carefully managed through the application of appropriate lighting design. In this instance, the offshore islands for example the Titi/ Muttonbird Islands,

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Ruapuke Island and Whenuahou/Codfish Island are excluded because it is considered the majority of development that is likely to adversely affect the night sky will occur on the mainland of Stewart Island/Rakiura.

Rules

Note: District-wide rules.

The following district-wide sections of the District Plan may apply in addition to any relevant GRZ - General Residential Zone Rules to activities undertaken in the GRZ - General Residential Zone. If one or more of the district-wide rules are breached, the activity will require consent in respect of those rules:

- EM - Energy and Minerals
- INF – Infrastructure
- TRAN - Transport
- CL - Contaminated Land
- WASTE - Waste
- HAZS - Hazardous Substances
- HH - Historic Heritage
- ECO - Ecosystems and Indigenous Biodiversity
- PA - Public Access
- SUB – Subdivision
- LAN – Land Use and Development
- ASW - Activities on the Surface of Water
- FIN - Financial Contributions
- NOISE - Noise
- SIGNS - Signs
- TEMP - Temporary Activities

GRZ-R1	Permitted Activities
The following activities are **Permitted Activities** within the GRZ General Residential Zone: 1. **Residential Activities** (not located within the Commercial Precinct) that comply in all aspects with the General Residential Standards for the General Residential Zone.	**Activity Status when compliance with one performance standard is not achieved:** RDIS **Matters of Discretion:** GRZ-MAT1: Degree of Compliance **Activity Status when compliance with two or more performance standard is not achieved:** DIS
2. **Visitor Accommodation** (involving five or less paying guests).	**Activity Status when compliance with one performance standard is not achieved:** RDIS **Matters of Discretion:** GRZ-MAT1: Degree of Compliance **Activity Status when compliance with two or more performance standard is not achieved:** DIS
3. **Commercial, Community, Educational, Rural Service, Entertainment Activities**, Service Stations and **Visitor Accommodation** (involving six or more paying guests), located within the Commercial Precinct that comply in all aspects with the Performance Standards — General Residential Zone.	**Activity Status when compliance with one performance standard is not achieved:** RDIS **Matters of Discretion:** GRZ-MAT1: Degree of Compliance

	Activity Status when compliance with two or more performance standard is not achieved: DIS
4. **Temporary Events** provided that: a. The **temporary event** does not exceed six days in any calendar year. b. The **temporary event** shall not operate outside of the hours of: • 7.30 am - 10.00 pm, Monday to Saturday; • 7.30 am - 6.00 pm, Sundays and public holidays. c. Any **structures** associated with an event shall be erected: i. no more than two days before the event occurs; ii. removed no more than three days after the end of the event. d. The **site** on which the **temporary event** occurs shall be returned to its original condition no more than three days after the end of the event. e. There shall be no direct access to **sites** of **temporary events** from a State Highway or Regional Arterial **Road**. f. **Noise** generated by the **temporary event** does not exceed the maximum noise standards for the Residential Zone (refer to NOISE — Noise). g. Adequate provision is made for waste collection and disposal including the provision of toilet facilities.	**Activity Status when compliance with one performance standard is not achieved:** RDIS **Matters of Discretion:** GRZ-MAT1: Degree of Compliance **Activity Status when compliance with two or more performance standard is not achieved:** DIS
5. **Home Occupations** provided that: a. A maximum of 30 m² of the **gross floor area** of the **residential** or **accessory buildings** on the **property** is used for the operation of the **home occupation**. b. No more than 10 m² of the **property** shall be used as an outdoor display area for the operation of the **home occupation** and associated storage of goods, materials or equipment at any one time. c. The **home occupation** is not operated outside of the hours of: • 7.30 am - 9.00 pm, Monday to Saturday; and • 7.30 am - 6.00 pm, Sundays and public holidays.	**Activity Status when compliance not achieved:** RDIS **Matters of Discretion:** GRZ-MAT1: Degree of Compliance **Activity Status when compliance with two or more performance standard is not achieved:** DIS

6. Activities on **Council Reserves** provided that: Any activity specifically complies with an **approved management plan.** **Note:** Any activity on a reserve will still require authority from the administering body responsible for managing the reserve. This rule overrides specific Zone and Overlay requirements and all general standards.	**Activity Status when compliance not achieved:** RDIS **Matters of Discretion:** GRZ-MAT1: Degree of Compliance **Activity Status when compliance with two or more performance standard is not achieved:** DIS
7. Intermittent aircraft departures and landings that do not meet the definition of an airport under the Resource Management Act.	**Activity Status when compliance with one performance standard is not achieved:** RDIS **Matters of Discretion:** GRZ-MAT1: Degree of Compliance **Activity Status when compliance with two or more performance standard is not achieved:** DIS
8. **Earthworks** within a **National Grid Yard:** a. **Earthworks** within 2.2 metres of a **National Grid** pole support **structure** or stay wire shall not be greater than 300 mm in depth. b. **Earthworks** between 2.2 metres and 5 metres of a **National Grid** pole support structure or stay wire shall not be greater than 750 mm in depth. c. **Earthworks** within 12 metres of the outer edge of the visible foundation of a **National Grid** tower support **structure** shall not be greater than 300 mm in depth. d. **Earthworks** shall not compromise **National Grid** support **structure** stability. e. **Earthworks** shall not result in a reduction of the existing **conductor** clearance distance above the ground as required in NZECP34.	**Activity Status when compliance not achieved:** NC

Provided that the following activities are exempt from a. and b. above: i. **earthworks** undertaken by a **Network Utility Operator**; or ii. **earthworks** undertaken as part of agricultural or domestic **cultivation**, or repair, sealing or resealing of a **road**, footpath or driveway.	
9. Activities within a **National Grid Yard,** within any part of a Transmission Yard the following are permitted: a. **Buildings** less than 2.5 metres high and 10 m^2 in area. b. Alterations and additions to existing **buildings** that do not involve an increase in floor space. c. Mobile machinery and equipment. d. Network utilities and **energy facilities**. e. Any fence up to 2.5 metres high. f. Recreational activities.	**Activity Status when compliance not achieved:** NC

GRZ-R2	Restricted Discretionary Activities
The following activities are **Restricted Discretionary Activities** 1. Any Permitted Activity which fails to comply with no more than one Performance Standards — General Residential Zone, or no more than one condition of the permitted activity rule and is not within the **National Grid Yard**.	**Activity status where compliance not achieved:** DIS **Matters of Discretion:** GRZ-MAT1: Degree of Compliance
2. **Residential Activities** within the Commercial Precinct that comply in all aspects with the Performance Standards — General Residential Zone.	**Activity status where compliance not achieved:** DIS **Matters of Discretion:** GRZ-MAT2 Residential Amenity Standards GRZ-MAT3 Design Guidelines ~~GRZ-MAT4 Vehicles Access~~ ~~GRZ-MAT5 Infrastructure~~ GRZ-MAT6 Reverse Sensitivity

GRZ-R3	Discretionary Activities
1. Any activity that cannot be undertaken as a Permitted, Restricted Discretionary or Non-Complying Activity and is not listed as a Prohibited Activity is a Discretionary Activity.	**Activity Status when compliance not achieved:** N/A

GRZ-R4	Non-Complying Activities
1. **Industrial Activities.**	**Activity Status when compliance not achieved:** N/A
2. **Offensive Trades.**	**Activity Status when compliance not achieved:** N/A
3. Any activity that fails to comply with any of the performance conditions in relation to: a. GRZ-R1.8 - **Earthworks** within a **National Grid Yard**. b. GRZ-R1.9 - Activities within a **National Grid Yard**.	**Activity Status when compliance not achieved:** N/A
4. Within a **National Grid Yard**: a. Any **building** or addition to a **building** for a **sensitive activity**. b. A change of use to a **sensitive activity** or the establishment of a new **sensitive activity**. c. Any **building** or **structure** (except fences) located less than 12 metres from the outer edge of a **transmission line** support **structure**. d. Any **building** or **structure** over 1.5 metres high unless it is demonstrated that safe separation distances under NZECP34 are maintained under all **transmission line** operating conditions. e. Any **earthworks** that cannot comply with GRZ-R1.8 f. Any **building** or **structure** that is not a permitted activity in GRZR1, or discretionary in GRZ-R3.	**Activity Status when compliance not achieved:** N/A

GRZ-R5	Prohibited Activities

Buildings in the Lakeside Protection Area over 12 metres in **height** are Prohibited Activities.	**Activity Status when compliance not achieved:** N/A

Methods Other Than Rules

GRZ-M1	
Education through the distribution of information regarding urban design and integrated urban growth and development.	

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Performance Standards — General Residential Zone

All activities within the General Residential Zone shall comply with the following General Residential Standards:

GRZ-PS1	Earthworks	
	These standards do not apply to activities permitted under INF-R1 - Permitted Activities or to the removal and replacement of underground petroleum storage tanks. 1. **Earthworks** shall not be undertaken: a. on slopes of more than 12°; b. within 20 metres of a **waterbody**, including **wetlands** and **coastal water**, except **domestic gardening**; c. within 20 metres of any **natural hazard** protection work; d. in a manner that exacerbates any **natural hazards**. 2. No **earthworks** shall involve the disturbance of more than 200 m^3 (volume) of **land** and/or alter the existing **ground level** by more than 1 metre, measured vertically. 3. **Earthworks** shall not affect any **archaeological site** identified on the District Plan maps, except where an Archaeological Authority has been granted by Heritage New Zealand pursuant to the Heritage New Zealand Pouhere Taonga Act 2014 or confirmation is provided that no archaeological authority is required.	**Activity Status when compliance not achieved:** RDIS **Matters of Discretion:** GRZ-MAT1: Degree of Compliance

GRZ-PS2	Minimum Yard Requirements	
	Side, front and rear **yards** shall be provided in accordance with Table 16 — GRZ Yards:	**Activity Status when compliance not achieved:** RDIS **Matters of Discretion:** GRZ-MAT1: Degree of Compliance

Table 16 — GRZ Yards		
Area	**Minimum Front Yard (metres)**	**Minimum Side and Rear Yard (metres)**
General Residential Zone (excluding Stewart Island/Rakiura and the Commercial Precinct	4.5	1
Stewart Island/Rakiura General Residential Zone	4.5	3
Commercial Precinct where the relevant boundary adjoins the part of the General Residential Zone outside of the Commercial Precinct without the intervention of a **road**	4.5	4.5
Commercial Precinct where relevant boundary either: • does not adjoin that part of the General Residential Zone outside of the Commercial Precinct; • or adjoins a **road**	0	0

GRZ-PS3	Fencing	
	Any boundary fence shall not exceed a **height** of 2 metres.	**Activity Status when compliance not achieved:** RDIS **Matters of Discretion:** GRZ-MAT1: Degree of Compliance

GRZ-PS4	Maximum Height	
	1. **Building** and **structures** shall not exceed the maximum **heights** specified in the following table: 2. All **structures** shall comply with GRZ-PS5 - Height in Relation to Boundary, except in the Commercial Precinct where the **height** in relation to boundaries does not apply to the common boundary between two **commercial sites** or the front boundary. 3. In determining **height**, the rolling height method shall be used (see definition of **Height** and the Rolling Height Method).	**Activity Status when compliance not achieved:** RDIS **Matters of Discretion:** GRZ-MAT1: Degree of Compliance

Table 17 — GRZ Height

Area	**Maximum Height - All Buildings (excluding Residential Accessory Buildings) (metres)**	**Maximum Height — Residential Accessory Buildings (metres)**
General Residential Zone (excluding Stewart Island/Rakiura and the Commercial Precinct)	9	4.5
Stewart Island/Rakiura General Residential Zone	7.5	4.5
Commercial Precinct where the **site** adjoins or faces the General Residential Zone	9	9
Commercial Precinct where the **site** does not adjoin or face the General Residential Zone	12	12

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GRZ-PS5	Height in Relation to Boundary	
	1. The following standard does not apply to the common boundary between two **commercial sites** or the front boundary within the Commercial Precinct. 2. The maximum **height** of any **structure** shall be determined by a recession plane which commences at 2 metres above the line of each boundary and then slopes at an upward angle as determined by the Height Recession Diagram below, up to the maximum **height** specified in Table 17 — GRZ Height, except that: a. a minor breach of the recession plane is permitted provided the parts of the **structure** that protrude through the recession plane do not exceed 1.5 metres in **height** and a total area of 6 m² on each elevation. The area and **height** of the breach shall be measured as outlined in the diagram below and include solar heating devices that breach the recession plane; b. no account shall be taken of those items outlined in Clause 2 of the **height** definition.	**Activity Status when compliance not achieved:** RDIS **Matters of Discretion:** GRZ-MAT1: Degree of Compliance

Southland District Council Plan Change 2: Subdivision, Land Use and Development Code of Practice

Figure 7 - GRZ Height Recession Diagram

With both the **site** plan and the clock diagram below pointing north, place the edge of the clock on the inside of the **site** boundary. Where the clock touches the boundary indicates the recession angle for that boundary. An example has been provided to assist with the interpretation of the rule.

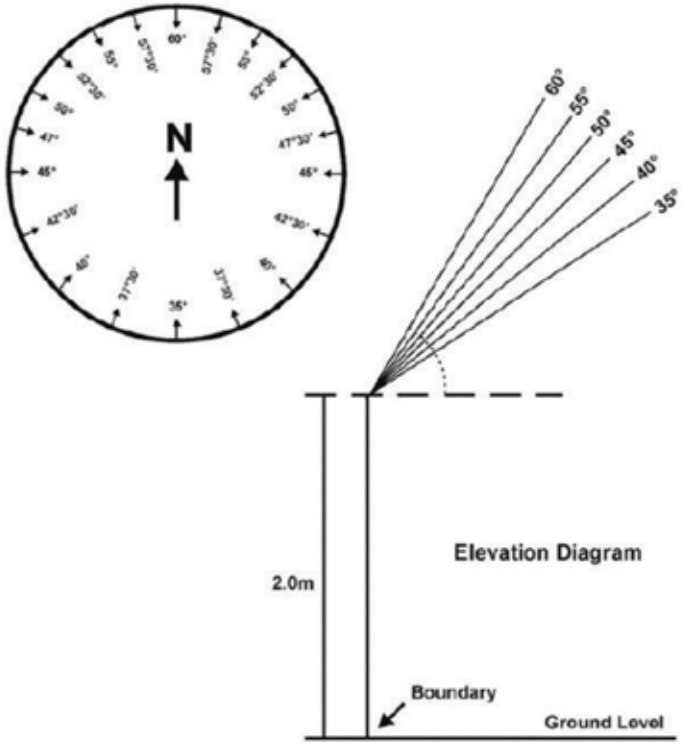

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Figure 8 - GRZ Recession Allowances

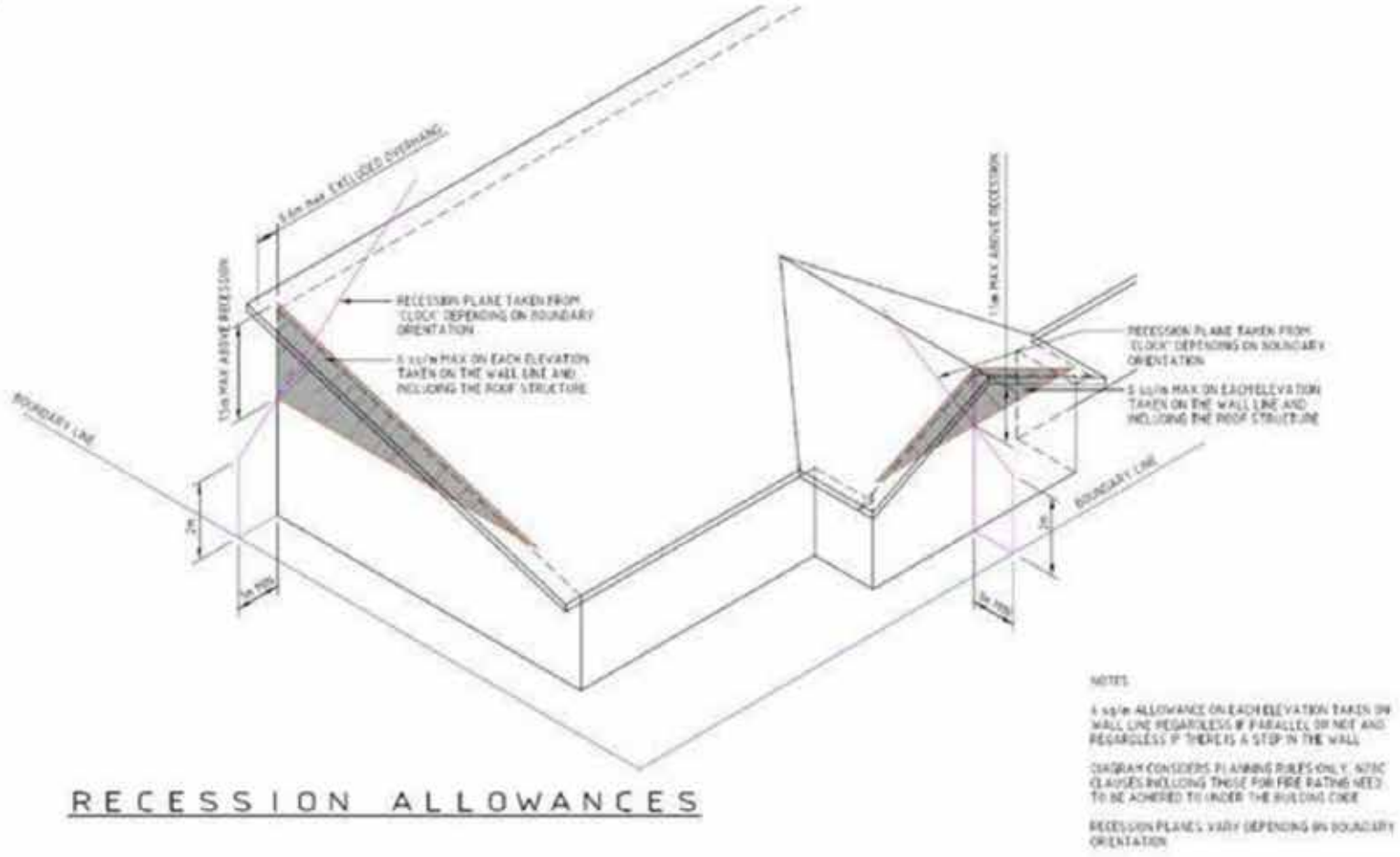

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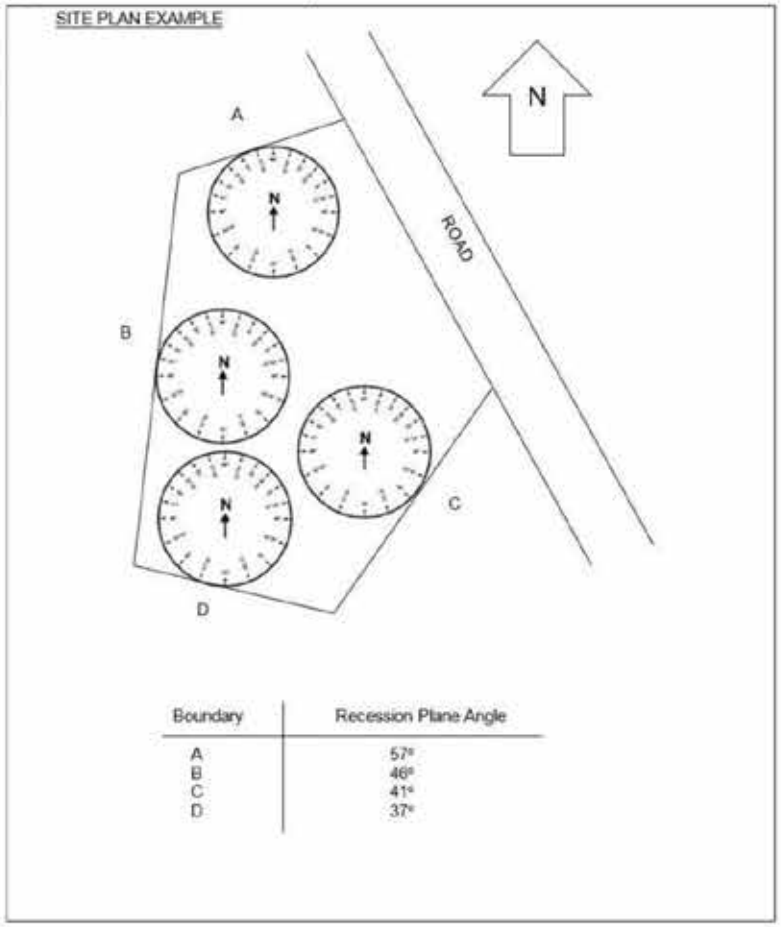
Figure 9 - GRZ Site Plan Example



Boundary	Recession Plane Angle
A	57°
B	46°
C	41°
D	37°

GRZ-PS6	Outdoor Living Space	
	1. **Outdoor Living Spaces** in the General Residential Zone shall be provided in accordance with Table 18 GRZ - Outdoor Living Spaces. 2. **Outdoor living spaces** shall be free of driveways, parking spaces and garages. 3. For **multi-unit developments** and **residential activities** within the Commercial Precinct with units above **ground level**, the **outdoor living space** provided at **ground level** may be reduced to 30 m² provided it is supplemented by a balcony which adjoins and is accessible to the **living room** of each unit above-ground floor level. This balcony shall have a minimum area of 8 m² and a minimum width of 2 metres. 4. For **multi-unit developments** and elderly and Kaumatua housing units no **dwelling** unit shall be sited or designed so that the main glazing of the living areas of one **dwelling** unit face the main glazing of the living area of another **dwelling** unit unless appropriate screening is provided at not less than 3 metres from each opposing unit.	**Activity Status when compliance not achieved:** RDIS **Matters of Discretion:** GRZ-MAT1: Degree of Compliance

Table 18 — GRZ Outdoor Living Spaces

Type of Residential Activity	Minimum Area	Minimum Dimension	Residential Accessory Buildings Allowed in Outdoor Living Space	Maximum Area of Residential Accessory Buildings in Outdoor Living Space	Area of Permeable Surface Required
Detached **Dwellings** (not part of **multi-unit development** or in Commercial Precinct)	100 m²	5 metres x 10 metres or a circle 8m in diameter	One	10 m²	Not less than 60%

	Residential activities within the Commercial Precinct — ground floor, **multi-unit developments**	50m² Must be for the exclusive use of each unit	5 metres x 5 metres Measured at right angles to the exterior wall of the **living room**	One	10m²	Not less than 60%
	Elderly person and Kaumatua housing units	33 m²	Minimum width of 5.5 metres and must adjoin **living room** and must be located to the north, east or west of the **dwelling** unit it serves, must be for the exclusive use of each unit	None	0	None

GRZ-PS7	Outdoor Storage	
	Any area used for storage purposes in connection with **Commercial**, **Community**, **Educational** and **Entertainment** **Activities**, that is not totally enclosed by a covered **building** shall be screened from public spaces and from **residential activities** and shall not exceed 50 m^2 in area, on any one **property**.	**Activity Status when compliance not achieved:** RDIS **Matters of Discretion:** GRZ-MAT1: Degree of Compliance

GRZ-PS8	Lighting and Glare (with the exception of Stewart Island/Rakiura)

	1. The spill of light from artificial lighting (excluding street lights and traffic signals) onto any other **site** (except as provided for by 2. below) shall not exceed 8 lux (horizontal and vertical) when measured at or within the boundary of any other **site.** 2. The spill of light from artificial lighting (excluding street lights and traffic signals) on to any other **site** within the commercial precinct shall not exceed 12 lux (horizontal and vertical) when measured at or within the boundary of that **site.** 3. All outdoor lighting shall be directed away from **adjoining properties.** **Note:** For clarification, outdoor garden solar lights are exempt from this rule.	**Activity Status when compliance not achieved:** RDIS **Matters of Discretion:** GRZ-MAT1: Degree of Compliance

GRZ-PS9	Lighting and Glare within the Stewart Island/Rakiura Residential Zone	
	1. The spill of light from artificial lighting (excluding street lights and traffic signals) on to any other **site** (except as provided for by 2. below) shall not exceed 3 lux (horizontal and vertical) when measured at or within the boundary of any other **site.** 2. All outdoor lighting shall be directed away from **adjoining** properties. 3. All fixtures shall be **fully shielded** with no light spill being permitted above the horizontal plane. 4. Artificial lighting colour is to be 'warm white' (being equal to or less than 3000K correlated colour temperature only). **Note:** For clarification, outdoor garden solar lights are exempt from this rule.	**Activity Status when compliance not achieved:** RDIS **Matters of Discretion:** GRZ-MAT1: Degree of Compliance

GRZ-PS10	Hours of Operation	
	Hours of operation shall be limited as follows: 1. **Commercial, Community, Educational, Rural Service** and **Entertainment Activities** within the Commercial Precinct a. Every day: 7.00 am — 1.00 am	**Activity Status when compliance not achieved:** RDIS **Matters of Discretion:** GRZ-MAT1: Degree of Compliance

GRZ-PS11	Verandah Requirement Area — Commercial Precincts	
	1. All new **buildings** that adjoin one or more **buildings** with a verandah, within the Verandah Requirement Area shown on the District Plan Maps shall have verandahs designed and constructed to: a. cover the width of the footpath in front of the **site** and extending along the full frontage width of the **site**; b. achieve continuity with **adjoining** verandahs; c. be a minimum of 2.4 metres clear of the footpath; d. be self-supporting. 2. All existing **buildings** with verandahs, that adjoin one or more **buildings** with a verandah, within the Verandah Requirement Area shown on the District Plan Maps shall have verandahs designed and constructed to either replace like with like, or meet the criteria outlined in a. to b. above.	**Activity Status when compliance not achieved:** RDIS **Matters of Discretion:** GRZ-MAT1: Degree of Compliance

GRZ-PS12	Noise	
	Except as provided in NOISE-R3 and NOISE-R4 to NOISER11, **noise** from all activities shall not exceed the following limits: **Note:** The daytime **noise** limits are intended to provide **amenity** for outdoor activities. Night-time **noise** limits are intended to allow for sleep **amenity**. Where an activity shares a boundary with another Zone the activity must comply with the more restrictive **noise** limit.	**Activity Status when compliance not achieved:** RDIS **Matters of Discretion:** GRZ-MAT1: Degree of Compliance

Table 19 — GRZ Noise Limits

When Measured at the Boundary of Any Property Zoned:	**Daytime (7.00 am - 10.00 pm inclusive)**		**Night Time (All other times)**	
	LAeq (15 min)	**LAF, max**	**LAeq (15 min)**	**LAF, max**
General Residential Zone	50 dB	75 dB	40 dB	70 dB

	General Residential Zone- Commercial Precinct	55 dB	80dB	45 dB	70 dB

GRZ-PS13	Signs	
	Compliance with the relevant **signs** standards as set out in SIGN Table 12- Sign Limit	**Activity Status when compliance not achieved:** RDIS **Matters of Discretion:** GRZ-MAT1: Degree of Compliance

GRZ-PS14	~~Transportation Standards including Access~~ Deleted	
	~~All activities shall comply in all aspects with the provisions set out in the Southland District Council Subdivision, Land Use and Development Bylaw 2012 - relating to car parking numbers, dimensions, access, loading and manoeuvring.~~	~~**Activity Status when compliance not achieved:** RDIS~~ ~~**Matters of Discretion:**~~ ~~GRZ-MAT1: Degree of Compliance~~

GRZ-PS15	National Grid Lines and Support Structures	
	1. Setbacks from **National Grid** Support **Structures** 2. No **building** or **structure** shall be located within 12 metres (in any direction) of the visible outer edge of a **National Grid** support **structure**, with the following exceptions: a. fencing up to 2.5 metres in **height** that is at least 5 metres from the outer edge of any support **structure**; b. **network utility operators** within a transport corridor or any part of electricity **infrastructure** that connects to the **National Grid**.	**Activity Status when compliance not achieved:** RDIS **Matters of Discretion:** GRZ-MAT1: Degree of Compliance

	3. Setbacks from **National Grid** Lines 4. No **building** or **structure** shall be erected within 12 metres from the centre line and 12 metres from the outer edge of the support **structure** of a high voltage **transmission line** that is part of the transmission network and is designed to operate at or over 110 kV provided that this rule does not apply to: a. ancillary **buildings** and **structures** associated with **residential activities** that are less than 10 m^2 in area and under 2.5 metres in **height** can be located within the above setback distances, provided they are at least 12 metres from the visible outer edge of any support **structure** and are not used for habitation; b. fencing of up to 2.5 metres in **height** that is at least 5 metres from the visible outer edge of any support **structure**; c. alterations to existing **buildings** that do not increase the **building** envelope or footprint provided that they are at least 12 metres from the visible outer edge of any support **structure;** d. **network utility operators** within a transport corridor or any part of electricity **infrastructure** that connects to the **National Grid**. 5. **Sensitive activities** shall be at least 12 metres from a **National Grid** tower, pole or centreline of a **National Grid** line shown on the Planning Maps as a High Voltage Line.	

GRZ-PS16	Activities near Transport Corridors	
	Any new or relocated **dwelling**, located: 1. within 40 metres of the closest railway track; 2. where there is no track in place, 35 metres from the nearest boundary of the railway designation; 3. 80 metres of the seal edge of a State Highway that has a speed limit of 70 km/hr and greater or 40 metres of the seal edge of a State Highway that has a speed limit of less than 70 km/hr; shall be designed, sited and constructed to ensure that the internal **noise** levels for **dwellings** do not exceed 35 dB $L_{Aeq\ (1\ hr)}$ inside bedrooms or 40 dB $L_{Aeq\ (1\ hr)}$ inside other **habitable rooms**.	**Activity Status when compliance not achieved:** RDIS **Matters of Discretion:** GRZ-MAT1: Degree of Compliance

Matters of Discretion or Control - General Residential Zone

GRZ-MAT1	Degree of Compliance
	The degree and **effects** of non-compliance with the condition or the performance standard.

GRZ-MAT2	Residential Amenity Standards
	Whether appropriate **residential amenity** standards will be provided.

GRZ-MAT3	Design Guidelines
	Matters contained in any relevant design guidelines.

GRZ-MAT4	~~Vehicles Access~~ Deleted
	~~The ability of vehicles to safely access and exit the **site**.~~

GRZ-MAT5	~~Infrastructure~~ Deleted
	~~Whether there is adequate **infrastructure** capacity to meet the needs of the proposed activity.~~

GRZ-MAT6	Reverse Sensitivity
	Potential for **reverse sensitivity** issues and the extent to which the **residential activity** has provided for appropriate **noise** mitigation.

GIZ — General Industrial Zone

The General Industrial Zone provides an appropriate location for **industrial activities** to develop and operate, as it has a higher tolerance for the adverse environmental **effects** typically generated by **industrial activity**. The co-location or cluster of **industrial activity**, within the General Industrial Zone, can ensure that adverse **effects** of like activities are contained within a defined area and that appropriate separation from more **sensitive activities** is achieved. The Zone provides operating certainty for new and existing **industrial activities** and can reduce the likelihood of **land** use conflict, where **industrial activities** may not be compatible with neighbouring **land** uses. It can also provide for the efficient use and development of transportation and **infrastructure** networks. Non-**industrial activities** within the General Industrial Zone should be avoided and are provided for in other Zones elsewhere in the District.

Objectives

GIZ-O1

Subdivision, **land** use and development within the General Industrial Zone occur in an integrated and sustainable manner.

Policies

GIZ-P1

Recognise the benefits of locating **industrial activity** within the General Industrial Zone.

Explanation: The General Industrial Zone provides specifically for **industrial activity**. The co-location or cluster of **industrial activities** can mitigate adverse environmental **effects** by confining the activities within a defined area. It can also enable effective provision of transport and infrastructural networks, designed to accommodate the impacts of **industrial activities**. These factors can enable **industrial activities** to develop and operate in an efficient and effective manner without being unduly restricted and in turn, support the socio-economic well-being of the District.

GIZ-P2

Recognise and provide for the growth and development of **industrial activities** within the General Industrial Zone, whilst avoiding, remedying or mitigating adverse **effects** on the **environment**.

Explanation: While **subdivision**, **land** use and development in the General Industrial Zone can generate positive socio-economic **effects**, **industrial activities** can also give rise to adverse environmental **effects**. Processes and operations associated with **industrial activities** can generate **noise**, **dust**, traffic, and waste and adversely affect the **amenity** of surrounding areas. While the General Industrial Zone has a higher tolerance for adverse environmental **effects**, activities must still be carried out in a manner that avoids, remedies or mitigates these **effects**. In some cases, the implementation of robust management and monitoring plans may be appropriate. The Zone must also achieve integration with the wider **environment** and activities located

on the interface with other Zones and should take account of any adverse **effects** on **adjoining** areas, including the provision of appropriate buffers or separation to reduce environmental **effects**. The implementation of urban design principles should also be considered. GIZ-P3

GIZ-P3

Avoid the establishment and operation of **noise sensitive activities** in the General Industrial Zone.

***Explanation*: Industrial activities** can generate a range of adverse environmental **effects** including higher levels of **noise**, **dust** and traffic movement than is experienced elsewhere in the District. The establishment and operation of activities unduly sensitive to the **effects** of **industrial activity**, or **noise sensitive activities**, within the General Industrial Zone, should be avoided to avoid conflict between these **land** uses.

Rules

Note: District-wide rules

The following district-wide sections of the District Plan may apply in addition to any relevant General Industrial Zone Rules to activities undertaken in the General Industrial Zone. If one or more of the district-wide rules is breached, the activity will require consent in respect of those rules:

- EM - Energy and Minerals
- INF - Infrastructure
- CL - Contaminated Land
- WASTE - Waste
- HAZS - Hazardous Substances
- HH - Historic Heritage
- ECO - Ecosystems and Indigenous Biodiversity
- PA - Public Access
- SUB – Subdivision
- LAN – Land Use and Development
- TRAN - Transport
- ASW - Activities on the Surface of Water
- FIN - Financial Contributions
- NOISE - Noise
- SIGN – Signs
- TEMP - Temporary Activities

GIZ-R1	Permitted **Activities**
The following activities are permitted in the General Industrial Zone: 1. **Industrial Activities** (excluding **offensive trades**), **Rural Service Activities** and Service Stations that comply in all aspects with the General Industrial Standards.	**Activity Status when compliance not achieved:** DIS
2. Activities on **Council Reserves** provided that any activity specifically complies with an **approved management plan**. **Note:** Any activity on a reserve will still require authority from the administering body responsible for managing the reserve. This rule overrides specific Zone and Overlay requirements and all general standards.	**Activity Status when compliance not achieved:** DIS

GIZ-R2	**Discretionary Activities**
Activities not provided for by GIZ-R1, GIZ-R3 or Performance Standards - General Industrial Zone are **Discretionary Activities**.	**Activity Status when compliance not achieved:** N/A

GIZ-R3	**Non-Complying Activities**
The following activities are **Non-Complying Activities**: 1. **Noise Sensitive Activities**.	**Activity Status when compliance not achieved:** N/A
2. **Commercial Activities**.	**Activity Status when compliance not achieved:** N/A

Performance Standards — General Industrial Zone

All activities within the General Industrial Zone shall comply with the following general standards:

GIZ-PS1	Earthworks	
	1. **Earthworks** The following standards apply when carrying out **earthworks** for any activity such as constructing new **buildings** and relocating **buildings**, construction of **roads** and accessways to **building sites**, **subdivision** lots, parks and parking areas. These standards do not apply, however, to **road** maintenance activities within the legal **road** and activities associated with the maintenance of a **waterbody** or stormwater control and to the removal of and replacement of underground petroleum storage tanks. **Earthworks** shall not: a. be undertaken on slopes of more than 12°. b. be undertaken within 20 metres of a **waterbody**, including **wetlands** and **coastal water**. c. disturb more than 1,000 m^3 of **land**. d. alter the existing **ground level** by more than 1 metre.	**Activity Status when compliance not achieved:** DIS

GIZ-PS2	Maximum Height	
	1. Maximum **Height** **Buildings** and **structures** shall not exceed 12 metres.	**Activity Status when compliance not achieved:** DIS

GIZ-PS3	Height in Relation to Boundaries

	1. **Height** in Relation to Boundaries For **sites adjoining** the General Residential Zone, the **building** shall meet the **height** recession requirement for the General Residential Zone in relation to the relevant boundary. This shall not apply to **road** boundaries.	**Activity Status when compliance not achieved:** DIS

GIZ-PS4	Yards	
		Activity Status when compliance not achieved: DIS
	Table 20 — GIZ Yards	
	Location	**Minimum Yard**
	Where a **site** adjoins a State Highway or a Regional Arterial **Road** as listed in SCHED5	12 metres on the boundary with the State Highway or a Regional Arterial **Road**
	Where a **site** adjoins any other **road**	7.5 metres on the boundary with the **road**
	Where a **site** adjoins any other zone without the intervention of a **road**	7.5 metres on the boundary with the other Zone

GIZ-PS5	Screening	
	Screening An **industrial activity** shall provide effective screening from any **site** zoned General Residential, General Rural or within a Commercial Precinct that is	**Activity Status when compliance not achieved:** DIS

	adjoining or opposite (across a **road**). The screening shall comprise of either a densely planted buffer of vegetation capable of growing to at least 3 metres in **height** or a solid fence or wall between 1.8 metres and 2 metres in **height**.	

GIZ-PS6	Lighting and Glare	
	1. Lighting and Glare (with the exclusion of Stewart Island/Rakiura) All exterior lighting shall be designed, located and at all times directed, screened, adjusted and maintained to ensure that: i. The spill of light from artificial lighting (excluding street lights and traffic signals) onto any other **site** shall not exceed 10 lux (horizontal and vertical) when measured at or within the boundary of any other **site**. ii. All outdoor lighting is directed away from **adjoining properties**. 2. Lighting and Glare within the General Industrial Zone on Stewart Island/Rakiura All exterior lighting shall be designed, located and at all times directed, screened, adjusted and maintained to ensure that: iii. The spill of light from artificial lighting (excluding street lights and traffic signals) shall not exceed 10 lux (horizontal and vertical) when measured at or within the boundary of any other **site**. iv. All outdoor lighting is directed away from **adjoining properties**. v. All fixtures shall be **fully shielded** with no light spill being permitted above the horizontal plane. iv. Artificial lighting colour is to be 'warm white' (being equal to or less than 3000K correlated colour temperature only).	**Activity Status when compliance not achieved:** DIS

GIZ-PS7	Concept Plans

	1. Concept Plans Activities undertaken in those areas identified as being subject to the Edendale Dairy Plant Development Concept Plan, Stewart Island/Rakiura Industrial Zone Concept Plan or Winton Industrial Development Concept Plan shall be undertaken in accordance with the District Plan unless they have specific provisions within of the relevant concept plan contained in sections DEV1, DEV2, and DEV3. For the avoidance of doubt, if the activity does not comply with the provisions of the relevant concept plan, a resource consent application in accordance with the concept plan provisions shall be applied for.	**Activity Status when compliance not achieved:** DIS

GIZ-PS8	Noise				
	1. **Noise** Except as provided in NOISE-R3 and NOISE-R4 to NOISE-R11, **noise** from all activities shall not exceed the following limits:			**Activity Status when compliance not achieved:** DIS	
	Table 21 — GIZ Noise Limits				
	When Measured at the Boundary of Any Property Zoned:	**Day Time (7.00 am - 10.00 pm inclusive)**		**Night Time (All other times)**	
		LAeq (15 min)	**LAF, max**	**LAeq (15 min)**	**LAF, max**
	General Industrial Zone	65 dB	90 dB	55 dB	80 dB
	Note: The day time **noise** limits are intended to provide **amenity** for outdoor activities. Night time **noise** limits are intended to allow for sleep **amenity**. Where an activity shares a boundary with another Zone the activity must comply with the more restrictive **noise** limit.				

GIZ-PS9	Signs	
	1. **Signs** Compliance with the relevant **sign** standards as set out in SIGN - Signs.	**Activity Status when compliance not achieved:** DIS

GIZ-PS10	~~Transportation Standards including Access~~ Deleted	
	~~1. Transportation Standards including Access~~ ~~All activities shall comply in all aspects with the provisions set out in the Southland District Council Subdivision, Land Use and Development Bylaw 2012 - relating to car parking numbers, dimensions, access, loading and manoeuvring.~~	~~**Activity Status when compliance not achieved:** DIS~~

NOSZ — Natural Open Spaces Zone (Fiordland/ Rakiura Zone)

The Natural Open Space Zone encompasses the Fiordland and Rakiura National Parks and part of Mt Aspiring National Park. It also includes areas of privately-owned **land** which adjoin the National Parks, the District's offshore islands and conservation **land** that adjoins the National Parks. The Zone is recognised for its outstanding natural and wilderness qualities, of particular note are those parts of the Zone within the Fiordland, Rakiura and Mt Aspiring National Parks. The Natural Open Space Zone affords aesthetic, ecological, landscape, open space, recreational and **amenity values** and many areas of the Zone also have cultural and historic associations. The Zone forms part of the District's coastal environment with all offshore islands including Stewart Island/Rakiura and those parts of Fiordland subject to coastal processes identified as being within the Coastal Environment. The Natural Open Space Zone supports largely unmodified areas of significant **indigenous vegetation** and significant habitats of **indigenous** fauna and is identified in the District Plan as being an area of Outstanding Natural Features and Landscapes. Fiordland is recognised as internationally significant by UNESCO as Te Wahipounamu South West New Zealand World Heritage Area.

In contrast to Rakiura National Park, Fiordland National Park supports nationally and **regionally significant infrastructure**. This includes the Manapouri Power Station and State Highway 94 - the 'Milford Road'. It also contains the only established settlement in the Natural Open Space Zone, Milford, which is located at Milford Sound/Piopiotahi which acts as a key tourist hub servicing large numbers of visitors to Fiordland National Park.

Inappropriate **subdivision**, **land** use and development activities can compromise the natural and wilderness qualities of the Zone and the outstanding qualities of the National Parks. **Subdivision**, **land** use and development activities should give particular consideration to the protection of significant **indigenous vegetation** and habitats of **indigenous** fauna, the preservation of natural character, the protection of outstanding natural features and landscapes and the relationship of Tangata Whenua with the area. Areas in the Natural Open Space Zone on Stewart Island/Rakiura contain **land** held by Māori under the Te Ture Whenua Māori Act 1993 including South Island Landless Natives Act 1906 (SILNA) **land.** Council recognises the purpose of granting the **land** held by Māori under the Te Ture Whenua Māori Act 1993 including SILNA **land** so that the grantees might provide for their own support and maintenance.

Through the Zone provisions, Council recognises different thresholds for activities within and activities outside of, the National Parks. While activities within the National Parks are managed by Council under the District Plan, they are also administered by the Department of Conservation under the National Parks Act 1980 and Conservation Act 1987 and more specifically, the Mainland Southland/West Otago Conservation Management Strategy, the Fiordland National Park Management Plan, the Stewart Island/Rakiura Conservation Management Strategy and the Rakiura National Park Management Plan.

Council recognises the Department of Conservation's role within this resource management framework. Council acknowledges that activities and works of the Crown can be undertaken within the boundaries of any area of **land** held or managed under the Conservation Act 1987, as long as it is consistent with the relevant Conservation Management Strategy or National Park Management Plan and will not give rise to significant adverse **effects** beyond the boundary of the area of **land**.

Objectives

NOSZ-O1

The natural and wilderness qualities of the Natural Open Space Zone are maintained.

NOSZ-O2

The outstanding natural and wilderness qualities of the Fiordland, Rakiura and Mt Aspiring National Parks and Te Wahipounamu Southwest New Zealand World Heritage Area are protected.

Policies

NOSZ-P1

Avoid **subdivision** in the Fiordland, Rakiura and Mt Aspiring National Parks.

Explanation: **Subdivisions**, including the creation of new Computer Freehold Registers and **boundary adjustments**, can provide a framework for future development. Further development within the Fiordland, Rakiura and Mt Aspiring National Parks could have significant adverse **effects** on the outstanding natural and wilderness qualities. In particular, on significant **indigenous vegetation** and habitats of **indigenous** fauna, natural character and outstanding natural features and landscapes. Therefore, Council considers the prohibition of **subdivision** an appropriate mechanism to restrict further development.

NOSZ-P2

Avoid, remedy or mitigate the adverse **effects** of **land** use and development on the outstanding natural and wilderness qualities of the Fiordland, Rakiura and Mt Aspiring National Parks and Te Wahipounamu Southwest New Zealand World Heritage Area.

Explanation: The Fiordland, Rakiura and Mt Aspiring National Parks and Te Wahipounamu Southwest New Zealand World Heritage Area are recognised and renowned for their outstanding natural and wilderness qualities, in particular, their significant **indigenous vegetation** and habitats of **indigenous** fauna, their natural character and their outstanding natural features and landscapes. In order to protect these qualities, the adverse **effects** of **land** use and development should be avoided where possible or mitigated. Careful consideration should be given to the design, nature and location of activities and the way in which they integrate and respect the outstanding natural and wilderness qualities. This Policy relates to activities within National Parks and the World Heritage Area.

NOSZ-P3

Avoid, remedy or mitigate the adverse **effects** of **subdivision**, **land** use and development in the Natural Open Space Zone in areas outside of the Fiordland, Rakiura and Mt Aspiring National Parks.

Explanation: Council recognises that the characteristics of the areas within the Natural Open Space Zone, outside of the Fiordland, Rakiura and Mt Aspiring National Parks, are locally distinctive and differ from those of the National Parks. Some **subdivision**, **land** use and development activities in these areas may be appropriate, however, they should be in keeping with the natural and wilderness qualities of the Zone.

NOSZ-P4

Avoid, remedy or mitigate the adverse **effects** of **buildings** and **structures** in the Natural Open Space Zone.

Explanation: **Buildings** and **structures** within the Natural Open Space Zone can give rise to adverse **effects** on the **environment**, including **effects** on natural character, landscape and ecological values. They can also compromise the outstanding natural and wilderness qualities of the Fiordland, Rakiura and Mt Aspiring National Parks.

All **buildings** and **structures** should demonstrate their need to be located within the Zone and the examination of alternative locations undertaken. The design and location of **buildings** and **structures**, including construction methods, should be responsive to their context and integrate and reflect the characteristics of the **site** and wider **environment**. This includes the siting and scale of **buildings** and **structures** and their associated **curtilage**, utilities, access, **signs**, **earthworks** and landscape plantings.

NOSZ-P5

Avoid, remedy or mitigate the adverse **effects** of **earthworks** within the Natural Open Space Zone.

Explanation: **Earthworks** within the Natural Open Space Zone can give rise to a range of adverse **effects**, including **effects** on slope and soil stability, biological diversity, visual **amenity** and **water** quality and **historic heritage**. Potentially, these **effects** could have a significant impact on the outstanding natural and wilderness qualities of the Fiordland, Rakiura and Mt Aspiring National Parks. **Earthworks** should be managed through the implementation of a robust methodology and works supervision procedures. Particular attention should be given to appropriate **site** remediation, including revegetation and landscaping.

NOSZ-P6

Have particular regard to any relevant Conservation Management Strategy and National Park Management Plan for activities within **land** managed by the Department of Conservation.

Explanation: It is important for decisions made under the District Plan to be made in the context of other management plans applicable to the **land** the activity is on. Therefore, consideration should be given to any relevant Conservation Management Strategy or National Park Management Plan.

NOSZ-P7

Recognise the recreational opportunities and recreational values associated with the Natural Open Space Zone

Explanation: The Natural Open Space Zone and in particular the Fiordland, Rakiura and Mt Aspiring National Parks, are renowned for their range of recreational opportunities and associated recreational values. Recreational and open space opportunities promote a sense of place and identity and support public health and wellbeing.

They can also increase awareness of the outstanding natural and wilderness qualities of the National Parks, the natural character, ecological and landscape values of the area and promote the 'visitor experience'. However, increased tourism and recreational use may also compromise these qualities and values and it may be appropriate to restrict activities and access to some areas, particularly vehicle access, to preserve or protect these qualities and values.

NOSZ-P8

Recognise the importance of the development, operation, maintenance and upgrading of **infrastructure**, particularly nationally and **regionally significant infrastructure** and **renewable electricity generation** facilities whilst avoiding, remedying or mitigating the adverse **effects** of **infrastructure** on the **environment**.

Explanation: **Infrastructure**, particularly **regionally significant infrastructure** and **renewable electricity generation** facilities fulfil a key role in the functioning of the District and may have a **functional**, technical or **operational need** to be sited within the Natural Open Space Zone. These types of development and **land** use activities can give rise to adverse **effects** on the **environment**, including **effects** on natural character, landscape and ecological values. They can also potentially compromise the outstanding natural and wilderness qualities of the Fiordland, Rakiura and Mt Aspiring National Parks. These development and **land** use proposals should demonstrate need to be located within the Natural Open Space Zone and an examination of alternative locations should be undertaken.

NOSZ-P9

Recognise the purpose of **land** held by Māori under the Te Ture Whenua Māori Act 1993 including the SILNA, when considering **subdivision**, **land** use and development proposals within the Natural Open Space Zone that relate to Māori **land**.

Explanation: Areas of the Natural Open Space Zone on Stewart Island/Rakiura contain **land** held by Māori under the Te Ture Whenua Māori Act 1993 including SILNA **land,** most of which is under **indigenous** forest cover. Māori and SILNA **lands** were transferred to South Island Māori as economic redress after **land** purchase agreements left some sections of the South Island Māori population with insufficient **land** to support themselves.

Southland District Council Plan Change 2: Subdivision, Land Use and Development Code of Practice

Rules

The following district-wide Sections of the District Plan may apply in addition to any relevant the Natural Open Space Zone Rules to activities undertaken in the Zone. If one or more of the district-wide rules is breached, the activity will require consent in respect of those rules:

- EM - Energy and Minerals
- INF – Infrastructure
- TRAN - Transport
- CL - Contaminated Land
- WASTE - Waste
- HAZS - Hazardous Substances
- HH - Historic Heritage
- ECO - Ecosystems and Indigenous Biodiversity
- LAN – Land Use and Development
- SUB - Subdivision
- ASW - Water and Surface Water Activities
- FIN - Financial Contributions
- NOISE - Noise
- SIGN - Signs

NOSZ-R1	Permitted Activities
The following activities are **Permitted Activities** within the Natural Open Space Zone provided that they meet the Performance Standards - Natural Open Space Zone: 1. The operation, maintenance, refurbishment, enhancement and **minor upgrading** of any existing renewable electricity facilities including the **clearance, modification or removal of indigenous vegetation** required to ensure the safety and integrity of the facility.	**Activity Status when compliance not achieved:** DIS
2. a. **Earthworks** that: i. in any 12-month period, do not exceed, the disturbance of more than 200 m^3 (volume) of **land** per **property**; and	**Activity Status when compliance not achieved:** DIS

1. greater than 20 metres from a **waterbody** that do not alter the existing **ground level** by more than 5 metres in depth or 2 metres in **height**; 2. within 20 metres of a **waterbody** that do not alter the existing **ground level** by more than 2 metres in depth or **height**; 3. are permitted, provided that the activity: 4. shall not be undertaken at an elevation greater than 700 metres above mean sea-level, with the exception of **earthworks ancillary** to fencing activities; 5. shall not be undertaken on slopes of more than 20° except for **cultivation**, or **domestic gardening**; and/or cause slope instability; 6. shall protect any stockpiles of material and all areas of bare ground created by the activity from soil erosion as soon as practicable; 7. shall not be undertaken within 5 metres of any **waterbody**, including **wetlands** and **coastal water**, or flood protection works, except **cultivation** of a field or **domestic gardening**; 8. shall not be undertaken on a **contaminated** or **potentially contaminated** piece of **land** unless it is in accordance with the National Environmental Standard for Assessing and Managing Contaminants in Soil to Protect Human Health 2011 contained in SCHED3; 9. does not affect any **archaeological site** identified on the District Plan maps, except where an Archaeological Authority has been granted by Heritage New Zealand pursuant to the Heritage New Zealand Pouhere Taonga Act 2014 or confirmation is provided that no archaeological authority is required. b. **Earthworks** within a **riparian margin** that: i. the volume of **earthworks** in the **riparian margin** must not exceed 25 m^3 and must not include the cumulative disturbance of more than 20 linear metres in any 200-metre length of **riparian margin**, per **property**. ii. **earthworks** are carried out such that: 1. trenches for the purpose of installing pipes, lines or cables are backfilled and compacted within 48 hours of excavation; and 2. all areas of bare ground created by the activity are protected from soil erosion as soon as practicable. **Note:** Southland Regional Council also has requirements regarding activities in close proximity to **waterbodies**. Please check the Regional Water Plan to ensure compliance with these is achieved.	

3. Any activity or work of the Crown within the National Park or Public Conservation Land that is consistent with the relevant Conservation Management Strategy or National Park Management Plan and will not have a significant adverse **effect** beyond the boundary.	**Activity Status when compliance not achieved:** DIS
4. Any recreational activity that is permitted in the National Park by the relevant Conservation Management Strategy or National Park Management Plan.	**Activity Status when compliance not achieved:** DIS
5. Intermittent aircraft departures and landings that do not meet the definition of an airport under the Act.	**Activity Status when compliance not achieved:** DIS
6. **Visitor Accommodation** (involving five or less paying guests) outside of a National Park.	**Activity Status when compliance not achieved:** DIS

NOSZ-R2	Controlled Activities
One **dwelling** or **building** on an area of **land** which existed in one or more Computer Freehold Registers as at 28 November 2012, are Controlled Activities, provided that: 1. The **clearance, modification or removal of indigenous vegetation** does not exceed a maximum of 500 m2 or 40% of the **land** area, whichever is the lesser. 2. The **height** does not exceed either: a. 7.5 metres above **ground level** within the 'Stewart Island/Rakiura Transitional Overlay'; or b. 6 metres above **ground level** elsewhere 3. The floor area does not exceed 200 m^2, except within the Stewart Island/Rakiura Transitional Overlay. 4. External building materials and colours are to be recessive with a maximum reflectance value of 40%. (**Note:** This does not apply to glazing, natural or stained timber, solar panels or building trims such as the fascia boards, soffits, and window frames).	**Activity Status when compliance not achieved:** NC Matters of Control: NOSZ-MAT1: Outstanding Natural Features and Landscapes NOSZ-MAT2: Building Material NOSZ-MAT3: Lighting NOSZ-MAT4: Setbacks NOSZ-MAT5: Significant Indigenous Biodiversity NOSZ-MAT6: Effects of associated earthworks NOSZ-MAT7: The risk of natural hazards

NOSZ-R3	Discretionary Activities
The following activities are **Discretionary Activities** within the Natural Open Space Zone: 1. Any **dwelling** or **residential accessory building**, and associated **earthworks**, within the Stewart Island/Rakiura Transitional Overlay that does not meet the criteria outlined in NOSZ-R2.	**Activity Status when compliance not achieved:** N/A
2. Any activity or work of the Crown within the boundaries of a National Park and public conservation **land** that is not consistent with the relevant Conservation Management Strategy or National Park Management Plan.	**Activity Status when compliance not achieved:** N/A
3. Within areas identified in SCHED2 as the Stewart Island/Rakiura Airport Approach Vectors: a. Any activity that would prejudice the safety and satisfactory conduct of the operations of Stewart Island/Rakiura Airport by virtue of the emission of smoke, **dust**, glare or electrical interference or by attracting birds. b. Any **structures** exceeding the **heights** specified by the approach vectors.	**Activity Status when compliance not achieved:** N/A
4. **Temporary Events.**	**Activity Status when compliance not achieved:** N/A
5. Coastal Protection Works.	**Activity Status when compliance not achieved:** N/A
6. Any activity that does not meet the permitted activity criteria of NOSZR1.	**Activity Status when compliance not achieved:** N/A

NOSZ-R4	Non Complying Activities
Any activity that is not listed as a Permitted, Controlled or Discretionary Activity is a **Non-Complying Activity**.	**Activity Status when compliance not achieved:** N/A

Southland District Council Plan Change 2: Subdivision, Land Use and Development Code of Practice

Performance Standards - Natural Open Space Zone

All activities within the Natural Open Space Zone shall comply with the following Performance Standards:

NOSZ-PS1	Noise	
	Except as provided in NOISE-R3 and NOISE-R4 to NOISER11, **noise** from all activities shall not exceed the following limits:	**Activity Status when compliance not achieved:** DIS

Table 22 — NOSZ Noise Limits

When Measured at the Boundary of any Property Zoned:	**Day Time (7.00 am - 10.00 pm inclusive)**		**Night Time (All other times)**	
	LAeq (15 min)	**LAF, max**	**LAeq (15 min)**	**LAF, max**
Natural Open Space Zone	40 dB	65 dB	30 dB	55 dB

Note: The day time **noise** limits are intended to provide **amenity** for outdoor activities. Night time **noise** limits are intended to allow for sleep **amenity**.

The National Park Management Plans also contain **noise** limits which should be referred to, to ensure compliance with these is achieved. Where an activity shares a boundary with another Zone, the activity must comply with the more restrictive **noise** limit.

NOSZ-PS2	~~Transportation Standards including Access~~ Deleted	
	~~All activities shall comply in all aspects with the provisions set out in the Southland District Council Subdivision, Land Use and Development Bylaw 2012 - relating to carparking numbers, dimensions, access, loading and manoeuvring.~~	~~**Activity Status when compliance not achieved:** DIS~~

NOSZ-PS3	Signs	
	The relevant **sign** standards as set out in the SIGN chapter.	**Activity Status when compliance not achieved:** DIS

NOSZ-PS4	Lighting	
	Lighting on Stewart Island/Rakiura (excludes offshore islands), with the exception of lights for maritime and aviation navigational aids, shall meet the following: 1. All fixtures shall be **fully shielded** with no light spill being permitted above the horizontal plane. 2. Artificial lighting colour that is 'warm white' (being equal to or less than 3000K correlated colour temperature only). **Note:** Lights for navigation aids are to comply with Maritime and Civil Aviation regulations and bylaws and are not required to comply with this rule.	**Activity Status when compliance not achieved:** DIS

Matters of Discretion or Control - Natural Open Spaces Zone

NOSZ-MAT1	Outstanding Natural Features and Landscapes
	The location and visual impact of any **building**, **structure** or **dwelling** on Outstanding Natural Features and Landscapes.

NOSZ-MAT2	Building Material
	The material and external finishing to be used in the construction of the **dwelling** or **building**.

NOSZ-MAT3	Lighting
	The **effects** of artificial lighting on the Stewart Island/Rakiura (excludes offshore islands) night sky.

NOSZ-MAT4	Setbacks
	The setbacks of any **building**, **structure** or **dwelling** from surrounding **waterbodies**.

NOSZ-MAT5	Significant Indigenous Biodiversity
	The impacts of any **building**, **structure** or **dwelling** on significant **indigenous biodiversity**.

NOSZ-MAT6	Effects of associated earthworks.

NOSZ-MAT7	The risk of natural hazards.

SPZ-EWE – Special Purpose Zone - Eweburn Zone

Objectives

SPZ-EWE-O1

To maintain, and where appropriate, enhance rural amenity and ecological values, while providing for well-designed visitor, residential and recreational facilities.

Explanation: The Eweburn Zone Outline Development Plan (DEV4) has been approved to outline how development occurs within the Eweburn Zone. The **site** is identified as having high rural character and ecological aspects during the Plan Change process which is worthy of being retained and enhanced. Ecological values within the Eweburn Zone such as the soil and **water** resource should be maintained or enhanced.

Policies

SPZ-EWE-P1

Give **effect** to the Outline Development Plan and ensure that **land** development avoids or mitigates adverse **effects** on open space, landscape, ecological, rural character and **amenity values** of the locality.

SPZ-EWE-P2

Enhance waterways and that part of the Zone fronting State Highway 94 through **indigenous** plantings.

SPZ-EWE-P3

Ensure that **buildings** and **structures** do not dominate or detract from the landscape by restricting residential, visitor and/or commercial activities to defined Activity Areas and Activity Clusters as well as controlling the density, bulk and location of built form in accordance with the Outline Development Plan.

SPZ-EWE-P4

Ensure infrastructural requirements such as **roads**, **water**, stormwater wastewater disposal, electricity and **telecommunications** etc. are appropriately provided for within the Zone.

SPZ-EWE-P5

Avoid adverse economic impacts on the Te Anau community.

Southland District Council Plan Change 2: Subdivision, Land Use and Development Code of Practice

Rules

SPZ-EWE-R1	
All methods, rules and performance standards within PART 2 of the Plan (the General Rules) apply to all activities within the Eweburn Zone. Where there is a conflict between the General Rules and any other provisions in this Section, the provisions of this Section shall prevail. The Outline Development Plan for the Eweburn Zone is provided in DEV4 of the Plan.	**Activity Status when compliance not achieved:** DIS

SPZ-EWE-R2	
Except for earthworks associated with a golf course under SPZ-EWE-R4.1, all earthworks shall be assessed under the GRUZ - General Rural Zone provisions of the Plan.	**Activity Status when compliance not achieved:** DIS

SPZ-EWE-R3 Permitted Activities	
1. Except as provided for in SPZ-EWE-R7.4, agriculture and horticulture activities within the Eweburn Zone.	**Activity Status when compliance not achieved:** PR
2. Planting of indigenous species in the Eweburn Zone and the planting of Buffer Landscape Strips and ecological enhancement areas in accordance with SPZ-EWE-PS11 and PS12	**Activity Status when compliance not achieved:** DIS **Activity Status when SPZ-EWE-R5 compliance not achieved:** NC
3. Fencing for agricultural and horticultural purposes.	**Activity Status when compliance not achieved:** DIS **Activity Status when SPZ-EWE-R5 compliance not achieved:** NC

4. The repair or replacement of existing farm buildings provided that any repair or replacement to farm buildings in the Eweburn View Corridor does not exceed the building footprint or height of the original.	**Activity Status when compliance not achieved: DIS** **Activity Status when SPZ-EWE-R5 compliance not achieved: NC**

SPZ-EWE-R4 Controlled Activities	
1. The construction and operation of a golf course in Activity Area 1 and Eweburn View Corridor (excluding buildings).	**Matters of control:** SPZ-EWE-MAT1: The effect of associated earthworks SPZ-EWE-MAT2: Landscaping
2. In Activity Areas 1, 2 and 3, buildings for the primary purpose of agriculture and horticulture, dwellings and visitor accommodation which comply with Performance Standards – Special Purpose Zone – Eweburn Zone and are not discretionary or non-complying activities.	**Matters of control:** SPZ-EWE-MAT3: Design, Appearance and Location SPZ-EWE-MAT2: Landscaping SPZ-EWE-MAT4: Curtilage Areas SPZ-EWE-MAT5: Fencing SPZ-EWE-MAT6: Signs SPZ-EWE-MAT7: Lighting SPZ-EWE-MAT8: Network Utilities
3. In Activity Clusters A and B, buildings and structures for commercial activities which comply with Performance Standards – Special Purpose Zone – Eweburn Zone and are not discretionary or non-complying activities. Commercial Activities are limited to the following: • Catering, restaurants,	**Matters of control:** SPZ-EWE-MAT2: Landscaping SPZ-EWE-MAT3: Design, Appearance and Location

• Café/bar facilities, • Conference facilities, • Visitor accommodation, • Recreational facilities, • Visitor amenities - toilets and associated services, inclusive of showers, • Car parking, • Utility buildings and storage, • Convenience stores, • Administration activities.	SPZ-EWE-MAT4: Curtilage Areas SPZ-EWE-MAT5: Fencing SPZ-EWE-MAT6: Signs SPZ-EWE-MAT7: Lighting SPZ-EWE-MAT8: Network Utilities SPZ-EWE-MAT9: Building/Structure Materials SPZ-EWE-MAT10: Parking and Loading
4. The installation of an entranceway at Crossing Point 39 or 41. Note: • Any resource consent applications under SPZ-EWE-R4, will be processed non-notified with no affected party approvals from adjoining landowners. • The Eweburn Guidance Information outlines matters which should be considered for all future resource consent applications to Council.	**Matters of control:** SPZ-EWE-MAT11: Size and character SPZ-EWE-MAT12: Design/Appearance

SPZ-EWE-R5	Discretionary Activities
1. Any activity that is not otherwise provided for in SPZ-EWE-R1 - R4, R6, R7 and Performance Standards - Special Purpose Zone – Eweburn Zone is a discretionary activity.	**Activity Status when compliance not achieved: NC**
2. The establishment of any building or structure in Activity Cluster A before the remediation of the old sheep dip within Cluster A has been completed.	**Activity Status when compliance not achieved: NC**
3. Any plantings within the Buffer Landscape Strips which do not comply with SPZ-EWE-PS8.	**Activity Status when compliance not achieved: NC**

4. Any retail activities within Activity Clusters "A" and "B".	**Activity Status when compliance not achieved: NC**
5. The construction of any residential, visitor accommodation or commercial/retail activities in Activity Area 1 and/or Activity Cluster A, prior to the commencement of the planting in the area identified as 'Activity Area 1 State Highway Buffer Landscape Strip' on the Outline Development Plan (DEV4).	**Activity Status when compliance not achieved: NC**
6. The construction of any residential, visitor accommodation or commercial/retail activities in Activity Area 2 and/or Activity Cluster B, prior to the commencement of planting in the area identified as 'Activity Area 2 State Highway Buffer Landscape Strip' as identified on the Outline Development Plan (DEV4).	**Activity Status when compliance not achieved: NC**

SPZ-EWE-R6	Non-Complying Activities
1. Buildings and Structures within the Activity Areas or Activity Clusters which: a. Exceed the maximum height controls for that Area or Cluster. b. Exceed the maximum site coverage for that Area or Cluster.	**Activity Status when compliance not achieved: N/A**
2. Any structure or activity not otherwise provided for under SPZ-EWE-R3 - R5 or prohibited by SPZ-EWE-R7.	**Activity Status when compliance not achieved: N/A**
3. Any development within Activity Area 1 or Activity Cluster A, prior to the upgrading of Crossing Point 39 and the closure of Crossing Point 40 shall be a non-complying activity.	**Activity Status when compliance not achieved: N/A**
4. Any development within Activity Area 2 or Activity Cluster B, prior to the upgrading of Crossing Point 41 shall be a non-complying activity.	**Activity Status when compliance not achieved: N/A**
5. The removal of the existing shelterbelts prior to the plantings within the State Highway Planting Strip for Activity Areas 1 or 2 or Activity Clusters A and B attaining 5 metres in height or having been established for five years, whichever is first.	**Activity Status when compliance not achieved: N/A**

6. The construction of new buildings or structures within Activity Cluster "A", prior to an Ecological Management Plan for the Ecological Enhancement Area in Activity Areas 1 and 3, as identified on the Outline Development Plan (DEV4), being prepared by a suitably qualified ecologist and provided to the consent authority.	**Activity Status when compliance not achieved: N/A**
7. The construction of new buildings or structures within Activity Cluster "B", prior to an Ecological Management Plan for the Ecological Enhancement Area in Activity Area 2, as identified on the Outline Development Plan (DEV4), being prepared by a suitably qualified ecologist and provided to the consent authority	**Activity Status when compliance not achieved: N/A**

SPZ-EWE-R7	Prohibited Activities
1. All buildings, structures and activities within the Eweburn View Corridor unless provided for under SPZ-EWE-R3 and SPZ-EWE-R4.1 and SPZ-EWE-R4.4.	**Activity Status when compliance not achieved: N/A**
2. Industrial or trade processes.	**Activity Status when compliance not achieved: N/A**
3. Planting of any pest plants as set out in the Regional Pest Management Strategy and the National Pest Accord.	**Activity Status when compliance not achieved: N/A**
4. With the exception of grazing for the purposes of assisting with weed and vegetation control, any grazing, agriculture and horticulture activities within an Ecological Enhancement Area or State Highway Buffer Landscape Strip if planting in that area has commenced.	**Activity Status when compliance not achieved: N/A**
5. The provision of access to the Activity Areas and Activity Clusters, other than from existing NZTA Crossing Points 39 and 41.	**Activity Status when compliance not achieved: N/A**

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Performance Standards – Special Purpose Zone – Eweburn Zone

The following Performance Standards shall apply in the Eweburn Zone.

SPZ-EWE-PS1	Buildings and Structures in Activity Cluster A	
	Buildings and Structures in Activity Cluster A: a. Shall not exceed a maximum height of 6 metres. b. Total site coverage over all allotments shall not exceed 10,000 m^2 (approximately 13%) of the total area of Activity Cluster A. c. All materials and colours shall have a light reflectivity value not exceeding 30% and shall be of recessive, muted colour tones compatible with the surrounding landscape setting. d. Shall not exceed a maximum of one residential dwelling.	**Activity Status when compliance not achieved:** DIS

SPZ-EWE-PS2	Buildings and Structures in Activity Area 1	
	Buildings and Structures in Activity Area 1: a. Shall not exceed a maximum height of 6 metres. b. Shall not exceed a maximum of 20 dwellings and cumulative total site coverage of 10,000 m^2. c. All materials and colours shall have a light reflectivity value not exceeding 30% and shall be of recessive, muted colour tones compatible with the surrounding landscape setting.	**Activity Status when compliance not achieved:** DIS

SPZ-EWE-PS3	Buildings and Structures in Activity Cluster B	
	Buildings and Structures in Activity Cluster B: a. Shall not exceed a maximum height of 6 metres.	**Activity Status when compliance not achieved:** DIS

	b. Total site coverage over all allotments shall not exceed 5,000 m^2 (approximately 6%) of the total area of Activity Cluster B. c. All materials and colours shall have a light reflectivity value not exceeding 30% and shall be of recessive, muted colour tones compatible with the surrounding landscape setting. d. Shall not exceed a maximum of one residential dwelling.	

SPZ-EWE-PS4	Buildings and Structures in Activity Cluster B	
	Buildings and Structures in Activity Area 2: a. Shall not exceed a maximum height of 6 metres. b. Shall not exceed a maximum of 20 dwellings and cumulative total site coverage of 10,000 m^2. c. All materials and colours shall have a light reflectivity value not exceeding 30% and shall be of recessive, muted colour tones compatible with the surrounding landscape setting.	**Activity Status when compliance not achieved:** DIS

SPZ-EWE-PS5	Buildings and Structures in Activity Area 3	
	Buildings and Structures in Activity Area 3: a. Shall not exceed a maximum height of 8 metres. b. Shall not exceed a maximum of 20 dwellings and cumulative total site coverage of 10,000 m^2. c. All materials and colours shall have a light reflectivity value not exceeding 30% and shall be of recessive, muted colour tones compatible with the surrounding landscape setting.	**Activity Status when compliance not achieved:** DIS

SPZ-EWE-PS6	Lighting

	Lighting a. No access road lighting will be permitted other than at intersection points.	**Activity Status when compliance not achieved:** DIS

SPZ-EWE-PS7	Design	
	Design a. All buildings shall have eaves of greater than 750 mm.	**Activity Status when compliance not achieved:** DIS

SPZ-EWE-PS8	Plantings	
	Plantings a. Other than within curtilage areas, native plant species endemic to the Ecological district only, shall be used for planting proposals.	**Activity Status when compliance not achieved:** DIS

SPZ-EWE-PS9	Fencing	
	Fencing a. Except for screen fencing around building curtilage areas or privacy screening associated with residential or commercial buildings, all fencing shall be of open, rural post and wire construction with a natural material and unpainted finish. b. All materials and colours for screen fencing shall have a light reflectivity value not exceeding 30% and shall be of recessive, muted colour tones compatible with the surrounding landscape setting.	**Activity Status when compliance not achieved:** DIS

SPZ-EWE-PS10	Fire Fighting Water Supply

	Fire Fighting Water Supply a. A firefighting reserve of water shall be maintained. The storage shall meet the NZ Fire Fighting Water Supplies Code of Practice SNZ PAS 4509:2008 or superseding documents. b. All access widths will comply with the minimum requirements of the NZ Fire Fighting Water Supplies Code of Practice SNZ PAS 4509:2008 or superseding documents.	**Activity Status when compliance not achieved:** DIS

SPZ-EWE-PS11	Planting of native species within the Buffer Landscape Strips shown on the Outline Development Plan (DEV4)	
	Planting of native species within the Buffer Landscape Strips shown on the Outline Development Plan (DEV4). a. Species to be planted must follow the recommended species lists as set out below: Manuka *Leptospermum scoparium* Mingimingi *Coprosma propinqua* Leafy coprosma *Coprosma parviflora* Broadleaf *Griselinia littoralis* Cabbage tree *Cordyline australis* Kohuhu *Pittosporum tenuifolium* Lancewood *Pseudopanax crassifolius* Korokio *Corokia cotoneaster* Koromiko *Hebe salicifolia* Kowhai *Sophora microphylla* Weeping matipo *Myrsine divaricata* Haumakaroa *Raukaua simplex*	**Activity Status when compliance not achieved:** DIS

	Prickly mingimingi *Cyathodes juniperina* Bog pine *Halocarpus bidwillii* Mountain totara *Podocarpus hallii* Matagouri *Discaria toumatou* Silver beech *Nothofagus menziesii* Mountain beech *Nothofagus solandri var. cliffortioides* b. Except for along stream banks and on wetter soils, where the following species may be planted: Toe *Austroderia richardii* Harakeke/NZ flax *Phormium tenax* Pukio *Carex secta*	

SPZ-EWE-PS12	Vegetation	
	1. The vegetation within the State Highway planting strip along the State Highway frontage shall be trimmed and maintained so that it does not create shading of State Highway 94 between the hours of 10:00 and 14:00 on the shortest day of the year.	**Activity Status when compliance not achieved:** DIS

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Matters of Discretion or Control – Special Purpose Zone - Eweburn Zone

SPZ-EWE-MAT1	The effects of associated earthworks
SPZ-EWE-MAT2	Landscaping
SPZ-EWE-MAT3	Design, Appearance and Location
SPZ-EWE-MAT4	Curtilage Areas
SPZ-EWE-MAT5	Fencing
SPZ-EWE-MAT6	Signs
SPZ-EWE-MAT7	Lighting
SPZ-EWE-MAT8	Network Utilities
	The provision and adequacy of services for access, sewage, water, stormwater, electricity and telecommunications (landline or otherwise).
SPZ-EWE-MAT9	Buildings/Structure Materials

	Materials and colours used on the exterior of the building or structure.

SPZ-EWE-MAT10	Parking and Loading
	Design and location of parking and loading areas.

SPZ-EWE-MAT11	Size and Character

SPZ-EWE-MAT12	Design/Appearance
	Design, appearance (including colours, materials and lighting).

Eweburn Zone Guidance Information

This guidance note outlines matters which should be considered or addressed in applications for resource consents within the Eweburn Zone.

1. **Landscape Treatment**

   (a) The extent to which planting and landscape treatments reinforce and enhance the natural character and values of the **site** and area, and contribute to restoration of natural processes and **indigenous biodiversity**.
   (b) The extent to which proposed planting will be effective in mitigating adverse **effects** of **buildings** and other development on natural character rural **amenity values**.
   (c) The extent to which built landscape elements are appropriate to the local landscape character in terms of their materials, forms and design.
   (d) The extent to which proposed planting proposals include provisions to ensure successful and timely establishment.
   (e) New planting should integrate with existing vegetation where possible.
   (f) Plantings and grouped plantings should be informally laid out avoiding lines or rows.

2. **Curtilage Areas**

(a) The extent to which service/storage **curtilage** areas are screened from adjacent roadways and surrounding public viewpoints. (Note: **Curtilage** areas refer to areas containing all domestic elements such as storage areas, **water** tanks, rubbish bins, clotheslines and heating units, as well as vehicle and boat parking).

3. Access and Road Design

Access and Roading design shall be in accordance with ~~Council's Subdivision, Land Use and Development Bylaw 2012~~ the Southland District Council and Invercargill City Council Subdivision, Land Use, and Development Code of Practice 2023. Further, consideration shall be given to:

(b) The extent to which the location and design of **roads** and accessways minimises **earthworks** and disruption to natural landforms and areas of **indigenous vegetation**, and follows the natural landform.
(c) The extent to which the presence and impact of roading is minimised, for example, through the use of common driveways, minimising width, and/or location associated with changes in landform or areas of visually significant vegetation.
(d) The extent to which **road** design minimises adverse **effects** on rural character.

4. Signs

(a) The extent to which any **signs** avoids being visually dominant in the landscape, has a backdrop of vegetation, landform or built form and is derived from locally appropriate materials.
(b) Lighting of **signs**.

5. Visitor Accommodation and Commercial Activities

(a) The extent to which the apparent scale of large **buildings** or **structures** is minimised, for example through modular clustering.
(b) The number of guests accommodated with the activity.

6. Buildings and Structures

(a) The extent to which the **building** or **structure** integrates with and minimises disruption to the natural landforms.
(b) The extent to which the **building** or **structure** is sited to appear recessive in the landscape.
(c) The extent to which the scale, form, materials and colours of the **building** or **structure** integrates and harmonises with the natural landforms and vegetation patterns.
(d) The extent to which locally appropriate materials are used for the **building** or **structure**.

(e) The extent to which the design of the **building** or **structure** includes features to minimise glint from windows.
(f) The extent to which the landscape impact of **buildings** and **structures** is minimised by clustering, associated planting and the use of rooflines, built forms and shapes that relate to the landforms.
(g) The extent to which a high standard of environmentally sustainable design is achieved.

7. **Lighting**

(a) The extent to which outdoor lighting associated with **buildings** is screened from beyond the **site**.

8. **Infrastructure**

(a) Guidance on the ~~The~~ provision and adequacy of services for access, sewage, **water,** stormwater, electricity and **telecommunications** (landline or otherwise) can be found in the LAN – Land use and Development Section.

9. **Subdivision**

(a) Any future **subdivision** within Activity Areas "A", "B" and "C" and Activity Clusters "1" and "2" shall be submitted outlining how the remaining **site coverage** allowance will be apportioned to each new **allotment** created. Council will then issue a Consent Notice on the Computer Freehold Register for each respective **allotment** which outlines the **site coverage** allowance.

DEV1 – Edendale Dairy Plant Industrial Development Concept Plan

The Edendale Dairy Plant area that is subject to this Development Concept Plan is approximately 39 hectares in size and is shown on Map 52 of the Planning Maps (the Edendale Dairy Plant Industrial Area).

Inner Building Envelope

The inner building envelope applies to the **land** on which taller **buildings** associated with the core processing of dairy products (e.g. milk dryers and milk silos) are presently located, plus undeveloped **land** to the north and west of the existing development identified for future development.

Outer Building Envelope

The outer building envelope applies to the areas of the **site** with lower **structures** and **activities ancillary** to the operation of the Dairy Plant and includes:

(a) Any **building**, **structure**, carparking area, or railway access
(b) Administration **building**
(c) Boilers
(d) Cool stores
(e) Dry goods and bulk stores
(f) Milk and milk product storage, movement and distribution
(g) Milk product processing plant
(h) Truck workshop
(i) Laboratory
(j) Milk reception area
(k) Amenities **building**
(l) Carparking
(m) Rail loading and unloading

Objectives

DEV1-O1

The objectives of the Edendale Dairy Plant Development Concept Plan are to:

1. Enable the continued use and development of the resources of the Edendale Dairy Plant in a way or at a rate that is consistent with the promotion of **sustainable management** and **amenity values** associated with the area.

2. Secure financial contributions in appropriate circumstances on the development of the Edendale Dairy Plant to offset any unavoidable adverse **effects** that the development may have on the Edendale township.

Rules

DEV-R1	**Permitted Activities**
Subject to compliance with the relevant performance standards, the following are permitted activities within the inner and outer building envelope identified in the Development Concept Plan: 1. The processing and handling of dairy products, including related by-products and waste materials.	
2. Warehouses, silos, stores and cool stores for the storage of any products produced on the site.	
3. Energy production including boilers, power plants and co-generation plants.	
4. Transport servicing depots and workshops.	
5. Facilities for the storage of dangerous goods and hazardous substances associated with the processing of dairy products including related by-products and waste materials that satisfy the procedural and structural controls procedure for such facilities in Section 3 of the Development Concept Plan provisions of the District Plan.	
6. Water tanks and water treatment plants.	
7. Building and structures associated with the processing of milk including cooling towers.	
8. Parking and hard surfaces associated with vehicle movements.	
9. Rail infrastructure for the transportation of milk, milk products or associated ingredient and package products.	
10. The inner envelope has three different height limits:	

a. 55 metres for the original central spine developed as part of the original Edendale concept development plan; to the west, b. a higher 70-metre area which allows for additional dryers which have grown in size and through technological advancement since the original plan, and c. a 30-metre area further to the west to allow for the future relocation of the energy centre away from the Edendale township.	
11. Its outer boundary has been determined by three factors: a. It covers the land on which the existing taller processing equipment is located and on which processing activities involving taller structures are well-suited and more likely to occur. b. It is set back from the site boundaries to mitigate any adverse effects on the surrounding environment as a consequence of the height and bulk of the structures. c. It allows for an extension of the inner envelope on the western side of the existing building, thereby encouraging development and expansion away from the existing residential area of Edendale	
12. All of the uses of the Outer Building Envelope structures are integral to the continued efficient use and operation of the resources of the Dairy Plant.	
13. In both the outer and inner building envelopes, buildings and structures are not subject to a road boundary setback or planting/fencing requirement but shall be so designed as to avoid shading of State Highway 1 between 10:00 am and 2:00 pm at any time of year.	

DEV-R2	**Restricted Discretionary Activities**
Subject to compliance with the relevant performance standards, all facilities for the storage of dangerous goods and hazardous substances associated with the processing of dairy products that deviates from the structural and procedural controls for such facilities in SCHED6 are restricted discretionary activities within the inner and outer building envelope identified on the Development Concept Plan and are subject to the following criteria: 1. Assessment Criteria the Council shall restrict the exercise of its discretion to the following matters:	

a. Whether the risks associated with the proposal are able to be avoided or mitigated on the basis of a risk assessment based on the criteria outlined below. b. The degree to which potential adverse effects on the environment are mitigated by features incorporated in the design of the facility. c. Whether appropriate site management systems are proposed. d. Whether there are reasonable alternatives to the proposal.	
2. Risk Assessment a qualitative or quantitative risk assessment identifying any risk to the environment may be required depending upon the scale or potential effects of the proposed activity with emphasis on the following issues: a. Separation distance to people-sensitive activities. b. Location in relation to nearest aquifer or stream. c. Nature of subsoil and site geology. d. Distance to sensitive habitats in the area or water catchment. e. Cumulative and synergistic effects and bioaccumulation of hazardous substances used or stored. f. Fire safety and fire water management. g. Adherence to health, safety and environmental management systems. Council considers the use of the NZCIC Responsible Care Management System, the DNV International Safety Rating System, the appropriate ISO 14000 series system, or other recognised and accepted systems to satisfy this requirement if included in the resource consent. The Council will give consideration to any other alternative site management system which will achieve the same intent as any of the above systems in relation to providing: i. spill contingency and emergency planning, monitoring and maintenance schedules; ii. secondary containment systems and stormwater diversion systems; and iii. safety procedures for transportation of hazardous substances, especially for large proposals. **Note:** Whether appropriate site management systems are proposed, consideration will be given to specific spill contingency plans, emergency procedures, stormwater management, treatment and disposal procedures for hazardous waste, fire safety, transportation and monitoring and maintenance procedures.	

Whether there are reasonable alternatives to the proposal, a description of any possible alternative locations or methods or substances for undertaking the activity shall be submitted, where it is likely that an activity will result in any significant adverse effects on the environment.	
3. Conditions Council may impose conditions on particular proposals in relation to the following matters: a. Hazards and exposure pathways. b. The surrounding natural and physical environment. c. The separation distances from neighbouring activities and number of people potentially at risk from the facility. d. Managing risks to adjacent property. e. Cumulative effects of hazardous facilities in the area. f. Site drainage and off-site infrastructure (e.g. stormwater, sewer type and capacity). g. Transport of hazardous substances on and off the site. h. Site layout and design. i. Fire safety and fire water management. j. Spill contingency and emergency planning, monitoring and maintenance schedules. **Note:** Other conditions may be imposed to ensure that particular measures are undertaken so that any risk posed by the proposal is avoided or satisfactorily mitigated.	

DEV-R3	**Restricted Discretionary Activities**
The following are restricted discretionary activities: 1. Any building or structure in the inner building envelope shown on the Concept Plan, where the building or structure exceeds the permitted height limits of either 30 metres, 55 metres or 70 metres in height (excluding any portion of the building or structure that forms less than 25% of the overall building footprint).	

2. Any building or structure in the outer building envelope shown on the Concept Plan, where the building or structure exceeds 20 metres in height (excluding any portion of the building or structure that forms less than 25% of the overall building footprint).	
3. Any building or structure in the outer building envelope shown on the Development Concept Plan, which exceeds 12 metres in height (excluding any portion of the building or structure that forms less than 25% of the overall building footprint) plus the shortest horizontal distance between that part of the building or structure and the nearest site boundary.	
4. Any building or structure that will cause shading on State Highway 1 between 10:00 am and 2:00 pm at any time of the year.	
5. In assessing any application for a building or structure exceeding the maximum height, Council shall restrict its discretion to and have regard to the following: a. The adverse effects of the excess portion of the structure on neighbouring houses and activities and on State Highway 1 in terms of shadow, draught, privacy, traffic safety and the existing character of the surrounding environment. b. Any alternative locations within the scheduled site for a structure having an excess height which would have reduced impacts in terms of the above on neighbouring dwellings and activities.	

DEV1-R4	**Discretionary Activities**
Any activity which fails to meet any performance standards for the permitted activities and/or the general provisions or both and not otherwise provided for as a restricted discretionary activity shall be assessed as a discretionary activity.	

DEV1-R5	Additional Performance Standards	
	1. Access Any new access that exceeds the minimum access standards set out in the Southland District Council and Invercargill City Council Subdivision, Land Use, and Development Code of Practice 2023	

	~~Southland District Council Subdivision, Land Use and Development Bylaw 2012~~ shall be subject to approval by the relevant Road Controlling Authority. Should approval be granted, the district-wide access provisions may be waived if the relevant Road Controlling Authority considers that a proposed alternative design would avoid an unnecessary expense on the applicant or that the proposed alternative design is necessary to ensure that any adverse effect on the environment would be minor. 2. Earthworks Any earthworks where a volume of 1,000 m^3 or greater of land will be disturbed, shall require the preparation and submission of an Earthworks Management Plan for approval by Council. This shall include details on the management of issues relating to land stability, dust and erosion control, proximity to waterways, and revegetation of exposed soil (where required).	

DEV1-R6	Financial Contributions

1. The Council may impose a financial contribution for developments in the Edendale Dairy Plant Development Concept Plan area, the value of which exceeds $10,000,000.
2. The financial contribution shall not exceed 0.2% of the value of the development. The value of any contribution shall be quantifiable and the justification of the value of the contribution shall be provided to the site operator.
3. The purpose of the imposition of the financial contribution shall be to remedy, mitigate or offset any quantifiable adverse effects arising from, in consequence of, or in association with, any development.
4. The use of the financial contribution shall be for one or more of the following in the Edendale township and its environs:
    a. offsetting additional demands on infrastructure and utility services provided by Council;
    b. offsetting additional demands on community and recreational facilities;
    c. restoring or enhancing amenity values;
    d. restoring or enhancing open space and landscaping.
5. The Council will assess the need for and quantum of, a financial contribution on a case-by-case basis as development occurs having regard to:
    a. the significance of the adverse effect;
    b. the extent to which the adverse effect can be dealt with successfully by other means;
    c. any proposals to mitigate or remedy the adverse effects;
    d. any direct positive community benefits arising from the development.

6. In applying the provisions of this clause, Council shall have regard to the fact that in the circumstances, money is the preferred form of financial contribution where adverse effects cannot be offset.

DEV1-R7	Dairy Processing Hazardous Substances
1. Hazardous Substances On-Site, the following bulk hazardous substances facilities are or likely to be utilised within the Edendale Dairy Plant Site:	
Table 23 — DEV1- Bulk Hazardous Substances Facilities	
Bulk Hazardous Substances Facilities	
Clean-in-place (CIP) facilities **compounds**	Fixed bulk containers of corrosive substances (acids and caustics) oxidisers and poisons.
CIP bulk containers (not fixed)	Mobile bulk container of corrosive substances, oxidisers and poisons (1,000 or less).
Fuel tanks	Underground fuel tanks for refuelling or emergency boiler and **generator** use.
Fuel tanks	Above-ground fuel tanks for **emergency generator** use or use in association with the **site**'s boilers.
Bulk Gases	Above-ground bulk gas storage.
2. Controls for Fixed **Hazardous Substances** Storage Facilities (Compounds) for Bulk Corrosive Substances a. Structural Controls: i. Compounds containing two incompatible substances shall have entirely separate bunds and the separation distance between the tanks must be sufficient to cater for the spill angle or the tank (i.e. the tanks must be far enough apart that in the event that a spill occurred in the upper part of the tank, the trajectory of the spill would not result in the spilled substances entering the bund of the adjacent tank containing a chemically incompatible substance). ii. The bund will contain a mechanism for draining rainwater or spilled substances. This release mechanism must be able to be accessed from outside the bund and locked closed when not in use.	

iii. The unloading point for the tank must be either inside the bund wall or have a catchment area with a collection sump or wastewater drain outside the bund of suitable size to collect any leakage.
iv. The unloading area for the supplier tanker must drain to a wastewater drain or a stormwater drain which can be diverted to wastewater.
v. All pipes conveying **hazardous substances** will be colour-coded relevant to the substance conveyed.

b. Procedural and Management Controls, these will be included in a **hazardous substances site** management plan:
i. All tanks will be tested at frequencies stipulated by HSNO (or any subsequent legislation).
ii. The results of tank testing will be available to Council on request.
iii. An Emergency Response Management Plan shall be developed and implemented, which covers all aspects of emergency response and spill contingency plans. This shall include:
1. assigned roles and responsibility of response teams;
2. lists of equipment and maintenance procedures;
3. procedures for responding to a range of spill scenarios;
4. training of spill response.

3. Controls for Mobile **Hazardous Substances** Storage Facilities for Bulk Corrosive Substances
a. Structural Controls
i. All mobile tanks not located within a roofed area will be contained within a bund capable of holding 110% of the volume of the tank. Mobile tanks in a roofed area will be contained in a bund capable of holding 100% of the volume of the tank.
ii. In the event that the container cannot be bunded, it will be located in an area with a dedicated drain which drains to a wastewater or containment sump.
iii. Incompatible substances will be stored a safe distance apart taking into consideration the spill angle of the container.
b. Procedural and Management Controls
i. Procedures shall be developed for the delivery, storage, use and removal of mobile **hazardous substances**. Procedures will also include reporting of deliveries and inspection of storage areas (daily and weekly).
ii. The **site**'s spill contingency plans will incorporate spills from mobile bulk containers.

4. Underground Fuel Tanks
a. Structural Controls
i. All tanks will be constructed in accordance with the Code of Practice for the Design, Installation and Operation of Underground Petroleum Storage Tanks.
b. Procedural and Management Controls
i. Spill contingency plans will incorporate spills of fuel from supply tanker unloading and refuelling of milk tankers and other site vehicles.

5. Above-ground Fuel Tanks
   a. Structural Controls
      i. The tanks will be fully bunded or double-walled/skinned and capable of holding the entire contents of the tank.
      ii. Devices shall be in place to prevent the overflowing of fuel during filling.
   b. Procedural and Management Controls
      i. The tanks will be incorporated into a spill contingency plan.

DEV1-R8	Management of Noise Emissions from Edendale Dairy Plant

1. Noise Management Plan The Noise Management Plan for the site shall be revised within six months of the date of this District Plan becoming operative and updated to incorporate the following:
   a. Noise Management Plan objectives, including the management of 'nuisance' noise.
   b. Noise modelling, noise monitoring, auditing and reporting procedures.
   c. Complaint handling procedures.
   d. Procedures for managing noise, particularly at the southern end of the site, through operational procedures and staff and contractor training.
   e. Procedures for managing noise, particularly at the southern end of the site, through plant upgrades, replacements, modifications and maintenance.
   f. Procedures to determine the offer of treatment mitigation for non-compliant noise emissions.
   g. Procedures for alterations to the Noise Management Plan, including regular updates and reporting to Council.

   Note: The Noise Management Plan shall be subject to approval from Council prior to implementation. Council shall provide a written response within 20 working days of receipt of the Noise Management Plan.

2. Monitoring and Reporting
   a. Annual noise surveys shall be conducted by suitably qualified acoustics personnel experienced in the measurement of environmental noise. Surveys shall be undertaken during the peak operating season, i.e. around November and shall avoid the off-season period, i.e. around June.
   b. A Noise Contour Map shall be produced and included in the Noise Management Plan based on the peak milk processing operational scenario. Equal-loudness contours shall be produced using a professional noise modelling software package and shall include all major noise sources at the Fonterra Edendale site.
   c. The Noise Contour Map shall show 40 dB LAeq and 45 dB LAeq equal-loudness contours around the whole Edendale Dairy Plant manufacturing site. Farming activities and any off-site vehicle movements associated with the activity are excluded from this modelling.
   d. The Noise Contour Map shall be updated at least annually and shall be provided to the Council within two months following any updates. Any major changes will be identified and an explanation for the variation attached.

3. Noise Containment Limit, The 45 dB noise contour is not permitted to:
   a. Extend into any residential zoned property where that property is used as a residential activity and not subject to the 45 dB LAeq noise contour at the date at which this District Plan becomes operative.
   b. Extend beyond the notional boundary of any rural/General Rural Zone zoned dwelling not owned by the site operator where the notional boundary of the dwelling is not subject to the 45 dB LAeq noise contour at the date at which this District Plan becomes operative.

   These properties shall be identified as per DEV1-R8.2.

   Failure to comply with this rule shall be a discretionary activity.

Note:

- This clause does not apply to General Rural zoned properties owned by the site operator.
- "Notional Boundary" is defined as: means a line 20 metres from any side of a residential unit or other building used for a noise-sensitive activity, or the legal boundary where this is closer to such a building.

4. Classification of Potentially Noise-Affected Properties
   Where the Noise Contour Map prepared under DEV1-R8.2 above indicates that noise levels from the site exceed 40 dB LAeq at any point within the boundary of any rural/General Rural Zone, residential/General Residential zoned property or any other zone containing an existing lawfully established dwelling at the date of which this District Plan becomes operative, that property shall be classified as a Potentially Noise Affected Property and marked on a Potentially Noise Affected Property Map. The site operator shall submit the Potentially Noise Affected Property Map to Council on an annual basis.

   Note: This clause does not apply to properties owned by the site operator.

   Where the Noise Contour Map prepared under DEV1-R8.2 above indicates that cumulative noise levels from the site do not exceed 40 dB LAeq on any part of a property, the noise effects on this property shall be deemed to be permitted and this property is not eligible to be classified as a Potentially Noise Affected Property.

5. Noise Mitigation - Internal Noise Monitoring and Treatment for Potentially Noise-Affected Properties
   a. Where a property is classified as a Potentially Noise Affected Property, internal noise monitoring shall be offered to the owner(s) of the affected existing building(s) within two months of the contour map being submitted to Council. The date of monitoring shall be agreed upon with the affected property owner.
   b. Should internal noise monitoring be accepted by the affected property owner and this monitoring demonstrate that the Internal Noise Limits listed in Table 25 are not achieved, additional acoustic insulation treatment shall be investigated and offered to the building owner within six months of the noise monitoring having been completed.

c. Should acoustic treatment be accepted by the affected property owner, this shall be undertaken within a period of 12 months from the date of acceptance.
d. Following completion of acoustic treatment, internal noise levels shall be monitored to ensure they achieve or better the Internal Noise Limits listed in Table 24:

Table 24 — Internal Noise Limits for Cumulative Noise from Edendale Site

Type of Occupancy/Activity	Assessable Area(s)	Internal Noise Limit
Habitable **Dwelling**	Bedrooms only	30 dB L_{Aeq}
All other **buildings**	ALL	"Satisfactory" Recommended Design Sound Level specified in Table 1 of NZS 2107:2000 for that particular type of Occupancy/Activity

e. Certification of sound insulation treatment will be provided to the Southland District Council within six months of acoustic treatment being completed.
f. A record of all certifications shall be kept by both Southland District Council and the site operator. The Council shall ensure that a record of this certification is provided either on the property title or the property file (Land Information Memorandum- LIM).
g. Once certification is complete, the applicable property is not eligible for any further treatment provided the noise from the Edendale Dairy Plant does not increase to a level which in the opinion of a suitably qualified acoustic consultant would result in failure to achieve the internal noise limits listed in Table 24. This level is to be specified on the sound insulation certificate.
h. If an affected property owner does not accept the offer of internal noise monitoring or treatment, this offer shall be reviewed and resubmitted on an annual basis.
i. No building, other than those existing at the date at which the District Plan becomes operative shall be eligible for consideration as a Potentially Noise Affected Property.
j. Any extensions to an existing dwelling or the construction of a new dwelling on a property entirely or partly within the 40 dB LAeq contour are required to achieve the internal limits listed in Table 25. This is the responsibility of the landowner.

6. Noise Notes:
   a. Additional sound insulation is not required to be provided to buildings/rooms where it can be shown that cumulative noise levels from the Edendale Dairy Plant site are below the relevant Internal Noise Limit.
   b. Internal noise levels will be assessed with all doors and windows open to a level sufficient for ventilation for the applicable room. If compliance cannot be achieved with windows open, then windows will be closed for the purposes of monitoring. If compliance is achieved with windows

closed and a suitable air ventilation unit is not present within the applicable room, an offer to install a ventilation unit at the site operator's expense will be made to the affected property owner. The air ventilation unit installed shall be of a design that ensures noise compliance can be achieved.

c. Priority of internal noise monitoring and treatment will be given in order to those affected properties that are subject to the highest noise levels descending to the lowest.

d. Examples of the applicable noise limits for buildings other than habitable dwellings are given in:

Table 25 — Examples of Internal Noise Limits Based on NZS 2107:2000

Type of Occupancy/Activity	Internal Noise Limit
School Classrooms	35 dB L_{Aeq}
General Office Areas	40 dB L_{Aeq}
Reading Areas in Libraries	40 dB L_{Aeq}
Small Retail Stores	45 dB L_{Aeq}
Bars and Lounges	45 dB L_{Aeq}

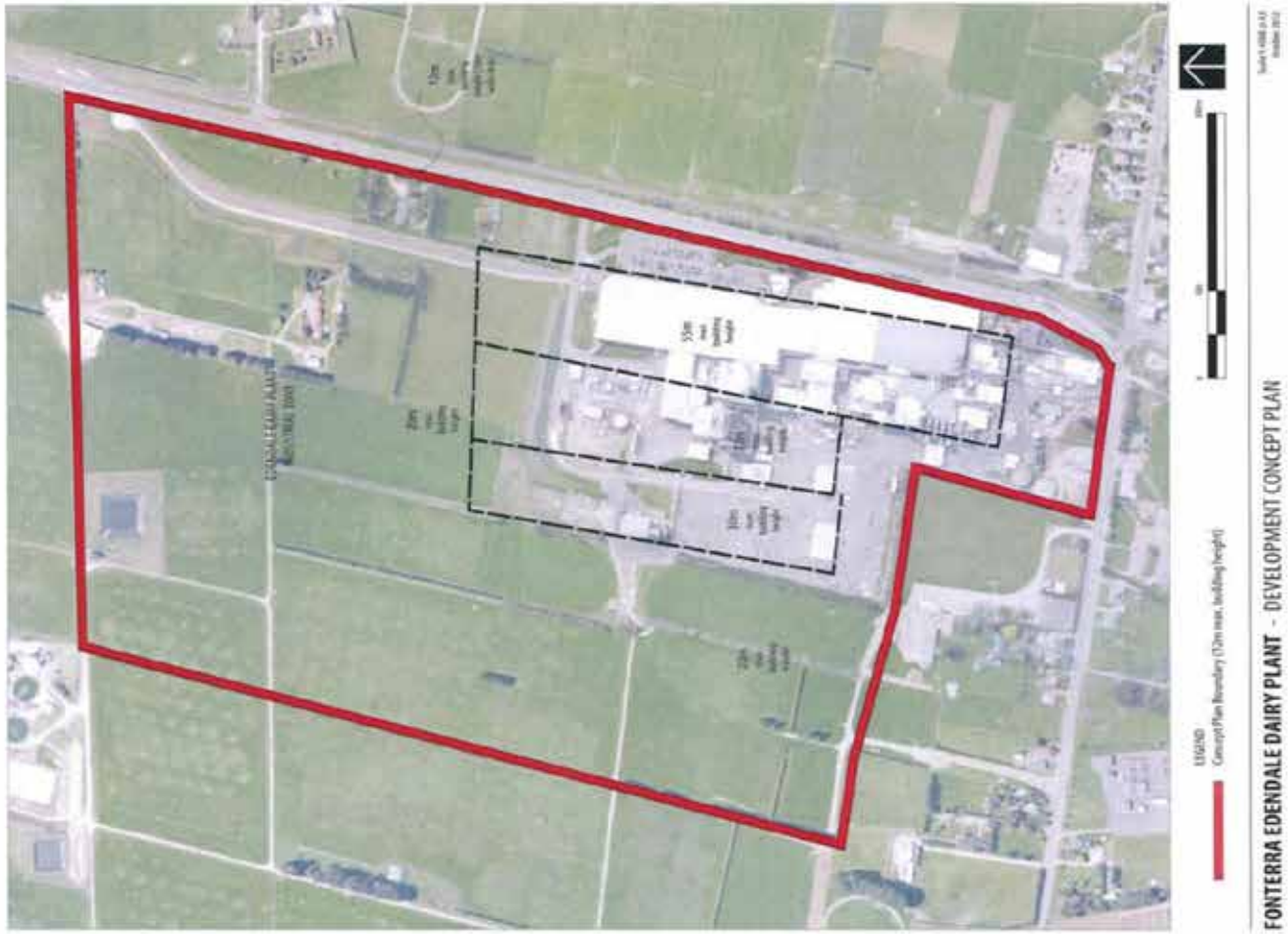
e. All **noise** contours shall be produced using a recognised **noise** modelling software package.

Southland District Council Plan Change 2: Subdivision, Land Use and Development Code of Practice

DEV1-AER1	Dairy Plant Operation
a. The continued operation of the Dairy Plant as a resource of regional significance. b. Certainty to the owners of the Dairy Plant and to the owners of adjacent land holdings regarding the continuing operation and management of the Dairy Plant and other activities in the future. c. Continued operation of the Dairy Plant and the introduction of other associated uses in a manner that avoids, remedies or mitigates adverse effects on the environment.	

Southland District Council Plan Change 2: Subdivision, Land Use and Development Code of Practice

Figure 11 - Fonterra Edendale Dairy Plant- Development Concept Plan



SCHED11—Information for Resource Consents

The provisions of the Fourth Schedule of the Act set out the general requirements for matters to be included in an assessment of the effects of a proposal on the environment, to accompany applications for resource and subdivision consents.

Information should be provided in hard copy (minimum of two copies) but the applicant may choose to also submit electronic copies of maps, site plans and documents. If it is intended to provide electronic copies of files, please check with Council prior to providing the documents, to ensure the correct file format.

The following list should guide Council and applicants in determining the type of information that should be submitted with any application for resource consent.

Land Use Drawings Required

1. Any application for resource consent shall include two sets of drawings illustrating the proposal.
2. A drawing showing the location of the site with road name, property number and north point.
3. A site plan of the area affected by the proposal showing:
    a. Site boundary lengths and other dimensions in metres.
    b. Location with distances to site boundaries of all existing buildings which are to remain on the site and all proposed buildings and structures (including where applicable eaves, balconies, courts and verandahs).
    c. Proposed use of each building.
    d. Position of any easement over the site.
    e. Position, location and dimensions of every parking and loading space.
    f. Location of roads adjacent to the site and the formation status of the road and any footpath(s).
    g. Kerb lines adjacent to the site and the position of any street trees.
    h. Levels on the site boundaries around any buildings, or contours of the site except where the site has a uniform grade of less than 1 in 10.
    i. Proposed retaining walls, excavations and landfill.
    j. Existing trees and proposed landscaping (particularly where this is a requirement of the rules for the zone). Dimensioned areas of the landscaping should be shown together with all existing and proposed scaled areas.
    k. Indigenous vegetation areas, streams, wetlands and heritage items.
    l. Where relevant, recession line diagrams or models.
    m. Watercourses and drainage and sewerage pipes within and adjacent to the site.
    n. The means proposed to deal with all stormwater and sanitary drainage.
    o. The location of any historic heritage items listed in Historic Heritage or Archaeological Sites.
    p. The location of any transmission lines that traverse the site.
4. A floor plan of each building (at a scale of not less than 1:100) showing:
    a. Use of all parts of the building, including basements, parking, lift towers, storage or service areas.

b. Room layout of the building, if this is known and a clear identification of the use of different rooms or parts of a floor, including a total gross floor area for each use. Where several floors are of the same area and use, a standard floor plan may be shown.

5. Elevations of each building (at a scale not less than 1:100) showing:
   a. the external appearance of the building including doors and windows.
   b. Number of floors and their proposed usage.
   c. Building heights and height in relation to any boundary.
   d. Materials and colours to be used on the exterior cladding.

Land Use Details Required

1. Certificates of Title or Computer Freehold Register for the subject site(s).
2. A description of the site including existing uses, buildings, topography and vegetation, including information on the extent and nature of any fill on the site, an assessment of the likely risk of natural hazards and a description of the existing natural environment (including areas of indigenous vegetation, habitats of indigenous animals, existence of threatened species and landscape features).
3. A statement specifying all other resource consents that the applicant may require from any consent authority in respect of the activity to which the application relates and whether or not the application has applied for such consents.
4. A description of the activity for which consent is sought, including but not limited to:

   a. The number of carparks to be provided and the provisions for access, loading and circulation.
   aa. The location and dimensions of every existing and proposed access to the property and any access to be closed, and the classification of the frontage road, and all justification for any proposed non-standard design elements.
   b. The frequency and timing of vehicle movements anticipated to or from the site and the number of heavy vehicles expected.
   c. Number of persons to be employed.
   d. Hours of operation.
   e. Any landscaping to be provided, including areas for planting, the location and types of trees to be planted, the location of any outdoor storage areas and how these are to be screened from view.
   f. Location of roads adjacent to the site and the formation status of the road and any footpath(s).
   ff. All servicing proposals in terms of water supply, stormwater and wastewater disposal, any implications of these proposals for existing reticulated networks and/or capacities, and all justification for any proposed non-standard design elements.
   g. Any outdoor advertising signs proposed, including the dimensions, height, lettering and location (freestanding or on buildings) of any signs, or any illumination proposed.
   h. In respect to any potential for noise generation:

      i. the type and specification of any proposed machinery or equipment;
      ii. the location on site or within buildings, and the material of which the buildings are constructed;
      iii. details of any proposed measures to avoid, remedy or mitigate noise, including any technological or management approaches;

iv. hours of operation, and the expected nature and frequency of noise events;
v. duration where specified noise levels will be exceeded, particularly at night, with regard to likely disturbance that may be caused;
vi. the degree to which any excessive noise or vibration generation will affect amenity values:

1. the value and nature of entertainment activities and their benefit to the wider community, having regard to the frequency of noise intrusion and the practicality of mitigating noise, or utilising alternative sites;
2. the extent to which achieving the relevant standard is practicable, given any existing activities which create noise, particularly on the interface with commercial, industrial or recreational activities;
3. the extent to which achieving the relevant standard is practicable where the existing noise environment is subject to significant noise intrusion from road, rail or air transport activities;
4. cumulative noise effects.

i. In respect to any hazardous substances to be stored or used on site:

i. the type and volume of those substances;
ii. proposed methods of containment, including in emergencies;
iii. the location on site or within buildings of any transfer, or storage points;
iv. transport arrangements on site, and routes and methods of transport to and from the site;
v. the location of the site or facility with respect to population, services, schools, emergency services, hospitals and arterial routes;
vi. compliance with the Hazardous Substances and New Organisms Act 1996;
vii. sensitivity of, and consequences of, any failure, escape or activation of the hazardous substance to the surrounding environment;
viii. consideration of alternatives including methods of storage;
ix. consideration of relevant New Zealand Standards and Industry Codes of Practice.

j. In respect to any earthworks, fill or excavation proposed:

i. the type of fill;
ii. the volume and depth of fill and excavation;
iii. identification of those areas of the site subject to fill or excavation;
iv. the impact on utilities, or on any archaeological sites;
v. the proximity of earthworks to surface water and groundwater bodies.

k. In respect to any potential for glare:

i. the nature and location of any highly reflective surfaces;
ii. the location, type and power of lighting on the site;

iii. the means of directing its spill;
iv. any effects on visibility of the night sky.

l. The need for any financial contribution and/or bond.

5. An assessment of any actual or potential effects that the activity may have on the environment (in such detail as corresponds with the scale and significance of the actual or potential effects that the activity may have on the environment) and the ways in which those adverse effects may be avoided, remedied or mitigated, including, but not limited to, the information set out below.

a. The effects of the proposal on biodiversity:

i. including methods proposed to avoid, remedy or mitigate adverse effects;
ii. including indigenous vegetation;
iii. including habitats and ecosystems;
iv. including ecologically sensitive areas;
v. including breeding populations of indigenous fauna;
vi. the proximity to riparian margins and waterways;
vii. the proximity to the coastal environment, or wetlands;
viii. proposals to compensate for or offset loss of indigenous vegetation and habitats of indigenous fauna;
ix. any relevant authorisation issued under the Forests Act 1949.

b. The effects of the proposal on any listed historic heritage items:

i. where a listed historic heritage item would be affected this should include plans and photographs showing existing interior or exterior original features;
ii. plans of these features should any alterations be proposed to be carried out. A statement must also be provided as to whether any activity will affect the whole or part of a listed heritage item;
iii. any consultation with the Heritage New Zealand.

c. The effects on any nature conservation areas, recreational values and facilities:

i. existing recreation users;
ii. and the experiences of other recreational users in the vicinity.

d. The effects on any significant geological sites and landforms as listed in SCHED10 – Significant Geological Sites and Landforms.
e. The effects of the proposal on any Outstanding Landscapes and Natural Features and Visual Amenity Landscapes:

i. visibility of development from surface water bodies and public places;
ii. visibility of development access;
iii. from proposed revegetation and any earthworks;
iv. whether the development breaks the skyline or the form of any ridges, hills or prominent slopes;
v. visibility of any utilities to service development;
vi. existing land uses and patterns of development;
vii. natural landscape patterns;
viii. natural vegetation patterns;
ix. any methods to avoid, remedy or mitigate adverse effects.

f. Where natural hazards are identified, the proposed methods to avoid, remedy or mitigate the hazard:

i. including the extent to which the development has an operational need to be located in an area of natural hazard risk;
ii. including confirmation that the development is not likely to accelerate or result in material damage to land, other land or any structure, through inundation or erosion;
iii. whether the development would reduce risk of natural hazards;
iv. and consideration of the most recent natural hazard information available.

g. The effects of Energy Facilities, Mining and Infrastructure:

i. on the safety and integrity of any other network utility operator, which could be adversely affected by the proposal;
ii. and the extent to which the adverse effects of noise, lighting and vibration will be avoided, remedied or mitigated;
iii. on natural character and amenity values of the Coastal Environment, wetlands, lakes and rivers and their margins;
iv. the protection of Outstanding Natural Features and Landscapes;
v. the extent to which adverse effects on the environment from the storage use, disposal and transportation of hazardous substances are avoided, remedied or mitigated;
vi. the extent to which any adverse effects of the proposal on traffic safety and movement may be avoided, remedied or mitigated;
vii. the protection of historic heritage;
viii. the consideration of alternatives.
ix. The positive local, regional and national benefits to be derived from the use and development of renewable energy infrastructure.

h. The effects on any river or lake, particularly effects on:

i. ecological values;
ii. community water supplies;
iii. water quality;

iv. amenity values and natural character;
v. public safety and navigation;
vi. public access.

i. Any effects on adjoining sites, for example shading caused by a building or blocking of views or dominance of buildings.
j. Any effects on Māori cultural, spiritual or traditional values including any traditions with their ancestral lands, water, sites, wāhi tapu and other taonga and the outcome of any consultation with Tangata Whenua.
k. The results of any consultation undertaken with any parties who may be affected by the proposal and any other stakeholders.

Subdivision Drawings Required

Every application for subdivision consent shall include a plan drawn to scale showing the following information:

1. The whole of the land held in physical continuity by the subdividing owner, a diagram may be shown if the land is too large to be drawn at the principal scale.
2. The location, dimensions and description of existing and proposed buildings in relation to existing and proposed boundaries.

2a. The location and dimensions of every existing and proposed access to the property and any access to be closed.

3. The position of existing water, sewer, stormwater, electrical and telecommunication
4. The location of any transmission lines that traverse the site.
5. The lot number for each site, boundary distances, site areas and in the case of rear sites, both net and total areas.
6. The location of any esplanade mechanisms.
7. The location of any existing and proposed easements and rights of way.
8. Where reserves and/or roads are to vest in the Council, the location and areas of the proposed reserves and/or walkways and any tree planting proposed for the reserves and/or roads to vest in the Council.
9. Any outline development plan or structure plan.

Subdivision Information Required

In addition, the subdivision application assessment of environmental effects should address:

1. The methods of servicing new allotments with water, sewer, stormwater, electrical and telecommunication facilities and evidence to demonstrate that those services can outfall or connect to existing reticulations.
2. The road classification and formation standards of the roads adjoining the subject land, e.g. whether sealed, metalled or unformed, whether or not there is an existing kerb and channel and/or formed footpath.
3. Whether or not any adjoining river has an average width of 3 metres or more.

4. The position of stock water
5. The effects on water and soils.
6. The effects on amenity values.
7. The effects on any Outstanding Natural Features and Landscapes and Visual Amenity Landscapes.
8. The adequate provision of on-site wastewater systems where relevant.
9. Any risks associated with areas of land identified as contaminated or potentially contaminated.
10. The effects on significant indigenous vegetation and significant habitats of indigenous
11. The location of any esplanade mechanism.
12. The position of any listed heritage item, including archaeological sites.
13. The location of any wāhi tapu or wāhi taoka.
14. The presence of and type of natural hazards.
15. Integration with infrastructure.
16. The need for financial contribution, bond and vesting of land.

Southland District Plan

Proposed Plan Change 2

(Code of Practice)

Section 32 Evaluation Report

October 2024

1 INTRODUCTION

1.1 Purpose of this Report

This report provides an evaluation of the provisions contained in Plan Change 2 to the Southland District Council's operative District Plan (the district plan) in accordance with section 32 of the Resource Management Act 1991 (RMA). This report includes the following:

- A summary of the planning context for the plan change
- A summary of the issues addressed by Plan Change 2;
- A description of the development of Plan Change 2, including alternative options considered and relevant background information;
- A description of Plan Change 2 and its provisions; and
- An effectiveness and efficiency evaluation of the Plan Change 2 provisions.

This report is to be read in conjunction with the provisions contained in Plan Change 2 and the Southland District Council and Invercargill City Council Land Use, Subdivision, and Development Code of Practice 2023 (Code of Practice).

1.2 Relationship of Plan Change 2 with the District Plan

The district plan is an instrument used by the Council to assist it to carry out its functions to achieve the purpose of the Resource Management Act 1991. The purpose of that Act is set out in Section 5 as "... to promote the sustainable management of natural and physical resources". Sustainable management is defined in s5(2) as:

> *In this Act, **sustainable management** means managing the use, development, and protection of natural and physical resources in a way, or at a rate, which enables people and communities to provide for their social, economic, and cultural well-being and for their health and safety while—*
>
> *(a) sustaining the potential of natural and physical resources (excluding minerals) to meet the reasonably foreseeable needs of future generations; and*
>
> *(b) safeguarding the life-supporting capacity of air, water, soil, and ecosystems; and*
>
> *(c) avoiding, remedying, or mitigating any adverse effects of activities on the environment.*

The district plan operates at two levels:

- a district-wide level which comprises provisions that cover the matters applicable to the whole District and contains the objectives, policies and rules that apply across the Southland District; and

- a zone or area level which comprises provisions that are applicable in each of the spatial zones, and which recognises that different areas of the District have different resources, land use, character and levels of amenity, and that the community seeks different environmental results for each area. Plan Change 2 (PC2) proposes amendments to both the district-wide and zone-specific chapters of the District Plan.

1.3 Extent of Plan Change 2

Plan Change 2 comprises the following elements:

- The removal from the District Plan of all references to "Land Use and Development Bylaw 2012" and, in selected locations, replacement with "Subdivision, Land Use, and Development Code of Practice 2023"
- Amendments to the existing rule regime to link, as required, those rules with the "Subdivision, Land Use, and Development Code of Practice 2023", and thereby to facilitate its implementation and enforcement, and the deletion of some provisions to avoid duplication of new provisions being introduced in the new Land Use & Development (LAN) chapter
- The introduction of new provisions (performance standards, matters of control and discretion) including an extension to the existing Transport (TRAN) Chapter
- The introduction of a new section (objectives, policies, rules) within the District-wide Chapter covering local water supply, stormwater and wastewater infrastructure, transport matters, network utilities, landscaping and community facilities.

This evaluation report focuses on these aspects of Plan Change 2.

1.4 Matters Outside the Extent of Plan Change 2

Plan Change 2 is focussed on the methods considered most appropriate for implementing the Code of Practice through district plan provisions. The Code of Practice is a document to be incorporated into the district plan by reference, pursuant to Part 3 of the First Schedule to the Resource Management Act 1991. The necessary steps set out in Part 3 of the First Schedule have been complied with.

The plan change does not propose any amendments to the Code of Practice itself, and therefore the content of the Code of Practice is outside the scope of this plan change.

The appropriateness of the provisions of the Code of Practice have already been subject to a submission and hearing process during its development and are not subject to further evaluation in this report.

2 PLANNING CONTEXT

This section of this report identifies the key statutory and planning documents to assist understanding of the context within which Plan Change 2 has been prepared.

2.1 Resource Management Act 1991

Plan Change 2 has been prepared to fulfil Council's functions under section 31 of the RMA, and in accordance with the applicable requirements of sections 73 to 76 of the RMA.

Section 32 of the RMA is reproduced in Appendix A. In summary, Section 32 requires councils, when amending district plans, to examine whether the provisions are the most appropriate way to achieve the objectives by identifying other reasonably practicable options for achieving the objectives; assessing the efficiency and effectiveness of the provisions in achieving the objectives; and summarising the reasons for deciding on the provisions. The evaluation report must be made available for public viewing.

2.2 Southland Regional Policy Statement

Council's District Plan is required by Section 75 of the RMA to give effect to any relevant provisions within a regional policy statement.

The Southland Regional Policy Statement (RPS) became operative in 2017. Throughout the instrument the Methods identify how Southland District Council is to give effect to the RPS. The Methods in the following sections of the RPS have informed the preparation of Plan Change 2, and, to the extent practicable given the scope of Plan Change 2, have been implemented through the preparation of Plan Change 2.

1. Method TW.5 – District Plans
2. Method TW.9 – Consultation
3. Method WQUAL.13 – District Plans
4. Method WQUAL.14 – Good Management Practice
5. Method WQUAN.8 – District Plans
6. Method WQUAN.9 – Consultation
7. Method RURAL.6 – Territorial Authority Management
8. Method NH.5 – District Plans
9. Method NH.10 – Resource Consents
10. Method INF.2 – District Plans
11. Method INF.3 – Consistent Approach
12. Method TRAN.3 – District Plans
13. Method URB.2 – District Plans

2.3 Iwi Management Plans

Section 74(2A) requires territorial authorities to consider any relevant planning document recognised by an iwi authority. One iwi management plan is particularly relevant to Plan Change 2:

- Te Tangi a Tauira - The Cry of the People - Ngāi Tahu ki Murihiku Natural Resource and Environmental Iwi Management Plan 2008

The kaupapa of this Iwi Management Plan is succinctly set out by Environment Southland on its website landing page where it hosts this Plan.

> The kaupapa of this Plan is Ki Uta Ki Tai - From the Mountains to the Sea. It is a culturally based natural resource framework developed by and for Ngāi Tahu Whānui and has been identified and advocated as a key tool in assisting Ngāi Tahu achieve more meaningful rangatiratanga and kaitiakitanga in natural resource management. It is about an indigenous understanding of the environment that can be used to help address the wide range of issues rūnanga face with regards to environmental management. Ki Uta Ki Tai is based on the idea that if the realms of Tāwhirimatea (god of the winds), Tāne Mahuta (god of all living things), Papatūānuku (mother earth) and Tangaroa (god of the sea) are sustained, then the people will be sustained.
>
> The kaupapa reflects the knowledge that resources are connected, from the mountains to the sea, and must be managed as such. Furthermore, the kaupapa reflects that we belong to the environment and are only borrowing the resources from our generations that are yet to come. It is considered our duty to leave the environment in as good or even better condition than received from our tūpuna. The historical practices were established by our tūpuna and must be passed on to ngā uri kei te heke mai, the generations to come.

The Plan itself records that in January 2008 the plan was officially endorsed by Te Rūnanga o Awarua, Te Rūnanga o Oraka/Aparima, Te Rūnaka o Waihopai and Te Rūnanga o Hokonui, and on the 14th of February 2008, Te Rūnanga o Ngāi Tahu Kaiwhakahaere Mark Solomon endorsed this Plan in accordance with the Te Rūnanga o Ngāi Tahu Resolution (July 2003) to endorse environmental management planning documents prepared by Rūnanga Papatipu. As such, this Plan is a planning document recognised by the iwi authority Te Rūnanga o Ngāi Tahu.

Council has been mindful of the contents of and outcomes sought by this Iwi Management Plan and has sought to provide for, and not frustrate the attainment of, these when developing Plan Change 2.

3 ISSUES AND RESPONSES

Issues are existing or potential problems that must be resolved to promote the purpose of the RMA. Environmental issues usually concern conflicts between users of resources, allocation of resources, or effects on the environment (Quality Planning, 2013). Issues can arise from the cumulative effects of many resource uses or from a series of individual proposals. Issues may also relate to the need to take positive action to correct policy failures or the absence of policy, or the need to promote or reward positive effects (Quality Planning, 2013).

Section 75(1) of the RMA requires district plans to state—

(a) the objectives for the district; and

(b) the policies to implement the objectives; and

(c) the rules (if any) to implement the policies.

While there is no need for a district plan to set out the significant resource management issues for the district, those issues are often to be found in a careful reading of the objectives and policies which are the plan's response to them. In large part, that is the case with the Southland District Plan.

Section 32 of the RMA does not require an evaluation of issues. However, issue statements underpin the policy direction in a planning document as they are the starting point for policy development. This section outlines the issue underpinning the development of Plan Change 2.

The current Subdivision, Land Use, and Development Bylaw 2012 was due for review in March 2023, as required by s159 of the Local Government Act 2002. That Act, however, allows for the Bylaw to remain in effect until either it is reviewed, or it is revoked pursuant to s160A. Council has decided not to review the Bylaw, and therefore it will be revoked in March 2025.

Rather than complete a review of the Bylaw, Council has chosen to replace it with a Code of Practice. That Code of Practice comprises an updated version of the previous Bylaw, has been subject to a public consultation process under the Local Government Act 2002, was the subject of public hearings on the submissions made and has been formally adopted by Council on 16 October 2024.

The single issue that this proposed plan change responds to concerns how best to implement and give effect to the intent of the Code of Practice through the provisions of the District Plan. Essentially, the move from a regime where the content of the Bylaw was enforceable through the Local Government Act to a regime where it is implemented and enforced through the Resource Management Act is the driver behind this plan change.

While there is no environmental issue that this plan change responds to, it is essential that a regime is established whereby consistent minimum standards for the planning and construction of infrastructure assets that the Council will accept as part of its networks (including ongoing operations and maintenance), and requirements relevant to infrastructure that will remain private but connect to public assets, is established, able to be implemented, and enforced. If these outcomes are achieved then the desired environmental outcomes currently achieved through implementation of the Bylaw will continue to be achieved, but in a manner more integrated with the wider outcomes sought through the District Plan. Further, the Code of Practice will enable Council to achieve the objectives and levels of service set out in Council's Long-term Plan and the District Plan.

4 DEVELOPMENT OF PLAN CHANGE 2

As previously noted, the Code of Practice has been developed under the Local Government Act 2002. Following the completion of those processes, Council initiated plan change processes under the RMA to enable the Code of Practice to be given effect to and implemented.

Early in the development of this plan change, Council engaged with representatives of the development community in Southland (surveyors, planners, engineers, land developers), Council engineering officers, Council consent planners, and Councillors. Consultation also took place between Council and Te Ao Mārama. Te Rūnanga o Ngāi Tahu is the iwi authority (Te Rūnanga o Ngāi Tahu Act 1996). The Te Rūnanga o Ngāi Tahu Act also sets out the takiwa (area or jurisdiction) of the 18 Papatipu Rūnanga of Te Rūnanga o Ngāi Tahu. Te Ao Mārama is authorised to represent three Ngāi Tahu papatipu runanga in Murihiku/Southland.

Initial discussions were deliberately open ended and focussed on identifying issues with current procedures, current district plan provisions and the interface of the Bylaw with the district plan and Building Act 2004 provisions. This consultation also provided an opportunity to identify solutions to these issues.

From those issues and suggested solutions, various iterations of plan provisions were developed. Continuous looping back to the issues, along with seeking ready integration with the present format and style of the operative District Plan, resulted in a suite of amendments being prepared; collectively known as Plan Change 2.

4.1 Schedule 1 Consultation

Clause 3 Consultation

Clause 3, Schedule 1 of the RMA includes a requirement to consult the Minister for the Environment, those other Ministers of the Crown who may be affected by the proposed plan change, local authorities who may be affected, tangata whenua who may be affected (through iwi authorities) and any customary marine title group in the area during the preparation of a plan.

Pursuant to Clause 3, a formal draft copy of Plan Change 2 was sent to the following parties for comment:

- Minister for the Environment
- Minister of Conservation
- Department of Conservation - Invercargill
- Environment Southland

- Invercargill City Council
- Gore District Council
- Central Otago District Council
- Clutha District Council
- Queenstown Lakes District Council
- Te Ao Mārama

In addition, there is provision in Clause 3 that enables Council to consult more widely. Because of the nature of the proposed plan change, Council included in its Clause 3 consultation those representatives of the development community in Southland who had participated in the initial discussions. In addition to Fire and Emergency New Zealand, Kianga Ora and New Zealand Transport Agency, Council also forwarded the draft plan change to fifteen consultancies or representatives of the development community.

Aside from some general comments, and two comments specifically on the amendments to Schedule 11, all the comments received were focussed on the proposed new LAN Chapter. A summary of the feedback received is set out in Appendix B to this Report.

A number of minor amendments/corrections were made to the proposed plan change arising from the comments received. In addition, a more fundamental change was made to the provisions – the default classification for activities not complying with the performance standards was amended from Discretionary to Restricted Discretionary.

Clause 4A Consultation

After comments and feedback received pursuant to Clause 3 had been considered and amendments made, Plan Change 2 was forwarded to Te Ao Mārama, pursuant to Clause 4A of the First Schedule to the RMA.

The comments received from Te Ao Mārama direct Council's attention to *'Te Tangi a Tauira - Iwi Management Plan 2008'* and record that this iwi management plan outlines the Ngāi Tahu ki Murihiku position in respect of sustainable development and the overall management of te taiao.

> "The kaupapa of Te Tangi reflects the knowledge that resources are connected, from the mountains to the sea, and must be managed as such. Furthermore, the kaupapa reflects that we belong to the environment and are only borrowing the resources from our generations that are yet to come. It is considered our duty to leave the environment in as good or even better condition than received from our

tūpuna. Te *Tangi a Tauira* is to be considered across all elements of any plan change. "

The comments also confirm that all elements of Te Tangi are to be read in equal measure when considering any resource management decision, but in the context of Plan Change 2 particular attention should be given to:

- 1.12 Outcomes
- 3.1 Climate change
- 3.5.7 Subdivision and Development

With particular regard to climate change, the comments directed Council's attention to *'Ngāi Tāhū o te Whāriki – Anchoring the Foundation'* which is the Ngāi Tāhū Climate Change Strategy, and record that climate change is a matter of consideration for any subdivision and land use development from a Ngāi Tahu perspective and should be considered across all elements of any related plan change.

The overall conclusion is that mana whenua are supportive of the plan change and acknowledge it facilitates the delivery of the latest Subdivision, Land Use and Development Code of Practice 2023. In particular, there is support for the provisions "that hold developers accountable to deliver best practice in terms of subdivision and land use".

In response to these comments Council has introduced a new matter of discretion into the proposed LAN Chapter which specifically addresses flood hazards. This matter of discretion is linked to LAN-PS1 Stormwater, LAN-PS3 Wastewater – On-Site Wastewater Collection, Treatment and Disposal at Subdivision Application, and LAN-PS4 Wastewater – On-Site Wastewater Collection, Treatment and Disposal at Land Use Consent or Building Consent. It was not considered appropriate or necessary to adjust the policies or other provisions at this time. Climate change and its effects management is a significant topic that is beyond the purpose of the proposed plan change.

5 EVALUATION

5.1 Introduction

Section 5 of the RMA states the purpose of the Act, being the sustainable management of natural and physical resources. Under the RMA, 'sustainable management' means managing resource use, development and protection so as to enable people and communities to provide for their wellbeing (social, cultural and economic), and health and safety while sustaining resource potential needs for future generations, safe-guarding the environment's life-supporting capacity, and managing activities' adverse environmental effects.

5.2 Section 32 of the RMA

Section 32 evaluations are required for all proposed policy statements or plans (including changes to these instruments) prepared under the RMA (Clause 5 (1)(a) First Schedule).

Decision makers are required to have particular regard to section 32 evaluations. The full text of section 32 is set out in Appendix A. In summary, an evaluation report must examine whether any proposed objectives are the most appropriate way of achieving the purpose of the Act. It must also examine whether the proposed provisions (including policies, rules, associated tables, maps, and schedules) are the most appropriate way of achieving the objectives by assessing their efficiency and effectiveness. Other reasonably practicable options must also be identified.

To determine this, the provisions in Plan Change 2 are grouped according to the Chapter of the Operative District Plan in which they are located. Following a description of the proposed provisions an evaluation is then carried out for each group that:

- identifies other reasonably practicable options (section 32(1)(b)(i));
- examines the efficiency and effectiveness of the proposed provisions at achieving the identified objectives (section 32(1)(b)(ii));
- provides an overall evaluation summary of the reasons for deciding on the provisions (section 32(1)(b)(iii)); and
- uses a level of detail in the assessment that corresponds with the scale and significance of the effects anticipated from the implementation of the plan change provisions (section 32(1)(c)).

What follows here is a brief explanation as to how the section 32 evaluation has been carried out, including:

- the options assessment;

- the effectiveness assessment; and
- the efficiency assessment.

The grouping of provisions undertaken for this assessment is described in Section 6 of this report.

5.3 Options Assessment

While section 32 requires that "other reasonably practicable options" are identified, it does not require those options to be subject to an evaluation of their effectiveness or efficiency. Where there is a practicable option, this report provides an assessment. In many instances, however, Council considers there is no reasonably practicable option and this is recorded accordingly.

5.4 Efficiency Assessment

An assessment of the efficiency of the provisions at achieving the district plan's objectives is also required (section 32(1)(b)(ii)). This must cover the anticipated benefits and costs of the environmental, economic, social and cultural effects resulting from the implementation of the provisions. The Act explicitly requires consideration of anticipated changes to opportunities for economic growth and employment; and where practicable, costs and benefits should be quantified (section 32(2)).

When evaluating benefits and costs, the Council's baseline is the current environment and the policy and rule framework provided by the operative district plan.

In evaluating benefits and costs across the four well-beings anticipated to result from implementation of Plan Change 2, benefits and costs are categorised as follows:

- Environmental benefits and costs fall upon ecosystems and natural and physical resources.
- Economic benefits and costs are those that accrue to the productive economy and are based around economic well-being and efficiency considerations and anticipated effects, including opportunities for economic growth and employment that are anticipated to be provided or reduced. Changes to economic growth and employment are both categorised as economic effects.
- Social benefits and costs are those that fall on people and the community. Often these impacts relate to changes in environmental and economic conditions are included under the social benefits and costs.
- Cultural benefits and costs are those that relate to the customs, values and beliefs of people and communities, particularly Ngāi Tahu. These considerations can be specific or holistic in nature. They often relate to changes in environmental, economic or social conditions.

Given the nature of Plan Change 2 quantification is has not been practicable, but rather the likely monetary effects on individuals and the community of Southland as a whole have been assessed in a broader manner and described in the narrative.

5.5 Effectiveness Assessment

Section 32(1)(b)(ii) requires that effectiveness is assessed in terms of how well the provisions achieve the plan's objectives.

All objectives in the district plan are relevant to each grouping of provisions. However, for assessment purposes, some district plan objectives are more relevant to particular groupings than others. Effectiveness has therefore been assessed according to how well a provision grouping achieves those particularly relevant district plan objectives.

5.6 Risk

Section 32 also requires an assessment of risks. The evaluation of each set of provisions identifies gaps or uncertainties in the information relied upon, and an assessment of the risk of acting or not acting is provided.

6 EVALUATION OF PROVISIONS - INTRODUCTION

This section sets out the evaluations that have occurred under section 32 of the RMA in relation to the provisions of the Plan Change. The evaluation commences with the broad subject of Changes of Document Name. This is followed by the evaluation of the proposed new Land Use and Development chapter. From there onwards the evaluation mirrors the order in which the provisions are found in the operative District Plan:

- Energy, Infrastructure and Transport – particularly INF and TRAN
- Subdivision – SUB
- Financial Contributions – FIN
- General Rural Zone – GRUZ
- General Residential Zone – GRZ
- General Industrial Zone – GIZ
- Natural Open Spaces Zone – NOSZ
- Special Purpose Zone – Eweburn Zone – SPZ-EWE
- Edendale Diary Plant Industrial Development Concept Plan – DEV1
- Schedule 11 - Information for Resource Consents – SCHED 11

The requirements of section 32 evaluation reports have previously been set out. This part of the report focuses on examining whether the provisions in the proposal (i.e. the policies and methods) are the most appropriate way to achieve the objectives by:

- Identifying other reasonably practicable options for achieving the objectives; and
- Assessing the efficiency and effectiveness of the provisions in achieving the objectives.

In accordance with section 32(2), that examination also includes:

- Identifying and assessing the benefits and costs of the environmental, economic, social and cultural effects anticipated from the implementation of the provisions, including the opportunities for:
    - i. Economic growth that are anticipated to be provided or reduced; and
    - ii. Employment that are anticipated to be provided or reduced;
- Where practicable, quantifying the benefits and costs; and
- Assessing the risk of acting or not acting if there is uncertain or insufficient information about the subject matter of the provisions.

Opportunities for economic growth and employment opportunities that might be attributable to the provisions included in this plan change, and the plan change as a whole, have been an integral part of the evaluation. The nature and purpose of the plan

change is such that no obvious opportunities for, or impediments to, economic growth or employment have been identified. In the interests of conciseness, this conclusion is not repeated in each subsequent section of this evaluation report.

7 CHANGE OF DOCUMENT NAME

TRAN-P3 Explanation; SUB Introduction; SUB-P6; SUB-R1.1; FIN-R1.2; SPZ-EWE Guidance Information 3; DEV1-R5

7.1. Proposed Amendments

The purpose of this part of the plan change is narrowly focussed on deleting from the district plan provisions all references to the Southland District Council Subdivision, Land Use, and Development Bylaw 2012 and replacing them, where appropriate, with the Southland District Council and Invercargill City Council Subdivision, Land Use, and Development Code of Practice 2023. These proposed amendments apply only where the reference to the Bylaw, and its replacement with the Code of Practice, are not part of any more comprehensive amendment to the district plan provision but are necessary because the Bylaw will cease to exist after 23 March 2025.

7.2 Reasonably practicable options

Council has previously decided to proceed with developing a Code of Practice (as opposed to reviewing its Bylaw) and with implementing this Code of Practice through its district plan. Given this, there are no reasonably practicable options available that can achieve this purpose. While re-phrasing all the affected provisions to not refer directly to the Code of Practice might be possible, it is not assessed as practicable and would defeat the purpose of this plan change.

7.3 Benefits and Costs Assessment

BENEFITS	COSTS
Environmental	
The present Southland District Council Subdivision, Land Use, and Development Bylaw 2012 will cease to exist on 23 March 2025. Council has decided to not review the Bylaw but rather to replace it with a Code of Practice to be known as Southland District Council and Invercargill City Council Subdivision, Land Use, and Development Code of Practice 2023. This Code of Practice is to be incorporated by reference into the operative Southland District Plan. Replacing the references to the Bylaw with the new references to the Code of Practice will have positive environmental effects because it is within that Code (to	Not implementing the amendment to reflect the title of the Bylaw replacement document within the district plan will mean that the Code of Practice is not properly referenced and may mean that it is unable to be implemented through the district plan. Moving to a RMA basis for implementation, as opposed to a Local Government Act basis, is the principal driver behind this plan change. There are no environmental costs associated with the proposal.

be implemented through various amendments to other provisions within the district plan as part of this plan change) that various requirements are established that are designed to promote sustainable management of the environment.	
Cultural	
The change of name facilitated through this plan change is assessed as being neutral in cultural terms	
Social	
The change of name facilitated through this plan change is assessed as being neutral in social terms	
Economic	
The change of name facilitated through this plan change signals a change in approach to the management of many requirements connected with land use and development (including subdivision) activities. The economic benefits that flow from this will be felt in the future as Council is assisted with its long-term management of all infrastructure that will be Council owned. This arises from properly planned, sequenced, installed/constructed infrastructure designed appropriately for the development to be serviced. There are no assessed benefits to economic growth that are anticipated to be reduced or employment opportunities that are anticipated to be reduced.	The change in approach to the management of many requirements connected with land use and development (including subdivision) activities may have economic costs for future development activities, particularly where those proposals do not comply with the requirements set out in the Code of Practice. This arises because variances from the requirements will necessitate an applicant seeking, and being granted a resource consent before development can proceed. Quantification of those costs is not practicable because each variance and each development proposal will be different. The mitigating factor here, however, is that there is an avenue for avoiding these costs – compliance with the Code of Practice. In terms of economic growth or employment opportunities this aspect of the plan change is assessed as being neutral.

7.4 Efficiency and effectiveness evaluation

The table below sets out the assessment of the efficiency and effectiveness of the proposed provisions in achieving the objectives.

Efficiency	Given the purpose of this plan change is to provide a mechanism under the RMA for implementing the Southland District Council and Invercargill City Council Subdivision, Land Use, and Development Code of Practice 2023 amending the current references in the District Plan to reflect this new document is the most efficient way of promoting that purpose.
Effectiveness	The broader question here is whether the Code of Practice should be implemented through a plan change that incorporates it by reference or through incorporating its provisions directly into the district plan. Council wishes to proceed with the former and therefore amending the name of the document as proposed is the most effective way of achieving this purpose.

7.5 Risk of acting or not acting

Section 32(2)(c) of the RMA requires Council to take into account the risk of acting or not acting if there is uncertain or insufficient information. There is sufficient information, and there is no uncertainty regarding the proposal to amend the name as proposed.

8 PROPOSED NEW CHAPTER – LAN – LAND USE AND DEVELOPMENT

8.1 Background

Following a period of review and development, in June 2023 Council, in collaboration with Invercargill City Council, conducted hearings into submissions on a proposed new Subdivision, Land Use, and Development Code of Practice. This Code of Practice is to replace Council's Subdivision and Land Development Bylaw 2012, which will be deemed to be revoked, pursuant to Sections 158 and 159 of the Local Government Act 2002, on 22 March 2025.

Having made the decision to proceed with a Code of Practice rather than review the existing Bylaw, Council then needed to find a mechanism by which effect could be given to the various provisions within the Code of Practice. To achieve the outcomes sought by the Code of Practice (as stated in Section 1.2 and in each of Sections 4 to 8) and to implement and give effect to the provisions of the Code of Practice, it was decided that amendments to the Southland District Plan would be the most practicable method.

The final piece of the background which informs Council's decision to proceed with a plan change concerns sustainable management. Council accepts that the sustainable management of land and development within Southland District has wide-ranging implications for Council's activities (particularly the provision and maintenance of three-waters assets, parks and reserves, and the roading network) and for the economic, social and cultural wellbeing of the people of the district. It is also a positive contributor to the quality and sustainability of the Southland environment.

An initial review of the provisions of the operative district plan revealed that a suite of related and integrated amendments would be required:

- Simple amendments to change the name of the referenced document from the Bylaw to the Code of Practice
- Introduction of a new district-wide chapter to the district plan which would become the key cross-reference point and a "one-stop-shop" for requirements relating to Stormwater, Wastewater collection, treatment and disposal, Water supply, Transport (including parking requirements), Network utilities, Landscape, and Community facilities.
- An expanded Transport Section dealing specifically with roading matters in sensitive landscapes
- A series of consequential amendments designed to remove duplication of provisions and to direct users of the district plan from the Subdivision Chapter and various Zone chapters to the new Land and Development Chapter.

These are the key components of this proposed plan change.

It is through the provisions of the new Land and Development Section that Council has facilitated implementation of the Code of Practice and has made provision for its enforcement.

The architecture of this new district wide section closely follows that which applies to the remainder of the district plan. This new chapter, therefore, contains objectives, policies, and methods (rules, performance standards, matters of discretion or control). This new section applies, through the working of LAN-R1, to all land use, subdivision, and development activities and takes precedence over zone or activity provisions elsewhere in the district plan.

What follows is the required assessment in terms of Section 32 of the RMA for each of these components of this new section.

8.2. Assessment of Proposed Objectives

While not the first Chapter of the Operative District Plan in sequence, it is appropriate to commence this evaluation with the proposed new LAN – Land Use and Development Chapter because it contains new objectives which as well as establishing the outcomes sought by the LAN Chapter, also underpin the policies and methods introduced or amended by the Plan Change and set out in the remainder of the plan change.

Any evaluation of proposed objectives must commence with an understanding of the issue. The issue being addressed by this plan change, and hence these objectives, is how best to implement and give effect to the provisions of the Code of Practice, having previously decided to use the provisions of the Resource Management Act to achieve this. The response to the issue is, therefore, constrained to what amendments are required to the operative district plan to implement and give effect to the provisions of the Code of Practice.

The evaluation of objectives is required to assess each new objective in terms of three matters:

- Relevance - includes whether the objectives relate directly to a resource management issue and whether they will achieve the purpose of the Act and other higher statutory documents.
- Feasibility - includes the degree of risk of unintended or adverse effects and the ability to achieve the objective.
- Acceptability - evaluates whether the objectives align with community outcomes and whether they recognise differing value sets.

Plan Change 2 proposes two new objectives. LAN-O1 and LAN-O2 have each been evaluated for relevance, feasibility and acceptability.

Objective LAN-O1

Objective LAN-O1 states that:

> Land Use and development within the Southland District promotes positive community and environmental outcomes alongside economic gains, and takes place in a manner which is environmentally, socially and culturally sustainable whilst balancing the need to be technically robust.

8.2.1 Appropriateness of Proposed Objective LAN-O1

Relevance	Given the purpose of the plan change overall and the new LAN Chapter in particular, this objective is a clear statement of the outcome sought to be achieved. It is relevant because it links together the promotion of positive outcomes and the need for sustainability while also seeking to ensure technical robustness. The absence of a clear statement of outcome would potentially undermine the achievement of technically robust development that positively contributes to the other outcomes. Further, it could result in a separation of this overall package of outcomes into various components which might then be able to be traded off against each other. That would fail to achieve the purpose of the RMA. Clearly integrating all these outcomes encourages appropriate land use and development activities that make a positive contribution to environmental, social, cultural and economic outcomes for Southland.
Feasibility	This objective addresses several issues regarding the sustainable management of land use and development activities within Southland that have been identified during the implementation of the Bylaw regime. The objective sets the outcomes for policies and methods to achieve and will guide decision-making on individual applications for resource consents. The objective is within the Council's authority under section 31 of the RMA.

Acceptability	There was limited response from the community in the Clause 3 feedback in relation to this objective, however it was generally supported as it is acknowledged that an integrated resource management approach is required. The only opposing feedback was a concern that the objective was not easy to follow and the language should be clarified.
Overall Appropriateness	Objective 1 is considered appropriate to achieve the purpose of the RMA.

Objective LAN-O2

Objective LAN-O2 states that:

> Works undertaken in new developments are future focussed, resilient, and will not impose environmental and financial costs and inequitable difficulties onto future generations, nor expose infrastructure providers and the communities of Southland to undue future liabilities and costs.

8.2.2 Appropriateness of Proposed Objective LAN-O2

Relevance	Land use and development activities can have wide-ranging implications for the activities of a number of infrastructure asset managers (particularly the provision and maintenance of three-waters assets, parks and reserves, and the roading network) and for the economic, social and cultural wellbeing of the people of the district. Equally, thoughtful land use and development activities can positively contribute to the quality and sustainability of the Southland environment. While development within the district is encouraged, where the assets arising from that development become the responsibility of the public, there is an ongoing cost to be met. Achieving affordability into the future, both in terms of the environment and intergenerational cost equity is very important if true sustainability is to be achieved. This objective sets the platform for an ongoing

	consideration of these very important outcomes.
Feasibility	By placing this outcome/objective alongside the more traditional outcomes of environmental, social and cultural sustainability, the affordability of asset management into the future becomes an essential consideration for any planned development. It allows appropriate links to be made between spatial planning, long-term asset management and achievement of desired community outcomes. This objective in particular works with others in the district plan to provide a suite of desired outcomes, all of which in an integrated way and when viewed together, will promote the purpose of the RMA. A potential downside of this objective might be a more structured and planned approach to development activities, which might slow down some development opportunities. The risk of this, compared with the benefits arising from coordinated and planned development, especially for future generations, is relatively minor and should not prelude this approach to managing development activities.
Acceptability	There was limited response from the community in the Clause 3 feedback in relation to this objective. There were, however, two matters raised: first, a concern that it was open to very wide interpretation; and secondly that some of the language was not as precise as might be desirable. Both of these concerns have been addressed. It is now considered that this objective is broadly acceptable.
Overall Appropriateness	Objective 2 is considered appropriate to achieve the purpose of the RMA.

8.3 Conclusion on Objectives

Considering the assessment above, Council considers that these objectives will promote achievement of the purpose of the RMA.

8.4 Assessment of Proposed Policies

LAN-P1; LAN-P2; LAN-P3; LAN-P4

8.4.1 Proposed Amendments

These four new policies work together to provide direction on how the objectives are to be achieved. Each, therefore, is focussed on a different aspect of land use and development within Southland District which Council wishes to manage through its Code of Practice and district plan provisions.

Policy LAN-P1 seeks to establish and implement best engineering practice for all assets that Council will ultimately accept, manage and maintain. It is the Code of Practice that contains the standards for these various assets, but this policy provides clear direction to the rule framework that will implement it.

Policy LAN-P2 recognises that not all situations require or are suitable for a common standard of design for assets. The policy therefore directs that provision be made for alternative design solutions, but within constraints concerning implications for the operation and maintenance of existing infrastructure assets and environmental effects. This policy and the provisions that give effect to it arose directly from consultation with local land development professionals.

Policy LAN-P3 seeks to achieve a proper match between proposed development and landform. This policy requires early consideration of existing natural features, natural character, and landscape amenity values when developments are in the planning phase so that low impact design principles can be given full expression.

Policy LAN-P4 is the policy that requires comprehensive consideration, at the time of development planning, of water supply provision, the environmental effects of stormwater and wastewater collection, treatment and disposal, and the functionality and integration of this infrastructure with existing systems.

8.4.2 Benefits and Costs Assessment

For the purposes of this assessment the four proposed policies are considered together because they are written to operate together and because they address different but related aspects of the same activity – land use and development.

BENEFITS	COSTS
Environmental	
The considerations that these polices direct when land use and development proposals are being planned will have positive environmental outcomes. No	There are no assessed environmental costs likely to arise from the inclusion of these policies in the district plan.

longer will these activities be able to be planned and undertaken in isolation of a consideration of the wider environment and the implications of the proposal for the wider environment.	
Cultural	
These policies direct that in planning a land use or development there needs to be a comprehensive consideration of, inter alia, the provision to be made for water supply and wastewater disposal. Of necessity that will include all effects on the environment. This will directly assist in attaining the relevant outcomes set out in Te Tangi a Tauira - The Cry of the People - Ngāi Tahu ki Murihiku Natural Resource and Environmental Iwi Management Plan 2008.	There are no assessed cultural costs likely to arise from the inclusion of these policies in the district plan.
Social	
The intent of these policies, in part, is to secure the social wellbeing of the people of the district. Proper and adequate provision of infrastructure that does not have adverse effects on the environment, will assist with achieving that outcome.	There are no assessed social costs likely to arise from the inclusion of these policies in the district plan.
Economic	
Timely, appropriate and adequate provision of infrastructure at the time of land use or development will contribute to effective and efficient operation and management of these publicly owned assets. This will have positive economic benefit for the ratepayers of the district and for proponents of future development activities.	The implementation of these policies will have economic consequences for land use and development projects. These costs will arise directly from the requirements to establish timely, appropriate and adequate infrastructure at the time of development. It is not possible to quantify those costs because the circumstances of each development proposal cannot be known. It is, however, reasonable that these costs should fall on the project proponent.

8.4.3 Efficiency and effectiveness evaluation

The table below contains the assessment of the efficiency and effectiveness of the proposed provisions in achieving the objectives.

Efficiency	These four policies focus on the essential elements of development proposals and direct actions necessary to achieve the outcomes sought by the objectives. A limited number of focussed policies, which lead directly to a suite of methods, are assessed as being an efficient means of achieving the objectives. A more fine-grained approach to the drafting of the policies could have been implemented but such an approach would have been no more efficient than that which has been proposed here.
Effectiveness	This plan change is designed to give effect to and implement Council's Code of Practice. This suite of policies is focussed on the key components of the Code of Practice and therefore is an effective means of achieving that outcome.

8.4.4 Risk of acting or not acting

Section 32(2)(c) of the RMA requires Council to take into account the risk of acting or not acting if there is uncertain or insufficient information. There is nothing uncertain or unknown about these four policies. There is, however, a risk to Council's management of its infrastructure assets and to the environment if these policies are not included in the district plan. This risk arises directly from the fact that it is only through the district plan provisions proposed here that Council will be able to give effect to and implement its Code of Practice. In the absence of these district plan provisions there will be no requirement on proponents of land use and development projects to provide infrastructure in a timely, appropriate or adequate manner.

8.5 Assessment of Proposed Rules

LAN-R1; LAN-R2

These two rules are the essential component of the link between the Code of Practice and the district plan and are the mechanism by which the Code of Practice is given effect to and implemented under the RMA. They have applicability for all land use, subdivision, and development activities across the whole of the Southland District. Their architecture is such that they follow the format of all other suites of rules within the operative district plan, and thereby integrate well with the balance of the district

plan. Additionally, they contribute positively to achieving the outcomes not only of the LAN Chapter itself but also the other suites of district-wide provisions and the various land use Zones.

Their architecture is such that together they comprise a simple cascade from what is permitted, subject to compliance with the specified performance standards, through to an increased level of scrutiny as the degree of compliance with those performance standards reduces.

8.5.1 Proposed Amendments

Rule LAN-R1.1 has two parts, both of which require full compliance for a land use, subdivision or development activity to be permitted. The first establishes the predominance of the LAN Chapter within the district plan while also requiring compliance with the performance standards of both the relevant Zone or Activity rule, and compliance with all the relevant performance standards set out in the LAN Chapter.

The second part of LAN-R1.1is focussed on the effects of a development proposal on existing infrastructure and requires either a proposal to demonstrate that there is no requirement for, or an upgrade of, the listed services, or the provision of evidence of approval for any required upgrade of those services.

The applicable standards for connections to those services, and hence any requirements for upgrades, is set out in the relevant part of the Code of Practice, access to which is achieved through the various LAN Chapter performance standards.

LAN-R2 requires a land use, subdivision or development activity that does not comply with any one or more of the relevant performance standards to be granted restricted discretionary resource consent before it can proceed. Because proposed project circumstances are all different it is preferable to have a pathway for considering variations to a performance standard requirement.

8.5.2 Reasonably practicable options

The most reasonably practicable option considered during the preparation of this plan change was drafting a suite of rules for each separate Zone or Area. This would result in duplication of provisions throughout the district plan.

A second choice of note made during the drafting concerns the classification of activities that do not comply with the performance standards. An alternative to the present proposal would be for non-compliance with a single performance standard to be classified as a restricted discretionary activity and for non-compliance with two or more of the performance standards to be classified as a discretionary activity. Given the nature of subdivision, land use and development activities is very case specific and because the focus is on attaining compliance with the performance standards the decision was taken to classify all non-compliance as restricted discretionary, with

targeted matters of discretion. A fully discretionary approach to non-compliance was considered to not achieve the purpose of the plan change.

8.5.3 Benefits and Costs Assessment

BENEFITS	COSTS
Environmental	
The environmental benefits of this suite of rules is assessed as being positive because the implementation of the Code of Practice through these provisions has environmental benefit as one of its principal outcomes. Properly designed, installed and operated infrastructure, that looks beyond just the immediate site to the wider network or environment, is a critical component of managing the effects of activities on the environment.	The environmental costs of this suite of rules are assessed as being neutral. Achieving the overall benefits of properly designed, installed, and operated infrastructure may give rise to some costs on the environment, both of a short, and possibly longer, term nature. This suite of rules is focussed on minimising these costs to the fullest extent practicable. Quantifying these costs is very difficult because of the variable nature of each land use, subdivision and development proposal and how each is designed to interact with the environment.
Cultural	
The cultural benefits and costs of this suite of rules is generally assessed as neutral. There are, however, opportunities for positive benefits arising through the implementation of requirements regarding the collection, treatment and disposal of stormwater and wastewater, and the provision of reticulated potable water.	
Social	
While in general, the social benefits and costs are assessed as neutral, there are opportunities for sustainable improvements in public health, and public safety arising through the implementation of requirements regarding the collection, treatment and disposal of stormwater and wastewater, the provision of reticulated potable water, and the various transport requirements.	
Economic	
This suite of rules clearly sets out what is required of proponents of projects in respect of new and existing on-site or reticulated infrastructure. This will facilitate a 'no-surprises' integrated approach to the planning of such proposals, a consideration of all the requirements at that planning stage and the integration of amendments to a	Such an approach comes at a cost. More work will be required of project proponents through the planning stage than might otherwise be the case, particularly where the project requires a resource consent. This will add costs to the project, but those costs are not assessed as inappropriately falling on the proponent. Because each project and its

project to accommodate those requirements during that planning stage, as opposed to them becoming an 'add-on'. Additionally, requiring a comprehensive approach to the consideration and provision of infrastructure during the planning stage of a project will have benefits to the community because the costs will fall where they should rather than becoming a future burden on the ratepayers of the district.	particular circumstances is different, quantifying these costs is not practicable.

8.5.4 Efficiency and effectiveness evaluation

The table below sets out the assessment of the efficiency and effectiveness of the proposed provisions in achieving the objectives.

Efficiency	A more permissive regime might be considered a more efficient means of achieving the same outcome as the proposed suite of rules. When considered in the wider context of the various costs of reduced management of these infrastructure assets, however, a more permissive regime becomes much less efficient. Further, clear direction and direct management are required if the outcomes set out in the objectives are to be achieved. These two rules are assessed as being an efficient method of achieving the objectives.
Effectiveness	Clarity of expression, clear direction and direct management (where required) are required if the outcomes set out in the objectives are to be achieved. This suite of two rules is assessed as being an effective method for achieving the objectives while also preserving opportunities for project proponents to consider all the requirements for infrastructure and plan their development in the most cost-effective manner.

8.5.5 Risk of acting or not acting

Section 32(2)(c) of the RMA requires Council to take into account the risk of acting or not acting if there is uncertain or insufficient information. There is nothing uncertain or insufficient regarding the subject matter of these rules. There is a direct line of sight between the objectives, through the policies to these rules and therefore the outcomes sought and how they are to be achieved is clear. Also clear are the positive effects for sustainable management of the physical and natural resources of the district and the benefits for the wellbeing of the people of the district.

8.6 Assessment of Proposed Performance Standards

LAN-PS1; LAN-PS2; LAN-PS3; LAN-PS4; LAN-PS5; LAN-PS6; LAN-PS7; LAN-PS8; LAN-PS9

The nexus between the Code of Practice and the district plan is to be found in these nine performance standards. Each performance standard directly relates to a section within the Code of Practice, except that concerning wastewater, where there are three performance standards – one for reticulated systems, one for onsite systems arising from new subdivisions or developments, and one for land use consent or building consent applications on a pre-existing allotment.

Each performance standard follows the same basic format: a direction for compliance with specified sections of the Code of Practice; a method by which alternative solutions (which may be either required or proposed because of the circumstances of the proposal) may be considered; and any specific requirements for the type of infrastructure under consideration.

What is significant about this suite of performance standards, from a district plan administration and district plan user perspective, is that the provisions clearly establish the information required to be submitted with any application for approval. The onus is therefore on the project proponent, and that is considered appropriate. This approach to the drafting of these provisions requires of project proponents a suitably comprehensive and integrated consideration of all infrastructure requirements at the time the project is being planned. The various interrelationships between these infrastructure requirements can thereby be utilised as part of the shaping of the proposal, rather than being treated as an 'add-on'.

As found elsewhere in the district plan, each performance standard also sets out the activity status when compliance with the performance standard is not achieved. In each instance the activity status reflects the degree of management considered by Council to be appropriate for the standard being breached.

8.6.1 Proposed Amendments

Aside from the stated standards to be achieved, and the method for consideration of alternative solutions, the key component of LAN-PS1 Stormwater is the requirement for proposed on-site systems to not have any effects on the operation of any on-site wastewater collection, treatment and disposal system. This will have implications for the scale of any proposed development, the location of these two different on-site systems, and potentially the suitability of the site for the proposal.

LAN-PS2 is concerned with wastewater going to a reticulated network. The Code of Practice sets out various engineering requirements for such connections to the reticulated network, all of which are designed to facilitate the sustainable management of the network. Alternative solutions are provided for, but this too requires adherence to specified standards.

On-site Wastewater systems are the subject of LAN-PS3. Again, there is direct reference to parts of the Code of Practice, and provision for alternative solutions. Additionally, however, there are also requirements concerning impacts on on-site stormwater systems, the reporting on field work undertaken to establish the suitability of the site to receive the discharges, and the provision of drawings showing location and layout of the proposed system.

To clarify how on-site wastewater systems connected to new land use activities or building proposals on existing allotments are to be managed, LAN-PS4 is proposed. Along with the specific provisions in the Code of Practice and the provision for alternative solutions, there are requirements concerning compliance with any relevant regional rules, a requirement that there is no impact on any stormwater system on the same site, and a requirement that evidence of all field work undertaken to establish the suitability of the site is provided.

Water supply is the subject of LAN-PS5. Importantly, this performance standard, as well as linking directly to the Code of Practice where the various engineering requirements are set out for supply quantities and supply systems, sets out requirements for firefighting water where there is no reticulated supply. Alternative solutions are provided for, but this too requires adherence to specified standards.

Transport matters, including minimum on-site car parking requirements, are the subject of LAN-PS6. This performance standard works alongside the activity rules set out in the proposed TRAN – Transport chapter of the district plan. It sets the various standards for the planning and development of new roads and accessways, and the upgrading of this same infrastructure.

The parking requirements set out in this performance standard were part of Council's Bylaw (at Appendix E) and are included here, albeit in modified form, because such

provision can be made through the district plan and is required to manage an effect on the environment.

Performance standards LAN-PS7, LAN-PS8 and LAN-PS9 concern the planning and development of Network utilities, Landscaping and Community facilities respectively. Each provides a direct link to, and requires compliance with, the relevant provisions of the Code of Practice.

Any non-compliance with any clause within these nine performance standards requires a resource consent which will be assessed as a restricted discretionary activity.

8.6.2 Reasonably practicable options

Given the particular architecture of this plan change and the outcomes sought to be achieved, coupled with a desire to make the requirements clearly understandable, implementable and enforceable, it is considered that there are no reasonably practicable options available.

8.6.3 Benefits and Costs Assessment

BENEFITS	COSTS
Environmental	
The way these performance standards have been set up, and the particular wording of each, is designed to achieve environmental benefits from their administration and through the establishment, operation and maintenance of required infrastructure associated with land use, subdivision, and development proposals.	Any environmental costs attributable to these performance standards are assessed as most likely to arise during the installation of the infrastructure. This can, in large part, be managed on site but not all effects can be avoided. Following installation, the effects on the environment should not be observable.
Cultural	
There are opportunities for positive cultural benefits to arise through the implementation of the performance standards regarding the collection, treatment and disposal of stormwater and wastewater, the provision of reticulated potable water, requirements regarding transport matters and the planning and development of network utilities. These benefits are both environmental and concern the health and wellbeing of people.	The cultural costs of this proposed approach to managing land use, subdivision and development activities are assessed as neutral.

Social	
While in general, the social benefits and costs are assessed as neutral, there are opportunities for sustainable improvements in public health, and public safety arising through the implementation of requirements regarding the collection, treatment and disposal of stormwater and wastewater, the provision of reticulated potable water, and the various transport requirements, and requirements for network utilities. In addition, there will be amenity benefits attributable to the landscaping requirements, and wider social benefits arising from the development of community facilities in accordance with that performance standard.	
Economic	
This suite of performance standards clearly sets out what is required of proponents of projects in respect of new and existing on-site or reticulated infrastructure, activities involving roading, the provision of car parking, and the planning and development of network utilities, landscaping and community facilities. This will facilitate a 'no-surprises' integrated approach to the planning of such proposals, a consideration of all the requirements at that planning stage and the integration of amendments to a project to accommodate those requirements during that planning stage, as opposed to them becoming an 'add-on'. Additionally, requiring a comprehensive approach to the consideration and provision of infrastructure during the planning stage of a project will have benefits to the community because the costs will fall where they should rather than becoming a future burden on the ratepayers of the district.	Such an approach comes at a cost. More work will be required of project proponents through the planning stage than might otherwise be the case, particularly where the project requires a resource consent. This will add costs to the project, but those costs are not assessed as inappropriately falling on the proponent. Because each project and its circumstances are different, quantifying these costs is not practicable.

8.6.4 Efficiency and effectiveness evaluation

The table below sets out the assessment of the efficiency and effectiveness of the proposed provisions in achieving the objectives.

Efficiency	There are real efficiency gains achieved for the readability and administration of the district plan by having all the

	engineering requirements in a Code of Practice that is directly referenced through district plan provisions but not specifically written into the district plan. Further, while these engineering requirements directly contribute to the attainment of the objectives of the district plan, efficiencies are gained by referring in the performance standards to what is required to be achieved rather than the methods by which that can or should occur. Those methods are set out in the Code of Practice.
Effectiveness	Similarly to the rules, clarity of expression, clear direction and direct management (where required) are required if the outcomes set out in the objectives are to be achieved. This suite of performance standards is assessed as being an effective method for achieving the objectives while also preserving opportunities for project proponents to consider all the requirements for infrastructure and plan their development in the most cost-effective manner. Setting out in the district plan all the engineering standards might be effective insofar as a complete 'one-stop-shop' might be concerned. This possible effectiveness is reduced, however, by combining these engineering requirements with provisions focussed on sustainably managing natural and physical resources, due to the complexity of the instrument that would result.

8.6.5 Risk of acting or not acting

Section 32(2)(c) of the RMA requires Council to consider the risk of acting or not acting if there is uncertain or insufficient information. There is nothing uncertain or insufficient regarding the subject matter of these nine performance standards. There is a direct line of sight between the objectives, through the policies and rules to these performance standards therefore the outcomes sought and how they are to be achieved is clear. Also clear are the positive effects for sustainable management of the physical and natural resources of the district and the benefits for the wellbeing of the people of the district.

8.7 Assessment of Proposed Matters of Discretion

LAN-MAT1; LAN-MAT2; LAN-MAT3; LAN-MAT4; LAN-MAT5; LAN-MAT6; LAN-MAT7; LAN-MAT8; LAN-MAT9

The proposal to set out these nine matters of discretion at the end of this proposed new district plan chapter follows the general architecture of the district plan.

It is a requirement of s77B of the RMA that where a discretion is restricted, the matters of discretion are to be set out in the district plan. This part of the plan change fulfils that requirement.

8.7.1 Proposed Amendments

The matters over which Council proposes to reserve its discretion are set out under the same broad headings as the performance standards. There are, however, three notable exceptions – LAN-MAT1 – Degree of Compliance, LAN-MAT8 – Allotments, and LAN-MAT9 – Flood Hazards.

Regarding the former matters of discretion, the details under each heading relate directly to the relevant considerations under the Code of Practice provisions, and in so doing link together the district plan and the Code of Practice. Each of the matters of discretion gives clear direction to anyone preparing or evaluating an application for resource consent as to what requires evaluation and reporting on and, without being explicit, what outcome is expected from the proposal.

LAN-MAT1 – Degree of Compliance, is an extension of the same matter of discretion or control found elsewhere in the district plan. The extension concerns the requirement here to consider the reasons for and the effects of the non-compliance. By indicating that these matters will be considered, the onus switches to the applicant to provide information on both matters. There is no intent here to prevent alternative solutions but rather to require that they are fully developed, evaluated and comprehensively thought through.

In addition, this matter of discretion requires a consideration of any implications of the proposal for the attainment of the objectives and policies of the LAN chapter and the objectives of the Code of Practice. This is considered important because it is these provisions that provide context for the particular performance standards and a measure for the implications of any non-compliance.

LAN-MAT8 – Allotments applies in respect of non-compliance with all performance standards except Network Utilities and Community Facilities. The purpose of the matter of discretion is to direct attention to the ability of the allotment upon which an activity is to be established, or the allotment being created, to accommodate both the activity and all required infrastructure. It requires an allotment specific consideration and is designed to avoid future problems.

LAN-MAT9 – Flood Hazards is a response to a concern raised during consultation regarding the future effects of climate change, and in particular flooding, on infrastructure associated with land use activities and development. The particular matters set out in LAN-MAT9 require specific consideration because the consequences of flooding for necessary infrastructure, both on the site and within the wider environment, have the potential to be serious.

8.7.2 Reasonably practicable options

Given the particular architecture of this plan change and the outcomes sought to be achieved, coupled with a desire to make the requirements clearly understandable, implementable and enforceable, it is considered that there are no reasonably practicable options available.

8.7.3 Benefits and Costs Assessment

BENEFITS	COSTS
Environmental	
The appropriate application of these nine matters of discretion will result in benefits to the environment. The matters of discretion are all directed at ensuring the wider environmental implications of a proposal to utilise existing or establish new infrastructure, and/or to establish new activities or developments are fully considered and assessed as acceptable prior to the activity commencing.	There are no assessed environmental costs attributable to the implementation of these nine matters of discretion.
Cultural	
The appropriate application of these seven matters of discretion will result in cultural benefits in the same way as those assessed above concerning the performance standards.	The cultural costs of this proposed approach to managing land use, subdivision and development activities are assessed as neutral.
Social	
While in general, the social benefits and costs are assessed as neutral, there are opportunities for sustainable improvements in public health and wellbeing and public safety arising from the application of these matters of discretion.	
Economic	
The economic benefits and costs of the application of these matters of discretion follow closely those previously assessed above in connection with the performance	

standards. Those assessments are adopted and apply equally here and are therefore not repeated.

8.7.4 Efficiency and effectiveness evaluation

The table below sets out the assessment of the efficiency and effectiveness of the proposed provisions in achieving the objectives.

Efficiency	Having a clearly stated suite of matters of discretion, linked directly to the relevant parent performance standard, enhances the efficiency, in terms of achieving the objectives, of the provisions of the LAN Chapter because they assist both applicants and administrators of the district plan.
Effectiveness	The matters of discretion focus on the key matters that require evaluation and consideration when assessing a non-compliance with a performance standard. This 'line-of-sight' is an effective way of structuring district plan provisions and of achieving the objectives. This occurs because, without explicitly stating all the linkages, the reasons for the various provisions become self-explanatory.

8.7.5 Risk of acting or not acting

Section 32(2)(c) of the RMA requires Council to take into account the risk of acting or not acting if there is uncertain or insufficient information. There is no uncertain or insufficient information regarding the subject matter of these nine matters of discretion. There is a direct line of sight between the objectives, through the policies, rules and performance standards to these matters of discretion therefore the outcomes sought and how they are to be achieved is clear. Also clear are the positive effects for sustainable management of the physical and natural resources of the district and the benefits for the wellbeing of the people of the district.

9 PROPOSED AMENDMENTS TO INF - INFRASTRUCTURE

INF – Rules First Note; INF-R1.3; INF-R1.4; INF-R1.13; INF-R4.7; INF-R5.3; INF-PS3

9.1 Proposed Amendments

The proposed amendments to the INF – Infrastructure Section of the district plan are essentially the deletion of parts of Rules where the text is now redundant because the subject is now covered in the new LAN Chapter or the revised TRAN Chapter. The deletion of the first note under the heading 'Rules' is proposed because it is no longer accurate, given the introduction of the new LAN Chapter, and because it is an unnecessary statement regarding the way the district plan is to operate.

Rules INF-R1.3, INF-R1.4, INF-R4.7 and INF-R5.3 are to be deleted because they are being replaced with an equivalent suite of rules (TRAN-R1, TRAN-R2 and TRAN-R3) in the revised TRAN Chapter of the district plan.

Amendments are proposed to INF-R1.13 and INF-PS3 because the operative wording of INF-PS3 does not work as a performance standard. The amendment separates the status of the activity from the performance standard and relocates it to a new INF-R1.13.

For reasons of efficiency, all of these amendments are assessed collectively below.

9.2 Reasonably practicable options

Given the particular architecture of this plan change and the outcomes sought to be achieved, coupled with a desire to make the requirements clearly understandable, implementable and enforceable, it is considered that there are no reasonably practicable options available.

9.3 Benefits and Costs Assessment

BENEFITS	COSTS
Environmental	
The proposed amendments to the INF Section will have some benefits in terms of environmental outcomes sought to be attained through the implementation of the district plan. While the provisions are already contained within the operative district plan, their relocation provides them with improved visibility and brings them under the direction of the policy framework of the TRAN Chapter.	The proposed amendments to the INF Section are cost neutral in terms of environmental outcomes. The provisions are already contained within the operative district plan and their relocation provides them with improved visibility within the instrument.

In addition, environmentally sensitive areas now have a greater degree of protection from the effects of the construction of new roads by Council in those areas. This arises because any such proposed new road will require consent as a non-complying activity, compared with the currently operative provisions which make such road constriction a discretionary activity. Concerning the proposal to split INF-PS3 into the activity status part and the performance standard part, the environmental benefits arise from the consequent clarity of these provisions and their enforceability.	
Cultural	
The amendments proposed through this part of the plan change are assessed as being neutral in cultural terms.	
Social	
The amendments proposed through this part of the plan change are assessed as being neutral in social terms.	
Economic	
There are no clear economic benefits arising from the proposal concerning the construction of new roads. Concerning the proposal to split INF-PS3 into the activity status part and the performance standard part, the economic benefits arise from the consequent clarity of these provisions and therefore their understanding and enforceability.	The only amendment proposed that changes the status of a roading activity arises from the deletion of INF-R1.4. The rule to be deleted applies to both the construction of a new road and the construction of a realignment. The new rule separates these two types of construction into separate rules and non-compliance in respect of a new road now becomes a non-complying activity, whereas previously it was a discretionary activity. This will result in potential additional costs on Council.

9.4 Efficiency and effectiveness

The table below sets out the assessment of the efficiency and effectiveness of the proposed provisions in achieving the objectives.

Efficiency	Clarity of expression is an essential element in enabling district plan

	provisions to achieve the objectives of the instrument, and Council to achieve its purpose under the RMA. The proposed amendments to the INF Chapter work towards this goal of clarity of expression along with predictability in terms of where various provisions are to be found within the instrument. In achieving this, they also assist with achieving the objectives of the district plan. The amendments proposed are the minimum practicable without undertaking a major plan review, and therefore are assessed as being efficient.
Effectiveness	The amendments proposed in this part of the plan change are part of a complete suite of amendments to the district plan that will enable implementation of the Code of Practice through an RMA instrument. These amendments will improve the effectiveness of the district plan in the attainment of its objectives and in achieving the purpose of the RMA. These amended provisions achieve greater clarity of intent and consequently understanding of what is required of those who seek to establish land uses, subdivide land or undertake development activities.

9.5 Risk of acting or not acting

Section 32(2)(c) of the RMA requires Council to take into account the risk of acting or not acting if there is uncertain or insufficient information. As previously noted, the plan change is limited in its scope and in respect of the amendments assessed in this section of this Report, there is little or no change compared with the provisions in the operative district plan, even though there is some relocation of those provisions. The risk of not acting is simply that the district plan will not fully implement the Code of Practice and will not have the desired level of clarity for such an instrument. There is nothing unknown or uncertain about the operative district plan or the amendments proposed.

10 PROPOSED AMENDMENTS TO TRAN – TRANSPORT

TRAN-P3; TRAN Rules Introduction; TRAN-R1; TRAN-R2; TRAN-R3

10.1 Proposed Amendments

The purpose of the proposed amendments to the TRAN Chapter of the district plan is to bring together in a single place a suite of provisions focussed on roading because it is the principal component of the transport network within Southland District, designed to attain the objective of an "integrated, safe, responsive and sustainable transport network".

The first proposed amendment extends the scope of the policies to better reflect the transport outcomes sought through the Code of Practice. It achieves this by extending Policy TRAN-P3 so that it now states four clear outcomes as follows:

- Subdivision, land use and development are to integrate with the transport network
- Roads are designed to the context of their environment
- Roads are capable of carrying all utility services, and
- Roads provide for the management of stormwater.

Attainment of these outcomes occurs through implementation of the rules in the TRAN Chapter along with the relevant provisions of the new LAN Chapter.

The second amendment proposes the deletion of an advice note which indicates that rules that relate to transportation matters are to be found in the various zone provisions and the INF and SUB Chapters. The rearrangement of the provisions relating to Transport matters, coupled with the new LAN Chapter now render this advice note obsolete and incorrect.

The three new rules (TRAN-R1, TRAN-R2 and TRAN-R3) bring together into a single rule framework the management of road construction activities. At the same time the improved clarity better establishes the links between these activities and the outcomes sought in other sections of the district plan, including the LAN and NOSZ Chapters.

Essentially these rules are relocated from the INF Section:

- TRAN-R1.1 was previously INF-R1.3
- TRAN-R1.2 was previously INF-R1.4 but has now been split into its two components with different activity status when compliance is not achieved for new roads and realignments of roads
- TRAN-R1.3 is new and provides for roads within National Parks or Public Conservation Land provided that the developer is the Crown and the works are

consistent with any Conservation Management Strategy or National Park Management Plan

- TRAN-R2 is relocated from INF-R4.7
- TRAN-R3 is relocated from INF-R5.3

To improve clarity and certainty within the text of each rule there has also been some minor restructuring and rewriting and in the latter two instances slight rewording has also been proposed to accommodate the new TRAN-R1.3.

The direct references to INF-PS1, INF-PS3 and INF-PS4 within new rule TRAN-R1.1 is necessary because compliance with these three performance standards secures the attainment of the desired environmental outcomes in respect of all road repair and maintenance activities.

10.2 Reasonably practicable options

Given the particular architecture of this plan change and the outcomes sought to be achieved, coupled with a desire to make the requirements clearly understandable, implementable and enforceable, it is considered that there are no reasonably practicable options available.

10.3 Benefits and Costs Assessment

BENEFITS	COSTS
Environmental	
The proposed restructuring and rewording of the existing roading activity rules will provide environmental benefits because of the improved clarity of expression while still providing for maintenance and repair activities. In the most sensitive environments (Conservation land and National Parks) the district plan now defers directly to the relevant management plan. This is considered a positive environmental benefit because it means any such works must be consistent with those management plans which are integrated documents covering more than just the roading activity. It also shifts the management responsibility from Council to the relevant manager of the land in question which means greater emphasis on environmental protection.	The proposed relocation of and minor restructuring/word amendments to the rules manging roading activities within Outstanding Natural Features and Landscapes Overlays or within an area of significant indigenous vegetation or habitat of indigenous fauna are assessed as being cost neutral. There is no change to the status of these roading activities and therefore unlikely to be any change to the environmental costs.

Cultural	
The cultural benefits and costs arising from the proposal are assessed as being neutral, arising principally from the fact that the provisions are already contained within the operative district plan.	
Social	
The social benefits and costs arising from the proposal are assessed as being neutral, arising principally from the fact that the provisions are already contained within the operative district plan.	
Economic	
The economic benefits arising from the proposal are assessed as being neutral, arising principally from the fact that, with one exception, the provisions are already contained within the operative district plan. The exception is the transfer of management responsibility for roading activities within Conservation Land and National Parks.	There may be additional costs to the Crown arising from the shift of management responsibility for roading activities within Conservation Land and National Parks. This is a deliberate move by Council because it is the Crown that administers the relevant management plans for this land and therefore has ultimate control over these activities.

10.4 Efficiency and effectiveness evaluation

The table below sets out the assessment of the efficiency and effectiveness of the proposed provisions in achieving the objectives.

Efficiency	The relevant objectives are noted as TRAN-O1, LAN-O1, NOSZ-O1 and NOSZ-O2 and these objectives operate in tandem to achieve protection of the existing quality of the outstanding natural environments of the district. Bringing together into a single suite of rules the management of roading activities within these environments is efficient for users of the district plan and for its administration.
Effectiveness	Given the outcomes sought to be achieved by these objectives, this suite of rules is assessed as being the most effective way of manging roading activities within these sensitive environments. Moving the management of roading activities within land managed by the Crown (and subject to specific management plans) is assessed as being

	more effective than having two authorities responsible, both for achieving the outcomes sought by the objectives and also for those seeking to undertake roading activities within land managed by the Crown.

10.5 Risk of acting or not acting

Section 32(2)(c) of the RMA requires Council to take into account the risk of acting or not acting if there is uncertain or insufficient information. There is nothing unknown or uncertain about the operative district plan or the amendments proposed. There is, therefore, no risk attributable to the proposal.

11 PROPOSED AMENDMENTS TO SUB - SUBDIVISION

SUB Rules Introduction; SUB-R1.1; SUB-R1.4; SUB-R2.1; SUB-R2.2; SUB-R2.3; SUB-R2.4; SUB-R3; SUB-MAT1, SUB-MAT4, SUB-MAT5, SUB-MAT6, SUB-MAT9

11.1 Proposed Amendments

Given the proposed introduction to the district plan of the new LAN Chapter, the shift of provisions concerning land use, subdivision and development activities to the LAN Chapter, and the need to provide positive links to, and for the implementation of, the Code of Practice, the amendments proposed for the Subdivision Chapter of the district plan are designed to achieve these outcomes.

The amendment to SUB-R1.1provides a direct link to relevant parts of the Code of Practice and then introduces specific requirements where compliance with the performance standards is not achieved.

At SUB-R1.4, which applies specifically to proposed lots of less than 2000m2 in the GRZ and Rural Settlement Overlay of the GRUZ, the list of infrastructure requirements currently set out in the rule are proposed to be replaced with a single reference to LAN-R1. This cross-reference then brings into consideration all the relevant provisions contained in the new LAN Chapter. In addition, and importantly, this cross-reference also brings into consideration any requirements for upgrading of existing services.

Proposed amendments to SUB-R2.3 and SUB-R2.4 are designed to move from reliance on the Bylaw which will cease to exist in March 2025 to LAN-R1 in respect of all required infrastructure. This is consistent with the purpose of the plan change but does not extend the scope of the present rules which are being amended. The proposed deletion removes duplication that would otherwise arise.

The final change to the SUB Section concerns the deletion of a number of the Matters of Discretion or Control, and consequential amendments to the rules to reflect the effect of these deletions. The proposed deletions remove duplication between these MATs and the provisions set out in the new LAN Chapter. The consequential amendments remove from the rules all references to the MATs being deleted and replace them with references to the appropriate MATs in the LAN Chapter.

11.2 Reasonably practicable options

Given the particular architecture of this plan change and the outcomes sought to be achieved, coupled with a desire to make the requirements clearly understandable, implementable and enforceable, it is considered that there are no reasonably practicable options available.

11.3 Benefits and Costs Assessment

BENEFITS	COSTS
Environmental	
The environmental benefits of the proposed amendments will show up in terms of safer roads and because of improvements to infrastructure provided for each new allotment. For some subdivisions this will be at the level of individual allotments; for others it will be cumulative across the whole development.	The district plan is relatively permissive regarding the subdivision of land, which can give rise to environmental costs. The proposed amendments to the SUB Chapter are designed to neutralise those environmental costs.
Cultural	
The cultural benefits and costs arising from the proposed amendments are assessed as being neutral, arising principally from the fact that the provisions are already contained within the operative district plan and the Bylaw. Any cultural benefits that may arise will do so over time and as a result of the implementation of the LAN provisions which will play a significant role in the management of subdivision activities.	
Social	
The social benefits and costs arising from the proposed amendments are assessed as being neutral, arising principally from the fact that the provisions are already contained within the operative district plan and the Bylaw.	
Economic	
The economic benefits arising from the proposed amendments will accrue to the community through reduced costs on Council to provide infrastructure and through Council being able to better plan for and undertake asset management because the quality of the assets will improve over time as these provisions, coupled with those in the LAN Chapter, take effect.	These provisions, when coupled with those in the new LAN Chapter, will result in additional costs to those undertaking subdivision activities or, in some cases, developments on recently subdivided land. Quantifying those costs is not practicable because each subdivision proposal is different and requires a different approach to the provision of required infrastructure.

11.4 Efficiency and effectiveness evaluation

The table below sets out the assessment of the efficiency and effectiveness of the proposed provisions in achieving the objectives.

Efficiency	The three objectives set out in the SUB Chapter of the district plan are unaltered by this plan change. The proposed amendments to the rules, however, are assessed as better achieving the outcomes sought than the present provisions. This is because they defer to the new LAN Chapter as the single source for requirements concerning the provision of infrastructure for all new allotments. It is accepted that there will need to be a settling in period for all users of the district plan ads they become familiar with the new provisions and the relationship between the SUB and LAN Chapters, but the result will be a more efficient district plan in terms of usability and achieving the relevant objectives.
Effectiveness	The single purpose of this plan change is the implementation, through district plan provisions, of the Code of Practice. The proposed amendments to the SUB Chapter are necessary to complement the proposed new LAN Chapter and to provide for the integrated management of subdivision activities. The amended suite of rules is assessed as an effective method by which the relevant objectives can be attained.

11.5 Risk of acting or not acting

Section 32(2)(c) of the RMA requires Council to take into account the risk of acting or not acting if there is uncertain or insufficient information. There is nothing unknown or uncertain about the operative district plan or the amendments proposed. There is, therefore, no risk attributable to the proposal.

12 PROPOSED AMENDMENTS TO GRUZ - GENERAL RURAL ZONE

Note – District-wide Rules; GRUZ-R1.2; GRUZ-R2.2; GRUZ-R2.3; GRUZ-R2.4; GRUZ-PS2; GRUZ-MAT6; GRUZ-MAT7; GRUZ-MAT14

12.1 Proposed Amendments

With the single exception of the proposed amendments to the note at the commencement of the Rules, all other proposed amendments involve the deletion of operative provisions that are covered in the LAN Chapter and are therefore redundant in the GRUZ Chapter of the district plan.

The amendments to the Note concern a correction (to the word Transport) and the addition of a reference to the LAN Chapter.

The deletion of the note at the end of GRUZ-R1.2 is proposed because the content of this Note is now covered in the LAN Chapter.

The amendments proposed to the rules (GRUZ-R2.2; GRUZ-R2.3; GRUZ-R2.4) concern the deletion of the Matters of Control concerning Vehicle Access, Waste, and Power and Telecommunications. The content of each of these Matters of Control is now covered in the new LAN Chapter.

The deletion of GRUZ-PS2 Transport Standards including Access is proposed because this matter is now covered in the new LAN Chapter.

The final amendments to this Chapter of the district plan concern the deletion of several now obsolete Matters of Discretion or Control. In particular, these are GRUZ-MAT6 - Vehicle Access, GRUZ-MAT7 - Waste, and GRUZ-MAT14 - Power and Telecommunications.

12.2 Reasonably practicable options

Given the particular architecture of this plan change and the outcomes sought to be achieved, coupled with a desire to make the requirements clearly understandable, implementable and enforceable, it is considered that there are no reasonably practicable options available.

12.3 Benefits and Costs Assessment

BENEFITS	COSTS
Environmental	
The environmental benefits and costs of these proposed amendments are assessed as being neutral because the provisions being deleted are being replaced with	

equivalent provisions in the LAN Chapter. Any possible benefits are likely to arise because the matters covered by the new provisions in the LAN Chapter are more precisely stated, and therefore have greater clarity of intent and outcome, and are better linked with all other similar provisions concerning land development, subdivision and land use activities within the GRUZ.	
Cultural	
The cultural benefits and costs of these proposed amendments are assessed as being neutral because the provisions being deleted are being replaced with equivalent provisions in the LAN Chapter.	
Social	
The social benefits and costs of these proposed amendments are assessed as being neutral because the provisions being deleted are being replaced with equivalent provisions in the LAN Chapter.	
Economic	
The economic benefits of these proposed amendments are assessed as being neutral because the provisions being deleted are being replaced with equivalent provisions in the LAN Chapter.	It is assessed that there are likely to be additional costs arising from these proposed amendments but any additional costs are difficult to identify and/or quantify because each development proposal has its own particular circumstances and response to the relevant performance standards and information requirements.

12.4 Efficiency and effectiveness evaluation

The table below sets out the assessment of the efficiency and effectiveness of the proposed provisions in achieving the objectives.

Efficiency	To achieve the purpose of the plan change, and to contribute to the attainment of the outcomes as expressed in the relevant objectives, it is necessary to focus attention on the provisions set out in the new LAN Chapter. That Chapter is designed to apply across the entire District and therefore it is necessary to delete any duplicated provisions from the GRUZ. This is assessed as the most efficient method for giving effect to the purpose of the plan change and attainment of the relevant objectives.

Effectiveness	The administration and understanding of the outcomes sought by the district plan will be enhanced by the proposal to introduce a new LAN Chapter and to concentrate in that LAN Chapter all matters relevant to land use activities and development that are common across the District. This architecture for the district plan is assessed as being effective in achieving the relevant objectives of the district plan.

12.5 Risk of acting or not acting

Section 32(2)(c) of the RMA requires Council to take into account the risk of acting or not acting if there is uncertain or insufficient information. There is nothing unknown or uncertain about the operative district plan or the amendments proposed. There is, therefore, no risk attributable to the proposal.

13 PROPOSED AMENDMENTS TO GRZ - GENERAL RESIDENTIAL ZONE

Note – District-wide Rules; GRZ-R2.2; GRZ-PS14 & GRZ-MAT4; GRZ-MAT5

13.1 Proposed Amendments

The amendments to the Note that precedes the Rules concern the addition of two new references to district-wide chapters of the district plan – TRAN - Transport and LAN-Land use and Development.

The amendment to GRZ-R2.2 proposes deletion of the reference to GRZ-MAT4 Vehicle Access, and GRZ-MAT5 Infrastructure. These deletions are consequential on the proposed deletion of those two Matters of Discretion or Control, which are required to avoid duplication of provisions with the new LAN Chapter.

The final proposed amendment to the GRZ Section concerns the deletion of GRZ-PS14 Transportation Standards including Access. Again, the matters addressed in this performance standard are proposed to be relocated to the LAN Chapter and therefore to avoid duplication this provision should be deleted.

13.2 Reasonably practicable options

Given the particular architecture of this plan change and the outcomes sought to be achieved, coupled with a desire to make the requirements clearly understandable, implementable and enforceable, it is considered that there are no reasonably practicable options available.

13.3 Benefits and Costs Assessment

BENEFITS	COSTS
Environmental	
The amendments proposed here are assessed as being neutral in terms of environmental benefits and costs.	
Cultural	
The amendments proposed here are assessed as being neutral in terms of cultural benefits and costs.	
Social	
The amendments proposed here are assessed as being neutral in terms of social benefits and costs.	
Economic	

The amendments proposed here are assessed as being neutral in terms of economic benefits and costs.

13.4 Efficiency and effectiveness evaluation

The table below sets out the assessment of the efficiency and effectiveness of the proposed provisions in achieving the objectives.

Efficiency	Achieving the purpose of the plan change and facilitating the attainment of the relevant district plan objectives necessitates drawing into a single location all provisions concerning infrastructure relevant to land use activities, subdivision, and development. The proposed new LAN Chapter achieves this but consequently, and to avoid duplication and potential confusion within the district plan, these proposed amendments are necessary. The efficiency of the proposed LAN Chapter has been considered elsewhere in this report. The proposed amendments considered here contribute to that efficiency.
Effectiveness	The purpose of the plan change is clear as are the outcomes sought by the relevant objectives of the district plan. Avoiding duplication of similar provisions is an effective means of promoting the purpose of the plan change and the attainment of the outcomes sought by the relevant objectives of the district plan.

13.5 Risk of acting or not acting

Section 32(2)(c) of the RMA requires Council to take into account the risk of acting or not acting if there is uncertain or insufficient information. There is nothing unknown or uncertain about the operative district plan or the amendments proposed. There is, therefore, no risk attributable to the proposal.

14 PROPOSED AMENDMENTS TO GIZ - GENERAL INDUSTRIAL & NOSZ – NATURAL OPEN SPACES ZONE

Note – District-wide Rules in both GIZ and NOSZ; GIZ-PS10; NOSZ-PS2

14.1 Proposed Amendments

The same two amendments are proposed to both the GIZ Chapter and NOSZ Chapter of the district plan.

The first adds the LAN Chapter and TRAN Chapter to the schedule of district wide chapters that also apply to activities undertaken in the General Industrial Zone and the Natural Open Spaces Zone. Both the new LAN Chapter and the amendments to the TRAN Chapter are applicable to subdivision proposals, land use proposals and development activities in these two Zones. It is therefore appropriate that they are both specifically mentioned in this schedule of district wide provisions so that there is no residual question regarding their applicability.

The second amendment proposes the deletion of GIZ-PS10 and NOSZ-PS2 Transportation Standards including Access. The matters covered by the present performance standards are proposed to be covered by the amendments to the TRAN Chapter and by the provisions in the new LAN Chapter. Duplication is unnecessary and is unhelpful when it comes to plan administration.

14.2 Reasonably practicable options

Given the particular architecture of this plan change and the outcomes sought to be achieved, coupled with a desire to make the requirements clearly understandable, implementable and enforceable, it is considered that there are no reasonably practicable options available.

14.3 Benefits and Costs Assessment

BENEFITS	COSTS
Environmental	
The environmental benefits and costs of these proposed amendments to the GIZ and NOSZ provisions are assessed as being neutral.	
Cultural	
The cultural benefits and costs of these proposed amendments to the GIZ and NOSZ provisions are assessed as being neutral.	
Social	

The social benefits and costs of these proposed amendments to the GIZ and NOSZ provisions are assessed as being neutral.
Economic
The economic benefits and costs of these proposed amendments to the GIZ and NOSZ provisions are assessed as being neutral.

14.4 Efficiency and effectiveness

The table below sets out the assessment of the efficiency and effectiveness of the proposed provisions in achieving the objectives.

Efficiency	The simple addition of two new cross-referenced chapters to the existing schedule of relevant district wide provisions is the most efficient means by which readers of the GIZ Chapter and the NOSZ Chapter of the district plan can be informed of their potential relevance to a land use, subdivision or development proposal. Deleting a now redundant performance standard is the most efficient method for avoiding duplication and potentially confusion for readers and administrators of the district plan.
Effectiveness	Both amendments proposed to the GIZ Chapter and NOSZ Chapter will be effective in terms of the overall administration of the district plan and in terms of promoting clarity within and between provisions of the district plan.

14.5 Risk of acting or not acting

Section 32(2)(c) of the RMA requires Council to take into account the risk of acting or not acting if there is uncertain or insufficient information. There is nothing either uncertain or unknown about these two amendments to the plan. There is no assessed risk of acting as proposed. The risk of not acting is to deny readers and administrators of the plan certainty regarding applicability of provisions to specified circumstances and of causing some confusion between the applicability of various provisions within the district plan.

15 PROPOSED AMENDMENT TO SPZ-EWE – SPECIAL PURPOSE ZONE – EWEBURN ZONE

Eweburn Zone Guidance Information 8

15.1 Proposed Amendment

Guidance Information 8 concerns the provision of infrastructure within the Special Purpose Zone – Eweburn Zone. As currently written in the operative district plan this particular provision reads more as a performance standard than a guidance note. It is therefore, given the context within which it appears, appropriate to amend the wording to provide guidance on infrastructure matters. The proposed LAN Chapter is where all relevant guidance is to be located, and the proposed amendment to Guidance Information 8 reflects this.

15.2 Reasonably practicable options

Given the particular architecture of this plan change and the outcomes sought to be achieved, coupled with a desire to make the requirements clearly understandable, implementable and enforceable, it is considered that there are no reasonably practicable options available.

15.3 Benefits and Costs Assessment

BENEFITS	COSTS
Environmental	
The environmental benefits and costs of this proposed amendment to the Eweburn Zone Guidance Information 8 provision is assessed as being neutral.	
Cultural	
The cultural benefits and costs of this proposed amendment to the Eweburn Zone Guidance Information 8 provision is assessed as being neutral.	
Social	
The social benefits and costs of this proposed amendment to the Eweburn Zone Guidance Information 8 provision is assessed as being neutral.	
Economic	
The economic benefits and costs of this proposed amendment to the Eweburn Zone Guidance Information 8 provision is assessed as being neutral.	

15.4 Efficiency and effectiveness evaluation

The table below sets out the assessment of the efficiency and effectiveness of the proposed provisions in achieving the objectives.

Efficiency	Phrasing guidance as a performance standard is inappropriate and does not assist with the administration of the district plan. Given the proposed introduction of the new LAN Chapter, the focus of which is all the infrastructure noted in the present text of the 'guidance', it is entirely appropriate and efficient for this provision to refer directly to that new LAN Chapter. There is no more efficient method of achieving this outcome.
Effectiveness	Conciseness and removal or avoidance of duplication between provisions is the most effective method by which consistent plan administration and interpretation/ implementation of provisions is attained. Focussing attention on the new LAN Chapter for all matters concerned with the provision of infrastructure is more effective than having it scattered throughout the district plan. This proposed amendment contributes to the effectiveness.

15.5 Risk of acting or not acting

Section 32(2)(c) of the RMA requires Council to take into account the risk of acting or not acting if there is uncertain or insufficient information. There is nothing either uncertain or unknown about this amendment to the district plan. There is no assessed risk of acting as proposed. The risk of not acting is to deny readers and administrators of the plan certainty regarding the applicability of this particular Guidance Information provision.

16 SCHEDULE 11 – INFORMATION FOR RESOURCE CONSENT

Land Use Details Required; Subdivision Drawings Required; Subdivision Information Required

16.1 Proposed Amendments

There are three amendments proposed to SCHED 11 Information for Resource Consents. Each of these proposes an addition to the present provisions and each is designed to assist with the assessment of effects of any proposal for land use or subdivision. There are clear links between these suggested inclusions and the new LAN Chapter.

The first, under the heading Land Use Details, concerns the proposed provision of access to the property. These details are necessary to fully understand any present and proposed access. Further, if any non-standard design elements are proposed, the application must now contain a written justification for these elements, which would include an assessment of any effect on the environment, and particularly the frontage road.

The second amendment, also under the same heading, requires details of proposals for the three waters, assessment of any implications of these proposals for existing reticulated networks and/or capacities, and justification for any non-standard design elements. These matters are essential to a complete description of the proposal and assessment of any environmental effects of that proposal.

The final amendment to SCHED11 is under the heading Subdivision Drawings Required and proposes a new requirement to show the location and dimensions of every existing and proposed property access and any access to be closed.

16.2 Reasonably practicable options

Given the particular architecture of this plan change and the outcomes sought to be achieved, coupled with a desire to make the requirements clearly understandable, implementable and enforceable, it is considered that there are no reasonably practicable options available.

16.3 Benefits and Costs Assessment

BENEFITS	COSTS
Environmental	
The benefits to the environment arising from these amendments will flow from a more complete assessment of the effects of each proposal, and following that	The costs to the environment of these proposed amendments are assessed as neutral.

assessment, any changes to the proposal required to reduce those environmental effects.	
Cultural	
The cultural benefits and costs of these proposed amendments to Schedule 11 are assessed as being neutral.	
Social	
The social benefits and costs of these proposed amendments to Schedule 11 are assessed as being neutral.	
Economic	
The economic benefits of these proposed amendments will arise from reduced road accidents as a result of careful attention being paid to the location and design of property accesses; and from the comprehensive consideration of three waters servicing proposals and the implications of these for existing reticulation networks.	The costs of the required assessments will fall on the person proposing the subdivision or land use activity, but those costs should not be unexpected. The Fourth Schedule to the RMA requires a complete assessment of effects to be undertaken and reported on at the time of lodging an application for resource consent. These amendments serve as a reminder that the items they cover are an essential component of any such assessment. Quantifying these costs is not practicable because the circumstance of each proposal differs.

16.4 Efficiency and effectiveness evaluation

The table below sets out the assessment of the efficiency and effectiveness of the proposed provisions in achieving the objectives.

Efficiency	Schedule 11 provides guidance to Council and applicants in determining the type of information to be included with any application for resource consent. The proposed new LAN Chapter clearly establishes what is required of applicants. These amendments serve to reinforce the matters on which a full evaluation of effects is required and should be part of any application for resource consent. This is an efficient method by which the relevant objectives can be attained because it requires the

	assessment to be undertaken during the development of the proposal.
Effectiveness	Schedule 11 sets out many matters that should be considered by applicants for resource consent as they develop their proposals. The three additions proposed by these amendments is the most effective way of ensuring these matters are assessed and therefore of contributing to the attainment of the relevant objectives.

16.5 Risk of acting or not acting

Section 32(2)(c) of the RMA requires Council to take into account the risk of acting or not acting if there is uncertain or insufficient information. There is nothing either uncertain or unknown about these amendments to the district plan. There is no assessed risk of acting as proposed. The risk of not acting is to deny readers and administrators of the plan certainty regarding the need for these matters to be assessed as a proposal is developed and reported on in any application for resource consent.

17 OVERALL ASSESSMENT OF APPROPRIATENESS AND REASONS FOR DECIDING ON PROVISIONS

Having regard to the evaluation set out in this Report it is Council's view that the amendments to the Southland District Plan proposed by Plan Change 2 are the most appropriate to achieve the objectives of the District Plan and the objectives of the plan change itself.

The Council has decided to proceed with Plan Change 2 having considered other reasonably practicable options, and having assessed the efficiency and effectiveness of the proposed provisions in achieving the objectives of the both the plan change and the Southland District Plan.

This plan change is necessary to give effect to and to implement the provisions of the Code of Practice. The method by which this is to occur is considered to be the most effective and efficient for attainment of the outcomes established in the objectives of both the district plan and the Code of Practice.

Attainment of the purpose of the Resource Management Act 1991 will be promoted through the provisions contained in this plan change and as such Council will be fulfilling one of its more important functions under the RMA, the outcomes of which will be to the cultural, social and environmental benefit of the Southland community.

APPENDICES

Appendix A

Section 32 RMA

The Southland District Council is required to examine the objectives, policies, rules, and other methods of the Plan Change in accordance with the requirements of section 32 of the Resource Management Act 1991 (RMA).

Section 32 states:

(1) An evaluation report required under this Act must –

a) examine the extent to which the objectives of the proposal being evaluated are the most appropriate way to achieve the purpose of this Act; and

b) examine whether the provisions in the proposal are the most appropriate way to achieve the objectives by –

i. identifying other reasonably practicable options for achieving the objectives; and

ii. assessing the efficiency and effectiveness of the provisions in achieving the objectives; and

iii. summarising the reasons for deciding on the provisions; and

c) contain a level of detail that corresponds to the scale and significance of the environmental, economic, social, and cultural effects that are anticipated from the implementation of the proposal.

(2) An assessment under subsection (1)(b)(ii) must –

a) identify and assess the benefits and costs of the environmental, economic, social, and cultural effects that are anticipated from the implementation of the provisions, including the opportunities for -

i. economic growth that are anticipated to be provided or reduced; and

ii. employment that are anticipated to be provided or reduced; and

b) if practicable, quantify the benefits and costs referred to in paragraph (a); and

c) assess the risk of acting or not acting if there is uncertain or insufficient information about the subject matter of the provisions.

(3) If the proposal (an amending proposal) will amend a standard, statement, regulation, plan, or change that is already proposed or that already exists (an existing proposal), the examination under subsection (1)(b) must relate to –

a) the provisions and objectives of the amending proposal; and

b) the objectives of the existing proposal to the extent that those objectives—

i. are relevant to the objectives of the amending proposal; and

ii. would remain if the amending proposal were to take effect.

(4) If the proposal will impose a greater prohibition or restriction on an activity to which a national environmental standard applies than the existing prohibitions or restrictions in that standard, the evaluation report must examine whether the prohibition or restriction is justified in the circumstances of each region or district in which the prohibition or restriction would have effect.

(5) The person who must have particular regard to the evaluation report must make the report available for public inspection -

a) as soon as practicable after the proposal is made (in the case of a standard or regulation); or

b) at the same time as the proposal is publicly notified.

(6) In this section, -

objectives means, -

(a) for a proposal that contains or states objectives, those objectives:

(b) for all other proposals, the purpose of the proposal

proposal means a proposed standard, statement, regulation, plan, or change for which an evaluation report must be prepared under this Act

provisions means,—

(a) for a proposed plan or change, the policies, rules, or other methods that implement, or give effect to, the objectives of the proposed plan or change:

(b) for all other proposals, the policies or provisions of the proposal that implement, or give effect to, the objectives of the proposal.

Appendix B

Summary of Clause 3 Feedback Received

Please note the following explanation of the acronyms are used in this summary:

- PA – permitted activity
- CA – controlled activity
- RDA – restricted discretionary activity (RDIS in the PC2 provisions)
- DA – discretionary activity (DIS in the PC2 provisions)
- PS – performance standard
- NZTA – New Zealand Transport Agency
- CoP – Code of Practice

Provision	Feedback
General	• LAN Chapter too lengthy – more concise expression would assist with understanding – especially the rules • Strong opposition to CA becoming DA – should be RDA • No fundamental opposition to LAN Chapter – consistency of assessment across all zones • Some concerns with prescriptive nature of Chapter • Support for alternative solutions pathway, but oppose DA status • Problem with disjoint between land use activity status in zone rules and DA status in LAN Chapter • Amend NZTA Waka Kotahi to NZTA • Objectives and policies not easy to follow – clarify • Support for alternative solutions pathway
LAN-O1	• Provide greater clarity on what relates to and what is the outcome sought • Reconsider "promotes positive community outcomes" and "economic gains". Promote "positive outcomes" might suffice
LAN-O2	• Open to very wide interpretation – 2 lot to 100 lot subdivision requiring upgraded services • Amended and broaden wording to include infrastructure assets, used by the public, and administered by the Crown • What are "undue future liabilities and costs"?
LAN-P3	• Term "landform" not defined. Provision should restrict Chapter to infrastructure only. • Omit the policy
LAN-P4	• Restrict policy to only those activities which require water • Restrict first part of policy to only those activities which require water • Confusion with words in explanation between district plan compliance and CoP compliance • Clarify only applies where services are required

LAN-R1	• Clarify status of activities not complying with R1. Status should not change land use status from zone rules • Clarify not all services required for every activity • Words 'road network serving the site or development' are too vague. Upgrade requirement should be proportionate • RDA status preferred for non-compliance with servicing requirements • Need greater clarity around application – should not apply to activities not requiring servicing • Does LAN-R1 provide PA status – if so, state this • Conflict between R1 and R2? • Questions whether could exclude boundary adjustments from LAN-R1
LAN-R1.2b	• Requires explanation and clarification
LAN-R2	• Should apply to any performance standard; and omit R3 • Confusion regarding what performance standards apply – clarify. Question if should only be LAN Chapter?
LAN-R3	• Omit as consequence of comments on activity status in R1
LAN-PS1	• Stormwater disposal should not be necessarily required on large lot or rural subdivisions • Requirement not always necessary at time of subdivision or land use application – PS should identify specific circumstances when details are required. • Make provision for large rural allotments and boundary adjustments
LAN-PS1.2	• DA classification is opposed – should be RDA
LAN-PS2	• Should simply refer to "management" of wastewater
LAN-PS2.2	• DA classification is opposed – should be RDA
LAN-PS3	• Wastewater disposal should not be necessarily required on large lot or rural subdivisions • Requirement not always necessary at time of subdivision or land use application – PS should identify specific circumstances when details are required. • Should simply refer to "management" of wastewater • Requirements too onerous – sites in excess of 1 ha generally considered large enough for wastewater disposal • Make provision for large rural allotments and boundary adjustments
LAN-PS3.1	• What does "per allotment basis" mean?
LAN-PS3.2b	• Replace with something achievable by the applicant
LAN-PS3.5	• Questions need for reserve area
LAN-PS3.6	• Make wording/requirement more specific; or include in policy – consistent with Water and Land Plan • Suggest start clause with more direct language
LAN-PS3.7	• Why refer to only 2-lot subdivision? Why include this requirement? • Change so applicant only needs to demonstrate that on-site wastewater can be disposed of on-site at time of subdivision. Details can be provided in future at time of development

LAN-PS4	• Stormwater disposal should not be necessarily required on large lot or rural subdivisions • Requirement not always necessary at time of subdivision or land use application – PS should identify specific circumstances when details are required. • Should simply refer to "management" of wastewater • Make provision for large rural allotments and boundary adjustments
LAN-PS4.3	• Specify exactly what is required
LAN-PS4.4	• More specifics as to what is required – site and soil report for all lot sizes?
LAN-PS4.5	• More specifics as to what is required – site and soil report for all lot sizes?
LAN-PS4.6	• More specifics as to what is required – site and soil report for all lot sizes?
LAN-PS4.7	• More specifics as to what is required – site and soil report for all lot sizes? • How is "adjacent" to be defined?
LAN-PS5.2	• DA classification is opposed – should be RDA
LAN-PS5.3	• Clarify that this is applicable to land use consent only, and use consent notice on subdivisions
LAN-PS6	• Use of "all" is confusing • Support for matters in PS6.1 to PS6.4
LAN-PS6.3	• Restrict to all regularly used accessways
Schedule 11	• Clause 4aa and 2a considered excessive – should refer to the application site • Full support for all additions