



Notice is hereby given that a Meeting of the Riverton Harbour Subcommittee will be held on:

Date: Monday, 11 March 2019
Time: 4.30pm
Meeting Room: Southland District Council Riverton Office
Venue: 117 Palmerston Street, Riverton

Riverton Harbour Subcommittee Agenda OPEN

MEMBERSHIP

Chairperson	Nick White	Riverton Harbour Berth Owner
Deputy Chairperson	Hayley Nelson	Riverton Harbour Berth Owner
Members	Muriel Johnstone	Oraka Aparima Runaka
	Blair Stewart	Riverton/Aparima Community Board
	Graeme Stuart	Riverton/Aparima Community Board
	Councillor Nick Perham	

IN ATTENDANCE

Committee Advisor	Alyson Hamilton	
Community Engineer	Greg Erskine	
	Lyndon Cleaver	Environment Southland
	Ian Coard	Environment Southland

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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.

Terms of Reference for Riverton Harbour Committee

This committee is a subcommittee of Southland District Council and is responsible for:

- The management and control of all Riverton harbour assets
 - The control and management of all Riverton harbour endowment lands
 - Parking and traffic management on harbour endowment land
 - Control of the berthing of vessels
 - Management of activities in the harbour, including health and safety
 - Preparing an annual budget, including ensuring any income from assets and activities are spent on the harbour and endowment lands, and on purposes that benefit the Riverton community
 - Appointing a harbourmaster
 - Recommending legal action in cases of breaches of the bylaw
-

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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

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

4 Public Forum

Notification to speak is required by 5pm at least two days before the meeting. Further information is available on www.southlanddc.govt.nz or phoning 0800 732 732.

5 Extraordinary/Urgent Items

To consider, and if thought fit, to pass a resolution to permit the committee 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."

6 Confirmation of Minutes

6.1 Meeting minutes of Riverton Harbour Subcommittee, 03 December 2018



Riverton Harbour Subcommittee

UNCONFIRMED

OPEN MINUTES

Minutes of a meeting of Riverton Harbour Subcommittee held in the Southland District Council Riverton Office, 117 Palmerston Street, Riverton on Monday, 3 December 2018 at 4pm.

PRESENT

Acting Chairperson

Councillor Nick Perham

Members

Muriel Johnstone

Oraka Aparima Runaka

Blair Stewart

Riverton/Aparima Community Board

Graeme Stuart

Riverton/Aparima Community Board

APOLOGIES

Chairperson

Nick White

Member

Hayley Nelson

Environment Southland

Lyndon Cleaver

IN ATTENDANCE

Strategy and Policy Manager

Michelle Stevenson

Corporate Performance Lead

Chantelle Subritzky

Team Leader, Community Engineers

Steve Manaena

Graduate Planner

Kate Westenra

Environment Southland

Ian Coard

Committee Advisor

Alyson Hamilton

1 Apologies

There were apologies from Chairperson White, Members Nelson and Cleaver.

Moved Member Stewart, seconded Member Stuart and **resolved:**

That the Riverton Harbour Subcommittee accept the apologies.

2 Leave of absence

There were no requests for leave of absence.

3 Conflict of Interest

There were no conflicts of interest declared.

4 Public Forum

There was no public forum.

5 Extraordinary/Urgent Items

There were no Extraordinary/Urgent items.

6 Confirmation of Minutes

Resolution

Moved Member Stewart, seconded Member Stuart **and resolved:**

That the minutes of Riverton Harbour Subcommittee meeting held on 3 September 2018 be confirmed as a true and correct record of that meeting.

Reports for Recommendation

7.1 Direction-setting for Annual Plan 2019/2020

Record No: R/18/10/24750

Corporate Performance Leader, Chantelle Subritzky, Strategy and Policy Manager, Michelle Stevenson and Graduate Accountant, Kate Westenra were in attendance for this item.

Miss Subritzky advised that the purpose of the report was to confirm the direction determined for the 2nd year of the 2018-2028 Long Term Plan.

The Subcommittee noted that the report provided an overview of the forecasted projects and services for the Riverton Harbour Subcommittee in 2019/2020 and includes any variations from what was anticipated in year two of the Long Term Plan 2018-2028.

Resolution

Moved Cr Perham, seconded Member Stewart **and resolved:**

That the Riverton Harbour Subcommittee:

- a) **Receives the report titled "Direction-setting for Annual Plan 2019/2020" dated 14 November 2018.**
- b) **Determines that this matter or decision be recognised 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 minor variations in the Riverton Harbour Subcommittee plan from year two of the Long Term Plan 2018-2028.**
- e) **Requests that the budgets for the year commencing 1 July 2019 be adopted for inclusion in the Council's Draft 2019/2020 Annual Plan.**
- f) **Requests the setting of the following fees and charges (including GST) for the year commencing 1 July 2019 based on the approved budgets in (e) above.**

	<u>2018/2019</u>	<u>2019/2020</u>
<u>Fee Description</u>	<u>Rate (GST Incl)</u>	<u>Rate (GST Incl)*</u>
Wharf Licence Fee	\$15.26 (per metre)	\$15.60 (per metre)
Transfer Fee	\$157.43	\$160.89

* 2019/2020 proposed fees are based on current year fee + inflation of 2.2%

Updates

8.1 Chairperson's Report

Items of interest occurring in the Riverton Harbour included the following:

- advice of Maritime New Zealand directive that an oil spill exercise is to be undertaken in the Riverton Harbour - the meeting noted the exercise is scheduled for Tuesday, 11 December 2018
- advice of cruise ship to anchor in the Bay on Wednesday, 12 December 2018 with tenders to off load approximately 125 cyclists who will then ride to Bluff

- advice of ongoing discussions with Environment Southland staff in regards the removal of the railway irons - staff to update the subcommittee via email on progress of the necessary consents/approvals required and staff is to ensure Oraka Aparima Runaka is kept informed on progress of the work.

The meeting concluded at 4.37pm.

CONFIRMED AS A TRUE AND CORRECT RECORD AT A
MEETING OF THE RIVERTON HARBOUR
SUBCOMMITTEE HELD ON MONDAY, 3 DECEMBER
2018.

DATE:.....

CHAIRPERSON:.....

Financial Report to 31 January 2019

Record No: R/19/3/4071

Author: Greg Erskine, Community Facilities Contract Manager

Approved by: Matt Russell, Group Manager Services and Assets

☐ Decision

☐ Recommendation

☒ Information

Summary

- 1 The purpose of this report is to provide for information the Financial and projects update to 31 January 2019 as attached.

Recommendation

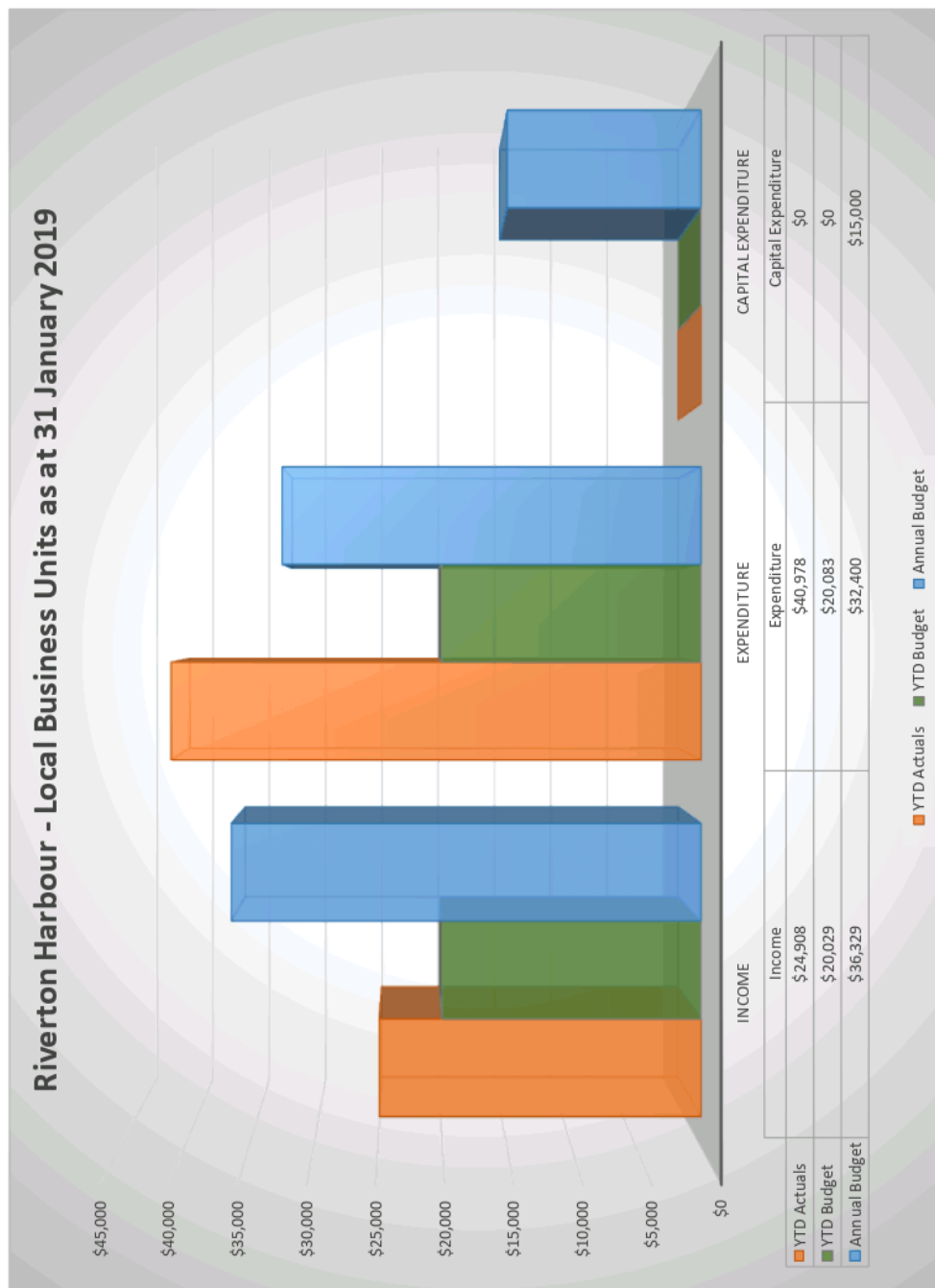
That the Riverton Harbour Subcommittee:

- a) **Receives the report titled “Financial Report to 31 January 2019” dated 5 March 2019.**

Attachments

- A Financial Report to 31 January 2019 [↓](#)

Financial Report to 31 January 2019



Riverton Harbour - Business Units as at 31 January 2019											
BU Code	Business Unit	Income			Expenses			Capital			Budget Full Year
		Actual YTD	Budget YTD	Budget Full Year	Expenses YTD	Budget YTD	Budget Full Year	Actual YTD	Budget YTD	Budget Full Year	
26381	Harbour	\$24,908	\$20,029	\$36,329	\$40,978	\$20,083	\$32,400			\$15,000	
Total		\$24,908	\$20,029	\$36,329	\$40,978	\$20,083	\$32,400	\$0	\$0	\$15,000	

Reserve Balances

Riverton Harbour	Opening Balance	Current Budget	Forecast Budget	2019/2020	2020/2021	2021/2022	2022/2023	2023/2024	2024/2025	2025/2026	2026/2027	2027/2028	2028/2029
Local													
Reserve													
Riverton Harbour General - RES	55,156	26,355	45,288	52,076	58,644	64,976	71,029	65,403	70,409	74,999	79,138	82,775	83,389
Total Local Reserve	55,156	26,355	45,288	52,076	58,644	64,976	71,029	65,403	70,409	74,999	79,138	82,775	83,389
Total Local Balance	55,156	26,355	45,288	52,076	58,644	64,976	71,029	65,403	70,409	74,999	79,138	82,775	83,389
Total Riverton Harbour Reserve Balance	55,156	26,355	45,288	52,076	58,644	64,976	71,029	65,403	70,409	74,999	79,138	82,775	83,389



Comments

Long wharf and pleasure wharf repairs have included new decking, fastening existing decking, cross bracing repairs and concrete work.

Electrical supply to the Long Wharf has been sorted by the local boat owner committee, a separate supply is now in place and ongoing electricity costs will be borne by them. A request for a contribution to the setting up has not been received at this stage.

Environment Southland has provided permission for council to remove the river railway irons without a consent. The same contractor that did the first 27 piles has been engaged to undertake the remaining work. This will happen in March.

A small cruise ship anchored in the bay in December and unloaded a number of visitors at the pleasure wharf via small tenders.

The Taramea (Howells) Point beacon was vandalised in December with temporary repairs in place until a new beacon arrives.

At the end of January income was on target, expenditure has been exceeded in the maintenance project budget with the major works undertaken on the long and pleasure wharves and legal fees for L36.

Riverton Wharves Maintenance Update

Record No: R/19/2/3315

Author: Colin Pemberton, Community Facilities Asset Management Officer

Approved by: Matt Russell, Group Manager Services and Assets

☐ Decision

☒ Recommendation

☐ Information

Purpose

- 1 The purpose of the report is to provide the Riverton Harbour Subcommittee (RHS) with an update on the second Emtech report on the Riverton Harbour wharves. This report covers the level of maintenance that has been undertaken to bring the wharves up to the required standard since the first report was provided to wharf owners in November 2015.
- 2 Further, this report seeks the RHS recommendation to Council that should current licence holders fail to complete the necessary works by 30 June 2019 Council will move to revoke licences and ownership.

Executive Summary

- 3 The follow up inspection to that undertaken in 2014, was undertaken by Emtech in November 2018 with the final report received 5 February 2019. This report identifies those wharves that have been repaired to the required standard, those that still do not meet the required standard and those that have not had any of the necessary work completed.
- 4 Wharf owners have been sent copies of the extract of the latest report for their wharf, with instruction to undertake the work required by 30 June 2019.
- 5 Council cannot allow wharf owners to continue to breach their licences by not completing the required work. There are significant health and safety reasons involved that pose significant risks to the owners and Council if left unattended. Accordingly, this report asks the subcommittee to make a recommendation to Council in anticipation of such action being necessary.
- 6 There is an exception to the above, with one wharf owner having not signed a licence (or undertaken the required repairs to their wharf).
- 7 The matter is dealt with separately in this report.

Recommendation

That the Riverton Harbour Subcommittee:

- a) Receives the report titled “Riverton Wharves Maintenance Update” dated 5 March 2019.**
- 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) Recommends to Council that it supports action to suspend/terminate licences and take possession of those wharves: where the owners have not completed necessary maintenance and repair works to an acceptable standard by 30 June 2019 as determined in the November 2018 Emtech report.**
- e) Recommends to Council that it commences proceedings to take possession of the one remaining wharf where the current owner has refused to sign a licence with Southland District Council as the consent holder and has subsequently rendered Southland District Council in breach of its resource consent requirements.**

Background

- 8 On 4 and 5 September 2018, Emtch personnel carried out re-inspections on all the structures for which SDC in conjunction with the RHS have jurisdiction for permitting and licensing. These inspections were undertaken to assess the current condition of the structures and in particular if the recommended maintenance works following the November 2015 report had been addressed.
- 9 As a general summary, the standard of the structures has improved significantly since the initial report of November 2015. The report indicates that 78% of the structures have had some improvement works undertaken on them since the 2015 report. Unfortunately, 66% of structures have not yet got to an acceptable level and have outstanding issues that require addressing.
- 10 Such inaction renders the licensees in breach of their licence conditions.
- 11 With the relevant wharf owners having had ample time to make the necessary repairs, Council has sent wharf owners the extract from the November 2018 report for their wharves, with an instruction that the necessary work is undertaken to the required standard by 30 June 2019.
- 12 It is recommended that the failure of wharf owners to meet this deadline, will result in Council commencing action to suspend, or terminate their licence, or take possession/ownership of their wharf.
- 13 There is an exception to the above, with one wharf owner having not signed a licence (or undertaken the required repairs to their wharf), despite their assurance on 13 June 2016 that they had sufficient funds and people available to undertake the required repairs to their wharf.
- 14 Separate dealings with this owner gave them until 18 February 2019 to return to Council a properly signed and witnessed licence and undertake the required repairs by 31 March 2019. Yet again the owner has failed to respond.

Issues

- 15 Some wharf owners have failed to comply with the conditions of their licence, despite a very lengthy timeframe in which to do so. This leaves the Council exposed under various legislative provisions, in particular health and safety provisions which now have considerable consequences.
- 16 In the case of the owner who has not signed their licence, Council is exposed to legal action by Environment Southland for being in breach of the Resource Consent it holds for the structures in Riverton Harbour, by virtue of the owner having not signed their licence. Council has unsuccessfully gone to significant effort in a bid to get the owner's signature on a licence document. It is evident that this will not stop Environment Southland from taking action for the breach.

Factors to Consider

Legal and Statutory Requirements

- 17 Council is required to comply with resource consent conditions. The owner having not signed their licence places Council in breach of the resource consent and Environment Southland could serve an abatement notice. Council must be seen to be pursuing available action against the owner to satisfy Environment Southland that it is taking the owner's inaction seriously.
- 18 Repairs to required standard is a condition of all the wharf licences. Council could continue to extend the timeframe required for the other wharf owners to complete the repairs. Council staff

are concerned that some owners would take advantage of this and nothing would happen. Accordingly a line must be drawn in the sand and Council must commit to pursuing the legal action available to it – which is suspension, termination and taking possession of wharves.

- 19 Council solicitor, Barry Slowly, has advised that Council should pursue the legal options available to it.

Community Views

- 20 Not sought other than through the RHC. The issuance of licences had previously gone through a consultation process.

Costs and Funding

- 21 Unknown, but potential legal/court costs if progressed that far.

Policy Implications

- 22 Such action is ensuring relevant Council policies are adhered to.

Analysis

Options Considered

- 23 Two options are available, but only one is realistic. Council could do nothing, which will likely ultimately result in Environment Southland acting on the breach of resource consent conditions by Council; or Council can inform errant wharf owners of the potential action and make preparations in the event this proves necessary.

Analysis of Options

Option 1

(a) Take action to terminate licences and ownership should necessary works not be completed by 30 June 2019.

(b) Take action to take possession of the wharf without a signed licence.

<i>Advantages</i>	<i>Disadvantages</i>
<ul style="list-style-type: none">• Ensure compliance with Council policies.• Ensures compliance with resource consent.• Gives confidence to community that Council's vision of 'Southland – one community offering endless opportunities' signals a District-wide approach as we look to work in partnership with our communities for a better Southland.	<ul style="list-style-type: none">• May upset affected wharf owners.• May have a cost to the possible action.

Option 2 – Do nothing

<i>Advantages</i>	<i>Disadvantages</i>
<ul style="list-style-type: none">• None	<ul style="list-style-type: none">• Will still have a cost as ultimately action is required.• Environment Southland may act on Council breach of resource consent.

Assessment of Significance

- 24 This is considered a matter of local significance, but only in terms of possible breaches of licences issued by Council and the subsequent related resource consent breaches. Council must be seen to be ensuring compliance, which in turn requires Council compliance with resource consent.

Recommended Option

- 25 Option 1 is recommended.

Next Steps

- 26 Council to inform wharf owners of potential action when sending out copies of the latest Emtech report and setting deadline of 30 June 2019 for repairs to be completed to required standard. Following this, if wharf owners continue to ignore requirements preparations should be made to pursue legal redress as necessary post 31 May 2019.
- 27 Council to inform the wharf owner who hasn't signed a licence that Council will commence proceedings to take possession of the subject wharf if a signed licence is not received and works undertaken by 31 March 2019.

Attachments

- A November 2018 Emtech Report on Structures In Riverton Harbour [📄](#)



Southland District Council

**2018 RIVERTON MARINE STRUCTURES
INSPECTION REPORT**

November 2018



This Document has been prepared by the office of Emtech Ltd

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Issue Date	Revision No.	Author	Checked	Approved
7/01/2019	Draft	A.R. Bird	R.M. Davis	R.M. Davis
4/02/2019	-	A.R. Bird	R.M. Davis	R.M. Davis

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W:\Dropbox\18105 - SDC Riverton Wharf Re-inspection\RP-18-11-01.docx

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EXECUTIVE SUMMARY

On 4 and 5 September 2018 Emtech personnel assisted by Riverton Community Board (RCB) representatives carried out re-inspections on all the structures for which SDC in conjunction with the Riverton Harbour Subcommittee (RHS) have jurisdiction for permitting and licensing. These inspections were undertaken to assess the current condition of the structures and in particular if the recommended maintenance works following the 2014 inspections had been addressed.

As a general summary, the standard of the structures has improved significantly since the initial inspections in 2014. 78% of the structures meet the fit-for-purpose threshold or have had some improvement works undertaken on them since 2014. Unfortunately, 66% of structures have not yet got to an acceptable level yet and have outstanding issues that require addressing. A summary of these is included below:

Asset or Structure Reference	All Works Completed	Some works completed, items still outstanding or in progress	No works completed or significant concerns noted
L1		X	
L2		X	
L3		X	
L4	✓		
L5		X	
L5A	✓		
L6			X
L7		X	
L8		X	
L9		X	
L10		X	
L11			X
L12	✓		
L13	✓		
L14	✓		
L15	✓		
L16	✓*		
L17	✓*		
L18	✓		
L19		X	
L20	✓		
L21			X
L22	✓*		

Asset or Structure Reference	All Works Completed	Some works completed, items still outstanding or in progress	No works completed or significant concerns noted
L23	✓*		
L24	✓*		
L25		X	
L26			X
L27		X	
L28		X	
L29		X	
L30		X	
L35			X
L36			X
L37		X	
L38		X	
L39	✓		
L40			X
L41			X
L42			X
L43		X	
L44		X	
L45		X	
T-Wharf		X	
Boat ramp		X	
Focal Point	✓		

* Denotes structures that have completed required works but EL provide recommendation to ensure owners get required durability

15 Structures (33%) meet the minimum accepted standard and except for some that have recommendations to help achieve required durability, require no further works.



21 Structures (46%) have had some improvements made but still have outstanding items or were at the time of the 2018 inspections a 'work in progress' and did not meet the minimum acceptable standard of ownership.

9 Structures (20%) have had no apparent works undertaken since the previous inspections or have significant concerns noted and require immediate attention.

1.0 BACKGROUND

1.1 General

In 2014 Emtech Ltd (EL) carried out an engineering inspection and assessment of the Riverton Wharves, Jetties and Marine related structures as part of Southland District Council (SDC) licence review. As part of this review an assessment and subsequent report outlined the condition of these structures and deficiencies that would require remedied to bring all assets to the minimum acceptable level

Following a notification and grace period, EL were engaged to carry out a further inspection and report in October 2018 as means of providing SDC an update on progress of any remedial works and the current condition at the end of the notification period in which asset owners had to ensure their assets met the minimum required standards.

The inspections were undertaken on 4 and 5 September 2018 with the help of a locally based skipper and an aluminium runabout used for accessing the facilities. The inspection covered all jetties, wharves and ramp structures including slipways under SDC jurisdiction on and alongside the Aparima River, Riverton.

The following personnel were present:

Aidan Bird	EL
Ian Coard	Riverton Coast Guard/Riverton-Aparima Community Board
Colin Pemberton	SDC (At initial site inspection only)

1.2 Scope of Work

The agreed Scope of Work for the engagement is as follows:

- Carry out a visual inspection of the structures delineated as:
 - L1-L30 (31 structures)
 - L35-L45 (11 structures)
 - T Wharf (1 Structure)
 - Focal Point (1 Structure)
- Public Boat Ramp adjacent old Co-op Wharf (1 Ramp)
- Inspections where focused on the items noted in previous report but also included any significant deterioration or items of concern relating too:
 - the retaining or abutment structures, pile footings or means of fixing to ground or seabed (where visible)

- the piles, caps, beams and deck including soundness testing of timber components.
- Photographs of all structures will be recorded as part of the inspection. A selection has been included in this report where relevant. All photos are available to SDC for reference and asset management records.

2.0 INSPECTIONS

2.1 Inspection Conditions

The inspections were undertaken from 1100hrs 4 September, with low tide occurring around early-afternoon. Inspections continued throughout the morning of 5 September on a falling tide to maximise visibility of piles bracing and their fixings.

Environmental conditions

4 September: Cool initially improving to warm clear sky with small patches of high cloud.
Wind: Calm
Sea: Calm
Water: Below surface visibility was marginal with 0.5-1m visibility below surface at best.

5 September: Cool initially improving to warm clear sky with significant cloud building to the south.
Wind: Generally calm
Sea: Calm
Water: Below surface visibility was significantly reduced from previous day to 0.5m maximum.

It is noted that the inspection of piles was limited to the extent of visibility below the water surface at the time. It is possible therefore, that some piles may be deficient below water. Also, it has not been possible to check the embedment of piles except where they are exposed at low water.

2.2 Abbreviations and Terminology

The following abbreviations have been used in this report and are expanded below for clarity

Aval	Available
BS	Both Sides
Conc	Concrete
Cond	Condition
Crs	Centres
Deck Beams	Structural timber members normally supported on the headstock. These provide the fixing and run perpendicular to the decking timber
Dia	Diameter
EL	Emtech Limited
EW	Each way
Galv	Galvanised
Headstock	Usually the lowest structural member bolted directly to piles on which the remaining structure above is supported and fastened
HW	Hardwood
Max	Maximum
Nom	Nominal dimension
Oct.	Octagonal
Org	Original
SDC	Southland District Council
SED	Small end diameter (of a pile)
Sq	Square
SW	Softwood

2.3 Observations

In general terms there has been significant improvements made to a number of the structures listed in the standard with others having done the bare minimum. Unfortunately, as mentioned earlier there is still a number that have not addressed the short comings of their structures and in a number of cases pose a risk to not only the adjacent owners and occupiers but to many of the stakeholders, operators and recreational users of the area.

The lack of maintenance or remedial works by some owners will be jeopardising their obligations to their insurers and/or the insurers of vessels using the berth as most policies clearly state that a safe and secure berthage is used. The risk also extends to the surrounding stakeholders.

In two cases remedial or rebuild works were clearly in-progress at the time of the inspections with construction contractors working at the time, and these have been noted as such, in all other cases the structures have been assessed 'As-Is'.

EL believe it is reasonable for SDC to use the 'As-Is' nature of this inspection, unless noted otherwise, as the benchmark for non-compliance due to the significant grace period granted to the owners by SDC to undertake recommended minimum remedial works since previous reporting and notification.

2.4 Asset Inspections

EL understand the need to have these facilities available to the owners and users and the importance to the community. We believe we have been very reasonable in our assessment and recommendations and therefore expect the timeframes given for remedial works to be enforced by SDC to achieve an acceptable level of safety

The assets have been assessed with the findings updated in the existing table with a 2018 summary appended to the bottom of the table:

Asset or Berth Number	L01 Slipway	Former Marine Department Reference:	MD 13978
Owners Name	Riverton Slipways C/- Murray Anderson		
Owners Address	67 Towack Street, Riverton 9822		
Asset Details	Asset type: Slipway		
Lease Length (m)	36.92 (L02 combined)	Cradle Length	6.33m
No. of rails	3	Cradle Width	2.85m
Rail Length (m)	30+	Cradle height	4.10m (stanchions)
Width (across rails)	2.65m	Max vessel breadth	4.3m – Between stanchions
Services	Power and water in shed		
Condition			
Foundations & rails	The 3 rails are set on 500mm wide footings all being in good working condition.		
Cradles	Cradle is in good working condition. Associated sheaves, wires and attachments all ok.		
Sheds/Amenities	9.45m ² of amenity buildings with services.		
Previous Recommendations	Address areas of erosion with compacted hardfill to prevent further erosion around rails in short term. Possible use of designed coffer dams to retain fill and limit erosion. Winch room door not regarded as secure.		
2018 Inspection	Erosion areas around rails have been addressed. No coffer dams installed to limit future erosion but acceptable as current. The machinery/gear room is not secure. The owner was present at time of inspection and communicated that the door and openings were for a purpose due to equipment in shed. While we appreciate that the openings in door and front of shed for cable are there for operational purposes, these should be able to be closed and secured when not in use. This area is readily accessible by public. EL expect that this would not be acceptable to either SDC or the owners HSWA requirements.		



L01



Asset or Berth Number	L02 Slipway	Former Marine Department Reference:	MD 13978
Owners Name	Riverton Slipways C/- Murray Anderson		
Owners Address	67 Towack Street, Riverton 9822		
Asset Details	Asset type: Slipway		
Lease Length (m)	36.92 (L01 combined)	Cradle Length	7.85m
No. of rails	3	Cradle Width	3.47m
Rail Length (m)	30+	Cradle height	4.60m (stanchions)
Width (across rails)	3.26m	Max vessel breadth	4.7m – Between stanchions
Services	Power and water in shed		
Condition			
Foundations & rails	The 2 outside rails are set on 300mm wide footings and both are in good working condition. The centre rail is set on a 700mm wide footing also in good working condition.		
Cradles	Cradle is in good working condition. Associated sheaves, wires and attachments all ok.		
Sheds/Amenities	Amenities are shared with the buildings at the top end of Slipway 1. These house the services and winches for haul-out on slipway 2. Refer notes L01 Slipway.		
Previous Recommendations	Address areas of erosion with compacted hardfill to prevent further erosion around rails in short term. Possible use of designed coffer dams to retain fill and limit erosion.		
2018 Inspection	Erosion areas around rails have been addressed. No coffer dams installed to limit future erosion but acceptable as current. Refer also L02 re: equipment shed.		



L02

Asset or Berth Number	L03	Former Marine Department Reference:	MD 13266
Owners Name	L. J. Turner		
Owners Address	PO Box 494, Invercargill 9840		
Asset Details	Asset type: Wharf structure including upgraded boat shed		
Lease Length (m)	13.84	Decking	Timber beams and deck over cantilever insitu concrete slab
Structure Length (m)	13.84	Deck Beams	125x125 timber
Both sides Avail. (m)	No	Headstocks	N/A
Total Berthing (m)	13.84	Piles	200dia HW piles at end (effectively bracing structure for fenders – No deck)
Width (m)		Bracing	N/A
Additional Areas		Fenders	150dia poles
Services	Power	Bollards	
Condition		Handrails	
Deck	A new timber deck has been built over top of the existing insitu concrete deck that is cantilevered from the concrete foundations of a building situated within the tidal range of the river. While the timber deck platform has been acceptably constructed and secured, the entire deck is resting on the cantilevered concrete deck which is showing signs of advanced corrosion and cracking. Concrete spooling and breakage have occurred in some areas and the decks ability to load bear has been alarmingly reduced. The fender poles offer no load bearing capacity due to connection type, and if anything, contribute additionally to the load being taken by the concrete deck. The downstream deck end appears uncomplete and is a hazard due to missing deck planks. No safety rails anywhere.		
Structure	As noted above, while the main concrete structure/foundation for the building appeared relatively sound, the cantilevered concrete deck and beams show signs of advanced cracking, spooling and corrosion. A lower whaler type structure provides support to the fender poles and 2 outer piles at approx. low tide level. This was in acceptable condition however fixings were very lightweight for this type of installation.		
Piles	<p>The 2 outer piles at the extremities of the structure appeared sound but have been through bolted to a cantilevered deck beam with a singular fixing. The central deck beam remains entirely unsupported over the full length of an unacceptable length of cantilever.</p> <p>The timber fender poles are in acceptable condition although some wastage was noted in the lower inter-tidal zone which should be monitored. The fenders are fixed to the concrete deck by means of a lightweight clamp arrangement at deck level.</p> <p>Loose piles still remain secured only by ropes - Unacceptable</p>		
Additional info and comments	The building/shed has had a major upgrade since the previous inspection, with new profiled metal cladding and roofing, residential style aluminium windows and doors.		



Previous Recommendations

All piles need to be checked for secureness at riverbed level and at deck level. Where connections are loose or badly corroded, replacements need to be installed. Rope connections are not acceptable. Connections between timber bracing and beams require installation or replacement in a number of places and some will require replacing

The cantilevered concrete decks at each end appear to have been constructed with the reliance of support from a pair of piles and a headstock or similar beam. In all cases this structure has slumped to a degree that now does not provide any support. These need to be replaced to ensure the safety of further operations on this structure.

Any timber, tied in place with rope, is required to be fastened with an approved mechanical type fixing or removed completely.

The above listed recommendations need to be addressed within 6-12 months

2018 Inspection

Any piles or poles secured only by rope connections are unacceptable.

Any timber, tied in place with rope, is required to be fastened with an approved mechanical type fixing or removed completely.

A pair of headstocks are required between the pair of piles at both ends of the deck to provide adequate support and fixings to the timber cantilever. Singular fixings only through the adjacent deck beam is inadequate.

We have significant concern regarding the cantilevered concrete deck which is showing signs of advanced corrosion, spooling and cracking and its ability to continue to support the deck as this deterioration advances. We recommend an engineer's report on its suitability to continue to support the deck or an engineer's statement or engineered solution providing adequate additional means of support.

Decking needs installed at downstream end and handrailing is required at both deck ends on non-berthing faces





L03



L03

Asset or Berth Number	L04	Former Marine Department Reference:	MD 12573
Owners Name	Sam Mathieson		
Owners Address	78 Ontario Street, East Gore RD2 GORE 9775		
Asset Details	Asset type: Wharf structure with shed		
Lease Length (m)	15.38	Decking	200x50 Mixed HW & SW
Structure Length (m)	10.35	Deck Beams	225x100 SW or 200 dia HW poles
Both sides Avail. (m)	No	Headstocks	200x100 and 100x100
Total Berthing (m)	15.38	Piles	Mixed HW – Refer below
Width (m)	1.5 (orig)	Bracing	Mixed – Refer below
Additional Areas	10.35 x 8.2m with shed	Fenders	Piles extended with 200x50 facing timbers on some
Services	Power	Bollards	No
		Handrails	Single barrier rail one end – Poor Walkway barriers – Require additional fixing
Condition			
Deck	Deck at last inspection was poorly constructed with numerous broken or rotten mixture of HW and SW planking. A good effort has been made to address all planking issues where necessary.		
Structure	Where necessary the SW & HW deck beams and Headstocks, including their connections to the piles have been addressed and all appear satisfactory. The bracing was generally in poor condition however almost all braces have been replaced or remediated and additional bracing has been installed. The structure is noticeable better. The additional structure and the walkway to the south east as means of egress from the buildings and wharf was previously lightly constructed, this has now had additional timbers added with bracing and is also much better. Hand railing and connections have been replaced as required.		
Piles	Almost all piles have been concrete collared from below river bed level to approx. 300mm above bed level. This has addressed areas of noticeable wastage in the piles and ensured the structure is well founded.		
Additional info and comments			
Previous Recommendations	<p>The significantly deteriorated bracing elements in the structure will need to be addressed within the next 12 months. The majority will require replacing. In doing so, if a pile is found to have significant wasting at the existing fixing location, the pile itself will be required to be replaced.</p> <p>All handrails require adequate fixings to be installed to the structure. 2-M12 galv bolts minimum bottom fixing of stanchion at 1.5m crs max.</p> <p>30% of the deck planking requires replacing (6-12 months)</p> <p>To reduce deflection of structure around the stairs additional strengthening or bracing of the substructure and connection to piles is required. (6-12 months)</p>		
2018 Inspection	All areas from previous report addressed		



L04



L04

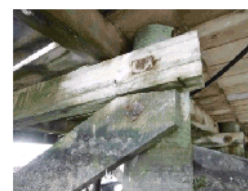
Asset or Berth Number	L05	Former Marine Department Reference:	MD 12622
Owners Name	W B Corbin		
Owners Address	84 Milton Street, RIVERTON 9822		
Asset Details	Asset type: Wharf structure		
Lease Length (m)	16.92	Decking	200x50 SW at 250mm crs
Structure Length (m)	7.9	Deck Beams	Outside beams 180x180 HW Inner beams 150x75 SW
Both sides Aval.	No	Headstocks	Varying sizes All unacceptable condition
Total Berthing (m)	7.9	Piles	200dia HW at 2.5m crs
Width (m)	2.4	Bracing	Varying sizes – All poor
Additional Areas	15.2 x 2.6m approach	Fenders	No
Services	No	Bollards	No
Condition		Handrails	No
Deck	Deck planking issues have been addressed on the approach and the upstream leg of the T-head to effectively make an L-shaped structure. The downstream leg of the T-head had a single strand of danger tape across as there was no deck planking beyond this point.		
Structure	<p>The T-head structure was in poor condition at previous inspection, however selected beam, headstock and bracing timber replacement, including new bolted connections has improved this to an acceptable level under the upstream section. The deck beams on the downstream section are still in poor condition however this is the yet un-decked section. Bracing in this section has been upgraded however.</p> <p>The approach structure is generally in acceptable and serviceable condition but there were still some connections on the approach that could do with replacement and/or remedial works to ensure it is effective and tight as there has been none of the bracing reinstalled in this area.</p>		
Piles	<p>The outer piles have been straightened and with the combination of new headstocks, bracing and connectors, the piles are now considerably better than when previously inspected.</p> <p>The approach piles have been set in concrete plinths and are ok but some fixings to headstocks still need addressing.</p>		
Previous Recommendations	The structure will require re-piling along the berthing face and some inner T-head side piles will need replacing also. The sub-deck structure requires complete replacement including all fixings. The approach is generally ok with just a number of fixings and general nailing to be addressed within 6-12 months		
2018 Inspection	<p>A permanent barrier or handrail needs to be installed if downstream decking is not to be installed. Alternatively, the deck beams and fixings will need addressed and new decking installed in this area.</p> <p>Some fixings and/or bracing addressed on the approach</p>		



L05

Asset or Berth Number	L05A	Former Marine Department Reference:	MD (S) 674
Owners Name	S. McKay		
Owners Address	18 Homer Street, TE ANAU 9600		
Asset Details	Asset type: Boat shed and ramp		
Lease Length (m)	10.25	Decking	Concrete ramp
Structure Length (m)	N/A	Deck Beams	N/A
Both sides Avail.	No	Headstocks	N/A
Total Berthing (m)	N/A	Piles	N/A
Width (m)	2.2	Bracing	N/A
Additional Areas	66.5m ² shed	Fenders	N/A
Services	Yes	Bollards	N/A
Condition		Handrails	N/A
Structure	The internal structure of shed was not available for inspection however the exterior was in an acceptable condition and secure.		
Additional info and comments	This structure is an insitu concrete ramp from river bed to shed floor height complete with cast in rails. The shed appears well founded on an insitu concrete foundation.		
Previous Recommendations	No operational or safety recommendations for this structure however there was obvious signs the cast in-rails in the ramp are corroding to the extent that this is cracking concrete and it would be prudent to look at a method of retarding this corrosion and or providing a protection system to extend the life of the concrete and rails		
2018 Inspection	No change since previous inspection		

Asset or Berth Number	L06	Former Marine Department Reference:	MD12626
Owners Name	Apollo Fishing C/- Carey McIvor		
Owners Address	6 Moana Street, Riverton 9822		
Asset Details	Asset type: Wharf structure		
Lease Length (m)	9.53	Decking	200x50 SW
Structure Length (m)	14.6	Deck Beams	150x100 SW
Both sides Avail.	No	Headstocks	150x100 SW
Total Berthing (m)	14.60	Piles	200 SED SW at varying centres
Width (m)	Varies 2.4, 2.9 & 5.0m	Bracing	Various - Refer structure notes below
Additional Areas	2m x 3.6m Shed	Fenders	5-200x75 SW fenders
Services		Bollards	No
Condition		Handrails	Rope at SE end
Deck	Deck has noticeable slump due to structure movement (refer below). Decking timber is generally in good condition with only minor deck fixings required		
Structure	<p>The structure's outer or berthing face piles have settled or the pile toes have moved towards river which gives the structure the impression of leaning landward. This has caused the decking to slump. These outer piles are recent installs and are in good condition with sufficient bracing appearing to have been installed at a similar time. Unfortunately some braces have only been installed with nail type fixings and these will fail quickly and should be replaced with bolts.</p> <p>The 2m approx. deck extension landward at SE end has good decking timber and shed is secure.</p>		
Piles	All piles in good condition with newer piles are in very good condition however due to the berthing face piles now not being vertical it is critical bracing connections are maintained to prevent the piles subsiding further and the structure deteriorating rapidly.		
Additional info and comments	Rope hand railing at SE end is not compliant to NZ building code however it does offer protection from persons walking off the end of the structure which most other structures in the area do not have		
Previous Recommendations	Ensure all bracing timbers and headstock timbers are bolted to piles. Some deck nailing required. (2-3 months)		
2018 Inspection	No works appear to have been undertaken or completed on this wharf since previous inspection as there are still bracing and headstock requiring remedial fixings and decking timbers to be addressed.		



Asset or Berth Number	L07	Former Marine Department Reference:	MD12651
Owners Name	Nick White		
Owners Address	40 Havelock Street, Riverton 9821		
Asset Details	Asset type: Wharf structure including shed and fuel cell platform		
Lease Length (m)	19.38m	Decking	300x50 + 200x50 SW
Structure Length (m)	19.30m	Deck Beams	200 dia HW original
Both sides Avail.	No	Headstocks	200dia HW poles
Total Berthing (m)	19.30	Piles	200dia HW
Width (m)	Original 2.3m Add-on 5.4m	Bracing	Broken
Additional Areas	11.9 x 2.4m approach	Fenders	No
Services	Power to 2 x freezers and shed and water in shed also		
Condition	Handrails		No
General	L07 consists of 2.3m wide wharf along the berthing face and an 11.9 x 2.4m approach from the land being the original structure. This has an additional 2.6 x 2.4m deck with roof and freezer behind original structure SE side of approach and a 12 x 5.4m deck NW side of approach referred to as the 'add-on'. At the back of the add-on is a 12 x 4.8m shed on piles. Note the add-on and shed continue onto L08 but have different owner.		
Deck	Decking is generally ok on the original structure, freezer platform and add-on with 3 planks requiring replacement and some nailing required to fix existing deck timber down. The approach has additional doubler planks on top of decking timber to cater for vehicles and all are ok.		
Structure	<p>The 200 dia edge deck beams, the 200x50 CL beam and the 200dia headstocks on the original structure are all in adequate condition. The bracing in this area however is all broken at or near fixings. There was no effective bracing observed.</p> <p>Some sub deck structure members have been recently replaced under the add-on and this area was ok</p> <p>Freezer platform has minimal decking with freezer located directly on 150 x 100 SW deck beams and 200 dia SW headstock. All ok.</p> <p>Approach structure condition acceptable</p>		
Piles	All piles on original, add-on, freezer platform and shed where in serviceable condition with none requiring immediate or short term replacement. Care should be taken when re-installing braces that further damage is not done to the piles in the area of old fixings as this can accelerate degradation.		
Additional info and comments	This structure also has a 3.9 x 3.2m platform at the shore end of the approach housing a 2.4m dia diesel tank. This structure was adequately braced and members were in acceptable condition		
Previous Recommendations	Structure generally acceptable with deck timber and fixings to be addressed and of significant importance, reinstatement of all bracing elements under original and add-on structures. Works are to be completed in 6-12 months		

2018 Inspection

Structure generally good with bracing and fixing under main wharf acceptable, however the bracing and associated fixings under the add-on to the adjacent wharf requires attention. Some braces and 1 pile are poor and may require replacement, as are some fixings which will require replacement.



L07



L07

Asset or Berth Number	L08	Former Marine Department Reference:	MD14709
Owners Name	R C Newton		
Owners Address	21 Irvine Road, The Cove, Dunedin 9077		
Asset Details	Asset type: Wharf structure & Shed		
Lease Length (m)	17.23m	Decking	300x50 and 200x50 SW
Structure Length (m)	16.85	Deck Beams	200x50
Both sides Avail.	No	Headstocks	200 dia poles HW
Total Berthing (m)	16.85	Piles	Mixture of 200dia HW & SW & new 250x50 SW
Width (m)	Original 2.4m Add-on 5.4m	Bracing	Broken or missing
Additional Areas		Fenders	No
Services	Power and water in shed	Bollards	No
Condition		Handrails	No
General	L08 consists of 2.3m wide wharf along the berthing face being the original structure. An additional 9.7 x 5.4m deck landward of the original structure provides addition deck storage and is referred to as the 'add-on'. At the back of the add-on is a 3.5m of the 4.8m wide shed on piles also part of L07. Note the add-on and shed continue onto L07 but have different owner.		
Deck	Decking is generally ok on the original structure with 2 planks requiring replacement and some nailing required to fix existing deck timber down. The add-on decking was good.		
Structure	<p>The 200 dia edge deck beams, the 200x50 CL beam and the 200dia headstocks on the original structure are all in adequate condition. The bracing in this area however is all broken at or near fixings. There was no adequate bracing observed.</p> <p>The sub deck structure members have been recently replaced under the add-on and this area was generally ok but two bolts are required at each headstock/pile connection.</p>		
Piles	All piles on original, add-on and shed were in serviceable condition with none requiring immediate or short term replacement. Care should be taken when re-installing braces that further damage is not done to the piles in the area of old fixings as this can accelerate degradation.		
Additional info and comments			
Previous Recommendations	Structure generally acceptable with deck timber and fixings to be addressed and of significant importance, reinstatement of all bracing elements under original and add-on structures. Works are to be completed in 6-12 months		
2018 Inspection	Some minor works have been done however has advised SDC that contractor on-site and waiting for timber to arrive to complete works.		

Asset or Berth Number	L09	Former Marine Department Reference:	MD14874
Owners Name	C E Lawless		
Owners Address	PO Box 16, Riverton 9847		
Asset Details	Asset type: Wharf structure		
Lease Length (m)	23.69 (L09 & L10)	Decking	Mixture of 150 – 300x50 SW
Structure Length (m)	23.69 (L09 & L10)	Deck Beams	200 dia edge and 200x75 CL SW
Both sides Aval.	No	Headstocks	200 dia poles HW
Total Berthing (m)	23.6969 (L09 & L10)	Piles	Varies -150-200 dia HW poles
Width (m)	2.45	Bracing	1-200x75 L09/L 10
Additional Areas	15.2 x 1m approach	Fenders	No
Services	No	Bollards	No
Condition	Handrails		
	Small section of handrail on both wharf and approach - Both poor		
Deck	Decking timber on L09 wharf is a variety of different sizes and are all acceptable. A number of decking timbers on the approach (mainly outer end) are not acceptable and will require replacement and general fixing of decking timbers needs to be addressed.		
Structure	The headstocks and deck beams are in acceptable condition although the fixings at some locations are poor and the structure has very limited bracing which is situated at one end only. The connection at this pile location is very poor. The approach structure is generally sound but has no lateral bracing at any location.		
Piles	Majority of piles on wharf and approach are ok with only the pile with brace showing serious reduction in diameter and decay at connection location.		
Additional info and comments	The short sections of handrails on both wharf and approach, while providing a visual barrier are poor in condition and likely unable to support a person. If these are to be retained the timber and method of fixing need to be upgraded.		
Previous Recommendations	Replace decking timbers as required on approach (Complete in 2-3 months) Replace or repair wasted pile at bracing location and install new bracing fixings in existing brace. Due to limited bracing on the wharf and approach structures, the addition of a cross type brace at one location on the outer end of the approach and one additional cross brace on the wharf structure to maintain structural integrity is required this will also be beneficial in the wharfs ability to resist berthing and impact loads. (Complete in 3-6 months) If the existing handrails are to be retained, the timber and method of fixing needs to be upgraded to bolted stanchion and handrail fixings with stanchions at 1.5m crs max. (Complete in 2-3months)		
2018 Inspection	Has advised SDC that contractor on-site and waiting for timber to arrive to complete works.		

Asset or Berth Number	L10	Former Marine Department Reference:	MD14874
Owners Name	C E Lawless		
Owners Address	PO Box 16, Riverton 9847		
Asset Details	Asset type: Wharf structure		
Lease Length (m)	23.69 (L09 & L10)	Decking	Mixture of 150 – 300x50 SW
Structure Length (m)	23.69 (L09 & L10)	Deck Beams	200 dia edge and 200x75 CL SW
Both sides Avail.	No	Headstocks	200 dia poles HW
Total Berthing (m)	23.6969 (L09 & L10)	Piles	Varies -150-200 dia HW poles
Width (m)	2.45	Bracing	1-200x75 L09/L10 1-200x75 L10/L11
Additional Areas	4.3 x 2.5m Shed	Fenders	No
Services	No	Bollards	No
Condition	Handrails		No
Deck	The decking on L10 is generally poor. A number of planks are missing, or in a deteriorated condition that is not acceptable. Fixing of deck timber to deck beams is generally poor also with a number of planks springing clear of the deck due to no fixing at all.		
Structure	The structure is generally poor also for this section of wharf with significant deterioration in a number of both headstocks and deck beams. The bracing and bracing connections are also in poor condition		
Piles	The upper ends of the piles appear in reasonable condition however at a lower level there is significant wasting and significant loss of section under both the wharf structure and the shed extension shoreside. This is consistent over the majority of the piles.		
Additional info and comments			
Previous Recommendations	This area of structure is in poor condition and will require significant pile repairs or re-piling, bracing and subdeck structure repairs or renewal to bring it to an acceptable level. The decking currently is unacceptable also and while this would be required to be fixed in the immediate or short term it would not be sensible to undertake decking repairs to a structure that requires significant repairs to the supporting members. Our recommendation is that this structure be upgraded with new piles and bracing as required, re using the acceptable existing structure timbers where possible and supplementing with new H5 treated SW and re-decking using only the good existing decking timbers and again supplementing with new. This structure is deemed high risk and remedial works should be completed as soon as practical within 6 months.		
2018 Inspection	Has advised SDC that contractor on-site and waiting for timber to arrive to complete works.		

Asset or Berth Number	L11	Former Marine Department Reference:	MD13612
Owners Name	Nick White		
Owners Address	40 Havelock Street, Riverton 9821		
Asset Details	Asset type: Wharf structure		
Lease Length (m)	15.38	Decking	200x50 SW
Structure Length (m)	15.38	Deck Beams	5-200x75 SW
Both sides Aval.	No	Headstocks	200x75
Total Berthing (m)	15.38	Piles	200 dia HW
Width (m)	3.0-6.9m	Bracing	200x75
Additional Areas	5.2 x 3.7m Shed	Fenders	No
Services	No	Bollards	No
Condition		Handrails	No
Deck	The decking timber on this portion of the wharf was in good condition however there were both a number of holes in the decking and the lengths of decking cantilevered a significant length over the inshore side of the structure in the mid-section. These cantilevers have been left with various lengths meaning the deck does not provide a continuous edge, and the cantilever is such that even the weight of a modest piece of equipment or person deflects the timber significantly.		
Structure	The structure is generally good with the only concern being the bottom brace-to-pile connection. Loss of pile diameter have made these connections loose and ineffective and will continue to deteriorate if not addressed in short term		
Piles	The majority of piles were in acceptable condition with just two in the area under the shed showing significant wasting in the area of bracing connection.		
Additional info and comments	A walk-in freezer/chiller unit is situated at the SE end of this structure and cantilevers over the edge of the wharf, shoreside. We were unable to establish any connection to the wharf and its precarious position provides a risk to people and the environment if it were to end up in the waterway.		
Previous Recommendations	<p>Decking requires a tidy up with planks replaced where holes exist and either a trimming beam installed to pick up the end of the cantilevered deck timber and all timbers replace to ensure they land on it or cut decking timber back to a uniform edge maximum 500mm from existing deck beam.</p> <p>Piles identified with waisting replaced or repaired within 12 months</p> <p>Bracing connections shown to have movement to be replaced following pile repairs.</p> <p>Freezer/chiller removed or fixed to wharf structure with adequate support provided</p>		
2018 Inspection	Some minor works have been undertaken and a pile appears to have been removed from the wharf recently. This along with the previous recommendations still require addressing. We understand owner has advised SDC that contractor on-site and waiting for works to be completed following L08-L10 remedial works		

Asset or Berth Number	L12	Former Marine Department Reference:	MD14179
Owners Name	Leigh C Collings and Greg Jones		
Owners Address	88 Traill Road, Pourakino Valley, RD3, Riverton 9883		
Asset Details	Asset type: Wharf structure		
Lease Length (m)	16.0	Decking	200x50 SW
Structure Length (m)	16.0	Deck Beams	200dia HW outers 200x50 SW Inner
Both sides Aval.	No	Headstocks	200dia HW pole or 150x50 SW
Total Berthing (m)	16.0	Piles	200dia HW
Width (m)	Nom 2.2m	Bracing	200x50 under wharf 200dia HW poles shoreside to ground
Additional Areas	No	Fenders	2-150x50
Services	No	Bollards	No
Condition	Handrails		No
Deck	The decking timbers on this structure are in acceptable condition, but the fixing is very poor. Large gaps, loose planks and uneven timber provide a number of hazards. The deck widening at the NW end has slumped and is poorly constructed again with large gaps, loose planks and uneven timber.		
Structure	The structure appears to be a combination of historical elements and more recent repairs. The structure as a whole appears to have suffered at some stage some large berthing or impact loads and is leaning noticeably to shoreward. This appears to have been countered by the installation of 200dia HW poles as braces to land on the shoreward side. The headstocks are very minimal with the deck beams generally satisfactory with the exception of one severely cracked headstock and two deck beams similarly deteriorated. Bracing other than the pole supports listed above is minimal on this structure and the associated fixings poor.		
Piles	<p>The majority of the 200dia HW piles on the outer wharf structure are in acceptable condition with only minimal wasting. A number of these piles are on a significant angle and their connections to headstocks have been compromised. Their ability to now withstand vertical and berthing loads is questionable without further inspections at riverbed level.</p> <p>The piles at the L11 end of this structure are in the poorest condition, one of which is of smaller diameter. Degradation of these at both river bed level and at deck connection level require replacement.</p> <p>Two piles shore side on the widened structure have also slumped or been compromised with one having significant splitting of the timber</p>		
Additional info and comments	A two plank walkway exists between L12 and L11. This provides a convenient connection between the two structures but responsibility for its condition and maintenance is not determined. It is not an acceptable structure in its present condition as it poses significant risk to users		
Previous Recommendations	The structure, while on a noticeable lean, appears stable with the addition of the landward props. The walkway to L11 needs to be removed immediately		

2018 Inspection

or upgraded to an acceptable level with appropriate deck beams, decking and handrails.

Piles at L11 end and shore side of deck widening at L13 end will require replacement within the next 12 months. With this replacement new fixings will be required to headstocks where appropriate

Decking timbers need to be replaced where excessive gaps or holes exist and all decking timbers fixed down to deck beams at all crossing locations.

Deck planking and fixings have been addressed.

Walkway to L11 has been upgraded to be a continuation of L12 and is acceptable now.

A number of required fixings in beams and headstocks have been addressed.

Braces fixed to multiple piles have been installed transversely and are providing adequate bracing now

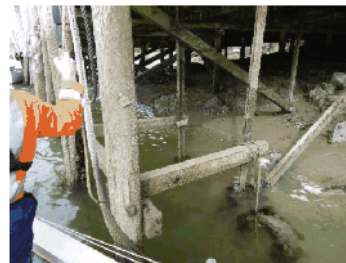


L12



L12

Asset or Berth Number	L13	Former Marine Department Reference:	MD12781
Owners Name	RG & RL Haggerty & AP Brookland - Haggerty Family Trust		
Owners Address	92 Matua Road, Otara, RD9, Invercargill 9879		
Asset Details	Asset type: Wharf structure and shed		
Lease Length (m)	14.15	Decking	200x50
Structure Length (m)	14.15	Deck Beams	150x100 SW @ 1.2m crs
Both sides Aval.	No	Headstocks	200dia HW pole
Total Berthing (m)	14.25	Piles	Varying 150-250dia HW at 2.6m crs sq
Width (m)	12m	Bracing	200 dia poles just a couple water side
Additional Areas	2.0 x 2.8m Approach	Fenders	Old tyres on some berthing piles
Services	Power, water in shed, deck	Bollards	No
Condition	Handrails		No
Deck	This structure has a large deck area and the deck planking is in good but well used condition. A small amount of nailing is required on loose planks.		
Structure	<p>The structure is adequately built in a consistent grid. The timber members are aging, particularly the headstocks which are HW poles and are showing signs of cracking however due to the regular grid, bracing and fixings this is not of a concern in the short to medium term.</p> <p>The upstream end of the structure has been constructed using railway iron piles and headstocks. These irons are still in good condition with good connection to timber deck beams</p>		
Piles	All except 2 of the HW piles are satisfactory and all railway iron piles at upstream end are also satisfactory.		
Additional info and comments	Shed: 2.8 x 2.6m. Has had an internal fire with walls and roof framing at one end badly damaged. Remaining walls, roof and floor appear sound.		
Previous Recommendations	<p>General nailing of deck planking and replacement of the two split, wasted and broken piles to be completed within 6-12 months.</p> <p>Refer photo over for location. Ensure when replacing piles all bracing is reinstated.</p>		
2018 Inspection	3 Piles have been replaced and fixings have been replaced as required.		



Asset or Berth Number	L14	Former Marine Department Reference:	MD12721
Owners Name	KD & JO White		
Owners Address	20 David Street, Riverton 9822		
Asset Details	Asset type: Wharf structure and Shed		
Lease Length (m)	14.76	Decking	200 x 50 SW
Structure Length (m)	14.95m	Deck Beams	200 x 50 with 1-200dia at berthing face
Both sides Avail.	No	Headstocks	Orig. wharf only
Total Berthing (m)	14.95	Piles	200 dia @ 2m nom crs HW
Width (m)	4.10m	Bracing	200x75
Additional Areas	11 x 1.5m Approach	Fenders	Minimal
Services	Power	Bollards or Handrails	No
Condition	Shed		8.15 x 4.10m
General	<p>L14 appears to have originally been T-head type structure with a 1.6m wide berthing wharf extending upstream from the 1.5m wide approach coming from the land. There has been a localised angular fillet at the junction of the approach and wharf.</p> <p>The structure has been extended with another row of piles 2.5m landward of the original inner piles. No headstocks have been used and a simple deck beam trimming these piles and decking timber has been attached to give an overall structure width of 4.1m.</p> <p>A shed has then been built on top of the existing structure extending 8.15m upstream from the downstream end with a secured door coinciding with the approach. The wharf can be accessed also from L15.</p>		
Deck	<p>Decking has been replaced where required and planking well fixed</p> <p>The approach decking timber is all satisfactory</p>		
Structure	<p>The original wharf structure still appears in satisfactory condition however the new trimmer beam with no headstock support on the landward edge of the extension has cracked completely through from what appears to be overloading or heavy impact.</p> <p>The structure under the 33m² shed and chiller area has had additional timbers and bracing added and are now adequate since previous inspection</p> <p>The approach structure is very lightly built but adequate with recently installed galv. fastenings.</p>		
Piles	The piles are all HW poles except 2-200 x 100 SW posts on the upstream inner corner, the majority of the piles are adequate. Two berthing face piles will require replacement as they are damaged beyond repair.		
Additional info and comments	Interior or structure of shed was not available for inspection and has not been included. The structure is in poor condition currently but with minimal work will be adequate in the short term.		
Previous Recommendations	General renewal of deck fixings and replacement of deck planks at and around the entry to the shed and freezer and also on the extension of the deck landward.		

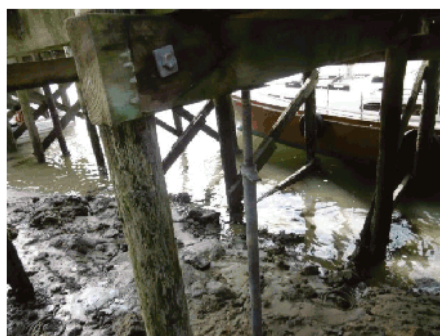


2018 Inspection	<p>The broken landward trimmer beam requires replacement. We would recommend in this situation that another beam be also installed midway between the broken one and the original landward beam effectively halving the span of the decking and a 150x75 headstock be installed under both fixed with 20dia galv. bolts to the piles to prevent the beam breaking under a modest loads from pots or chiller bins are stacked there</p> <p>The two berthing face piles will require replacing with 200 SED H6 piles</p> <p>All the above work would be expected to be completed within the short term of 6-12 months.</p>
	<p>Decking and fixings replaced as required</p> <p>Berthing face piles adequate</p> <p>New timbers and fixings in structure adequate</p>



L 14

Asset or Berth Number	L15	Former Marine Department Reference:	MD(S)148
Owners Name	JM & LS Gibbs		
Owners Address	34 Brook Street, Riverton 9822		
Asset Details	Asset type: Wharf structure and Shed		
Lease Length (m)	13.84	Decking	Mixture 200x50 SW (majority) and HW
Structure Length (m)	13.71	Deck Beams	200x75 @ 1m crs nom HW
Both sides Avail.	No	Headstocks	200x75 SW
Total Berthing (m)	13.71	Piles	Mixture 200dia SW/HW @ 2m crs
Width (m)	Varies	Bracing	200x100
Additional Areas	Approach: Landward 5.85m (L) x 1.4m (W) widens to 2.85m (L) x 2.5 (W) Shed: 3.7m x 2.15m		
Services	Water and 1 wharf tap	Fenders or Bollards	No
Condition		Handrails	Removed
Deck	Decking (majority SW) now satisfactory on both wharf and approach		
Structure	All 6 pile bents over the length of this structure have braces fitted and all now have satisfactory upper and lower connections. Headstocks and deck beams are all sufficient. A few lower walers are wasted but do not demand immediate attention.		
Piles	6 pairs on wharf plus 3 pairs on approach all ok		
Additional info and comments	Handrail section on wharf in poor condition. This will require upgrading if it is to remain		
Previous Recommendations	Replace deck planks on approach and reinstate bracing on two upstream bents. This may be as simple as lifting the brace at the bottom connection and fastening with new 20dia galv bolts. Using larger diameter bolts and 50x50 min washers decreases the wood fibre crushing experienced with smaller diameter bolts and washers and increases durability of connection		
2018 Inspection	Bracing has been addressed on main wharf and approach timbers are now satisfactory.		



Asset or Berth Number	L16	Former Marine Department Reference:	MD12641
Owners Name	JB Ballantyne		
Owners Address	47 Spence Avenue, Otatara, RD 9, Invercargill 9879		
Asset Details	Asset type: Wharf structure		
Lease Length (m)	15.38	Decking	250x50 at 270 crs
Structure Length (m)	15.35	Deck Beams	250x75 at 1m crs
Both sides Aval.	No	Headstocks	2x250x75 SW
Total Berthing (m)	15.35	Piles	200 SED SW
Width (m)	2.6m & 2.2m	Bracing	250x75 SW
Additional Areas	-	Fenders	No
Services	Water	Bollards	No
Condition	Handrails		
Deck	New treated SW decking		
Structure	Wharf has been rebuilt to a very good standard with double headstocks, cross bracing at all bents, 3 x longitudinal deck beams and horiz bracing under deck beams.		
Piles	New 250 SED piles		
Previous Recommendations	General deck fixing of loose planks. Reinstate braces to ensure a minimum of four braces are complete out of the six pile bents. This may be as simple as lifting the brace at the bottom connection if the timber is in suitable condition and fastening with new 20dia galv bolts. Using larger diameter bolts and 50x50 min washers decreases the wood fibre crushing experienced with smaller diameter bolts and washers and increases durability of connection		
2018 Inspection	Only recommendation would be to apply some bituminous or approved mastic coating to all bolt heads, nuts and washers to ensure you get the required durability. Good installation		



L16



L16

Asset or Berth Number	L17	Former Marine Department Reference:	MD13260
Owners Name	Ivan S Gorton and Gorton Fisheries Ltd		
Owners Address	16 Raeburn Avenue, Otatara, RD9, Invercargill 9879		
Asset Details	Asset type: Wharf structure		
Lease Length (m)	14.15	Decking	150x50 SW at 200crs nom
Structure Length (m)	14.15	Deck Beams	150x75 edge beams, 150x50 CL
Both sides Aval.	No	Headstocks	1x200x50
Total Berthing (m)	14.15	Piles	Mixture of HW & SW 150-250dia
Width (m)	3m (nom)	Bracing	New 150x50 SW
Additional Areas		Fenders	Some 100x50 facing timbers on piles
Services	Water pipe under	Bollards	No
Condition		Handrails	No
Deck	Decking timber is adequate with some planks appearing to have been replaced recently. Gaps between deck planks are larger than is desirable in places.		
Structure	<p>The wharf structure is built very lightly with some 150dia piles however the addition of new 150x50 bracing and a new 250dia SW pile has helped to provide some structural integrity.</p> <p>The headstocks and deck beams are in reasonably good condition but again very light for a berthing structure.</p> <p>The majority of berthing edge piles have a 100x50 fender strip attached.</p>		
Piles	The seven pairs of piles in this structure all of different size and type. Some of the small HW piles are starting to open significantly and therefore will require replacement in the medium term.		
Previous Recommendations	<p>The two piles listed above will require replacement similar to the new one which has recently been installed shore side. A headstock needs to be fitted following the installation of the new piles to ensure the existing new pile is incorporated into the structure. These works need to be addressed within the next 12 months.</p> <p>Medium term (2-3 years) a number of the smaller diameter HW piles that have deteriorated should be scheduled for replacement.</p>		
2018 Inspection	New piles have been installed as required, with deck, sub-structure and bracing all good. Some remaining piles, while acceptable now, were of small diameter originally and their sectional area has been reduced significantly and therefore should be planned for replacement in the near future.		



Asset or Berth Number	L18	Former Marine Department Reference:	MD12643
Owners Name	SW & M MacDonald		
Owners Address	33 Alamein Street, Riverton 9822		
Asset Details	Asset type: Wharf structure		
Lease Length (m)	15.26	Decking	150x50 SW at 200 crs
Structure Length (m)	15.23	Deck Beams	250x50 SW at 1400 crs
Both sides Avail.	N0	Headstocks	Railway irons and softwood - Poor
Total Berthing (m)	15.23	Piles	2 x 200 and 2x250 – landside
Width (m)	3.2m	Bracing	200x75 and 200x100 SW
Additional Areas		Fenders	Four berthing piles have SW fender extensions above top of pile
Services	Water and 1 tap	Bollards	No
Condition		Handrails	No
Deck	The decking condition varies greatly from new planks to very poor. The current deck is serviceable but requires general refastening of deck planks and a minimum of three planks require replacement.		
Structure	The original sub-deck structure appears to have been braced pairs of railway iron piles with railway iron headstocks and bracing. This type of construction only remains at the downstream end. We understand the wharf at time of inspection was in the process of being upgraded with new treated SW piles with bracing already installed in some areas. The remaining railway irons are in very poor condition and require replacement.		
Piles	The newly installed piles are good and the remaining piles are poor with considerable deterioration and joint fastenings very poor.		
Previous Recommendations	Replace all railway iron members with treated SW timber piles, headstocks bracing and beams in short term 6-12 months All new members to be connected with galv. 20mm bolts and 50x50 washers General deck fixings and replacement of deck planks – in short term		
2018 Inspection	All above recommendations have been addressed		



Asset or Berth Number	L19	Former Marine Department Reference:	MD13259
Owners Name	I.A Bain		
Owners Address	213 West Plains Road, RD 4 Invercargill 9874		
Asset Details	Asset type: Wharf structure and Shed		
Lease Length (m)	21.60	Decking	250x50 SW at 290crs
Structure Length (m)	21.90	Deck Beams	250x75 SW at 1.0m crs
Both sides Avail.	No	Headstocks	1-150x100
Total Berthing (m)	21.90	Piles	200dia HW
Width (m)	2.2-2.3m	Bracing	No
Additional Areas	10.2x5.4 shed 12.85x5.5 deck	Fenders	Some extended on berthing piles
Services	Power, water and deck tap	Bollards	No
Condition		Handrails	No
General	<p>L19 appears to have originally been a 21.9m section of wharf, 2.2m wide linking L18 and L20. This now has a shed extending the 5.4m back to land at the upstream end. This shed extends 10.2m downstream at which point an additional deck has been constructed for vehicular access to the wharf extending a further 12.85m.</p> <p>EL staff understand an arrangement to lease or buy additional wharf length was made off adjacent holders however the assessment has been completed on the basis of the information given to EL from SDC and the RHS.</p>		
Deck	<p>Original Wharf: The decking is consistent and adequate at the upstream end with 2 planks requiring replacement and general deck fixings to be renewed. The deck deteriorates the further downstream you move with a number of split/broken planks requiring replacement and generally the deck is in poor condition at or around the change in direction of the berthing face.</p> <p>Vehicle Access Deck: The deck area that provides vehicle access to the wharf is constructed with 200-300x50 planks over deck beams only. These have deformed significantly. The deck has no structural integrity in its present form or from its method of construction. This area is unacceptable.</p> <p>Storage Deck Area: This area of decking had newer timber planks but these were already showing signs of deformation</p>		
Structure	<p>The areas of wharf with timber piles, headstocks, deck beam structure are in adequate condition however the areas that have railway iron components are poor and unacceptable.</p> <p>The structure under both the vehicle and storage area decks is poor and showing significant signs of deformation, degradation and is not acceptable. In these deck areas the over-spanning of timber planks and beams, lack of headstocks and no bracing provides no structural integrity to the structure. The use of railway irons in some areas has exacerbated the problem.</p> <p>The structure under the shed is all treated SW and in good condition</p>		
Piles	The timber berthing face piles are generally in good condition with some having had a spliced extension added to the top to act as a fender at high		

Piles continued	<p>tides. The berthing face piles at the wharf change in direction are poor, broken or split and will require replacement</p> <p>The HW piles under the shed are ok although the bolted connections will require attention in the medium term.</p> <p>The piles under the vehicle access and storage deck are light and in poor condition and poorly placed for effective load distribution. These are not attached to headstocks and occur under some beams providing minimal support to the structure as a whole.</p>
Additional info and comments	<p>A freezer/chiller unit is also located on the vehicle access deck against the downstream wall of the shed</p>
Previous Recommendations	<p>The downstream section of this structure is in poor condition and the condition of the wharf, vehicle and storage decks is unacceptable.</p> <p>Four, minimum, new piles will be required at the downstream end of the wharf along with new decking timbers in the short term (6-12 months)</p> <p>The vehicle deck requires the decking timbers to be lifted additional piles placed to suit design loadings and headstocks and deck beams fastened to achieve a structural deck suitable for vehicle traffic expected at this site.</p> <p>The storage deck requires some additional piles or a headstock and beam grid designed and installed appropriate to the loadings it is currently and expected to cater for.</p> <p>The vehicle and storage deck remedial works should be undertaken with some urgency but for practical reasons we have listed them as short term 6-12 months to allow these to coincide with other work on this wharf structure.</p>
2018 Inspection	<p>New piles, and beams have been installed in the vehicle and storage deck areas and the landward side of the structure is greatly improved.</p> <p>Of concern is that a number of bolts were noted as not being done up tight or were missing nuts, washers or both. This needs to be rectified immediately.</p> <p>At least 3 original outer piles have degraded or have been worn extensively and coupled with poor connections to badly deteriorated headstocks provide concern. The piles and headstocks should be replaced or at a minimum the piles and headstocks duplicated. New bolted connections to the headstocks are also required.</p>





L19



L19

Asset or Berth Number	L20	Former Marine Department Reference:	-
Owners Name	Southern Protein Limited, Russell Keen		
Owners Address	PO Box 19, Stewart Island 9846		
Asset Details	Asset type: Wharf structure and Shed		
Lease Length (m)	9.53	Decking	200x75 at 210mm crs
Structure Length (m)	9.53	Deck Beams	300x100 at 600mm crs
Both sides Aval.	No	Headstocks	2x300x100
Total Berthing (m)	9.53	Piles	250SED HW at 2.9m nom.
Width (m)	2	Bracing	200x75
Additional Areas	4.3 x 2.4m approach	Fenders	No
Services	Power, water & wharf tap	Bollards	No
Condition		Handrails	No
Deck	Existing wharf removed, new treated SW structure		
Structure	Existing wharf removed, new treated SW structure		
Piles	Existing wharf removed, new treated SW structure		
Additional info and comments	Under construction at time of inspection – Progress to date was well built		
Recommendations	Nil		



L20

Asset or Berth Number	L21	Former Marine Department Reference:	MD 14742
Owners Name	CA Oswell & AE Hutchings		
Owners Address	10 Carlyle Crescent, Witherlea, Blenheim 7201		
Asset Details	Asset type: Wharf structure and two sheds		
Lease Length (m)	23.38	Decking	200x50 SW
Structure Length (m)	23.3	Deck Beams	200x75 SW
Both sides Aval.	No	Headstocks	200x75 SW
Total Berthing (m)	23.3	Piles	250dia SW
Width (m)	3.1	Bracing	200x75 SW
Additional Areas	Two sheds	Fenders	2 timber fender strips on berthing piles
Services	Power and water	Bollards	No
Condition		Handrails	No
Deck	While we were not able to get access to the wharf structure the deck was able to be viewed from adjacent structures and from the underside. The decking timber is in good condition although it is sloping in areas due to pile movement. Decking timber in sheds all appear ok from underside.		
Structure	<p>The structure has been designed and built solidly with adequate bracing. The wharf appears to have been subjected to a lot of use and in particular berthing loads and impacts. The bottom connection on as many as five of the downstream braces on the berthing face piles have failed. This in turn has let the pile toes move away from the structure most likely as a result of berthing impacts higher up the pile. It is very obvious this structure has been subjected to these impacts as the vessel's beltings have worn the piles and ends of headstocks and braces back in some cases to the extent of exposing fastenings. At least one headstock has been completely broken as a result of the berthing impacts. Sacrificial fender timbers appear to have been fixed recently to mitigate the wearing of the piles</p> <p>The structure supporting the sheds is very solid and in good condition</p>		
Piles	The piles are in good condition but with the failure of the bottom bracing connection some piles have slumped (toe moving towards the river) and this has had the effect of making the deck uneven particular at downstream end.		
Additional info and comments	The structure will get some bracing help from the buildings spanning back to land however the downstream end subjected to both the weather exposure and higher berthing loads get no bracing benefits from the building at this end and it is therefore imperative the bracing is reinstated satisfactorily		
Previous Recommendations	<p>All headstocks need to be checked and any damaged including the broken one replaced or repaired with a splice plate both sides.</p> <p>If piles are able to be trued, they should be, prior to the reattachment or replacement of all braces that have become detached.</p> <p>Ensure sufficient wearing strips are attached to berthing piles to ensure no further degradation of headstock and bracing ends. Coat exposed fastenings in 'Flintcoat' or similar bituminous coating to slow accelerated corrosion.</p>		

2018 Inspection

There does not appear to have been any, or very little maintenance or remedial works undertaken on this structure since the previous inspection. The wharf, in particular the outer berthing area of the structure, is noticeably worse than when previously inspected.

An attempt may possibly have been made to repair a broken headstock as it has a piece of blocking hanging from it, however this has been ineffective, and it is again hanging broken.

Other beams are broken or cracked, and the structure has begun to slump noticeably as the toes of the outer piles appear have settled outboard. This settlement exacerbated obviously by a larger boat impacting higher up the fender piles is putting the structure under stress and is most certainly contributing to the cracking and broken timbers.

A high percentage of the fixings around bracing and headstock to pile connections are very badly corroded and will also require replacement.



L21



L21

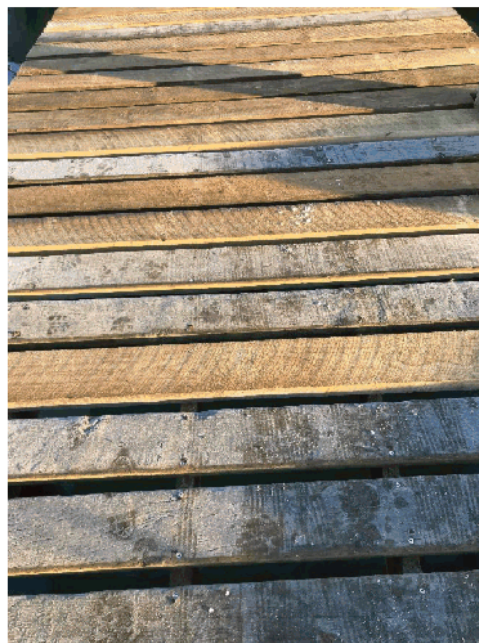


L21

Asset or Berth Number	L22	Former Marine Department Reference:	MD 14661
Owners Name	J & K M Svensson		
Owners Address	57 Richard Street, Riverton 9822		
Asset Details	Asset type: Wharf structure (Part of Long Wharf)		
Lease Length (m)	17.23	Decking	200x50 SW
Structure Length (m)	17.23	Deck Beams	200x75 SW at 1.0m crs
Both sides Avail.	Yes	Headstocks	200x100 SW at 300 crs
Total Berthing (m)	34.46	Piles	200dia SW
Width (m)	3.05	Bracing	200x75 SW cross brace at all bents
Additional Areas	No	Fenders	3-100x50 landside
Services	Water & tap, Power cable	Bollards	No
Condition		Handrails	No
Deck	Decking has been replaced and all sound		
Structure	<p>A number of deck beams are showing significant loss of section or wasting. Outer deck beam riverside between bents 6 and 7 has been broken to the extent it does not reach the headstock</p> <p>The headstocks ends have degraded in some cases with the help of vessels belting rubbing them to the extent that it has exposed the bolt fastenings. Due to the fastenings' exposure they have then suffered accelerated corrosion.</p> <p>All outer fastenings near ends of headstocks or deck beams are showing signs of advanced corrosion</p>		
Piles	All seven pairs of piles are sound		
Previous Recommendations	<p>Replace deck planks and general deck fastening.</p> <p>Deck beam at bents 6-7 to be replaced as soon as practical but within 6 months.</p> <p>Bolts in all headstocks need to be inspected and if exposed and seen to have advanced corrosion or noticeable loss of section they need to be replaced. Where fixing looks ok paint any exposed steel with 'Flintcoat' or similar bituminous paint.</p> <p>Bottom connections on all cross bracing at every bent have failed. Where failure is from bolt or degradation of existing brace is minor, brace can be lifted to slightly flatter angle and new fastening installed. Where the degradation is significant, the brace should be replaced in the short term of 6-12 months.</p>		
2018 Inspection	<p>Deck planking and fastenings have been replaced and are good. Selected deck beams have also been replaced where required. Additional bolt fastenings have been added where the existing were poor. All bracing and associated fastenings have been replaced.</p> <p>Recommend applying 'Flintcoat' or similar bituminous coating to all fastenings to ensure required durability is achieved.</p>		



L22



L22

Asset or Berth Number	L23	Former Marine Department Reference:	MD 14662
Owners Name	JF Ingram		
Owners Address	2 David Street, Riverton 9822		
Asset Details	Asset type: Wharf structure (Part of Long Wharf)		
Lease Length (m)	17.23	Decking	Grooved 200x50 SW
Structure Length (m)	17.23	Deck Beams	200x75 SW at 1.0m crs
Both sides Avail.	Yes	Headstocks	200x100 SW at 300 crs
Total Berthing (m)	34.46	Piles	200dia SW
Width (m)	3.05	Bracing	200x75 SW cross brace at all bents
Additional Areas	No	Fenders	4-200x40 landside, 1-75x75 riverside
Services	Water & tap, Power cable	Bollards	No
Condition		Handrails	No
Deck	New grooved decking has been replaced and all sound		
Structure	<p>A number of deck beams are showing significant loss of section or wasting. The headstocks ends have degraded in some cases with the help of vessels belting rubbing them, to the extent that it has exposed the bolt fastenings. Due to the fastenings exposure they have then suffered accelerated corrosion.</p> <p>All outer fastenings near ends of headstocks or deck beams are showing signs of advanced corrosion</p>		
Piles	All seven pairs of piles are sound		
Previous Recommendations	<p>General deck fastening.</p> <p>Bolts in all headstocks need to be inspected and if exposed and seen to have advanced corrosion or noticeable loss of section they need to be replaced. Where fixing looks ok paint any exposed steel with 'Flintcoat' or similar bituminous paint.</p> <p>Bottom connections on all cross bracing at every bent have failed. Where failure is from bolt or degradation of existing brace is minor, brace can be lifted to slightly flatter angle and new fastening installed. Where the degradation is significant the brace should be replaced in the short term of 6-12 months.</p>		
2018 Inspection	<p>Deck planking and fastenings have been replaced and are good with the exception of the plank at the power/light pole. Additional bolt fastenings have been added where the existing were poor. All bracing and associated fastenings have been replaced.</p> <p>Recommend applying 'Flintcoat' or similar bituminous coating to all fastenings to ensure required durability is achieved.</p>		

Asset or Berth Number	L24	Former Marine Department Reference:	MD 14663
Owners Name	A R & D Haywood		
Owners Address	12 Bates Street, Riverton 9822		
Asset Details	Asset type: Wharf structure (Part of Long Wharf)		
Lease Length (m)	14.76	Decking	200x50 SW at 260crs
Structure Length (m)	14.76	Deck Beams	200x75 SW at 1.0m crs
Both sides Aval.	Yes	Headstocks	200x100 SW at 300 crs
Total Berthing (m)	29.52	Piles	200dia SW
Width (m)	3.05	Bracing	200x75 SW cross brace at all bents
Additional Areas	No	Fenders	3-150x50 landside, 3-125x125 riverside
Services	Water & tap, Power plug, light & power box	Bollards	No
Condition		Handrails	No
Deck	Generally, deck planking ok however a number of uneven, broken cracked or non-continuous deck planks marked with a pink paint dot require replacing		
Structure	<p>Outer deck beam riverside requires attention.</p> <p>The headstocks ends have degraded in some cases with the help of vessels belting rubbing them, to the extent that it has exposed the bolt fastenings. Due to the fastenings exposure they have then suffered accelerated corrosion.</p> <p>All outer fastenings near ends of headstocks or deck beams are showing signs of advanced corrosion</p>		
Piles	Six pairs of piles are sound. We understand Bent No.24 was mistakenly identified as part of this asset at previous inspection and notes relating to that are now with L25		
Previous Recommendations	<p>Replace deck planks and general deck fastening.</p> <p>Outer deck beam to be replaced or repaired as soon as practical</p> <p>Bolts in all headstocks need to be inspected and if exposed and seen to have advanced corrosion or noticeable loss of section they need to be replaced. Where fixing looks ok paint any exposed steel with 'Flintcoat' or similar bituminous paint.</p> <p>Bottom connections on all cross bracing at every bent have failed. Where failure is from bolt or degradation of existing brace is minor, brace can be lifted to slightly flatter angle and new fastening installed. Where the degradation is significant the brace should be replaced in the short term of 6-12 months.</p> <p>Investigate extent of pile wasting bent 24 and if section loss is more than 35% of original area, pile to be replaced within 3 months.</p>		
2018 Inspection	<p>Identified deck planking and fastenings require replacement.</p> <p>All bracing and associated fastenings have been replaced.</p>		

Additional bolt fastenings have been added where the existing were poor.
Recommend applying 'Flintcoat' or similar bituminous coating to all fastenings to ensure required durability is achieved.



L24

Asset or Berth Number	L25	Former Marine Department Reference:	MD 14664
Owners Name	R T Bull		
Owners Address	32 Walker Street, Riverton 9822		
Asset Details	Asset type: Wharf structure (Part of Long Wharf)		
Lease Length (m)	17.23	Decking	200x50 SW at 260crs
Structure Length (m)	17.23	Deck Beams	200x75 SW at 1.0m crs
Both sides Aval.	Yes	Headstocks	200x100 SW at 300 crs
Total Berthing (m)	34.46	Piles	200dia SW
Width (m)	3.05	Bracing	200x75 SW cross brace at all bents
Additional Areas	No	Fenders	1-125x75 landside
Services	Water & tap, Power cable	Bollards	No
Condition		Handrails	No
Deck	General deck plank fastening required. Sections of deck bracing have failed and either disappeared or are hanging under deck ineffective		
Structure	4 deck beams on the outboard side require replacement as a minimum. The headstocks ends have degraded in some cases with the help of vessels belting rubbing them, to the extent that it has exposed the bolt fastenings. Due to the fastenings exposure they have then suffered accelerated corrosion. All outer fastenings near ends of headstocks or deck beams are showing signs of advanced corrosion		
Piles	Of the six pairs of piles, 10 are sound and 2 have significant defects and will require replacing. Bent 24 was mistakenly catalogued under L24 which has a significantly wasted pile.		
Previous Recommendations	Replace deck planks and general deck fastening. Bolts in all headstocks need to be inspected and if exposed and seen to have advanced corrosion or noticeable loss of section they need to be replaced. Where fixing looks ok paint any exposed steel with 'Flintcoat' or similar bituminous paint. Bottom connections on all cross bracing at every bent have failed. Where failure is from bolt or degradation of existing brace is minor, brace can be lifted to slightly flatter angle and new fastening installed. Where the degradation is significant the brace should be replaced in the short term of 6-12 months.		
2018 Inspection	Very little has been done to this section of wharf since previous inspection. A minimum of 2 piles, 4 deck beams, multiple bolt fixings and decking planks are required to be addressed. SDC has been advised these works are underway but were not completed at time of inspection		



Asset or Berth Number	L26	Former Marine Department Reference:	MD 14665
Owners Name	Jones Family Trust		
Owners Address	c/- Dave Jones, 131 Layard St, Invercargill 9810		
Asset Details	Asset type: Wharf structure (Part of Long Wharf)		
Lease Length (m)	17.23	Decking	200x50 SW at 260crs
Structure Length (m)	17.23	Deck Beams	200x75 SW at 1.0m crs
Both sides Aval.	Yes	Headstocks	200x100 SW at 300 crs
Total Berthing (m)	34.46	Piles	200dia SW
Width (m)	3.05	Bracing	200x75 SW cross brace at all bents
Additional Areas	No	Fenders	2-75x75 landside 3-300x50 riverside
Services	Water & tap, Power cable	Bollards	No
Condition		Handrails	No
Deck	Deck generally sound with 1 plank requiring replacement and general deck plank fastening. Sections of deck bracing have failed and either disappeared or are hanging under deck ineffective		
Structure	The headstocks ends have degraded in some cases with the help of vessels belting rubbing them, to the extent that it has exposed the bolt fastenings. Due to the fastenings exposure they have then suffered accelerated corrosion. 1 outboard deck beam requires replacement as it appears to have been significantly damaged by an impact. 2 cross braces are unacceptable due to wastage and lower connections. All outer fastenings near ends of headstocks or deck beams are showing signs of advanced corrosion		
Piles	All seven pairs of piles are sound. One pile has had the top broken off.		
Previous Recommendations	Replace deck plank and general deck fastening. As soon as practical provide blocking and covering timber for hole in the deck where pile was broken off Bolts in all headstocks need to be inspected and if exposed and seen to have advanced corrosion or noticeable loss of section they need to be replaced. Where fixing looks ok paint any exposed steel with 'Flintcoat' or similar bituminous paint. Bottom connections on all cross bracing at every bent have failed. Where failure is from bolt or degradation of existing brace is minor, brace can be lifted to slightly flatter angle and new fastening installed. Where the degradation is significant the brace should be replaced in the short term of 6-12 months.		
2018 Inspection	No maintenance or remedial works are obvious on this section of wharf since previous inspection. General deck planking and fixings are required to be carried out as well as the deck beam and cross bracing replacement		



L26

Asset or Berth Number	L27	Former Marine Department Reference:	MD 14666
Owners Name	M Kuishopp & J Leask, C/- Takapu Charters		
Owners Address	PO Box 2013, Washdyke, Timaru 7941		
Asset Details	Asset type: Wharf structure (Part of Long Wharf)		
Lease Length (m)	14.76	Decking	200x50 SW at 260crs
Structure Length (m)	14.76	Deck Beams	200x75 SW at 1.0m crs
Both sides Aval.	Yes	Headstocks	200x100 SW at 300 crs
Total Berthing (m)	29.52	Piles	200dia SW
Width (m)	3.05	Bracing	200x75 SW cross brace at all bents
Additional Areas	No	Fenders	Heavy duty tyres landside, 6-100x50 riverside
Services	Water & tap, Power cable	Bollards	No
Condition		Handrails	No
Deck	Deck generally sound with just general deck plank fastening required		
Structure	<p>Outer deck beam landside requires attention.</p> <p>Outer bent requires new cross bracing, existing have failed</p> <p>The headstocks ends have degraded in some cases with the help of vessels belting rubbing them, to the extent that it has exposed the bolt fastenings. Due to the fastenings exposure they have then suffered accelerated corrosion.</p> <p>All outer fastenings near ends of headstocks or deck beams are showing signs of advanced corrosion</p>		
Piles	All six pairs of piles are sound.		
Previous Recommendations	<p>General deck fastening.</p> <p>Outer deck beam to be replaced or repaired as soon as practical but within 6 months.</p> <p>Bolts in all headstocks need to be inspected and if exposed and seen to have advanced corrosion or noticeable loss of section they need to be replaced. Where fixing looks ok paint any exposed steel with 'Flintcoat' or similar bituminous paint.</p> <p>Bottom connections on all cross bracing at every bent have failed. Where failure is from bolt or degradation of existing brace is minor, brace can be lifted to slightly flatter angle and new fastening installed. Where the degradation is significant the brace should be replaced in the short term of 6-12 months.</p>		
2018 Inspection	General deck planking and fixings are required to be carried out as well as the outer bent cross bracing replacement.		

Asset or Berth Number	L28	Former Marine Department Reference:	MD 14667
Owners Name	D Scott		
Owners Address	5 Richard Street, Riverton 9822		
Asset Details	Asset type: Wharf structure (Part of Long Wharf)		
Lease Length (m)	17.23	Decking	200x50 SW at 260crs
Structure Length (m)	17.23	Deck Beams	200x75 SW at 1.0m crs
Both sides Aval.	Yes	Headstocks	200x100 SW at 300 crs
Total Berthing (m)	34.46	Piles	200dia SW
Width (m)	3.05	Bracing	200x75 SW cross brace at all bents
Additional Areas	No	Fenders	No
Services	Water & tap, Power plug, light & power box	Bollards	No
Condition		Handrails	No
Deck	Deck sound with general deck plank fastening required. Sections of deck bracing have failed and either disappeared or are hanging under deck ineffective		
Structure	The headstocks ends have degraded in some cases with the help of vessels belting rubbing it, to the extent that it has exposed the bolt fastenings. Due to the fastenings exposure they have then suffered accelerated corrosion. All outer fastenings near ends of headstocks or deck beams are showing signs of advanced corrosion		
Piles	All seven pairs of piles are sound		
Recommendations	General deck fastening. Bolts in all headstocks need to be inspected and if exposed and seen to have advanced corrosion or noticeable loss of section they need to be replaced. Where fixing looks ok paint any exposed steel with 'Flintcoat' or similar bituminous paint. Bottom connections on all cross bracing at every bent have failed. Where failure is from bolt or degradation of existing brace is minor, brace can be lifted to slightly flatter angle and new fastening installed. Where the degradation is significant the brace should be replaced in the short term of 6-12 months.		
2018 Inspection	General deck planking and fixings are required to be carried out as well as addressing the bolted fastenings in headstocks Bracing has been addressed		

Asset or Berth Number	L29	Former Marine Department Reference:	MD 14668
Owners Name	D Excell and N Excell		
Owners Address	1 Tawera Place, Te Anau 9679		
Asset Details	Asset type: Wharf structure (Part of Long Wharf)		
Lease Length (m)	14.76	Decking	200x50 SW at 260crs
Structure Length (m)	14.76	Deck Beams	200x75 SW at 1.0m crs
Both sides Avail.	Yes	Headstocks	200x100 SW at 300 crs
Total Berthing (m)	29.52	Piles	200dia SW
Width (m)	3.05	Bracing	200x75 SW cross brace at all bents
Additional Areas	No	Fenders	2-200x50 with MS bracket landside
Services	Water & tap, Power cable	Bollards	No
Condition		Handrails	No
Deck	Deck sound with general deck plank fastening required. Sections of deck bracing have failed and either disappeared or are hanging under deck ineffective		
Structure	The headstocks ends have degraded in some cases with the help of vessels belting rubbing it, to the extent that it has exposed the bolt fastenings. Due to the fastenings exposure they have then suffered accelerated corrosion. All outer fastenings near ends of headstocks or deck beams are showing signs of advanced corrosion		
Piles	All six pairs of piles are sound		
Previous Recommendations	General deck fastening. Bolts in all headstocks need to be inspected and if exposed and seen to have advanced corrosion or noticeable loss of section they need to be replaced. Where fixing looks ok paint any exposed steel with 'Flintcoat' or similar bituminous paint. Bottom connections on all cross bracing at every bent have failed. Where failure is from bolt or degradation of existing brace is minor, brace can be lifted to slightly flatter angle and new fastening installed. Where the degradation is significant the brace should be replaced in the short term of 6-12 months.		
2018 Inspection	Some deck planking and fixings required Bracing has been addressed		

Asset or Berth Number	L30	Former Marine Department Reference:	MD 14837
Owners Name	A F Stenton and R Wallace		
Owners Address	10 Roy Street, Riverton 9822		
Asset Details	Asset type: Wharf structure (Part of Long Wharf)		
Lease Length (m)	17.23	Decking	200x50 SW at 260crs
Structure Length (m)	17.23	Deck Beams	200x75 SW at 1.0m crs
Both sides Aval.	Yes	Headstocks	200x100 SW at 300 crs
Total Berthing (m)	34.46	Piles	200 SED SW
Width (m)	3.05	Bracing	200x75 SW cross brace at all bents
Additional Areas	No	Fenders	7-75x75 landside, 3-200x200 waterside
Services	Water & tap, Power cable	Bollards	No
Condition		Handrails	No
Deck	Deck is mainly sound with general deck plank fastening required. Planking condition at the upstream end of the Long Wharf structure is deteriorating and will require replacing medium term 2-3 years Sections of deck bracing have failed and either disappeared or are hanging under deck ineffective		
Structure	The headstocks ends have degraded in some cases with the help of vessels belting rubbing it, to the extent that it has exposed the bolt fastenings. Due to the fastenings exposure they have then suffered accelerated corrosion. All outer fastenings near ends of headstocks or deck beams are showing signs of advanced corrosion		
Piles	All seven pairs of piles are sound. Outer most pile landside wasted		
Previous Recommendations	Replace deck planks and general deck fastening. Bolts in all headstocks need to be inspected and if exposed and seen to have advanced corrosion or noticeable loss of section they need to be replaced. Where fixing looks ok paint any exposed steel with 'Flintcoat' or similar bituminous paint. Bottom connections on all cross bracing at every bent have failed. Where failure is from bolt or degradation of existing brace is minor, brace can be lifted to slightly flatter angle and new fastening installed. Where the degradation is significant the brace should be replaced in the short term of 6-12 months. Investigate extent of pile wasting at outer most bent. If the loss of section exceeds 35% of original area, pile to be replaced within 3 months.		
2018 Inspection	Some deck planking and fixings required Bracing has been addressed Outer pile has been doubled with the addition of 250x250sq SW pile		



L30

Asset or Berth Number	L35	Former Marine Department Reference:	MD 13941
Owners Name	GRB Coull		
Owners Address	224B Colac Bay Foreshore Road, RD 1, Riverton 9881		
Asset Details	Asset type: Wharf structure (Outer end of L36)		
Lease Length (m)	13.1	Decking	150x50 SW
Structure Length (m)	13.1	Deck Beams	150x50 SW
Both sides Aval.	Yes	Headstocks	200x75
Total Berthing (m)	26.2	Piles	Originally 200dia
Width (m)	3.0	Bracing	Original braces no longer present
Additional Areas	No	Fenders	No
Services	No	Bollards	No
Condition	Handrails		No
Deck	Most of decking is 150x50 although there is the odd 100x50 and 220x50 the majority of which is acceptable and requiring only fastenings		
Structure	The structure is very poor. The deck beams are not acceptable and the headstocks are marginal and in combination with all the bracing broken or gone this structure is a very poor state		
Piles	The piles have significant wasting around low water area reducing their effective diameter and with no bracing left, offer little in lateral resistance.		
Additional info and comments	The L35 structure is of serious concern and while vessels are still using it, there is a very real risk in adverse condition that this structure could fail. The doubtful integrity of the structure and the security of vessels moored to it justify urgent action on the part of SDC.		
Previous Recommendations	<p>If this structure is to be repaired there is very little to be recovered from the existing structure and the project would more resemble a rebuild from scratch requiring at least 10 min new piles, headstocks, deck beams, decking and associated fixings. It is recommended that the owners be required to present a programme for repair or replacement within 2 months. The plan to be subject to approval by SDC with the intention to restore the structure to an acceptable level within 6 months of approval being granted, at which time a further inspection will be made.</p> <p>The continued validity of the licence to occupy sea bed to be conditional upon compliance with the above</p>		
2018 Inspection	No maintenance or remedial works have been undertaken on this structure since the previous inspection		



Asset or Berth Number	L36	Former Marine Department Reference:	MD 14714
Owners Name and Address	Southland District Council, PO Box 903, Invercargill 9840		
Lessee Name and Address	K J Hishon, PO Box 42, Lumsden 9742		
Asset Details	Asset type: Wharf structure		
Lease Length (m)	10.30	Decking	Upper 125x50 SW Lower 100x50 SW
Structure Length (m)	10.30	Deck Beams	Upper 125x50 SW Lower 100x50 SW
Both sides Avail.	No	Headstocks	Upper 125x50 SW Lower 125x50 SW
Total Berthing (m)	10.30	Piles	Upper 150dia HW, Lower 150dia
Width (m)	4.15	Bracing	Original braces no longer present
Additional Areas	23.3 x 1.37m Approach	Fenders	No
Services	Power, light & powerbox	Bollards	No
Condition		Handrails	On approach and inside edge of upper deck
Deck	<p>This wharf is split level and both the upper and lower wharf decking is in poor condition with 50% requiring replacement. Deck planks are broken, significantly cracked or rotten to the extent that the risk of persons falling through one of these is very real.</p> <p>The approach structure is new, has been constructed very well and the decking timber is in good condition</p>		
Structure	The structure of L36 is poor. Approximately 50% of the headstocks are unacceptable with a similar percentage of deck beams also unacceptable and all bracing is broken or gone.		
Piles	The piles show wasting at low water, and while not as dramatic as the adjacent wharf some have significant loss of effective diameter and with no bracing present, offer little in lateral resistance. This part of the wharf has 3 lines of piles and therefore is a little more robust. The connections to the headstocks appear ok		
Additional info and comments	A wharf of two halves, approach good, wharf poor.		
Previous Recommendations	<p>The approach requires no remediation other than at the outer end its connection to the wharf would need to be addressed with any repairs. The wharf decks, lower area in particular and at the junction with the approach are very poor and decking would require complete replacement. On the upper deck 20-30% of the decking planks would require replacement. Where headstocks are showing signs of advanced deterioration a new treated headstock of similar size should be bolted on the other side of the piles.</p> <p>Deck beams will need to be replaced on a case by case basis once decking is removed and condition can be properly assessed but EL estimate as much as 30-40% of these would require replacement.</p> <p>With the addition of heavy fender type timber bolted to the piles ensuring it spans the wasted area and fixed both sides and the addition of 150x75min</p>		

cross bracing it would provide this structure with an economical repair offering an acceptable remaining life for a structure in this condition.

Piles showing loss of section of more than 35% of original should be replaced within 3 months,

It is recommended that the owners be required to present a programme for repair or replacement within 2 months. The plan to be subject to approval by SDC with the intention to restore the structure to an acceptable level within 6 months of approval being granted, at which time a further inspection will be made.

The continued validity of the licence to occupy sea bed to be conditional upon compliance with the above

No maintenance or remedial works have been undertaken on this structure since the previous inspection

2018 Inspection

L36

Asset or Berth Number	L37	Former Marine Department Reference:	MD 12644
Owners Name	A R Thompson		
Owners Address	52 Bungalow Hill Road, RD 1, Riverton 9881		
Asset Details	Asset type: Wharf structure		
Lease Length (m)	10.5	Decking	Limited numbers of 150x50 HW and SW in places and some sheets of plywood in some areas
Structure Length (m)	10.5	Deck Beams	No uniform deck beam structure
Both sides Avail.	No	Headstocks	150 & 200 dia HW poles
Total Berthing (m)	10.5	Piles	200 & 300 dia HW piles
Width (m)	4.5	Bracing	No effective bracing evident
Additional Areas	18.5 x 2.5m Approach	Fenders	-
Services	Water, power & powerbox	Bollards	-
Condition		Handrails	-
Deck	Decking is a mixture of sizes in both HW and SW. All timbers were in acceptable condition however some was not permanently fixed down.		
Structure	<p>The structure is formed with a variety of timbers and sizes but loosely consists of round piles extending above deck level supporting in places a round headstock or directly fixed to HW poles running longitudinally as deck beams.</p> <p>Unconventionally in some cases the headstocks are fixed up through the deck beams with no connection to the piles while still supporting central deck beams. This is unacceptable but relatively easily fixed.</p> <p>There is no form of bracing on the approach or the T-Head</p>		
Piles	<p>The 200 & 300 dia HW piles are generally sound, appear to have reasonable embedment but with no form of bracing and marginal connection to the structure in places provides real concern</p> <p>The structure has improved dramatically since the previous inspection however it still poses a serious risk due to some minor and relatively easily fixes. These concerns include:</p> <ul style="list-style-type: none"> • Missing or unconventional fixings at beam/headstock/pile • No bracing elements on approach or T-head • Numerous loose timber members some attached by rope • 2 vessels rafted to the outer end of an un-braced and poorly fixed wharf structure 		
Additional info and comments			
Previous Recommendations	<p>This structure is unacceptable and poses a very real risk to the environment and users of the waterway.</p> <p>While we appreciate the 'bones' of a structure may be at the site, it in no way fulfils the requirements of a safe and functional structure and due to the amount of material and method of fixing, this structure could have catastrophic consequences for nearby structure owners, moored boats or users of the waterway in high river flows or adverse environmental conditions</p>		

2018 Inspection

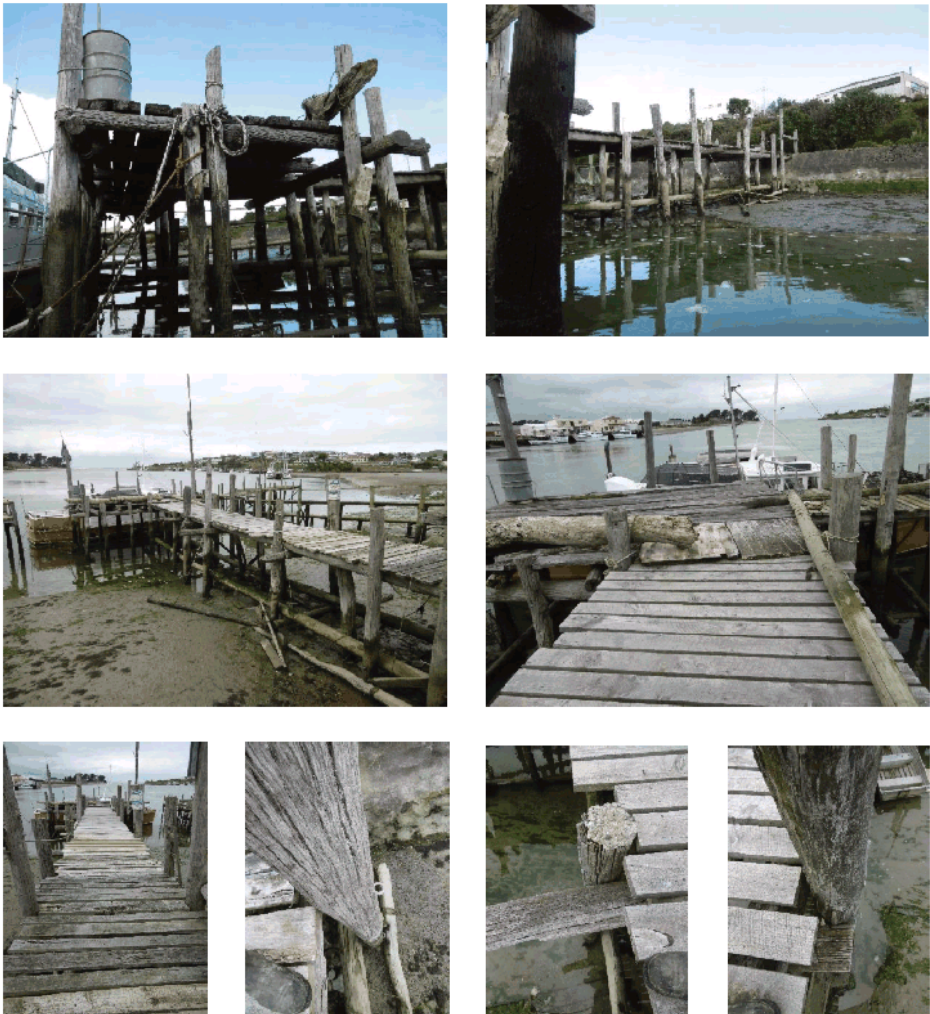
It is recommended that the owners be required to present a programme for repair or replacement within 2 months. The plan to be subject to approval by SDC with the intention to restore the structure to an acceptable level within 6 months of approval being granted, at which time a further inspection will be made.

The continued validity of the licence to occupy sea bed to be conditional upon compliance with the above

As listed above fixings at beam/headstock/pile need to ensure the headstock is well attached to the piles in all case.

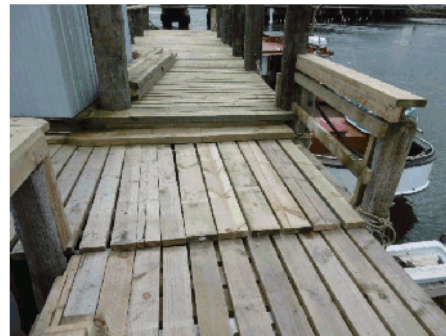
Some form of cross bracing or similar approved to be installed on both the approach and the T-head.

All decking timber is required to be fixed down to the deck beams



L37

Asset or Berth Number	L38	Former Marine Department Reference:	MD 12642
Owners Name	E W Dickson		
Owners Address	361 Orepuki-Riverton Highway, Riverton 9822		
Asset Details	Asset type: Wharf structure		
Lease Length (m)	11.5	Decking	New 150x50 treated SW over existing deck
Structure Length (m)	11.5	Deck Beams	200x100 HW
Both sides Aval.	No	Headstocks	200x100 HW
Total Berthing (m)	11.5	Piles	150dia HW
Width (m)	2.1	Bracing	200x50 SW
Additional Areas	18.8 x 1.6m Approach	Fenders	No
Services	No	Bollards	No
Condition		Handrails	Yes - New
Deck	The approach decking has been completely renewed from road to T-head complete with kerb or kick rail both sides and hand rail downstream side only. Wharf head decking is new 150x50 treated SW planking fixed over existing deck.		
Structure	<p>The Headstocks on the wharf are sound except one, the second last downstream bent. This headstock is compromised by rot from the top of the member and will require replacement.</p> <p>As the piles are relatively small diameter it is important that adequate levels of bracing are maintained. The majority of bracing is in adequate condition with one broken brace requiring replacement and one requiring reinstatement of adequate bottom fastening</p> <p>Approach structure has been recently upgraded and is sound.</p>		
Piles	<p>Piles on the wharf structure are light HW poles and show signs of wasting at lower water level. While this is concerning, if adequate effective bracing is maintained at all times and the pile wasting does not accelerate these piles can be accepted as adequate in the short term. A replacement strategy should be initiated for the medium term (3-5 years)</p> <p>Approach piles all sound</p>		
Additional info and comments	Works were on-going at time of inspection with SDC notified of pending arrival of timber for additional bracing on out board piles.		
Previous Recommendations	<p>Replace SW deck planks and handrails with bolted fixings (2-3 months)</p> <p>Replace or repair headstock with similar size treated timber and reinstate broken bracing including bottom fixing on others where required (3-6 months)</p>		
2018 Inspection	<p>Wharf was much improved on last inspection.</p> <p>2 downstream headstocks are significantly deteriorated and will require replacement or duplication with new on other side of pile if possible.</p> <p>Bracing is required to be installed to form cross on a minimum of three bents. We understand the installation is pending arrival of treated timber.</p>		



Asset or Berth Number	L39	Former Marine Department Reference:	-
Owners Name	Schofield Fishing Company Ltd, C/- Kevin Schofield		
Owners Address	508 Lorne Dacre Highway, RD 6, Invercargill 9876		
Asset Details	Asset type: Wharf structure (Continuation of L38)		
Lease Length (m)	12.5	Decking	150x75 SW at 180crs
Structure Length (m)	12.5	Deck Beams	250x75 at 1.25mcrs
Both sides Avail.	Yes	Headstocks	2-250x75
Total Berthing (m)	25.0	Piles	250 SED H6
Width (m)	2.1	Bracing	250x75 SW
Additional Areas	2.55 x2.55m platform and shed	Fenders	No
Services	No	Bollards	Extension of the piles
Condition		Handrails	250x75 railing to piles
Deck	New wharf structure, well-constructed.		
Structure	New wharf structure, well-constructed with the exception of the shed platform which forms an add-on to the wharf structure and is in an acceptable condition.		
Piles	New wharf structure, well-constructed.		
Additional info and comments			
Previous Recommendations	Replace SW deck planks and handrails with bolted fixings (2-3 months) Replace or repair headstock with similar size treated timber and reinstate broken bracing including bottom fixing on others where required (3-6 months)		
2018 Inspection	Nil		



L39



L39

Asset or Berth Number	L40	Former Marine Department Reference:	MD 14565
Owners Name	Alistair and Raewyn Sutherland		
Owners Address	681 Manapouri Te Anau Highway TE ANAU 9679		
Asset Details	Asset type: Wharf structure		
Lease Length (m)	15.5	Decking	200x50
Structure Length (m)	15.5	Deck Beams	200x100 and 100x100 SW
Both sides Aval.	No	Headstocks	2-200x100 SW
Total Berthing (m)	15.5	Piles	400 oct. conc. Landside 200 SED riverside
Width (m)	3.1	Bracing	No
Additional Areas	No	Fenders	No
Services	Nil	Bollards	No
Condition	Handrails		No
Deck	The majority of the SW deck is acceptable with the exception of some planks at the upstream end. Some are badly cracked or have pieces broken out of and need to be addressed.		
Structure	Two beams are broken in the sub-structure and require replacement. The remainder of the timbers are adequate however the fixings are very badly corroded and some need to be replaced at pile/headstock connection.		
Piles	Concrete piles are good. Timber berthing piles are showing both advanced cracking and degradation on their tops and noticeable wear from vessel beltings etc. and it is our recommendation that some sacrificial fender type timbers be attached to extend the life of the piles however this in its present condition does not affect the integrity of the pile.		
Additional info and comments	This wharf structure is a designated lease of a portion of a length of wharf referred to locally as the Co-op wharf. This section does not have any bracing but is well founded with tie-backs to the land from the concrete piles offering significant bracing support		
Previous Recommendations	Pile facings as above		
2018 Inspection	<p>No maintenance or remedial works are obvious since last inspection however a deterioration in the condition of the structure is noticeable.</p> <p>Broken beams in the sub-structure need to be addressed.</p> <p>Deck planking at the upstream end and outer edges needs to be fixed.</p>		







L40



L40

Asset or Berth Number	L41	Former Marine Department Reference:	MD 14595
Owners Name	Ian McCracken		
Owners Address	853 Orepuki-Tuatapere Highway, RD 1 RIVERTON 9881		
Asset Details	Asset type: Wharf structure		
Lease Length (m)	15.75	Decking	200x50
Structure Length (m)	15.75	Deck Beams	200x100 and 100x100 SW
Both sides Aval.	No	Headstocks	2-200x100 SW
Total Berthing (m)	15.75	Piles	400 oct. conc. Landside 200 SED riverside
Width (m)	3.1	Bracing	No
Additional Areas	No	Fenders	No
Services	Nil	Bollards	No
Condition	Handrails		No
Deck	The SW deck is sound with secure fixings		
Structure	<p>Structure is generally sound in this area with defects as follows</p> <p>The timber plate/trimmer that supports the landward end of the headstocks has failed at bents 10 & 11 and the deck has dropped as a result. This needs to be reinstated as soon as possible to prevent further deterioration to the wharf structure.</p>		
Piles	<p>Both concrete and timber piles good. Timber berthing piles are showing wear from vessel beltings etc. and it is our recommendation that some sacrificial fender type timbers be attached to extend the life of the piles however this in its present condition does not affect the integrity of the pile.</p>		
Additional info and comments	<p>This wharf structure is a designated lease of a portion of a length of wharf referred to locally as the Co-op wharf. This section does not have any bracing but is well founded with tie-backs to the land from the concrete piles offering significant bracing support</p>		
Previous Recommendations	<p>Reinstate timber plate/trimmer between bents 10 & 11 as soon as practical (1-2 months) and effect repairs to any related timber member damage.</p> <p>Install pile facing timbers as above.</p>		
2018 Inspection	<p>No maintenance or remedial works are obvious since last inspection.</p> <p>Broken beams in the sub-structure need to be addressed.</p> <p>Steel carrier plates are extensively corroded and will require replacement in the short term</p> <p>Also noted is the loss of material from behind the retaining wall. If this is allowed to continue it will compromise the integrity of the wall and associated tie backs.</p>		
 			

Asset or Berth Number	L42	Former Marine Department Reference:	MD 14596
Owners Name	Ian McCracken		
Owners Address	853 Orepuki-Tuatapere Highway, RD 1 RIVERTON 9881		
Asset Details	Asset type: Wharf structure		
Lease Length (m)	18.37	Decking	200x50
Structure Length (m)	18.37	Deck Beams	200x100 and 100x100 SW
Both sides Avail.	No	Headstocks	2-200x100 SW
Total Berthing (m)	18.37	Piles	400 oct. conc. Landside 200 SED riverside
Width (m)	3.1	Bracing	No
Additional Areas	No	Fenders	No
Services	Deck crane and power	Bollards	No
Condition		Handrails	No
Deck	The SW deck is sound with secure fixings		
Structure	Structure is also sound, connections adequate.		
Piles	Both concrete and timber piles good. Timber berthing piles are showing wear from vessel beltings etc. and it is our recommendation that some sacrificial fender type timbers be attached to extend the life of the piles however this in its present condition does not affect the integrity of the pile.		
Additional info and comments	This wharf structure is a designated lease of a portion of a length of wharf referred to locally as the Co-op wharf. This section does not have any bracing but is well founded with tie-backs to the land from the concrete piles offering significant bracing support.		
Previous Recommendations	Install pile facing timbers as above		
2018 Inspection	<p>No maintenance or remedial works are obvious since last inspection.</p> <p>Broken beams in the sub-structure need to be addressed.</p> <p>Steel carrier plates are extensively corroded and will require replacement in the short term</p> <p>Also noted is the loss of material from behind the retaining wall. If this is allowed to continue it will compromise the integrity of the wall and associated tie backs.</p>		

Asset or Berth Number	L43	Former Marine Department Reference:	MD 14656
Owners Name	C/- G Tong		
Owners Address	3521 Lorne-Dacre Highway, RD 6 Invercargill 9876		
Asset Details	Asset type: Wharf structure		
Lease Length (m)	10.0	Decking	200x50
Structure Length (m)	10.0	Deck Beams	200x100 and 100x100 SW
Both sides Avail.	No	Headstocks	2-200x100 SW
Total Berthing (m)	10.0	Piles	400 oct. conc. Landside 200 SED riverside
Width (m)	3.1	Bracing	No
Additional Areas	No	Fenders	No
Services	2.0 x 2.0m Shed	Bollards	No
Condition		Handrails	No
Deck	The SW deck is sound with secure fixings until the last 2m length at downstream end where light timber has been used to create an extension to the deck. Decking is poor in this area including in and around the shed. This creates multiple hazards.		
Structure	Structure is generally sound however there is a broken beam and a Headstock where the outer end has deteriorated back to the fixings and has failed. This has been chocked to the trimmer below which appears to have contributed to its fixings failing. This is unacceptable and needs to be rectified.		
Piles	Both concrete and timber piles good. Timber berthing piles are showing wear from vessel beltings etc. and it is our recommendation that some sacrificial fender type timbers be attached to extend the life of the piles however this in its present condition does not affect the integrity of the pile.		
Additional info and comments	This wharf structure is a designated lease of a portion of a length of wharf referred to locally as the Co-op wharf. This section does not have any bracing but is well founded with tie-backs to the land from the concrete piles offering significant bracing support		
Previous Recommendations	Replace deficient decking at downstream end and make shed (fit door) secure to eliminate hazards created by the shed and its contents. (1-2 months)		
2018 Inspection	<p>Shed has been secured as per previous recommendation.</p> <p>Deck still requires remedial works at downstream end.</p> <p>Broken beams and failed headstock in the sub-structure need to be addressed.</p> <p>Steel carrier plates are extensively corroded and will require replacement in the short term</p>		



L43



L43

Asset or Berth Number	L44	Former Marine Department Reference:	
Owners Name	W B Corbin		
Owners Address	84 Milton Street, RIVERTON 9822		
Asset Details	Asset type: Wharf structure		
Lease Length (m)	9.11	Decking	200x50 SW
Structure Length (m)	9.11	Deck Beams	200x50 SW
Both sides Aval.	No	Headstocks	2-200x50 SW
Total Berthing (m)	9.11	Piles	150dia HW
Width (m)	3.1	Bracing	100x50 SW
Additional Areas	No	Fenders	No
Services	Nil	Bollards	No
Condition	Handrails		No
Deck	The SW deck is sound with secure fixings		
Structure	<p>This structure has defects that need to be remedied outlined below:</p> <p>The outside upstream deck beam is split and is ineffective as a structural member. This needs to be replaced urgently.</p> <p>All braces are either broken or connections have failed and these need to be reinstated as soon as practical to ensure this structure is able to perform as required.</p>		
Piles	All ok		
Additional info and comments	This structure is not for permanent berthing but is used generally for loading and unloading personnel when using the boat ramp etc. It is also situated in a high current area and is frequently subject to high berthing loads. Structural integrity in the form of good connections and braces should be maintained at all times		
Previous Recommendations	Outer deck beam and bracing requires reinstatement with treated timber members of equal size to those existing as soon as practical (1-2 months)		
2018 Inspection	<p>Decking has been replaced and is all well secured.</p> <p>Upstream deck beam has not been replaced and is required.</p> <p>L44 still does not have any effective cross bracing and this should also be a priority.</p>		



Asset or Berth Number	L45	Former Marine Department Reference:	
Owners Name	Southland District Council		
Owners Address	PO Box 903, Invercargill 9840		
Asset Details	Asset type: Wharf structure		
Lease Length (m)	4.29	Decking	200x50 SW
Structure Length (m)	4.29	Deck Beams	200x50 SW
Both sides Avail.	No	Headstocks	2-200x50 SW
Total Berthing (m)	4.29	Piles	150dia HW
Width (m)	3.1	Bracing	100x50 SW
Additional Areas	No	Fenders	No
Services	Nil	Bollards	No
Condition	Handrails		
Deck	The SW deck is sound with secure fixings		
Structure	This structure has defects that need to be remedied outlined below: Headstock around stairs have been impacted on their ends and are splitting away. These will need to be replaced in short term.		
Piles	The pile at the stairs appears to have broken and is now ineffective. This needs to be replaced as soon as practical. All other piles are acceptable		
Additional info and comments	This structure is not for permanent berthing but is used generally for loading and unloading personnel when using the boat ramp etc. It is also situated in a high current area and is frequently subject to high berthing loads. Structural integrity in the form of good connections and braces should be maintained at all times.		
Recommendations	<p>Bracing requires reinstatement with treated timber members of equal size to those existing as soon as practical (1-2 months)</p> <p>Headstocks suffering from impact damage around stairs area require replacement within 12 months.</p> <p>The handrail should be strengthened and an intermediate rail added.</p> <p>A handrail should also be installed at the stairs. These are steeper than a normal stairs with relatively short 'goings' tending to tip persons forward when going down.</p> <p>The handrail strengthening, intermediate rail and stair rail should be completed within 1-2 months.</p>		
2018 Inspection	<p>Decking has been replaced and is all well secured.</p> <p>Pile at stairs requires replacement</p> <p>Bracing requires checking as some members were noticeable loose.</p>		



Asset or Berth Number	T-Wharf	Former Marine Department Reference:	
Owners Name	Southland District Council		
Owners Address	PO Box 903, Invercargill 9840		
Asset Details	Asset type: Wharf structure		
Lease Length (m)		Decking	200x100 SW
Structure Length (m)	25.5	Deck Beams	300x230 HW
Both sides Avail.	Yes	Headstocks	300x160 HW
Total Berthing (m)	46.7	Piles	350dia HW
Width (m)	3.4	Bracing	300x160 HW
Additional Areas	14.1 x 4.3m Approach	Fenders	No
Services	Power to light & crane Water??	Bollards	Yes
Condition		Handrails	Yes – At split level only
Deck	<p>The approach has been completely re-decked with well fixed 200x100 treated SW planks including new kerbs on both sides.</p> <p>The main cross wharf has been re-decked in the high traffic areas and in other locations as necessary. All decking is generally well fixed with new kerb blocks except for some planking on the lower boarding platform. This planking needs to be adequately fixed or replaced.</p> <p>The kerb block at the landward end of the approach is not fixed and is dangerous as it moves if any weight is applied. This should be permanently fixed.</p>		
Structure	<p>The structure is very solidly built with HW, and while the HW is very weathered, it is generally in good serviceable condition with only minor defects outlined below:</p> <p>Many of the fastenings are now suffering from advanced corrosion. An assessment of critical fastenings should be undertaken and were required these be replaced.</p> <p>Diagonal brace timber on the approach and central cross wharf is in an acceptable condition but the bolt fixings are badly corroded and require immediate attention in some cases.</p> <p>Diagonal bracing on the outer ends of the cross wharf is new however the timber has shrunk, or the bolts have come loose and require re-tightening</p>		
Piles	All are generally ok just with advanced degradation at the bollard tops.		
Additional info and comments			
Previous Recommendations	<p>Bracing elements requires reinstatement with new fixings if possible or if a brace requires full replacement, H6 treated timber members of equal size to those existing should be used (3-6 months)</p> <p>Decking timber replacement and fastening assessment should also be completed in 3-6 months</p>		

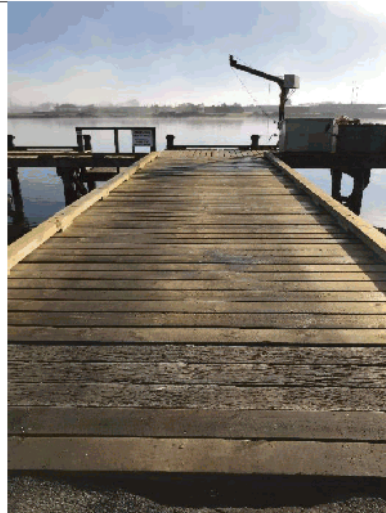
2018 Inspection

Decking has been replaced as required and is generally well secured. Some decking needs to be addressed on the lower boarding platform.

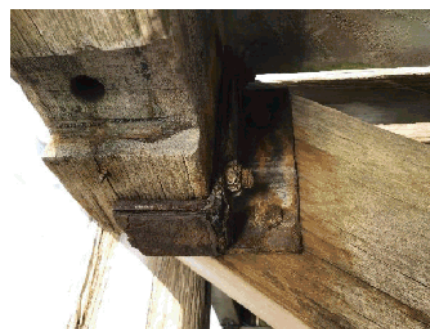
Cross brace fastenings require tightening.

Kerb block at landward end requires solid fixing.

Badly corroded steel brackets and fastenings require immediate attention.



T-Wharf



T-Wharf

Asset or Berth Number	Boat Ramp	Former Marine Department Reference:	
Owners Name	Southland District Council		
Owners Address	PO Box 903, Invercargill 9840		
Asset Details	Asset type: Wharf structure		
Lease Length (m)		Decking	
Structure Length (m)		Deck Beams	
Both sides Avail.		Headstocks	
Total Berthing (m)		Piles	
Width (m)		Bracing	
Additional Areas		Fenders	
Services		Bollards	
Condition	Handrails		
General	<p>The concrete boat ramp situated between L40 and L45 was to be assessed at the same time as afore mentioned assets. While it is a significantly different kind of asset an assessment was to be made to ensure there were no functional or safety issues associated with the asset that need to be escalated or recorded.</p>		
Additional info and comments	<p>The ramp was in good working condition. It was noted that the concrete at the head of the ramp was starting to break up however this was in no way affecting the ramps operation or safety.</p> <p>There was no excessive growth or sediment build up on the ramp and the tyres were secure on the upstream side wall</p> <p>The only issue was the timber walers/horizontal fenders on the downstream side entry to the ramp that span from asset L40 to the ramp wall. These have been broken and are a hazard. These timbers provide a safe bearing surface for vessels when entering or exiting the ramp to or from the river and the vessel has got off line due to current, wind or navigation. The broken ends currently pose a risk and should be replaced or at the very least cropped back to the nearest pile.</p>		
Previous Recommendations	<p>Replace or crop broken timber walers/horizontal fenders a downstream side river entry to ramp (1-2 months)</p>		
2018 Inspection	<p>Previous walers/horizontal fenders issue addressed.</p> <p>Tyres previously attached to the upstream side of the ramp as fenders were noted to have broken of with one lying in the ramp area. These should be re-attached or disposed of.</p>		



Asset or Berth Number	Focal Point	Former Marine Department Reference:	
Owners Name	Southland District Council		
Owners Address	PO Box 903, Invercargill 9840		
Asset Details	Asset type: Wharf structure		
Lease Length (m)	-	Decking	HW – Refer Drawings
Structure Length (m)	Refer drawings	Deck Beams	SW – Refer drawings
Both sides Avail.	N/A	Headstocks	SW – Refer drawings
Total Berthing (m)	N/A	Piles	SW – Refer drawings
Width (m)	Refer drawings	Bracing	SW – Refer drawings
Additional Areas		Fenders	N/A
Services	Power, lights and a disabled persons lift	Bollards	N/A
Condition		Handrails	Yes – All compliant
General	This structure is relatively new and has been built in accordance with current codes and practices. It utilises stainless steel fittings, hardwood and treated softwood components.		
Decking	All decking was well fixed with no deficiencies noted		
Structure	<p>The structure has been well put together, with a variety of different fixing methods. No deficiencies or safety concerns were found.</p> <p>All bracing is in the longitudinal direction with no lateral bracing against current or impact however the piles may have been designed with sufficient embedment to cater for this.</p> <p>All hand railing was code compliant</p>		
Previous Recommendations	The only recommendation we would make is that regular monitoring is undertaken of the sub deck structure as some very light hangers and straps have been used in the construction and some are already showing reasonable signs of corrosion.		
2018 Inspection	All sound and secure		