Council Agenda 29 July 2026

Meeting will be held at the Otago Regional Council Chamber, Aonui, 180 High Street, Dunedin, Otago, and live streamed on the ORC YouTube channel.

Members:
Cr Hilary Calvert (Chair)
Cr Kevin Malcolm (Deputy Chair)
Cr Robbie Byars
Cr Chanel Gardner
Cr Neil Gillespie
Cr Matt Hollyer
Cr Gary Kelliher
Cr Michael Laws
Cr Andrew Noone
Cr Gretchen Robertson
Cr Alan Somerville
Cr Kate Wilson

Senior Officer: Richard Saunders, Chief Executive
Meeting Support: Kylie Darragh, Governance Support Officer

29 July 2026 10:30 AM

Agenda Topic — Page

Agenda 1

1. WELCOME

Cr Chanel Gardner to open with a reflection.

2. APOLOGIES

No apologies received at the time of printing.

3. PUBLIC FORUM

No requests to speak at Public Forum were received at time of publishing.

4. CONFIRMATION OF AGENDA

The agenda to be confirmed as published.

5. DECLARATIONS OF INTEREST

Members are reminded of the need to stand aside from decision-making when a conflict arises between their role as an elected representative and any private or other external interest they might have. The Register of Member's Pecuniary Interests can be found on the ORC Website.

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This report presents the Risk Appetite Framework (RAF) to Council for adoption. It follows the Council workshop on 28 May 2026, subsequent refinement of the framework based on the feedback from the workshop, and the Audit and Risk Committee (ARC) discussion on 25 June 2026. The report seeks one decision from Council - on the treatment of the Mana Whenua Partnership category - and Council’s adoption of the framework.

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To report on the ORC Annual Plan 2025/26 direction to complete a business case for public transport in the Upper Clutha. Also this report presents the completed Public Transport Upper Clutha Investment Case to Council and seeks endorsement of the business case.
The attachment as a word version with clickable links is viewable in the Diligent Resource Centre and on the ORC Website under the meeting date of 29 July 2026.

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The purpose of this paper is to update Council on progress made in relation to the Dunedin bus stop audit work programme, including completed and ongoing bus stop infrastructure improvements

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To present information on the performance of 2025/26 cruise ship public transport services, and information on the upcoming 2026/27 cruise ship season.

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This report seeks Council endorsement of the draft non-financial significant forecasting assumptions which underpin development of the Long-Term Plan 2027-37 (LTP).

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10. NOTICES OF MOTION

No notices of motion had been submitted at the time of publishing.

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12. CLOSURE

Otago Regional Council

Council
MINUTES

Minutes of an ordinary meeting of the Otago Regional Council held in the Council Chamber, Aonui, 180 High Street, Dunedin on Wednesday 24 June 2026, commencing at 10:30 am.

24 June 2026 https://www.youtube.com/live/8e2-bcZ342Y?si=AGmNLKS9DPrsZCtb
25 June 2026 https://www.youtube.com/live/ecQmdM2BDFc?si=iswnusN2L8LJe0RT

PRESENT

Cr Hilary Calvert	*(Chair)*
Cr Kevin Malcolm	*(Deputy Chair)*
Cr Chanel Gardner	
Cr Neil Gillespie	
Cr Matt Hollyer	
Cr Gary Kelliher	
Cr Michael Laws	*(online)*
Cr Andrew Noone	
Cr Gretchen Robertson	
Cr Alan Somerville	
Cr Kate Wilson	

1. WELCOME

Cr Noone said a reflection to open the meeting at 10:30 am. Chair Calvert welcomed Councillors, members of the public and staff to the meeting. Staff present included Richard Saunders (Chief Executive), Anita Dawe (GM Regional Planning and Transport), Nick Donnelly (GM Finance) online, Tom Dyer (GM Manager Science and Resilience), Joanna Gilroy (GM Environmental Delivery), Tami Sargeant (GM People and Corporate), Amanda Vercoe (GM Strategy and Customer, Deputy CE), Dianne Railton (Team Leader, Governance), Kylie Darragh (Governance Support).

2. APOLOGIES

Resolution: Cr Kelliher Moved, Cr Hollyer Seconded:

That the apologies for Cr Robbie Byars be accepted.

MOTION CARRIED

3. PUBLIC FORUM

3.1 Mr Trevor Goodin spoke on behalf of the Oamaru Community Shuttle Service, Cr Calvert thanked Mr Goodin for attending.

3.2 Mr Zane Eggleton on behalf of CCS Disability Action – Waitaki Voice & Action, Cr Calvert thanked Mr Eggleton for attending.

3.3 Mr Russell Lund and Neil Johnstone, spoke on behalf of the Dunedin Stormwater Group, Chair Calvert thanked the group for attending.

4. CONFIRMATION OF AGENDA

Resolution: Chair Calvert Moved, Cr Wilson Seconded:

That the Council accept the additional documents and change in order to the agenda:

1. Supplementary Agenda 25 June 2026
2. Public Excluded Agenda 25 June 2026
3. Rates Resolution Attachments to Matter 9.9 Rates Report and Rates Resolution 2026-2027
4. Matter 1.2 South Dunedin Future to be heard after matter 9.4
5. Matter 1.1 Local Government Reform to be heard after matter 9.14.

MOTION CARRIED

5. DECLARATIONS OF INTERESTS

Councillors were reminded of the need to stand aside if a conflict of interest arises. Cr Gardner declared a conflict of interest in regards to Matter 9.11 and signalled her intention to abstain from the vote.

6. CONFIRMATION OF MINUTES

Resolution: Cr Somerville Moved, Cr Robertson Seconded

That the minutes of the Council meeting held on 27 May 2026 be confirmed as a true and accurate record.

MOTION CARRIED

7. ACTIONS (STATUS OF COUNCIL RESOLUTIONS)

There are currently no open actions for Council.

8. CHAIRPERSON'S AND CHIEF EXECUTIVE'S REPORTS

8.1. Chairperson's Report

Chair Calvert was available for questions on the report.

Resolution: Cr Kelliher Moved, Cr Hollyer Seconded

That the Council:

1) Notes *this report.*

MOTION CARRIED

8.2. Chief Executive's Report

Richard Saunders was available for questions on the report.

Resolution: Cr Kelliher Moved, Cr Hollyer Seconded

That the Council:

1) Notes *this report.*

MOTION CARRIED

9. MATTERS FOR CONSIDERATION

9.1. Ōamaru Community Transport Trial

[YouTube 43:17] This report provided an evaluation of the Ōamaru community shuttle community transport trial to understand the benefits and costs of the trial. The trial commenced in November 2025 and is due to conclude on 30 September 2026. Portfolio lead, Cr Somerville introduced the report. Robyn Hyde (Transport Planning Lead) and Anita Dawe (GM Regional Planning and Transport) were available to respond to questions on the report.

Resolution CM26-186: Cr Somerville Moved, Cr Hollyer Seconded

That the Council:

1) Notes *this report.*

2) Notes *that the Ōamaru community transport trial concludes on 30 September 2026 and that there is no further financial assistance budgeted for community transport.*

3) Notes *the commitment and significant effort and donation of time to the trial by the Ōamaru Steering Committee and volunteers, and thanks them for their input and contribution.*

4) Notes *that the learnings from the trial will inform the development of the Community Transport Framework, which will set out Council's community transport strategy and eligibility requirement, to be brought back to Council for formal approval at a later date.*

5) Notes *Council will be presented with options to implement an Ōamaru to Dunedin bus service in a separate report at the 24 June 2026 Council meeting.*

MOTION CARRIED

9.2. Ōamaru Public Transport Investigations

[YouTube 54:30] This paper reported on the ORC Annual Plan 2025/26 direction to complete an investigation into an Ōamaru to Dunedin public transport service. The report sought Council's approval to implement a subsidised Ōamaru to Dunedin bus service from 1 October 2026. Portfolio lead Cr Somerville introduced the report. Robyn Hyde (Transport Planning Lead) and Anita Dawe (GM Regional Planning and Transport) were available to respond to questions on the report.

Resolution CM26-187: Cr Malcolm Moved, Cr Somerville Seconded
That the Council:

1) ***Notes*** *this report.*

2) ***Approves*** *the implementation of provisional item 1 in the PTC 2025/1 Unit 1 contract commencing 1 October 2026.*

3) ***Notes*** *that fares for the service will be set by the separate fare structure review paper.*

MOTION CARRIED

9.3. Public Transport Fare Structure Review

[YouTube 1.31] The purpose of this report was to provide Council with detail of how a zonal fare structure and fare capping could be applied in Otago, and to seek Council's approval to consult on draft changes to Otago's public transport fare structure. Portfolio lead Cr Hollyer introduced the paper. Jack Cowie (Transport Planner), Robyn Hyde (Transport Planning Lead), and Anita Dawe (GM Regional Planning and Transport) were available to respond to questions on the report.

At 12:06 pm Cr Calvert Moved, Cr Hollyer Seconded
That *Council adjourn for 5 minutes.*
MOTION CARRIED

Resolution CM26-188: Cr Malcolm Moved, Cr Hollyer Seconded
That the Council:

1) ***Notes*** *this report.*

2) ***Approves*** *Option 1 to undertake consultation on all three topics: zonal fare structure, fare capping and the removal of cash fares****, as follows:***

- ***a)*** *Consult on a four zone and a five zone option for Dunedin; and*
- ***b)*** *Consult on a one zone and a two zone option for Queenstown; and*
- ***c)*** *Consult on a fare capping scenario of two daily and 10 weekly trip cap and*
- ***d)*** *Consult on fare capping scenario of two daily and 8 weekly trip cap; and*
- ***e)*** *Consult on the impact of the removal of cash as a means of payment for bus fares.*

3) ***Notes*** *the public consultation period will be between 10 and 29 July 2026.*

MOTION CARRIED

At 12:40 pm Cr Robertson Moved, Cr Wilson Seconded
That *Council adjourn for lunch until 1 pm.*
MOTION CARRIED

9.4. Approval to make the Proposed Otago Regional Policy Statement 2021 Operative

[YouTube 2:41:20] This report sought the Council's approval to make the proposed Otago Regional Policy Statement 2021 operative. Portfolio lead, Cr Wilson, introduced the report. Simon Anderson (Partner, Ross Dowling Lawyers), Fleur Matthews (Manager, Policy and Planning) and Anita Dawe (GM Regional Policy and Planning), were available to respond to questions on the report.

Resolution CM26-189: Cr Wilson Moved, Cr Malcolm Seconded
That the Council:

1) ***Notes*** *this report.*

2) ***Notes*** *that all appeals on provisions of the proposed Otago Regional Policy Statement 2021 have been resolved.*

3) ***Notes*** *that all amendments under clause 16 of Schedule 1 of the Resource Management Act 1991 have been made and there are no variations under clause 16A of the Resource Management Act 1991.*
4) ***Approves****, under clause 17 of Schedule 1 of the Resource Management Act 1991, the proposed Otago Regional Policy Statement 2021.*
5) ***Approves****, under clause 20 of Schedule 1 of the Resource Management Act 1991, public notice being given on 27 June 2026, making the proposed Otago Regional Policy Statement 2021 operative on 9 July 2026.*
6) ***Notes*** *that under clause 17(3) of Schedule 1 of the Resource Management Act 1991, the Council's Common Seal shall be affixed to the Otago Regional Policy Statement 2021 and witnessed by two Councillors.*
7) ***Notes*** *that when the proposed Otago Regional Policy Statement 2021 becomes operative, the Otago Regional Policy Statement 2019 will cease to be operative.*
8) ***Notes*** *that the housing bottom lines for Dunedin and Queenstown will be included in the Otago Regional Policy Statement 2021 under section 55(2A)(a) of the Resource Management Act 1991.*
9) ***Notes*** *that public notice will be given on 15 July 2026 of the amendment of the Otago Regional Policy Statement 2021 to include the housing bottom lines for Dunedin and Queenstown under section 55(2A)(b) of the Resource Management Act 1991.*

BY DIVISION

FOR	Cr Gillespie, Cr Hollyer, Cr Malcolm, Cr Noone, Cr Robertson, Cr Somerville, Cr Wilson, Cr Calvert.
AGAINST	Cr Kelliher, Cr Laws.
ABSTAINED	Cr Gardner.

MOTION CARRIED
8 in favour, 2 against, 1 abstained.

Cr Gardner left the meeting at 2:23 pm.
Cr Gardner returned to the meeting at 2:25 pm.

1.2. South Dunedin Future - 3 Proposed Adaptation Futures

[YouTube 3:20 24 June 2026] The purpose of this paper was to provide an outline and update on the South Dunedin Future (SDF) programme, present the latest technical reports relating to the three Proposed Adaptation Futures for South Dunedin, and seek approval of Councils to engage with affected communities and other stakeholders. At this stage, Councils have committed to completing the SDF programme only, with any future decisions on land use, infrastructure, and implementation subject to further consideration by Councils through long-term planning and financial processes. Portfolio lead Cr Robertson introduced the paper. Jean-Luc Payan (Manager Natural Hazards), Jonathan Rowe (Programme Manager), Tom Dyer, (GM Science), and Anita Dawe (GM Regional Planning and Transport) were available to respond to questions on the report.

At 2:48 pm Cr Wilson Moved, Cr Malcolm Seconded
That *Council adjourn for 5 minutes.*
MOTION CARRIED

Resolution CM26-190: Cr Noone Moved, Cr Kelliher Seconded

That the Council:

South Dunedin Future Technical Reports

1) ***Notes*** *the background of the South Dunedin Future programme, including the Council-approved programme plan and strategy, and the work undertaken since the previous report to Council in September 2025.*

2) ***Notes*** *the contents of the attached South Dunedin Future technical reports, including:*

a) Three proposed adaptation futures for South Dunedin, which provides an overview of the futures including the key features, actions, and associated costs and benefits;

b) South Dunedin Stormwater Modelling Report, which describes technical assessments of feasibility of a range of potential stormwater-related interventions intended to mitigate flood and other risks affecting South Dunedin;

c) South Dunedin Groundwater Modelling Report, which describes early-stage technical assessments to determine the feasibility of groundwater drainage systems aimed at managing risks from shallow and rising groundwater across South Dunedin; and

d) Economic Assessment of the three proposed adaptation futures for South Dunedin, which evaluates the economic performance of each of the futures against a status quo scenario.

3) ***Notes*** *these four reports have undergone external technical peer review, and where technical issues remain outstanding, these are acknowledged in the reports or will be addressed in subsequent stages of the SDF programme.*

4) ***Notes*** *that additional reports have also been completed on the health and equity implications of the three proposed adaptation futures, the potential property implications of various adaptation actions, and on initial due diligence on potential future development in Ocean Beach Domain. Summaries of these reports are included in this paper, and the full reports will be available on the South Dunedin Future webpage.*

5) ***Endorses*** *the attached South Dunedin Future technical reports for the purposes of community engagement, noting any future decisions on land use, infrastructure, and project implementation would be subject to further consideration by Councils through long-term planning and financial processes.*

Community Engagement

6) ***Approves*** *progressing to the next step of the SDF programme, which involves staff engaging with partners, stakeholders and affected communities to seek feedback on the three proposed adaptation futures for South Dunedin and a status quo option.*

7) ***Notes*** *the proposed communications and engagement activities, including range of media and public communications, and mix of public and targeted stakeholder engagements planned for early-July to mid-August 2026.*

Final stage of the SDF programme

8) ***Notes*** *that following completion of community engagement in August 2026, feedback will be analysed, and key findings reported to Councils in September 2026.*

9) ***Notes*** *that community feedback will also inform a multi-criteria assessment of the three proposed adaptation futures against a decision-making framework previously approved by Councils, and that results of this assessment will be reported to Councils in September 2026.*

10) ***Notes*** *the final stage of the SDF programme will involve identifying a preferred adaptation future as the basis for finalising a climate adaptation masterplan for South Dunedin for Councils' consideration and approval by 30 June 2027.*

11) ***Notes*** *staff will seek to align the final stage of the SDF programme with Council's Long-Term Plan (2027-36) to promote coherence and support efficient transition to implementation of the masterplan and related activities from 1 July 2027.*

Other Options

12) Notes *other options explored in this paper, which include:*

a) One or both Councils requesting further technical, economic, or other work on the climate and natural hazard-related risks affecting South Dunedin and potential responses, including those outlined in the proposed adaptation futures, before seeking approval of Councils to undertake planned engagement with partners, stakeholders, and affected communities; and

b) One or both Councils directing an alternative course of action from those described in previous options above.

MOTION CARRIED

Cr Malcolm voted against.

Resolution CM26-191: Cr Noone Moved, Cr Kelliher Seconded

13) That *a South Dunedin engineered flood protection system be designed and costed for inclusion in a future report for public consultation, this work is to be undertaken in partnership with the Dunedin City Council.*

14) Delegates *the Chair in consultation with the CEO the ability to approve minor modification to the consultation topics to align with decisions made by Dunedin City Council.*

BY DIVISION

FOR	Cr Gardner, Cr Gillespie, Cr Hollyer, Cr Kelliher, Cr Laws, Cr Malcolm, Cr Noone, Cr Wilson, Cr Calvert.
AGAINST	Cr Somerville, Cr Robertson.
ABSTAINED	None.

MOTION CARRIED

9 in favour, two against.

At 3:00 pm Cr Kelliher Moved, Cr Hollyer Seconded

That *Council adjourn for 15 minutes.*

MOTION CARRIED

9.5 Interim Governance Group for Regional Spatial Planning

[Youtube 4:56] This paper sought Council's approval to nominate two elected member representatives to the Interim Regional Spatial Planning Governance Group, a cross-council governance body being established to provide early elected member oversight of regional spatial planning across Otago. Portfolio lead Cr Calvert introduced the report. Marianna Brook (Principal Advisor Mayoral Forum and Local Government Reform), and Fleur Matthews (Manager Policy and Planning) were available to respond to questions on the report. Cr Wilson sat back from the table.

Resolution CM26-192: Cr Hollyer Moved, Cr Somerville Seconded

That the Council:

1) ***Notes*** *this report.*
2) ***Approves*** *the nomination of two elected member representatives to the Interim Regional Spatial Planning Governance Group, being Cr Kate Wilson and Cr Neil Gillespie.*
3) ***Delegates*** *authority to the Interim Regional Spatial Planning Governance Group to appoint an independent Chair at its first meeting.*
4) ***Notes*** *that Kā Rūnaka will be invited to nominate representatives for the Interim Group, should this be their preference, at the Te Rōpū Taiao Otago hui on 3 July 2026.*

MOTION CARRIED

Cr Wilson abstained.

9.6. Large Scale Environment Fund

[YouTube 5:00] This paper presented options to Council for the delivery of the Large-scale Environmental Fund. Cr Gardner introduced the paper. Libby Caldwell (Manager Environment), Soraya Engelken (Project Delivery Specialist Freshwater & Biodiversity), and Joanna Gilroy (GM Environmental Delivery) were available to respond to questions on the report.

Resolution CM26-193: Cr Wilson Moved, Cr Hollyer Seconded

That the Council:

1) ***Notes*** *the report*

2) ***Appoints*** *the Finance and Environmental Delivery Portfolio leads to a Large Scale Environmental Fund Governance Group*

3) ***Requests*** *that the Governance Group work with staff to complete the following tasks:*

4) *Develop a terms of reference for the Governance Group including but not limited to, delegations for future funding decisions and timing for reporting back to Council*

5) *Refine and finalise the key criteria, process and associated templates to support the Large Scale Environment fund process*

6) *Instruct the staff working group to commence work identifying a range of priority projects for initial funding*

7) ***Requests*** *that a report from the Governance Group be prepared for Council, no later than August 2026, which includes the terms or reference, final criteria and documents, and early thinking about potential priority projects for investment.*

MOTION CARRIED

Cr Kelliher voted against.

9.7. ECO Fund Approvals 2026

[YouTube 5:23] This report sought approval of the recommended applications for Council to fund through the ECO Fund March 2026 round. Cr Gardner introduced the paper. Libby Caldwell (Manager Environment), Elodie Letendre (Environmental Funding Lead), and Joanna Gilroy (GM Environmental Delivery) were available to respond to questions on the report.

Resolution CM26-194: Cr Gardner Moved, Cr Robertson Seconded

That the Council:

1) ***Approves*** *the reallocation of $27,479.94 (Hill Country Erosion Management), $9,890.28 (Biodiversity Enhancement on Protected Private Land), and $3,766.82 (Weed Removal and Revegetation) to provide funding towards the projects from Routeburn Dart Wildlife Trust ($32,327.45) and Open Valley Urban Ecosanctuary ($8,809.59) (Option 1).*

2) ***Approves*** *the funding recommendations of the ECO Fund Assessment Panel for the March 2026 round to a total value of $*919,800*, as outlined in tables 3 to 8 (Option 3).*

3) ***Notes*** *that the annual review of the ECO Fund will be completed by September 2026 and the outcome of this review will be presented to Council for endorsement to enable the funding categories and criteria to be communicated prior to the next round in early 2027.*

MOTION CARRIED

9.8. Funding Agreement with MPI for Wilding Conifer and Wallaby Programmes

[YouTube 5:30] The report sought approval to sign annual funding agreements with the Ministry for Primary Industries/Manatū Ahu Matua (MPI) for funding and operational delivery of the National Wilding Conifer Control Programme and the Tipu Mātoro National Wallaby Eradication Programme in Otago for the remaining four-year term of the signed Services Agreements (2025-2030) and also commence delivery of the National Wilding Conifer Control Programme and the Tipu Mātoro National Wallaby Eradication Programme from 1 July, annually for the remaining four-year term of the signed Services Agreements (2025-2030), if signed funding agreements are not received prior to 1 July from MPI. Portfolio lead Cr Noone introduced the report. Libby

Caldwell (Manager Environmental Implementation) and Joanna Gilroy (GM Environmental Delivery) were available to respond to questions on the report.

Resolution CM26-195: Cr Noone Moved, Cr Malcolm Seconded
That the Council:

1) ***Notes*** *this report.*

2) ***Delegates*** *the Chief Executive to sign the annual funding agreements for and on behalf of Council for the remaining four-year term of the signed Services Agreement (2025-2030).*

3) ***Approves Option 3*** *to commence delivery of works for the National Wilding Conifer Control Programme and the Tipu Mātoro National Wallaby Eradication Programme from 1 July, annually, for the remaining four-year term of the signed Services Agreements (2025-2030).*

4) ***Notes that Council will carry some financial risk for delivery ahead of the receipt of formal*** *funding agreements, but that risk is considered low.*

MOTION CARRIED

9.9. Rates Report and Rates Resolution 2026/2027

[YouTube 5:34] This report provided details of each of the rates to be set, and to recommended that Council adopt the rates resolution for the 2026-2027 financial year. Portfolio lead Cr Gardner introduced the paper. Sarah Munro (Group Financial Controller) and Nick Donnelly (GM Finance) were available to respond to questions on the report.

Resolution CM26-196: Cr Malcolm Moved, Cr Gardner Seconded
That the Council:

1) ***Receives*** *this report, the revised Rates Funding Impact Statement 2026-2027 and the 2026-2027 Rating Resolution sample tables, sample analysis and sensitivity graphs (circulated separately).*

2) ***Adopts*** *the revised Rates Funding Impact Statement 2026-2027.*

3) ***Adopts*** *the Rating Resolution for the 2026-2027 financial year.*

MOTION CARRIED

9.10. Update on LIDAR Progress and Funding

[YouTube5:59] This report updated council on the progress of the Otago Regional LiDAR Collection programme. Portfolio lead, Cr Kelliher introduced the paper. Andrew Welsh (Spatial Analyst), Jean-Luc Payan (Manager Natural Hazards), and Tom Dyer (GM Science) were available to respond to questions on the report.

Resolution CM26-197: Cr Robertson Moved, Cr Wilson Seconded
That the Council:

1) ***Notes*** *this report.*

2) ***Notes*** *the Ministry for the Environment additional financial contribution to the Otago Regional LiDAR Collection programme.*

3) ***Notes*** *the progress of the Otago Regional LiDAR Collection programme.*

MOTION CARRIED

Cr Noone left the meeting at 4:25 pm.
Cr Noone returned to the meeting at 4:27 pm.

Cr Malcolm Moved, Cr Wilson Seconded:
That *matter 9.13 be brought forward in the agenda to be heard next.*
MOTION CARRIED

9.13 Developing the Long-Term Plan 2027-37 Community Outcomes and LTP Engagement Approach.

[YouTube 6:07] This report sought Council endorsement of Community Outcomes for the 2027-2037 Long-Term Plan (LTP). Additionally, this report set out an approach to engagement and communication with the community while developing the LTP in order to build buy-in to the LTP ahead of formal consultation in early 2027. Jasmin Lamorie (Senior Corporate Planner), Ian Telfer (Manager Partnerships and Engagement), Hilary Lennox (Manager Strategy), and Amanda Vercoe (GM Customer and Strategy) were available to respond to questions on the report.

Resolution CM26-198: Cr Malcolm Moved, Cr Hollyer Seconded

That the Council:

1) ***Endorses*** *the Community Outcomes for the Long-Term Plan 2027-37 as described in this report.*

2) ***Notes*** *the approach for ongoing engagement with the community throughout the Long-Term Plan process.*

MOTION CARRIED

At 4:40 pm Cr Kelliher Moved, Cr Hollyer Seconded

That Council adjourn until 9:00 am 25 June 2026.

MOTION CARRIED.

The Council reconvened on Thursday, 25 June, at 9am.

Cr Noone Moved, Cr Wilson Seconded

That the apology for lateness by Cr Laws be accepted.

MOTION CARRIED

9.11. Final ORC Indigenous Biodiversity Strategy 2026 for Adoption

[YouTube 3:00] The purpose of this paper was to present Council with the final version of the ORC Indigenous Biodiversity Strategy 2026 (the Strategy) for consideration and adoption. Portfolio lead Cr Gillespie introduced the paper. Shay van der Hurk (Senior Advisor Strategy), Hillary Lennox (Manager Strategy), and Amanda Vercoe (GM Customer and Strategy) were available to respond to questions on the report.

Resolution CM26-199: Cr Gillespie Moved, Cr Wilson Seconded

That the Council:

1) ***Notes*** *this report.*

2) ***Adopts*** *the Otago Regional Council Indigenous Biodiversity Strategy 2026, replacing the Biodiversity Strategy 2018, and Biosecurity Strategy 2019.*

MOTION CARRIED

Cr Gardner abstained.

9.12. Compliance Targets 2026/2027

[YouTube 21:00] This report sought Council's approval of the 2026/27 Compliance Targets as required to be set under the Annual Plan 2026/27. Portfolio lead, Cr Noone introduced the report. Alex King (Manager Consents/Manager Environmental Delivery Data & Systems), Simon Wilson (Manager Compliance), and Joanna Gilroy (GM Environmental Delivery) were available to respond to questions on the report.

Resolution CM26-200: Cr Noone Moved, Cr Wilson Seconded
That the Council:
1) ***Approves*** *the targets set out in the attached Compliance Audit and Performance Monitoring Schedule 2026-27 (Option 1).*
MOTION CARRIED

Cr Gillespie left the meeting at 9:42 am.
Cr Gillespie returned to the meeting at 9:47 am.

9.14. Community Survey Action Plan
[YouTube 43:00] The purpose of this report was to provide councillors a draft 2026–27 action plan for consideration. The action plan is based on insights from the 2026 Community Survey to determine future focus areas and where improvements could be made. Vicki Roach (Brand and Marketing Team Lead), and Amanda Vercoe (GM Strategy and Customer) were available to respond to questions on the report.

Resolution CM26-201: Cr Calvert Moved, Cr Malcolm Seconded
That the Council:
1) ***Notes*** *this report.*
2) ***Approves*** *the 2026 Community Survey Action plan that will be implemented in the Financial Year 2026-27.*
3) ***Notes*** *that the Communications and Marketing team will report back on the progress of the 2026-27 Action plan at the March 2027 council meeting.*
MOTION CARRIED
Cr Gillespie and Cr Kelliher voted against.

At 10:01 am Cr Laws joined the meeting, online.

At 10:05 am Cr Noone Moved, Cr Malcolm Seconded
That *Council adjourn for 15 minutes.*
MOTION CARRIED

1.1. Local Government Reform
[YouTube 1:24 25] This report provided Council with an overview of the local government reform programme and the voluntary Head Start reorganisation pathway. It set out the functions, assets, and regional context relevant to how ORC's functions may be reorganised. It was intended to support a shared, well-informed understanding across the region as Otago councils consider whether to progress an outline proposal, and to inform any contribution that ORC makes to that work. Richard Saunders (Chief Executive) was available to respond to questions on the report.

Resolution CM26-202: Cr Calvert Moved, Cr Kelliher Seconded
That the Council:
1) ***Notes*** *this report.*
MOTION CARRIED

Cr Noone left the meeting at 10:49 am.
Cr Noone returned to the meeting at 10:52 am.
Cr Noone left the meeting at 11:33 am.
Cr Noone returned to the meeting at 11:36 am.
Cr Gillespie left the meeting at 11:33 am.
Cr Gillespie returned to the meeting at 11:42 am.

10. MATTERS FOR NOTING

[YouTube 2:36] There was an opportunity for any questions on the reports.

Resolution CM26-203: Cr Kelliher Moved, Cr Robertson Seconded

That the Council

1) ***Notes*** *the following papers:*

10.1 Clutha Delta Natural Hazards Adaptation Programme Update

10.2 Coast and Estuaries Update

10.3 2024 Climate Strategy Implementation and Effectiveness Report

10.4 Indigenous Biodiversity Ecosystems

MOTION CARRIED

11. NOTICES OF MOTION

None received for this meeting.

12. RESOLUTION TO EXCLUDE THE PUBLIC

Resolution: Cr Malcolm Moved, Cr Wilson Seconded:

That the public be excluded from the following items under LGOIMA 48(1)(a):

1.1 Minutes of Council 25 February 2026

3.1 Appointment of an Independent Member to the Audit & Risk Committee.

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

General subject of each matter to be considered	Reason for passing this resolution in relation to each matter	Ground(s) under section 48(1) for the passing of this resolution
2.1 Minutes of Council 25 February 2026	To protect information where the making available of the information—would be likely unreasonably to prejudice the commercial position of the person who supplied or who is the subject of the information – Section 7(2)(b)(ii). To enable any local authority holding the information to carry out, without prejudice or disadvantage, commercial activities – Section 7(2)(h)	Section 48(1)(a); Subject to subsection (3), a local authority may by resolution exclude the public from the whole or any part of the proceedings of any meeting only on 1 or more of the following grounds: (a)that the public conduct of the whole or the relevant part of the proceedings of the meeting would be likely to result in the disclosure of information for which good reason for withholding would exist.

3.1 Appointment of an Independent Member to the Audit & Risk Committee	To protect the privacy of natural persons, including that of deceased natural persons – Section 7(2)(a)	Section 48(1)(a); Subject to subsection (3), a local authority may by resolution exclude the public from the whole or any part of the proceedings of any meeting only on 1 or more of the following grounds: (a)that the public conduct of the whole or the relevant part of the proceedings of the meeting would be likely to result in the disclosure of information for which good reason for withholding would exist.

This resolution is made in reliance on section 48(1)(a) of the Local Government Official Information and Meetings Act 1987 and the particular interest or interests protected by section 6 or section 7 of that Act or section 6 or section 7 or section 9 of the Official Information Act 1982, as the case may require, which would be prejudiced by the holding of the whole or the relevant part of the proceedings of the meeting in public.

13. CLOSURE

There was no further business and Chair Calvert declared the meeting closed at 11:58 am.

_____ _____

Chairperson Date

Meeting Date	Document	Item	Status	Action Required	Assignee/s	Action Taken	Due Date
24-06-2026	Council Meeting Supplementary Agenda - 24 June 2026	**S&R2614** South Dunedin Future - 3 Proposed Adaptation Futures	In Progress	Resolution CM26-191 That a South Dunedin engineered flood protection system be designed and costed for inclusion in a future report for public consultation, this work is to be undertaken in partnership with the Dunedin City Council.	General Manager Regional Planning and Transport, General Manager Science and Resilience	17/07/2026 GM Regional Planning and Transport: Staff are working through the scope , timelines and cost of developing the additional option. An update will be provided to Council in due course.	2-08-2026
24-06-2026	Council Meeting - 24 June 2026	**ENV2604** Large Scale Environment Fund	In Progress	Resolution CM26-193 Requests that a report from the Governance Group be prepared for Council, no later than August, which includes the terms or reference, final criteria and documents, and early thinking about potential priority projects for investment.	Chief Executive, General Manager Environmental Delivery, Manager Environmental Implementation	16/07/2026 GM Manager Environmental Delivery: A meeting with the Governance Group members has been organised and a paper will be presented at the August Council meeting.	2-08-2026

8.1. Chairperson's Report

Prepared for: Council

Author: Cr Hilary Calvert (Chairperson)

Date: 29 July 2026

RECOMMENDATION

That the Council:

1) ***Notes*** *this report.*

2) ***Delegates*** *authority to the Chair and Deputy Chair to provide support and input on behalf of Otago Regional Council to any correspondence from Otago Mayors to Government regarding local government simplification in Otago, ensuring ORC's priorities are highlighted including the importance of catchment management and managing environmental matters at the appropriate scale; and authorises the Chair to approve ORC's formal endorsement of such correspondence.*

INTRODUCTION

[1] Over the past month, Council's attention has been divided between the local government reform process and a substantial programme of statutory and operational decisions. The reform work, particularly the Mayoral Forum workshops, community engagement, and preparation for the 9 August outline proposal deadline, has been intensive alongside concurrent decisions on the Regional Policy Statement, Biodiversity Strategy, transport services, South Dunedin adaptation futures, and rates adoption.

COUNCIL BUSINESS

[2] Councillors have continued their engagement with the local government reform process. At this meeting, Council noted a detailed report on the reform programme and the voluntary Head Start reorganisation pathway, which set out ORC's functions, assets, and regional context to support a shared, well-informed understanding as Otago councils consider whether to progress an outline proposal by the 9 August 2026 deadline.

[3] Council approved implementation of a subsidised Ōamaru to Dunedin public transport service commencing 1 October 2026, following an investigation into the service and the conclusion of the Ōamaru community shuttle trial on 30 September 2026. Council also approved consultation on a zonal fare structure and fare capping for Otago's public transport network, with consultation planned for 10-29 July 2026 across four options including removal of cash payment for bus fares.

[4] Council approved making the Proposed Otago Regional Policy Statement 2021 operative on 9 July 2026, with all appeals on provisions resolved and amendments completed under the Resource Management Act 1991. Housing bottom lines for Dunedin and Queenstown will be included under section 55(2A)(a) of the RMA 1991.

[5] Council endorsed the Community Outcomes for the 2027-2037 Long-Term Plan and noted the engagement approach for community involvement throughout the LTP development, and adopted the final ORC Indigenous Biodiversity Strategy 2026, replacing the 2018 Biodiversity Strategy and 2019 Biosecurity Strategy.

[6] Council approved progressing the South Dunedin Future programme to community engagement on three proposed adaptation futures and a status quo option, with community feedback to inform a multi-criteria assessment and preferred adaptation future by June 2027. Council directed that a South Dunedin engineered flood protection system be designed and costed for inclusion in a future report for public consultation, to be undertaken in partnership with Dunedin City Council. Council also approved establishment of a Large Scale Environmental Fund Governance Group to refine funding criteria and identify priority projects, with a report expected by August 2026.

[7] Council adopted the 2026-2027 Rates Resolution and Rating Resolution, approved ECO Fund allocations totalling $919,800, delegated authority to the Chief Executive to sign MPI funding agreements for wilding conifer and wallaby programmes through 2030 and approved the 2026-27 Compliance Targets. Council also approved the 2026 Community Survey Action Plan to be implemented in the 2026-27 financial year.

OTAGO MAYORAL FORUM

[8] A community survey on local government reform drawn from across the region, which sought views on what is most important to people, drew 1,820 responses. Key priorities identified at regional level included affordable rates (64%), quality services and infrastructure (58%), keeping decisions local (54%), more efficiency and less duplication (51%), and rural areas and small towns being valued (40%). At a regional level more than one third of respondents commented with pro-reform sentiment, while key issues identified also related to a loss of identity and financial concerns.

[9] The Forum committed to a collaborative approach to understanding reform options across Otago's councils and agreed to being open to exploring cross-boundary considerations to achieve the best outcomes. The Forum's July meeting in Ōamaru focussed on local government reform, discussing region-wide information prepared and received to date, including the results of community engagement, the Forum's Otago Working Principles, Morrison Low's technical analysis, and mana whenua perspectives.

[10] A facilitated workshop tested four reorganisation options, drawing on the community engagement findings, Morrison Low's analysis, the Otago Working Principles agreed on 19 June, and perspectives from mana whenua. While no preferred option was determined, the workshop showed increasing alignment on the principles and outcomes that should underpin future governance, including catchment-based environmental protection and strong local voice and representation.

[11] Following the July Forum meeting, a Hui for Otago allowed Otago councillors to hear directly from Ngāi Tahu and Morrison Low on local government reform, giving the wider group of Otago councillors visibility of the evidence base the Mayoral Forum has been working through, ahead of individual councils considering their positions during July.

[12] The Government's reform process sets a starting point of creating a unitary authority within Otago, whilst allowing for the possibility of more than one unitary authority in

large regions with complex issues. The Forum is progressing work within a timeframe that keeps the Head Start pathway open, with outline proposals due by 9 August.

[13] The Forum committed to being open to reaching out to neighbouring districts in coming weeks to test a willingness to work together.

[14] Council recognises that ORC's core functions operate predominately at a catchment scale that crosses territorial boundaries. The Council supports a focus on catchment-based environmental protection as essential to effective delivery of these functions and notes that the strength of a collaborative approach is its potential to address these cross-boundary challenges. ORC's participation in any correspondence to Government will emphasise the importance of governance structures that enable integrated management at the scale at which environmental and biosecurity risks operate.

[15] The Forum will next meet on Friday 31 July in Balclutha.

STAKEHOLDER AND COMMUNITY ENGAGEMENT AND EVENTS

[16] The Chair, Deputy Chair or alternate attended the following events and meetings:

- LGNZ reform briefings
- Otago Mayoral Forum meetings
- South Island Regional Councils Governance Group.

RECENT MEDIA ENGAGEMENT

[17] Media monitoring tracking, with Chair comment or mention included:

June 2026

- Wilding pine fight to get $79m boost - Southern Rural Life (print), 2 June.
- ORC councillors want involvement in reform - The News - Central Otago & Wanaka (print), 4 June.
- What new, bigger councils are coming? Tracking progress on amalgamation - The Post Weekend/The Press - Te Matatika/The Post (online/print), 5 June.
- Unelected members are being banned from voting on councils. What does it mean? - The Spinoff (online), 7 June.
- The benefits of having one unitary council in Otago - Otago Daily Times (online/print), 23-24 June.
- Fourth flood protection option on table - Otago Daily Times (online/print), 24-25 June.
- New bus to run seven days a week/New bus service to Dunedin will run daily - Otago Daily Times / Oamaru Mail (online/print), 24–26 June.
- Decision by ORC irks mayor/ 'Added costs and complexity': Mayor slams ORC's South D decision – Otago Daily Times (online/print), 29–30 June.

July 2026

- One for all? Editorial - Local Government Reform - Otago Daily Times (print), 3 July.

KEY CORRESPONDENCE TO AND FROM THE CHAIR

Incoming:

- 12 June 2026 Letter from Acting CE Otago Fish & Game Council- Investigation into a Local Bill for the Manuherekia Minimum Flow.

Outgoing

- 10 June 2026 Letter to Minister Bishop - Review and Resourcing of the Total Mobility Scheme.
- 7 July 2026 Letter to Matapura Ellison - congratulations on appointment as Upoko of Kāti Huirapa Rūnaka ki Puketeraki.

ATTACHMENTS

1. 2026.06.12 Letter from Fish & Game Manuherekia Bill ORC [**8.1.1** - 2 pages]
2. 2026.06.10 Letter to Minister Bishop - Review and Resourcing of the Total Mobility Scheme [**8.1.2** - 1 page]
3. 2026.07.07 Matapura Ellison Upoko, Kāti Huirapa Rūnaka ki Puketeraki [**8.1.3** - 1 page]

12 June 2026

Otago Regional Council
180 High Street
Dunedin, 9016
hilary.calvert@orc.govt.nz

Investigation into a Local Bill for the Manuherekia Minimum Flow

Dear Hilary,

I am writing to express our concern about the Central Otago District Council's proposal for a Local Bill to legislate a minimum flow for the Manuherekia River and secure land/easements for Falls Dam.We understand that the CODC has reached out to the Otago Regional Council for assistance in preparing this bill.

Our interest in the Manuherekia is long-standing. It is the third largest river fishery in Otago by angler usage and is degraded by water abstraction, sediment and nutrient discharges. Based on direction from its democratically elected governors, Fish and Game has spent well over 50 years advocating for the protection of and meaningful improvement to the river. During this time, Fish and Game has been involved in countless community groups and feedback processes, representing a significant investment of licence holder and stakeholder resources.

The Manuherekia is possibly the most complex irrigation supporting catchment in New Zealand, and a resolution to the long-standing effects of abstraction is desperately needed. Fish and Game has been vocal in the past in stating that it doesn't want further delay but equally, any solution must be enduring. Given that complexity of abstraction in this catchment, a solution that is not widely accepted will be under significant pressure to be revisited in the future.

A genuinely participatory process will aid in creating enduring solutions for the catchment. However, legislating the minimum flow achieves the opposite because it replaces a community participatory process underpinned by independent technical scrutiny with a political one, restricting meaningful public participation and risking outcomes that are not merit-based.

A non-participatory process will be seen by many as political opportunism, breeding yet more conflict.

This is a fatal flaw of the proposal because just as Parliament can act to enact legislation, it can be amended or repealed. Without a genuine resolution to the underlying issue, the Council, river users and more than 600 water users and associated businesses in the catchment will not have certainty.

Statutory managers of freshwater sports fish, game birds and their habitat

Otago Fish & Game Council

5 Hazlett Road, Mosgiel, New Zealand. P: (03) 477 9076 E: otago@fishandgame.org.nz

www.fishandgame.org.nz

We see a host of other, serious issues with the proposal which detract from the appropriateness of a minimum flow set through legislation:

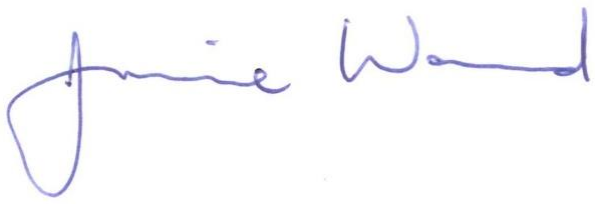
- The Manuherekia does not have a realistic allocation limit, and the Local Bill is not proposed to set one. A minimum flow and allocation limit work together to determine water availability for abstraction, meaning that the security of supply will be in question again when an allocation limit is set in future.
- Neither parliament nor the Central Otago District Council is equipped to make decisions on technical matters like minimum flows, risking a poor outcome despite the significant ratepayer investment already made in gathering information to inform flow setting.
- Bespoke minimum flow legislation adds another layer to an already unwieldy system. This is the antithesis of RMA reform goals and the very complexity the government sought to avoid by delaying notification of the Otago Land and Water Regional Plan.

We acknowledge the safety issue with Falls Dam and the difficulty that the Otago Land and Water Regional Plan delay has caused for the resolution of these issues. As Fish and Game understands it, the age of the dam, and the need for its maintenance or replacement in future was a known factor in the agreement to hand over publicly funded infrastructure to private interests. It is not the fault of the river or the in-stream users that the maintenance and replacement programme has not progressed as necessary. That is a matter for private enterprise.

Progressing the Local Bill proposal will ultimately fail to provide investment certainty, increase conflict in the community and create complexity for future planning and resource management legislation.

We urge you to oppose the development of a Local Bill and work with the whole community to find an enduring resolution. If it would be helpful, I would be pleased to meet with you or your staff to discuss the situation and paths forward.

Yours sincerely,



Jamie Ward

Acting Chief Executive

Statutory managers of freshwater sports fish, game birds and their habitat

Otago Fish & Game Council

5 Hazlett Road, Mosgiel, New Zealand. P: (03) 477 9076 E: otago@fishandgame.org.nz

www.fishandgame.org.nz

Otago Regional Council

10 June 2026

Hon. Chris Bishop
Minister of Transport
Email: c.bishop@ministers.govt.nz

Review and Resourcing of the Total Mobility Scheme

Dear Minister,

At its meeting of 27 May 2026, the Otago Regional Council resolved to write to you urging that the Total Mobility Scheme be reviewed and better resourced so that it can fully meet its purpose for all communities.

Council recognises the important role that Total Mobility plays in enabling people with disabilities and mobility impairments to participate in everyday life. For many users, the scheme is not a convenience but a necessity, providing access to healthcare appointments, employment, education, shopping, social connections, and community activities.

The recent reduction in the subsidy rate, and the associated changes to regional fare caps, have highlighted broader concerns about the affordability of transport for those who rely on the scheme. Many Total Mobility users are on fixed or limited incomes and already face higher living costs associated with disability. Even relatively small increases in out-of-pocket transport costs can create barriers to travel, leading people to forgo essential trips or become more socially isolated.

Council is concerned that the current funding settings may not adequately reflect the real cost of accessible transport services, particularly in regional and rural communities where travel distances are often greater and transport options more limited. Without sufficient funding and regular review, there is a risk that the scheme will progressively become less effective in achieving its core purpose of supporting equitable access and participation.

We therefore urge Government to undertake a comprehensive review of the Total Mobility Scheme, including:

- The adequacy of current subsidy levels and fare caps in meeting users' needs;
- The affordability impacts on disabled people and others who rely on the scheme;
- The sustainability of the scheme in regional and rural areas;
- Future demand arising from an ageing population and increasing accessibility expectations; and
- Opportunities to ensure that funding arrangements enable the scheme to deliver equitable outcomes across New Zealand.

Council believes that accessible transport is a fundamental enabler of inclusion and community participation. A well-resourced Total Mobility Scheme is essential to ensuring that people with mobility impairments can access the same opportunities and services as other New Zealanders.

We would welcome the opportunity to contribute to any future review of the scheme and to share the experiences of Total Mobility users across the region.

Yours sincerely

Cr Hilary Calvert
Chairperson

orc.govt.nz 0800 474 082 Private Bag 1954, Dunedin 9054

Otago Regional Council

From the Office of the Chairperson

7 July 2026

Matapura Ellison
Upoko
Kāti Huirapa Rūnaka ki Puketeraki
Email: matapura.ellison@ngaitahu.iwi.nz

Tēnā koe Matapura

On behalf of the Otago Regional Council, congratulations on your appointment as Upoko of Kāti Huirapa Rūnaka ki Puketeraki. It is a milestone for the rūnaka and recognition of the service you have given your family and community over many years.

The recognition from rūnaka speaks to the regard in which you are held, and to the value placed on your leadership and the time you have devoted to helping families reconnect with their heritage and cultural identity.

Your appointment comes at an important time for the region as we navigate significant change. The Council values the guidance of iwi across its work, from freshwater and land management to the health of our coasts and catchments. The mountains-to-the-sea approach that anchors our Regional Policy Statement reflects values that mana whenua have long upheld, and your leadership will help strengthen that shared commitment to caring for the environment.

The Council values its relationship with Kāti Huirapa Rūnaka ki Puketeraki, and we look forward to working with you in this role.

Regards

Hilary Calvert
Chairperson

8.2. Chief Executive's Report

Prepared for: Council

Activity: Governance - Council

Endorsed by: Richard Saunders (Chief Executive)

Date: 29 July 2026

PURPOSE

[1] This report provides Council with an overview of Otago Regional Council's (ORC) key projects, financial performance and progress against our levels of service.

EXECUTIVE SUMMARY

[2] Staff are progressing the 34 priority actions across six portfolios identified in early 2026, with 14 currently in active delivery and 5 in planning phase. Initial assessment shows that of the 100 tracked sub-actions, 33 require new capacity while 61 represent acceleration or formalisation of existing work, indicating a realistic approach to workload. Eleven actions still require detailed scoping before delivery timelines can be confirmed.

[3] Customer experience remains strong, with June enquiry volumes at 5,110 (94% satisfaction, 92% of calls answered on time). Reception visitor numbers at Aonui reached 842 in June, a significant increase from 219 in June 2025. Rates and routine transport matters continue to dominate enquiry themes.

[4] Key operational work is advancing across multiple fronts. The Regional Pest Management Plan early review has generated strong community engagement through drop-in sessions and an online discussion phase, with formal consultation planned for early 2027. ORC has expanded its groundwater monitoring network in the Hāwea area and secured a further $641,000 from the Ministry for the Environment to complete regional LiDAR coverage by 2027-28, bringing Government co-funding to 63% of the total project budget. Public consultation on proposed Dunedin and Queenstown bus network changes is underway until 29 July.

[5] Business improvement work continues on project and programme management frameworks, integrated work planning, and community engagement initiatives, with implementation of key systems expected in the first quarter of 2026-27.

RECOMMENDATION

That the Council:

*1) **Notes** this report.*

ANNUAL PLAN & LONG-TERM PLAN

[6] Implementation of the Annual Plan 2026-27 is underway, with no risks or issues to date.

[7] The Long-Term Plan 2027-37 process is on track. Phase one is focused on establishing the foundational elements, such as confirming community outcomes, preparing current state briefings and drafting non-financial assumptions.

PRIORITY ACTIONS

[8] Following the election of the new Council in October 2025, elected members signalled a desire to revisit and clarify Council's priorities for the remainder of the triennium.

[9] In early 2026, Councillors identified 34 priority actions across six portfolio areas (Science and Resilience, Strategy and Planning, Environmental Delivery, Public Transport, Governance and Community Engagement, and Cross Portfolio) to focus effort and resources on delivering the greatest impact on the wellbeing and environmental outcomes that matter most to the Otago community.

[10] Staff have been working with Portfolio Leads to determine the most appropriate actions required to achieve the outcomes sought by Council, alongside establishing a monitoring and reporting framework.

[11] Each of the 34 priority actions is supported by detailed sub-actions specifying deliverables, ownership, and completion dates. As of 9 July, 14 actions are in active delivery, 5 are in planning phase, and 15 are not yet started.

[12] Initial assessment shows that across the 100 tracked sub-actions, 33 represent new work requiring new capacity or resource investment, whilst 61 represent acceleration or formalisation of existing work -indicating Council is being strategic about workload realism rather than expanding scope.

[13] Portfolio load varies significantly. Environmental Delivery has the most resource-intensive portfolio (46% new work, 41 sub-actions), with capacity concentration in lagarosiphon intervention assessment, rabbit pest management strategy, and wilding pine community support. Public Transport has the highest proportion of new work (56%) but smaller absolute workload (9 sub-actions), largely centred on governance setup (liaison group reestablishment). Governance and Community Engagement is largely business as usual work (7% new work), as most actions formalise existing governance obligations. Science and Resilience (42% new work) is concentrated in foundational framework development work for the science programme review.

[14] Eleven actions currently have no populated sub-actions and require scoping before realistic delivery timelines can be confirmed: three in Science and Resilience (SRA2, SRA4, SRA5), one in Strategy and Planning (SPA3), one in Environmental Delivery (EDA5), one in Public Transport (PTA5), and five in Cross Portfolio (CPA1–CPA3, CPA5–CPA6). Portfolio leads for several Cross Portfolio actions are still being assigned. Completion of sub-action scoping and resource planning is a priority for the next reporting cycle.

[15] The priority actions framework ensures Council is transparent about what it has committed to achieve and provides a clear line of sight between governance direction and operational delivery. Progress will be reported quarterly to track pace of delivery, identify emerging risks, highlight areas requiring Council attention or decision-making. For new, complex actions or those requiring new funding, Council may receive stand-alone reports seeking direction or providing status updates. General Managers will also update Portfolio Leads as part of their regular catchups.

CUSTOMER EXPERIENCE

[16] In June 2026, the Customer Experience team managed 5,110 enquiries, against a rolling 12-month average of 5,913 interactions per month. This total comprised 842 reception enquiries, 1,836 phone calls, 1,417 emails, 20 online forms, and 995 social media interactions.

[17] Total customer interaction volume increased by 627 compared with June 2025. Customer sentiment for the month tracked at neutral/positive, while service levels remained strong, with 92% of calls answered within target timeframes.

[18] Customer satisfaction for June 2026 was 94%. Enquiry themes continued to be dominated by rates-related matters, including balance enquiries, direct debit enquiries, mailing address changes, email rates invoice requests, solicitor enquiries, and mortgage collection enquiries.

[19] Routine transport enquiries also featured during the month, particularly around lost property, driver behaviour, and service timeliness.

[20] Reception visitor numbers continued to increase, with Aonui welcoming 842 visitors since the building opened, compared with 219 in June 2025. This represents a further increase of 130 visitors from May. Social media engagement was driven by posts relating to the Win a Moisture Meter competition, Oamaru air quality, and the Muddy Creek drop-in session.

[21] Customer feedback from the "Happy or Not" reception survey continues to show very strong performance across the Dunedin and Queenstown service centres. Between 2023 and mid-2026, ORC received 5,002 survey responses, with 92% positive feedback (85% Very Happy and 7% Happy). Satisfaction has improved steadily over time, reaching approximately 95% year-to-date in 2026, with staff friendliness, knowledge, and issue resolution identified as the key drivers of positive customer experiences. The survey also highlighted opportunities to further improve customer satisfaction through reducing wait times, particularly during the lunchtime period.

BUSINESS IMPROVEMENT

[22] Since adoption of the 2023 Efficiency Review, its recommendations have continued to inform business-as-usual improvement activity across the organisation. In February 2025, the Business Improvement Framework Governance Group reviewed the remaining recommendations and prioritised them based on anticipated effort and organisational impact. A number of recommendations were assessed as already completed, addressed through existing work programmes, or incorporated into broader initiatives. As a result, the current programme is focused on a smaller number of high-value projects that support organisational effectiveness, planning and delivery.

[23] During the April–June 2026 quarter, work progressed on three key improvement priorities: development of an organisation-wide approach to project and programme management, implementation of an integrated work planning process, and strengthening how ORC communicates its value to communities. The integrated work planning initiative has moved into implementation, using the Long-term Planning process as a vehicle for embedding organisational planning and resource alignment improvements. Progress has also continued developing a practical project and programme management framework, with implementation expected in the first quarter of 2026–27. This work is intended to provide greater consistency, increased accountability, more consistent decision-making, improved visibility of organisational resources, and stronger organisational capability to deliver change.

[24] Several additional initiatives remain in the pipeline. These include a review of timesheet processes to reduce reliance on timesheets for budgeting and cost allocation, and development of a cross-directorate data management framework and common data standards. Work is also continuing to improve communication of ORC's value through initiatives linked to the Engagement Framework, Communications Strategy, Strategic Directions Implementation Plan and the development of actions arising from the 2026 Community Survey.

[25] The recommendations arising from the Te Korowai Review were reconsidered during the quarter. Following review by the Chair and Deputy Chair, governance-related recommendations have been placed on hold pending decisions relating to local government reform. For the remaining recommendations, it was determined that those relating to planning, science and consultation would deliver the greatest benefit if addressed through a single coordinated project. This proposed project has been assessed as high impact relative to effort and will be considered through the organisation's emerging project management and prioritisation framework.

[26] Overall, implementation of the Efficiency Review remains on track, with a number of recommendations now completed and embedded within normal operations, and attention increasingly focused on larger organisational improvement initiatives that will strengthen planning, project delivery, data management, and community engagement over the longer term.

GENERAL COUNCIL BUSINESS

[27] Work is progressing on the early review of the Regional Pest Management Plan. An initial survey drew over 900 responses identifying the pests' residents are most concerned about, with rabbits, feral cats, and pest conifers topping the list ahead of possums and mustelids. These results shaped a discussion document released on 5 June 2026, with feedback open until 8 July. Community drop-in sessions ran across the region through June and July, in Dunedin, Ōwaka, Balclutha, Wānaka, Ōamaru, Alexandra, and Queenstown. The Ranfurly session was postponed due to severe weather and will be rescheduled. These in person sessions were supplemented with an online session, giving communities the chance to comment on suggested management options before formal consultation. Feedback will inform the full draft plan proposal, which goes out for consultation in early 2027, followed by submissions and hearings. Once approved and notified, the new plan is expected to be operational in mid-2028.

[28] ORC expanded its groundwater monitoring network in the Hāwea area with two new monitoring wells, installed at Hāwea Cemetery and in the Maungawera Valley in June 2026. The cemetery site was chosen to track how groundwater levels respond to fluctuations in Lake Hāwea, while the Maungawera Valley well fills a gap in the network where a known aquifer had no dedicated monitoring site. Both wells will monitor groundwater levels on an ongoing basis, with quarterly water quality sampling at the Maungawera Valley site to assess suitability for uses such as drinking and stock water. The data will feed ORC's Environmental Data Portal and support future resource management decisions.

[29] ORC secured a further $641,000 from the Ministry for the Environment to help complete its region-wide LiDAR (Light Detection and Ranging) mapping programme, bringing the Government's total contribution to more than $1.8 million, or around 63% of the project budget, with ORC funding the remainder. Around 32% of Otago, roughly 10,200 square kilometres, already has LiDAR coverage, and the current programme will capture a further 23,000 square kilometres to achieve full regional coverage by 2027-28. The three-dimensional elevation data supports flood risk, natural hazard, climate adaptation, and infrastructure planning, and will be freely available through the LiDAR Data Service to businesses, landowners, and infrastructure providers.

[30] Public consultation on proposed changes to the Dunedin and Queenstown bus networks runs from 13 July to 29 July 2026. The proposal introduces a zone-based fare system, so longer trips generally cost more than shorter ones, replacing the current flat $2.50 adult Bee Card fare that applies regardless of distance. The consultation also seeks views on fare capping, which would limit the maximum a passenger pays over a day, week, or month to reward frequent use, and on removing cash as a payment option ahead of the Motu Move rollout in 2027, which will allow payment by most bank cards. A decision is expected in September 2026, with any changes phased in between October 2026 and mid-2027.

[31] Following an earlier incursion discovered in the Waianakarua area, the pest plant African feather grass was identified in the Ngapara area in June 2026. The find came directly from ORC's Regional Pest Management Plan review drop-ins, where a landowner recognised the plant from a factsheet displayed at the Ōamaru session and alerted staff. Biosecurity staff visited the site, and the species was confirmed by the Bioeconomy Science Institute. ORC will now survey surrounding properties to determine the extent of the spread, then develop an incursion response plan with the landowners. African feather grass spreads readily by wind, water, and machinery, and can crowd out low-growing species and affect production values, so early detection and reporting are important.

OPTIONS

[32] As this is a report for noting there are no options to consider.

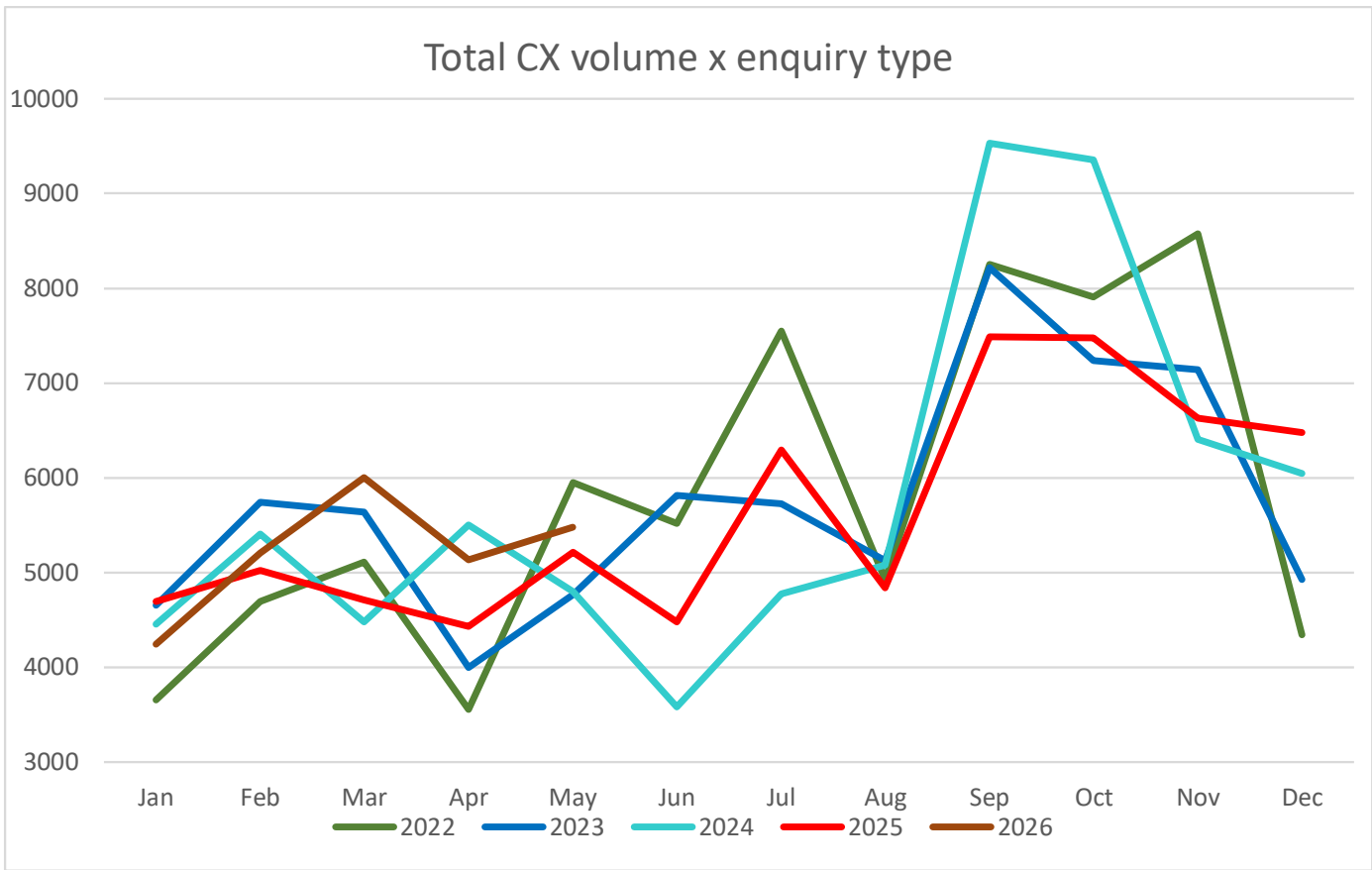
ATTACHMENTS

1. Customer Report May 2026 [**8.2.1** - 2 pages]
2. Efficiency Review Council Update July 2026 [**8.2.2** - 7 pages]

May 2026 Customer Report

Rolling 12-month customer interaction volume average is 5802 per month

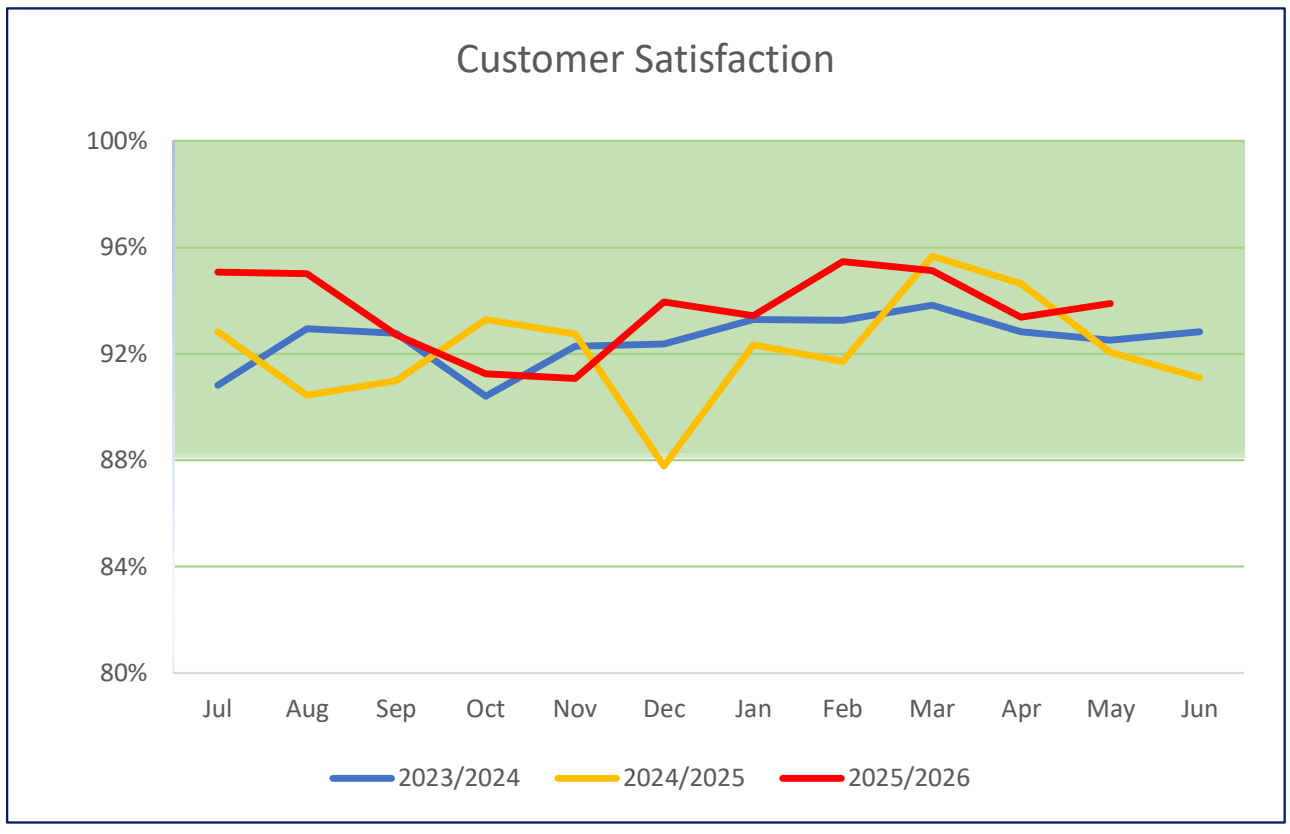
This month's customer volume total: **5342**
(reception = 718, phone = 1976, email = 1516, online form = 26, social 1132, afterhours = due 7/6)



- Total customer interaction volume increased by 125 against May 2025.
- Customer sentiment tracking was neutral/positive.
- Total service level for all calls increased to 92%
- Total customer satisfaction May rating at 93%

Enquiry themes:

- Rates: balance enquiry, direct debit enquiry, mailing address change, email rates invoice, solicitor enquiry.
- Transport – routine enquiries: Lost Property, Driver behaviour, timeliness.
- Social media – Orbus posts electric buses, ORC Moving day & moisture meter posts
- Aonui Reception visitors increased from 218 last May to 718. Enquiries at reception for Transport, General and Rates all tripled in volume.


Customer Satisfaction
100%
96%
92%
88%
84%
80%
Jul
Aug
Sep
Oct
Nov
Dec
Jan
Feb
Mar
Apr
May
Jun
2023/2024
2024/2025
2025/2026

Efficiency Review – Implementation Update July 2026

The recommendations from the 2023 Efficiency Review have been informing business as usual improvements, since the report was adopted by Council. Remaining recommendations were reviewed and prioritised by the Business Improvement Framework Governance Group in February 2025. For each initiative the governance group determined the anticipated effort and the resulting impact. Some items were determined not to require prioritisation through this process as they were either addressed by business-as-usual work, were adequately covered by other initiatives, or had already been completed. Items which have been completed, and were reported to Council in previous updates, are listed in Appendix A.

Additional recommendations that have been identified through the Te Korowai Review (Appendix B) were presented to Council in October 2025 and it was decided to wait until the new Council had been established before re-considering. The Chair and Deputy Chair have now reviewed the governance items (highlighted in blue) and have agreed to put these items on hold in light of the local government reform proposal. The remaining recommendations that were not addressed through planned or existing work, indicate that a combined new project should be initiated to address the Planning, Science and Consultation points together (highlighted in yellow). This will be included in the new project management approach currently being finalised, for prioritisation and capacity planning.

Snapshot of improvement activity for Apr-Jun 2026

Current focus:

- Develop an ORC approach to project and programme management (Actions 3.1 and 3.2)
- Develop integrated work planning process (Actions 2.2 and 2.3)
- Communicating our value (Action 5.2, will be ongoing)

In the pipeline:

- Review timesheet function (Action 1.4)
- Develop a data management framework (Action 4.1)
- Project to address Planning, Science and Consultation recommendations from the Te Korowai Review

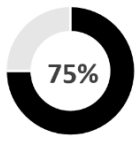
2023 Efficiency Review Recommendations

1. **Financial Processes**
   Sponsor: Nick Donnelly - GM Finance

Actions	Status	Assessment	Notes	Progress
4) Review timesheet function to reduce the reliance on timesheets for budgeting and cost allocation	Planning	*"could do" - low impact/ low effort*	*This review will be led by the Finance directorate and progressed within current budget. Review will progress further once Annual Report, rates strike and Datascape Rates are completed.*	0%

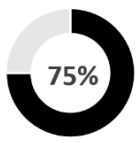
2. **Integrated Planning and Reporting**
   Sponsor: Amanda Vercoe, GM Strategy and Customer/Deputy CE

Actions	Status	Assessment	Notes	Progress
2) Develop a strategic and operational planning framework, including an approach to coordinating resources and consolidating work programmes through the organisation	N/A	*N/A – incorporated into 2.4*	*This recommendation will be incorporated with the one below and addressed within one project.*	N/A

3) Develop integrated work planning process that is clearly aligned to resource planning, budget setting, strategic plan, delivery plans, external/internal resourcing	Commenced	*"weighty project" - high impact/ high effort*	*This initiative is led by the Organisational Planning and Performance Team, and it is now in the implementation phase using the current Long-term Planning project as the change vehicle/process update mechanism.*	

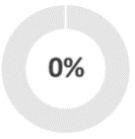
3. Project and Programme Management

Sponsor: Richard Saunders – Chief Executive

Actions	Status	Assessment	Notes	Progress
1) Review existing projects and consider where a programme management approach may be appropriate	N/A	*N/A incorporated into 3.2*	*This recommendation will be incorporated with the one below. IT projects, Datascape programme and the Business Improvement Framework all address this recommendation. Further review of projects will occur after a PM approach has been determined and via regular LTP review of projects.*	N/A
2) Develop an ORC approach to project and programme management and consider introducing a PMO	In progress	*"weighty project" - high impact/ high effort*	*Programme management has been introduced to large projects. Clarity was achieved regarding an approach to give clearer accountability, more consistent decision-making, and better visibility of resources across the organisation. This is now well advanced with a practical organisational approach in the final stages of refinement, and implementation expected in Q1 2026-27. Longer term this will help us build organisational capability and reliably deliver change with confidence.*	

4. Data Management

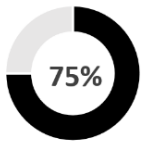
Sponsor: Tom Dyer – GM Science and Resilience

Actions	Status	Assessment	Notes	Progress
1) Develop a data management framework and adopt common data standards	Planning	*"weighty project" - high impact/ high effort*	*This project will require a cross-directorate approach. Timing and scoping are being investigated.*	

5. Additional Opportunities

Sponsor: Amanda Vercoe, GM Strategy and Customer/Deputy CE

Actions	Status	Assessment	Notes	Progress
1) Aligning strategic goals and outcomes.	N/A	*N/A - incorporated into 2.4*	*This recommendation will be incorporated with the integrated work planning initiative. It is also being addressed through the*	N/A

			development of Strategic Directions implementation plan. Outcome indicators have been drafted and will be presented to Council in February 2026.	
2) Communicating our value: - Communicate what, why, when and how work is being delivered - Develop processes and language for communicating "value for money" with the community.	Commenced	*N/A - Action addressed by BAU work and through 2026 Community Survey action plan (to be developed)*	*Work in progress. Further actions will be considered as part of the Community Survey 2026 action plan currently being developed. To date this has been addressed through work under the Engagement framework, the Communications Strategy, the Customer Policy and the Strategic Directions Implementation Plan. Value snapshot prepared for Councillors to support Annual Plan Year 2 deliberations; next steps are to consider how to use this to communicate Year 2 value from activities alongside annual report.* *Strategic events attendance communicates ORC's value through engaging stalls.* *Te Mātāpuna: The Source quarterly newsletter, the annual brochure that accompanies rates invoices, ORC's website and social media are channels used to communicate to what ORC does and what role we play.*	

Appendix A: Actions completed and previously reported to Council

1. Financial Processes

Sponsor: Nick Donnelly - GM Finance

Actions	Status	Assessment	Notes	Progress
1) Review revenue targets and charge-out rates for cost recovered activities	Completed	*N/A - Action completed*	*Charge out rates and revenue targets were reviewed in LTP 2024-34, with revisions made for AP 2025-26. Further review is considered part of BAU work programme.*	
2) Review overhead allocation and reporting process to ensure visibility of "below the line" activities	Completed	*N/A - Action completed*	*Overhead allocation revised for LTP 2024-34. No further action needed.*	
3) Review use of consultants, and processes for procurement and budget setting to ensure internal capabilities are considered	Completed	*"could do" - low impact/ low effort*	*Procurement Policy with additional requirement to consider internal resourcing approved by ELT in May. Refresher training on this and revised financial delegations to be completed by Finance over the coming months.*	
4) Review of budgeting process and financial management/ financial reporting	Completed	*"weighty project" - high impact/ high effort*	*IBIS Breeze implemented as reporting, forecasting and planning system for 2025-26 reporting / forecasting and 2026-27 annual plan.*	

2. Integrated Planning and Reporting

Sponsor: Amanda Vercoe, GM Strategy and Customer/Deputy CE

Actions	Status	Assessment	Notes	Progress
1) Review non-financial performance measures	Completed	*BAU*	*Service measures were reviewed in LTP 2024-34, with revisions made for AP 2025-26. Further review is considered part of BAU work programme. LTP 2027-37 will trigger another substantive review.*	
2) Develop a definition of "efficiency" and an organisational approach to efficiency	Completed	*"could do" - low impact/ low effort*	*This project was being led by the Organisational Planning and Performance team and progressed within current budget. The team developed a draft definition and approach to efficiency and then held a workshop with Council in March to further refine these. Feedback has been incorporated into the final definition and approach and will be used going forward to focus efforts internally.*	

Appendix B: Recommendations from Te Korowai

Theme	Ref/Name	Area of Improvement	Status	Recommendation
Catchments and climate change	CC1: Catchment climate options	Move beyond themes in Strategic Direction and activities in the Climate Change Strategy to detailed catchment-based discussions. *	Work in this area is partially addressed through current and planned work in ICM and through the Climate Strategy.	No additional actions. This was assessed through the BIF process and rated as having low impact compared to effort. *If Council decides there is value in additional work then scoping of further actions could be directed to the Climate Strategy working group and the ICM team.*
		Start to develop mitigation options and costs to share with stakeholders in those catchments. *		
		Develop catchment strategy and tactics, better integrating adaptation with council activities including asset management and planning.		
	CC2: Spatial Accounting	Continue to develop management accounting systems so costs can be allocated to geographic areas such as catchments rather than just to activities. *	This is partially addressed through existing systems. *There may be value in considering how the information could be applied, displayed, and accessed more widely.*	No additional actions. This was assessed through the BIF process and rated as having low impact compared to effort.
Communication, consultation, and engagement	CE1: Coordinated engagement	Ongoing commitment to coordinating engagement and consultation efforts across Council, ensuring 'one car up the driveway'.	This is being addressed by the Engagement Framework and will be covered by BAU work of the P&E team. It is also supported by the new CRM system and IRIS Next Gen. Additionally there is a project on the Support Services workplan to optimise vehicle use.	No additional actions; this is covered by planned or existing work.
	CE2: Consultation findings and feedback	Documenting consultation and engagement findings impartially and in a balanced way.	This is partially addressed by the Engagement Framework and the Partnership & Engagement team.	New project to be initiated to address to Planning, Science and Consultation points. This was assessed through the BIF process and rated as high impact compared to effort.
		'Closing the loop' to communicate engagement and consultation outcomes and how stakeholder input was considered.		
	CE3: Internal awareness	Increasing awareness across the organisation of the purpose and activities of teams and business groups.	This is being addressed by the development of an Internal Communications plan. An audit of internal communication channels is underway.	No additional actions; it is covered by planned or existing work.
	CE4: Comms Plan/Strategy	Have an agreed communication plan and include councillors in development of that plan to get better alignment of messaging.	This is being addressed by development of a Communications Strategy and current practices which include communication plans being developed and presented to Councillors for input on large projects, such as LWRP and LTP. The Communications	No additional actions; it is covered by planned or existing work.

			Strategy will include criteria for when Communication Plans are expected to have Councillor involvement.	
Governance and regional advocacy	GA1: Councillor training	Develop a systematic training programme for councillors beyond induction phase and including training in the RMA. *	These items are for Councillor consideration and decision.	No staff recommendation.
		A dedicated professional development and self-review programme for elected members could be beneficial.		
	GA2: Governance culture	A more considerate and collaborative governance culture, providing opportunities for respectful dissent, would increase ORC's ability to achieve its vision and goals for the region.		
	GA3: Regional advocacy	Advocating for the needs of the region more actively with central government.		
Investments and financial transparency	IF1: Investment vehicle	Consider grouping and managing all investments together in an arm's length council owned investment vehicle.*	These items are for Councillor consideration and decision.	No staff recommendation.
	IF2: Investment Risk & Transparency	Integrate the overall risk profile of different investment income streams.		
		Make investment management and risk more transparent.		
		Adjust preference for risk and therefore earn better long-term investment returns.		
	IF3: Illustrating financial info	Better integration and graphic summarisation of financial information in the Long-term Plan would assist ratepayer understanding of prioritisation and trade-offs.	This will be addressed as part of BAU continuous improvement in development of the Long-term Plan.	No additional actions; it is covered by planned or existing work.
Planning and science	PS1: LWRP communication	Better co-ordination and explanation of the approach to land and water planning including detailing the implementation plan and desired end result.*	The LWRP is on hold however there is an opportunity develop a framework that provides further clarity and consistency to the processes and approach and also addresses the Science and Consultation points.	New project to be initiated to address to Planning, Science and Consultation points together. This was assessed through the BIF process and rated as high impact compared to effort.
		Better manage conversations around trade-offs in implementation of those regulations.		
		Be clearer with the direction, desired end point, transition path and implementation plan for land and water regulations.		

	PS2: Science in debates	Bring the science function to the fore in planning debates.	Science regularly contributes to Planning debates however there is an opportunity to provide further clarity and consistency to the processes and approach.	As indicated above – New project to be initiated.
	PS3: SOE document	Provide a Statement of the Environment that is a stocktake of the environment in Otago.*	This is being addressed through planned Science trend reporting and development of an overarching SOE summary for the website. It is further supported by the development of outcomes monitoring and reporting for ORC's Strategic Directions.	No additional actions; it is covered by planned or existing work.
		Develop a State of the Environment document, so the challenges of environmental limits are better expressed, in one place.		
Strategic directions	SD1: CE performance plan	The Chief Executive's performance plan could include more quantifiable KPIs and be structured to more strongly reflect Council's strategic directions.	This item is for Councillor consideration and decision.	No staff recommendation.
	SD2: Work & strategic goals	Understanding of any additional or different work ORC needs to undertake, or cease undertaking, to achieve its strategic goals could be improved; although it is understood that this work is underway.	This is being addressed by development of an implementation plan for Strategic Directions. It is further supported by actions to address Efficiency Review recommendations and will be covered by the planned work programme.	No additional actions; it is covered by planned or existing work.
Systems and capability	SC1: IRIS	Continue to develop the internal systems environment with full implementation of IRIS.	This is being addressed through the planned implementation of IRIS.	No additional actions; it is covered by planned or existing work.
	SC2: HRS & performance management	In HR management, introduce online systems and improve management of under-performance.	This is being addressed through the planned implementation of a new HR system. Management of under-performance will be addressed through planned HR work programme.	No additional actions; it is covered by planned or existing work.

9.2. Otago Deep Water Lakes Research and Monitoring Proposal

Prepared for:	Council
Report No.	S&R2616
Activity:	Science
Authors:	Jason Augspurger (Principal Scientist), Ben Mackey (Manager Science).
Endorsed by:	Tom Dyer (General Manager Science and Resilience)
Date:	29 July 2026
Portfolio Leads:	Cr Kelliher and Cr Robertson, Science and Resilience

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PURPOSE

[1] This report presents a proposed monitoring and research programme to support evidence-based management of Otago's deep lakes, for consideration by the Council. This proposal was requested by the June 2025 Science and Resilience Committee.

EXECUTIVE SUMMARY

[2] The Otago Deep Water Lakes Technical Advisory Group was asked by Council to prepare a monitoring and research programme for Otago's deep water lakes.

[3] This paper outlines the proposal, which is a comprehensive monitoring and research programme to provide decision makers and environmental managers with an evidence basis for future lake management. This paper seeks a decision from the Council whether to proceed with the programme, likely through consulting on funding the work through the Long-Term Plan process.

[4] The proposed programme of monitoring and research would require resourcing at approximately $2M per year over a ten-year period, a significant increase over Council's existing lake science and environmental monitoring budgets. Council may wish to support funding a proportion of the work and seek external support to fund the full programme.

RECOMMENDATION

That the Council:

1) ***Approves*** *the inclusion of the Otago Deep Water lakes monitoring and research programme for consideration a part of the development of the upcoming Draft Long-Term Plan.*
2) ***Approves*** *an ORC funding commitment of xx% of the total programme cost for consideration in the upcoming Draft Long-Term Plan and as a basis for seeking funding commitment from external partners.*

3) ***Directs*** *staff to continue to explore potential funding contributions from potential partners and deliver a Council Workshop to inform Governance roles and oversight to seek funding.*
4) ***Notes*** *the work of the Otago Deep Water Lakes Technical Advisory Group in producing this proposal, and thanks the participants for their contribution and expertise.*

BACKGROUND

[5] Regular State of the Environment monitoring of Otago's deep-water lakes (Wanaka, Wakatipu, and Hawea) was implemented in 2016. By 2020, 5 years of open water chlorophyl a measurements, an indicator of algal concentration, showed an increasing trend in all three lakes. A 2021 report[1] by Wai Wanaka highlighted this dataset. Further, it summarised the pressures facing the lakes, noted recent incursions of invasive species (e.g., lagarosphyon, lake snow), and documented the general uncertainty about how much stress the lakes were under.

[6] Following concern generated from this report, including an enquiry[2] from the Parliamentary Commissioner for the Environment to ORC about lake management, the ORC committed[3] to forming a multi-agency working group to develop a work programme for the lakes.

[7] The Otago Deep Water Lakes Technical Working Group (TAG) was formed in early 2024 at the request of the Otago Deep Water Lakes Management Working Group. The TAG's primary functions are to review the state of knowledge on the Lakes, identify knowledge gaps, and develop a recommended programme of monitoring and research to fill gaps.

[8] The purpose of the programme of monitoring and research is to enable evidence-based management of Otago's deep water lakes, including informing development of relevant national and regional policies and plans. The TAG's role is central to ensuring the scientific basis for management decisions, including both non-regulatory and regulatory responses, is as accurate and complete as possible.

[9] To date, the TAG has produced two reports:

- A December 2024 report[4] summarising the state of knowledge about the lakes, documenting risks, comparing overseas examples, and identifying key knowledge gaps and questions.
- A June 2025 report[5] which outlined three potential monitoring and research programmes focussed on the lakes. The proposals spanned a nominal 10-year period and ranged in estimated total cost from $2 to $20 million dollars.

[10] At the June 2025 Science and Resilience Committee Meeting, Councillors requested the TAG proceed to develop a full proposal based on 'Proposal 1', with a projected cost of approximately $20 Million over the 10-year programme duration.

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[1] Wai Wanaka (2021) Understanding and protecting Otago's deepwater lakes
[2] PCE letter to ORC re deepwater lakes
[3] ORC response to PCE - December 2022
[4] Enviromental Science and Policy Committee - Dec 2024 - pg 90
[5] Science and Resilience Committee - June 2025 - pg8

Resolution SRC25-101: Cr Forbes Moved, Cr Laws Seconded

That the Committee:

*1) **Notes** this report.*

*2) **Requests** the Technical Advisory Group to develop a more detailed research and monitoring plan at a funding level aligned with Proposal 1.*

*3) **Requests** that the Technical Advisory Group works to identify funding opportunities from external sources.*

MOTION CARRIED

[11] Since that request, the TAG has refined the proposal into a detailed programme of work. Much of the subsequent proposal was developed at an in-person workshop of TAG members in Queenstown in October 2025.

[12] This paper outlines the proposal, appended as Attachment 1, and seeks a Council decision on whether to include this proposal in the development of the Draft Long-Term Plan, including signalling an ORC funding contribution. The paper also seeks direction to begin exploring funding opportunities with partners.

DISCUSSION

Proposed Deep Lakes Monitoring and Research Programme

[13] The research and monitoring proposal developed by the TAG is appended as Attachment 1. The proposal builds on the previous two reports to Council, and proposes an integrated programme of research and monitoring to fill six key knowledge gaps related to the functioning and management of Otago's deep-water lakes:

- Section 1: Lake budgets
- Sections 2-3: Fundamental lake processes
- Section 4: Lake history and future scenarios
- Section 5: Mātauraka Māori
- Section 6: Decision support for lake management and community engagement

[14] A summary of each programme component is presented in Table 1 below:

Table 1 – Programme summary of each workstream, indicating what is involved, and the rationale for it. The total estimated cost over the 10-year programme duration for each workstream is indicated.

(1) Lake Budgets	**$11.75M**
What	Quantifying the input, output and internal behaviour of key physical and chemical components of the lake system, including water, heat, oxygen, nutrients and sediment.
How	Expanded monitoring of stream inflows (incl. high flow), rainfall, in-lake measurements. Measuring atmospheric deposition, installing climate stations, direct lakebed measurements.
Why	Critical for understanding lake behaviour, lake and catchment connection, lake response to stressors, and scenario testing.
(2) Lake functioning: Physical processes	**$1.5M**
What	Targeted physical measurements, development of three-dimensional hydrodynamic models, and water quality modelling.

How	Water column profile measurements, moored instruments for currents. Develop 3-D hydrodynamic models for lake mixing and stratification. Water quality models.
Why	Assess connectivity within lakes, transport paths, required for land/climate scenario testing, biosecurity risk assessments.
(3) Lake Functioning: Ecology and food webs	**$3.0M**
What	Workstream to understand ecological processes, foodwebs, nutrient bioavailability, biomass hotspots, and identify ecological tipping points.
How	Targeted research studies on key ecological processes and relationships, development of methods to analyse algae/nutrient relationships, isotope tracing, biomass surveys, assessing ecological changes from current and future invasive species (e.g., lake snow, weeds).
Why	Key lake values (clarity, algae blooms, fish stocks) governed by ecological processes, predicting minimising/impact of invasives, understand lake ecological response to stress (e.g., nutrients/climate change).
(4) Catchment history and future	**$2.6M**
What	Reconstructing how the lakes have changed over deep time (~1,000 yr), quantifying the effects of changes in land use and land cover, and developing realisitc future climate and land use development scenarios.
How	Analysis of sediment cores from lake beds, reconstructing catchment land use change from historic records. Input climate and development scenarios into lake hydrodynamic and water quality models.
Why	Place current lake conditions and trends in context, establish historic catchment nutrient load, quantify time lags, predict effect of plausible future scenarios.
(5) Mātauraka	**$1.3M**
What	Understanding rich source of mana whenua knowledge and observations of lake history, behaviour, species, and Mahika kai. Importance of migratory eels and effects of dams.
How	Collating existing mātauraka Māori for the area to the extent and in a format agreeable to mana whenua. Developing a cultural monitoring programme to complement the technical workstreams.
Why	Mātauraka Māori remains a critical knowledge gap that can increase understanding for how lakes have changed over centuries and puts emerging lake conditions into context. Disruption to eel migration having an unknown effect on populations, ecology, and lake conditions.

(6) Decision support and community engagement	**$1M**
What	Workstream to develop a Decision Support Framework (DSF) to support decision makers to implement programme outputs/findings. Public awareness of lake health/fragility and programme outputs.
How	DSF integrates diverse knowledge streams across the research programme into a decision-relevant whole – what does all this information mean – how to interpret it? Targeted environmental programme reporting for local communities.
Why	Building an evidence-based integrated and adaptive approach to environmental governance rather than treating scientific disciplines, policy processes, cultural values and community perspectives separately. Enables flexibility as the programme evolves. Increased community awareness builds understanding/support for future management challenges.
Total	**$21.15M**

Programme sequence

[15] The proposed programme of work supports management and decision making in the lakes through substantial monitoring efforts, modelling and targeted studies. At a high level, the proposal is sequenced with:

- Augmented catchment, river, atmospheric, and lake measurements, enabling the creation of budgets for the lakes.
- Budgets are then used to develop 3D numerical lake models which, paired with catchment nutrient and hydrological models, help understand lake dynamics and water quality.
- A parallel workstream of monitoring and experiments focusses on nutrient availability, lake ecology and food webs.
- Both the physical and ecological work will allow for scenario testing (how does the lake respond to a predicted environmental change?).
- All workstreams inform the decision-making process to enable development of suitable management regimes for the lakes and their catchments.

[16] The programme of work outlined here is planned over a 10-year period with a steady funding level of approximately $2M/yr. The programme has been consciously front loaded by prioritising data collation and key observations to obtain the fundamental data that will underpin subsequent modelling and research. Many components of the programme feed into subsequent workstreams or have dependencies in other areas.

[17] The lake budgets work (1) represents a significant increase in environmental monitoring of the lakes and their catchments and is pivotal for establishing the physical processes component (2). The ecology and food web component (3) is a parallel workstream to better understand how the lakes function ecologically, and ultimately determine how physical, nutrient, or species changes may impact values strongly influenced by lake ecology (e.g., algae). These first three workstreams combine to enable predictive capacity for how the lake may respond to a given change (nutrient, climate, species etc).

[18] The historic and future scenario work (4) is critical for understanding whether current lake conditions and trends are normal or unusual, and developing a record of the stressors that drove previous lake behaviour. It is independent of the first three components, but constrains realistic future scenarios (climate, development) and leverages the earlier sections (1,2,3) to establish how these future scenarios may drive change in the lake. The mātauraka component (5) is less dependent on the previous components, and sits alongside the technical workstreams, providing historic context and potentially a cultural monitoring programme, feeding into the decision support framework. It ties closely to the ecology and food web work (3) through assessing the effect of eel population decline on lake health. Finally, the decision support and community engagement workstream (6) provides a mechanism to bring all workstreams together in a meaningful format for both decision makers and the wider community as the programme progresses.

Prioritising informed management

[19] This proposal has a deliberate focus on better understanding the critical aspects of lake and catchment science that will translate to better predictability and providing decision makers with a sound basis to manage the lakes. Notably, it focusses on monitoring and understanding the stressors that are most likely to impact on values (e.g., water clarity, water quality), subsumed within the concept of lake health.

[20] The proposed package of work aims to provide a sound, evidentiary basis to inform future lake management by:

- Substantially improve our understanding of the fundamental physical and biological processes in the lakes
- Placing the current state of the lakes within the context of their historical, natural ranges of variation
- Identifying when observed changes are of material concern for lake values
- Anticipating future lake responses to realistic changes in stressor levels due to climate, land use and ecological disruption (e.g., invasive species)
- Enable early identification of risks to the lakes (e.g., the likelihood of the existence of ecological tipping points) where a rapid management response may be appropriate.

[21] The type of management decisions the programme could inform include:

- Levels of catchment nutrient loads that could adversely affect the lakes
- Effective controls on catchment development or land use to minimise risk to the lakes
- The best approaches to managing invasive species
- Appropriate adaptations to predicted changes in lake condition or behaviour (e.g., due to climate changes, delayed responses from existing stress).

Funding

[22] A new research and monitoring programme of this scale is a significant expense for the Council in an uncertain and constrained funding environment. There have been significant changes signalled to local government since Council requested the TAG to proceed with developing a proposal in June 2025. Funding the proposed programme at the ~$2Million a year level is nearly a six-fold increase to the existing annual baseline science and environmental monitoring lake operational and capital budget of ~$350,000. The TAG's research and monitoring programme is additional to the existing

lake science and environmental monitoring budget, and assumes this continues (e.g., lake buoys, open water sampling, submerged plant surveys, lake snow monitoring).

[23] A fully implemented programme such as the one outlined here would present future lake managers and environmental regulators with a sound evidence basis to manage the lakes into the future. The benefit of ensuring the ongoing health of Otago's deep lakes extends far beyond Otago, with the pristine lakes and stunning landscapes representing major a drawcard for tourism, business, and internal migration.

[24] Experience from other decadal scale lake management programmes emphasises the importance of upfront and enduring leadership from key organisations to ensure programme success. If ORC was to commit to funding the programme it would signal commitment to others and provide confidence the Council is serious about investing in the long-term health of Otago's deep lakes.

[25] Obtaining co-funding from other organisations would reduce the cost to ORC and give the best chance of ensuring a sustainable research and monitoring programme at the level outlined here. ORC has had recent success in obtaining co-funding for a substantial acquisition of LiDAR across the region, and this approach could serve as a model for attracting funding to the proposed lake programme.

[26] Funding the lakes research and monitoring programme could be consulted on as part of the upcoming Long-Term Plan consultation.

OPTIONS

[27] Council has 3 broad options to consider when considering the recommendations within this paper.

[28] Option 1: Resolve to include the programme in the development of the Draft Long-Term Plan. This option enables ORC to begin seeking funding from partners. This option does not commit Council to Funding this work through Long Term Plan. Council could choose to fully or part fund the programme or remove it from the Long-Term Plan entirely before or after long term plan consultation with the community.

[29] Option 2: Council could resolve to not fund the work. No further work would occur at this stage. This option carries risk associated with both long term environmental and regulatory oversight and reputational risk with interested communities.

[30] Option 3: Council could resolve to seek a revised programme from the TAG. Depending on the level of change sought this may introduce minor delays.

SUMMARY OF CONSIDERATIONS

COMMUNITY OUTCOMES

This work aligns with the following community outcomes from the ORC 2024-2034 Long-Term Plan:

Communities

Otago has cohesive and engaged communities that are connected to the environment and each other.

Environment

Otago has a healthy environment ki uta ki tai (from mountains to the sea), including thriving ecosystems and communities, as well as flourishing biodiversity.

Resilience

Otago builds resilience in a way that contributes to community and environmental wellbeing through planned and well-managed responses to shocks and stresses, including natural hazards.

ALIGNMENT WITH CENTRAL GOVERNMENT LEGISLATION

This work is consistent with relevant central government policy and direction. Specifically, it aligns with the Resource Management Act (RMA) and the new Natural Environment Bill, which will replace the RMA. This legislation provides for limit setting and resource allocation. The proposed research programme could be directly used to inform limit setting and non-regulatory actions.

While the specifics of the future national policy direction (NPD), which will replace existing national policy statements (NPS), are net yet known, the proposed programme will provide an information base which will be suitable for informing decision making under multiple future policy settings.

ALIGNMENT WITH ORC INTERNAL POLICY

There is no specific ORC policy that is directly applicable to this work.

FINANCIAL CONSIDERATIONS

The research and monitoring proposal presented here is unfunded. Any decision to fund all or part of the programme could be consulted on through the LTP process.

The cost of running the TAG to dates is approximately $220,000, including consultants, workshops, and ORC staff time.

LEGAL/COMPLIANCE RISK

There is insignificant/minor risk that decisions arising from this report could expose Council to litigation, regulatory non-compliance, or breach of policy/legislation.

REPUTATIONAL RISK

The ORC is the regulator charged with managing Otago's environment. The organisation faces reputational risk if the health of Otago's lakes deteriorate significantly.

CLIMATE RESILIENCE

The impacts of climate-related risks (e.g. flooding, drought, extreme winds, coastal erosion, wildfires) on this work has not been assessed.

CARBON EMISSIONS

The implications of this work on organisational or regional greenhouse gas emissions has not been assessed.

HE MAHI RAU RIKA: SIGNIFICANCE, ENGAGEMENT AND MĀORI PARTICIPATION POLICY

Not Applicable

ENGAGEMENT WITH MANA WHENUA

Mana whenua have had a member on the Otago Deep Water Lakes Management Working Group. The TAG has maintained contact with Aukaha as the programme has been developed.

STAKEHOLDER ENGAGEMENT

There has been no engagement with external stakeholders and/or the public specifically for this work.

COMMUNICATIONS

The decision will be communicated with the relevant audiences, in particular the Parliamentary Commissioner for the Environment, Wai Wanaka, Ministry for the Environment, Guardians of Lakes Wanaka and Hawea, Department of Conservation, LINZ, the University of Otago, and QLDC.

NEXT STEPS

[31] If Council recommends proceeding with the proposal, it could be consulted on through the upcoming Long-Term Plan process.

[32] If Council supports funding a proportion of the programme, Council staff will explore additional funding possibilities as directed.

[33] If Council supports funding a proportion of the programme, Council Staff will provide a workshop for councillors to review potential funding options or mechanisms.

ATTACHMENTS

1. Attachment 1 - Deep Water Lakes Monitoring and Research Proposal [**9.2.1** - 51 pages]

Otago Deep Water Lakes Research and Monitoring Proposal

Prepared for:

Otago Deep Water Lakes Management Working Group

By:

Otago Deep Water Lakes Technical Advisory Group

July 2026

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Introduction and Rationale

The Otago Deep Water Lakes Technical Working Group (TAG) was formed in early 2024 at the request of the Otago Deep Water Lakes Management Working Group. The TAG's primary functions[1] are to review the state of knowledge on the Lakes, identify knowledge gaps, and develop a recommended programme of monitoring and research to fill gaps.

The purpose of the programme of monitoring and research is to enable evidence-based management of Otago's deep-water lakes, including informing development of relevant national and regional policies and plans. The TAG's role is central to ensuring the scientific basis for management decisions, including both non-regulatory and regulatory responses, is as accurate and complete as possible.

To date, the TAG has produced two reports:

1. A December 2024 report summarising the state of knowledge about the lakes, documenting risks, comparing overseas examples, and identifying key knowledge gaps and questions.
2. A June 2025 report which outlined three potential monitoring and research programmes focussed on the lakes. The proposals spanned a nominal 10-year period and ranged in estimated total cost from $2 to $20 million dollars.

At the June 2025 Environmental Science Policy Committee Meeting, Councillors requested the TAG proceed to develop a full proposal based on 'Proposal 1', with a projected cost of approximately $20 Million over the 10-year programme duration.

Since that request, the TAG has refined the proposal into a detailed programme of work. Much of the subsequent proposal was developed at an in-person workshop of TAG members in Queenstown in October 2025.

Here, we propose a programme which will improve our understanding of how current and future stressors affect the key values of Otago's three deep lakes: Whakatipu, Wānaka and Hāwea. Building on the previous two reports, this proposal addresses five critical knowledge gaps, or areas where understanding of the lakes is lacking and hampering informed decision making:

- **Section 1: Lake budgets** – Quantifying the input, output and internal behaviour of key physical and chemical components of the lake system, including water, heat, oxygen, nutrients and sediment.
- **Sections 2-3: Fundamental lake processes** – How the lakes work, including stratification, mixing currents, water quality modelling, nutrient cycling, lake ecology and food webs.
- **Section 4: Lake history and future scenarios** – How the lakes have changed over time, effects of changes in land use and land cover, and developing potential future climate and land use development scenarios.
- **Section 5: Mātauraka Māori** – Understanding mana whenua knowledge of the lakes, and opportunities for cultural monitoring of key parameters or phenomena, including eel migration.
- **Section 6: Decision support for lake management and community engagement** – How to develop a formal framework to aggregate different types of information and

[1] As outlined in the TAG's Terms of Reference

knowledge to help guide decision making and to convey lake science to the broader community to increase awareness of lake health, while building support for potential management options.

Proposal Structure

The proposed monitoring and research plan is presented across several key sections:

- The proposal details are presented in Appendix 1, which itemises individual workstreams, groups them into themes, and gives indicative costs.
- Appendix 2 projects how the work will be staged and sequenced over the proposed 10-year duration and identifies the critical milestones, outputs and dependencies between different initiatives. The programme outlined in Appendix 2 has "front loaded" as many projects as possible, but assuming a steady funding pipeline. Milestones which could immediately be incorporated into decision making are highlighted.
- As with any large-scale research programme spanning multiple years, there are inherent risks within different project components. Appendix 3 lists the risks in the proposed work and how these can potentially be managed.
- A detailed description and justification for each component is presented in the following pages.

This proposal is a comprehensive but fit for purpose package of lake research encompassing experiments, targeted surveillance and surveys, deterministic modelling, an enhanced monitoring network, food web modelling, palaeolimnology, catchment history, the development of future scenarios, multi-criteria decision analysis, Bayesian network modelling, and community engagement.

> ***"This proposal has a deliberate focus on better understanding the critical aspects of lake and catchment science that will translate to better predictability and providing decision makers with a sound basis to manage the lakes."***

These approaches will provide a wide range of high-quality biophysical information about the lakes, how they function ecologically, and what processes affect key lake values. It is proposed to combine the different types of information into a Bayesian network model (or similar causal modelling framework) to provide a transparent and easily updated model incorporating all the forms of information and their uncertainties. The ability to integrate and update information across the proposed programme, as it becomes available, is key to enabling adaptive, evidence-based management of the lakes.

Prioritising Informed Management

A lake functions as an integrated system, where climatic, physical, hydrological, geological, chemical, biological and ecological processes interact. Limnology, or the study of lakes, is a broad research discipline to cover this inter-connectedness, which can help identify key pressure points. In addition to the suite of natural lake processes, human activities occur in the catchment. The changes in large water bodies like Otago's deep water lakes, which have volumes of several tens of cubic kilometers, can be subtle and not easily quantified at scale, yet their consequences can be substantial and irreversible.

This proposal has a deliberate focus on better understanding the critical aspects of lake and catchment science that will translate to better predictability and providing decision makers with a sound basis to manage the lakes. Notably, we have focussed on monitoring and understanding the anthropogenic stressors that are most likely to impact on values (e.g., water clarity, water quality), subsumed within the concept of lake health.

The proposed package of work aims to provide a sound, evidentiary basis to inform future lake management by:

- Substantially improve our understanding of the fundamental physical and biological processes in the lakes
- Placing the current state of the lakes within the context of their historical, natural ranges of variation
- Identifying when observed changes are of material concern for lake values
- Anticipating future lake responses to realistic changes in stressor levels due to climate, land use and ecological disruption (e.g., invasive species)
- Enable early identification of risks to the lakes (e.g., the likelihood of the existence of ecological tipping points) where a rapid or concerted management response may be appropriate

The type of management decisions the programme could inform include:

- Levels of catchment nutrient loads that could adversely affect the lakes
- Effective controls on catchment development or land use to minimise risk to the lakes
- The best approaches to managing invasive species
- Appropriate adaptations to predicted changes in lake condition or behaviour (e.g., due to climate changes, or delayed responses from existing stress)

Comprehensively understanding the history, behaviour, processes and risks to Otago's three deep water lakes and associated catchments is a massive undertaking. Similar programmes have successfully been undertaken to understand important lakes (e.g., the Laurentian Great Lakes, Lake Constance, Lake Geneva, Lake Mendota, etc.) in other countries (e.g., Canada, Germany, France, Switzerland, USA, etc.).

Scientific research on similar lakes located overseas (e.g., Lake Geneva, Lake Constance, etc.) will be obtained through literature reviews and by forging collaborations with scientists and lake managers who have been working for decades on understanding and managing such lakes – lakes that have previously undergone degradation and, in some cases, recovery.

Programme Duration, Sequencing, and Connectedness

The proposed programme of work supports management and decision making in the lakes through substantial monitoring efforts, modelling and targeted studies. At a high level, the proposal is sequenced with augmented river, atmospheric, and lake measurements, enabling the creation of budgets for the lakes. Budgets are then used to develop 3D lake models which, paired with catchment nutrient and hydrological models, help understand lake dynamics and water quality. A separate workstream of monitoring and experiments focusses on lake ecology and food webs. The lake dynamics and water quality modelling will enhance ecological understanding, although this is arguably the most ambitious aspect of the proposal. Both the physical and ecological work will allow for scenario testing (how does the lake respond to a

predicted environmental change), which then ultimately informs the decision making process to enable suitable management regimes for the lakes and their catchments.

The programme of work outlined here is planned over a 10-year period. The programme has been consciously front loaded by prioritising data collation and key observations to obtain the fundamental data that will underpin subsequent modelling and research. Many components of the programme feed into subsequent workstreams or have dependencies in other areas. In the proposal below, we have sought to identify how the different project components are connected.

In addition to an up-front focus on data collection, programme components that feed directly into potential management decisions have also been prioritised. This is in recognition that the programme is not going to occur in a vacuum. The lakes, pressures and unexpected events will continue to require monitoring, management and decisions, while the programme is running. Appendix 3 attempts to document potential risks to the proposed programme, with implications and possible ways to mitigate these risks.

Programme Success

If adopted, the proposed programme of work represents a significant investment in understanding and managing the Otago's deep-water lakes. It will be successful, if it:

- allows the identification of issues and risks to the lakes by putting the current state of the lakes in historic context, and predicts future changes based on realistic scenarios,
- identifies nutrient thresholds and early warning indicators,
- can explain the mechanisms underlying changes in indicators of lake health, such as chlorophyll a, in the context of temporal trends and thus future risks,
- integrates information on stressors, ecological values, ecological resilience, ecological tipping points and on different potential management levers that could be used to successfully maintain key lake values in a desirable state,
- integrates diverse biophysical information (e.g., from monitoring, experiments, modelling, palaeolimnology, mātauraka Māori, local expert knowledge, etc.) into a transparent and easily updatable modelling framework,
- provides an evidentiary basis for management decisions and provides tools to evaluate how the lake systems may respond under potential future scenarios (management, climate, invasive species),
- encourages community engagement to help collectively set aspirations and limits, and fosters the social licence for effective management actions, if required, and finally,
- allows improved ability to test management options under different future scenarios.

Proposal description

The following section discusses the individual, but interconnected components of the five key knowledge gaps elaborating on why their respective workstreams are important, and how the work will be undertaken. It also explains the linkages and dependencies between the various programme workstreams, and how they fit together. A further focus is on how each workstream will enable informed lake management.

The programme of work outlined below should be read in conjunction with the description of work in Appendix 1 and the programme sequencing milestones and deliverables in Appendix 2.

1. Lake Budgets

Background

Lake budgets account for annual inputs, outputs and storage to the body of water (Fig. 1). Constructing lake budgets is helpful for understanding how lakes interact with climate and with their catchments (as sources of water, sediments, nutrients and contaminants). The TAG's analysis of knowledge gaps identified the following budgets as important for developing a better understanding of longer-term changes in lake functioning with regard to both external stressors and lake responses.

Figure 1. Components of a simplified lake sediment budget.

Water Balance – Quantifying the inflows and outflows of water from the lakes, including streamflow, groundwater, rainfall and evaporation. This allows more accurate predictions of lake level (e.g., flood risk), storage volumes and residence times. As water transports or mediates energy and organic matter in lakes, the water budget is fundamental for calculating nutrient, heat and oxygen budgets.

Equation for a simple lake water budget (e.g., in m^3) calculated between two points in time

$$\textit{Change in lake volume} = \textit{inflows} + \textit{rainfall} + \textit{groundwater} - \textit{outflow} - \textit{evaporation} \quad (1)$$

Groundwater input – groundwater output

Heat – Physical and biological processes in large deep lakes, such as nutrient cycling, are strongly controlled by stratification (when layers of water form within the lake due to differing temperatures) and mixing processes (when the layers mix). Heat budgets help us understand how and when the stratification and mixing processes that influence nutrient cycling occur.

To model and predict the stratification and mixing, inputs, outputs and storage of heat and water are required. Heat fluxes and storage will change in the future due to climate change, and any predictions of climate impacts require an understanding of how climate change will impact the heat budget.

Equation for a simple lake heat content budget (e.g., in joules) between two points in time

Change in heat content = inputs – heat in outflow – other losses (2)

Solar radiation + heat in inflows + atmospheric heating + geothermal

Latent heat of evaporation + loss to lake bed + cooling to atmosphere

Nutrients – Nutrients (particularly nitrogen and phosphorus, but also carbon, silica, iron and trace elements) entering the lakes support the ecosystem. However, excessive nutrient inputs can cause serious water quality issues including excessive algal growth (usually measured as chlorophyll a), leading to dissolved oxygen **depletion**, reduced water clarity, changes in water colour and disruption of **food webs** and lake ecology.

Nutrients enter the lake through rivers and streams, groundwater, outfall pipes, atmospheric deposition and can be sequestered in or released from sediments at the bottom of the lake (influenced by stratification and mixing). Accounting for these diverse nutrient inputs is essential for setting robust, evidence-based nutrient load limits and targets.

Equation for a simple lake nutrient budget (e.g., in tonnes) calculated between two points in time

Change in lake nutrients = inputs – outputs – sequestration (3)

Nutrients in river and groundwater inflows + wet and dry atmospheric deposition + release from sediments + fixation from atmosphere

Nutrients flowing out of the lake outlet

Nutrients lost to lake bed via sedimentation

Dissolved oxygen – An adequate concentration of dissolved oxygen is essential for aquatic life. Inputs are via atmospheric exchange, photosynthesis by littoral zone periphyton, phytoplankton, macrophytes and from river inflows; losses are caused by respiration by organisms (including fish, invertebrates, zooplankton, algae plants and bacteria). Hypoxic (low

oxygen) conditions can occur in lakes that stratify seasonally. This can result in the release of nutrients in lake bed sediments into the water column, fuelling algal growth.

Equation for a simple lake oxygen budget (e.g., in tonnes) calculated between two points in time

Change in lake oxygen content = inputs – oxygen in outflow – other losses *(4)*

Oxygen in inflows + absorption from atmosphere + photosynthesis

Respiration + loss to atmosphere + mineral weathering

Sediments – Coarse sediments (gravel, sand) settle out close to river mouths, forming deltas and gradually infill lake margins. Fine sediments (silt and mud) travel further before they fall out of suspension, making the water more turbid, reducing light availability for photosynthesis and affecting where in the water column heat from the sun is absorbed. In this programme of work, the sediment budget is included as a part of the nutrient component because sediments are associated with nutrients.

Equation for a simple lake suspended sediment budget (e.g., in tonnes) calculated between two points in time

Change in suspended sediment content = inputs + resuspension – sedimentation - outflow (5)

Proposed Programme for Lake Budgets

1.1 Water Balance

1.1.1 Why important: local context

Accurate data on inflow discharge to the lakes is important for predicting lake levels, storage and outflows, and for calculating loads of nutrients, sediment, heat and oxygen into the lakes (see Eq. 1). Few of the rivers flowing into the three lakes have flow recorders (Whakatipu: Dart and Rees; Wānaka: Matukituki, Wilkins and Bullock Creek; Hāwea: ungauged), highlighting the need for additional data on water flows into the lakes.

Consequently, the ability to create an accurate water balance for the lakes is constrained by a lack of measurements. This greatly limits our ability to predict lake levels and outflows, our ability to assess groundwater flows into or out of the lakes and generally limits our understanding of how the lakes function. Accurate inflow data, gathered through *in situ* monitoring such as stream gauges, is also essential for modelling the physical behaviour and water quality of the lakes. As a result, improving the water balance is fundamental for developing management tools and evaluating likely outcomes of future management scenarios.

1.1.2 How/methods

We propose to:

- Install additional river flow recorders and climate/rainfall monitoring sites to expand the river flow and rainfall monitoring networks. It is not practical to install flow recorders on all the rivers and streams that flow into the lakes, and some rivers are too dynamic with no suitable site to allow continuous gauging (e.g., Hunter River at head of Lake Hāwea). However, by adding recorders to major inflows and representative catchments, a greater portion of the inflow will be directly measured. Adding additional rainfall measurement sites and climate stations in the catchments, in combination with the new river flow sites, will allow improved estimates and modelling of inflow from the ungauged catchments.
- Conduct a bathymetric survey of Lake Hāwea. Bathymetric surveys of Whakatipu and Wānaka have recently been completed, but the last known complete survey of Hāwea was in 1975. An updated, high resolution bathymetric survey of Lake Hāwea will be undertaken, allowing for more accurate calculations of storage but also for use in hydrodynamics, water quality and habit availability.

1.1.3 Linkages:

- Required for nutrient (1.2) and heat (1.3) budgets
- Required for catchment water quality modelling (1.5) and lake hydrological/hydrodynamic (2.2) and water quality (2.3) modelling
- Supports future scenario modelling and evaluation (climate change (4.3) and land use (4.4) modelling)

1.2 Nutrient budget (incl. Sediment)

1.2.1 Why important: local context

Nutrients (particularly nitrogen and phosphorus) entering the lakes support the ecosystem, but excessive nutrient inputs can cause serious water quality issues including excessive algal growth, leading to oxygen depletion, reduced water clarity, changes in water colour, and disruption to the lakes. The Otago lakes currently have good water quality with low nutrient levels – the growth and biomass of algae is restricted by the low availability of nutrients. However, this also means that these lakes are likely to be sensitive to small increases in nutrient inputs.

For lakes, it is important to understand the nutrient load. Nutrient load is the total amount of nutrients entering the lake (e.g. tonnes of nitrogen per year; see Eq. 3). Calculating nutrient load requires scaling the instream concentration by the discharge to get a total mass flux. To do so, we need to understand the concentrations of nutrients coming in at high, mid-range, and low flows. Understanding nutrient contributions at high flows is particularly important as this is when the larger nutrient loads are delivered to the lake. A lack of understanding of nutrient budgets limits our ability to identify key sources of nutrients, model water quality and predict potential responses in water quality and algal productivity and biomass (e.g., chlorophyll a) to inform management needs and scenario evaluation.

Currently we have only a partial understanding of the quantity of nutrients entering the lakes. Monitoring data is collected monthly, from a subset of major tributaries which are not necessarily representative of the wider tributaries contributing nutrients to the lake. In addition, regular monthly sampling is not actively targeted to measuring nutrient concentrations and fluxes at high flows, so can miss major floods and therefore major nutrient/sediment transport events. This means load estimates are based on a relatively small dataset with high uncertainty.

A fraction of nutrients in lake water is associated with suspended sediment. This is particularly true of phosphorus, of which is a substantial fraction is often chemically bound to suspended sediment particles. Some of this particle-bound phosphorus will be sequestered in the lake bed via sedimentation. However, some of this phosphorus can be made available to microorganisms such as bacteria and phytoplankton through weathering and enzyme-mediated mineralisation.

Thus, nutrients associated with suspended sediment loads can contribute to the pool of biologically available nutrients in lake water, fuelling algal growth and biological production, while some of the particle-bound nutrients will be unavailable and will be sequestered in the lake bed fairly rapidly upon entering the lakes. As a consequence, suspended sediment loads and dynamics are potentially important to the lake food webs via the mineralisation of particle-bound nutrients.

> ***"A lack of understanding of nutrient budgets limits our ability to identify key sources of nutrients, model water quality and predict potential responses in water quality and algal productivity and biomass (e.g., chlorophyll a) to inform management needs and scenario evaluation."***

In glacially fed lakes, such as the Otago deepwater lakes, suspended sediment loads (particularly of fine glacial flour) have a strong influence on water clarity and light penetration into the lakes. Water clarity is a key human value of these lakes and, as such, the drivers of water clarity need to be well understood. In addition, the extent of light penetration into the lakes directly controls the depth to which photosynthesis and plant/algal growth can occur. The depth to which plants can grow determines the extent of the littoral habitat in these lakes, which is where much of the biological productivity of these lakes takes place. Therefore, understanding suspended sediment budgets (especially of glacial flour) of the lakes will also improve our understanding of variability and differences in the extent of the littoral habitats and in the light conditions experienced by phytoplankton circulating in the mixed layer of the lakes.

1.2.2 How/methods

We propose to:

- Include a greater number of rivers and streams flowing into the lake in regular water quality sampling. This will include the water quality parameters nitrogen, phosphorus, silica, and trace elements, which are required for the growth of algae and aquatic plants. In addition, suspended sediment concentrations and particle sizes will be measured at these additional inflow sites.
- In addition to routine sampling at regular intervals, sampling will also be conducted during episodic floods. This can be done with auto-samplers which automatically sample during high flows, such as currently occurs on Mill Stream entering Lake Hayes. With large portions of annual nutrient and sediment inputs happening during periods of high flow, these measurements are important for calculating nutrient inputs and calibrating models.
- Samples will also be taken from groundwater and atmospheric deposition (rain, dust) so that the nutrient loads from these sources can be estimated.

1.2.3 Links to other programme components

- Required for catchment modelling (1.5)

- Required for lake water quality modelling (2.3)
- Supports future climate change (4.3) and land use change (4.4.) scenario modelling

1.3 Heat budget

1.3.1 Why important: local context

The flux of heat in and out of lakes controls their stratification and mixing, which in turn controls the dynamics of water, nutrients and other materials in the lake. Heat fluxes are expected to change under climate change, resulting in changes in the strength and duration of stratification, with consequences for lake ecosystems.

Currently, no heat budget exists for Whakatipu and Hāwea, while some preliminary work has been done on Wānaka inferred from hydrodynamic modelling. This limits our ability to understand how nutrients, dissolved oxygen, sediments, etc. move through the lake. As a result, we cannot evaluate how the lakes may respond to different future scenarios, when inputs and outputs of heat to and from the lakes are likely to change (see Eq. 2).

1.3.2 How/methods

Heat budgets will be developed through a combination of data from:

- the existing lake buoys which measure in-lake climate and lake temperature profiles
- additional climate stations to capture the variation in weather conditions along each lake
- continuous monitoring of inflow and outflow temperatures,
- additional in-lake monitoring (moored instruments) for fixed periods to resolve spatial variability in lake mixing and stratification
- hydrodynamic modelling, which uses observational data as inputs for calibration and validation and creates a heat budget to simulate lake thermodynamics

1.3.3 Links to other programme components

- Required for lake hydrodynamic modelling (2.2)
- Supports future climate change scenario modelling (4.3).

1.4 Dissolved oxygen budget

1.4.1 Why important: local context

Dissolved oxygen is essential for sustaining aquatic life. Oxygen is produced by algae and plants when there is sufficient light for photosynthesis and is consumed through respiration by fish, plankton, plants and algae, and as organic matter is broken down by bacteria (see Eq, 4). Oxygen also exchanges between the lake and atmosphere, enters through inflows, and is exported via the outlet. When lakes thermally stratify, the deeper, poorly illuminated waters become isolated from the atmosphere and oxygen concentrations decline. This continues throughout the stratified period (usually late spring to mid/late winter in the Otago lakes) until the lake overturns and can be re-oxygenated. Currently, the bottom waters of the three lakes sustain healthy oxygen concentrations year around, except for Stevensons Inlet in Lake Wānaka. However, small increases in algal biomass would increase the rate of oxygen consumption in the stratified bottom waters.

Climate change could also have a strong influence on oxygen concentrations. For example, oxygen is less soluble in warmer water, and most biological processes speed up, increasing the

rate of oxygen consumption. The combination of these pressures leads to a risk that anoxic (no oxygen) or hypoxic (low oxygen) conditions may develop in the lakes, posing both a direct risk to biota as well as triggering the release of nutrients from sediments, which would cause a feed-back loop of more algal growth, driving faster oxygen consumption, resulting in more frequent and extended anoxic/hypoxic conditions. This describes the typical process of eutrophication in seasonally stratified lakes, as commonly occurs at Lake Hayes, for example.

1.4.2 How/methods

Oxygen budgets will be calculated from a combination of data, including:

- the existing lake buoys which measure oxygen profiles
- additional dissolved oxygen measurements for specified times and places in the lakes to identify hotspots and specific episodes of oxygen depletion
- oxygen consumption measurements of hypolimnetic waters and of the lake bed to be able to apportion oxygen consumption between water column and sediment

1.4.3 Links to other programme components

- Supports water quality modelling (2.3)
- Sensitive to future climate change (4.3) and land use change (4.4.) scenario modelling

1.5 Catchment modelling

1.5.1 Why important: local context

The three lakes have large catchments, and it is not possible to directly measure all the inputs of water, nutrients and sediments to the lakes due to difficult to access locations and challenging terrain, and the cost and practicalities of installing and maintaining reliable high frequency instrumentation throughout the catchment. Catchment hydrological and water quality models are powerful tools for completing water, nutrient and sediment budgets, as they can be used to calculate loads from parts of the catchments where data cannot be collected. Catchment models can also be used for prediction, such as for short-term forecasting to predict inputs to the lake in upcoming weather events or testing scenarios of land-use changes (both past and future), nutrient mitigation or control methods, or climate change.

Hydrological models account for the storage and transport of water including processes such as rainfall and snow fall, snowpack storage, evapotranspiration, overland flow and stream flow. Models developed here will be driven by observed and modelled climate data to produce timeseries of inflows from the lakes' catchments and sub-catchments.

Two types of catchment water quality models will be developed: quasi-steady state models that predict annual loads and are suitable for evaluating effects of land use or land cover change, and time-stepping/dynamic models that can resolve seasonal or weather events (e.g. at daily timesteps). The quasi-steady state models are particularly useful for scenario testing, while the time-stepping/dynamic models can provide data at the temporal resolution required by lake water quality models.

Some catchment modelling work has been done for Lake Wānaka, but further calibration of these models (and new models for Whakatipu and Hāwea) will be required to allow them to be used with confidence.

1.5.2 How/methods

- Develop hydrological catchment models, calibrated to observations collected from existing and new climate and flow measurement sites. These models will not only predict the inflows from unmeasured rivers with greater certainty but can also be used in both short-term forecasting for flood hazard, and long-term forecasting for effects of climate and land use change.
- Nutrient and sediment water quality models will be developed, coupled or added to the catchment hydrological models, to calculate nutrient and sediment inputs from entire catchments, including from unmonitored streams and sub-catchments.
- Once they have been well-calibrated and validated, these models will be used for scenario testing to predict how changes in land use or climate will alter inputs to the lakes.

1.5.3 Links to other programme components

Development of catchment models relies on observation data described in **1.1 Water balance** and **1.2 Nutrient balance**. The models will be required for **2.2 Hydrodynamic modelling, 2.3 Lake Water Quality Modelling, 4.3 Future climate scenarios** and **4.4 Land-use change scenarios**.

2. Deep Water Lake Functioning: Physics and Water Chemistry

Our current understanding of the physical, chemical, and biological/ecological functioning of Otago's iconic deep water lakes is limited, compromising their effective management. Obtaining this knowledge is key to understanding the mechanisms driving changes in metrics of lake health. Lakes are complex ecosystems in which physical, chemical and biological/ecological components and processes interact and manifest in overall lake health. Most of our knowledge about lake functioning comes from studies of much more common smaller and shallower lakes and, thus, it does not account for some major distinctions in functioning between our deep water lakes and more typical smaller well-studied lakes. In this proposal, we delineate the programme components dealing with physical and chemical aspects of deep water lake functioning from the components focused on the biological/ecological components and processes.

Background

In addition to the inputs, storage, and outputs discussed in the budget section above, lake ecosystems are influenced by physical processes related to water currents and mixing (i.e., hydrodynamics). Currents in lakes are driven by winds, inflows, and water density differences due to variations in water temperature. Currents transport and distribute nutrients, algae, sediment, larvae, aquatic plants, invasive aquatic organisms and contaminants within and throughout lakes (Fig. 2).

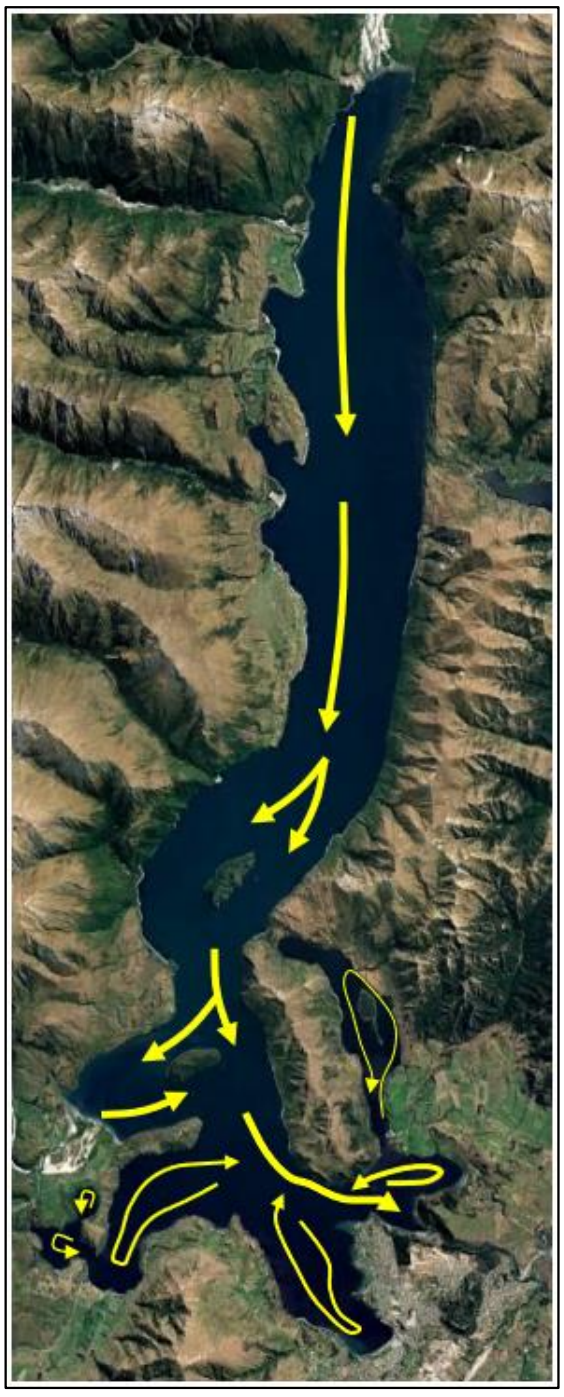


Figure 2. Potential dominant water currents and flows through Lake Wānaka, showing the major flow path dictated by large river inflows and the outflow, as well as potential gyres in the lake due to water flow within bays and arms of the lake.

Hydrodynamic models can accurately simulate transport and mixing processes in lakes under existing and future conditions (i.e., climate change), and the model outputs can be used to assess the connectivity between different parts of lake ecosystems, describe habitats and environmental conditions, and can be coupled with ecological models to make predictions of ecological response under different stressor scenarios.

Proposed Programme for Deep Water Lake Functioning: Physics and and Water Chemistry

2.1 Physical measurements

2.1.1 Why important: local context

Vertical mixing is important in large deep lakes as it controls the transport of nutrients and dissolved oxygen through the water column. For example, deep water lakes stratify (i.e., form

stable water layers of different temperatures that resist mixing), typically from late spring to mid-winter, and have high potential to explain the different behaviour of lake snow in the three lakes. Algae generally grow in the upper layer where there is light (phyotic zone) and cannot access nutrients in the bottom waters until the lake mixes during winter. When the lake is stratified, oxygen from the atmosphere no longer reaches the deeper parts of the lake and oxygen levels there begin to drop as organic matter is consumed by bacteria. The endmember scenario is that if oxygen levels drop low enough, aquatic life is impacted, and nutrients that were trapped in lakebed sediments can be released fuelling growth of algae, leading to more organic matter in the water and in turn more rapid consumption of oxygen.

Measurements of lake physical variables and their behaviour across the lake and over time reflects how lakes respond to climate and catchment inflows, providing real-world data for calibrating and validating lake hydrodynamic and water quality models. Large lakes such as Whakatipu, Wānaka and Hāwea have spatial variability that is challenging to capture, especially in long term monitoring programmes. While recent data collection in Lake Wānaka included temporary moorings (12 months) deployed by Earth Sciences New Zealand expanding the coverage offered by ORC's lake monitoring buoy, data for Whakatipu and Hāwea are more limited.

2.1.2 How/methods

We propose to:

- Undertake monthly regular water column profile measurements of temperature, oxygen, turbidity, chlorophyll and light at multiple locations in each lake to determine how these parameters vary spatially within each lake. This will be continued for at least one year.
- Deploy temporary instrument moorings to obtain continuous measurements of water currents, temperature and dissolved oxygen profiles at locations, complementing the existing monitoring buoys.

2.1.3 Links to other programme components

- Complements data collected in the lake budgets workstream (1.1 to 1.4) and will be combined to form hydrodynamic (2.2) and water quality (2.3) models.
- Links to food webs etc as physical processes data have high potential to explain the different behaviour of lake snow in the three lakes

2.2 Three-dimensional lake hydrodynamic modelling

2.2.1 Why important: local context

As many aspects of the functioning of deepwater lakes are influenced by hydrodynamics, understanding and being able to predict how water moves around the lake underpins diverse projects throughout the research programme. Developing hydrodynamic models for the lakes is one of the core tenets of this proposal, pivotal to testing future scenarios, and is central to many of the workstreams.

Three-dimensional hydrodynamic models (e.g., Fig. 3) are simulation tools for understanding and predicting how lakes respond to climate (heat, wind, rain) and inflows. They model heating/cooling, stratification, vertical mixing, and currents over the whole lake at high resolution. They will be used to assess connectivity between different parts of lakes

ecosystems, estimate environmental conditions in key habitats, and simulate responses to different climate conditions. In addition, they can be coupled with ecological models to make predictions of ecological responses under different scenarios. Other uses include determining where sediments, contaminants from storm water runoff, invasive organisms and microplastics are transported within the lakes.

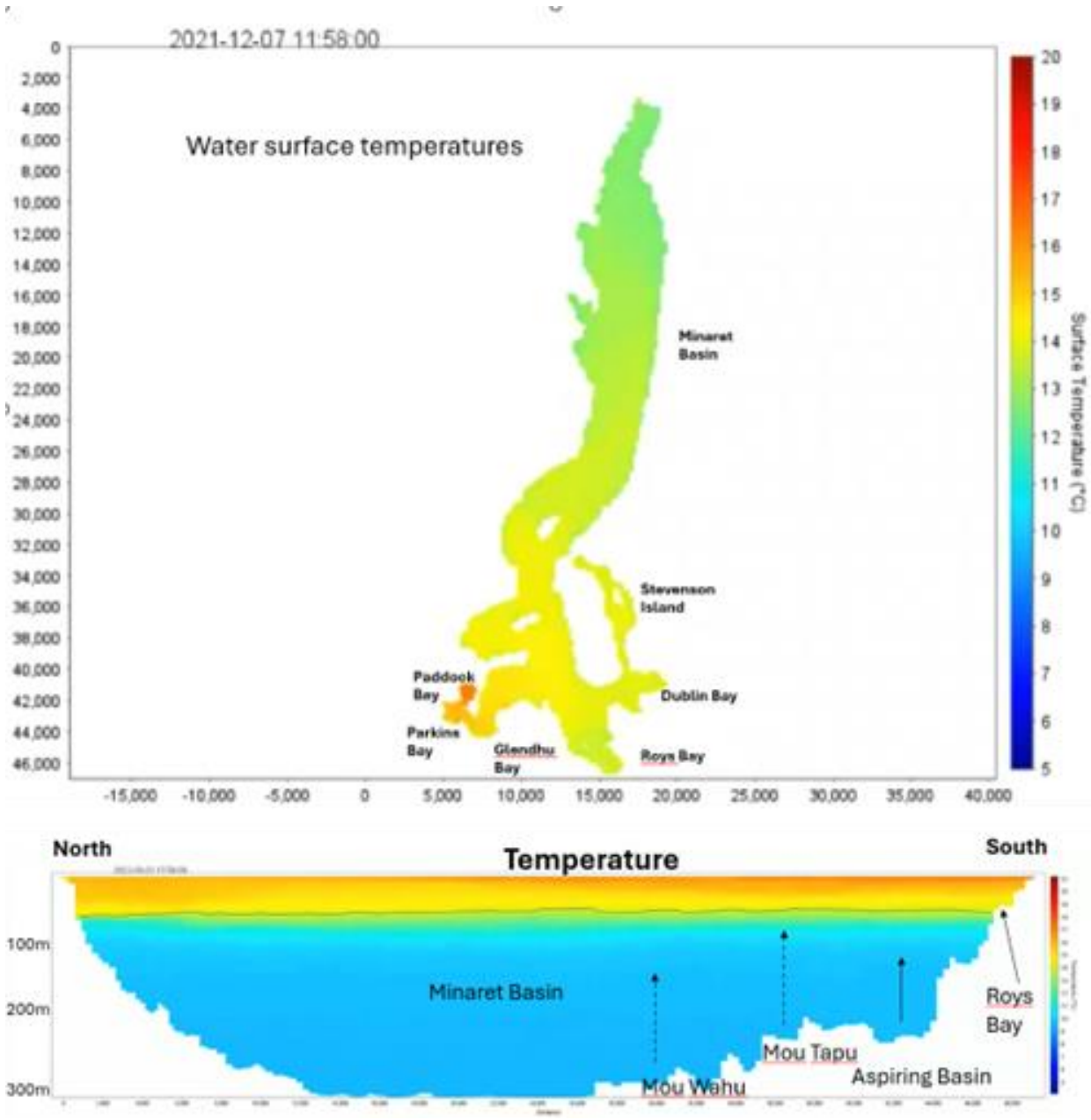


Figure 3. Example of hydrodynamic modelling output for Lake Wānaka. Modelled surface and cross section temperatures along the length of the Lake showing summer temperature stratification (Image courtesy David Plew, Earth Sciences NZ).

2.2.2 How/methods

We propose to:

- Develop three-dimensional mathematical hydrodynamic models of the lakes. These models will be validated using measured data. Inputs to these models include data from climate stations, stream flow measurements, as well as weather and catchment hydrological models.

2.2.3 Links to other programme components

- This modelling builds on data collected in the lake budgets workstream combing the knowledge gained from detailed water balance (1.1), and heat budgets (1.3) into tools which can be used for climate change scenario evaluation (4.3).
- Relies on the data collected in the physical measurements (2.1) workstream and budget workstreams (1.1 to 1.4).
- Will be used in assessing climate change impacts on lake biota (3.3).
- Informs nutrient behaviour/cycling and algal productivity (3.1) and food webs (3.2) studies and may incorporate knowledge gained from these studies.
- Required for water quality modelling (2.3).
- Can be used for biosecurity risk assessments.
- Can be developed into short term forecast models for climate scenario evaluation (4.3).

2.3 Lake water quality modelling

2.3.1 Why important: local context

Lake water quality modelling can make predictions of nutrient concentrations, water clarity, algal biomass and oxygen concentrations. These parameters in turn drive ecosystem responses. Higher trophic levels (e.g., zooplankton and fish) are supported directly and indirectly by primary production (phytoplankton). Thus, the output from water quality models can be used to inform how the food web may respond. Water quality models can be used to estimate the impacts of catchment land use changes as well as climate variability on lake water quality. Such modelling can support decision making regarding catchment management.

2.3.2 How/methods

We propose to:

- Develop three-dimensional coupled water quality-hydrodynamic models of the lakes. These models will be validated using measured data.

2.3.3 Links to other programme components

- Builds upon hydrodynamic modelling (2.2) (incorporating water balance (1.1) and heat budgets (1.3)), nutrient budgets (1.2), oxygen budgets (1.4), and catchment modelling (1.5) to develop tools which can be used for scenario evaluation (4.3 and 4.4).
- Relies on the data collected in the physical measurements (2.1) and budgets workstreams (1.1 to 1.4).
- Will support lake ecology studies such as food webs (3.2) and may incorporate knowledge gained from them.
- Required for assessing impacts on water quality due to future climate change (4.3) land use change (4.4) scenarios.

3. Deep Lakes Functioning: Lake Ecology, Productivity, and Food Webs

Background

In addition to the physical processes that influence lake health, TAG identified that we currently have a limited understanding of how ecological processes interact with the physical processes influencing energy and nutrient flow through trophic levels (food chain position) and across the habitats of Otago's three deep water lakes. Improving our understanding of ecological processes is important as many of these processes directly link to many of the characteristics which are highly valued, such as clarity, fish stocks and low algae levels. Understanding the types of organisms present and how they interact with each other, and the environment of the lakes, allows us to better understand how stressors (such as augmented nutrient inputs and climate change) impact the functioning of the lakes currently and in the future.

TAG further identified six knowledge gaps related to lake ecological functioning in which these lakes are likely to differ significantly compared to smaller, shallower lakes (Table 1). Otago's deep water lakes are much deeper and larger and, as a result, also have a much longer water residence time (i.e., a slower flushing rate) than other Otago lakes. The deep water lakes have strongly glacial morphologies and are fed by headwater glaciers. They also have catchments dominated by a national park and conservation lands, further distinguishing these lakes from other monitored and managed lakes in Otago. In fact, in some ways (hydrodynamics, pelagic algal communities, and water column nutrient concentrations), these lakes are more similar to oceanic systems than they are to smaller, shallower lakes. Even the nuisance lake snow phenomenon is much more common in the oceans than it is in lakes.

Table 1. Some distinctive attributes of Otago's deep water lakes compared to more typically monitored and studied lakes.

Ways in which Otago's deepwater lakes differ from most monitored/studied lakes
1. Exhibit natural water level variations of up to 3 to 4 metres
2. Have long water residence times/slow flushing (c. 10 years)
3. Are fed by glaciers/affected by glacial flour
4. Have distinctive biotic communities and food webs
5. Are dominated by open water and deep water habitats, with relatively low levels of productivity
6. Have catchments with low nutrient, but high sediment, yields
7. Exhibit very high water clarity (light penetration) and deep wind-induced mixing of water column
8. Exhibit high physical forcing of the ecosystem by wind, currents, sediment-laden inflows, large fetches, funnelling of winds, etc.

These attributes directly affect the budgets (water, nutrient, heat, oxygen) and physical processes (hydrodynamics including stratification and mixing) of the lakes described in the previous section. The budgets and processes then link to ecological processes by influencing the types of organisms present and how they interact.

> ***"Improving our understanding of ecological processes is important as many of these processes directly link to many of the characteristics which are highly valued, such as clarity, fish stocks and low algae levels."***

At a fundamental level, lake food webs consist of primary producers which consume nutrients and sunlight to form the base of the food web (such as phytoplankton and cyanobacteria), primary consumers which feed on primary producers (such as zooplankton and rotifers), and further consumers which feed upon primary consumers (such as fish). In Otago's deep water lakes, the ***community of primary producers are specialized in thriving in low nutrient environments***. This means they could show disproportionately large responses to what are perceived as relatively small increases in available nutrients. A consequence of this could be increased risk of algal blooms or shifts in the community toward species which favour higher nutrient environments.

In addition to potential shifts at the food web base, the lakes have a distinctive range of invasive species and game fish present whose effects on ecosystem functioning are virtually unknown. The lakes were historically important sites for mahika kai and the abundance of important native species have been greatly reduced by downstream dams which have blocked natural recruitment of eels/tuna to the lakes since 1956, when the Roxburgh Dam was completed. The deep water lakes also have distinctive habitats which are poorly studied containing some rare species and biological communities (e.g. deep water mosses).

An analysis of all these distinctive factors and attributes led the TAG to identify the following aspects of lake ecological functioning as poorly understood. These knowledge gaps all relate to important values (e.g., mahika kai, water clarity, fisheries, etc.) and stressors (nutrient availability, climate change, hydrological manipulation, invasive species, etc.). The Lake Ecology, Productivity, and Food Webs component of this research programme aims to improve our understanding of how the various stressors, and potential future stressors, impact the key ecological values of these lakes. With a better understanding of the stressor-response relationships, future monitoring and management of the lakes will be more effective at safeguarding the key values and preventing degradation of these iconic and sensitive lake ecosystems.

Knowledge gaps identified in relation to understanding lake ecological functioning

1. Nutrient behaviour/cycling in lakes/effects on algal productivity
2. Food webs (including invasive and introduced species, iconic species and communities, taonga species)
3. Climate drivers and ecological response
4. Hotspots and hot moments of productivity and biomass of species of interest
5. Identification of ecological tipping points, resistance, and resilience
6. The role of migratory eels - addressed in section 5 below

Proposed Programme for Deepwater Lake Functioning: Lake Ecology, Productivity, and Food Webs

3.1 Nutrient behaviour/cycling and algal productivity

3.1.1 Why important: local context

The vast majority of ecological research done regarding eutrophication of lakes in New Zealand has been done on relatively small lakes in lowland areas, as these lakes have tended to be most heavily impacted by human activities, particularly increased nutrient loads. The deep water lakes have received relatively little research attention because:

1. they are challenging to study thoroughly, and
2. their ecology has not yet suffered apparent major anthropogenic impacts (apart from humans introducing *Lagarosiphon* (oxygen weed) to Lake Wānaka).

The incursion of *Lindavia*[2] (algae responsible for lake snow), and the recent increases in algal biomass (chlorophyll a) in all three lakes, has highlighted our lack of understanding regarding the drivers of these alarming phenomena in the deep water lakes. In addition, shifts in salmonid species composition in the lakes have not been explainable due to our lack of knowledge about the drivers of biological productivity or how energy flows through the food webs in these lakes. Information from other lakes contributes little to revealing the changes to key lake values that have occurred or to predicting what changes might occur in the future. Our general understanding of how lake ecosystems function, especially with regard to nutrient loads, climate change, and invasive species, is derived mainly from studies on relatively smaller and shallower lakes, that have already been somewhat degraded. Therefore, key knowledge to help safeguard the values of our rare deep water lakes is currently lacking.

Due to their long flushing times, the availability of phosphorus (P) and nitrogen (N) in the water columns of the deep water lakes may correlate with catchment nutrient loads only over long (i.e., decadal) time scales. In contrast, changes in algal productivity and biomass that happen at shorter time scales (seasonal changes, algal blooms, etc.) are closely linked to the recycling rates of P and N within the lakes. Thus, as in the ocean, there is an important distinction in these lakes between new and recycled nutrients.

A specific challenge in relating nutrient concentration to algal response is determining which nutrients are limiting algal biomass. Assessing traditional nutrients, such as P levels in the lakes, poses a challenge as the concentrations of forms of available P are often below analytical detection limits, meaning we only know that the P concentration is very low as opposed to a measured numeric concentration. This may occur as any available P in the water column is immediately taken up by algae and stored within its cells, suggesting that the rate of turnover or cycling of P is likely to be more strongly related to algal production than concentrations of available P in the water column at any particular time. The combination of internal cycling and low levels of P in the water column undermines the typical uses of P concentration in lake water or external P loading as effective proxies for algal productivity.

In addition to more the typical nutrients (N and P), in the deep water lakes, other trace nutrients which are essential for algal production may be limiting. As previously discussed, in many cases

[2] Lindavia is the invasive algae that causes the nuisance pelagic mucilage known as “lake snow” in NZ

the deep water lakes are more analogous to ocean systems rather than shallow lakes. In the Southern Ocean, trace nutrients such as iron can be more limiting than N and P which are typically considered in shallow lake ecosystems.

The proposed research aims to answer the following questions regarding the cycling rate of nutrients within these lakes, and how cycling rate relates to algal productivity and biomass:

- How can we accurately measure nutrient bioavailability (including P) to algae in the deep water lakes?
- How do dissolved organic forms of N and P, as well as the levels of enzymes produced by microbes to release organic forms of N and P in the water column, relate to nutrient cycling in these lakes?
- How do changes in the availability of essential nutrients other N and P (e.g., silicon, iron, trace elements) relate to algal productivity in these lakes?

The proposed research questions will develop a much more sensitive way of assessing how nutrient availability affects algal biomass and productivity, specifically for these low nutrient lakes. This will provide a more sensitive estimator of changes in nutrient availability over time in these lakes rather than simple measurements of nutrient concentrations, which are usually adequate for smaller lakes with shorter water residence times.

3.1.2 How/methods

This work aims to develop a better understanding of how nutrients drive changes in algae by developing molecular and enzymic methods for better measuring nutrient availability to algae. This work will include studies of algal and microbial exoenzyme activity and gene expression and organic nutrient bioavailability. Included in this will be to assess how experimental additions of silicon, iron and trace elements affect the productivity of lake algal communities, as the availability of these algal nutrients may also regulate algal productivity and biomass in these lakes.

These studies will commence in Lake Wānaka, to compare the nutrients and algae of open waters vs warmer, shallower bays, including Roy's Bay, which receives urban runoff. Studies will be carried out 2-3 times per year for multiple years and will be expanded to Lakes Whakatipu and Hāwea.

3.1.3 Links to other programme components

This project will build upon the **2.2 Lake hydrodynamic modelling** and feed into the **4.3 Future climate scenarios**, where future modelled projections of changes in stratification, light and temperature under different climate change scenarios could affect nutrient cycling rates via stressor-response relationships revealed by this research. Also, future land use scenarios **4.4 Future land use scenarios** will affect the ratio of external nutrient inputs: nutrient cycling rates and this could alter algal dynamics and biomass in the lakes.

This project also links to **3.2 Food webs** as our work here on the relationship between nutrients and algae determines the basis of the pelagic food web and the overall productivity of the lakes. Furthermore, our work will elucidate how lake snow affects nutrient cycling and the microbial food web, which will allow us to begin to assess the overall impact that lake snow has had on the lake food web.

3.2. Food webs

3.2.1 Why important: local context

Lake food webs are the food/energy links between different species that live in lakes. The study of food webs shows how biomass/carbon/energy flows from the base of the food web (e.g., algae, macrophytes, microbes), up to higher organisms including top predators like eels/tuna, trout and salmon (and even piscivorous (fish eating) grebes) (Fig. 4).

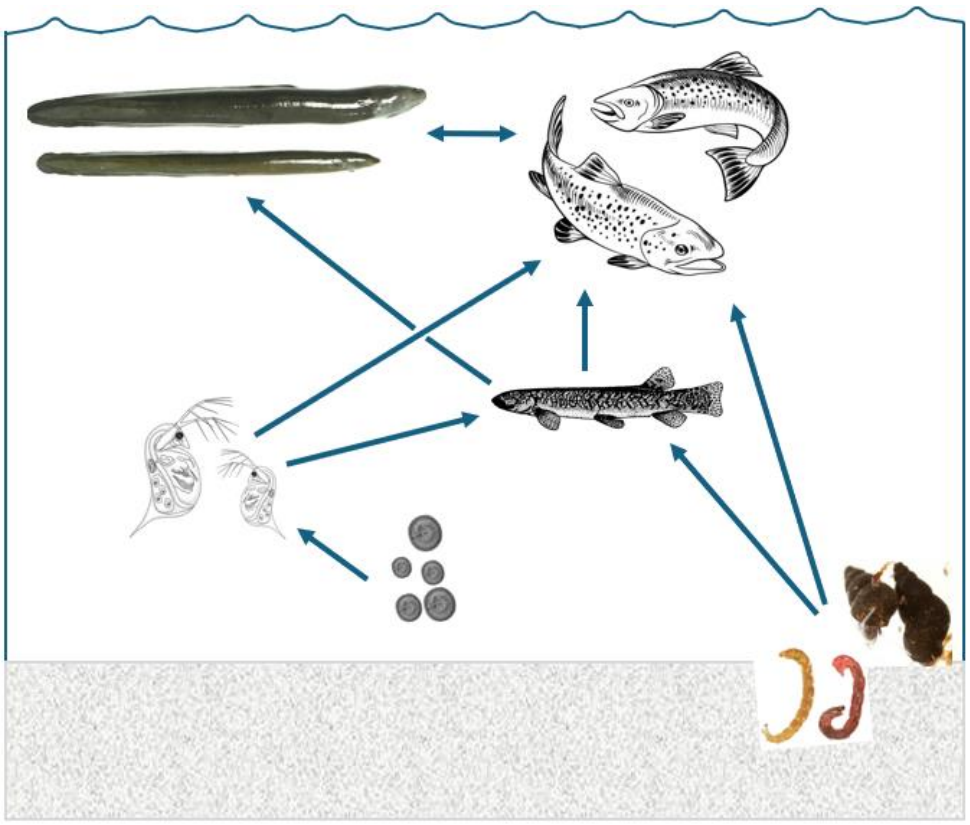


Figure 4. Simplified depiction of some of the potential predator-prey interactions in the foodwebs of Otago's deep water lakes. Communities in the diagram include benthic invertebrates (snails and chironomids), phytoplankton (centric diatoms), zooplankton (Daphnia), planktivorous fish (kōaro), piscivorous fish (eels/tuna) and omnivorous fish (trout).

Studying the food web of lakes:

- Reveals where there might be energy bottlenecks that either limit productivity and biomass of species, or result in excess biomass and productivity of other species.
- Helps predict how invasive species affect the abundances of other species that they interact with, as well as which habitats the invasives may occupy.
- Reveals why the fish species undergo changes in dominance over time and how the loss of eel/tuna recruitment might affect other species in the lake.
- Reveals where productivity hotspots occur and when productivity hot moments (e.g., algal blooms) occur within the lakes, and
- indicates which species may be keystone species, playing critical roles maintaining a well-functioning lake ecosystem and, therefore, may ***play pivotal roles in management decisions*.**

To date, very little work has been carried out on the food webs of our deep water lakes. Therefore, there is almost no understanding of how the food webs in these lakes function or how energy and nutrients flow through the different ecological components of the lakes. For example, we currently have no understanding of how food webs in near shore environments link

to those in open water or how shallow foodwebs link to those in deeper water (Fig. 5). We don't understand how predation by fish and grazing by zooplankton could affect the abundance of algae in the lake water (a trophic cascade), and we currently have no understanding of organisms and communities that exist in these lakes below 90m depth.

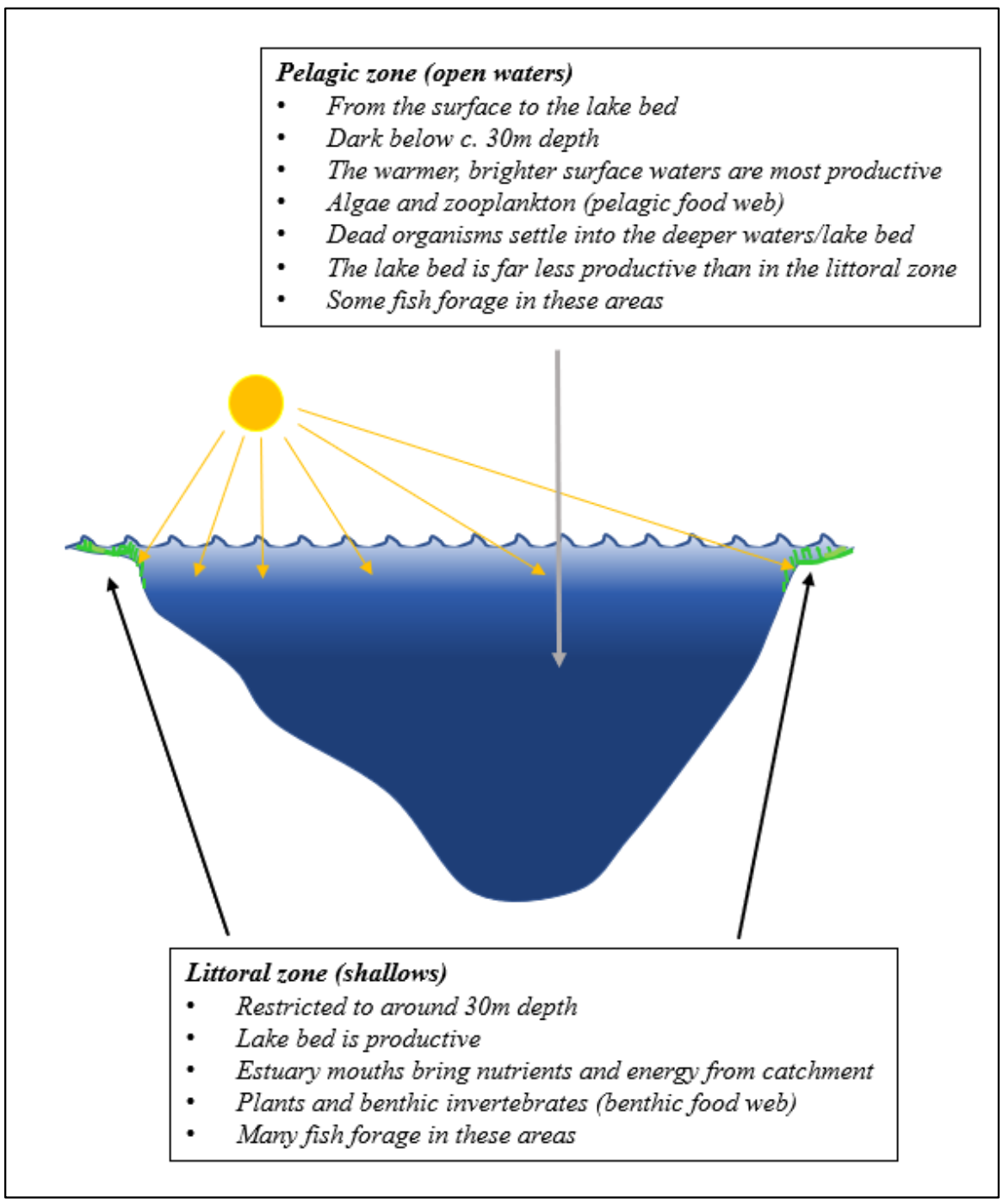


Figure 5. Diagram of the littoral and pelagic habitats of deep water lakes, highlighting the relatively small areas of highly productive littoral zones and the much larger pelagic and deep water habitats. If we hope to understand why changes in salmonids and mahika kai species are occurring in the lakes, or why differences in these species occur among the lakes, then an understanding of how the food webs function is necessary. An understanding of the abundance of zooplankton and fish could also help explain variations and trends in algal abundance in the lakes.

Understanding of food webs is also important both for understanding how these unique lakes function ecologically and how their ecological functioning may change in the future, in response to changing drivers. For example, because we do not currently have an understanding of the fundamental flows of energy through the food web, we also can not determine how invasive

*Lagarosipho*n (Oxygen weed), *Daphnia "pulex"*, and *Lindavia* (lake snow) affect other species and communities in our lakes. We also can not determine why perch have not yet colonised Lake Whakatipu and whether colonization is likely in the future. Perch can put significant grazing pressure on zooplankton which leads to less grazing pressure on algae. This means algal blooms can more readily occur.

By increasing our knowledge of the lakes' food webs, we may find there is enough food in these low productivity lakes to allow larval perch to develop into adults. If food limitation is the primary factor preventing perch colonisation, this situation could change in the future if increasing land development results in higher nutrient inputs to the lakes.

Ultimately, understanding the assemblages of aquatic species in our lakes and links between the species provides important insights into how these ecosystems respond to change and how they maintain species equilibria over time. Such understanding can help us predict how ecological shocks to the systems (such as the proliferation of an invasive species) and how future gradual changes to a variety of anthropogenic pressures are likely to affect important values such as fisheries, mahika kai, taonga species, and keystone species that play predominant roles in the lake foodwebs and water quality.

3.2.2 How/methods

Foodweb studies will involve collecting species of fish, zooplankton, invertebrates, phytoplankton, and macrophytes from different habitats at different times of the year. This will initially be done in Lake Wānaka but then will be extended to all three lakes, because of known differences in their species and communities. We anticipate that one year of field work per lake will suffice.

Stable isotopes, which are used to trace energy flow, gut content analyses, and Bayesian mixing models will be used to identify linkages between the food web components within and among different habitats. Data on the use of open water habitat by fish and *Daphnia* will be obtained using sidescan sonar. Habitat modelling and species risk assessments on keystone, taonga, and invasive species will be carried out.

3.2.3 Links to other programme components

This project will link with **3.1. Nutrient behaviour/cycling and algal productivity** because algal productivity and the microbial loop ultimately drives the energy and nutrients flowing through lake food webs. It will also link with **5.2. The role of migratory fish**, and **3.5. Hotspots and hot moments of productivity and biomass of species of interest**.

The work will also feed into interpretation of **4.3 Future climate scenarios** and **4.4 Future land use scenario** modelling.

3.3 Climate drivers and ecological response

3.3.1 Why important: local context

Safeguarding lake values into the future requires an understanding of how climate change and variability affects lake processes. In particular, knowledge about how climate impacts key lake

values and how climate variation directly or indirectly influences anthropogenic stressors will help regional planning to avoid degradation of key values.

Understanding the implications of climate change on the lakes' processes and ecology is important for lake management as the lakes may, or may not, become less resilient to anthropocentric stressors (such as increased nutrient loading) under future climate scenarios. Identifying how the lakes resilience may change under climate scenarios will enable resource managers to avoid situations where a management regime provides for current lake health but will provide for poor lake health under a future climate regime.

Currently, we have little understanding of climate trends and variability and how these impact lake functioning. Climate is a fundamental driver of lake ecology, directly affecting factors such as water temperature, depth of the thermocline, length of the stratification period, fate of freshwater inflows to the lake, water residence time, and nutrient loads. In addition, direct and indirect effects of climate change could make the lakes more suitable to invasive species, alter nutrient cycling rates, modify reproductive cycles of lake organisms, alter habitat suitability, etc.

Climate changes affect glacially-fed, deep water lakes in particular ways that differ from climate effects on smaller, shallower lakes without glacial inputs. This project aims to combine the knowledge gained from **2.2 Lake hydrodynamic modelling**, **3.2. Food webs**, and **3.1. Nutrient cycling** to try to predict how the effects of our changing climate will alter key ecological values such as algal biomass, fisheries and mahika kai. The work also aims to understand how impacts of a changing climate might interact with future scenarios of land use change.

3.3.2 How/methods

This can be achieved by studying the impacts of climate change on key values and stressors by analysing historical climate data for the region and inferring how measured climate variables affect hydrodynamics and water temperature using hydrodynamic models and realistic climate scenarios. Tina Bayer's 2013 PhD research can be used to guide and test modelling and biological inferences.

Data from recently installed lake monitoring buoys will be essential for this work, as will monthly Conductivity/Temperature/Depth (CTD) casts carried out by the Otago Regional Council. Climate impacts can be assessed on food webs both in the pelagic zone and littoral zone and both in open water sites and in embayments of Lake Wānaka.

A focus will be to examine and compare potential climate impacts (ref. section 4.3) on food webs both in the pelagic zone and littoral zone and both in open water sites and in embayments of Lake Wānaka.

3.3.3 Links to other programme components

This project will link strongly with **2.2 Lake hydrodynamic modelling, 3.2. Food webs**, **3.1. Nutrient cycling, 3.4. Hotspots and hot moments of productivity and biomass of species of interest** with **4.3 Future climate scenarios** and **4.4 Land-use change scenarios**. This project specifically integrates information from these projects to help understand likely impacts of climate change on lake ecological functioning.

3.4. Hotspots and hot moments of productivity and biomass of species of interest

3.4.1 Why important: local context

A better understanding of the foodwebs (section 3.3) will provide the programme with some knowledge of energy bottlenecks and keystone species. This will highlight the biological components of the ecosystem that are key to the ecological functioning and health of the lakes. These species and communities together with rare or threatened species, highly valued species, invasive species, and mahika kai species will constitute a group of key species and communities upon which more detailed research should be focused to better safeguard the highest value species and communities. Examples of highly valued species include salmonids and mahika kai species such as eels and kōaro. Examples of keystone species may include *Daphnia "pulex"*, *Lindavia intermedia*, which are both also invasive species. *Lagarosiphon* is also an example of an invasive species of interest.

Key species and communities will reveal important habitats to conserve, and potentially important times of year, when life cycles may be in a sensitive phase. This will inform management by providing specific considerations when assessing management options. For instance, if a highly valued fish species spawns in designated streams in October-November, relevant authorities may wish to encourage or provide greater protection to streams during those periods.

3.4.2 How/methods

This study will use targeted sampling methodologies to undertake more detailed studies of the spatial and temporal dynamics of species and communities of interest in the lakes. Evolving technology enables scientists to measure the abundance and productivity dynamics of species of interest. For example, boat-mounted sidescan sonar can be used to track habitat use and abundance of pelagic fish species, including larval stages. For migratory fish, otolith microchemistry can be used to identify migration patterns at specific life stages. Physico-chemical attributes will also be measured, because the hotspots and hot moments of biomass and productivity may correlate with the spatial and temporal patterns of water temperature, light climate, nutrient concentrations, suspended sediment concentrations, etc.

3.4.3 Links to other programme components

This study will link with **3.2. Food webs, 3.1. Nutrient behaviour/cycling and algal productivity, 3.5. Identification of ecological tipping points, resistance and resilience,** and **2.2 Lake hydrodynamic modelling**.

3.5. Identification of ecological tipping points, resistance and resilience

3.5.1 Why important: local context

To effectively manage lake values, an understanding of the key stressors affecting the values and how different stressor levels impact the values is required. For example, stressor levels and values may be linearly related, where increases in the stressor increasingly affect lake values in a consistent way. Alternatively, the relationship between stressor level and values may be non-linear, with an ecological tipping point, where a small change in stressor level can result in a large change in the lake value (Fig. 6). Where relationships are non-linear, stressor domains where ecological resistance is apparent, i.e. where large changes in a stressor level may have little effect on the values, may also exist. In addition, if a tipping point is temporarily crossed, the value may recover quickly, indicating ecological resilience to the stressor. Finally, different stressors may interact in additive or multiplicative ways, and such information is important for lake managers to know.

"This research will help understand whether lake managers should be concerned about sudden changes in lake values or whether further changes are likely be gradual"

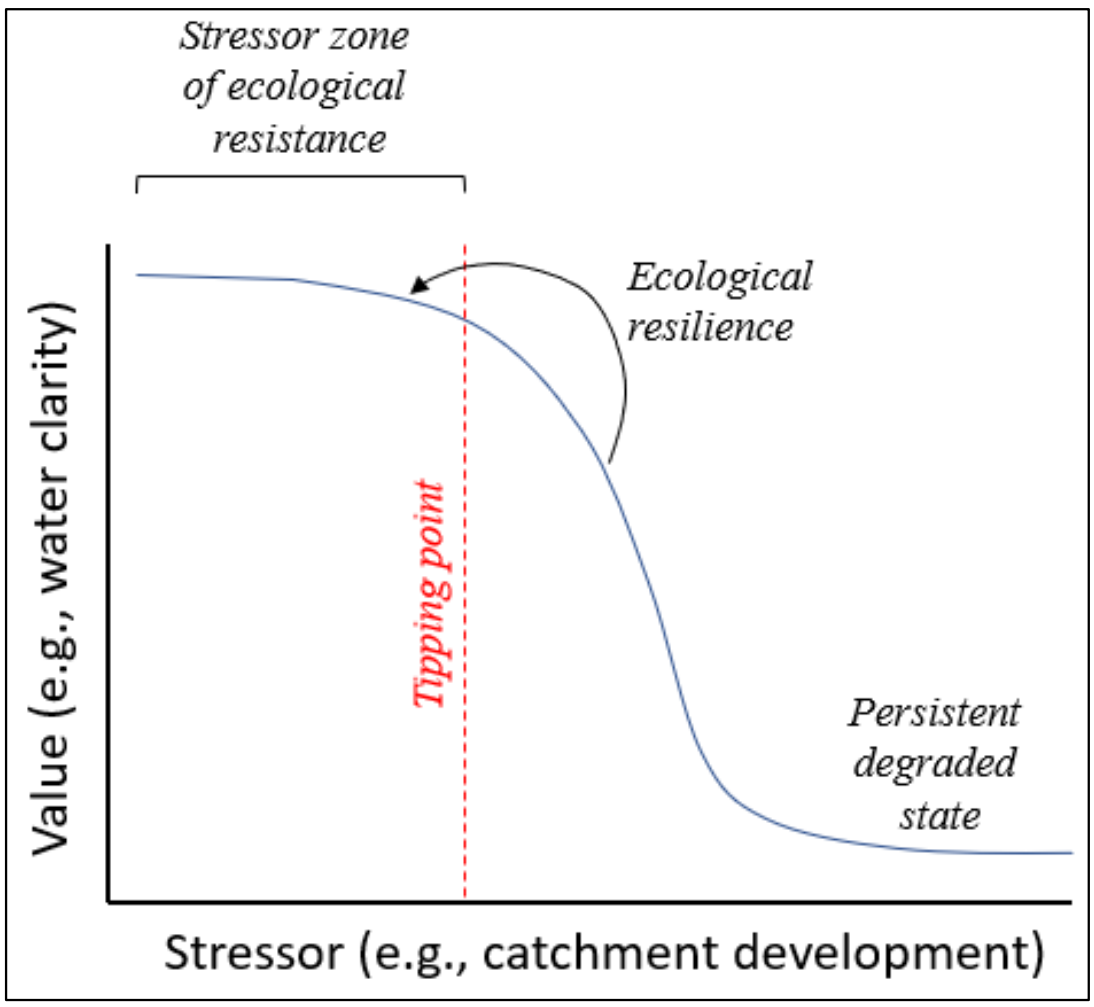


Figure 6. Schematic of a non-linear stressor-value relationships where water clarity is the value to be safeguarded and catchment development is the stressor affecting water clarity. The diagram shows the stressor level at which a tipping point in water clarity is breached. The diagram also shows the stressor zone where ecological resistance maintains a high water clarity. Ecological resilience occurs when a system breaches a tipping point but rapidly recovers to a desired state.

Data from Lake Taupo indicate that chlorophyll *a* increased linearly with increasing nitrogen loading from the catchment and with increasing stocking rates in the catchment. However, more recent data show that chlorophyll *a* has plateaued despite further increased nitrogen loads from the catchment. This shows that policy, regulations, and prudent investment in mitigations would benefit from an understanding of the nature (i.e., shape) of stressor-response relationships. This research will help understand whether lake managers should be concerned about sudden changes in lake values or whether further changes are likely be gradual and consistent with changes to stressor levels. The research will also identify key targets, patterns, or thresholds which may need to be avoided to maintain lake health.

3.5.2 How/methods

This project will integrate the information of ecological stressors and responses gleaned from other research within this deepwater lakes research programme, and from other similar lakes,

to provide a clearer understanding of ecological resistance, resilience and tipping points that may exist in the deepwater lakes. Historical water quality monitoring data and paleolimnological data from the deepwater lakes can be assessed to see whether historical information indicates the presence of historical tipping points, or not, in these lakes.

Further work would involve analysing data from published studies showing how other large, deep, pre-alpine lakes (e.g., Lake Taupo, Lake Constance, Lake Geneva, Lago Maggiore, etc) have responded to various pressures, such as increasing nutrient loads or climate changes. The objective would be to reveal whether responses of other lakes in relation to the stressor levels were gradual or sudden and identify where along the stressor gradient tipping points may occur.

3.5.3 Links to other projects in this proposal

This project integrates data from **3.1. Nutrient behaviour/cycling in lakes/effects on algal productivity**, **3.2. Food webs**, and **3.3 Climate impacts** as well as from paleolimnological work in the **4.1 Long-term Lake and Catchment History**. We will also examine **4.4 land use scenarios** and potential **4.3 Future climate scenarios** of stressors acting on these lakes.

4. Catchment History and Future Scenarios

Background

The purpose of the proposed TAG programme is to build a knowledge base which can inform limit setting and lake management. This section of the work programme will build upon other work streams and provide two essential components for lake management and limit setting: 1) an understanding of natural variation/historical context and 2) potential outcomes under likely future climate and development scenarios.

> ***"A key focus of the lake programme is to develop predictive capacity to enable the assessment of future environmental or land use changes on lake health."***

Proper monitoring of Otago's deep lakes has been in place for less than a decade. This comparatively short record hampers our ability to put current state or trends within historical context and consequently limits our ability to determine what are normal vs unusual, or concerning, conditions and trends. To obtain a fuller picture of the changes that have occurred to the deep lake catchments over time, it is proposed to have two workstreams investigating

1) reconstructing pre-historic lake conditions and trends to inform natural variation
2) historic changes in the catchment.

A key focus of the lake programme is to develop predictive capacity to enable the assessment of future environmental or land use changes on lake health. Two of the primary drivers are changes to the climate, and changes to human activities, such as land use or urbanisation. To make meaningful predictions of how changes to either climate or land use might affect lake health, realistic scenarios are needed to underpin any future modelling work. These scenarios

can be used to inform decision making on future management of the lakes to help safeguard their values.

Proposed Programme for Catchment History and Future Scenarios

4.1 Long-term Lake and catchment history

4.1.1 Why important: local context

The catchments of the deepwater lakes have undergone changes over the past centuries, including climate change, vegetation change, species extinctions, introduction of ruminants, land use intensification and urban growth, loss of migratory fish pathways due to dams, and the introduction of non-native lake organisms (e.g., lake snow, salmonids, weeds). Constructing a detailed >1000-year history of the lake provides context for modern lake conditions and helps to predict the lake response to future stress or changes. However, contemporary monitoring records are relatively short (generally less than a decade for most parameters), which limits our ability to determine whether observed changes are within the natural range of variability or represent a departure from historical conditions. Establishing a long-term record is therefore critical for interpreting current trends and informing proportionate management responses.

Obtaining sediment cores from the beds of lakes can provide a continuous and high-resolution archive of lake and catchment conditions over time, potentially spanning hundreds to thousands of years. The study of past lake conditions, Paleo-limnology, is an established discipline that can reconstruct changes in the catchment vegetation and erosion, lake chemistry, and lake ecology. In deep, low-disturbance systems such as Otago's large lakes, sediments can accumulate in relatively undisturbed layers, preserving detailed records of environmental change that are not available from contemporary monitoring. To date, little work has been undertaken to infer the historical conditions of Otago's deep lakes. As a result, there is currently limited understanding of what constitutes "natural" variability in these systems (Fig. 7), and therefore limited ability to assess whether recent observations represent typical conditions or emerging change.

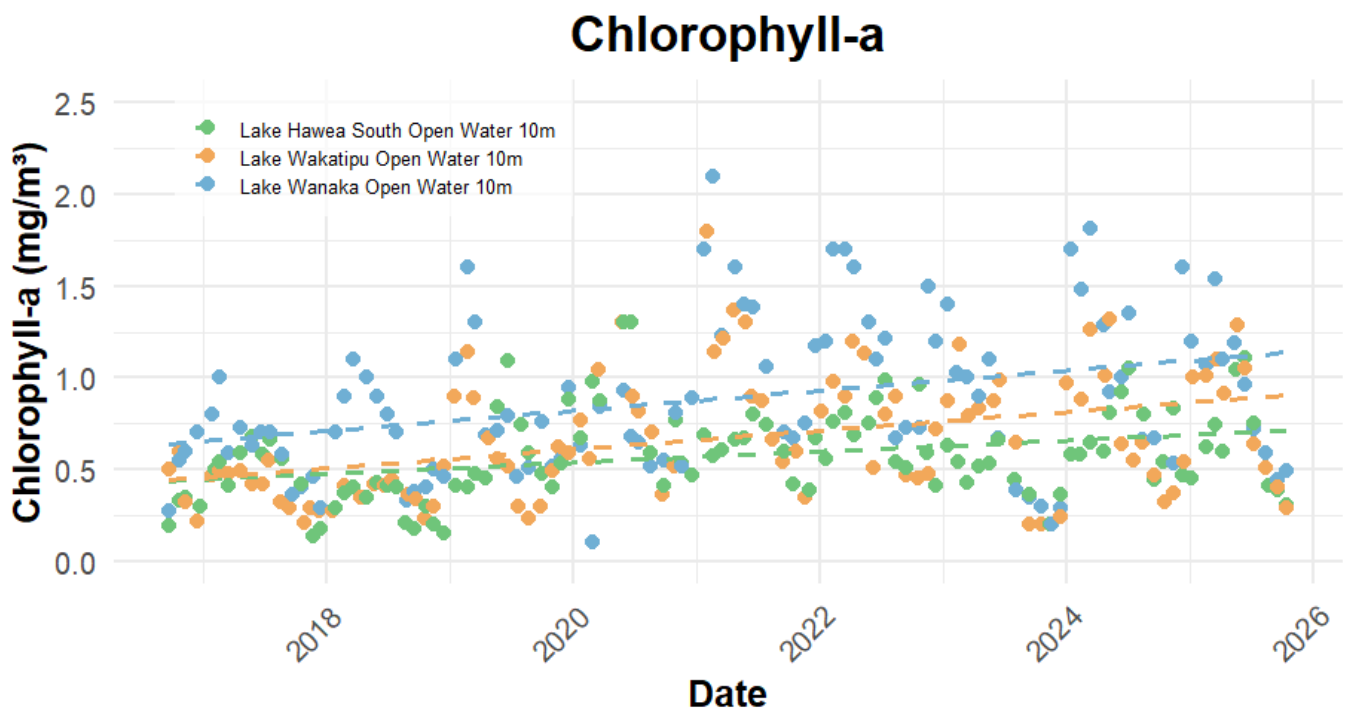


Figure 7. Plots of Chlorophyll-a in the three deep lakes showing an increasing trend from 2016-2026. It is not known whether this variability is 'normal' for the lakes or atypical and of concern.

4.1.2 How/methods

Sediments in deep lakes typically accumulate in fine, sequential layers that can represent seasonal to annual deposition, and in some cases individual flood events, providing a detailed temporal record of environmental change.

It is proposed to recover multiple cores of sediment from the beds of the three lakes (Fig. 8). An initial MfE/ORC funded project focussed on Lake Wānaka was undertaken in late 2025 and 6m long cores with an extensive record of sediment deposition were recovered. In the proposed project, additional cores would be collected in lakes Whakatipu and Hāwea, building upon the findings from the Wānaka cores.

Detailed analysis of these cores will use a multi-proxy approach to reconstruct past environmental conditions. This will include:

- Radiometric dating (e.g. radiocarbon and lead-210) to establish sediment chronology;
- Pollen analysis to reconstruct historical vegetation and land-use change;
- Geochemical and isotopic analyses to infer changes in nutrient inputs, erosion, and catchment processes;
- Fossil diatom assemblages to reconstruct historical lake productivity and nutrient status;
- Emerging sedimentary DNA (eDNA) techniques to infer past biological communities; and
- Physical sediment characteristics (e.g. grain size) to identify disturbance events such as floods.

Figure 8: Left: Core being recovered from the bed of Lake Wānaka, November 2025. Right: A 50mm wide transect of a core from Glendu Bay showing individual sediment layers. (Photos - Sean Fitzsimons, University of Otago).

4.1.3 Links to other programme components

Establishing the long-term history of the lakes feeds into lake water quality modelling by establishing baseline conditions and change through time, enables assessment of changes to lake chemistry and ecology through different stressors such as land use change or introduced species, and can provide an envelope of what is historically 'normal' for the lakes (Fig. 9). This data will provide critical context for calibrating and validating catchment–lake models, and for interpreting monitoring data within a longer-term framework.

Historical reconstructions may also reveal evidence of past thresholds, abrupt changes, or periods of resilience, which can inform assessment of future risks and support identification of potential tipping points in lake condition.

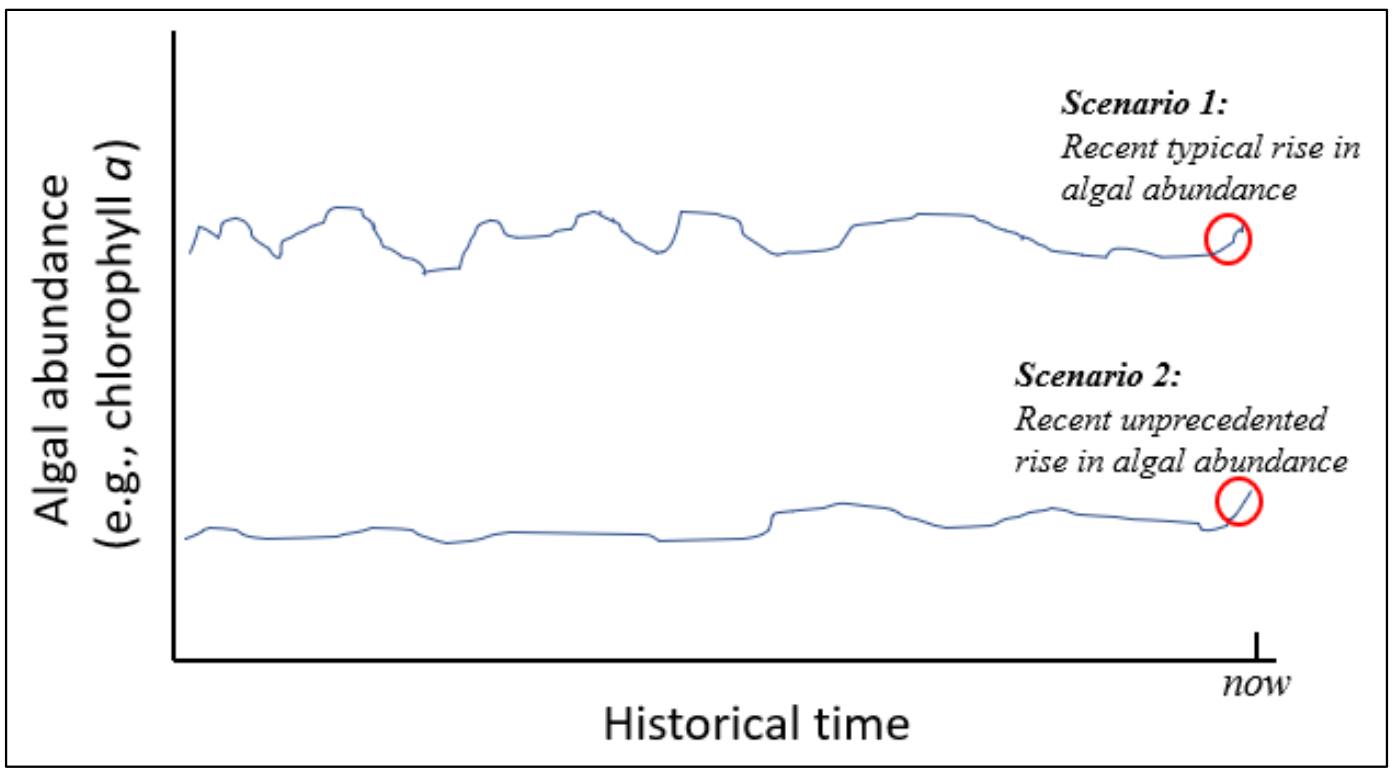


Figure 9. Two potential historical reconstructions of algal abundance in a lake. The recent increase in algal abundance is either within the historical range of variability (Scenario 1) or is historically unprecedented (Scenario 2). Currently, it is not clear whether the recent Chlorophyll-a trends in Fig. 7 above conform with Scenario 1 or 2.

4.2 Historic catchment changes

4.2.1 Why important: local context

Since European settlement in the ~1860's the alpine lake catchments have undergone extensive land use change including burning, the establishment of grasslands, grazing, fertilizer application, urbanisation, damming (Lakes Hāwea and Whakatipu), tourism growth, and more recently high-country land retirement offset in part by intensification on the flats. Experience from other lakes suggests agriculture and urban growth are key stressors through increased loading of nutrients and contaminants to the lakes.

4.2.2 How/methods

It is proposed to compile a record of land use and farming practice change in the lake catchments over the past ~160 years. This will be used to estimate nutrient, and contaminant loads across the catchments and how these loads have changed over time. This task is considered tractable due to the comparatively small number of large rural properties in the catchments, combined with intergenerational ownership, meaning obtaining meaningful records of historic farming practice is feasible. Modern nutrient management software such as Overseer can be used to interrogate historic farming practices to estimate changes in nutrient loss through time at the catchment scale.

It is proposed to make reconstructing the history of land use the focus of student master's research, likely involving interviews, interrogation of archives, photos, and historic records, and estimating nutrient loads to the lakes from historical farming practices. This would be augmented by assessment of the past and current effects of urban development on lake health, including analysing urban stormwater runoff and discharges from septic tanks and discharge fields.

4.2.3 Links to other programme components

Establishing a historic record of land use and nutrient loss is a key input for water quality modelling (2.3), notably for the catchment nutrient loading component. It also establishes an estimate of nutrient input to the lakes through time. This project also validates the inferences about historical catchment and lake changes (4.1).

4.3 Future climate scenarios

4.3.1 Why important: local context

One of the environmental stressors facing the deep lakes is the change in future climate conditions. This could include any combination of changes to the patterns of temperature, rainfall, snowpack, wind, or frequency of extreme events. For example, a reduction in the speed or duration of seasonal winds may increase the strength and duration of lake stratification, or an increase in the temperature of inflows could decrease their ability to plunge and oxygenate the depths of the lakes. Under a warming climate, there is an increasing possibility that the lakes won't fully mix during winter, allowing the depletion of oxygen in bottom waters to progress over successive years. Warming temperatures also reduce dissolved oxygen solubility in water and increase the rate of metabolic processes, which affect nutrient and dissolved oxygen dynamics.

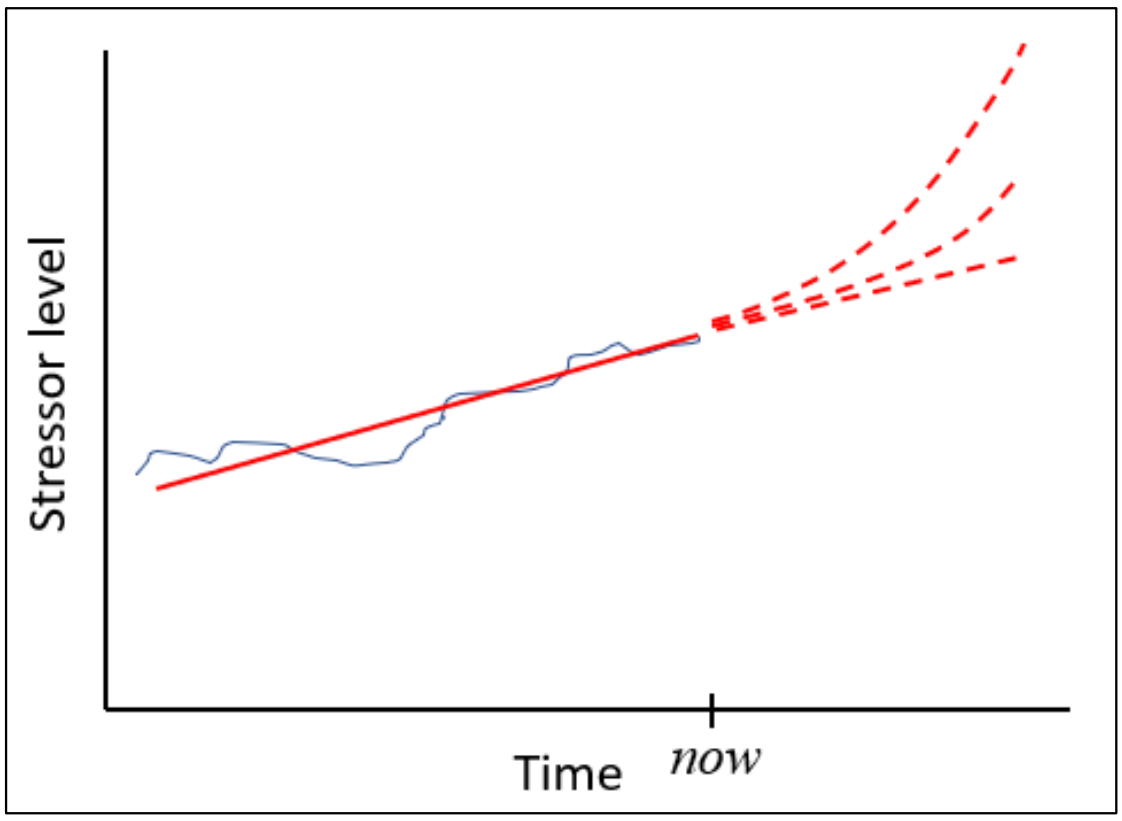


Figure 9. Illustration of three potential future scenarios for levels of a stressor in relation to an average historical trend in stressor level.

This project aims to leverage the knowledge and tools gained from **2.2 Lake hydrodynamic modelling**, **3.2. Food webs**, and **3.1. Nutrient cycling** to try to predict how the effects of our changing climate will alter key ecological values such as algal biomass, fisheries and mahika kai. The work also aims to understand how impacts of a changing climate might interact with future scenarios of **4.4 Land use change**.

4.3.2 How/methods

Global climate models, run by a global collaboration of climate modellers, have been used to forecast climate to the end of the century under a range of greenhouse gas emission scenarios. These scenarios are updated every few years to take advantage of improved understanding and modelling capability (CMIP6 – Coupled Model Intercomparison Model – was recently released, with work on CMIP7 underway). While no single model can make correct weather forecasts beyond a few days, by running many models (an ensemble), a probable range of future conditions can be predicted for a given scenario. Several of these models have been statistically "downscaled" (increased spatial resolution) to produce localised predictions for New Zealand.

It is proposed to:

- Couple downscaled climate models to catchment models to predict changes in hydrology (volume and timing of stream flows)
- Couple the catchment and climate models to lake hydrodynamic models to predict how lake physical conditions (temperature, stratification, mixing regimes) will change in the future
- In concert with section 3.3. examine and compare potential climate impacts on food webs both in the pelagic zone and littoral zone and both in open water sites and in embayment's of Lake Wānaka

4.3.3 Links to other components

This project will link strongly with **2.2 Lake hydrodynamic modelling, 2.2. Food webs**, **2.1. Nutrient cycling, 2.3 Climate effects on ecology, 2.5. Hotspots and hot moments of productivity and biomass of species of interest** and with **4.4 Land-use change scenarios**. This project specifically integrates information from these projects to help understand likely impacts of climate change on lake dynamics and ecological functioning.

4.4 Land use change scenarios

4.4.1 Why important

The Queenstown Lakes District is facing intense development pressure as more people want to live in and visit the area. Future development of the deep lake catchments can potentially have a major effect on the water quality and health of the lakes. Land use and urban intensification can result in higher contaminant loads, additional water abstraction, increased risk of invasive species and other threats to the lakes. *Critically, land use and development is one of the few areas where management decisions (e.g., urban expansion, land use controls) can directly influence factors that affect lake health*. This could include managing farming practices, urban expansion and land fragmentation, effluent and stormwater management, management of the conservation estate, and tourism pressure.

This project will develop our understanding of the risk level the lakes face from current and likely future land use changes over the coming decades in the lake's catchments. In addition to these scenarios, alternative scenarios, which may allow for more or less intensification, will be provided.

4.4.2 How/methods

The catchment models produced in **1.1 Water balance** and **1.2 Nutrient budgets/catchment models** will be amended using scenarios based on district development foreshadowed in spatial planning frameworks, population projects, and farming management trends to forecast likely changes. Alternative scenarios can then be developed to assess potential ways to reduce stressors or assess alternative potential futures.

The model outputs we be interpreted using knowledge gained from the Lake Ecology, Productivity, and Food Webs work stream. This will include assessing the risk posed by future scenarios based on any tipping points and the stressor response relationships identified here.

4.4.3 Links to other components

This work stream leverages the knowledge gained and tools developed in **1.1 Water balance, 1.2 Nutrient budgets/catchment models, 2.2 Lake hydrodynamic modelling, 2.3 Lake water quality modelling. 3.2. Food webs**, **3.1. Nutrient cycling,** and **3.5. Hotspots and hot moments of productivity and biomass of species of interest.**

5. Mātauraka Māori

Proposed Programme for Mātauraka Māori

5.1 Mātauraka Māori and cultural monitoring

5.1.1 Why important: local context

The TAG membership does not have the background or knowledge to convey/represent mana whenua understanding or mātauraka Māori of Otago's deep lakes, yet it remains a critical knowledge gap and potentially rich source of information and context for understanding the lakes. Knowledge of how the lakes have changed over centuries will be fundamental for putting the emerging lake conditions in context. Mana whenua likely hold observations and knowledge about lake history, behaviour, species, or mahika kai which are not captured by technical measurements and models, or reconstructions of lake and catchment history. Gaining a better understanding of mātauraka Māori will be a key tenant of the wider work programme.

5.1.2 How/methods

It is proposed to include two workstreams to integrate mātauraka Māori and cultural monitoring into the proposed programme of work. The first is to collate existing mātauraka Māori for the three deep lakes and their catchments, to the extent and in a format agreeable to mana whenua. This project would also present mana whenua cultural values to guide and inform workstream two.

The second workstream is to incorporate cultural monitoring into the research and monitoring plan. The focus and details of the cultural monitoring approach will be led and designed by mana whenua and could variably encompass:

- Targeted monitoring to ensure the lakes remain suitable for swimming and contact recreation
- Mahika kai
- Ecosystem health
- Changing lake conditions
- Investigating traditional placenames
- Species presence or abundance
- Habitat mapping
- The timing of migration or breeding cycles of key species.

The cultural monitoring work will complement the technical monitoring programmes and will be integrated with key components of the decision support and knowledge aggradation work.

5.1.3 Links to other projects in this proposal

The mātauraka Māori and cultural monitoring workstream aligns with the catchment history, community engagement, water quality, decision support and food web sections.

5.2 The role of migratory eels (tuna) in deepwater lake ecosystems

5.1.1 Why important: local context

Pressures on eel fisheries in the Mata/Au catchment can be dated back to the mid-1800s when the Otago Acclimatisation Society began systematic stocking of Otago rivers with exotic sports

fish. For a time both eels and shags were labelled as ‘vermin’ with incentives offered to cull these species which were seen as a threat to the efficacy of establishing sports fisheries in the catchment.

Prior to the construction of the Roxburgh Dam in 1956, the Clutha River was a conduit for migratory fish, allowing tuna/eels to migrate from the sea to the deep lakes. Now, three dams block migration to Lake Hāwea and two dams block migration to Lakes Whakatipu and Wānaka. Blocking eels and other anadromous (sea-going) fish from swimming up-river to the deep lakes is arguably one of the greatest ecological changes to this ecosystem — it is possible we are yet to see its full impact, where a full generation of eels fails to return en mass.

One attempt was made to introduce tuna to Lake Hāwea in 1998, when c. 9500 tuna were transferred into that lake. Other than that intervention, the migration of tuna into the lakes has likely been non-existent or very sparse, relying on a trap and transfer programme since 1956. As such, tuna populations have diminished greatly in the lakes, and any resident tuna are likely to be very old and large specimens.

Tuna are an important component of mahika kai and were sought for food by early Māori visiting the lakes. From an ecological perspective they were probably also an important component of the lake food webs – effectively the apex freshwater predator of the lake and catchment ecosystems. Little is known about tuna densities and population structure in the lakes prior to the dams, distributions within the lakes, diets, or growth rates. However, tuna re-caught after release into Lake Hāwea in 1998 showed accelerated growth rates once released into the lake.

This project aims to improve our understanding of the historic and current role of tuna in deepwater lake food webs. It has the potential to provide additional information to inform and support trap-and-transfer programmes which could restore regular tuna migrations into and out of the lakes.

5.1.2 How/methods

Any project assessing the ecological role of eels in the deep lakes would be prioritised and designed with mana whenua at the outset. One possibility could be to provide support to the Iwi/Contact Energy trap and transfer programme at the Roxburgh Dam. Tuna of varying sizes could be tagged and transferred into the three deepwater lakes. Mark-recapture analysis would enable determination of habitat use, growth rates, and diet (gut contents). Alternatively, eel population structures, locations, and abundance could be explored with a targeted cultural monitoring programme across the lakes and their catchments. This information will inform lake food web models produced in **3.2. Food webs.**

5.1.3 Links to other programme components

This project links with the sampling and food web modelling that will be done in **3.2. Food webs**. Habitat preference information will also link with **3.5. Hotspots and hot moments of productivity and biomass of species of interest**. It further aligns closely with the mātauraka Māori and cultural monitoring section described above.

6. Knowledge Integration, Decision Support Framework and Community Engagement

Background

The deepwater lakes research programme will generate a significant amount of new knowledge about Otago's deepwater lakes including physical models of how the lakes and their catchments function based on new monitoring data, improved understanding of food webs, and the ability to investigate how new management scenarios may alter the lake's health. However, simply generating an improved understanding would leave a gap between programme outputs and an integrated programme capable of readily supporting management and decision making.

Proposed Programme for Knowledge Integration, Decision Support Framework, and Community Engagement

6.1 Knowledge integration and Decision Support Framework (DSF)

To address this gap, this part of the proposed programme of work will develop a Decision Support Framework (DSF) to support freshwater management, environmental monitoring, and long-term planning for Lakes Wānaka, Whakatipu, and Hāwea. The DSF will integrate the knowledge gained through the deep lakes programme into a framework which will provide a transparent, systematic, quantitative, and visual way to evaluate different management alternatives under uncertainty, balancing risks, costs, and potential outcomes. More specifically, the DSF will enable evaluating how different restoration and management actions perform against environmental, cultural, social, and economic values under different scenarios (e.g., climate, socio-economic). The tool will also support alignment across Council activities, including state of the environment reporting, plan reviews, consent decision-making, and non-regulatory interventions.

The DSF will:

- Integrate the knowledge gained through projects into the deep lakes research programme into one framework,
- Provide a transparent and repeatable way to look at trade-offs under different management scenarios,
- improve capacity for long-term strategic planning,
- allow for stronger integration of science and policy,
- improve the ability to communicate uncertainty and trade-offs when making decisions,
- support adaptive management under changing conditions, and
- provide a platform for ongoing collaboration across community, stakeholders, mana whenua, policy, and science.

6.1.1 Why important

The proposed DSF moves beyond traditional single-discipline environmental assessment approaches by providing an integrated and adaptive approach to environmental governance. Rather than treating scientific disciplines, policy processes, cultural values, and community perspectives separately, the framework enables these components to be connected within a single transparent decision-support structure. This is particularly important for complex lake systems, where cumulative pressures, time lags, uncertainty, and competing values require decisions to be made across multiple timeframes and knowledge domains.

Key benefits include:

- **Integrated knowledge synthesis:** A single platform capable of integrating monitoring data, modelling outputs, expert knowledge, and cultural indicators.
- **Scenario testing capability:** Ability to explore future climate, land-use, management, and infrastructure scenarios.
- **Decision support:** The framework will enable decision makers to explore value trade-offs when making management and policy decisions such as evaluating economic vs. environmental outcomes.
- **Strategic investment guidance:** Supports prioritisation of inventions likely to achieve the greatest long-term environmental and community benefit.
- **Adaptive management support:** The framework can evolve over time as new science, monitoring data, and community priorities emerge to lower the risk of over, or under, regulation.
- **Explicit uncertainty representation:** Outputs will provide a clearer understanding of confidence, risk, and knowledge gaps.
- **Improved transparency:** Assumptions, trade-offs, and decision pathways become more visible and defensible.

6.1.2 How/methods

The proposed DSF is designed to act as the integrating layer across the wider research programme. While individual workstreams will generate detailed scientific understanding of specific components of the lakes, the DSF provides the mechanism through which these diverse knowledge streams can be brought together into a coherent, decision-relevant whole. It is designed as a practical tool to support adaptive management, strategic planning, investment prioritisation, and long-term stewardship of the lakes under changing environmental, social, and climatic conditions. The proposed DSF would consist of three key parts:

1) Driver, pressure, state, impact, and response description and conceptual model
2) Technical model aggregation through dynamic Bayesian Belief Networks
3) Decision support through Multi-Criteria Decision Analysis (MCDA)

1) Driver-Pressure-Stressor-Impact-Response (DPSIR)-system description and conceptual model

The first step in integrating work streams will take place at the outset of the programme and will outline key conceptual linkages to identify preferred indicators and integration structure. A widely used framework is the driver, pressure, stressor, impact, and response framework. ORC currently uses this framework when developing its catchment action plans (CAP). This structure provides a clear and transparent link between:

- environmental pressures and ecosystem responses
- monitoring and management actions
- policy interventions and outcomes
- investment decisions and long-term resilience

Importantly, the DPSIR structure provides a format that is accessible and usable for council planning, reporting, strategy development, and stakeholder engagement. This step will review and build on the DPSIR structure developed through the CAP programme to identify key indicators and structure for model aggregation. The framework will be reviewed periodically throughout the 10-year programme.

2) Dynamic Bayesian Belief Networks (DBNs)

The deepwater lakes programme will generate multiple types of outputs ranging from monitoring data to research and modelling outputs. Dynamic Bayesian Belief Networks (DBN) will be used to integrate the outputs from the programme including biophysical, ecological, climatic outputs, with social information to provide an integrated understanding. In addition to integrating multiple types of knowledge into a single framework, DBN's will also enhance understanding risks, trade-offs, and system sensitivities as DBNs provide probabilities and confidence ranges for future outcomes.

The DBN framework enables:

- integration of multiple data sources, research outputs, and knowledge systems
- explicit representation of uncertainty
- incorporation of expert knowledge where monitoring data are incomplete
- evaluation of future climate and land-use scenarios
- updating of model predictions as new information becomes available
- representation of temporal dynamics (seasonal and long-term change)
- testing of management interventions and policy options

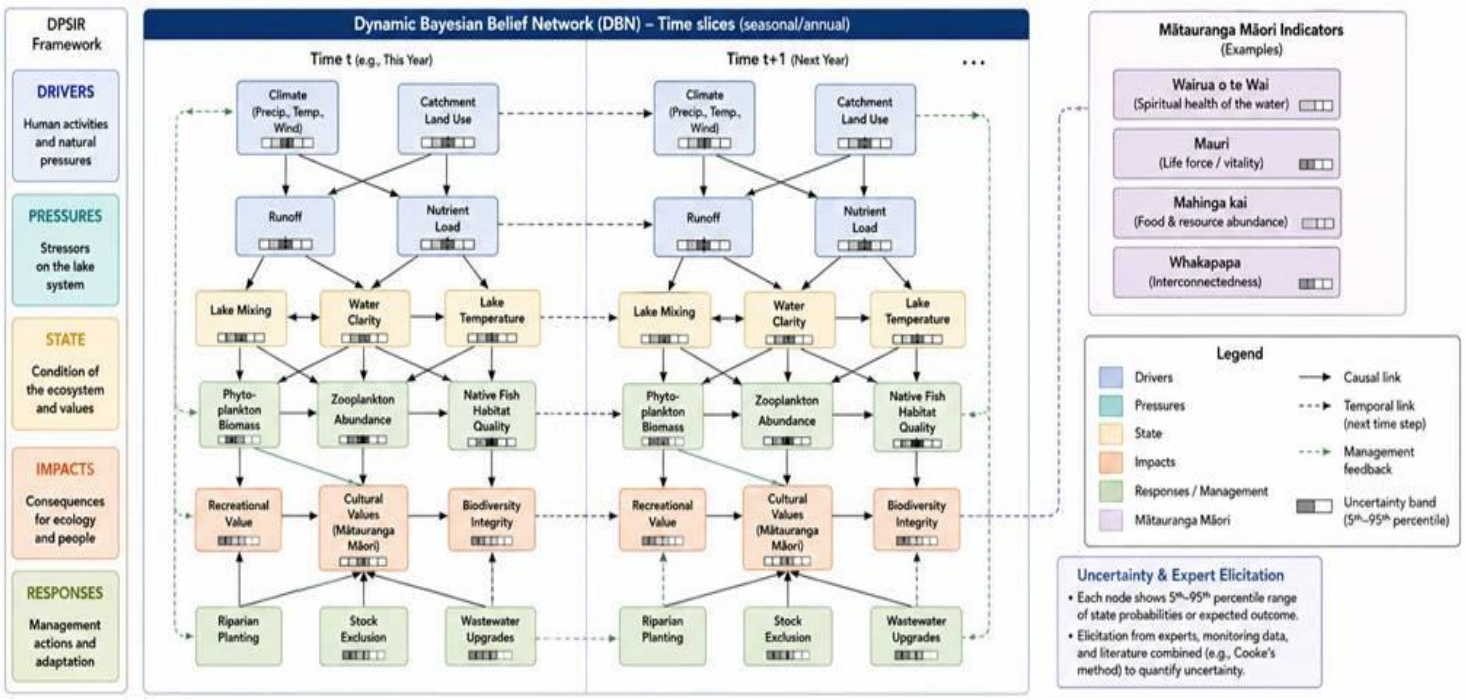


Figure 10. Mockup of a Dynamic Bayesian Belief Network for e.g. Lake Wānaka based on DPSIR cause-effect relationships.

3) Multi-Criteria Decision Analysis (MCDA)

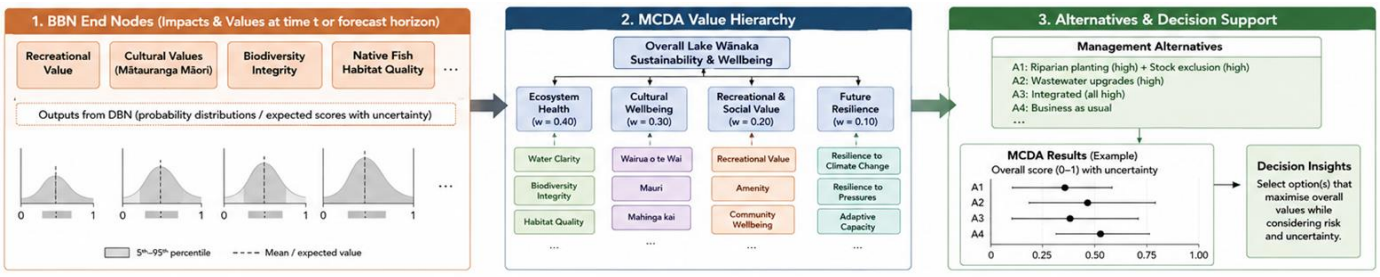
The final part of the DSF links key DBN outputs, and the selected indicators, through to a Multi-Criteria Decision Analysis (MCDA) value hierarchy. This enables the evaluation of management options against multiple community values. The MCDA framework allows:

- Transparent comparison of management options (e.g., riparian restoration, stock exclusion, wastewater infrastructure upgrades, etc.),
- explicit representation of trade-offs,
- inclusion of stakeholder and community values and weightings,
- testing of alternative future scenarios, and

- evaluation of uncertainty and confidence levels.

A central principle of the DSF is that long-term freshwater management requires ongoing collaboration between science, policy, mana whenua, stakeholders, and the wider community. The DSF supports a participatory and transparent approach to decision-making. Community engagement processes can be incorporated throughout model development and scenario evaluation, including:

- identification of community values and priorities,
- incorporation of local and experiential knowledge,
- collaborative development of future scenarios,
- participatory evaluation of management options and trade-offs, and
- communication of uncertainty and system risks in accessible formats.



Notes: (1) Node states (e.g., Low/Med/High) are represented as probability distributions with uncertainty bands (5th–95th percentile). (2) Weights (w) are illustrative and to be confirmed with stakeholders. (3) Dashed green arrows indicate adaptive management feedback informed by monitoring and updated beliefs over time.

Figure 11. Mockup of 1) outputs from the Dynamic Bayesian Belief Network which are depicted as probabilities of occurrences of individual end nodes. These are 2) fed into the Multi-Criteria Decision Analysis framework to 3) be aggregated to ultimately rank management alternatives considering community aspirations.

6.1.3 Links to other programme components

The DSF is a strategic integrator of current and future lake knowledge across the proposed programme of work outcomes. It incorporates knowledge gain from all the other workstreams. The DPSIR framework identified at the outset of the programme will also help other work streams support linkages over the 10-year programme.

6.2 Community engagement

6.2.1 Why important

As outlined in TAG's December 2024 paper, there is a widespread public sense that the water quality in the lakes is good, and the sheer scale of the lakes means there is little risk of them deteriorating. Examples from large overseas lakes illustrate the fragility of these systems, and how they can deteriorate rapidly. This public sentiment, that the lakes are robust and healthy, will be an obstacle if future management decisions require a restriction of land use or activities in the lakes catchments: the lack of awareness of the fragility or vulnerability of the lakes will galvanise opposition to any restrictive management changes. Consequently, increasing public awareness of threats to the lakes and the rationale for the TAG's proposed work programme will be critical for ensuring public buy-in for future decisions. This is an important facet of the proposed work programme and should be met with rationalised communication of the value of the work programme.

A proposal for $20 million on a monitoring and research programme to address a problem that many believe is a non-event is a hard sell for some of the community whom are likely going to have to contribute in some form. The reality is that many have been receiving “value” from the region and its natural resources and the lakes in externality, without necessarily paying for it. Communicating this value and identifying parties with vested interests will be key to establishing buy-in or social licence for the proposed TAG work programme.

6.2.2 How/methods

It is proposed to increase public awareness of TAG programme and understanding of lake health more generally through two workstreams:

1) Harnessing community interests and expertise

Although the TAG’s proposed monitoring plan is a considerable expansion of existing efforts, there are additional aspects where further work will provide valuable information to the programme.

First, while the programme seeks to inform whole of lake management through additional monitoring, modelling, and research studies, these planned studies may leave localized gaps where community groups want to know more. The Upper Lakes area has multiple active community groups including WAI Wānaka, Whakatipu Conservation Alliance, The Guardians of Lake Wānaka and Hāwea (of which, Lake Wānaka Guardians are ministerial appointments), and many mature catchment groups and collectives such as The Wānaka, Hāwea, and Cardrona Catchment Groups. This provides an effective intervention point for engagement with locals for two-way knowledge exchange. Furthermore, such groups are also represented by important local industries such as tourism operators, farming and agriculture, and local energy providers. These industries operate locally and directly benefit from the quality of the environment the TAG is aiming to address and promote. Engagement with such local industries will therefore be key both in terms of knowledge exchange, and to have conversations on the co-funding of research or work programmes that ultimately have mutual benefits for the ORC, the community, and local industry.

The proposed programme has provisioned funding to develop and implement projects which directly address localized community interests. These programmes will be developed and implemented by providing TAG expertise to support the community led science programmes. TAG members involved in development will also help ensure these projects can link into the wider research programme wherever possible.

2) Programme communication and deep lakes ‘State of the Environment’ reporting:

The TAG intends for the programme team to develop a communication strategy to make sure the programme progress and the state of the lakes are communicated to the Upper Lakes community. Central to this will be establishing a regular and ongoing environmental reporting system on the state and trends of the deepwater lakes. This will be designed to distil the ongoing monitoring and research work into a clear, digestible format that educates and engages the communities and engenders public support for the monitoring and research programme. The ORC Lake Buoys provide a nice initial point of intersection for data collection, combined with other ORC State of the Environment monitoring, QLDC, University, research organisations (Earth Sciences New Zealand, Bioeconomy Science Institute and Cawthron) monitoring programmes, and other community and industry monitoring initiatives will provide a diverse and

enumerated dataset that ultimately shares the burden of monitoring between multiple interested parties. The role of ORC (or equivalent) and the TAG in this case would be to provide quality assurance oversight and aggregation of the multiple data sources and lead the reporting of such.

6.2.3 Links to other programmes

There is an obvious crossover pertaining to the synergies of the TAG programme and **ORC's Upper Lakes Catchment Action Plan (Upper Lakes CAP)** that was developed with the local community over 2024-2025. There is an opportunity to have TAG research and projects directly feed into the evidence-based approach and philosophy of the Upper Lakes CAP and its identified management actions. Having a line of sight from the proposed research to some of the proposed catchment actions will be advantageous in terms of informing the development of research questions with the community, and then ensuring the research has actionable and implementable recommendations that resonate with the local community.

Appendix 1 - Workstreams and cost indicators

Code	Theme	Topic	Details / Description	Cost breakdown	Accumulated cost
1.1	Budgets	Water balance	Install flow recorders where possible in major inflows (Makarora, Hunter, Greenstone, Vonn, Locky, Dingle burn). Additional Rainfall gauges to fill gaps. Additional Lake level recorder x3. High res bathymetry for Hawea. Ground water programme needed for major inflows, tracer studies to distinguish GW and SW sources. Potential outflow monitoring improvement? Temperature sensors on flow gauges	Signifiant overlap with water and nutrient budgets. Additional Monitoring=$1,000,000 a year; $100k for new GW bores. High resolution Bathymetry for Lake Hawea - $150k.	$10,250,000
1.2		Nutrient budget (includes sediment)	Regular sampling of both "traditional" and a wider set of variables (DOM, DOC, POM, Silica/trace element, etc.) of as many inflows see above as possible, potential continuous (or at least event flow sampling) of as many tribs as possible -> aimed at loads. DGT/passive samplers? May require alternative lab processing techniques (concentrating first before "measuring). Additional in lake sites. Additional subcatchment monitoring potentially weighted towards anthropocentric / urban landuse changes. Benthic sampling, atmospheric deposition monitoring.		
1.3		Heat budget	Long wave radiation sensors/climate stations for all lakes including top of lake sites. Review of stations and whether coverage is sufficient; Evaporation analysis; surface heat flux (possibly covered by met data, perhaps validation from sampling); Absorbance spectra down profile; temperature on all inflows.	$150k for 2 climate stations per catchment (6 total) with long wave radiation sensors	$450,000
1.4		Dissolved Oxygen Budget	Deploy satellite buoys in littoral zone of all three lakes; benthic chambers; atmospheric flux measurements	$150k one-off benthic chambers (oxygen sensors on satellite buoys are included in section 2.1)	$150,000
1.5		Catchment Modelling	Nutrient and hydrologic models of catchment inputs to lakes	Est $300k per lake for "coupleable" spatial temporal hydro/water quality models (such as SWAT or other);	$900,000
2.1	Deepwater Lake Functioning - Physical Processes	Physical Measurements	Targeted water column measurements via temporary moorings, Temperature profiles are the priority, with oxygen at some depths. ADCP current measurements (potentially 6 per lake on moorings); Additional Moorings with temp sensors (High priority)->; more important in Wanaka due to arms/bays;	$500,000 for moorings	$500,000
2.2		Three -dimensional lake hydrodynamic modelling	High resolution 3-D models; aimed at under flow/currents (off flow sites). particle tracking	300,000 for 2 AEM3D hydrodynamic models (Wanaka model already exists);	$300,000
2.3		Lake water quality modelling	Regular column measurements of temp, ox, turbidty, clhorophyll, additional water quality sampling, model development	$50k/yr for 5 years to augment existing ORC monitoring programme; $450K to develop lake water quality models for 3 lakes	$700,000
3.1	Deepwater Lakes Functioning - Lake Ecology, Productivity, and Food Webs	Nutrient behavior/cycling and algae produ	Nutrient cycling quantification method development (medium risk); Characterization of dissolved organic matter (1 Ph.D.); microbial consortia associated with lake snow (1 Ph.D.); Trace element limitations (1 Ph.D.); PicoCyanobacteria (1 Ph.D.). PhD scholarships will use roughly 50% of the budget. The remaining budget to scientists. (Years 1-5).	$1,350,000	$1,350,000
3.2		Food webs	Studies on littoral, deep benthic, and pelagic food webs. Stable isotope and gut contents analyses. Estimate carbon fluxes from pelagic to benthic zones. Assess threat of perch invasion to Wakatipu. This will require 4 PhDs, and roughly 50% of the budget. The remainder goes to scientists. (Years 1-5)	$1,050,000	$1,050,000
3.3		Climate impacts on ecosystems	Historical climate data analysis, build on existing buoy data. 1 MSc project. Determine climate change impacts on algal biomass and productivity (1 PhD). (Years 6-10)	$300,000	$300,000
3.4		Hotspots of productiviy and biomass of species of interest	Sonar surveys, otolith work, estimating relative contributions to productivity and biomass. Lindavia, Daphnia pulex, Lagarosiphon, koaro. (Years 3-6)	$150,000	$150,000
3.5		Ecological tipping points, resistance and resilience	Analysis of above concepts- stressor response relationships- multivariate. Integration of other programmes, comparison with international lakes (Years 7 to 10)	$150,000	$150,000

4.1	**Catchment history and future scenarios**	**Long term Lake and catchment history (coring and related work)**	3 x Lake cores each Lake to understand natural range; long-term change; and event based sediment loads from land slides/earthquakes.	$350,000 per Lake. Wanaka done already	$700,000
4.2		**Quantify Historic / changing land use and hydrology**	2 masters evaluating Local archives, on farm practice change; and a farm scale change assessment	$300,000 for 2xMSc plus $500,000 for farm scale understanding	$800,000
4.3		**Future Trajectory- climate**	Climate change modelling; future water quality, and hydrology projections	$1,100,000	$1,100,000
4.4		**Future Trajectory- land development**	Forecasts based on district/regional plans etc, population projections	cost combined with future climate projections above	
5.1	**Mātauraka**	**Matauraka and Cultural monitoring**	Collation of Mātauraka Maori related to catchments and lakes Cultural monitoring programmes.	2 joint PhD's or equivalent research effort ($400k), monitoring ($50k/yr)	$1,100,000
5.2		**Eels in Deep Lake Ecosystems**	Work with existing transfer programmes, tagging, recapture analysis, polupation structures	$200k	$200,000
6.1	**Lake management and community engagement**	**Knowedge integration and decision support frameworks for management**	Utilise Bayesian networks or similar transparent, easily updated models to aggregate/integrate biophysical knowledge gain about the lakes. Use the integrated biophysical knowledge to undertake a multistakeholder, collaborative, transparent decision support process (e.g., multicriteria decision analysis) to develop integrated catchment/lake management plans focused on key stakeholder lake values and based on the totality of biophysical knowledge gained. These knowedge integration models will be a prototype approach that could be applied other catchments in NZ (establish yrs 1-2, consolidate yrs 7 - 10)	$50k p.a., yrs 1-2 to establish, 100k p.a. for last 4 years	$500,000
6.2		**Community engagement, citizen science, and communication**	Citizen science project- Annual fund for community groups to use in partnership with TAG to fill any gaps in desired knowledge base and CAP type process with additional technical input. Communication of programme results targeted to local communities.	$50k p.a. for community groups to supplement data collection and observations	$500,000
	Total				**$21,150,000**

Deep Lakes Research Timeline

Monitoring Install and Data Collection → **Initial Analysis, Refinement, and Further Data** → **Analysis and Maintenance of Key Sites** → **Integration and Decision Focus**

	Year 1	Years 2-3	Years 4-7	Years 8-10
Monitoring/Budgets	Install priority flow, temperature and rainfall sites			
	Additional water quality sampling in rivers and lakes			
	In lake profiles and buoys			
	Climate station installs			
		Atmospheric Deposition monitoring		
		Benthic samping		
		Event based water quality sampling		
			Gapfilling Sampling	
Research and Analysis	Hydrodynamics, catchment, and nutrient modelling commences			
	Nutrient Cycling, Foodwebs, and Energy Flow Research Projects			
		Historic Trajectories and coring		
				Climate change and Future land use scenarios
	Matauranga integration			
	Decision support Conceptualizaiton			
			Model integration and Decision Support	

	Year 1	Years 2-3	Years 4-7	Years 8-10
Key Milestones	1. Monitoring installs 2. Formalized conceptual model developed as part of Decision Support Framework 3. Commencement of nutrient cycling/energy flow Ph.D.s	1. Monitoring sites embedded/refined 2. Working model in Wanaka and model development in other lakes 2. Delivery of first Ph.D. projects 3. Commencement of coring work	1. Monitoring begins wind back 2. Delivery of operational catchment, lake and water quality models 3. Delivery of second set of Ph.D. projects 4. Conclusion of coring work and historic trajectories 5. Decision Support work commences	1. Models used for future climate and land use scenarios 2. Delivery of last set of Ph.D. projects 3. Full integration of biophyiscal information 4. Development of decision support framework to support managemet decisions
Knowledge Gained	Decisions would be based on current knowledge and formalized conceptual model with expert input.	Decisions would be made based on extrapolation of Wanaka model, earlying findings from foodwebs, and expert opinion	Decisions would be made based on an integrated knowledge base including lake specific models with scenario capability, completed food web studies, and an understanding of historic variation. Studies and models may have uncertainty which could be further reduced.	Decisions would supported by a lake specific stufies integrated into a decision support framework which enables evaluting cross discpline (environmental, social, cultural, and econcomic) trade offs, identifies preferred options, and is underpinned by a robust and completed programme.

Appendix 3 – Project Risks and Contingencies

Description of risk	Risk Level	Workstream where risk is based and others impacted	Proposed mitigation/prevention/contingency
Monitoring installation difficulties	Medium	Flow sites, buoys, or other sensor deployment may fail or have poor results initially	The proposed timeframes provide extra time for monitoring to bed in and be adjusted
Water budget doesn't close	Low	Water and associated budgets	Contingency for further investigation of groundwater inflows if likely a major missing component
Desired field installs not possible/practical	Medium	Especially flow sites – some major rivers not possible to gauge (e.g., Hunter River)	Supplement with additional rain gauges, flow forecasting models, proxy measurements
Physical and water quality models fail to connect to ecological outputs	Medium	Linking physical models to food webs	The planned Bayesian approach will be able to incorporate knowledge from all workstreams even if they can't be integrated into the physical model
Partial or complete loss of funding	High	Some or all workstreams	The project data collection is front loaded with analysis and modelling being completed in the final years. Once the "complete" dataset is collected, the data analysis could be completed over longer timescales. Alternatively, the dataset may attract independent analysis.
Poor physical model performance	Low	Water and associated budgets, physical dynamics	A model has already been completed for Wanaka. Learnings from this modelling process will be carried through and as a result we do not anticipate significant challenges in modelling the physical aspects of the lakes. If challenges did arise, the

			Bayesian approach will allow for multiple types of knowledge.
Loss of key personnel	Medium	All workstreams	Many workstreams have very limited pools of expertise in New Zealand. A project management plan completed before project stand up will identify key individuals, and potential options if those individuals were to be unavailable during the programme. Commitment to the programme would motivate suppliers/partners to ensure ongoing capability
Environmental Policy changes	Low	All workstreams	While the programme would inform potential regulatory and non-regulatory management of the deep-water lakes, the programme is not aimed any specific policy. Instead, it is aimed at providing the base information and tools that would be required to make management decisions at a later date. As a result, the programme would support multiple future policy requirements.
Decision making is required before programme completion	Medium	All workstreams	The programme will stand up an initial Bayesian support network and decision support framework at the start of the programme and will be available for use with the most up to date information integrated throughout the project. This work stream will therefore provide the best available information for decision making at any point during the programme

‘Black-Swan’ event changes lake and catchment environment (e.g., Alpine Fault earthquake, new invasive, major land use change)	Low	All workstreams	Such an event will challenge the programme, but the established workstreams will put response/enquiry on a good footing

9.3. Natural Hazard Prioritisation

Prepared for:	Council
Report No.	S&R2617
Activity:	Natural Hazards
Authors:	Tim van Woerden (Senior Natural Hazards Analyst) Andrew Welsh (Spatial Analyst) Jean-Luc Payan (Manager Natural Hazards)
Endorsed by:	Tom Dyer (General Manager Science and Resilience)
Date:	29 July 2026
Portfolio Leads:	Cr Kelliher and Cr Robertson, Science and Resilience

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PURPOSE

[1] To update Council on the findings of the Otago region natural hazards prioritisation work programme.

EXECUTIVE SUMMARY

[2] The Otago Regional Council (ORC) Natural Hazards team have been progressing work on a regional-scale natural hazards assessment programme. The programme is aiming to work towards a comprehensive, regional-scale, spatial understanding of Otago's natural hazards exposure and risks.

[3] This paper presents the approach and findings of a natural hazards prioritisation undertaken to inform development of natural hazards activities to be considered for the development of the 2027-2037 ORC Long-Term Plan.

[4] The prioritisation process has resulted in the identification of nine higher priority natural hazards areas, where development of local-scale natural hazards management/mitigation or adaptation work programmes should be considered in the LTP preparation process.

[5] The natural hazards prioritisation process has involved development and compilation of new assessments and compilation of information, much of which has previously been available only in a piecemeal manner. This new information itself is a valuable resource to build increased natural hazards understanding in the region, for example the compilation of summary information for past natural hazards impacts, and review of Natural Hazards Commission damage claims.

[6] The majority (8 of 9) of the higher priority natural hazards identified are for flooding due to river or coastal inundation, and most are located within the Dunedin City district. Most of the locations identified as higher priority for further natural hazards management activities have a relatively moderate natural hazard exposure of an estimated population of tens to a few hundred residents. This is interpreted to be because the majority of the larger-scale and higher-profile natural hazard risks in the region have previously been the focus of hazard

management/mitigation or adaptation work programmes (e.g. those listed in Table 5), so those remaining locations of higher natural hazard risks are those which are typically of a smaller scale.

[7] Location-specific work programmes for these identified higher priority locations will form only one part of the overall ORC natural hazards work programme – it does not mean these will be ORC's sole area of focus in the coming years. Work will also continue in parallel on many other natural hazards projects, for example ongoing activities for existing hazard management and adaptation programmes, review and updates to ORC's regional-scale natural hazards datasets, flood response, and communication of natural hazards and risk information.

RECOMMENDATION

That the Council:

1) ***Notes*** *this report.*
2) ***Endorses*** *the report* Otago Region Natural Hazards Prioritisation Method*, dated June 2026.*
3) ***Notes*** *the natural hazards prioritisation findings.*
4) ***Endorses*** *the use of natural hazards prioritisation findings as a basis for ORC Natural Hazards planning for the 2027-2037 LTP, and engagement for the proposed LTP activities.*
5) ***Notes*** *the next steps in the work programme.*

BACKGROUND

[8] Since the 2021/2022 financial year, the ORC Natural Hazards team have been progressing work on a regional-scale natural hazards review and assessment programme. The programme aims to work towards a comprehensive, regional-scale, spatial understanding of Otago's natural hazards and risks, with key tasks as shown in Figure 1. The background to the work programme is outlined in a paper presented to the ORC Safety and Resilience committee in May 2023.[1]

[9] There have been two key deliverables previously completed in this work programme;

a. In November 2024, ORC presented a proposed approach to natural hazards prioritisation for the Otago region.[2]
b. In June 2025, ORC completed a region-wide stocktake of natural hazards exposure, which is a valuable information source for use in prioritisation, especially for locations where little other information is available. The exposure analysis was presented as a technical report[3], a summary committee report[4], and an interactive online map portal[5].

[10] This paper presents the next update on the natural hazards prioritisation work programme, including;

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[1] van Woerden T, 2023. Otago Region Natural Hazards Risk Assessment. Report to the Otago Regional Council Safety and Resilience Committee, 10 May 2023.

[2] van Woerden T, Welsh A and Payan J, 2024. Otago Region Natural Hazards Prioritisation. Report HAZ2405 presented to the Otago Regional council Safety and Resilience Committee, 7 November 2024.

[3] van Woerden T and Welsh A, 2025. Otago Region Natural Hazards Exposure Analysis. May 2025.

[4] van Woerden T, Welsh A and Payan J, 2025. Otago Region Natural Hazards Exposure. Report HAZ2503 presented to the Otago Regional council Safety and Resilience Committee, 4 June 2025.

[5] Otago Region Natural Hazards Exposure Analysis Map Viewer.

a. Detailing the methods guideline for undertaking the prioritisation assessments (Appendix 1).
b. Summary of prioritisation outputs and identifying specific locations as higher priority.
c. Outlining the recommended natural hazards response for locations in each priority class.

[11] The natural hazard prioritisation information and assessment outputs are primarily intended to be used as a project planning tool for the ORC Natural Hazards team, to assist with allowing ORC to systematically identify and define key projects and allocation of work within the overall Natural Hazards work programme.

[12] A well-defined proactive approach for prioritisation reduces the need for reactive or ad-hoc decision-making. This approach also adds transparency into decision-making processes as the prioritisation approach used is openly available, and the inputs into the resulting outcomes are clearly visible.

[13] The prioritisation outputs support the development of ORC's Natural Hazards work programme through the upcoming Long-Term Plan development process (LTP 2027-2037), by identification of higher priority locations, and recommendation of a natural hazards response for those locations.

[14] Natural hazards work programmes can be categorised as either Adaptation or Hazard Management/Mitigation (described in Table 1), with each of these approaches being better suited for addressing natural hazards challenges with specific characteristics, however there is not a clear-cut distinction between these categories, and in reality all projects will sit somewhere on a spectrum from 'mostly Adaptation' to 'mostly Hazards Mitigation'.

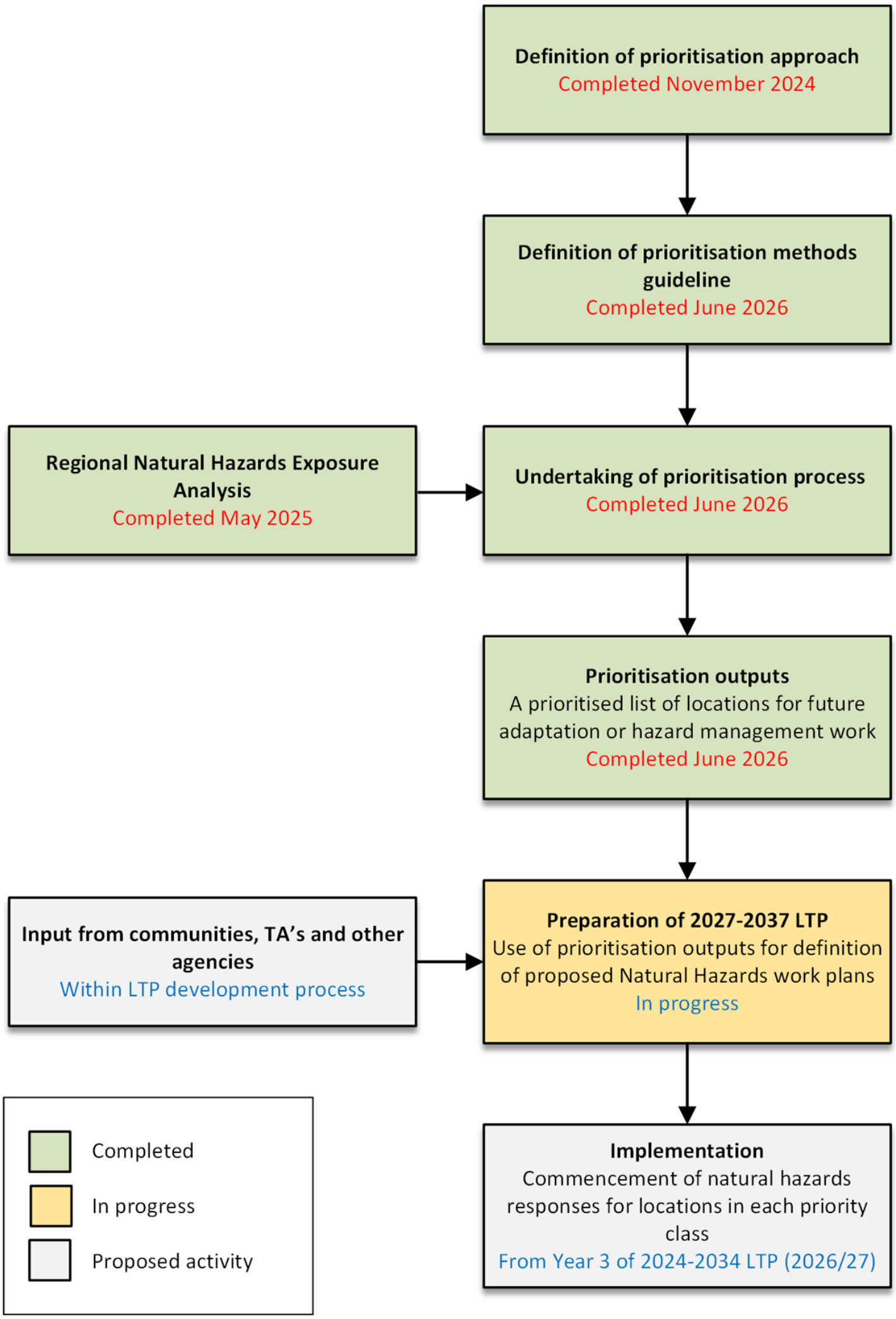

Figure 1: Flow chart showing key activities and programme sequencing in the natural hazards risk assessment and prioritisation programme.

Table 1: Description of natural hazards work programme approaches; 'Adaptation' and 'Hazard Mitigation'.

"Adaptation"
• A response to natural hazards challenges involving **significant complexity** in hazard-scape and social/ political settings, and expected (but highly uncertain) future increases in hazard risk. • Due to complexity and uncertainty, **a holistic approach is required, with significant engagement/collaboration needed** in development of possible management approaches. • Implementation of possible management interventions is expected to require multiple complementary approaches, and would need to be led by a range of organisations (potential for trade-offs?) • **Can't "Engineer" the natural hazard problem away** • Option development requires all stakeholder input. **Examples:** South Dunedin, Clutha Delta
"Hazard mitigation"
• A response to natural hazards challenges, which are simpler in terms of hazard-scape and social/political setting. • These may still be high risk, but any implementation of hazard management approaches is expected to be **largely implemented by ORC.** • **Option development is mostly an 'engineering exercise'** **Examples:** Water of Leith flood hazard management, Roxburgh debris flooding hazard management.

NATURAL HAZARDS PRIORITISATION FRAMEWORK

[15] The six-step natural hazards prioritisation process presented in the 2024 committee paper outlined, at a high level, the steps required for natural hazards prioritisation and included summary information on the factors to be considered in each prioritisation step. A new report has been completed to further describe the methods used for practical implementation of the prioritisation framework, which remains generally aligned with the approach published in 2024.

[16] The natural hazards prioritisation method is graphically represented in Figure 2. The technical report *Otago Region Natural Hazards Prioritisation Method* is included as Appendix 1. This report details the methods used in prioritisation analysis, including the input datasets used, analysis completed, and classification schemes applied.

[17] Limitations of the prioritisation approach are discussed in more detail in the technical report *Otago Region Natural Hazards Prioritisation Method* (Appendix 1), and limitations of the natural hazards exposure analysis are outlined in ORC's 2025 hazards exposure technical report.[6]

[18] A significant amount of natural hazards information has been compiled for use in the prioritisation analysis, this has included;

a. Updating of ORC's previous (2025) natural hazard exposure analysis with inclusion of four additional natural hazard datasets.

b. Completion of natural hazard exposure screening to identify communities where vulnerable populations (schools, early childhood education, hospitals and rest homes) may be exposed to potential natural hazard impact.

[6] van Woerden T and Welsh A, 2025. Otago Region Natural Hazards Exposure Analysis. May 2025.

c. Documentation of all locations in the region where location-specific natural hazards management or adaptation work programmes have been undertaken. This information was previously piecemeal among many sources, and had not been compiled into a single document.
d. Compilation of existing ORC information and news media to summarise the location and type of past natural hazards impacts in the region.
e. Review of the Natural Hazards Commission[7] damage claim records for the Otago region, this dataset comprises >5,000 settled damage claims, dating from the late 1990s to mid-2025. This review has included assessment of the type, spatial distribution and timing of claims for natural hazards damages.

[7] NHC, formerly the Earthquake Commission (EQC).

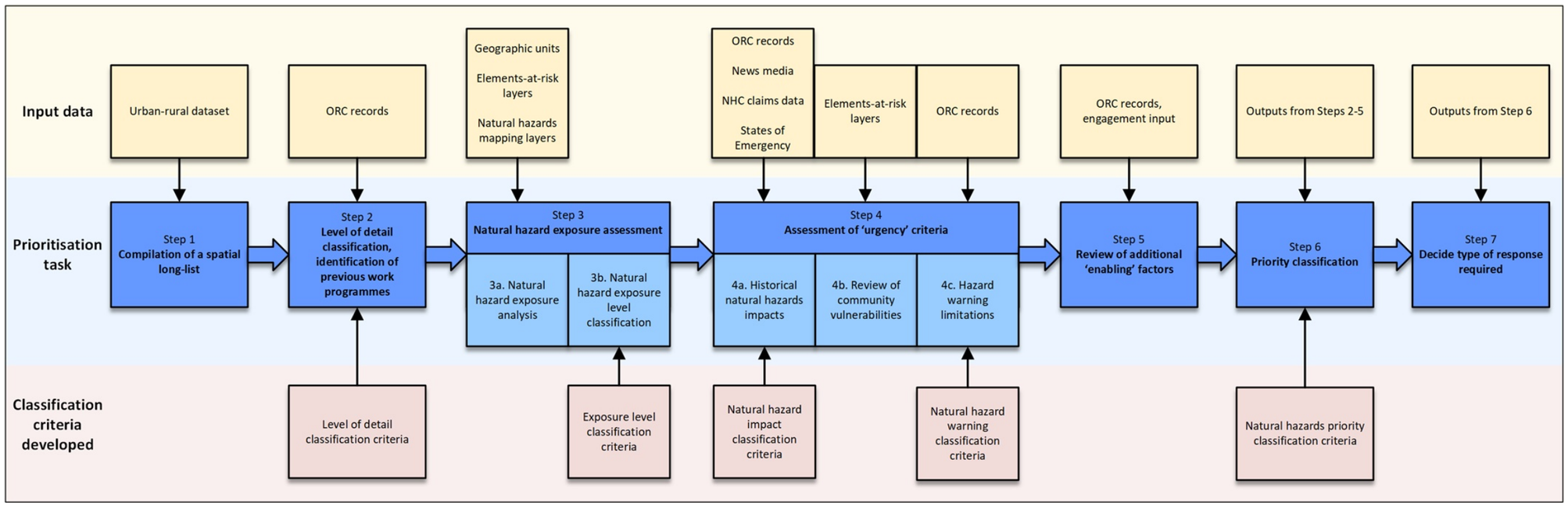

Figure 2: Flow chart showing overall workflow, key steps and input datasets used for natural hazards prioritisation.

NATURAL HAZARD PRIORITY CLASSIFICATION

[19] The natural hazards prioritisation method defines three priority groupings (lower, medium and higher priority) and five priority sub-classes (H1, M1-M3, L1-L2), based on review of three primary classification factors;

a. Level of natural hazard exposure,
b. History of natural hazard impacts, and
c. Whether any hazard management or adaptation work programme has already been completed.

[20] The priority classes defined are shown graphically as a prioritisation approach in Figure 3. These criteria were used only as a starting point for priority classification, and some judgment has been applied based on review of all knowledge of a particular location.

[21] This prioritisation approach and criteria are intended to assist with identification of locations where a new hazard management or adaptation work programme may be required. This assessment is aiming to identify where else a new natural hazards work programme is most needed, beyond the current or in-progress natural hazard management or adaptation work programs in the region; i.e. where are the locations of currently less-managed, poorly-known, natural hazard risks, which have higher exposure and are anticipated to again impact these communities in future?

[22] This approach therefore classifies as a relatively lower priority those locations which have already had significant investment in improving hazard risk understanding and in hazard management or adaptation planning (e.g. Taieri Plains, Roxburgh, Lindsay Creek, Glenorchy). In these locations, the natural hazard risks are generally clearly identified and better understood, and the work programmes are more well-established.

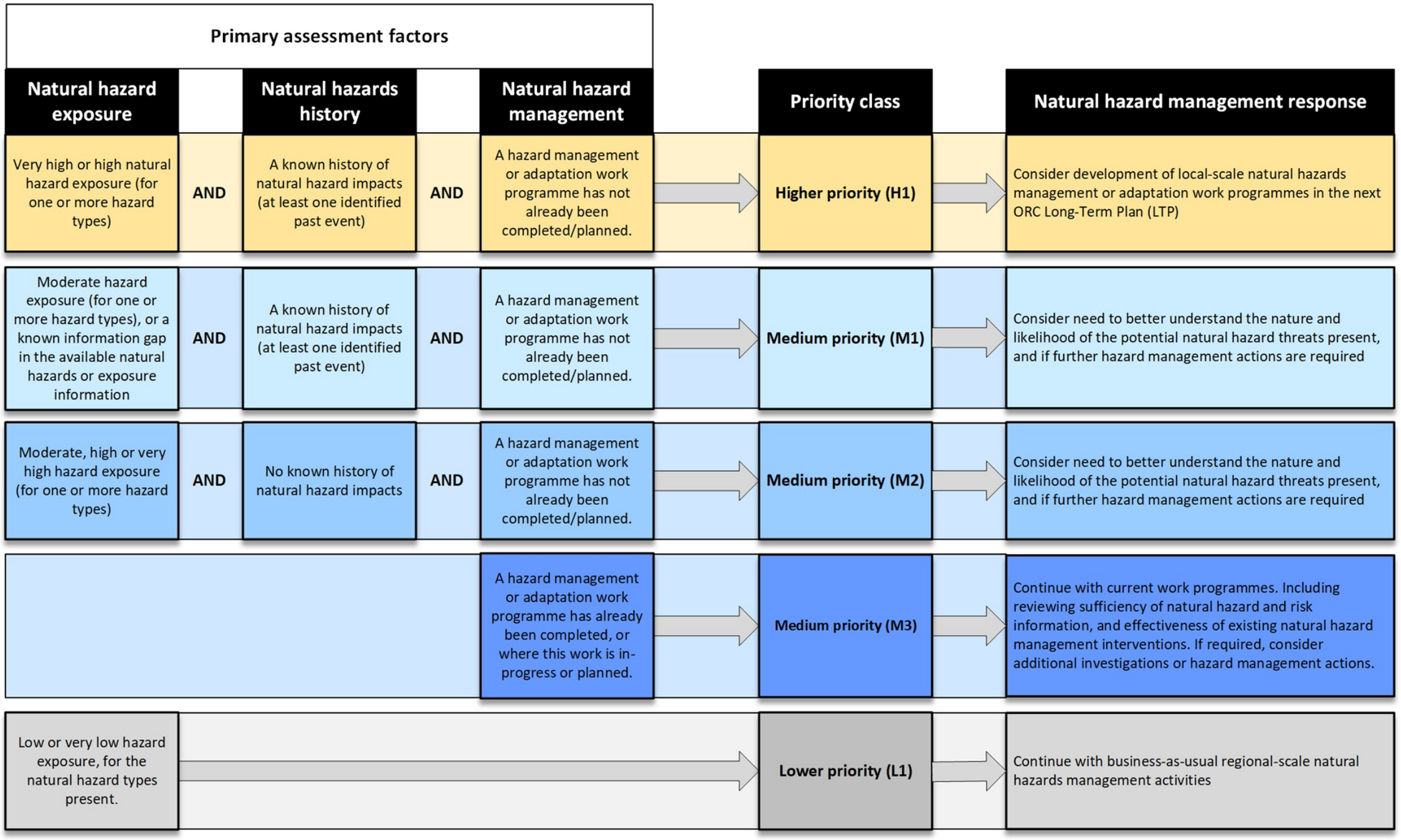

Figure 3: Definition criteria and process for natural hazards priority classification, and the type of response recommended for each priority class.

[23] For locations identified as candidates for classification as high priority, all relevant context information should be compiled to build a strong case explaining the rationale why the location is high priority for future work to develop a natural hazard management or adaptation work programme. For example, the reasoning summarised in Appendix 2 for each of the higher priority locations identified.

[24] Assessment of the relative ranking between locations in the higher priority class will depend on review and evaluation of all relevant factors and context, these will include:

a. The type, scale, and characteristics and likelihood of natural hazards exposures, with consideration of;
   - The potential for multi-hazard impacts, or cascading natural hazard events,
   - Anticipated timing of future natural hazards exposure (e.g. for events driven by sea level rise),
   - The confidence/uncertainty and level of detail in the natural hazards information supporting assessments of natural hazard exposure.

b. The type, scale, severity and frequency of the known previous natural hazard event impacts, and information on how they directly impacted the affected community, and any wider or indirect impacts caused by these events.

c. The secondary assessment factors assessed;
   - Exposure of community vulnerabilities, such as schools or rest homes.
   - Consideration of 'enabling factors' such as potential for opportunities for collaboration (e.g. with territorial authorities), or to inform land-use planning processes.

NATURAL HAZARD MANAGEMENT RESPONSES

[25] The generalised response recommended for each priority class is summarised in the paragraphs below and shown in Figure 3. These recommended approaches help inform the development of a location-specific workplan . These responses are further explained in the prioritisation methods report (Appendix 1).

Higher priority locations

[26] Higher priority locations are recommended for consideration as locations for development of local-scale natural hazards management or adaptation work programmes during the development of the next ORC Long-Term Plan (LTP) for 2027-2037.

[27] The work programme activities required for a particular location should be tailored to the natural hazard riskscape and community context, and can be framed around the key activities in development and implementation of an adaptation or hazard management work programme shown in Table 1.

[28] Although the justification for the selection of a location as higher priority may be based on risks from a particular natural hazard type, a hazard management or adaptation programme should consider the full hazardscape of all natural hazard types and natural processes which may impact the location.

Table 2: Overview of objectives and key activities in development and implementation of an adaptation or natural hazard management work programme.[8]

Step	Objective	Key activities required
1. What is happening?	**Develop understanding of the natural hazards context**	Natural hazards modelling and hazard assessments to understand; • What are the main natural hazards processes or events which may occur in this location • How may they change in the future. • What do hazards events look like for various magnitudes. • How might hazard events/processes interact
2. What matters most?	**Establish community values and objectives, and assess vulnerability and risk**	Activities to understand; • Community context, values and objectives, and how these might be impacted by natural hazard events • Exposure and vulnerability, and what event consequences may look like, including social and economic impacts. • Assessments to characterise and assess natural hazard risk levels
3. What can we do?	**Identify and evaluate hazard mitigation or adaptation approaches**	Assessments which may include; • Identification of a long-list of all potential hazard management or adaptation approaches (across the full spectrum of response actions, e.g. PARA), and make a preliminary evaluation of their effectiveness and viability. • Selection of a smaller subset of approaches for further evaluation and feasibility assessments.
4. Make it happen	**Develop and implement plans**	Actions to; • Decide the most suitable portfolio of actions/interventions, and their timeframes/decision-points for implementation. • Develop and action an implementation plan, including detail of responsibilities, funding and timeframes.
5. How is it working?	**Review and adjustment**	Ongoing actions to; • Track progress towards implementation, and review and make updates as required

Medium priority locations (priority class M1 and M2)

[29] For locations with an M1 and M2 priority class, the development of a comprehensive natural hazards management or adaptation work programme is not necessarily required. However, further natural hazard investigation may be required to better understand the nature and likelihood of the potential natural hazard threats present, and determine if these are plausible natural hazard risks which will require management

[8] These steps are based on the MfE (2024) coastal hazards and climate change guidance, and have been used in the development of several ORC natural hazards adaptation work programmes (e.g. South Dunedin, Clutha Delta, Head of Lake Whakatipu).

actions to reduce risk levels. These investigations will be considered in the ORC Long-Term Plan (LTP) for 2027-2037.

Medium priority locations (priority class M3)

[30] For locations with an M3 priority class, a substantial amount of natural hazard management or adaptation has generally already been undertaken, and include many of the larger-scale and higher-profile natural hazards risks in the region. For these locations, the key actions which may be required are to;

- Continue with implementation of existing natural hazard management or adaptation work programmes, such as maintenance of flood protection infrastructure, civil defence preparedness and response planning, and integration of natural hazards considerations into land use planning frameworks.
- Review the effectiveness of existing natural hazard management interventions and determine if additional natural hazard mitigation is required beyond the scope of the completed or in-progress work programme.
- Identify any information gaps which should be addressed, and carry out further assessments to improve natural hazards and risk understanding, as required.

Lower priority locations (priority class L1)

[31] For locations in the lower-priority class, no new hazards management activities are recommended, but ORC should continue with their business-as-usual regional-scale natural hazards management activities, such as;

- Environmental monitoring for rainfall and river flows.
- Collaboration with Emergency Management Otago for communication of weather forecasting information, natural hazards preparedness and response advice.
- Maintaining and making updates to ORC's regional-scale natural hazard mapping datasets.
- Making natural hazards publicly available through the ORC Natural Hazards Portal.
- Responding to public enquiries regarding natural hazards information.

KEY FINDINGS

[32] The spatial long-list for the prioritisation exercise comprises a total of 52 locations, developed from the region's urban centres and rural settlements as defined by Statistics NZ. Each of these long-list locations has been assigned a priority classification following the criteria in Figure 3, and the resulting classifications are shown in Table 3 and Figures 4 and 5.

[33] Nine locations are identified as 'higher priority' and therefore recommended for consideration in the next ORC Long-Term Plan (LTP 2027-2037) for development of local-scale natural hazards management or adaptation work programmes.

Table 3: The 52 long-list locations classified by priority for flooding, coastal and debris flow hazards. Dunedin City landslide hazards are also identified as a high priority, but for a collective grouping of long-list locations in the city area (see Table 4).

Priority class	Central Otago (11)	Clutha (9)	Dunedin City (15)	Queenstown Lakes (10)	Waitaki (7)
Higher	Omakau	Lawrence Pounawea	Harwood and Otakou-Harington Point Karitane Purakaunui Waikouaiti Waitati-Doctors Point	-	-
Medium (M1 or M2)	Clyde Cromwell and Bannockburn Ettrick Naseby Millers Flat Pisa Moorings	Kaka Point Owaka Taieri Mouth	Aramoana Brighton Dunedin (Kaikorai) Dunedin (Peninsula) Dunedin (West Harbour) Warrington	Arrowtown and Millbrook Hawea Flat Lake Hawea Luggate	Hampden Kakanui Maheno
Medium (M3)	Alexandra Roxburgh	Clutha Delta Milton	Dunedin (Leith) Dunedin (South Dunedin) Middlemarch Taieri Plains	Glenorchy Kingston Queenstown (Central) Queenstown (Frankton) Queenstown (Remarkables) Wanaka	Moeraki Oamaru Palmerston
Lower	Lake Roxburgh Village Ranfurly	Clinton Tapanui	-	-	Herbert

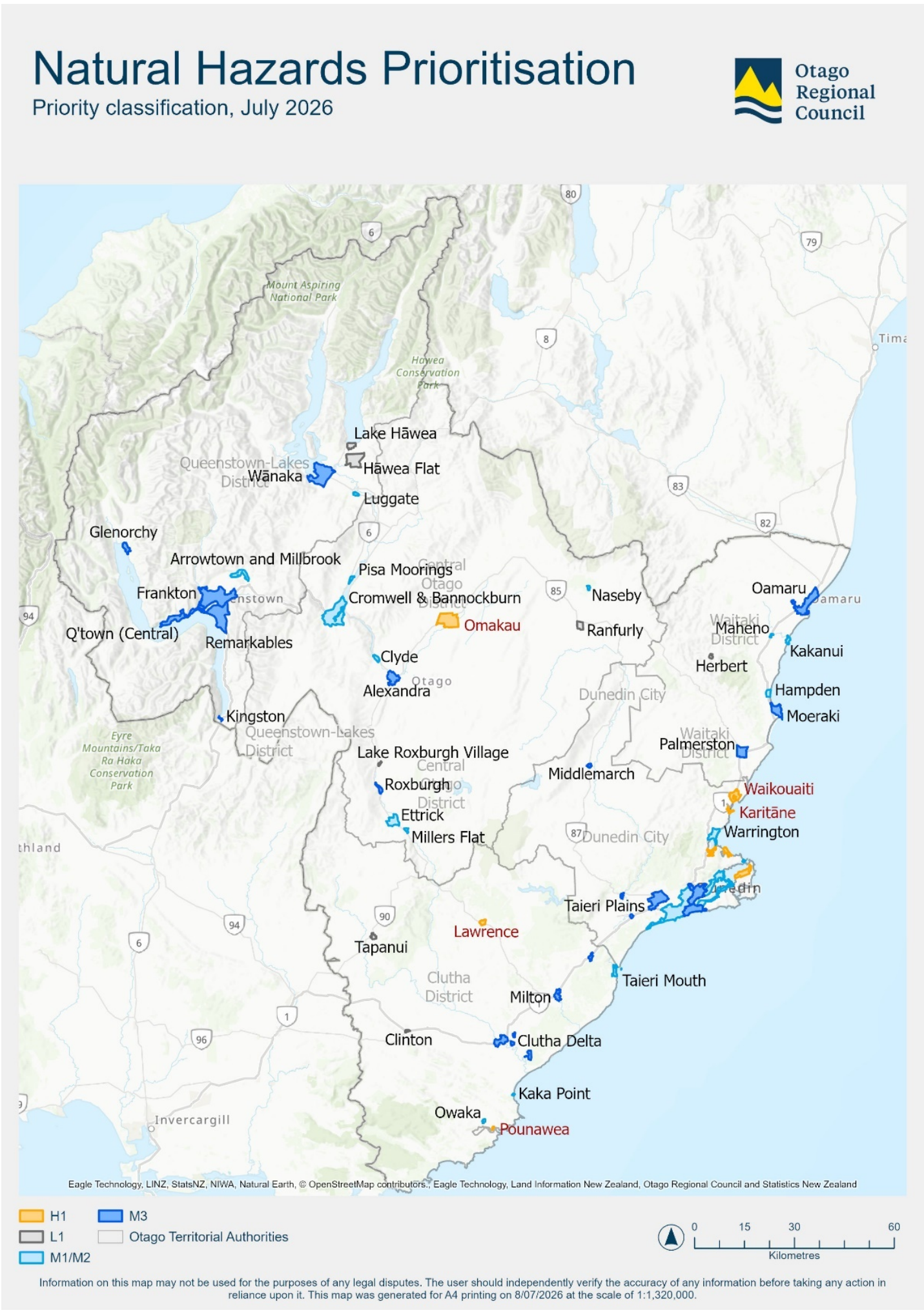

Figure 4: The 52 long-list locations classified by priority for flooding, coastal and debris flow hazards. Locations in the wider Dunedin city area are labelled in Figure 5. Dunedin City landslide hazards are also identified as a higher priority, but for a collective grouping of long-list locations in the city area (see Table 4).

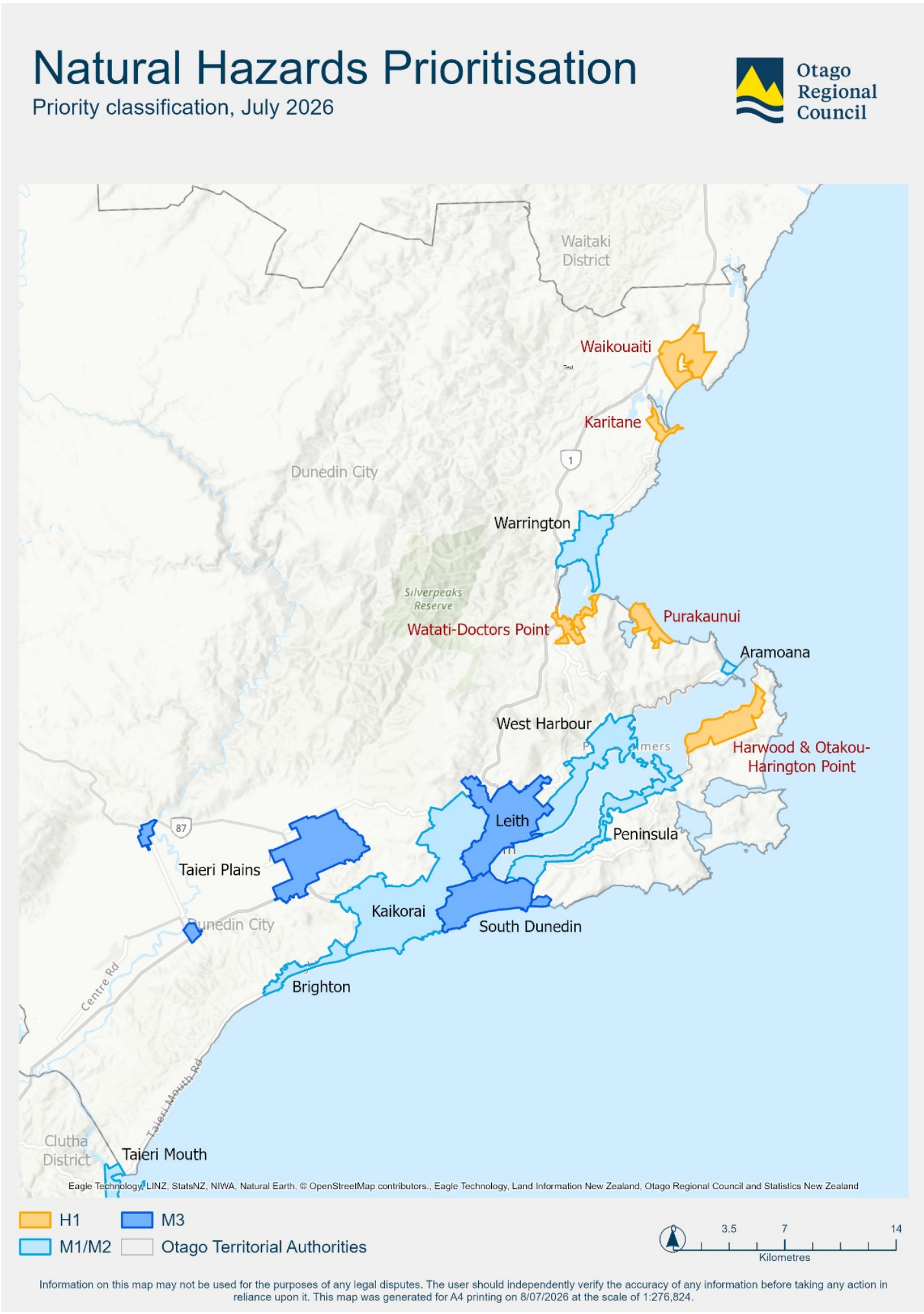

Figure 5: The long-list locations in the wider Dunedin City area, classified by priority for flooding, coastal and debris flow hazards. Dunedin City landslide hazards are also identified as a high priority, but for a collective grouping of long-list locations in the city area (see Table 4).

SUMMARY OF HIGHER PRIORITY LOCATIONS

[34] The nine higher priority natural hazards identified for inclusion in the 2027-2037 LTP are listed below. The relative priority ranking is not implied by the order in which they are

listed here. A brief summary of the reasoning for identification of these locations and natural hazards as higher priority is included as Appendix 2.

Table 4: The nine higher priority natural hazards identified for inclusion in the 2027-2037 LTP.

Primary natural hazard	District	Long-list location name
Karitane flooding hazard	Dunedin City	Karitane
Lawrence flooding hazard	Clutha	Lawrence
Long Beach flooding hazard	Dunedin City	Purakaunui
Ophir and Omakau flooding hazard	Central Otago	Omakau
Waikouaiti flooding hazard	Dunedin City	Waikouaiti
Waitati flooding hazard	Dunedin City	Waitati-Doctors Point
Harwood coastal inundation hazard	Dunedin City	Harwood and Otakou-Harington Point
Pounawea coastal inundation hazard	Clutha	Pounawea
Dunedin City landslide hazards	Dunedin City	Aramoana Brighton Dunedin (Kaikorai) Dunedin (Leith) Dunedin (Peninsula) Dunedin (South Dunedin) Dunedin (West Harbour) Harwood and Otakou-Harington Point

EXISTING NATURAL HAZARD MANAGEMENT AND ADAPTATION WORK PROGRAMMES

[35] ORC has completed extensive natural hazards investigation and management activities over the last 20+ years. Despite the absence of a regional-scale prioritisation framework, these activities have generally focused on locations of larger-scale natural hazards exposure and more frequent or severe event impacts – in effect an informal application of the primary assessment factors defined for this prioritisation approach (Figure 3).

[36] The prioritisation approach defined in this work programme adds a more robust framework for assessment of relative priorities across the region, enabling differentiation between locations where the variations in hazard risk characteristics are more subtle, and the region-wide scope helps to ensure no locations are overlooked.

[37] Review of the previous or in-progress location-specific natural hazard management or adaptation work programmes in the region is a key dataset in this prioritisation exercise. Table 5 lists the known location-specific natural hazard management, adaptation, or flood protection work programmes which have been led by ORC or an Otago territorial authority, and illustrates the large volume of previous natural hazards activities completed by or supported by ORC.

[38] These locations have been classified as medium (M3) priority, and include many of the region's larger-scale natural hazards impacts and higher exposures to natural hazards, for example the Taieri Plains, South Dunedin, the Water of Leith and Lindsay Creek catchments, Milton and the Tokomairiro Plain, and the Clutha Delta.

[39] In these locations, actions recommended include to review the effectiveness of existing natural hazard management interventions, identify any information gaps which should be addressed, and (if needed) carry out further assessments to improve natural hazards and risk understanding, or implementation of additional hazard management interventions.

Table 5: Natural hazard management, adaptation or flood protection work programmes led by ORC or an Otago territorial authority.

Location	Programme status	Reference
Hazard management or adaptation (ORC-led)		
Milton and Tokomairiro Plain (Milton 2060)	Completed	ORC and CDC, 2012. Milton 2060: Flood Risk Management Strategy for Milton and the Tokomairiro Plain
Lake Wanaka community	Completed	ORC and QLDC, 2006. Learning to Live with Flooding: A Flood Risk Management Strategy for the communities of Lakes Wakatipu and Wanaka
Lake Wakatipu communities (Queenstown, Kingston and Glenorchy)	Completed	ORC and QLDC, 2006. Learning to Live with Flooding: A Flood Risk Management Strategy for the communities of Lakes Wakatipu and Wanaka
Head of Lake Whakatipu	Completed	ORC, 2025. Head of Lake Whakatipu Natural Hazards Adaptation Strategy
Teviot Valley, including Roxburgh	Ongoing	Debris flood hazard in Roxburgh
Clutha Delta, including Balclutha and Kaitangata	Ongoing	Clutha Delta Natural Hazards Adaptation
South Dunedin	Ongoing	South Dunedin Future
Middlemarch	Ongoing	Middlemarch flood risks and interventions
Oamaru (Muddy Creek)	Ongoing	Muddy Creek Flood Study
Palmerston	Ongoing	Palmerston flood hazard investigation
Lindsay Creek	Ongoing	ORC, 2024. North East Valley Flood Risk Mitigation
TA-led hazard management, or land-use plan with a natural hazards consideration		
Gorge Road (Brewery Creek and Reavers Lane), Queenstown	Completed	Brewery Creek and Reavers Lane natural hazards (QLDC)
Southern Corridor (Jacks Point area)	Completed	Te Tapuae Southern Corridor Structure Plan (QLDC)
Frankton	Ongoing	Frankton Structure Plan (QLDC)
Wanaka	Ongoing	Wanaka Structure Plan (QLDC)
Moeraki	Ongoing	Moeraki land instability overlay and geotechnical rules in the Natural Hazards chapter of the draft district plan (WDC)
ORC Flood Protection and Drainage Schemes		
Alexandra	Ongoing	Alexandra Flood Protection Scheme
Clutha Delta	Ongoing	Lower Clutha Flood Protection and Drainage Scheme

Water of Leith	Ongoing	Leith Flood Protection Scheme
Taieri Plain	Ongoing	Lower Taieri Flood Protection Scheme, East Taieri Drainage Scheme and West Taieri Drainage Scheme
Tokomairiro Plain	Ongoing	Tokomairiro Drainage Scheme
West Wanaka	Ongoing	Stoney Creek Flood Protection Scheme
Waitaki Plain	Ongoing	Lower Waitaki River Control Scheme

OPTIONS

[40] **Option 1:** Endorse the use of these natural hazards prioritisation findings as a basis for ORC Natural Hazards planning for the 2027-2037 LTP. This option supports development of a robust and transparent Natural Hazards work programme in the proposed LTP.

[41] **Option 2:** Do not endorse the use of these natural hazards prioritisation findings as a basis for ORC Natural Hazards planning for the 2027-2037 LTP. This option may result in a more ad-hoc and less transparent process for development of the Natural Hazards work programme in the proposed LTP.

SUMMARY OF CONSIDERATIONS

COMMUNITY OUTCOMES

Resilience

Otago builds resilience in a way that contributes to community and environmental wellbeing through planned and well-managed responses to shocks and stresses, including natural hazards.

ALIGNMENT WITH CENTRAL GOVERNMENT LEGISLATION

This work is consistent with relevant central government policy and direction. Specifically, it aligns with the current resource management reform programmes, which seeks to meet the objective of "Adapting to the effects of climate change and reducing risks from natural hazards", and the proposed Planning Act has a goal to "Keep communities safe from intolerable risks and effects of natural hazards and climate change".[9]

Natural hazards are a mandatory matter to be included in regional spatial planning under the proposed Planning Act. The Planning Bill states that the content of regional spatial plans must include priority locations for adaptation plans prepared under the Climate Change Response Act 2002.[10] The input datasets and findings of this current prioritisation programme are expected to be a valuable input towards the natural hazards requirements of the regional spatial plan.

This work also aligns with the Emergency Management Bill which was introduced in 2025 to replace the Civil Defence Emergency Management Act 2002 (CDEM Act). Under the bill, the current Civil Defence Emergency Management Groups will continue in existence as Emergency Management Committees. The Emergency Management Committee will have the functions including to do the following in relation to hazards and risks within its area:

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[9] Report from the Expert Advisory Group on Resource Management Reform. Blueprint for resource management reform: A better planning and resource management system 2025.

[10] Planning Bill: 3(1)(f).

a. identify and assess those hazards and risks:
b. manage those hazards and risks:
c. identify and implement cost-effective risk reduction:
d. consult and communicate with the communities within the area about those hazards and risks:

The findings of this current prioritisation programme are expected to be a potential input towards the undertaking of these Emergency Management functions, for example in the identification of 'disproportionately affected communities' required by the bill.

ALIGNMENT WITH ORC INTERNAL POLICY
There is no specific ORC policy that is directly applicable to this work.

FINANCIAL CONSIDERATIONS
The budget for this work was approved through the 2024-2034 Long-Term Plan and comes from the Climate Change and Resilience activity budget.

LEGAL/COMPLIANCE RISK
There is insignificant/minor risk that decisions arising from this report could expose Council to litigation, regulatory non-compliance, or breach of policy/legislation.

REPUTATIONAL RISK
There is insignificant/minor risk that decisions arising from this report could adversely impact Council's reputation or community trust.

CLIMATE RESILIENCE
The influence of climate change is a key factor to be considered in assessment of natural hazard risks, and in development of natural hazards management or adaptation work programmes. Climate change is a factor considered in natural hazards prioritisation.

CARBON EMISSIONS
The implications of this work on organisational or regional greenhouse gas emissions has not been assessed.

HE MAHI RAU RIKA: SIGNIFICANCE, ENGAGEMENT AND MĀORI PARTICIPATION POLICY
This work is of LOW significance as assessed against He Mahi Rau Rika.

ENGAGEMENT WITH MANA WHENUA
There has been no engagement with mana whenua or Māori specifically for this work.

STAKEHOLDER ENGAGEMENT
ORC has engaged with the Otago territorial authorities to provide updates on the natural hazards exposure assessment completed in 2025, and to highlight that the next step in this programme was completion of a natural hazards prioritisation.

Preliminary findings of the natural hazards prioritisation have been presented to the Emergency Management Otago team in June 2026.

Engagement on the findings of the natural hazards prioritisation programme, and their application in planning for ORC's future natural hazards work programmes, will take place through the development and consultation process of the 2027-2037 LTP. Key stakeholders are

expected to include territorial authorities and Emergency Management Otago. Engagement may also take place with the Otago CE group and mayors.

Engagement will include discussion of potential collaboration opportunities with stakeholders with the intention that they also have opportunity to consider inclusion of related projects in their own LTP preparation processes.

COMMUNICATIONS

The decision will be communicated with the relevant audiences, in particular key stakeholders and the public.

Natural hazards prioritisation findings are presented only in this paper at this stage. When the natural hazards prioritisation findings have been documented in more detail as a technical report, it is expected that this will be made public through the ORC Natural Hazards Portal or another ORC webpage.

There may be value in making the prioritisation findings and supporting datasets more easily accessible, rather than only as a technical report format. ORC will consider possible additional approaches for communicating this information, for example plain-language summary material, use of an ArcGIS StoryMap format, or developing an expanded version of the current Natural Hazards Exposure website[11] and online map viewer.[12]

NEXT STEPS

[42] Document these natural hazards prioritisation findings in more detail as a technical report, and consider additional approaches for communication of these findings.

[43] Continue development of the Natural Hazards work programme of the 2027-2037 LTP, including proposed location-specific work programmes for all locations identified as higher priority, and engage on this proposed work programme with key stakeholders.

[44] Commence work programme activities for targeted high priority locations in the 2026/2027 financial year, and continue these into the period of the 2027-2037 LTP.

ATTACHMENTS

1. Otago Region Natural Hazards Prioritisation Method [**9.4.1** - 48 pages]
2. Summary Information for Higher Priorities [**9.4.2** - 6 pages]

[11] Otago's exposure to natural hazards
[12] Otago Region Natural Hazards Exposure Analysis Map Viewer

Otago Regional Council

Otago Region Natural Hazards Prioritisation Method

Report title

Otago Region Natural Hazards Prioritisation Method

Issue date

July 2026

Prepared by

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1 Introduction

There are a large number of locations in the Otago region where people, property and infrastructure may be potentially exposed to natural hazard impact from a diverse range of natural hazards, including flooding, slope stability, seismic and coastal hazard events.

This report presents the method used for an Otago Regional Council (ORC) natural hazards prioritisation, completed as part of an ORC programme to work towards a regional-scale, spatial understanding of Otago's exposure to natural hazards. The prioritisation assessments build on a region-wide analysis of natural hazards exposure completed in 2025 (van Woerden and Welsh), and the extensive natural hazard mapping and hazard assessments completed by ORC over the last 25+ years.

1.1 Background

Since the 2021/2022 financial year, the ORC Natural Hazards team have been progressing work on a regional-scale natural hazards risk assessment programme. The programme aims to work towards a comprehensive, regional-scale, spatial understanding of Otago's natural hazards and risks, with key tasks as shown in Figure 1.1. The background to the work programme is outlined in a paper presented to the ORC Safety and Resilience committee in May 2023 (van Woerden, Welsh and Payan 2023).

There have been two key programme deliverables previously completed;

a. In November 2024, ORC presented a proposed approach to natural hazards prioritisation for the Otago region (van Woerden, Welsh and Payan 2024).
b. In June 2025, ORC completed a region-wide stocktake of natural hazards exposure, which is a valuable information source for use in prioritisation, especially for locations where little other information is available. The exposure analysis was presented as a technical report (van Woerden and Welsh 2025), a summary committee report (van Woerden, Welsh and Payan 2025), and an interactive online map portal.[1]

[1] Otago Region Natural Hazards Exposure Analysis Map Viewer.

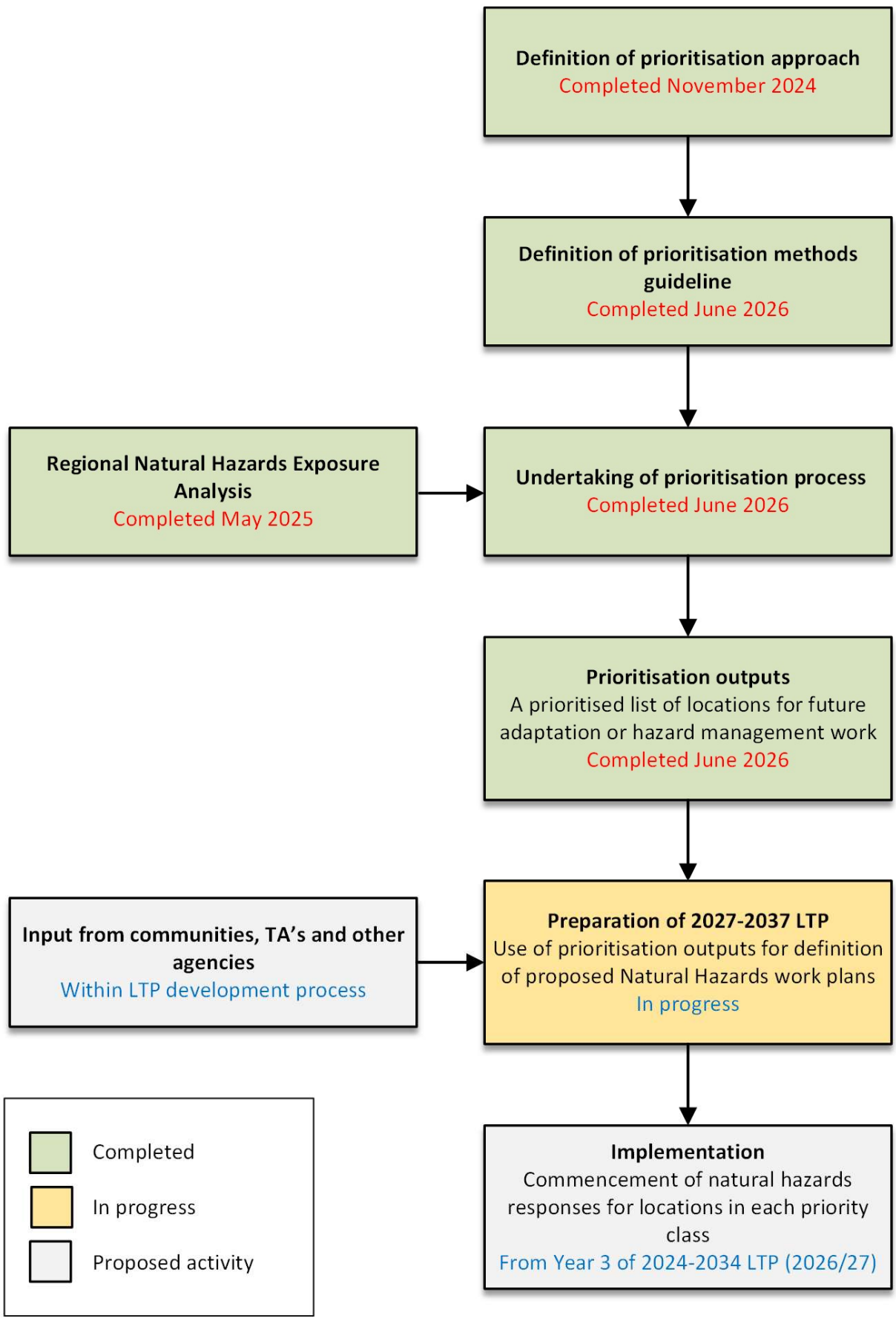

Figure 1.1: Flow chart showing key activities and programme sequencing in the natural hazards risk assessment and prioritisation programme.

This report presents the method developed as a guideline for implementation of the prioritisation approach, which will result in the following outcomes:

a. A priority classification, which identifies project areas which are to be prioritised when developing the work plan for future Natural Hazards activities by ORC, such as development of adaptation or hazard management projects.
b. Information on the approach of the future work activities which may be required for locations within each priority class.

ORC's 2024-2034 Strategic Directions have an aspiration that: '*Otago builds resilience in a way that contributes to community and environmental wellbeing through planned and well-managed responses to shocks and stresses, including natural hazards*.' Under this aspiration is the goal that 'Plans are in place to ensure that the region's most vulnerable communities (geographic and demographic) and ecosystems are resilient in the face of natural hazards.'

The natural hazards prioritisation project is strongly aligned these ORC aspirations and goals by:

- Identifying the communities which are the "most vulnerable", due to their natural hazard risk or exposure characteristics.
- Informing the planning of targeted natural hazards work for those more vulnerable communities through the LTP process, ensuring "plans are in place" to build hazards resilience for those communities.

1.2 Purpose of Natural Hazards Prioritisation

The natural hazard prioritisation information and assessment outputs are primarily intended to be used as a project planning tool for the ORC Natural Hazards team, to assist with allowing ORC to systematically identify and define key projects and allocation of work within the overall Natural Hazards work programme. It is intended to enable consistent and transparent assessments and comparison of relative hazard characteristics across different project locations. A well-defined proactive approach for prioritisation reduces the need for reactive or ad-hoc decision-making.

These outputs from implementation of the prioritisation approach will be a key factor in the development of ORC's Natural Hazards work programme through the Long-term Plan (LTP) process, through providing a guide to the relative priority and type of activities which may be required in the possible projects considered for inclusion.

1.3 Natural Hazards Prioritisation Framework Development

A six-step natural hazards prioritisation framework has been developed by the ORC Natural Hazards team, and presented by van Woerden, Welsh and Payan (2024). The framework outlines at a high level the steps required for natural hazards prioritisation, but provides only summary information on the factors to be considered in each prioritisation step. This report adds further detail to describe the methods used for practical implementation of the prioritisation framework, which remain generally aligned with the approach published in 2024.

The method described in the report has been developed collaboratively by members of the Otago Regional Council Natural Hazards team and improved through valuable discussions with other teams within ORC, and with those working to develop similar frameworks in other regions.

2 Methods

2.1 Introduction

This section presents the natural hazards prioritisation approach developed, describing each step including the reasoning for inclusion, input datasets, analysis completed, and classification schemes applied. Figure 2.1 graphically represents the overall workflow, key steps and input datasets used for natural hazards prioritisation. Section 3 then provides further detail on the limitations associated with each step of the approach.

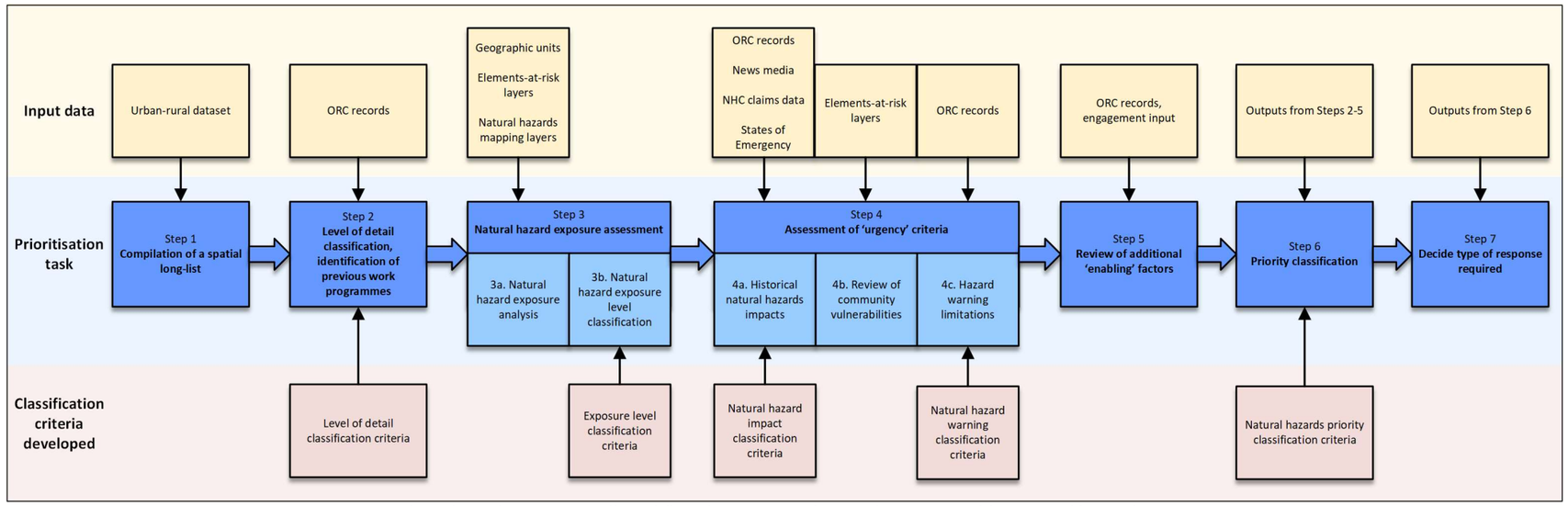

Figure 2.1: Flow chart showing overall workflow, key steps and input datasets used for natural hazards prioritisation.

2.2 Compilation of a Spatial Long-List

The Stats NZ “urban rural” (UR) geography dataset is used as a starting point to identify and spatially define all population centers in the region. These defined boundaries form the basis of the spatial long-list used for prioritisation, and provide a systematic, repeatable basis for identifying the long-list locations. This UR dataset is updated annually by Statistics New Zealand, based on inspection of aerial imagery, district plan maps designations, and other available information. The 2026 assessment has used the most recent version of the dataset, last updated August 2025.

55 localities in the Otago region are identified as being either an urban area or rural settlement (Table 2.1). These urban area and rural settlement boundaries are used as a starting point to define the geographic units for natural hazard exposure screening.

Table 2.1: The 55 urban areas and rural settlements in Otago whose mapped boundaries are used as the basis for development of the spatial long-list.

	Waitaki (7 locations)	***Dunedin City (14)***	***Clutha (13)***	***Central (12)***	***Queenstown Lakes (9)***
Major Urban Area (>100,000 residents)	-	Dunedin	-	-	-
Large Urban Area (30,000- 99,999 residents)	-	-	-	-	-
Medium Urban Area (10,000-29,999 residents)	Oamaru	Mosgiel	-	-	Queenstown Wanaka
Small Urban Area (1,000- 9,999 residents)	-	Brighton Waikouaiti	Balclutha Milton	Alexandra Clyde Cromwell	Arrowtown Lake Hawea
Rural Settlement	Hampden Herbert Kakanui Maheno Moeraki Palmerston	Allanton Aramoana Harwood Karitane Middlemarch Outram Otakou-Harington Point Purakaunui Waitati-Doctors Point Warrington	Benhar Clinton Kaitangata Kaka Point Lawrence Owaka Pounawea Stirling Taieri Mouth Tapanui Waihola	Bannockburn Ettrick Lake Roxburgh Village Millers Flat Naseby Omakau Pisa Moorings Ranfurly Roxburgh	Glenorchy Hawea Flat Kingston Luggate Millbrook

The spatial long-list locations have been developed from the Stats NZ UR locations, with several modifications, as described below.

In several cases, a group of urban areas and rural settlements have been identified collectively as a single long-list location, where these are either:

a. Within the same geographically defined area exposed to a similar hazard setting, for example the Taieri Plains (Mosgiel, Outram, Allanton and Waihola) and the Clutha Delta (Balclutha, Kaitangata, Stirling and Benhar), or
b. Distinct but adjacent townships/settlements sharing a common boundary in the Stats NZ UR dataset, for example: Arrowtown and Millbrook, Cromwell and Bannockburn, and Harwood and Ōtākou-Harington Point.

The larger urban areas in the region (Dunedin and Queenstown) cover a broad spatial extent, have a large population and contain a diverse geographic and natural hazard landscape. For this prioritisation assessment, these urban area boundaries have been subdivided into smaller sub-areas to provide increased spatial resolution and better consideration of areas of distinct natural hazard characteristics. The Mosgiel (~15,000) and Oamaru (~14,000) urban areas also have relatively larger populations, but with a less diverse hazardscape; these urban areas have each been treated as a single area rather than being subdivided.

Dunedin City has been split into five sub-areas, divided along community area (SA2) boundaries:

- Kaikorai catchment,
- Leith catchment,
- Peninsula,
- South Dunedin, and
- West harbour.

Queenstown has been split into three sub-areas, divided along community area (SA2) boundaries:

- Queenstown central,
- Frankton, and
- Remarkables.

Following the consolidation of locations which can be assessed collectively, and addition of Dunedin city and Queenstown sub-areas, a total of 52 locations are identified as the long-list for prioritisation, these are listed in Table 2.2 and shown in Figure 2.2.

For compilation of other information required for the following steps of the prioritisation process (such as completion of previous hazard management or adaptation activities, historical hazards impacts, and hazard warning ability) these location boundaries are not applied strictly, but rather used as an approach to identify and name the general locality. These steps have considered the associated surrounding area (i.e. both urban and rural) with similar natural hazards and community characteristics.

Table 2.2: The 52 locations in Otago identified as the spatial long-list for prioritisation.

Waitaki (7 locations)	***Dunedin City (15)***	***Clutha (9)***	***Central (11)***	***Queenstown Lakes (10)***
Hampden	Aramoana	Clinton	Alexandra	Arrowtown and Millbrook
Herbert	Brighton	Clutha Delta (Balclutha, Kaitangata, Stirling, Benhar)	Clyde	Glenorchy
Kakanui	Dunedin (Kaikorai)	Kaka Point	Cromwell and Bannockburn	Hawea Flat
Maheno	Dunedin (Leith)	Lawrence	Ettrick	Kingston
Moeraki	Dunedin (Peninsula)	Milton	Lake Roxburgh Village	Lake Hawea
Oamaru	Dunedin (South Dunedin)	Owaka	Millers Flat	Luggate
Palmerston	Dunedin (West harbour)	Pounawea	Naseby	Queenstown (Central)
	Harwood and Otakou-Harington Point	Taieri Mouth	Omakau	Queenstown (Frankton)
	Taieri Plains (Mosgiel, Outram, Allanton, Waihola[2])	Tapanui	Pisa Moorings	Queenstown (Remarkables)
	Waikouaiti		Ranfurly	Wanaka
	Waitati-Doctors Point		Roxburgh	
	Warrington			
	Karitane			
	Middlemarch			
	Purakaunui			

[2] Waihola is in the Clutha District.

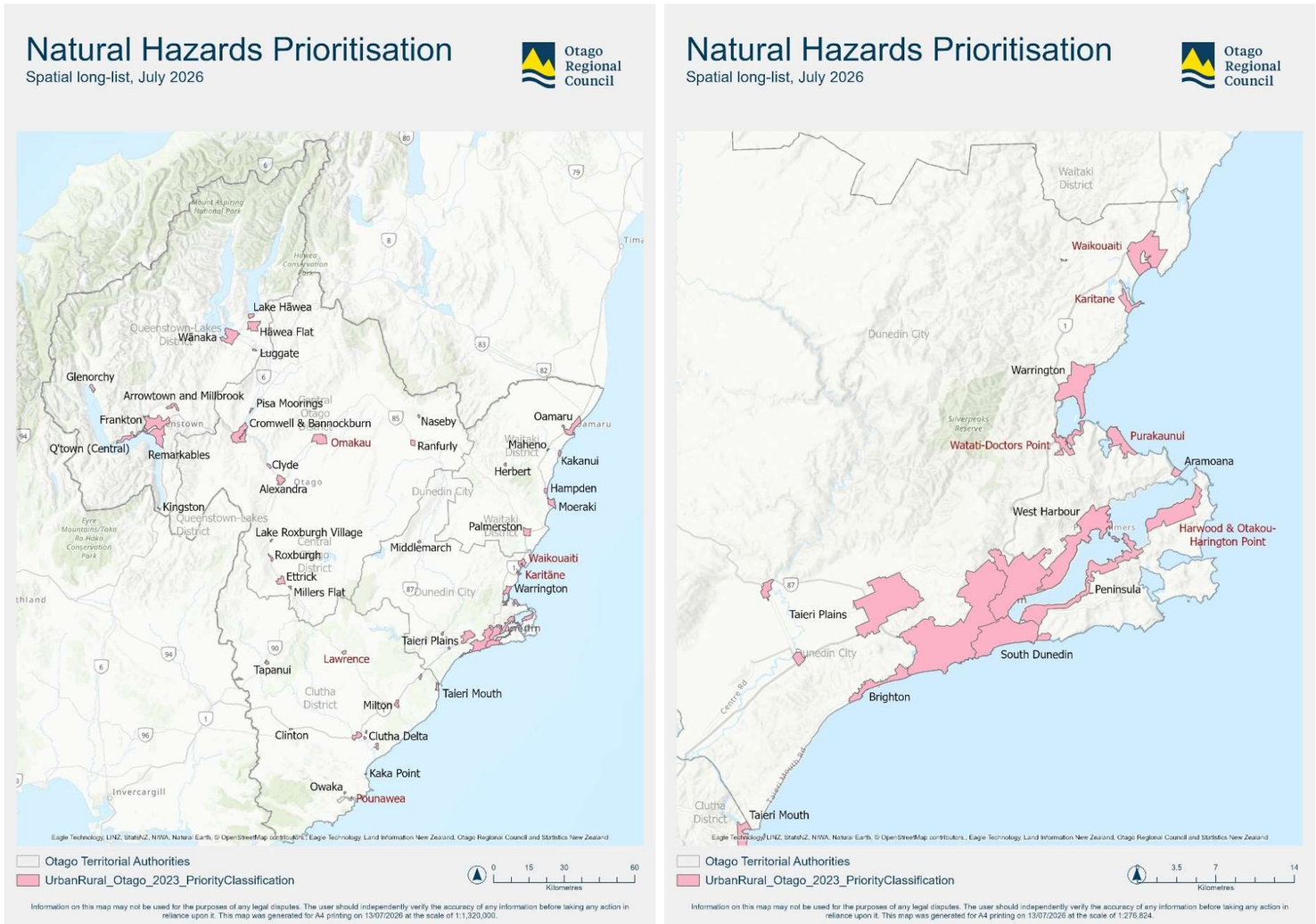

Figure 2.2: The 52 locations in Otago identified as the spatial long-list for prioritisation.

2.3 Level of detail classification

The level of current natural hazards understanding or completion of previous natural hazards assessments, management or adaptation activities for a location are key considerations in this prioritisation, because the purpose of prioritisation is to identify candidate locations for the development of new work programmes of this type.

The 'level of detail' has been summarised for each long-list location through two approaches:

a. Identification of previous or current natural hazards management or adaptation programmes.
b. A level of detail classification to provide an initial indication of the state of natural hazards understanding for each location.

2.3.1 Natural hazards adaptation and natural hazards management programmes

Completion of natural hazards adaptation or natural hazards management work programmes is used as a primary assessment factor in prioritisation. To assist this assessment, known location-specific work programmes in Otago with a natural hazards focus have been identified, including;

- ORC-led adaptation and hazard management work programmes,
- ORC flood protection and drainage schemes, and
- TA-led hazard management or landuse planning programmes which included a strong focus on natural hazard and risk assessment, and often where ORC collaborated as a project partner.

These locations include both those where work programmes have been previously completed, and those which are currently in-progress and ongoing.

This step identifies the location of ORC's previous focus and investment in natural hazard management or adaptation, including both adaptation strategy development and construction of physical hazard mitigation infrastructure (i.e. flood protection schemes). It does not imply that no further hazard management work is required for these locations, as all locations will have some remaining residual risk and further investigations or hazard management activities may be required.

However, further natural hazard assessments or hazard management/adaptation work in these locations is a business-as-usual activity for ORC, and there is not a requirement for initiation of a new natural hazards work programme. For example, these business-as-usual activities could include implementation of hazard mitigation actions identified in the existing adaptation or hazard management strategy, or ongoing work to manage and understand the performance of flood protection schemes.

For locations not identified as being a focus for previous natural hazard management or adaptation activities, it does not mean there is no management of their hazard risks. For example, regional-scale hazard management activities include the promotion of hazard awareness through making natural hazard reports and mapping publicly available, provision of flood monitoring and warning services, and preparedness activities such as support for community response groups.

2.3.2 Level of Detail Classification

The level of detail classification scheme is presented in Table 2.3, and has been applied to each long-list location, for each of the four main natural hazard groupings:

- Flooding hazard (river and lake flooding, floodwater-dominated alluvial fans)
- Slope stability hazards (landslide, rockfall and debris-dominated alluvial fans)
- Seismic hazards (fault rupture, liquefaction)
- Coastal hazards (storm surge, coastal erosion, tsunami)

The key considerations and assumptions in reviewing the level of detail are summarised below:

- The level of detail in natural hazards information may vary across a particular spatial location, for example having higher level of detail for a specific sub-area, but relatively little information for the surrounding area. In this case, the classification is made for the area of greatest exposure or (inferred) highest risk but recognizing there may still be information gaps within that overall location.
- In some locations where detailed hazard modelling has been previously completed, these assessments were completed for consenting processes and ORC does not hold copies of any model output data files to enable any further risk analysis (e.g. for Stoney Creek alluvial fan at Wanaka). Even if detailed hazard assessments have been completed, the level of detail is classified as 'moderate', as the data cannot easily be applied by ORC to further risk analysis.
- In locations where detailed hazard modelling by ORC is in progress and results are not yet finalised or publicly available, we also classify the level of detail as 'moderate'.

For locations exposed to multiple natural hazard types, the hazard type(s) considered (subjectively) to be of most significance for the location (e.g. those which have historically been most frequent or impactful) are identified as the 'primary hazard(s)'. The level of detail for these 'primary' hazard types are those considered most important for assessment of whether further natural hazard assessment work may be required.

Table 2.3: Level of detail classification for natural hazards understanding.

Level of detail for natural hazards information	***Description***	***Example datasets***
n/a (hazard not present)	Hazard not known to occur in this location, based on knowledge of past events, and available hazards mapping information.	
Low	**General knowledge of hazard exposure** Judgement made on the location and magnitude of hazard exposure, based on event observations and/or topographic interpretation, but not modelled or assessed in detail. No event likelihood information available, and therefore hazard mapping does not correspond to an event of a specific likelihood.	Regional-scale flood hazard mapping Regional-scale alluvial fan, landslide and rockfall awareness area mapping

Moderate	**Identified hazard exposure** Moderate understanding of the location and magnitude of hazard exposure, based on knowledge of previous hazard events and understanding of hazard processes. May include qualitative assessment or basic hazard modelling for a range of likelihood scenarios.	Regional-scale storm surge modelling District-scale coastal erosion modelling National-scale flood modelling (NIWA)
High	**Detailed assessment of hazard exposure** Detailed numerical modelling or site-specific investigations representing the location and magnitude of hazard exposure, for a range of likelihood scenarios. Multiple well-documented previous hazard events.	Detailed numerical modelling assessments for flooding, debris flow or liquefaction hazard

2.4 Natural Hazard Exposure Screening

A review of natural hazards exposure for each urban area and settlement is used to provide a consistent comparison of the scale of potential natural hazards impacts for each of these locations.

2.4.1 RiskScape Analysis for Natural Hazard Exposure

The natural hazard exposure analysis approach utilised RiskScape software and the same general approach as that used in ORC's region-wide natural hazard exposure analysis (van Woerden and Welsh 2025). Section 3 and Appendix E of that report provide further description of the exposure assessment methodology.

The analysis process workflow for this current natural hazards exposure assessment is summarised in Figure 2.3. The input datasets (hazards, elements at risk, geographic units) used in exposure analysis, and the exposure classification approach, are described in the sections below.

If new or revised natural hazards datasets become available, or if additional regional-scale element-at-risk datasets are identified, consideration can be given to re-running the exposure analysis.

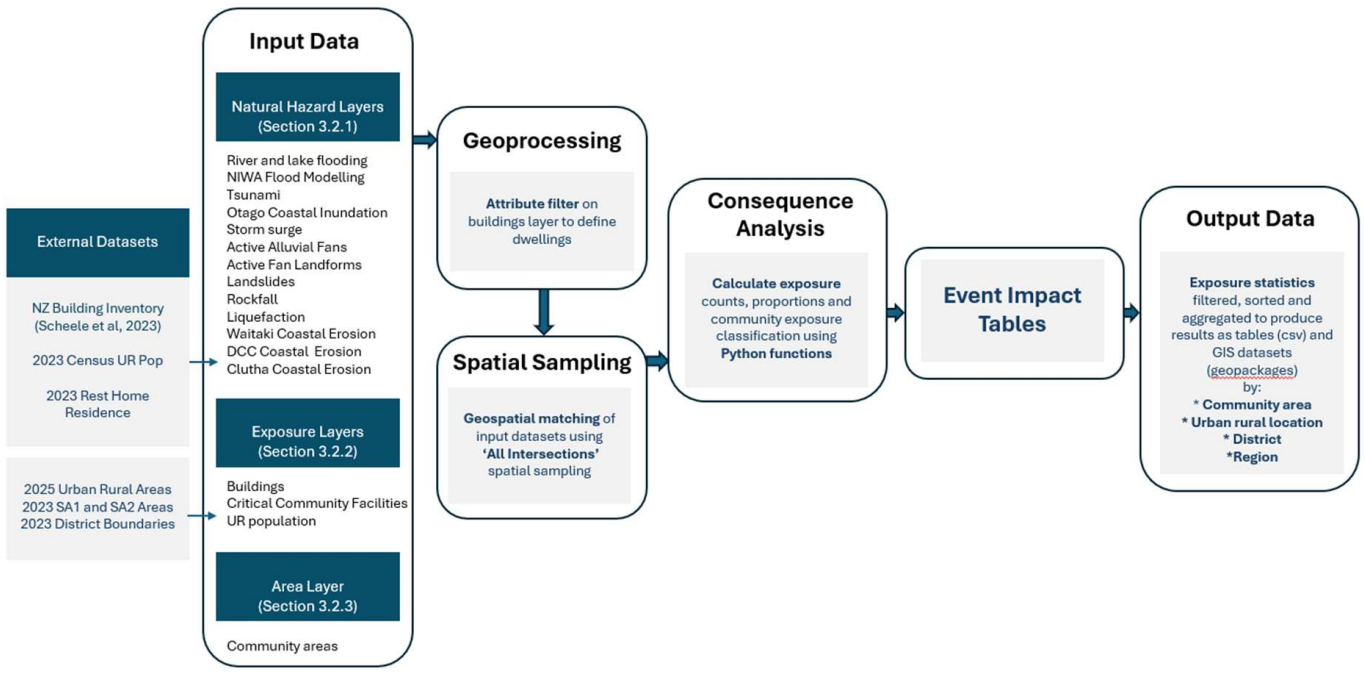

Figure 2.3: Generalised RiskScape model pipeline for the exposure analysis, updated from van Woerden and Welsh (2025).

2.4.1.1 GEOGRAPHIC UNITS

Statistical Area 1 (SA1) and Statistical Area 2 (SA2) geographic areas classified by Statistics New Zealand are used to give a consistent spatial division for this natural hazards exposure analysis. The use of defined geographic units provides a systematic approach to dividing urban areas into smaller sub-areas with comparable population sizes.

The geographic resolution of this exposure analysis is a referred to as the 'community area', defined using the statistical units defined by Statistics New Zealand. These are intended to represent "a 'community of place' where people interact together socially and economically" (Stats NZ, 2022). In urban areas, the 'community area' is represented by the SA2 geographic unit, equivalent to suburbs. Larger urban areas such as Dunedin City (51) or Queenstown (13) contain many community areas within their defined extent. Smaller urban areas or rural settlements are generally represented by a single 'community area', either SA1 or SA2.

2.4.1.2 ELEMENTS AT RISK

The elements-at-risk datasets used in exposure assessment are the same as those utilised in the 2025 Otago natural hazards exposure analysis:

- population,
- buildings, and
- critical community facilities (defined as being medical and emergency services facilities, emergency coordination or operations centres (ECC or EOC)).

For use in assessment of 'community vulnerabilities' as an urgency criterion (Step 4), an exposure screening has been carried out for schools, early childhood education, hospitals and rest homes. This screening identified which urban areas and rural settlements contained these building types within areas of potential natural hazards exposure, and used this as a broad descriptor of vulnerability.

2.4.1.3 NATURAL HAZARD MAPPING

The natural hazards considered in this exposure analysis are those where ORC holds existing spatial mapping datasets. This analysis considers an expanded suite of eleven natural hazards mapping datasets, to provide additional context beyond the 2025 Otago natural hazards exposure analysis (van Woerden and Welsh 2025).

The natural hazard mapping datasets utilised are listed in Table 2.4 and further described in Appendix A. This updated analysis includes the following additional natural hazards datasets:

- Recently developed district-wide datasets available since the 2025 analysis (Dunedin City and Clutha district coastal erosion projections).
- National-scale datasets where these provide additional hazards context and complement ORC data (fluvial/pluvial flooding and coastal inundation).
- Local-scale datasets where more detailed mapping is available for selected locations (alluvial fan landform mapping).

Active faults are not included from the exposure analysis, as fault rupture hazard is more likely to be managed regionally through landuse planning approaches (e.g. Fault Awareness Areas or Fault Awareness Zones (FAA, FAZ) rather than through development of a location-specific hazard management plan.

This analysis includes two input datasets both illustrating extents of potential flooding hazards (ORC and NIWA), but it is important to note that neither is 'better' or more accurate, and both add value in understanding the flood hazard context. Each of these datasets has been developed by differing methodologies and for different purposes. The ORC flood hazard mapping focuses on identification of major floodplains and flood-prone alluvial fans, and was developed from observations of past events, and from geomorphic and topographic interpretation. The NIWA dataset was developed by a numerical modelling approach and includes areas which may be affected by pluvial or fluvial flooding events. Similarly, the Otago region (Lane *et al* 2008) and national-scale (Paulik *et al* 2023) coastal inundation modelling were developed using slightly different approaches, and the results can be used to complement each other.

The alluvial fan landform mapping (Barrell et al 2009; Barrell 2015) was developed as targeted follow-up to the regional-wide alluvial fan identification (Grindley et al 2009). This landform mapping identifies a range of geomorphic features, of which the 'fan active bed' and 'fan recently active' are together taken to represent the 'hazard area' where there is potential for the area to be re-occupied by flooding or sedimentation activity'.

The floodwater-dominated alluvial fans identified by Grindley et al (2009) were included within the composite ORC flood layer used for exposure analysis. For locations where higher resolution landform mapping is available, it can provide a more refined assessment of exposure. In the same manner, mapped 'composite' or 'debris-dominated' alluvial fans identified by Grindley et al (2009) were the basis of the alluvial fan (debris inundation) layer. In locations where the landform mapping is available, it can also provide a more refined assessment of this exposure.

Table 2.4: Natural hazards mapping datasets used in exposure analysis.

Hazard type	***Hazard mapping dataset***	***Mapping developed for***	***Dataset included in ORC's 2025 exposure analysis***
Flooding	River, alluvial fan and lake flooding	ORC	Yes
Flooding	Fluvial and pluvial flooding	NIWA	No
Slope stability	Landslide inventory	ORC	Yes
Slope stability	Rockfall 'awareness areas'	ORC	Yes
Slope stability	Alluvial fan (debris inundation)	ORC	Yes
Flooding/slope stability	Alluvial fan landform	ORC	No
Seismic	Liquefaction susceptibility	ORC	Yes
Coastal	Coastal inundation (storm surge) and sea level impacts	ORC	Yes
Coastal	Coastal inundation (storm surge) and sea level impacts	NIWA	No
Coastal	Coastal erosion	ORC, DCC	Yes (Waitaki District) No (Dunedin, Clutha)
Coastal	Tsunami	ORC	Yes

2.4.2 Exposure Level Classification

An exposure level class is assigned to each 'community area', for each natural hazard dataset, as an indicator of the overall natural hazards exposure for the three elements considered: population, buildings and critical community facilities. An exposure level class is assigned to each 'community area' using the classification presented in Table 2.5, which has been slightly modified[3] from that applied by van Woerden and Welsh (2025). This classification scheme is based on the approach to assessing natural hazard consequences in the proposed Otago Regional Policy Statement 2021 (pORPS, ORC 2021).

Table 2.5: Exposure level classification (modified from van Woerden and Welsh 2025).

Exposure level	***Built***		***Health and Safety***
	Buildings	***Critical Community Facilities (CCF)***	***Population exposed to the hazard***
Very high	≥ 50% of buildings within community area are located within a mapped hazard area	≥ 25% of CCF within community area are located within a mapped hazard area	> 100 residents located within a mapped hazard area

[3] Adjustment of the population count values for low, moderate and high exposure classes.

High	21-49% of buildings within community area are located within a mapped hazard area	11-24% of CCF within community area are located within a mapped hazard area	21-100 residents located within a mapped hazard area
Moderate	11-20% of buildings within community area are located within a mapped hazard area	6-10% of CCF within community area are located within a mapped hazard area	6-20 residents located within a mapped hazard area
Low	2-10% of buildings within community area are located within a mapped hazard area	1-5% of CCF within community area are located within a mapped hazard area	1-5 residents located within a mapped hazard area
Very low	≤ 1% of buildings within community area are located within a mapped hazard area	No critical community facilities within the community area located within a mapped hazard area	No residents located within a mapped hazard area

2.4.3 Aggregation and Reporting

Following calculation of exposure for each community area, analysis results are aggregated to provide an overview of total exposure for each urban area and rural settlement. Natural hazard exposure can then be reported for each long-list location, to provide an overview of exposure for all hazards datasets at each location, or for a single natural hazard type to compare across locations.

To assign an exposure classification for each urban area or rural settlement, the location is assigned the highest exposure level classification of any of the community areas making up that urban area or settlement. For example, if any ‘community area’ within a defined urban area boundary has a high exposure, then the overall exposure level classification for that urban area is reported as ‘high’ (see example in Figure 2.4). For smaller urban areas or rural settlements which comprise only a single community area, then the classification for the community area is also applied as the overall exposure level classification for the urban area or settlement (see example in Figure 2.5).

As a summary of the multi-hazard exposure for each urban area or rural settlement, reporting also includes the count of natural hazard types for which at least one community area in the location has a high or very high exposure.

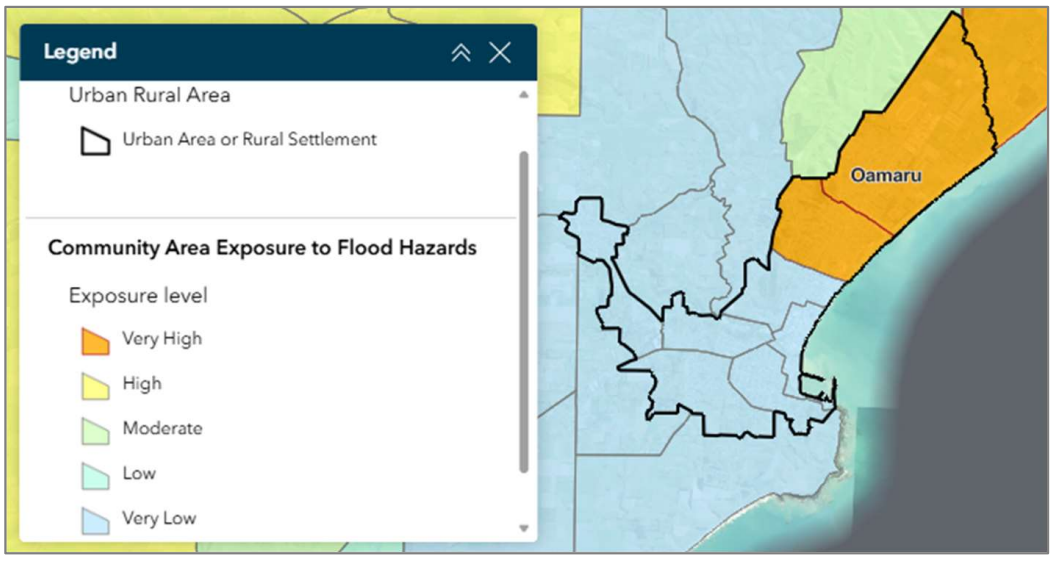

Figure 2.4: Example of exposure level classification for larger urban areas, as a screenshot from the 2025 ORC Natural Hazards Exposure Map Viewer. The Oamaru urban area (thick black line) comprises 8 SA2 'community areas' of which two have a 'very high' exposure level for flooding hazard, so the overall exposure level for the urban area is also assigned as 'very high'.

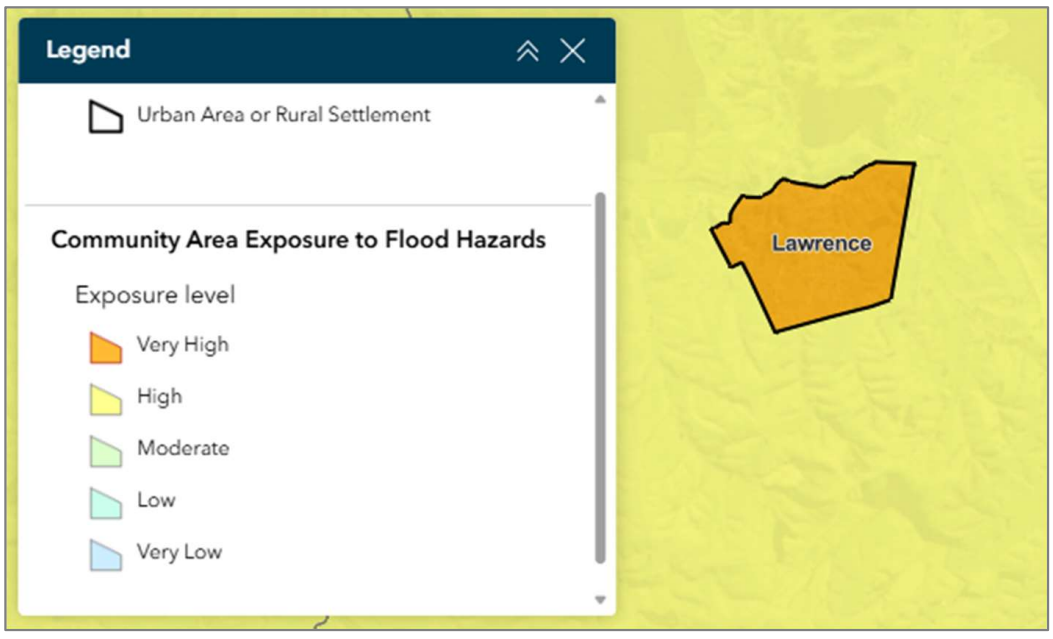

Figure 2.5: Example of exposure level classification for smaller urban areas and rural settlements, as a screenshot from the 2025 ORC Natural Hazards Exposure Map Viewer. The Lawrence settlement comprises only one SA2 'community area', which has a 'very high' exposure level for flooding hazard, so the overall exposure level for the urban area is also assigned as 'very high'.

2.5 Assessment of 'Urgency' Criteria

Three criteria relating to natural hazard risk characteristics are used to assess 'urgency for action' in terms of the need for potential adaptation or hazard management activities. Relevant information has been compiled and used to assign a classification for each of three categories:

a. Historical hazards impacts
b. Ability to provide effective hazard warning
c. Known community vulnerabilities

Historical hazards impacts are used as one of three primary prioritisation factors. Effective hazard warning and community vulnerabilities are used as secondary prioritisation factors, to enable a relative ranking of locations in the higher priority class (see prioritisation process in Table 2.11).

2.5.1 Historical Hazards Impacts

This criterion identifies locations where there are known historical impacts from natural hazard events (e.g. flooding/debris inundation to above floor level or around dwellings). Classification is largely based on information from ORC sources, supplemented for some locations using information from news media, NHC damage claims and known states of emergency. Information has been compiled for these three information sources, described in the sections below.

Each location is assigned a hazard impact classification using the criteria in Table 2.6, with a separate classification for direct impacts and for disruption to transport networks. The transport disruption criteria is used as an indicator of the extent of wider indirect impacts, beyond the directly affected community.

For locations with a 'high' hazard impact classification, this classification confirms exposure of those locations to past hazard impact and illustrates the type of impacts which may occur again in future. For locations known to have been impacted on multiple occasions, this information also acts as an indicator of the likelihood or frequency of these impacts.

Table 2.6: Hazard impact classification.

Classification	*Impacts description*	*Transport disruption*
High	Known natural historical impacts from natural hazard events, e.g. flooding/debris inundation to above floor level or around dwellings, or severe landslide damages.	Known disruption to major transport routes (state highways). Or Known disruption of the only transport routes into a community.
Moderate	Known hazard impacts (e.g. flooding/debris inundation to above floor level or around dwellings, or landslide damages) but very localized, or severity not known/uncertain.	Known disruption to local roading only (but not state highway network).
Low	Uncertain/unknown impacts, or not known to have occurred.	Uncertain/unknown, not known to have occurred, or disruption mainly limited to only within township area.

2.5.1.1 PAST NATURAL HAZARDS IMPACTS IN OTAGO

For each long-list location, natural hazards information has been reviewed to assess the potential occurrence of past natural hazard impact. This review is based on ORC sources such as reports and photographs, supplemented by other information sources such as media reporting. The majority of the information referenced is accessible through the ORC Natural Hazards Portal, a repository of natural hazards information held by ORC, including reports, mapping and photographs.

2.5.1.2 OTAGO REGION STATES OF EMERGENCY

States of emergency declared as a result of Otago natural hazard events for the period 1971 to 2026 have been compiled to identify locations where severe natural hazards impacts are known to have previously occurred in the region. Information is compiled from the NEMA website sources:

- NEMA 'historical emergencies' webpage, listing New Zealand states of emergency from 1971-2026: CDEM 'historical emergencies'.
- NEMA 'declared states of emergency' webpage, listing New Zealand states of emergency from 2002-2026: https://www.civildefence.govt.nz/emergency-events/previous-emergencies/declared-states-of-emergency

2.5.1.3 NATURAL HAZARDS COMMISSION DAMAGE CLAIMS

The Natural Hazards Commission Toka Tū Ake (NHC, formerly known as the Earthquake Commission, EQC) is New Zealand's natural hazards insurance scheme. The scheme provides insurance cover for residential buildings and land, although with some limitations:

- For landslip or earthquake damages, NHC provides cover for both land and buildings.
- For storm or flood damages, NHC provides cover for land only, with damage to the dwelling covered by private insurance. NHC cover for land may include contributions to costs of cleaning up the insured parts of the land, such as silt/debris removal, or repair of land scour. Damage to land from coastal erosion is not covered by NHC.

The NHC Natural Hazards Portal[4] publicly displays the locations of settled damage claims since 1995. ORC has acquired a copy of this damage claims dataset for the Otago region from NHC in spreadsheet format to enable further analysis of the location, timing and spatial distribution of damage claims, this analysis has been completed and is reported in a separate document. This claims data was received from NHC prior to the October 2025 weather event, which resulted in widespread damages in Otago due to high winds.

2.5.2 Hazard Warning Limitations

This classification identifies locations where natural hazards may have a rapid onset, and therefore little warning time is possible prior to hazard impact. Locations or hazard settings meeting this criterion include:

- Areas with a known vulnerability to debris flow or debris flooding events, often triggered by intense thunderstorm rainfall, with very little advance warning possible (e.g. Roxburgh area, or west Wanaka).
- Catchments where the flood hazard is known to be 'flashy' (i.e. highly responsive to rainfall), often smaller catchments with steep terrain, e.g. the Water of Leith and Lindsay Creek in Dunedin city, or the Waitati River.
- Locations with a known history of rapid rainfall-triggered landsliding within residential areas (e.g. West harbour, Otago peninsula).

Each long-list location is assessed against the classification criteria in Table 2.7. For some locations with exposure to multiple natural hazard threats, the classification may be mixed due to the various natural hazards threats present, for example:

- Queenstown is exposed to lake flooding with slow onset, but also possible rapid debris flow or rainfall-triggered landsliding.
- Lower Taieri flooding from the Taieri River generally has slow onset and good opportunity for early warning, but Silverstream is a smaller catchment and can be much more responsive.

[4] NHC Natural Hazards Portal.

Table 2.7: Classification for hazard warning limitations.

Description	*Location*
Limited hazard warning	Exposure to debris flow or debris flooding hazard, known very flashy river catchment, or known occurrence of rapid/damaging landslides
Moderate or uncertain hazard warning	Uncertain/unknown, or not a notably rapid or long warning period
More effective hazard warning	A longer warning period is possible, for example for larger catchments, or locations with a longer response time, or where forecast modelling and well-established warning procedures are in place,

2.5.3 Community Vulnerabilities

This classification identifies locations where it is known that buildings/facilities primarily used by more vulnerable populations are exposed to potential natural hazard impacts, where vulnerability is due to a higher reliance on others for support, decision-making, knowledge and skills to cope with an emergency. Four types of building usage are identified as having a population with an increased vulnerability to natural hazards impact, and where national-scale GIS datasets are available:

a. Schools and early childhood education (Ministry of Education, MoE)
b. Hospitals and rest homes (Ministry of Health, MoH)

These input layers were included within the GIS-based exposure screening of Step 4, described in Section 2.5.3.

The classification is assessed for each long-list location using the criteria is Table 2.8.

Table 2.8: Classification for assessment of vulnerable population exposure.

Vulnerability Class	*Description*
High	One (or more) vulnerable population (i.e. building/facility) is situated in a location of potential natural hazards impact from a natural hazard type considered to be one of the 'primary hazards' for that location (e.g. a hazard of higher significance, such those which have historically been most frequent or impactful)
Moderate	One (or more) vulnerable population (i.e. building/facility) is situated in a location of potential natural hazards impact, from a natural hazard type which has not historically been of significance for the location (e.g. lower likelihood hazard types such as liquefaction, or where hazard impacts will only develop with further sea level rise).
Low	No vulnerable population is situated in a location of potential natural hazards impact (no exposure)

2.6 Consideration of Additional Enabling Factors

This step identifies social or political factors which can be considered as 'enabling factors' or opportunities which may assist with the effective development and implementation of a hazard management or adaptation work programme (Table 2.9). The classification is assessed simply as a binary function for each long-list location (i.e. *no factors present, one or more factors is present*), with no weighting or scoring of factors.

Due to a changing regulatory and landscape planning landscape, these factors should be regularly reviewed to account for any updates. Some of these factors (e.g. community demand for action, or a high awareness of hazard risks for a particular location) may also change following the occurrence of major natural hazard events, so should be reviewed to assess if this impacts on any prioritisation outcomes.

Table 2.9: Examples of possible additional enabling factors.

Enabling factors
Desire from community for a hazard management or adaptation work programme ("*ORC should do something*").
Support from a Territorial Authority or other agencies to collaborate for a hazard management/adaptation work programme.
Appropriate timing to inform land-use planning processes (possible information flow towards District/Spatial/Future Development Strategy planning processes).
Availability of external funding opportunities, or potential for opportunistic responses due to alignment with other investment.
High awareness of risks due to occurrence of recent hazard events.

2.7 Identification of Priorities

2.7.1 Introduction – What is a Priority?

The previous report sections (2.2 – 2.6) have described the methods for review and classification of the factors feeding into prioritisation assessment. What locations are considered a priority for natural hazard management or adaptation could be assessed in various ways depending on the purpose the prioritisation is required for.

For the ORC Natural Hazards team, this prioritisation approach has been developed to assist with identification of locations which may require a new hazard management or adaptation work programme to be commenced. This approach therefore classifies as a relatively lower-priority those locations which have already had significant investment in improving hazard risk understanding and in hazard management or adaptation planning, although many of these locations of previous work may have higher natural hazards exposure and elevated natural hazard risk levels.

In these locations, the natural hazard risks are generally clearly identified and better understood, and work programmes are well-established, and have already had much investment. Although additional hazard or risk investigations, or implementation of hazard management or adaptation interventions may be beneficial, these actions are generally within ORC's business-as-usual work, as a continuation or implementation of existing work programmes.

The purpose of this prioritisation is to take a systematic approach in identifying locations where natural hazards are considered a higher-priority, so that these can then be addressed with a local-scale work programme. Beyond the current or in-progress natural hazard management or adaptation work programs in the region, this assessment is aiming to identify where else a new work programme of this type is most needed i.e. where are the locations of currently less-managed, poorly-known, natural hazard risks, which have higher exposure and are anticipated to again impact these communities in future?

2.7.2 Prioritisation Criteria and Approach

The prioritisation criteria and approach which has been applied are summarised in Tables 2.10 and 2.11. These show how the classification outputs from each assessment in Step 2-5 have been applied to assign each long-list location with a priority class. Three priority groupings are defined: lower, medium and higher priority, with the criteria for definition of each priority class described below. However, these criteria defined are to be used only as a starting point for priority classification, and some expert judgment must be applied in assessment of priority, which should be based on all knowledge of a particular location.

The justification for selection of a particular location as 'higher priority' is driven by a combination of factors, and all of this relevant context information should be compiled to build a strong case explaining the rationale why the location is higher priority for future natural hazards work. Factors to be considered should include those listed in a-c below, which are also those which should be used in assessment of the relative ranking or priority between locations in the 'higher' priority class;

a. The type, scale, and characteristics and likelihood of natural hazards exposures, with consideration of:
    - The potential for multi-hazard impacts or cascading natural hazard events.
    - Anticipated timing of future natural hazards exposure (e.g. for events driven by sea level rise).
    - The confidence/uncertainty and level of detail in the natural hazards information supporting assessments of natural hazard exposure.

b. The type, scale, severity and frequency of the known previous natural hazard event impacts, and information on how they have directly impacted the affected community, and any wider or indirect impacts caused by these events.

c. The secondary assessment factors assessed:
    - Exposure of community vulnerabilities, such as schools or rest homes (Section 2.5.3).
    - Consideration of 'enabling factors' such as potential opportunities for collaboration, or to inform land-use planning processes (Section 2.6).

This assessment of relative ranking/priority between locations should be documented in a brief summary memorandum (or similar) to transparently demonstrate the justifications for decisions, any key assumptions made, and any key uncertainties or risks which could substantially alter the proposed relative rankings.

Table 2.10: Definition criteria for natural hazards priority classes.

Priority grouping	Priority class	Prioritisation criteria
Higher priority	**H1**	a. Have a high or very high hazard exposure (for one or more hazard types), and b. Have a known history of natural hazard impacts (at least one identified past event), and c. Where a hazard management or adaptation work programme has not already been completed/planned.
Medium priority	**M1**	a. Have a moderate hazard exposure (for one or more hazard types), or a known information gap in the available natural hazards or exposure information, and b. Have a known history of natural hazard impacts, and c. Where a hazard management or adaptation work programme has not already been completed/planned.
	M2	a. Have a moderate, high or very high hazard exposure (for one or more hazard types), and b. Have no known history of natural hazard impacts, and c. Where a hazard management or adaptation work programme has not already been completed/planned.
	M3	a. Where a hazard management or adaptation work programme has already been completed, or where this work is in-progress or planned.
Lower priority	**L1**	a. Have a low or very low hazard exposure, for the natural hazard types present.

Table 2.11: Definition criteria and process for natural hazards priority classification, and the type of response recommended for each priority class.

Primary assessment factors							
Natural hazard exposure		**Natural hazards history**		**Natural hazard management**		**Priority class**	**Natural hazard management response**
Very high or high natural hazard exposure (for one or more hazard types)	**AND**	A known history of natural hazard impacts (at least one identified past event)	**AND**	A hazard management or adaptation work programme has not already been completed/planned.	→	**Higher priority (H1)**	Consider development of local-scale natural hazards management or adaptation work programmes in the next ORC Long-Term Plan (LTP)
Moderate hazard exposure (for one or more hazard types), or a known information gap in the available natural hazards or exposure information	**AND**	A known history of natural hazard impacts (at least one identified past event)	**AND**	A hazard management or adaptation work programme has not already been completed/planned.	→	**Medium priority (M1)**	Consider need to better understand the nature and likelihood of the potential natural hazard threats present, and if further hazard management actions are required
Moderate, high or very high hazard exposure (for one or more hazard types)	**AND**	No known history of natural hazard impacts	**AND**	A hazard management or adaptation work programme has not already been completed/planned.	→	**Medium priority (M2)**	Consider need to better understand the nature and likelihood of the potential natural hazard threats present, and if further hazard management actions are required
				A hazard management or adaptation work programme has already been completed, or where this work is in-progress or planned.	→	**Medium priority (M3)**	Continue with current work programmes. Including reviewing sufficiency of natural hazard and risk information, and effectiveness of existing natural hazard management interventions. If required, consider additional investigations or hazard management actions.
Low or very low hazard exposure, for the natural hazard types present.	→					**Lower priority (L1)**	Continue with business-as-usual regional-scale natural hazards management activities

2.8 Decide Type of Response Required

The objective of a natural hazards risk management response is to manage and reduce risks in order to mitigate future natural hazard impacts to a community. Hazard risk management can be achieved by drawing on interventions from across the spectrum of possible response actions, e.g. PARA (Protect, Accommodate, Retreat, Avoid), and is primarily focused on the 'Reduction'[5] activities of the integrated New Zealand approach to disaster management, known as the "4 R's" (reduction, readiness, response and recovery), where reduction aims to mitigate or avoid the risks of hazards.

The type of natural hazards management or adaptation response recommended for each location is dependent on the priority class assigned, which in turn depends on factors such as the natural hazards exposure, amount of previous work completed, and history of natural hazards at the location. The type of response recommended for each priority class is summarised in Table 2.11 and outlined in the section below, and these recommended approaches help inform planning for the types of activities which may be required for locations of each priority class.

2.8.1 Higher Priority Class (H1)

Higher priority locations are recommended for consideration as locations for potential development of local-scale natural hazards management or adaptation work programmes in the next ORC Long-Term Plan (LTP) for 2027-2037.

The type of work programme required for a particular location should be tailored to the natural hazard riskscape and community context. A work programme can be categorized as either an 'adaptation' response, or a more conventional 'hazard mitigation' or 'hazard risk management' approach, where these types of responses are defined in van Woerden, Welsh and Payan (2024). However, it is noted that there is not a clear-cut distinction between these categories, and in reality all projects will be somewhere on a spectrum from 'mostly adaptation' to 'mostly hazards mitigation'.

Regardless of the type of work programme (i.e. adaptation or hazard mitigation), a similar sequence of activities will be required for its development, and these can be framed around the simplified sequence of activities of the MfE decision-cycle framework (Figure 2.6, MfE 2024). Table 2.12 outlines the objectives and key activities in development and implementation of an adaptation or hazard management work programme but are only a starting point and will need to be tailored for each particular location during a scoping and programme definition phase.

The scale of work (and therefore timeframes and costs) required will be variable depending on factors such as geographic scale, and complexity of the hazardscape or community setting, and should be proportional to the scale of the issue. For larger-scale and more complex settings, the timeframe required for development of a comprehensive natural hazards management or adaptation plan could be 5+ years (e.g. comparable to the South Dunedin or Head of Lake Whakatipu hazards programmes).

[5] **Reduction:** Identifying and analysing long-term risks to human life and property from hazards; taking steps to eliminate these risks if practicable, and, if not, reducing the magnitude of their impact and the likelihood of their occurring.

Prioritisation has been carried out across the region and for a broad range of natural hazard types, however for some types of hazard impact it is not necessarily ORC's role to lead the response. For example, if the dominant natural hazard for a particular location is pluvial (e.g. from stormwater) flooding then this is primarily mitigated through infrastructure management, and it is the asset owner's responsibility to lead development and implementation of hazard mitigation approaches.

Figure 2.6: A simplified sequence of the activities making up the MfE decision-cycle framework.

Table 2.12: Overview of objectives and key activities in development and implementation of an adaptation or hazard management work programme.

Step	*Objective*	*Key activities required*
1. What is happening?	**Develop understanding of the natural hazards context**	Natural hazards modelling and hazard assessments to understand; • What are the main natural hazards processes or events which may occur in this location • How may they change in future. • What do hazards events look like for various magnitudes. • How might hazard events/processes interact
2. What matters most?	**Establish community values and objectives, and assess vulnerability and risk**	Activities to understand; • Community context, values and objectives, and how these might be impacted by natural hazard events • Exposure and vulnerability, and what event consequences may look like, including social and economic impacts. • Assessments to characterise and assess natural hazard risk levels
3. What can we do?	**Identify and evaluate hazard mitigation or adaptation approaches**	Assessments which may include; • Identification of a long-list of all potential hazard management or adaptation approaches (across the full spectrum of response actions, e.g. PARA), and make a preliminary evaluation of their effectiveness and viability. • Selection of a smaller subset of approaches for further evaluation and feasibility assessments.
4. Make it happen	**Develop and implement plans**	Actions to; • Decide most suitable portfolio of actions/interventions, and their timeframes/decision-points for implementation. • Develop and action an implementation plan, including detail of responsibilities, funding and timeframes.
5. How is it working?	**Review and adjustment**	Ongoing actions to; • Track progress towards implementation, and review and make updates as required

2.8.2 Medium Priority Class (M1 and M2)

For locations with a M1 and M2 medium priority class, development of a comprehensive natural hazards management or adaptation work programme is not necessarily required. However, further natural hazard investigation is required to better understand the nature and likelihood of the potential natural hazard threats present and determine if these are plausible natural hazard risks which will require management actions to reduce risk levels. These investigations should be considered for next ORC Long-Term Plan (LTP) for 2027-2037.

For priority class M1, exposure levels are relatively lower (moderate), but the location also has a known history of natural hazard impacts. In these class M1 locations, further natural hazard investigation is required to confirm if the natural hazard mapping and exposure classification provide an accurate representation of the potential natural hazard impacts.

For priority class M2, there are several reasons why a location with higher exposure based on natural hazard mapping may not have a known history of natural hazards impacts;

- There is no known history of hazard impacts because it is exposed to hazards with a low frequency of occurrence, and these have not occurred within the historical period.
- The location may have been previously impacted by the natural hazard, but the event was not well documented.
- The location may be exposed to natural hazard types which are anticipated to become an increasing issue in future due to climate change drivers such as sea-level rise, but which are not yet causing notable impacts.
- The natural hazard mapping used in exposure analysis is a poor representation of the expected natural hazard extent, and the location is not likely to be realistically impacted by these natural hazard events.

If, following additional natural hazard investigation, the potential for natural hazard impact is confirmed to be limited in scale or severity, or of relatively low likelihood, then the location may be considered of lower priority, and managed through continuation of business-as-usual natural hazard management activities, such as those listed in Section 2.8.4.

If, following additional natural hazard investigation, the potential for natural hazard impact is confirmed to be greater than previously thought (in terms of scale, severity or likelihood), then the location can be considered for upgrade to a higher priority class, and a candidate for development of more comprehensive hazard management or adaptation actions.

2.8.3 Medium Priority Class (M3)

For locations with a M3 medium priority class, a substantial amount of natural hazard management or adaptation has generally already been undertaken. In these locations, the key actions which may be required are to:

- Continue with implementation of existing natural hazard management or adaptation work programmes, such as maintenance of flood protection infrastructure, civil defense preparedness and response planning, and integration of natural hazards considerations into land-use planning frameworks.
- Review the effectiveness of existing natural hazard management interventions and determine if additional natural hazard mitigation is required beyond the scope of the completed or in-progress work programme.
- Identify any information gaps which should be addressed and carry out further assessments to improve natural hazards and risk understanding, as required.

2.8.4 Lower Priority Class (L1)

For locations with a lower priority class, no new hazards management activities are recommended, but ORC should continue with their business-as-usual regional-scale natural hazards management activities, such as:

- Environmental monitoring for rainfall and river flows.
- Collaboration with Emergency Management Otago for communication of weather forecasting information, natural hazards preparedness and response advice.
- Maintaining and making updates to ORC's regional-scale natural hazard mapping datasets.
- Making natural hazards publicly available through the ORC Natural Hazards Portal.
- Responding to public enquiries regarding natural hazards information.

3 Limitations

3.1 Introduction

The most significant constraint for the undertaking of a regional-scale natural hazards prioritisation approach is the availability and consistency of data for each of the prioritisation factors considered. This section presents and discusses the key limitations in this natural hazards prioritisation approach.

Despite these limitations, the prioritisation approach will enable the first systematic region-wide review of key factors influencing natural hazards priority, and lead to the first definition of priority classes to inform ORC's long-term programme planning for natural hazards activities.

3.2 Compilation of a Spatial Long-List

Use of the Stats NZ urban area and rural settlement boundaries for establishing the spatial long-list provides a systematic, objective approach for identifying a list of locations for assessment and prioritisation assessment. A key limitation identified with the use of this approach is that it does not identify every smaller rural community in the region. The Stats NZ definition of a 'rural settlement'[6] does not capture some of the smaller or more dispersed settlements in Otago (e.g. Makarora, Papatowai, Toko Mouth), so these were not included in the spatial long-list for prioritisation.

It is suggested that a phase of follow-up analysis in this work programme should be to review natural hazards exposure for communities in rural areas outside of the spatial long-list identified in the current prioritisation. The updated exposure analysis completed for the prioritisation programme includes information for the full region (both urban and rural), and the review of past natural hazards impacts also considered the full region, so these key datasets will be readily available for this follow-on assessment.

3.3 Level of detail classification

This methodology develops a single level of detail classification for each natural hazard type, for each long-list location. This is a simplification as in reality there may be a variable level of detail in natural hazards information within each urban area or rural settlement location.

[6] Stats NZ define a 'rural settlement' as "a cluster of residential dwellings which contains at least one community or public building, such as a church, school, or shop. They have an estimated resident population of 200–999, or at least 40 residential dwellings" (Stats NZ 2026).

3.4 Hazard Exposure Screening

For exposure analysis, the same limitations associated with input datasets and exposure assessment methodology as were identified in Section 4 of the 2025 Otago exposure analysis report (van Woerden and Welsh 2025) also apply to this new assessment.

The additional natural hazards mapping datasets included in this updated hazard exposure assessment mean there are now multiple hazards input datasets for several hazard types (flooding, coastal inundation, alluvial fan hazards). This means that there is no single 'correct' dataset, and exposure metrics may be variable depending on the underlying natural hazards dataset.

For coastal erosion hazards, the three district-scale datasets were developed separately for each district and assessed individually in this exposure analysis, but together provide full coverage of the Otago coastline. Each of these three studies had some variation in methodology and may not be directly comparable across districts, this is discussed in Wright (2026).

3.5 Assessment of 'Urgency' Criteria

3.5.1 Historical hazards impacts

No single dataset provides a complete view of all past natural hazards impacts in the region, but together they can be combined to help build a picture of the locations and type of hazard event which have been more commonly impactful to the region. Each of the information sources used has their own limitations:

- ORC records and documentation of impacts from past hazards events are likely to be incomplete, especially for older, more localised, or less severe events.
- NHC damage claims data is only available from the late 1990's, and excludes any records for flood damage to buildings, or any damages to commercial buildings. The claims data does not indicate the scale or severity of damage, which may have been relatively minor.
- Records of past states of emergency often do not identify specific township locations, often broadly naming a district or county only. In addition, not all emergencies have resulted in a state of emergency declaration, as some events were not considered to meet the threshold for declaration (e.g. June 2015 Dunedin City flooding[7]). At least one state of emergency was issued proactively in advance of a forecast weather event (ex-tropical Cyclone Fehi, February 2018), but the event may not have caused significant impacts.

The classification used to assess historical hazards impacts (Table 2.6) does not consider the geographic scale of impacts. For example, a location identified as having a 'high' impact classification could be due to knowledge of only a handful of properties being previously affected, through to hundreds in some cases (e.g. South Dunedin flooding in 2015).

3.5.2 Hazard Warning Limitations

[7] ODT, 8 June 2025. Cull rejects state-of-emergency claim

The identification and assessment of locations where effective hazard warning may be limited is a subjective assessment, depending on the judgement and knowledge of members of the ORC Natural Hazards team. However, this assessment is a useful starting point to identify locations where this is known to be a factor which should be considered.

3.5.3 Community Vulnerabilities

This was not a comprehensive identification or assessment of community vulnerability in Otago, being limited to only small number of facility types where national-scale GIS datasets are available. Many additional population groups are also known to have an elevated vulnerability to impact of natural hazard events, and may disproportionally experience negative effects, for example, the elderly, disabled people, and those with existing health conditions (e.g. Harrison et al 2022). However, many of those populations are more distributed within a wider community, outside of specific facilities such as hospitals or rest homes, so cannot be linked directly to a particular building or facility.

3.6 Consideration of Additional Enabling Factors

A wide range of factors may be considered as 'enabling' factors, and each of these may have more or less influence over ORC planning for natural hazards work programmes. It is recognised that there may be a large range of potential social or political factors of this type, and they may be challenging to evaluate or compare consistently. However, the inclusion of these factors ensures an opportunity to account for factors of this type within the prioritisation process.

3.7 Identification of Priorities

The process developed for assigning a priority classification is relatively simple, being based around assessment of only three primary prioritisation factors. The approach does not include a detailed scoring or relative weighting of each factor, but this is seen as an appropriate approach for consistent application of these factors and helps to makes the process easier to understand and therefore also more transparent.

In some cases, the classification criteria may not be applied strictly, for example:

- If it is recognised that the underlying hazards mapping is a poor representation of the hazard-prone extent, but that the scale of known past hazard impacts indicates a 'high' level of exposure, then this location may be included in a higher priority class, even if this was not indicated by results of exposure analysis.
- If a 'high' exposure identified is mainly due to pluvial flooding in an urban area, this is managed through existing stormwater networks. This is generally outside ORC's responsibility so we will not necessarily identify as a priority for ORC's work programme.

Because one of the primary assessment factors used in this assessment is the occurrence of historical natural hazards impacts, this places an emphasis on natural hazard types which are more frequent (e.g. flooding, storm surge, or rainfall-triggered landsliding). In contrast, more infrequent

hazard types such as a major Tsunami[8] or liquefaction event have not occurred in Otago through the historical period, and so these hazards will generally not be identified as higher priority. However, any detailed natural hazards assessment will consider the full hazardscape for a location, not just those hazard types with known impacts – for example, ORC's natural hazard and risk assessments completed for the South Dunedin, Glenorchy, and Clutha Delta areas have all included consideration of seismic risks, including liquefaction and earthquake shaking. In addition, investigations for many of these natural hazard types are being completed within projects to review and revise ORC's regional-scale natural hazards datasets (e.g. active fault mapping was updated in 2025, updated coastal tsunami assessments are planned to commence in 2026/2027).

3.8 Decide Type of Response Required

This report section outlines the type of natural hazards management or adaptation response recommended for locations within each priority class. These recommendations are relatively generic and intended only as a guide to the types of activities which may be required for locations of each priority class. Development of location-specific work programmes for each location will need to more fully consider the specific natural hazards and community setting present in each of these locations.

[8] There is one known record of past tsunami inundation reaching houses within Otago; a May 1960 tsunami at Taieri Mouth, where "*some gardens were also flooded and water lapped against the sides of houses*." (record 507 of the the New Zealand tsunami database.

4 List of Abbreviations

4.1 Abbreviations

Abbreviation	*Explanation*
CDC	Clutha District Council
CDEM	Civil Defense Emergency Management
CODC	Central Otago District Council
DCC	Dunedin City Council
EMO	Emergency Management Otago
NHC	Natural Hazards Commission Toka Tū Ake, known as the Earthquake Commission (EQC) prior to 1 July 2024.
GNS	GNS Science, now part of Earth Science New Zealand (ESNZ)
NHC	Natural Hazards Commission Toka Tū Ake, known as the Earthquake Commission (EQC) prior to 1 July 2024.
NIWA	National Institute of Water & Atmospheric research, now part of Earth Science New Zealand (ESNZ)
ORC	Otago Regional Council
QLDC	Queenstown Lakes District Council
SA	Statistical Area

5 References

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6 Appendices

6.1 Appendix A: Natural Hazards Mapping Datasets

Table A1: Natural hazards mapping layers used in natural hazards exposure and risk analysis.

Hazard Type	*Hazard Mapping Dataset*	*Data coverage*	*Description*	*Reference for mapping dataset*	*Considers climate change or sea level rise*
Flooding	River, alluvial fan and lake flooding (ORC)	Otago region	A dataset representing flood-prone areas, compiled for this study by merging a number of existing flood hazard mapping datasets (e.g. river floodplain, active floodwater-dominated alluvial fan streams, coastal streams). Most mapping is based on observations of historical flooding, and interpretation from aerial imagery and topographic datasets (e.g. LINZ Topo50 mapping or LiDAR). This mapping dataset does not include pluvial flooding (e.g. surface flooding from rainfall runoff where stormwater systems are overwhelmed).	Compilation of data from various sources (e.g. those described in ORC (1999a, b, c, 2002, 2014, 2025) and Grindley *et al* (2009)	No
Flooding	Fluvial and pluvial flooding (NIWA)	A national dataset, but with only partial coverage of the Otago region (coastal catchments, Manuherekia and Alexandra, Queenstown and Wanaka)	A dataset developed by NIWA to provide a modelled representation of New Zealand's flood hazard due to a 1% AEP rainfall event. For this exposure analysis only a single scenario has been used: present-day, 100-year ARI. Further information on the dataset and data processing are detailed in Appendix B.	Website for NIWA research programme: Mā te haumaru o ngā puna wai o Rākaihautū ka ora mō ake tonu. Interactive dashboard viewer: Flood hazard across Aotearoa New Zealand.	Yes. Includes modelled scenarios for 1, 2 and 3 degrees of additional warming on rainfall.

Hazard Type	*Hazard Mapping Dataset*	*Data coverage*	*Description*	*Reference for mapping dataset*	*Considers climate change or sea level rise*
Slope stability	Landslide	Otago region	Mapping of interpreted locations of past landslide movements, generally based on interpretation from aerial imagery. This dataset does not represent landslide susceptibility (i.e. slopes which may fail in future), or areas which may be impacted by the runout of landslide debris, and predates the national landslide planning guidance (de Vilder et al, 2024).	Compiled from various sources, including; Barrell et al (2017), Forsyth (2001), Turnbull (2000), Turnbull and Allibone (2003)	No
Slope stability	Rockfall	Otago region (excludes catchments devoid of buildings or roads, or with only very sparsely distributed buildings).	Rockfall 'awareness areas' which may be susceptible to rockfall. Developed based on RAMMS modelling from source areas defined by slope-angle analysis.	Easterbrook-Clarke et al (2022)	No
Slope stability	Alluvial fan (debris inundation)	Otago region	Mapped alluvial fan surfaces which have been classed as 'active', and as either 'debris-dominated' or 'composite' (fans may be subject to a combination of both debris flow and floodwater flow processes). Active 'floodwater-dominated' alluvial fans were mapped and included in the original mapping dataset (Grindley *et al*, 2009), these have been included within the flood hazard layer compiled for this study.	Grindley *et al* (2009)	No

Hazard Type	*Hazard Mapping Dataset*	*Data coverage*	*Description*	*Reference for mapping dataset*	*Considers climate change or sea level rise*
Flooding, slope stability	Alluvial fan landforms	29 selected locations within the region	Mapping of alluvial fan landforms, with a qualitative interpretation of how recently the last episode of sedimentation or erosion had occurred on different parts of the fans. For this exposure assessment, areas identified as 'fan active bed' and 'fan recently active' are together taken as the 'hazard extent'.	Barrell et al (2009), Barrell (2015)	No
Seismic	Liquefaction susceptibility	Otago region	Mapping of areas which are potentially subject to liquefaction hazards, based on regional-scale geologic mapping (QMAP), and interpretation from aerial imagery, LiDAR topography, and borehole information. Equivalent to a basic desktop assessment as defined in the MBIE/MfE (2017) guidance.	Barrell et al (2014), Barrell (2019)	No
Coastal	Coastal inundation (storm surge) and sea level impacts	Otago region	Modelled extents of potential inundation due to extreme sea level events with return periods of up to 500-year ARI.	Lane *et al* (2008)	Yes. Sea level rise scenarios of 0.3 and 0.5 m considered. These scenarios could be reached in approximately 2065 and 2095 under SSP2-4.5 (MfE, 2022).

Hazard Type	*Hazard Mapping Dataset*	*Data coverage*	*Description*	*Reference for mapping dataset*	*Considers climate change or sea level rise*
Coastal	Coastal inundation and sea level impacts	National, with full coverage of the Otago region	National-scale modelling by NIWA for 100-year ARI coastal inundation extents due to extreme sea levels and relative sea level rise. For this exposure analysis the 100-year ARI, 0.6m SLR scenario has been used.	Paulik et al (2023)	Yes. Relative sea-level rise ranging from 0 to 2 metres in 10 cm (0.1 m) increments
Coastal	Coastal erosion	Otago region (separate studies for Waitaki, Dunedin and Clutha districts)	In the Waitaki and Clutha districts, modelled future shoreline position with a 5% probability of erosion extending up to or landward of this line over approximately the 100-year outlook period (1.3 and 1.5m RSLR, respectively). In the Dunedin City district, a deterministic calculation of potential erosion areas inland from the shoreline (1.5m RSLR). For this exposure analysis, the future shoreline positions are converted to a polygon feature by buffering coastwards from the mapped coastal hazard zone (CHZ) line feature.	Bosserelle et al (2019) Riddle and Farley (2024) Wright (2026)	Yes. Relative sea level of up to 13-1.5 metres.
Coastal	Tsunami	Otago region	Numerical modelling findings showing the maximum area affected by a modelled tsunami from near and far-field sources, for events up to a 500-year ARI. There is no data available for lake tsunami or seiche.	Lane et al (2007)	Yes. Sea level rise scenarios of 0.3 and 0.5 m considered. These scenarios could be reached in approximately 2065 and 2095 under SSP2-4.5 (MfE, 2022)

6.1.1 References for natural hazard mapping datasets listed in Table A1

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Wright J, 2026. Clutha District Coastal Erosion Hazard Areas Analysis.

6.2 Appendix B: NIWA national flood model

6.2.1 Introduction

NIWA's (now part of Earth Sciences New Zealand, ESNZ) national-scale flood modelling was completed as part of a five-year research programme, *Mā te haumaru o ngā puna wai o Rākaihautū ka ora mō ake tonu*.

Modelling was completed by NIWA for a 1% AEP flooding scenario, for present-day conditions and with 1, 2 and 3 degrees of additional climate warming. The modelling methodology is detailed in a series of NIWA publications listed in the flood hazard dashboard viewer, these have been submitted for publication but are not yet available. Modelling was only completed for areas where LiDAR topography was available, and due to a lack of LiDAR coverage, the modelling does not cover the full Otago region (Figure A1). There is a variable level of detail to model outputs. These are of highest resolution in floodplains (4m cell size), and much coarser in surrounding areas. Outputs were released as an online viewer Flood hazard across Aotearoa New Zealand, and the raw output data can also be downloaded from the ESNZ portal.

The ESNZ disclaimers note that the modelling results are intended for "general informational purposes" only, and that they are "not a substitute for detailed regional or local flood hazard assessments, and the data shown are indicative only and subject to inherent uncertainties". Despite these limitations, the modelling is still useful to provide an indication of locations which may be exposed to a flooding hazard, especially for locations where there is little other hazard mapping information available.

These national-scale outputs are not considered equivalent in quality or accuracy to those from detailed local-scale flood hazard assessments, and so for this exposure and prioritisation assessment we use the national-scale flood modelling outputs only for assessment of hazard exposure only (not risk), comparable to the usage of the ORC's regional-scale flood hazard mapping.

The NIWA modelling outputs are not directly comparable to the existing ORC flood hazard mapping, so act as a complementary dataset, rather than a replacement or refinement to that existing mapping. In a key difference, the NIWA modelling also includes areas of pluvial inundation (surface flooding from rainfall runoff), while the ORC mapping is only for fluvial inundation (i.e. river and floodplain flooding).

6.2.2 Data Processing Steps

Model output data for the 1% AEP present-day scenario has been downloaded from the ESNZ portal and processed to enable assessment of exposure. A series of data processing steps have been undertaken within a GIS (ArcPro) to simplify and clean the dataset by removing areas of shallow or only localised inundation;

a. Download modelled raster datasets from the ESNZ portal, where there are individual raster outputs for each of the 20+ areas modelled separately within Otago.
b. Convert all individual model datasets to a single raster ('mosaic to new raster' tool).

c. Convert merged raster from depths in metres to depths in centimetres to remove issues with number of data points (raster calculator).
d. Filter to create a new raster layer which identifies only cells with values of ≥20cm ('con' tool)
e. Convert filtered raster to polygon ('raster to polygon' tool).
f. Attribute table with vertex count, so can identify and remove square/rectangular or blocky polygons of poor accuracy as these have relatively few vertices (add field, calculate geometry).
g. Select and delete polygons with 15 or fewer vertices (In ArcGIS, closed polygons typically count the start/end point twice, so a 4-sided polygon has 5 vertices).
h. Select and delete all small polygons (< 5,000 m^2).

Figure A1: Model coverage (blue shaded areas) for NIWA's national flood hazard modelling.

Appendix 2: Summary information for higher priority natural hazards

This appendix is a summary of the reasoning for identification of these locations and natural hazards as higher priority. This information will be expanded on in a summary report prepared to support preparation of the ORC 2027-2037 LTP and development of proposed work programmes for these locations.

1. Karitane flooding hazard

Karitane township is located on the right bank of the Waikouaiti River, and in flood conditions the river is known to occupy a secondary river channel through the township, re-entering the river at about Stornoway Street. This location is considered higher priority for the following reasons;

a. The township is known to have experienced river flooding, for example in June 1980 when several houses, a church and the bowling club were flooded.
b. Exposure of about 20 residents and 50 buildings, located within the extent of ORC's regional flood hazard mapping layers.
c. The northern half of the settlement may be isolated during flooding events as a temporary 'island'.
d. High sea levels are known to be a factor strongly influencing past river flow events, sea level rise will therefore exacerbate the effect of sea level on flooding events of this type.
e. There has been no detailed hazard assessment for storm surge or river flooding, or any location-specific hazard management planning.

Key references

- ORC, 1993. Floodplain management report: Dunedin District - rural areas.
- ORC, 2008. The Water Resources of the Waikouaiti River.
- ORC, 2012. Community vulnerability to elevated sea level and coastal tsunami events in Otago.
- ORC, 2014. Coastal hazards of the Dunedin City District.

2. Lawrence flooding hazard

Lawrence is exposed to flooding from the many urban streams within or adjacent to the township area. This location is considered higher priority for the following reasons;

a. The township has experienced repeated flooding, for example in January 1980 and July 2017. Impacts have included inundation of buildings in the town centre and closure of State Highway 1.

b. Exposure to potential flooding hazard is relatively high, with >200 buildings, including the ambulance, fire and police stations, located within the extent of ORC's regional flood hazard mapping layers.
c. There is no monitoring of river levels or flows for any of the streams in the township area, so there is currently no ability for near real-time monitoring of flooding events, or establishment of an early warning system linked to river levels or flows.
d. There has been no detailed flood hazard assessment for the township area, and there is not yet any detailed LiDAR topography which would enable completion of this analysis.[1]

Key references

- ORC, 1999. Clutha district floodplain report.

3. Long Beach flooding hazard

Long Beach settlements is located on the coast near Purakaunui Inlet. This location is considered higher priority for the following reasons;

a. Parts of Long beach are exposed to flooding from Drivers Creek and pluvial rainfall accumulation and are known to have experienced repeated flooding, for example in May 2010.
b. Relatively high exposure to river or pluvial flooding of about 45 residents and >150 buildings.
c. Although storm surge impacts are not documented, exposure to extreme sea level (storm surge) hazard is also relatively high. When including 0.5m of sea level rise this exposure includes the majority of the township (~70% of population), and greater than >70 residents and >200 buildings are located within the extent of ORC's regional storm surge hazard mapping layers.
d. There is no monitoring of river levels or flows for Drivers Creek, so there is currently no ability for near real-time monitoring of flooding events, or establishment of an early warning system linked to river levels or flows.
e. There has been no detailed hazard assessment for storm surge or river flooding, or any location-specific hazard management planning.

Key references

- ORC, 2012. Community vulnerability to elevated sea level and coastal tsunami events in Otago.
- ORC, 2014. Coastal hazards of the Dunedin City District.

[1] LiDAR survey data is planned to be captured for this area in 2026/2027 through ORC's regional LiDAR capture programme – refer to the 24 June 2026 Council paper S&R2607, *Update on LiDAR Progress and Funding*.

4. Ophir and Omakau flooding hazard

Omakau and Ophir townships are located on the margins of the Manuherekia River floodplain. This location is considered higher priority for the following reasons;

a. Parts of Ophir township are known to have experienced repeated river flooding, for example in December 1995 and March 1987. Flooding is also known at Lauder, located about 10 km upstream.
b. Exposure of about 30 residents and 15 buildings, located within the extent of ORC's regional flood hazard mapping layers.
c. There have been regular lifelines impacts, with the Omakau WWTP impacted by flooding, for example in July 2018 and July 2022.
d. There has been no recent detailed hazard assessment published for the area.
e. No location-specific hazard management planning has been carried out.

Key references

- ORC, 1999. Floodplain management report – Central Otago district.
- ORC, 1999. Ophir Flood Study.

5. Waikouaiti flooding hazard

Waikouaiti township is exposed to flooding from Post Office Creek and other local streams, and from high levels in Hawksbury Lagoon. This location is considered higher priority for the following reasons;

a. The township has experienced repeated flooding, for example in October 2024. Impacts have included inundation of buildings and closure of State Highway 1.
b. Exposure uncertain (but inferred to be relatively high) as current hazard mapping for river flooding does not identify locations of some known flood impacts (e.g. Post Office Creek, lagoon margins).
c. There are regular lifelines impacts due to flooding of State Highway 1. The Waikouaiti oxidation ponds may also be vulnerable to flooding impact, with floodwater reportedly reaching to within 150mm of the ponds during the 1980 flooding event.
d. With sea-level rise, the lower-lying portions of the township are expected to become increasingly exposed to impacts of extreme sea levels.
e. There has been no detailed hazard assessment for storm surge or river flooding, or any location-specific hazard management planning.

Key references

- ORC, 2012. Community vulnerability to elevated sea level and coastal tsunami events in Otago.

- ORC, 2014. Coastal hazards of the Dunedin City District.

6. Waitati flooding hazard

Waitati township is exposed to flooding from the Waitati River, where both the current stream and a former stream channel both run through urban area. This location is considered higher priority for the following reasons;

a. The township has experienced repeated flooding impacts, for example in June 1980, February 1991, March 2006, and from several older events.
b. The flood hazard for the Waitati catchment is 'flashy' (highly responsive to rainfall), so flooding may occur rapidly and with little opportunity for effective early warning.
c. Exposure to flooding hazard is relatively high and includes the majority of the township. Approximately 180 residents and 240 buildings are located within the extent of ORC's regional flood hazard mapping layers.
d. Previous impacts to lifelines infrastructure have included disruption of State Highway, local roads within the Waitati Valley, and the only road access to Doctors Point.
e. With sea-level rise, the lower-lying portions of the township are expected to become increasingly exposed to impacts of extreme sea levels.
f. There has been no detailed flood hazard assessment for the Waitati catchment, or any location-specific hazard management planning.

Key references

- ORC, 1993. Floodplain management report: Dunedin District - rural areas.
- ORC, 2009. The Water Resources of the Waitati River and Careys Creek.
- ORC, 2014. Coastal hazards of the Dunedin City District.

7. Harwood coastal inundation hazard

Harwood settlement is low-lying relative to sea level, located adjacent to the harbour on Otago Peninsula. This location is considered higher priority for the following reasons;

a. The township is known to have experienced coastal flooding due to high sea levels (e.g. in July 2011), and this hazard will become an increasing threat with the influence of sea level rise.
b. Exposure to extreme sea level (storm surge) hazard is relatively high in the present day, with >25 properties exposed based on NIWA's national coastal hazards modelling. When including 0.5m of sea level rise this exposure increases to the majority of the township area.
c. There has been no detailed hazard assessment for storm surge, or any location-specific hazard management planning.

Key references

- ORC, 2012. Community vulnerability to elevated sea level and coastal tsunami events in Otago.
- ORC, 2014. Coastal hazards of the Dunedin City District.

8. Pounawea coastal inundation hazard

Pounawea township is low-lying relative to sea level, and located adjacent to the Owaka River. This location is considered higher priority for the following reasons;

a. The township is known to have experienced coastal flooding due to high sea levels (e.g. in April 2006), and this hazard will become an increasing threat with the influence of sea level rise. In addition, a State of Emergency was declared for the township (and also Newhaven and Tahakopa) in February 1991, although little is known of the cause of this event, or the impacts in the township area.
b. Exposure to extreme sea level (storm surge) hazard is relatively high, and when including 0.5m of sea level rise this exposure includes the majority (~60%) of the township. Greater than 60 residents and 240 buildings are located within the extent of ORC's regional storm surge hazard mapping layers.
c. There has been no detailed hazard assessment for storm surge or river flooding, or any location-specific hazard management planning.

Key references

- ORC, 2012. Community vulnerability to elevated sea level and coastal tsunami events in Otago.

9. Dunedin City landslide hazards

Rainfall-triggered slope instabilities (e.g. landslides or debris flow) are a common occurrence in the wider Dunedin City urban area during major coastal Otago rainfall events. This hazard type is considered high priority for the following reasons;

a. These hazards have had repeated and widespread impacts, for example in the March 1994, June 2015, July 2017 and October 2024 weather events.
b. A high proportion of the region's landslide impacts are known to occur in the wider Dunedin City area. Since the late 1990's, ~70% (356 of 516 claims) of Otago Natural Hazards Commission[2] damage claims for 'landslip' damages have been located in Dunedin City or Brighton. Similarly, ~60% (343 of 567 claims) of the

[2] NHC, formerly the Earthquake Commission (EQC)

region's damage claims for 'storm/flood'[3] damages have been located in Dunedin City or Brighton, and based on their geographic locations many of these claims may also be due to slope stability-related issues.

c. Impacts on lifelines infrastructure due to landslides are common, for example disruption to roading access or other assets (e.g. the DCC water supply pipeline damaged in October 2024).

d. The has been no detailed assessment of landslide susceptibility in Dunedin City or the wider Otago region, and the current region-wide landslide inventory dataset is a limited predictor for the location of known landslide impacts, with only 25% of the NHC damage claims for landslip damages in the region occurring within a 100m distance of a mapped landslide or alluvial fan feature.

Key references

- GNS Science, 2015. The hazard significance of landslides in and around Dunedin City.
- GNS Science, 2015. Landslides in the Dunedin area resulting from the June 2015 rainstorm.
- GNS Science, 2017. Revised landslide database for the coastal sector of the Dunedin City district.

[3] Totals of NHC claims for 'Storm/flood' damages exclude any claims for flood damages to residential buildings, or for damages to commercial properties, as these are not covered by the NHC.

9.4. Risk Appetite Framework

Prepared for:	Council Meeting Public-Excluded
Report No.	S&C2629
Activity:	Organisational Planning and Performance
Authors:	Ginny Irving (Senior Risk and Assurance Business Partner), Joanne Greatbanks (Manager Organisational Planning and Performance)
Endorsed by:	Amanda Vercoe (General Manager Strategy and Customer)
Date:	29 July 2026
Portfolio Leads:	Chair Calvert and Cr Laws, Strategy and Customer

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PURPOSE

[1] This report presents the Risk Appetite Framework (RAF) to Council for adoption. It follows the Council workshop on 28 May 2026, subsequent refinement of the framework based on the feedback from the workshop, and the Audit and Risk Committee (ARC) discussion on 25 June 2026. The report seeks one decision from Council - on the treatment of the Mana Whenua Partnership category - and Council's adoption of the framework.

[2] The attachments enable Council to consider the framework and the matter requiring decision:

a. Risk Appetite Framework (Elected Member feedback incorporated) - Attachment 1.

b. Elected Member consolidated feedback - Attachment 2.

EXECUTIVE SUMMARY

[3] The Risk Appetite Framework provides Otago Regional Council (ORC) with a clear, shared reference point for how much and what type of risk the organisation is willing to accept in pursuit of its strategic objectives.

[4] The framework was developed through Executive Leadership Team (ELT) co-design, tested with elected members at the Council workshop on 28 May 2026, refined in response to that feedback, and considered by ARC on 25 June 2026. Following ARC's review and endorsement, the framework was returned to ELT for final confirmation. Throughout this process, feedback from elected members, ARC and ELT was broadly supportive, and the framework is now recommended to Council for adoption.

[5] The core framework has been reviewed and endorsed. Of the matters tested through this process, only the Mana Whenua Partnership category remains undecided; all other elements are confirmed, as set out below.

[6] The three-level appetite scale is endorsed. A label and tone change from 'Risk Seeking' to 'Risk Open' was supported and has been amended across the framework; Risk Averse and Risk Balanced are unchanged. The category structure also holds, with no new Level One categories added, with the exception of the pending Mana Whenua Partnership decision.

[7] Risk statement wordings are confirmed, with a tone adjustment applied throughout to better reflect the prudence expected of a local government organisation.

[8] Chosen appetite levels are confirmed as set, with the Strategic Risk appetite being retested following a query at ARC. ARC supported the move to 'Risk Open' framework-wide but questioned whether Strategic Risk should sit at the highest appetite level given the uncertainty of local government reform and ORC's short-term operating environment. On review, Risk Open is retained. The reworded statement emphasises disciplined, accountable decision-making within ORC's democratic mandate, and recognises both over-caution (institutional inertia) and over-reach (mandate expansion); together with the monitoring indicators to be developed for the category, this provides the control needed to keep strategic exposure within acceptable bounds. Following this retest, it is now confirmed as Risk Open.

[9] Only one matter remains unresolved and is referred to Council for decision - the treatment of the Mana Whenua Partnership Level One category - for which ARC made no firm recommendation.

[10] **Governance Decision Required:** regarding the treatment of the Mana Whenua Partnership category. Council is asked to either retain Mana Whenua Partnership as a standalone Level One category, or incorporate it into other categories:

a. Option 1 (status quo): retain Mana Whenua Partnership Risk as an ORC Level One risk category.
b. Option 2 (incorporate): absorb the partnership into Stakeholder & Community Risk as an enduring relationship, and anchor the enduring obligations to Te Tiriti o Waitangi within the Regulatory & Legislative Compliance Risk, with no separate Level One category.

[11] Subject to the decision on the Mana Whenua Partnership category, all other categories, appetite settings, statement wordings, and appetite levels are confirmed as updated in the attached framework, incorporating Council workshop, ARC, and ELT feedback.

RECOMMENDATION

That the Council:

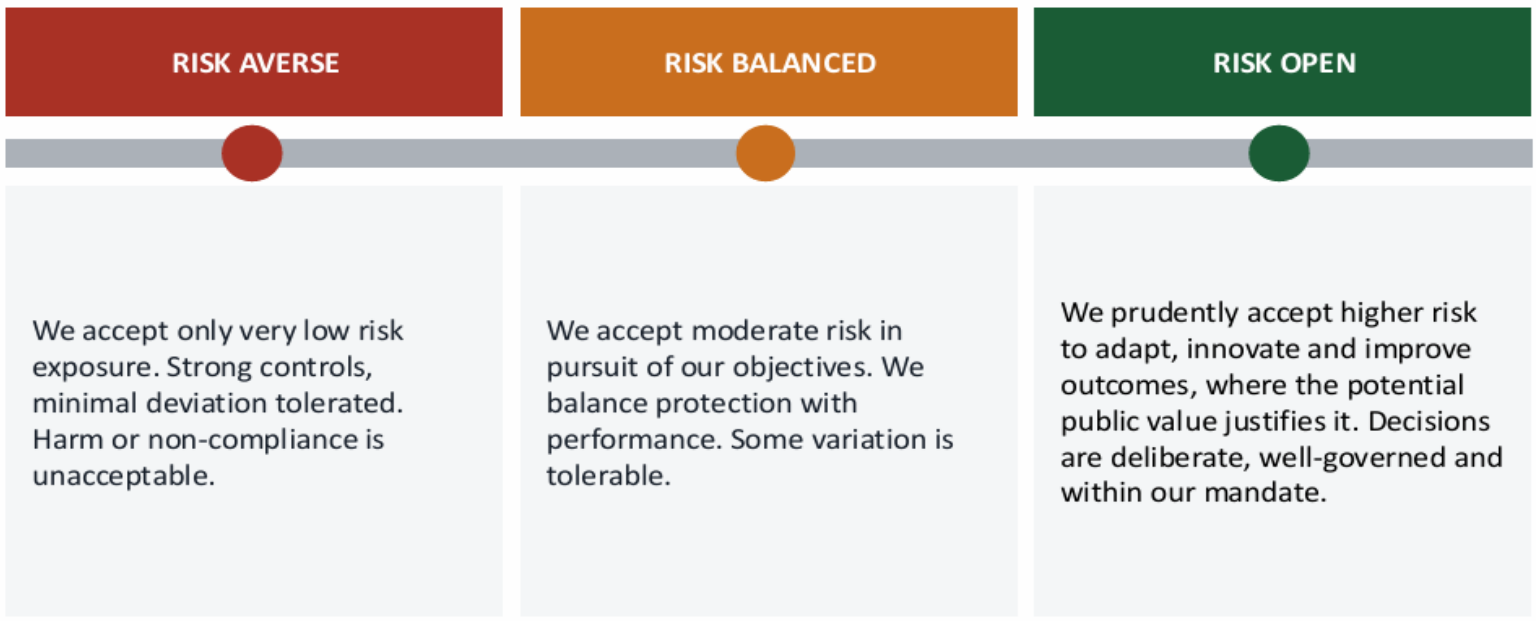
*1) **Notes** this report and the updated Risk Appetite Framework.*
*2) **Decides** the treatment of the Mana Whenua Partnership Risk category.*
*3) **Adopts** the Risk Appetite Framework, as amended to reflect the decision at 2).*

BACKGROUND

What the Risk Appetite Framework is and how it is used

[12] The Risk Appetite Framework sets the amount and type of risk ORC is willing to accept in pursuit of its objectives, before action is taken to reduce or transfer that risk. It creates a common language for risk-taking decisions and aligns Council's risk posture with its strategic intent and legal obligations.

[13] Each of the Level One risk categories has a risk statement defining the nature of the risk, an appetite level signaling ORC's tolerance, and (to follow) monitoring indicators that will signal when exposure is moving outside of acceptable bounds. The appetite scale has three levels: Risk Averse, Risk Balanced, and Risk Open - and the categories deliberately span all three to reflect the different nature of each risk domain.



How the Risk Appetite Framework fits within the Enterprise Risk Management Framework

[14] In March 2026, ARC endorsed ORC's Enterprise Risk Management Framework (ERMF) and the accompanying maturity uplift plan. The ERMF establishes the overarching system for managing risk at ORC, defining the approach to:

a. governance arrangements and accountabilities
b. a common risk language
c. risk registers and the Risk & Control Self-Assessment (RCSA) process
d. using the Risk Impact Matrix to size consequence and likelihood
e. escalation and reporting pathways to ELT and ARC, consistent with the ISO 31000 three lines of defense model.

[15] The Risk Appetite Framework is a core component of that Enterprise Framework. Where the ERMF establishes the machinery for identifying, sizing and reporting risk, the Risk Appetite Framework in turn, sets the reference point for how much and what type of risk ORC is willing to accept in each domain.

[16] Without an agreed appetite, a risk rating describes exposure but says nothing about whether that exposure is acceptable; with it, every rating can be read against an agreed position, which is what turns risk information into a governance signal.

Development journey to date

[17] The Risk Appetite Framework was developed through several ELT co-design discussions, with consolidated changes reported to ELT.

[18] The Council Workshop in May 2026 was the next step in that pathway - an opportunity for elected members to review the draft categories, statements and appetite levels and provide feedback to shape the framework.

[19] On 25 June 2026, the updated framework was presented to ARC with the incorporated changes and was endorsed to proceed to council for adoption.

[20] This report consolidates and tables that workshop feedback and is the bridge between the ELT co-design phase, the Council workshop feedback, ARC, and final adoption.

Governance oversight and reporting

[21] Once categories, appetite levels and indicators are confirmed, it will provide ARC with a consistent baseline against which to monitor, analyse and report each category's risk exposure. This shifts reporting from point-in-time snapshots to trend-based oversight (direction of travel, not a single rating), with indicators giving an objective escalation trigger when exposure moves outside of appetite. This supports early warning, defensible escalation, and comparability across categories and business units, as well as an audit trail of how the organisational risk position is changing.

DISCUSSION

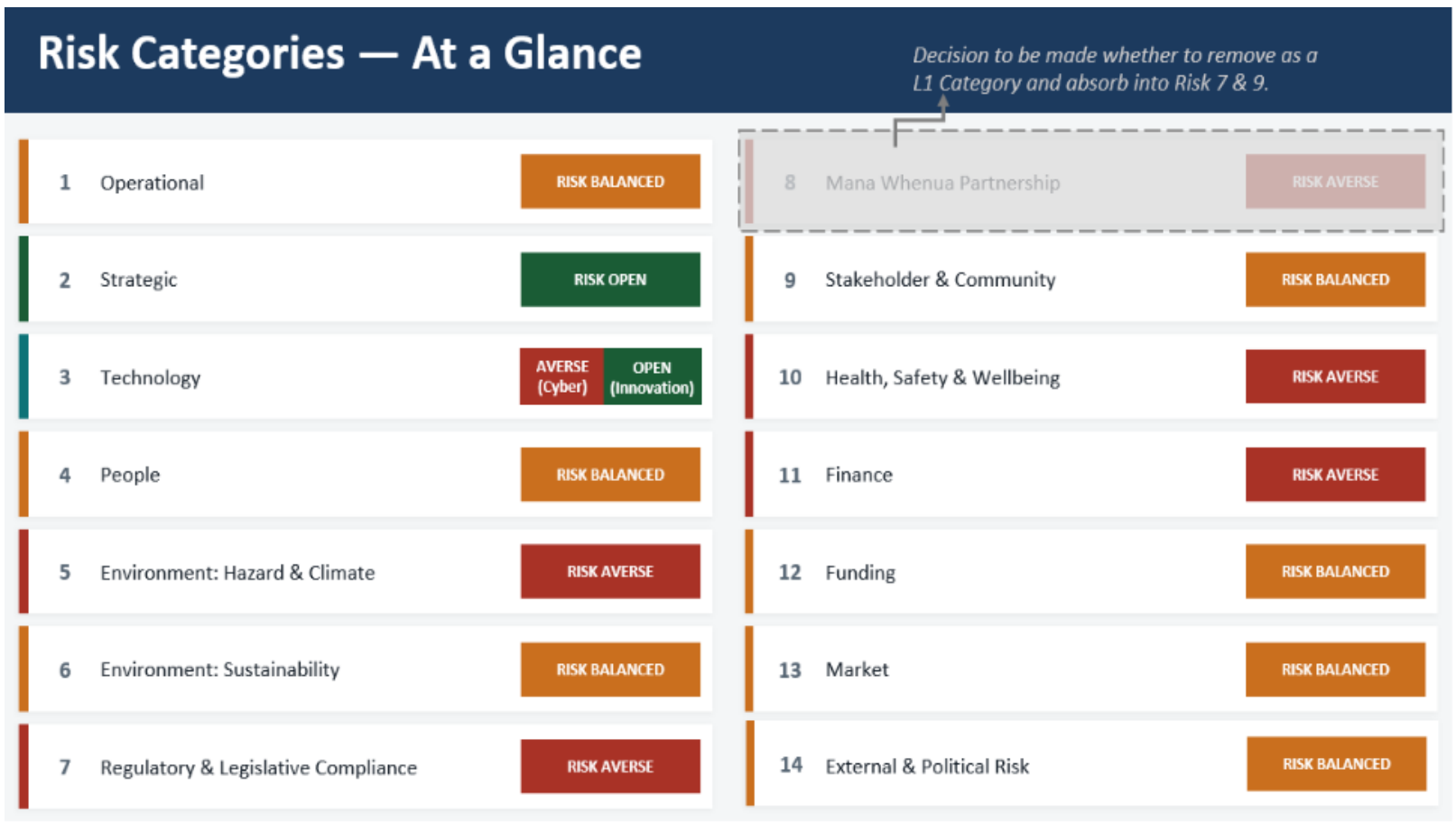
[22] Feedback was gathered through annotated workshop materials from the Council Workshop and discussion against the three prompts - category structure, statement wording, and appetite calibration. The feedback was coherent and constructive and is consolidated in the attached appendix. Cross-cutting/horizontal themes are set out first, followed by a category-by-category table summarising the feedback alongside the risk team's recommended response.

Cross-cutting/Horizontal themes

[23] **Terminology and tone:** The label 'Risk Seeking', and some of the supporting language, was felt to carry a 'tech start-up' or private-sector connotation. A recommendation was made to retain the three-level scale but reword the 'Risk Seeking' label/descriptor to 'Risk Open' to reflect public-sector language emphasising prudent and adaptive leadership, and to also review the supporting wording across all categories for the same tone. This updated content was endorsed by ARC.

[24] **Adapting transformation concepts to a public mandate:** A desire was expressed for disciplined improvement and modernisation, alongside a clear caution against importing private-sector transformation models into a democratic institution without adapting them to public mandate, accountability, affordability and long-term institutional coherence.

[25] **Category structure:** The category structure was largely endorsed. No new Level One categories are recommended. Cyber should remain within Technology (separating it would weaken integrated risk thinking), and media/reputation is better handled within Stakeholder & Community than as a new category. Mana Whenua Partnership Risk had mixed responses, with split feedback on keeping the category, or absorbing this under Stakeholder & Community Risk and Regulatory & Legislative Risk.



Matters for decision

[26] One matter is referred to Council for decision: the treatment of the Mana Whenua Partnership Risk category. The options, and the impacts of both option are then set out in full. ARC made no firm recommendation on this matter.

[27] **Governance Decision Required: Mana Whenua Partnership Risk**
Mana Whenua Partnership is currently a standalone Level One category with the risk appetite threshold of 'Risk Averse'. Workshop feedback was that Te Tiriti o Waitangi responsibilities are enduring obligations and relationships, not simply risks to be managed, with feedback balanced between whether the category should be retained or removed, and incorporated within "Regulatory & Legislative Compliance Risk" and "Stakeholder & Community Risk".

[28] **Option 1: retain as a standalone Level One category.**

a. **Positive:**

i. Maintains strategic visibility, signalling that ORC's Te Tiriti o Waitangi obligations warrant dedicated governance attention.

ii. Preserves a single, clear line of sight for monitoring, reporting, and trend data, with one identifiable risk owner and a clean assurance history.

iii. Allows the category's appetite setting (Risk Averse) to reflect the partnership on its own terms, rather than being blended with risks that carry a different tolerance.

b. **Negative:**

i. Separates Mana Whenua Partnership from the related “Regulatory & Legislative Compliance Risk” and “Stakeholder & Community Risk” categories, and despite the overlap with relationship-building activity and compliance monitoring, this may result in segregated approaches rather than these risk issues being considered holistically.

ii. Adds a 14th Level One category to track and report against, when the underlying obligation could, in principle, be expressed through existing categories.

[29] **Option 2: Incorporate into Stakeholder & Community and Regulatory & Legislative Compliance.**

a. **Positive:**

i. Recognises the partnership as an enduring relationship and obligation, embedded within categories that cover related dynamics, enabling stakeholder and compliance considerations to be viewed holistically.

ii. Te Tiriti anchors both an enduring relationship (Stakeholder & Community) and a compliance obligation (Regulatory & Legislative Compliance) - the dual placement reflects the dual nature of our obligation.

iii. Reduces the overall category count, simplifying the Level One structure.

b. **Negative:**

i. The Stakeholder & Community statement would need to cover several distinct domains at once - stakeholder relationships, community trust, media and reputation, and the Te Tiriti partnership - which are driven by different dynamics and owned by different parts of the organisation. This widens the statement's scope and may require a correspondingly larger set of key performance indicators to monitor each component.

ii. A single appetite rating per category means the category's overall position is driven by its worst-performing component. Mana Whenua Partnership currently sits at Risk Averse, against Risk Balanced for Stakeholder & Community; combining them either understates ORC's low tolerance for partnership failure or overstates its tolerance for general stakeholder and media matters, unless the appetite settings are reviewed to resolve this directly.

iii. Ownership and escalation would be shared across two categories rather than held in one place, which has implications for how a partnership-specific issue is identified, escalated, and tracked over time.

iv. Framing the relationship with iwi inside a general stakeholder, community and media category risks a category error that reduces an enduring partnership to a routine relationship, which could cause partnership harm.

[30] **Under Option 2, the reworded statements would read:**

a. ***Stakeholder & Community Risk:*** *‘Risk that loss of confidence and trust among mana whenua, iwi, communities, partners, regulators, or other key stakeholders - including failure to partner effectively with Māori in a way that honours Te Tiriti o Waitangi as an enduring relationship and obligation - limits ORC’s ability to*

influence outcomes, secure support, or implement strategic initiatives, resulting in poorer environmental outcomes and missed opportunities to strengthen long-term regional resilience.'

b. ***Regulatory & Legislative Compliance Risk: '****Risk that ORC fails to comply with applicable laws, regulations, codes, and standards - particularly its statutory responsibilities in planning, natural hazards, regulatory functions, and its obligations under Te Tiriti o Waitangi - resulting in legal sanctions, financial penalties, service disruption, or loss of public trust.'*

SUMMARY OF CONSIDERATIONS

COMMUNITY OUTCOMES

This work aligns with the following community outcomes from the ORC 2024-2034 Long-Term Plan:

Whole of Organisation

This work supports the whole organisation and, therefore, all Community Outcomes.

ALIGNMENT WITH CENTRAL GOVERNMENT LEGISLATION

There is no specific national policy statement or central government direction that is directly applicable to this work.

ALIGNMENT WITH ORC INTERNAL POLICY

There is no specific ORC policy that is directly applicable to this work.

FINANCIAL CONSIDERATIONS

The budget for this work was approved through the [2024-2034 Long-Term Plan / 2026-27 Annual Plan] and comes from the [Regional Leadership / Environment – Climate Change and Resilience / Transport / Council Organisation] activity budget.

LEGAL/COMPLIANCE RISK

There is insignificant/minor risk that decisions arising from this report could expose Council to litigation, regulatory non-compliance, or breach of policy/legislation.

REPUTATIONAL RISK

There is insignificant/minor risk that decisions arising from this report could adversely impact Council's reputation or community trust.

CLIMATE RESILIENCE

The impacts of climate-related risks (e.g. flooding, drought, extreme winds, coastal erosion, wildfires) on this work has not been assessed.

CARBON EMISSIONS

The implications of this work on organisational or regional greenhouse gas emissions has not been assessed.

HE MAHI RAU RIKA: SIGNIFICANCE, ENGAGEMENT AND MĀORI PARTICIPATION POLICY

This work is of LOW significance as assessed against He Mahi Rau Rika.

ENGAGEMENT WITH MANA WHENUA

There has been no engagement with mana whenua or Māori specifically for this work.

STAKEHOLDER ENGAGEMENT

There has been no engagement with external stakeholders and/or the public specifically for this work.

COMMUNICATIONS

Internal communication will be had with risk owners to communicate the final framework and develop key performance indicators for reporting.

NEXT STEPS

[31] Subject to Council's decision on the Mana Whenua Partnership category and adoption of the framework, the Risk Appetite Framework will be finalised and then monitoring indicators developed for each category.

[32] The framework will be further embedded through the Risk & Control Assessment rollout, and in regular risk reporting to ARC.

ATTACHMENTS

1. Risk Appetite Framework - Council Workshop Feedback [**9.4.1** - 9 pages]
2. Risk Appetite Framework - Council [**9.4.2** - 21 pages]

Risk Appetite Framework: Council Workshop 28th May 2026

Category-by-category feedback and recommendations

The table below records the appetite level presented at the workshop, the feedback received for each category, and the recommended action and/or response.

Category	Appetite	Council workshop feedback	Risk team response & recommendation
1. Operational	Balanced	Supports the category. Notes local government operates in a different accountability environment to corporate models, and that operational risk here also captures the cumulative effects of fragmentation, duplication, inconsistent delivery and loss of public confidence. Make it clear this relates to administrative risk. Some public-facing areas may warrant a lower tolerance where performance directly affects public trust, regulatory confidence or long-term financial exposure. Acknowledge that this captures operational risk that falls between other specific categories such as financial or regulatory compliance risk.	Action: Retain Balanced. Expand the rationale to reflect the public-sector accountability context and cumulative service-delivery effects and note that selected public-facing processes carry a lower working tolerance, managed through monitoring indicators.

2. Strategic	Seeking	'Risk Seeking' may read as private-sector language or institutional activism rather than disciplined strategic leadership (suggested 'strategically adaptive' / 'disciplined innovation'). Statement should signal enabling outcomes and innovation without increasing internal friction and should recognise both over-caution (institutional inertia) and overreach (mandate expansion, consultation fatigue). Seeks a clear boundary between strategic ambition and democratic authorisation. Acknowledging the organisation's uncertain future in a reform environment, is 'risk seeking' (now Risk Open) appropriate given this is a future focused risk.	Action: Retain a higher appetite but reframe the label and descriptor toward disciplined, adaptive strategic leadership by using the term "Risk Open". Amend the statement to capture both over-caution and overreach as strategic risks and add a framing note on the boundary between strategic ambition and democratic mandate.
3. Technology	Averse (Cyber) / Seeking (Innovation)	Cyber is no longer purely an IT issue and should be framed more broadly. Caution against equating digital expansion with organisational improvement. Dual appetite risks ambiguity	Action: Retain the dual appetite and single category (do not split Cyber out). Sharpen both statements to clarify the innovation / operational-exposure boundary, broaden cyber framing beyond

		over where disciplined innovation ends and operational exposure begins. Cyber should NOT be split into its own Level One category - this would weaken integrated risk thinking. Adoption should remain aligned with democratic accountability and human oversight ('intelligent enablement').	IT, and add explicit reference to data governance, human oversight and accountable adoption of new technology, including AI.
4. People	Balanced	Workforce risk is a broader systems issue spanning People and Health, Safety & Wellbeing - not simply wellbeing - reflecting organisational complexity, consultation load and the cumulative effect of strategic expansion. Leadership and succession risk should carry a lower tolerance than balanced, given institutional knowledge, specialist expertise and long-term relationships are difficult to rebuild in a specialised regional environment.	Action: Retain Balanced for the category, but add explicit recognition that leadership, succession and specialist-capability risk carry a lower working tolerance reflected in monitoring indicators. Clarify the People / HS&W boundary in supporting guidance to avoid gaps.
5. Env: Hazard & Climate	Averse	Be clear what 'Risk Averse' means in practice - some hazard exposure is unavoidable, so the governance question is	Action: Retain Averse, but clarify it applies to avoidable harm and non-compliance, not to the inherent uncertainty of complex natural

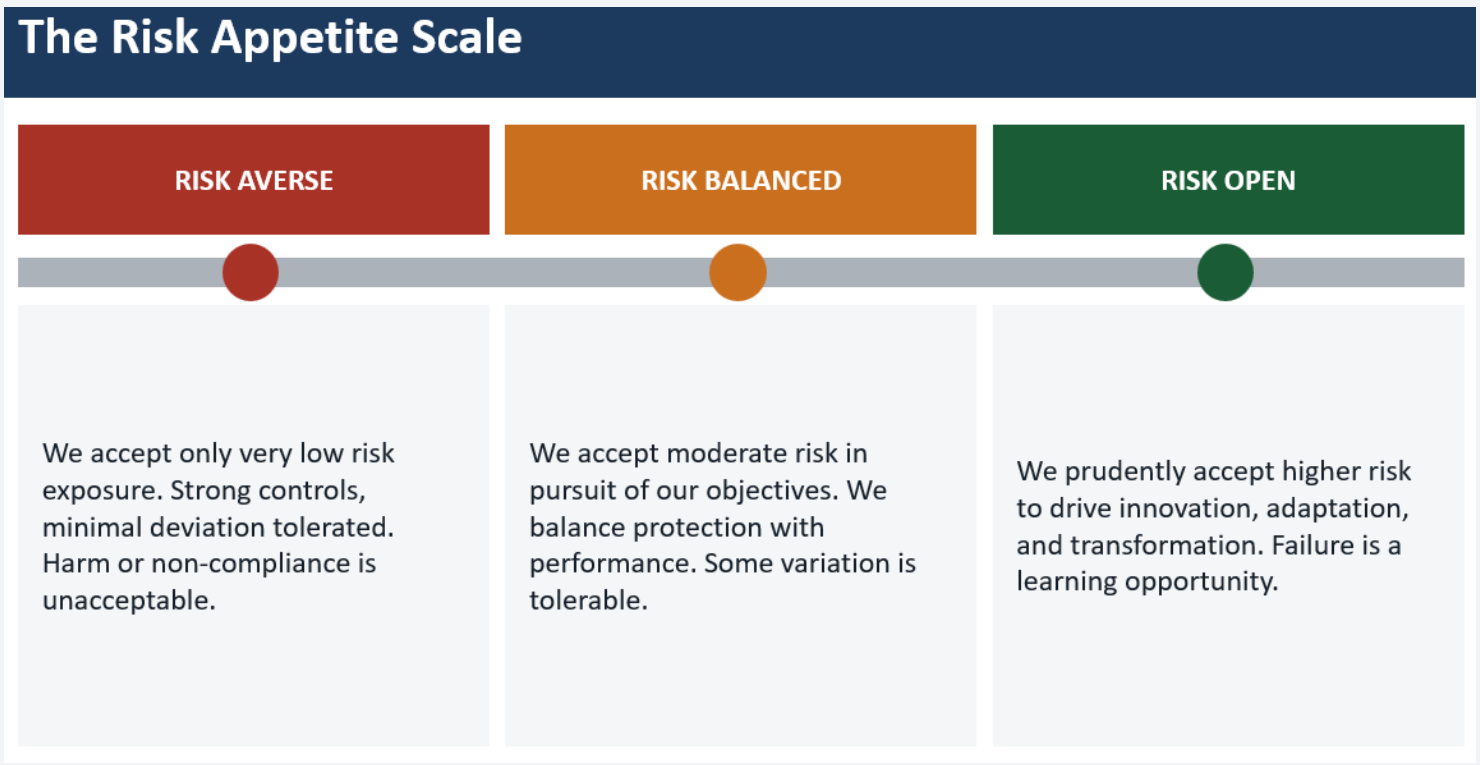
		whether ORC is building an adaptive, prioritised, coordinated system, not whether risk can be eliminated. An overly averse posture can create a defensive, process-heavy culture. Distinguish ORC's role as a responder to hazards from its role as a regulator shaping land-use decisions.	systems, and that the appetite supports adaptive, prioritised resilience. Make ORC's responder and regulator roles explicit.
6. Env: Sustainability & Protection	Balanced	Members supported Balanced provided it is read as active, not passive, stewardship. One suggested a possible split - Risk Averse for protecting existing environmental values, Risk Balanced for making improvements but was unsure it would work. Members asked that the statement explicitly add human / community health and environmental quality (community, not staff). Earlier feedback cautioned against artificial separation from Hazard & Climate and against rigidly tying appetite to RPS targets.	Action: Retain a single Balanced appetite with wording confirming active stewardship and adding human / community health and environmental quality. The dual-appetite split is noted as an option, but a single Balanced appetite with clarifying language is recommended to avoid category proliferation and artificial separation from Hazard & Climate. Reference RPS targets as context, not fixed thresholds.
7. Regulatory Compliance	Averse	Supports Averse. Suggests naming the specific statutory functions (planning,	Action: Retain Averse. Reference ORC's key statutory functions explicitly and add

		natural hazards, regulatory) whose failure consequences are significant enough to be recognised explicitly. Distinguish genuinely material failures from lower-level procedural issues.	wording distinguishing material statutory breaches from minor procedural matters, managed proportionately.
8. Mana Whenua Partnership	Averse	Te Tiriti responsibilities are enduring obligations and relationships, not simply risks to be managed. The statement needs to be more operationally clear and could be anchored in ORC's statutory responsibilities. Widely accepted as important but general consensus on the category to be removed or absorbed into Regulatory & Legislative Compliance Risk and Stakeholder and Community Risk.	Action: Council Decision TBC Option 1. Status Quo - Retain Mana Whenua Partnership Risk as an ORC Level One risk category. Option 2. Incorporate into the 'Stakeholder & Community Risk' and reframe so that the partnership is expressed as an enduring obligation and relationship (with the risk being failure to honour it), whilst anchoring it within 'Regulatory & Legislative Compliance Risk'. Seek to confirm wording with ORC Māori advisor.
9. Stakeholder & Community	Balanced	Balanced appetite supported ('fine'). Suggests clearer separation of community trust, institutional relationships and	Action: Retain the category and Balanced appetite but distinguish within the statement (or supporting indicators) between community / stakeholder trust and

		public-narrative / media management, as these are related but not always driven by the same dynamics or managed through the same responses.	media / reputation management. Recommend a sub-statement rather than a new Level One category, to preserve structure. Absorb Mana Whenua Partnership obligations into this category.
10. Health, Safety & Wellbeing	Averse	Probably deserves more specificity on physical versus psychosocial safety. Should explicitly recognise the diversity of operating environments - field operations, remote work and contractors - as risk profiles are not uniform.	Action: Retain Averse. Expand the statement to cover both physical and psychosocial safety explicitly, and to recognise field, remote and contractor operating environments.
11. Finance	Averse	Day-to-day financial controls and longer-term investment risk require different governance lenses - operational stewardship versus strategic capital allocation and long-term regional value. Port Otago should not be named in the statement; the framework should be principle-based, with material exposures and strategic assets monitored through supporting indicators and governance reporting.	Action: Retain Averse. Reword to distinguish operational financial control from strategic investment / capital decisions. Remove the named investment from the statement; manage material exposures (including Port Otago) through supporting indicators and governance reporting.

12. Funding	Balanced	The escalation threshold (Balanced to Averse) needs to be more clearly articulated, otherwise the appetite is descriptive rather than a genuine decision tool. ORC's growing reliance on external grants and co-funding warrants its own sub-statement.	Action: Retain Balanced. Articulate the conditions under which Funding risk would escalate to Averse, and add a sub-statement on ORC's increasing reliance on external funding and co-funding arrangements.
13. Market	Balanced	Current market pressures - construction cost inflation and contractor shortages - materially affect delivery, project cost and timeframes and should be called out. 'Value for money' should more explicitly reference procurement and delivery risk.	Action: Retain Balanced. Reference current market pressures and strengthen the link to procurement and delivery risk in the statement.
14. External & Political	Balanced	Balanced appetite is appropriate, so long as it does not translate into passivity. ORC still needs the capability and confidence to proactively influence, adapt and position the region rather than react.	Action: Retain Balanced. Add wording making clear that a Balanced appetite requires proactive influence and positioning, not passive acceptance.
General Feedback	-	There was general consensus that the categories felt 'about right' with good coverage, though one suggestion that	Categories are retained as presented, except in the Mana Whenua Partnership Risk category - options will need to go to Council.

		categories could be reduced or simplified.	
	-	Members' discomfort with 'Seeking' and 'Averse' and the implied meaning of these thresholds was a cross-cutting/horizontal framework-wide point rather than a single-category one.	Action: Descriptions have been amended to provide context and intent, noted in Risk Appetite Scale below. Risk Seeking has been changed to Risk Open.



Summary of recommended changes

- Retain the category structure and the three-level appetite scale, with no new Level One categories and no headline appetite level reversed.
- Reframe the 'Risk Seeking' as 'Risk Open' and thresholds to public-sector language and review supporting wording across categories for tone (changes included above). Recommendation of 'Risk Open'.

- Amend the Strategic statement to capture both over-caution and overreach and add framing on the boundary between strategic ambition and democratic mandate.
- Strengthen statements to reflect ORC's public-sector accountability context, statutory functions, and the distinction between material and procedural matters (notably Operational, Regulatory Compliance, Finance).
- Recognise lower working tolerances for specific sub-areas through supporting indicators rather than separate appetite levels (public-facing operations; leadership and succession within People).
- Clarify dual-appetite boundaries and broaden cyber framing in Technology, with explicit reference to data governance, human oversight and accountable adoption of new technology (including AI).
- Add sub-statements where requested (external-funding reliance within Funding; media/reputation within Stakeholder & Community) and articulate the Funding escalation threshold.

Council options for substantive changes

- Option 1. Status Quo - Retain Mana Whenua Partnership Risk as an ORC Level One risk category.
- Option 2. Incorporate into the 'Stakeholder & Community Risk' and reframe so that the partnership is expressed as an enduring obligation and relationship (with the risk being failure to honour it), whilst anchoring it within 'Regulatory & Legislative Compliance Risk'.

Risk Appetite Framework

Understanding the Risk Appetite Framework

What it is, what it contains, and why it matters for governance.

WHAT IT IS

The Risk Appetite Framework (RAF) sets out **how much and what type of risk** ORC is willing to accept in pursuit of its objectives - before action is taken to reduce or transfer it. It turns Council's strategic intent into clear, agreed risk boundaries, and operationalises ORC's Enterprise Risk Management Framework (ERMF).

BENEFITS FOR GOVERNANCE

- **Common language —** A shared basis for risk-based decisions across ORC and with Council.
- **Consistent, defensible decisions —** Guides delegation, prioritisation and trade-offs — less subjective, more transparent.
- **Clear escalation —** Defines when exposure should be escalated to ELT, ARC and Council.
- **Accountability & assurance —** Supports democratic accountability, oversight and independent assurance.

COMPONENTS

1. **Risk categories**
   Level One domains spanning ORC's operations, environment, finances, people and relationships.
2. **Risk statements**
   A plain-language statement defining the nature of the risk in each category.
3. **Appetite scale**
   Three levels — Risk Averse, Risk Balanced, Risk Open — describing tolerance.
4. **Assigned appetite**
   Each category is set at the appetite level that suits its risk domain.
5. **Monitoring indicators (KRIs)**
   Signals (to follow) that flag when exposure moves outside acceptable bounds.

The Risk Appetite Scale

RISK AVERSE	RISK BALANCED	RISK OPEN
We accept only very low risk exposure. Strong controls, minimal deviation tolerated. Harm or non-compliance is unacceptable.	We accept moderate risk in pursuit of our objectives. We balance protection with performance. Some variation is tolerable.	We prudently accept higher risk to adapt, innovate and improve outcomes, where the potential public value justifies it. Decisions are deliberate, well-governed and within our mandate.

ORC's categories span all three appetite levels — reflecting the different nature of each risk domain.

Risk Categories — At a Glance

Decision to be made whether to remove as a L1 Category and absorb into Risk 7 & 9.

1	Operational	RISK BALANCED
2	Strategic	RISK OPEN
3	Technology	AVERSE (Cyber) / OPEN (Innovation)
4	People	RISK BALANCED
5	Environment: Hazard & Climate	RISK AVERSE
6	Environment: Sustainability	RISK BALANCED
7	Regulatory & Legislative Compliance	RISK AVERSE
8	Mana Whenua Partnership	RISK AVERSE
9	Stakeholder & Community	RISK BALANCED
10	Health, Safety & Wellbeing	RISK AVERSE
11	Finance	RISK AVERSE
12	Funding	RISK BALANCED
13	Market	RISK BALANCED
14	External & Political Risk	RISK BALANCED

Purpose & How to Read This Pack

This pack consolidates the Council workshop feedback (28 May 2026) and the ARC discussion (25 June 2026). For each of the Level One categories it shows the original statement, the workshop feedback, the Risk & Assurance action, and the REFINED statement - so Council can see the full line of reasoning before the framework progresses to Council.

ORIGINAL STATEMENT

The statement as presented at the Council workshop.

COUNCIL WORKSHOP FEEDBACK

What elected members raised, by category.

RISK & ASSURANCE - ACTION

The recommended response and rationale.

REFINED STATEMENT

The revised statement incorporating feedback.

FOR COUNCIL:

Decision - Mana Whenua Partnership

Retain as a standalone Level One category, or incorporate into Stakeholder & Community and Regulatory Compliance. Two options shown with the statement rewrites and the impacts.

Framework-Wide Changes

Cross-cutting themes raised across the workshop, applied to every category.

1 Terminology: 'Risk Seeking' → 'Risk Open'

Members found 'Risk Seeking' carried a private-sector / start-up connotation. The three-level scale is retained, with the top level reworded to 'Risk Open' to reflect prudent, adaptive public-sector leadership.

2 Public-sector tone & mandate

Supporting wording reviewed across all categories to reflect ORC's statutory role, democratic accountability and affordability - rather than importing corporate transformation language unchanged.

3 No new Level One categories

The structure was felt to be 'about right'. Cyber stays within Technology (splitting it would weaken integrated risk thinking); media / reputation handled as a sub-statement within Stakeholder & Community.

4 Material vs procedural

Several statements (Operational, Regulatory Compliance, Finance) now distinguish genuinely material exposures from minor procedural matters, managed proportionately through indicators.

1 Operational Risk

RISK BALANCED

ORIGINAL STATEMENT

Risk that failures in internal processes, systems, or people disrupt operations, prevent or reduce the delivery of reliable, timely, and effective services, or result in financial or regulatory consequences.

REFINED STATEMENT

Risk that failures in internal processes, systems, or people disrupt operations, prevent or reduce the delivery of reliable, timely, and effective public services, or compromise ORC's operational resilience.

COUNCIL WORKSHOP FEEDBACK

Supports Balanced. Local government operates in a different accountability environment to corporate models. This category also captures the cumulative effects of fragmentation, duplication and inconsistent delivery on public confidence. Some public-facing areas may warrant a lower tolerance where performance affects public trust or financial exposure.

RISK & ASSURANCE - ACTION

Retain Balanced. Expand the rationale to reflect the public-sector accountability context and cumulative service-delivery effects, and note that selected public-facing processes carry a lower working tolerance, managed through monitoring indicators.

2 Strategic Risk

RISK OPEN

was 'Risk Seeking'

ORIGINAL STATEMENT

Risk that strategic decisions, investment choices, or failure to adapt to change undermine ORC's ability to achieve long-term outcomes, manage trade-offs, or realise intended benefits.

REFINED STATEMENT

Risk that undisciplined or inadequate strategic decisions, or failure to adapt to necessary change undermine ORC's ability to achieve long-term outcomes, manage trade-offs, or realise intended benefits within ORC's democratic mandate.

COUNCIL WORKSHOP FEEDBACK

'Risk Seeking' may read as private-sector language or activism rather than disciplined leadership. Recognise both over-caution (inertia) and overreach (mandate expansion, consultation fatigue). Seeks a clear boundary between strategic ambition and democratic authorisation. Is the highest appetite right given reform uncertainty?

RISK & ASSURANCE - ACTION

Retain a higher appetite but reframe the label to 'Risk Open'. Amend the statement to capture both over-caution and overreach, and add framing on the boundary between strategic ambition and democratic mandate. Appetite level reviewed and confirmed at Risk Open.

3 Technology Risk

AVERSE Cyber | **OPEN** Innovation

ORIGINAL STATEMENTS

INNOVATION Risk that inadequate digital capability, resilience, or technology investment limits ORC's ability to modernise services, trial innovative digital solutions, improve efficiency and service delivery, protect critical information, or support future operating models.

CYBER Risk that system failures, cyber-attacks, data breaches, technology obsolescence, or performance gaps disrupt operations, compromise information integrity, or impair service delivery.

REFINED STATEMENTS

INNOVATION Risk that inadequate digital capability, resilience, or technology investment limits ORC's ability to modernise services, trial beneficial digital solutions, improve service delivery, or support future operating models pursued with discipline and human oversight.

CYBER Risk that system failures, cyber-attacks, data breaches, weak data governance, or technology obsolescence disrupt operations, compromise information integrity, or impair service delivery - extending to data management, and accountable adoption of emerging technology.

COUNCIL WORKSHOP FEEDBACK

Cyber is no longer purely an IT issue - frame more broadly. Do not split Cyber into its own Level One category; this would weaken integrated risk thinking. Caution against equating digital expansion with improvement. Adoption should align with human oversight ('intelligent enablement').

RISK & ASSURANCE - ACTION

Retain the dual appetite and single category (do not split Cyber out). Sharpen both statements to clarify the innovation / operational-exposure boundary, broaden cyber framing beyond IT, and add explicit reference to data governance, human oversight and accountable adoption of new technology, including AI.

4 People Risk

RISK BALANCED

ORIGINAL STATEMENT

Risk that workforce attraction, retention, wellbeing, performance, leadership, or capability and capacity constraints reduce organisational resilience, service delivery, and project execution, resulting in degraded short-term performance and weakened long-term capability.

REFINED STATEMENT

Risk that workforce attraction, retention, wellbeing, performance, leadership, or capability and capacity constraints reduce organisational resilience, service delivery, and project execution, resulting in degraded short-term performance and weakened long-term capability.

Statement retained; lower working tolerance for leadership / succession tracked through monitoring indicators.

COUNCIL WORKSHOP FEEDBACK

Workforce risk is a broader systems issue spanning People and Health, Safety & Wellbeing - not simply wellbeing. Leadership and succession risk should carry a lower tolerance than Balanced, given institutional knowledge and specialist expertise are difficult to rebuild in a specialised regional environment.

RISK & ASSURANCE - ACTION

Retain Balanced. Add explicit recognition that leadership, succession and specialist-capability risk carry a lower working tolerance, reflected in monitoring indicators. Clarify the People / HS&W boundary in supporting guidance to avoid gaps.

5 Environment Risk: Hazard & Climate

RISK AVERSE

ORIGINAL STATEMENT

Risk that climate-driven and natural hazard events (flooding, erosion, landslides, drought, severe weather) are not effectively anticipated, mitigated, or responded to, resulting in harm to communities, the environment, and ORC's ability to maintain service continuity or meet statutory obligations.

REFINED STATEMENT

Risk that avoidable harm from climate-driven and natural hazard events (flooding, erosion, landslides, drought, severe weather) through inadequate anticipation, mitigation, or response, results in harm to communities, the environment, and ORC's failure to maintain service continuity and meet statutory obligations.

COUNCIL WORKSHOP FEEDBACK

Be clear what 'Risk Averse' means in practice - some hazard exposure is unavoidable. The question is whether ORC is building an adaptive, prioritised system, not whether risk can be eliminated. Distinguish ORC's role as a hazard responder from its role as a land-use regulator.

RISK & ASSURANCE - ACTION

Retain Averse, clarified to apply to avoidable harm and non-compliance - not the inherent uncertainty of complex natural systems - and to support adaptive, prioritised resilience. Make ORC's responder and regulator roles explicit.

6 Environment Risk: Sustainability & Protection

RISK BALANCED

ORIGINAL STATEMENT

Risk that inadequate long-term planning, regulation, monitoring, or management of natural resources leads to environmental degradation, loss of biodiversity, declining environmental quality, or failure to achieve sustainable outcomes over time.

REFINED STATEMENT

Risk that inadequate long-term planning, regulation, monitoring, or proactive management of natural resources leads to environmental degradation, loss of biodiversity, declining environmental and community health, or failure to achieve sustainable outcomes over time.

COUNCIL WORKSHOP FEEDBACK

Supported Balanced provided it is read as active, not passive, stewardship. Add human / community health and environmental quality explicitly. Earlier feedback cautioned against artificial separation from Hazard & Climate and against rigidly tying appetite to RPS targets.

RISK & ASSURANCE - ACTION

Retain a single Balanced appetite, with wording confirming active stewardship and adding human / community health and environmental quality. RPS targets referenced as context, not fixed thresholds. A dual-appetite split was considered but not adopted, to avoid category proliferation.

7 Regulatory Compliance Risk

RISK AVERSE

ORIGINAL STATEMENT

Risk that ORC fails to comply with applicable laws, regulations, codes, and standards, resulting in legal sanctions, financial penalties, service disruption, or loss of public trust.

REFINED STATEMENT

Risk that ORC fails to comply with applicable laws, regulations, codes, and standards - particularly statutory responsibilities in planning, natural hazards, and regulatory functions - resulting in legal sanctions, financial penalties, service disruption, or loss of public trust.

Te Tiriti o Waitangi anchoring depends on the Mana Whenua decision (Option 2) - see Mana Whenua slides.

COUNCIL WORKSHOP FEEDBACK

Supports Averse. Suggests naming the specific statutory functions (planning, natural hazards, regulatory) whose failure consequences are significant enough to recognise explicitly, and distinguishing genuinely material failures from lower-level procedural issues.

RISK & ASSURANCE - ACTION

Retain Averse. Reference ORC's key statutory functions explicitly and distinguish material statutory breaches from minor procedural matters, managed proportionately.

8 Stakeholder & Community Risk

RISK BALANCED

ORIGINAL STATEMENT

Risk that loss of confidence and trust among iwi, communities, partners, regulators, or other key stakeholders limits ORC's ability to influence outcomes, secure support, or implement strategic initiatives.

REFINED STATEMENT

Risk that loss of confidence and trust among mana whenua, iwi, communities, partners, regulators, or other key stakeholders limits ORC's ability to influence outcomes, secure support, or implement strategic initiatives.

Incorporation of Mana Whenua partnership depends on the Mana Whenua decision (Option 2) - see Mana Whenua slides.

COUNCIL WORKSHOP FEEDBACK

Balanced appetite supported. Suggests clearer separation of community trust, institutional relationships and public-narrative / media management - related, but not always driven by the same dynamics or managed through the same responses.

RISK & ASSURANCE - ACTION

Retain the category and Balanced appetite, distinguishing community / stakeholder trust from media / reputation management via KRIs rather than a new category.

Mana Whenua Partnership - Treatment

DECISION REQUIRED

CURRENT LEVEL ONE STATEMENT · Risk Averse

Risk that failure to partner effectively with Māori in a way that honours Te Tiriti o Waitangi erodes trust, weakens decision-making, limits integration of mātauranga Māori, and results in poorer environmental outcomes and missed opportunities to strengthen long-term regional resilience.

WORKSHOP FEEDBACK & ARC

Te Tiriti responsibilities are enduring obligations and relationships, not simply risks to be managed. Widely accepted as important, with general consensus that the category could be removed or absorbed into Regulatory Compliance and Stakeholder & Community.

ARC made no firm recommendation and referred to Council for decision.

OPTION 1 · Status Quo

Retain Mana Whenua Partnership as a standalone ORC Level One risk category.

IMPACT Maintains the relationship's strategic visibility and significance of obligation - signalling it is worthy of dedicated governance attention and protection.

OPTION 2 · Incorporate

Absorb into Stakeholder & Community (as an enduring relationship) and anchor Te Tiriti o Waitangi within Regulatory Compliance. No separate Level One category.

IMPACT Reduces standalone visibility, recognises the partnership alongside other community stakeholder relationships.

Option 2 - How the Statements Would Change

IF OPTION 2 IS ADOPTED

BEFORE	AFTER (reworded)
Stakeholder & Community Risk	
Risk that loss of confidence and trust among iwi, communities, partners, regulators, or other key stakeholders limits ORC's ability to influence outcomes, secure support, or implement strategic initiatives.	Risk that loss of confidence and trust among **mana whenua,** iwi, communities, partners, regulators, or other key stakeholders - **including failure to partner effectively with Māori in a way that honours Te Tiriti o Waitangi as an enduring relationship and obligation** - limits ORC's ability to influence outcomes, secure support, or implement strategic initiatives, **resulting in poorer environmental outcomes and missed opportunities to strengthen long-term regional resilience.**
Regulatory & Legislative Compliance Risk	
Risk that ORC fails to comply with applicable laws, regulations, codes, and standards - particularly its statutory responsibilities in planning, natural hazards, and regulatory functions - resulting in legal sanctions, financial penalties, service disruption, or loss of public trust.	Risk that ORC fails to comply with applicable laws, regulations, codes, and standards - particularly its statutory responsibilities in planning, natural hazards, regulatory functions, and **its obligations under Te Tiriti o Waitangi** - resulting in legal sanctions, financial penalties, service disruption, or loss of public trust.

Net effect: Mana Whenua Partnership ceases to exist as a separate Level One category; the obligation and relationship are carried withinthe two statements above.

9 Health, Safety & Wellbeing Risk

RISK AVERSE

ORIGINAL STATEMENT

Risk that unsafe work environments, inadequate safety practices, or poor wellbeing support result in harm to our people and compromise ORC's ability to sustain performance.

REFINED STATEMENT

Risk that unsafe work environments, inadequate safety practices, or poor wellbeing support result in harm to our people - covering both physical and psychosocial safety, across ORC's diverse operating environments (office, field, remote, contractor).

COUNCIL WORKSHOP FEEDBACK

Deserves more specificity on physical versus psychosocial safety. Should explicitly recognise the diversity of operating environments - field operations, remote work and contractors - as risk profiles are not uniform.

RISK & ASSURANCE - ACTION

Retain Averse. Expand the statement to cover both physical and psychosocial safety explicitly, and to recognise ORC's field, remote and contractor operating environments.

10 Financial Risk

RISK AVERSE

ORIGINAL STATEMENT

Risk of financial loss, instability, or reputational damage arising from weak financial controls, cost overruns, fraud, credit exposure, that compromises ORC's operational and capital funding capacity and public confidence in its financial stewardship.

REFINED STATEMENT

Risk of financial loss, instability, or reputational damage arising from weak operational financial controls, cost overruns, fraud, or strategic investment miscalculation, that compromises ORC's funding capacity and public confidence in its financial stewardship.

COUNCIL WORKSHOP FEEDBACK

Day-to-day controls and longer-term investment risk require different governance lenses. Port Otago should not be named in the statement - the framework should be principle-based, with material exposures and strategic assets monitored through supporting indicators and governance reporting.

RISK & ASSURANCE - ACTION

Retain Averse. Reword to distinguish operational financial control from strategic investment and capital decisions. Remove the named investment; manage material exposures (including Port Otago) through supporting indicators and governance reporting.

11 Funding Risk

RISK BALANCED

ORIGINAL STATEMENT

Risk that volatility, investment underperformance, or inflexibility in funding sources limit ORC's ability to sustainably plan & deliver the Annual and Long-Term Plan, meet statutory and service obligations, adequately resource day-to-day operations and priority programmes, invest for the future, respond to emerging needs, and maintain long-term financial resilience.

REFINED STATEMENT

Risk that volatility, investment underperformance, or inflexibility in funding sources limit ORC's ability to sustainably plan & deliver the Annual and Long-Term Plan, meet statutory and service obligations, adequately resource day-to-day operations and priority programmes, invest for the future, respond to emerging needs, and maintain long-term financial resilience.

COUNCIL WORKSHOP FEEDBACK

The escalation threshold (Balanced to Averse) needs clearer articulation, otherwise the appetite is descriptive rather than a genuine decision tool. ORC's growing reliance on external grants and co-funding warrants its own sub-statement.

RISK & ASSURANCE - ACTION

Retain Balanced. Articulate the conditions under which Funding risk would exceed tolerance via KRI thresholds that highlight changes in ORC's reliance on external funding and co-funding arrangements.

12 Market Risk

RISK BALANCED

ORIGINAL STATEMENT

Risk that shifts in economic conditions, labour and supplier markets, or community demand reduce ORC's ability to plan effectively, manage cost pressures, or achieve value for money over time.

REFINED STATEMENT

Risk that shifts in economic conditions, labour and supplier markets, or community demand reduce ORC's ability to plan effectively, manage cost pressures, or achieve value for money over time via procurement and/or delivery of work programmes.

COUNCIL WORKSHOP FEEDBACK

Current market pressures - construction cost inflation and contractor shortages - materially affect delivery, cost and timeframes and should be called out. 'Value for money' should more explicitly reference procurement and delivery risk.

RISK & ASSURANCE - ACTION

Retain Balanced. Reference current market pressures and strengthen the link to procurement and delivery risk in the supporting wording.

13 External & Political Risk

RISK BALANCED

ORIGINAL STATEMENT

Risk that shifts in national, regional, or local political priorities, legislation, or policy affect ORC's mandate, funding, or regulatory authority, constraining delivery of approved programmes and projects and adversely impacting stakeholders and regional outcomes.

REFINED STATEMENT

Risk that ORC's inability to proactively adapt to shifts in national, regional, or local political priorities, legislation, or policy affects ORC's mandate, funding, or regulatory authority, constraining delivery of programmes and adversely impacting stakeholders and regional outcomes.

COUNCIL WORKSHOP FEEDBACK

A Balanced appetite is appropriate, so long as it does not translate into passivity. ORC still needs the capability and confidence to proactively influence, adapt and position the region rather than simply react.

RISK & ASSURANCE - ACTION

Retain Balanced, with wording making clear that a Balanced appetite requires ORC to proactively influence and position the region - not passively accept external change.

9.5. Wanaka-Upper Clutha Public Transport Investigations Business Case

Prepared for:	Council
Report No.	TRN2613
Activity:	Transport Planning
Author:	Robyn Hyde, Acting Planning Transport Lead
Endorsed by:	Anita Dawe (General Manager Regional Planning and Transport)
Date:	29 July 2026
Portfolio Leads:	Cr Hollyer and Cr Somerville, Transport

PURPOSE

[1] To report on the ORC Annual Plan 2025/26 direction to complete a business case for public transport in the Upper Clutha.

[2] To present the completed Public Transport Upper Clutha Investment Case to Council and seek their endorsement of the business case.

EXECUTIVE SUMMARY

[3] Staff have completed a business case which outlines the case for investing in the introduction of a public transport service connecting Wānaka, Albert Town, Three Parks and Lake Hāwea.

[4] The investment case has been prepared in response to the Otago Regional Council (ORC) Long-Term Plan 2024–34 direction to investigate public transport opportunities in communities currently underserved by public transport, and more specifically, the Annual Plan 2025-26 commitment to undertake a business case for the Upper Clutha area.

[5] A wide range of viable options for public transport in the Upper Clutha have been considered and assessed through a structured long-list and short-list evaluation process.

[6] Taking into account the current limited funding environment and strong focus on affordability, the preferred option of a skeleton bus services operating eight trips per day, seven days per week was selected. This option is considered to represent the best value-for-money entry point for establishing public transport in Upper Clutha. There is flexibility to scale up service levels subject to Council appetite and available funding.

[7] The indicative annual operating cost is approximately $1.07 million (plus $100,000 of implementation costs in year 1), and the simplified economic assessment indicates a base Benefit-Cost Ratio (BCR) of approximately 1.1. Sensitivity testing shows performance improves significantly as population and patronage increase over time.

[8] If endorsed, staff recommend that this project be included for consultation as part of the LTP process. The recommendation would be that the trial is paid for through targeted rate funding to meet the local share (49%) of total operating costs of a two-year trial through ORC's Long-Term Plan 2027-2030.

[9] Co-funding for this service would be sought from NZTA through ORC's 2027-2030 RLTP (currently under development) future Service Improvement Programme bid.

[10] Delivery of the preferred option is considered achievable within existing ORC staff resources and governance arrangements.

[11] Initiating this project would provide people in the Upper Clutha with greater choice in how they safely move around to participate in economic and social opportunities. It would also contribute to reducing transport-related emissions through less reliance on private vehicles.

RECOMMENDATION

That the Council:

1) ***Notes*** *this report.*
2) ***Approves*** *the endorsement of the Public Transport Upper Clutha Investment Case.*
3) ***Notes*** *the preferred option for an Upper Clutha public transport service trial will be included in the transport projects put forward for inclusion in ORC's 2027 Long-Term Plan.*
4) ***Notes*** *the preferred option for an Upper Clutha public transport service trial will be included in ORC's public transport service improvement programme for inclusion in Otago's 2027-2030 Regional Land Transport Plan and 2027-2030 National Land Transport Plan bid.*

BACKGROUND

[12] The Upper Clutha area is experiencing rapid population growth, increasing visitor demand and ongoing transport challenges. The Upper Clutha population has more than doubled since 2012 and is projected to exceed 38,000 residents by 2055.

[13] Affordable transport services in the Upper Clutha are largely absent, and residents remain heavily reliant on private vehicles. This creates barriers to mobility, particularly for young people, older adults, disabled people, lower-income households and visitors.

[14] A local Wānaka service is signalled in the 2025 Regional Public Transport Plan's (RPTP) regional network aspirations (RPTP, p. 61) and is considered to be an integral service to the Otago public transport network (RPTP, p. 120).

[15] Unfunded proposed trial services for Wānaka and Upper Clutha were included in the 2021 RPTP (and subsequent 2025 RPTP). Funding for a Wānaka public transport business case instead of the previously proposed trial service was included (and rated) in the 2024-2034 Long-Term Plan (LTP). Co-funding from the National Land Transport Programme (NLTP) was not secured and a decision was made to remove the Upper Clutha Business Case from the draft Annual Plan 2025/26. Following public consultation and Council deliberation Council resolved [Resolution CM25-160, 25 June 2025 Council meeting] to reinstate the Wānaka Upper Clutha Business Case.

[16] The Wānaka Upper Clutha Community Board has introducing public transport to the Upper Clutha as a top priority for the 2025-2028 triennium. Staff have completed several engagement sessions with community board members during development of this investment case, including a formal briefing session on 12 May 2026.

[17] The completed Public Transport Upper Clutha Investment Case fulfils the ORC Annual Plan 2025/26 direction to complete a Wānaka Upper Clutha Business case investigating public transport options for the Upper Clutha area. It is a critical step in realising the RPTP's key priority of improving regional connectivity and network aspiration to have local public transport services in Wānaka.

[18] The investment case builds on several pieces of previous work including the Wānaka Network Optimisation Single Stage Business Case 2025 commissioned by Queenstown Lakes District Council and the Wānaka Community Shuttle Trials in 2022 and 2023 which were led by Community Networks/LINK Upper Clutha.

DISCUSSION

[19] The **Upper Clutha Public Transport Investment Case** (Attachment 1) outlines the case for investing in the introduction of a public transport service connecting Wānaka, Albert Town, Three Parks and Lake Hāwea.

[20] The case assesses the proposal through the Better Business Case Five Case Model, confirming:

- The need for investment and making a compelling case for change
- A range of potential options have been identified and the feasibility, costs, benefits and risks considered for each option
- The preferred option optimises public value and is commercially viable
- The necessary funding and management arrangements for the successful delivery of the project.

[21] The community needs are the foundational reason for initiating this project. Four investment objectives central to investment in public transport for Upper Clutha are described as:

- Land use and transport integration – public transport is well integrated with land-use and the built environment to support good urban form and well-functioning urban environments.
- Connectivity and choice – People have greater choice in how they move around safely to participate in social and economic opportunities in the Upper Clutha.
- Environmental sustainability – Transport-related emissions are reduced through less reliance on private vehicles.
- Affordability - Public transport is provided at a cost that is affordable to both users and funders.

[22] A broad range of possible public transport service options for the Upper Clutha were developed and assessed through a structured long-list to short-list process. Multi-criteria analysis was undertaken to assess each of the short-list options against the defined investment objectives, critical success factors, (strategic fit, value for money, supplier capacity and capability, affordability and achievability), risks and expected benefits.

[23] Based on the assessment the preferred option is a **skeleton bus service operating eight trips per day, seven days per week** connecting Lake Hāwea, Albert Town, Three Parks and Wānaka. This option is considered to represent the best value-for-money entry point for establishing public transport in Upper Clutha.

[24] An economic assessment was undertaken using NZTA's simplified procedure SP9, which is a simplified method for appraising the economic efficiency of new public transport services and associated infrastructure. The indicative annual operating cost of the preferred option is approximately $1.07 million per year (plus $100,000 of implementation costs in year 1), and has a base Benefit-Cost Ratio (BCR) of approximately 1.1.

[25] Sensitivity testing was carried out to test how sensitive the assessed benefits and costs are to change. For the preferred option the BCRs ranged from 0.5 to 3.7 with the trip generation rate (which estimates the number of people like to use a service) being the most sensitive of all the variables tested.

[26] Over time as population and demand grows, higher frequency and longer service hours will likely be achievable. This will increase the convenience and attractiveness of public transport and achieve the investment objectives and benefits sought to a higher degree.

[27] Staff undertook a market sounding to inform the Commercial Case and confirm market interest and capability in delivering services within the Upper Clutha. This exercise provided a level of assurance of adequate market competition to drive contract pricing and quality service delivery. Operators identified opportunities for collaborative service development and highlighted the key commercial risks as workforce availability, depot requirements, seasonal demand variation and fleet selection.

[28] The planned procurement approach for a service operator would be a one-step open competitive tender.

[29] As part of the business case process, staff propose that this project seek targeted rate funding through Otago Regional Council's Long-Term Plan 2027-2030 process to meet the local share (49%) of total operating costs of the two-year trial (the preferred option).

[30] Co-funding would also be sought from NZTA. The preferred option will form part of ORC's 2027-2030 service improvement programme bid for a three-year programme approval. If NZTA approve the inclusion of this project in ORC's 2027-2030 NLTP PT improvement programme, 51% of the net operating costs will be eligible for funding from NZTA.

[31] Small trials have previously sought general rate funding (for example the trials proposed for Balclutha and the Central sub-region in LTP 2024 – 2034), however the investment required for this proposed trial is significantly higher than those previous trials. For this reason staff suggest that a targeted rate is more appropriate should a trial go ahead. If Council choose to include this in the LTP, staff will develop a suitable targeted rating area based on the service.

[32] A trial provides an opportunity to establish and embed the service in the community before being evaluated and an assessment of its long-term viability completed.

[33] If the trial is considered successful and Council (and NZTA) approved the continuation of the service beyond a trial, staff would recommend a broader targeted rate review of the Queenstown, Upper Clutha and Central Lakes sub-region to understand how to best fund and support public transport across the Otago Central Lakes region.

[34] Passenger fares will be an important source of fare revenue to off-set the running cost of this service.

[35] Council is currently consulting and considering whether to move to a zonal fare structure. It is proposed that, should the trial proceed, the Upper Clutha would operate under a two-zone fare structure (similar to that proposed for Queenstown). Trips within the Wānaka and Albert Town area would be a one zone fare of $2.50, and trips travelling through two zones (for example Wānaka to Lake Hawea) would be subject to a two-zone fare of $3.00.

[36] As noted earlier, funding would need to be secured to progress this project. Should both local share and co-funding from NZTA be forthcoming, staff consider it achievable to launch an introductory level of service in early 2028 using existing ORC staff resources and governance arrangements.

[37] ORC's Transport team would own and manage the project delivery including the design, planning, procurement and management of the service, collaborating with key partners, such as QLDC, NZTA, and the service operator, as well as other stakeholders where relevant.

[38] The investment case (Attachment 1) details the strategic risks and management risks. The following key risks and associated mitigation strategies of the proposed service have been identified:

- If NZTA co-funding is not successfully secured for the initial trial service, then Council would need to consider funding in full, with rate funding to procced with the trial, or delay the trial again. Staff will continue to engage with NZTA to demonstrate the need and value of this service. Funding prioritisation is assessed nationally against all other public transport improvement programmes competing for funding from the NLTP.
- If service frequency or coverage is too limited, residents may perceive the service as inadequate, reducing trust or ridership. Staff will engage with the community during design and early implementation phases and plan the service in an iterative and evidence-led way. An adaptive management approach will be taken throughout the trial period.
- If the service does not generate enough patronage to be financially viable in the long term, then Council could decide to withdraw the service. The service would launch with existing fleet and frequent review periods have been built into the trial evaluation and proposed contract terms to provide Council with options to terminate. It will take time to build patronage and change entrenched travel behaviour patterns. The service would be marketed and promoted including education campaigns to remove barriers for use.
- If Ministry of Education bus services withdraw due to the introduction of public transport, then students' access to school could be worsened and the service could experience capacity issues at peak times. Staff would proactively collaborate with the Ministry of Education to determine students' eligibility and potential additional

service costs. Comprehensive engagement with the community would be required to provide information and receive feedback.

[39] Should the trial service proceed, periodic reviews of the trial's performance against outcomes sought would be undertaken. These would be used to inform ongoing adaptive management of timetables and operational efficiencies, inform future procurement opportunities and scaling of services. They would also be used to keep Council updated and support future funding requests.

[40] Staff recommend Council endorses the Upper Clutha Public Transport Investment Case. The investment case provides a comprehensive assessment of public transport options for Upper Clutha and demonstrates public value in introducing public transport services into the Upper Clutha region. It provides sound evidence to support inclusion of an Upper Clutha service trial in ORC's 2027-2030 Long-Term Plan and ORC's public transport service improvement programme for inclusion in Otago's 2027-2030 Regional Land Transport Plan and 2027-2030 National Land Transport Plan bid.

[41] Endorsement means that the business case has demonstrated, and Council agree, that a case for investment has been established, the preferred option addresses the problem, is strategically aligned, affordable and ready to progress to the next planning stage (e.g. put into the LTP and RLTP).

[42] Implementation of a skeleton (eight trips per day, seven days per week) public transport service will provide a practical and scalable first step towards improving mobility, supporting future growth and creating greater transport choice for Upper Clutha communities.

OPTIONS

[43] **Option 1:** Support the endorsement of the Upper Clutha Public Transport Investment Case.

[44] The Upper Clutha Public Transport Investment Case outlines the case for investing in the Upper Clutha, which is currently underserved by public transport. Planning and investing early could significantly reduce the risk of escalating network-level issues currently occurring in Queenstown from transpiring in Wānaka. The investment case provides a comprehensive assessment of public transport options for Upper Clutha and demonstrates public value in for establishing public transport in Upper Clutha region. It aligns with Otago's Regional Public Transport Plan network aspirations and key priorities.

[45] This option is recommended as Council's endorsement of the business case would allow funding pathways to be prepared for a trial service. The investment case provides sound evidence to support inclusion of an Upper Clutha service trial in ORC's 2027-2030 Long-Term Plan and ORC's public transport service improvement programme for inclusion in Otago's 2027-2030 Regional Land Transport Plan and 2027-2030 National Land Transport Plan bid.

[46] **Option 2:** Do not support the endorsement of the Upper Clutha Public Transport Investment Case.

[47] If option 2 is chosen and the investment case not endorsed, ORC would be left without a forward plan or funding pathway for implementing public transport in the Upper Clutha in the next three years.

[48] Staff would seek direction from Council on what further alternatives to consider for the Upper Clutha.

SUMMARY OF CONSIDERATIONS

COMMUNITY OUTCOMES

This work aligns with the following community outcomes from the ORC 2024-2034 Long-Term Plan:

Transport

Otago has an integrated transport system that contributes to the accessibility and connectivity of our community, reduces congestion and supports community wellbeing aspirations.

ALIGNMENT WITH CENTRAL GOVERNMENT LEGISLATION

This work is consistent with relevant central government policy and direction. Specifically, it aligns with the Land Transport Management Act 2003 (LTMA) and Local Government Act 2002 (LGA) where investigating public transport options for communities with limited or no public transport service fulfils the LTMA s115(1) principles of:

(a) Well-used public transport services reduce the environmental and health impacts of land transport, including by reducing reliance on single-occupant vehicles and using zero-emission technology

(b) Public transport services support a mode shift from private motor vehicle use and equitable access to places, facilities, services, and social and economic opportunities if they are co-ordinated, integrated, reliable, frequent, accessible, affordable, and safe.

The Project fulfils the following LGA *s12(2)* and *(5)* mandates for a regional council to deliver benefits to significant areas of its region:

(2) "For the purposes of performing its role, a local authority has—

(a) full capacity to carry on or undertake any activity or business, do any act, or enter into any transaction; and

(b) for the purposes of paragraph (a), full rights, powers, and privileges."

(5) "A regional council must exercise its powers under this section wholly or principally for the benefit of all or a significant part of its region, and not for the benefit of a single district."

ALIGNMENT WITH ORC INTERNAL POLICY

This work is consistent with relevant ORC policies, in particular the 2025 – 2035 Regional Public Transport Plan, 2025/26 Annual Plan and the 2024-2027 Procurement Strategy.

FINANCIAL CONSIDERATIONS

The estimated cost of delivering the recommended option is $1.17 million. This estimate is based on $1.07 million in service delivery costs and $100,000 in general implementation costs. The project delivery would be managed within existing transport staff resources.

The proposed approach is to seek targeted rate funding through Otago Regional Council's Long-Term Plan 2027-2030 process to meet the local share (49%) of total operating costs of the two-year trial. NZTA co-funding would also be sought Otago's 2027-2030 Regional Land Transport Plan and 2027-2030 National Land Transport Plan bid.

LEGAL/COMPLIANCE RISK

There is insignificant/minor risk that decisions arising from this report could expose Council to litigation, regulatory non-compliance, or breach of policy/legislation.

REPUTATIONAL RISK

There is insignificant/minor risk that decisions arising from this report could adversely impact Council's reputation or community trust.

Urban public transport services in Wānaka have been signalled since ORC's 2021 Regional Public Transport Plan and the community have signalled a high need for a service. This investment case work responds to strong support from the community to proceed with investigating public transport for the Upper Clutha despite lack of NZTA co-funding. Not endorsing this business case has the potential to further erode community trust and Council reputation.

CLIMATE RESILIENCE

The impacts of climate-related risks (e.g. flooding, drought, extreme winds, coastal erosion, wildfires) on this work has not been assessed.

The introduction of a bus service in the Upper Clutha is expected to generate mode shift away from private vehicle travel, reducing transport-related emissions in Otago.

CARBON EMISSIONS

The implications of this work on organisational or regional greenhouse gas emissions has not been assessed.

HE MAHI RAU RIKA: SIGNIFICANCE, ENGAGEMENT AND MĀORI PARTICIPATION POLICY

This work is of MEDIUM significance as assessed against He Mahi Rau Rika.

ENGAGEMENT WITH MANA WHENUA

There has been no engagement with mana whenua or Māori specifically for this work.

STAKEHOLDER ENGAGEMENT

Several engagement sessions have been held with community board members in preparation of this investment case.

In the coming months Council will decide on whether to include the proposed service as an item in the LTP 2027-2037 for public consultation. It will also be considered for inclusion in Otago's RLTP and NLTP bid which will also seek public feedback through consultation.

COMMUNICATIONS

The decision will be communicated with the relevant audiences, in particular Upper Clutha Community Board, Queenstown Lakes District Council and New Zealand Transport Agency.

NEXT STEPS

[49] If Council approve the investment case for endorsement, ORC's Transport team will:

- Include the Upper Clutha service trial in the transport projects for local share funding in ORC's 2027-2030 Long-Term Plan.
- Include the Upper Clutha service trial in ORC's public transport service improvement programme for inclusion in Otago's 2027-2030 Regional Land Transport Plan and 2027-2030 National Land Transport Plan bid.
- Continue market engagement to refine timetable design, service delivery costs and fleet requirements.
- Establish a procurement project team to progress procurement planning for upcoming procurement activities.

ATTACHMENTS

1. Final draft 070726 v3 Upper Clutha PT investment case (2) [**9.5.1** - 112 pages]

Otago Regional Council

Public Transport – Upper Clutha

Investment Case

Photo credit: Robyn Hyde

Prepared by:	Robyn Hyde, Grace Longson and Jack Cowie
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Public Transport - Upper Clutha

Document Control

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Document Review

Role	Name	Review Status
Public Transport Planning Lead	Robyn Hyde	Completed 07 July 2026
GM Regional Planning and Transport	Anita Dawe	

Document Sign-off

Role	Name	Sign-off Date
GM Regional Planning and Transport	Anita Dawe	

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Executive Summary

Introduction

This Single Stage Business Case outlines the case for investing in the introduction of a public transport service connecting Wānaka, Albert Town, Three Parks and Lake Hāwea. It seeks formal approval to progress with a skeleton service operating eight trips per day, seven days per week with an estimated annual operating cost of $1.073m (plus $100,000 of implementation costs in year 1) as the preferred option to be included into ORC's 2027-2030 Long-Term Plan and Otago's 2027-2030 Regional Land Transport Plan.

The Upper Clutha area is experiencing rapid population growth, increasing visitor demand and ongoing transport challenges. While Queenstown and Dunedin are served by established public transport networks, Upper Clutha residents remain heavily reliant on private vehicles. This causes challenges to mobility, access and connectivity – especially for those that do not have reliable access to a private vehicle or wish to use more sustainable modes.

Addressing regional connectivity is a priority for our community, as is increasing transport choice and confronting the climate emergency, as outlined in the 2025 Regional Public Transport Plan (RPTP).

Purpose

This investment case has been prepared in response to the Otago Regional Council Long-Term Plan 2024–34 direction to investigate public transport opportunities in communities currently underserved by public transport, and more specifically, the Annual Plan 2025-26 commitment to undertake a business case for the Upper Clutha area. The purpose of this investment case is to:

1. Consider and analyse a range of potential public transport options within the **Upper Clutha**.
2. Identify an optimal solution to expand public transport services in Otago, to address poor access and connectivity for people in the Upper Clutha.
3. Inform the 2027-2030 Regional Land Transport Plan (RLTP) and Long-Term Plan (LTP) funding decisions, and position Council to respond to future NZTA investment opportunities.
4. Seek approval from Council to proceed with preparing the investment proposal for procurement.
5. Describe the necessary management arrangements for successful delivery.

The case assesses the proposal through the Better Business Case Five Case Model, confirming:

- the need for investment and making a compelling case for change
- a range of potential options have been identified and the feasibility, costs, benefits and risks considered for each option
- the preferred option optimises public value and is commercially viable
- the necessary funding and management arrangements for the successful delivery of the project.

Strategic Case

The case for change is driven by rapid and sustained population growth, dispersed urban development patterns, increasing visitor numbers and a lack of transport alternatives to private vehicle travel. The Upper Clutha population has more than doubled since 2012 and is projected to exceed 38,000 residents by 2055. Despite this growth, public transport services are absent, creating barriers to mobility, particularly for young people, older adults, disabled people, lower-income households and visitors.

The proposed investment aligns strongly with national, regional and local policy, including the Otago Regional Public Transport Plan, Regional Land Transport Plan, Queenstown Lakes Spatial Plan and wider transport and urban development objectives.

The investment seeks to:

- Support good urban form and integrated land-use planning.
- Improve connectivity and accessibility using sustainable modes.
- Reduce transport-related emissions and reliance on private vehicles.
- Increase access to affordable alternatives to private vehicle travel.

The proposal also builds on previous work, including the Wānaka Network Optimisation Business Case and the 2022 Wānaka Community Shuttle trials. Both pieces of work confirmed the need for affordable and sustainable transport options, with the 2022 trial demonstrating strong support for a direct express link between Lake Hāwea and Wānaka.

Economic Case

The economic case considers viable options for public transport in the Upper Clutha. A wide range of service, geographic coverage, delivery, timing and funding options were assessed through a structured long-list and short-list evaluation process. The assessment considered strategic fit, value for money, affordability, achievability, risks and expected benefits.

The preferred option is a **skeleton bus service operating eight trips per day, seven days per week** connecting:

- Lake Hāwea
- Albert Town
- Three Parks
- Wānaka

Taking into account the current limited funding environment and strong focus on affordability, the preferred option was selected as it is considered to represent the best value-for-money entry point for establishing public transport in Upper Clutha.

There is flexibility to scale up service levels subject to Council appetite and available funding. Council could opt to go straight to an hourly service (option 1) to make the service as attractive as possible from the outset. However, in the short-term getting an initial service in place for the Upper

Clutha would be a step change, and as demand grows, service levels can be scaled (Options 1 and 2) over time to realise greater benefits.

The preferred option:

- Achieves the highest relative benefit-to-cost performance.
- Provides a meaningful increase in transport choice and accessibility.
- Supports future growth while limiting financial exposure.
- Creates a scalable foundation for future service enhancements as demand grows.

The indicative annual operating cost is approximately **$1.07 million** (plus $100,000 of implementation costs in year 1), and the simplified economic assessment indicates a base Benefit-Cost Ratio (BCR) of approximately **1.1**, with sensitivity testing showing performance improves significantly as population and patronage increase over time.

Commercial Case

The preferred delivery model is a **subsidised gross-cost public transport contract**, consistent with existing public transport arrangements in Queenstown and Dunedin.

Under this model:

- ORC procures and manages the service.
- ORC sets fares and retains fare revenue.
- The operator receives a contracted payment to deliver services.
- Service quality, branding, ticketing and customer experience remain under ORC control.

A market sounding exercise confirmed market interest and capability in delivering services within the Upper Clutha. It also provided a level of assurance of adequate market competition to drive contract pricing and quality service delivery. Operators identified opportunities for collaborative service development and highlighted the key commercial risks as workforce availability, depot requirements, seasonal demand variation and fleet selection.

Procurement would be undertaken in accordance with ORC's Transport Procurement Strategy and NZTA public transport procurement requirements. The planned approach to procurement would be an open competitive tender process.

Financial Case

The Financial Case outlines the funding requirements for the preferred option.

The preferred option is considered financially achievable through a combination of fare revenue, ORC rates and NZTA co-funding. However, under current Government transport investment priorities, NZTA co-funding for a new public transport service outside a major urban centre is not guaranteed.

The estimated operating cost of the preferred option is approximately **$1.07 million per annum** (plus $100,000 of implementation costs in year 1). Sensitivity testing demonstrates the proposal remains affordable under a range of patronage and cost assumptions.

It is proposed that this project seek targeted rate funding through Otago Regional Council's Long-Term Plan 2027-2030 process to meet the local share (49%) of total operating costs of the two-year trial and a suitable targeted rating area for the service developed.

Co-funding would also be sought from NZTA. This project will form part of ORC's 2027-2030 service improvement programme bid for a three-year programme approval (supported by 10-year forecasts). If NZTA approve the inclusion of this project in ORC's 2027-2030 NLTP PT improvement programme, 51% of the net operating costs will be eligible for funding from NZTA.

A trial provides an opportunity to establish and embed the service in the community before being evaluated and an assessment of its long-term viability completed. If the trial is considered successful and Council (and NZTA) approved the continuation of the service beyond a trial, a broader targeted rate review of the Queenstown, Upper Clutha and Central Lakes sub-region would be undertaken to understand the best approach to fund and support public transport across the Otago Central Lakes region.

The financial profile and apportionment of costs assuming co-funding from NZTA is shown in the table below.

	Financial year >	2027/28	2028/29	2029/30	2030/31	Yrs 5-9	Total
Operating Expenditure							
1	Service delivery contract (AGP)	1,072,690	1,072,690	1,072,690	1,072,690	5,363,450	9,654,210
2	General implementation costs	100,000					100,000
3	**Total Operating costs (OPEX) $**	**1,172,690**	**1,072,690**	**1,072,690**	**1,072,690**	**5,363,450**	**9,754,210**
Capital Expenditure							
4	Basic stop infrastructure	100,000			500,000		600,000
5	**Total Capital costs (CAPEX) $**	**100,000**			**500,000**		**600,000**
Total Expenditure							
6	**Total Project Costs (CAPEX + OPEX) $**	**1,272,690**	**1,072,690**	**1,072,690**	**1,572,690**	**5,363,450**	**10,354,210**
Funding							
7	CAPEX funding (QLDC/NZTA)	100,000			500,000		600,000
8	OPEX funding (ORC)	407,852	355,517	352,181	348,846	1,697,535	3,161,931
9	NZTA PT improvements co-funding	424,499	370,027	366,556	363,085	1,766,822	3,290,989
10	Fare revenue	340,339	347,146	353,953	360,760	1,899,093	3,301,290
11	**Total funding $**	**1,272,690**	**1,072,690**	**1,072,690**	**1,572,690**	**5,363,450**	**10,354,210**

Management Case

The proposed preferred option would initially be implemented as a trial service following approved funding pathways being established. The trial period is estimated to be one to three years, with an estimated commencement date of early 2028 (following completion of Motu Move). Initially implemented using existing fleet, service and fleet improvements will be planned on approval of longer-term funding

Delivery of the proposal is considered achievable within existing ORC resources and governance arrangements. ORC's Transport team would own and manage the project delivery including the design, planning, procurement and management of the service, collaborating with key partners, such as QLDC, NZTA, and the service operator, as well as other stakeholders where relevant.

Council will approve the final LTP 2027-2037 by June 2027 and government is set to release the NLTP 2027-2030 in August 2027. If funding for this project is secured it will proceed to implementation following these key dates.

The most significant risks that have the potential to delay, prevent or minimise achieving the investment objectives sought through the investment have been identified as:

- Availability of local share and NZTA co-funding for the trial
- Service frequency or coverage is too limited
- Lower or higher than expected patronage
- Changes in government priorities and policy settings
- Funding of infrastructure not aligned
- Uncertainty of long-term funding
- Delivery timing and level of service does not meet community expectations.

Appropriate mitigation measures have been identified and will be managed through business planning and processes, procurement, and working closely with funding partners.

As a trial service, periodic reviews of the trial's performance against outcomes sought will be undertaken. These will be used to inform ongoing adaptive management of timetables and operational efficiencies, inform future procurement opportunities and scaling of services. They will also be used to keep Council updated and support future funding requests.

Next Steps

This investment case outlines the public value in introducing public transport services into the Upper Clutha region and seeks formal approval from Council to:

- Endorse the preferred option for an Upper Clutha public transport service.
- Include the Upper Clutha service trial in the transport projects for local share funding in ORC's 2027-2030 Long-Term Plan.
- Include the Upper Clutha service trial in ORC's public transport service improvement programme for inclusion in Otago's 2027-2030 Regional Land Transport Plan and 2027-2030 National Land Transport Plan bid.
- Continue market engagement to refine timetable design, service delivery costs, fleet and operational planning.
- Establish a procurement project team to progress procurement planning for upcoming procurement activities.

Implementation of a skeleton (eight trips per day, seven days per week) public transport service will provide a practical and scalable first step towards improving mobility, supporting future growth and creating greater transport choice for Upper Clutha communities.

The Strategic Case – the Case for Change

This strategic case summarises the strategic context for the investment proposal and makes the case for change.

The proposed investment in public transport services for Wānaka and Upper Clutha presents an opportunity to increase connectivity and accessibility using affordable sustainable modes, support good urban form, and reduce environmental impacts. It aligns with Otago's Regional Public Transport Plan network aspirations and key priorities.

Strategic context

The Upper Clutha is an area within the Southern Alps consisting of stretches of rural land and the urban centres of Wānaka, Albert Town, Hāwea and Luggate. Its landscape is defined by the presence of Lake Wānaka and Lake Hāwea, two alpine lakes which feed the Clutha River. Covering over 458,000 hectares, the Upper Clutha makes up nearly half of the Queenstown Lakes District's land area.

The area is experiencing rapid change, shaped by sustained population growth and a strong tourism sector. Doubling in population size since 2012, the Upper Clutha area now accounts for 7% of Otago's population and 35% of the Queenstown Lakes District's population. Population growth in Wānaka and surrounds averaged 3.9% pa over the 5 years to 2025 compared with 0.8% pa in Otago Region and 2.7% pa in Queenstown-Lakes District. [1]

The area's rapid growth drives new residential and commercial development, particularly on the urban periphery. With high growth projected to continue, substantial urban expansion is planned in areas including Three Parks, Southern Wānaka and Hāwea, while intensification is planned for Central Wānaka.

Historically transport and land use planning have not been comprehensively integrated in the Upper Clutha. Often being developer-driven, the urban landscape is largely comprised of low-density single-use development and fragmented transport connections, particularly for active modes.

Regional and local planning documents have identified possible opportunities for public transport in Upper Clutha as a sustainable and affordable alternative to private vehicle travel. For instance, the Queenstown Lakes Spatial Plan identifies Upper Clutha as a location for a future public transport network to connect key destinations including Wānaka, Albert Town, Lake Hāwea and Luggate.

Organisational overview

As per the Land Transport Management Act 2003, ORC's responsibilities as the public transport authority for Otago include:

- Planning public transport networks
- Designing, procuring and funding public transport services
- Influencing land use via regional policy statements and regional plans developed in accordance with the Resource Management Act 1991

ORC currently maintains public transport networks in Dunedin and Queenstown and Total Mobility services in several urban centres including Wānaka. Total Mobility is a nationwide scheme that

1 https://regions.infometrics.co.nz/wanaka-surrounds/population/growth?compare=otago-region,queenstown-lakes-district

provides door-to-door transport for people who are disabled or have a medical condition that means they cannot easily use public transport.

Social context

The Upper Clutha area has a resident population of 18,630[2]. 13,200 or 69% of residents live in the area's primary urban centre, Wānaka, a resort town and popular tourist destination attracting a substantial number of visitors. On an average day visitors add 6,372 people to the Upper Clutha and up to 20,124 people on a peak day, effectively doubling the total population of the area. Visitor demand is particularly high during the summer months, ski season and major events.

In 2023, Upper Clutha's median personal income of adults was $49,854[3], notably higher than the $41,500 national median. Similarly, the median household income in the Upper Clutha is $114,368, which is 18% higher than New Zealand's median household income. This is paired with a notably higher cost of living, reflected in essential goods such as housing and fuel.

With the resident population expected to rise to over 38,000 by 2055, along with an additional 12,000 average day visitors, the overall population of Upper Clutha will be comparable to the Wakatipu basin's 2025 population. In 2025 Wakatipu basin was served by a six-route public transport network with all-day service, up to 15-minute frequencies and over 55,000 trips per day on average.

Spatial planning context

Population growth in the Upper Clutha averaged 3.9% per year from 2020 to 2025 compared with 2.9% in the Wakatipu Basin and 1.0% nationally. To meet this growth demand, residential dwellings have been consented at four times the national average.

Visitors also drive overall demand for residential dwellings as short-term rentals continue to be a popular accommodation option. An estimated 2,000 holiday dwellings are present in the Upper Clutha compared to 7,700 resident dwellings.[4] The relationship between dwellings and resident and visitor populations is shown in Table 1.

Table 1 Upper Clutha demand, historical and projected (source: QLDC Demand Projections unless otherwise stated)

	2018	2026	2034
Dwellings	7,600[5]	10,576	13,381
Residents	12,491	19,870	25,132
Visitors	7,945	6,593	8,166*
Average day population	20,436	26,463	33,298

[2] Derived from the aggregation of Statistics NZ Wānaka and Wānaka Outer Statistical Area 3 values

[3] Derived from weighted averages of the Statistics NZ Wānaka and Wānaka Outer Statistical Area 3 values

[4] https://www.qldc.govt.nz/media/twujq1ls/4a-hba-assessment.pdf

[5] https://www.qldc.govt.nz/media/ffadaq0p/wanaka-network-operating-framework-report.pdf

Peak day population	46,939	40,736	51,003

* 2033 value as no projection has been produced for 2034.

** Some visitors present in the Upper Clutha during the day stay in surrounding towns overnight.

With high resident and visitor population growth rates projected to continue in the long term, the Queenstown Lakes Spatial Plan identifies the following priority development areas to ensure growth can be adequately accommodated, and future developments are well-functioning urban environments (see Figure 1):

- Wānaka Town Centre to Three Parks Corridor (current urban zone)
- Southern Wānaka (future urban zone)

The Spatial Plan proposes urban growth in Wānaka and Hāwea be planned and designed to support public transport from early stages of development. It also sets out Hāwea and Luggate as local centres, enabling people living in these areas to have more key destinations within walking or cycling distance.

The Spatial Plan identifies land south of Hāwea's current urban extent as an area for "future urban investigation (subject to public transport connection)," highlighting the role of public transport as an enabler for well planned growth.

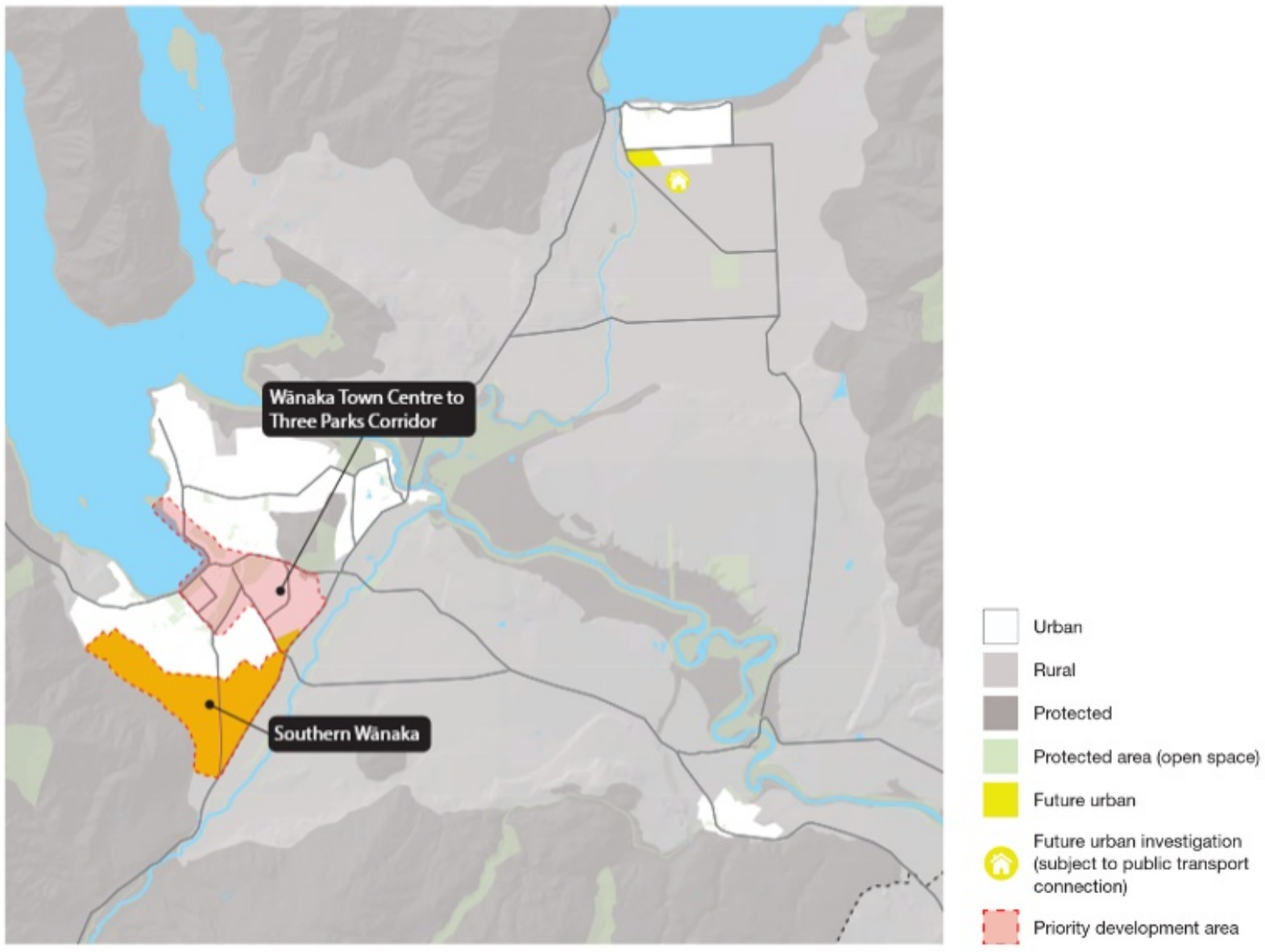

Figure 1 Upper Clutha priority development areas, Queenstown Lakes Spatial Plan (2021)

In the implementation of the Spatial Plan, QLDC is developing a joint structure plan for the Upper Clutha's two priority development areas, the Wānaka Town Centre to Three Parks Corridor and Southern Wānaka. The Structure Plan uses an evidence-based approach to address the timings, dependencies, risks and funding requirements for key community needs such as housing, recreation, transport, green spaces, and essential infrastructure.

Beyond conventional spatial planning processes, urban growth in the Queenstown Lakes District may be increasingly driven by out-of-sequence development enabled by the Fast-track Approvals Act 2024. When providing feedback to urban development fast-track applications ORC advocates for urban environments that can be served with frequent and affordable public transport. At the time of writing one urban development fast-track application comprising 263 dwellings is in progress within the Upper Clutha.

Transport context

The Upper Clutha's transport network is comprised of the following elements:

- State highways (SH6, SH84) connecting urban centres to surrounding rural areas and the wider region
- Urban roads and streets, sometimes with footpaths, and cycleways, providing motor vehicles, pedestrians and cyclists with connections to key activity centres
- Active travel corridors offering pedestrians and cyclists a travel corridor free of motor vehicle traffic

Transport mode share

Low density and often single use urban form comprising much of Upper Clutha's urban areas (paired with an absence of public transport) mean most trips are made by private vehicle. This is the case for trips to work or education, as shown in Figure 2 and Figure 3, as well as most trips made by visitors.

For residents travelling to work or education, driving a private vehicle, company vehicle or being a passenger in a vehicle make up the greatest share of trips. In Wānaka, rates of cycling to work and education are notably higher than the national average. Working and studying from home also occurs above the national rate.

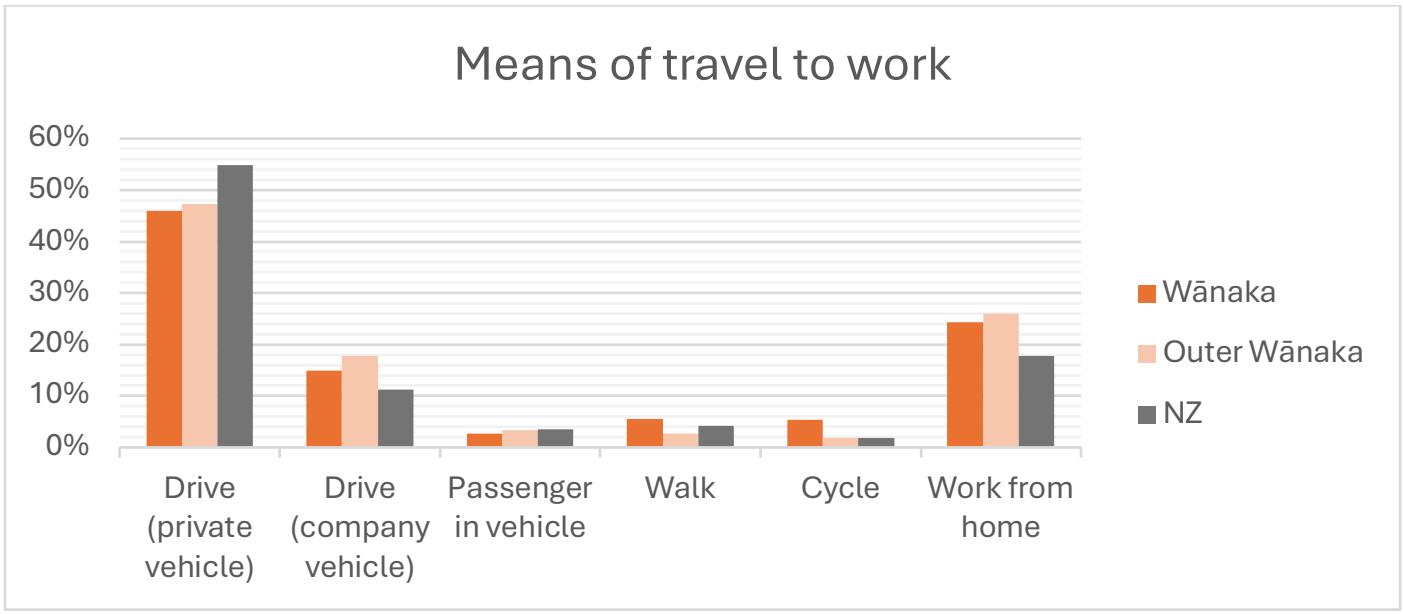

Figure 2 Means of travel to work for people living in the Upper Clutha, disaggregated by SA3 units (Census 2023)

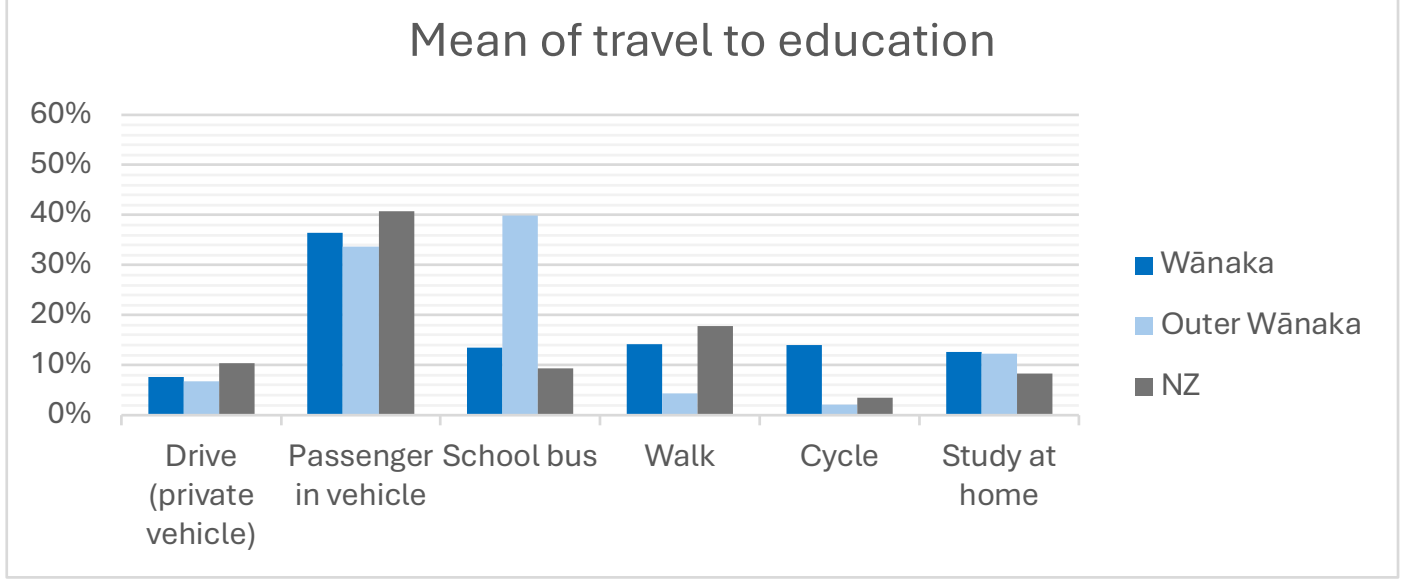

Figure 3 Means of travel to education for people living in the Upper Clutha, disaggregated by SA3 units (Census 2023)

Many journeys occur for reasons other than commuting to work and education, particularly in the Upper Clutha where visitors generate a high share of trips on the network. The Queenstown and Wānaka Visitor Experience Survey suggests that visitors also travel largely by motor vehicle, with 88% of respondents indicating they travelled by a private or rented motor vehicle while in Wānaka.

Motor vehicle availability (as a whole) in the Upper Clutha is substantially higher than the national average as shown below in Figure 4. However, there are still a number of households in the Upper Clutha that have one motor vehicle or no motor vehicle (1.8%), and either by choice or necessity need to find other ways to move around. 2025 data indicates that 19% of these vehicles are electric, well above the district and national average.

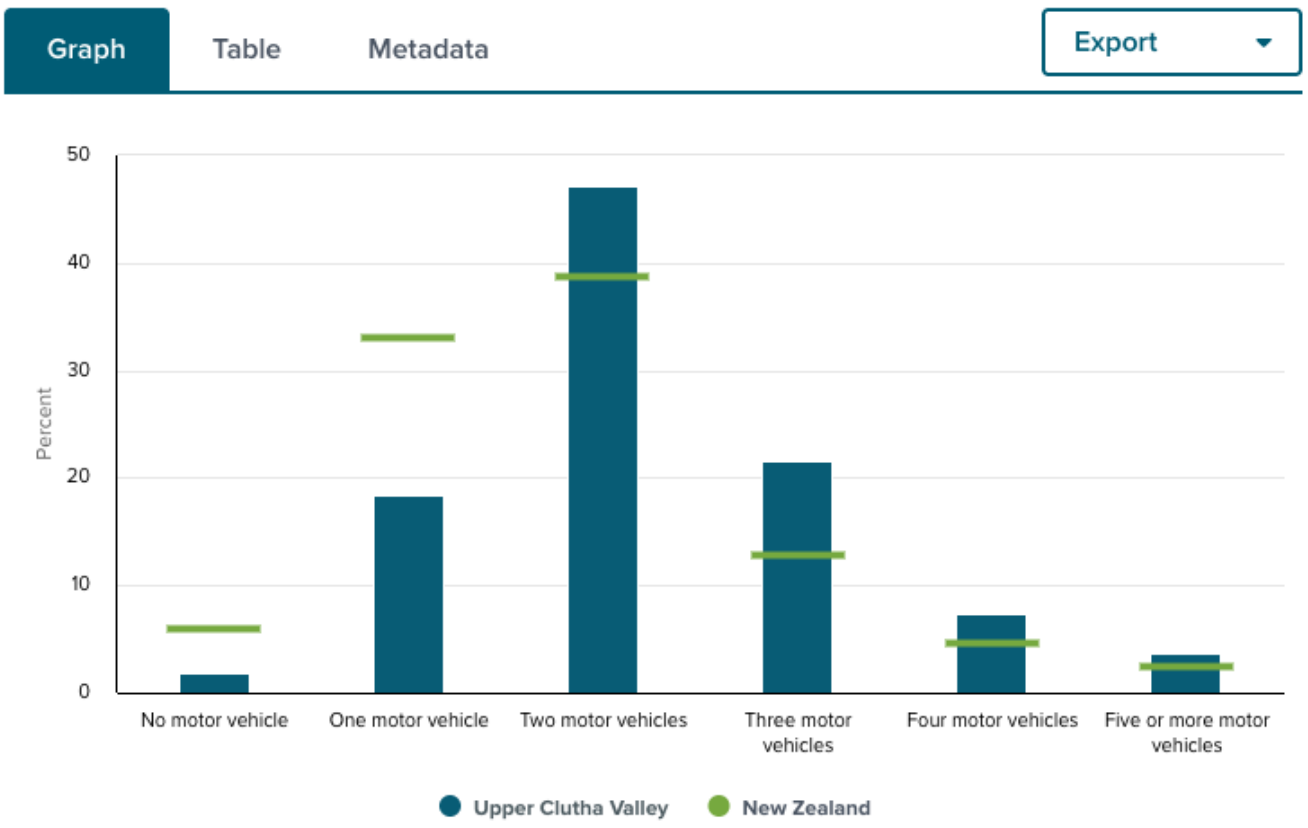

Figure 4 Percentage of households by number of motor vehicles, Upper Clutha compared to NZ (Source: Stats NZ 2023 Census)[6]

The tourism sector provides private transport services, such as shuttles to ski fields, wineries and cycle trails, which comprise a share of visitor trips. Taxi services are also available in Wānaka and the wider Upper Clutha area.

The Ministry of Education provides school bus services connecting rural areas and small towns to the four schools within the area. Ministry policy states the provision of these services is predicated on no public transport option being present for students. A full list of Ministry of Education school bus services in the Upper Clutha is presented in Appendix A.

While there are currently commercial public transport services serving Wānaka from Queenstown and Cromwell, these are relatively expensive and must be booked in advance. Consequently, people in the sub-region are highly reliant on private vehicles for key journeys.

Transport disadvantage

Many people in the Upper Clutha who cannot frequently and reliably access a private vehicle are left with limited transport options, and consequently are transport disadvantaged. Table 2 outlines the share of people in the Upper Clutha that likely experience some transport disadvantage, and the associated costs to these people not served.

Table 2 Transport disadvantage prevalence in the Upper Clutha[7]

Type	Prevalence	Cost if not served
Seniors who do not or should not drive	5-10%[8]	Non-drivers lack mobility, require chauffeuring (special vehicle travel

[6] https://tools.summaries.stats.govt.nz/places/SA2/upper-clutha-valley#number-of-motor-vehicles

[7] Table derived from 'A Business Case for Improving Interregional Bus Services' produced by the Victoria Transport Policy Institute

[8] Estimation from Victoria Transport Policy Institute at https://www.vtpi.org/bcit.pdf

Disabled people	3.9%[9]	to transport a non-driver), or costly options (taxis and ride-hailing), or move to another community with better transport options.
Youth (10-19 years)	10.8%[10]	
Drivers who share vehicles	5-15%[11]	
Drivers whose vehicles are inoperable or must be transported to another region for repair or sale	Varies	Requires chauffeuring, hitchhiking or costly taxi or ride-hailing services
Low-income people	25.3%[12]	Lack mobility or bear excessive transport costs
Visitors	25.1%[13]	Lack mobility, forego visiting or visit other areas
Impaired or distracted drivers	Varies	Increased road safety risks

High fuel costs in the Upper Clutha exacerbate transport disadvantage for low-income people and increases the community's vulnerability to petroleum-related economic shocks.

The types of people noted above in Table 2 are the groups of individuals most likely to use public transport if it was accessible, affordable and convenient.

Committed transport infrastructure funding

QLDC and NZTA have funding allocated for ongoing transport infrastructure maintenance and renewal and improvement projects including:

- **Wānaka**
    - Ballantyne Road / Avalon Station Drive Roundabout, Avalon Station Drive extension, and shared path connecting Avalon Station Drive and Ballantyne Road via Frederick Street (assumed prior to 1 July 2027).
    - Ballantyne Road / Golf Course Road Roundabout, new road links into Three Parks from Ballantyne Road, and the completion of the Schools to Pool Shared Path (assumed prior to 1 July 2027).
    - Northlake urban development road network build-out (ongoing)
    - Component renewal of road bridges, retaining structures, guardrails, tunnels, stock access structures cattle stops, footpaths on road structures, pedestrian over-bridges/underpasses (ongoing)
    - Lakefront Shared Path Stage 4 (assumed prior to 1 July 2027).

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[9] Source: 2023 Census data from https://regions.infometrics.co.nz/wanaka-surrounds/census?census=wanaka-surrounds

[10] Source: 2025 figure from https://regions.infometrics.co.nz/wanaka-surrounds/population/age-composition?compare=new-zealand

[11] Estimation from Victoria Transport Policy Institute at https://www.vtpi.org/bcit.pdf

[12] Derived from https://regions.infometrics.co.nz/wanaka-surrounds/population/age-composition?compare=new-zealand and https://tools.summaries.stats.govt.nz/places/SA3/wanaka-outer/vs/SA3/wanaka#total-income

[13] Source: 2025 figure from https://www.qldc.govt.nz/community/population-and-demand/

- Footpath renewals/improvements (ongoing)
- Minor public transport infrastructure (e.g. stops, shelters and approaches) to support a public transport service (ongoing from 1 July 2025)

- **Albert Town**
  - SH6 Clutha River (Albert Town) Bridge:
    - Short term: continual traffic signal optimisation to reduce proportion of “all red” phase
    - Long term: bridge duplication between 2038 and 2043
- **Hāwea**
  - Longview urban development road network build-out (ongoing)

Work completed to date

This investment case is informed by a number of previous land use and transport planning work for the area, as outlined in Appendix B. Specifically, it builds on the recent Wānaka Network Optimisation Single Stage Business Case and the Wānaka Community Shuttle Trial to strengthen the case for public transport in the Upper Clutha.

Wānaka Network Optimisation Single Stage Business Case

The Wānaka Network Optimisation Single Stage Business Case (2025) is an unfinished but concluded project that focused on the future of Wānaka’s transport network, following an earlier Masterplan and Programme Business Case. The project delivered a Strategic Case and Economic Case for all transport modes in Wānaka, Three Parks, Northlake and Albert Town. It considered how to prepare and optimise the transport system for future growth and development and demonstrates the importance of mode shift to sustainable transport modes and greater integration with land use to manage increased demand on the network. It concluded that early action and a strong mode-choice offering would deliver exceptional value for money, and support a more resilient, efficient transport network. Planning and investing early could significantly reduce the risk of escalating network-level issues currently occurring in Queenstown from transpiring in Wānaka.

The Wānaka Network Optimisation Single Stage Business Case developed a series of strategic responses covering the broad areas of:

- spatial planning
- capacity and safety improvements on critical corridors
- travel choices.

The introduction of public transport was included in the ‘travel choice’ strategic response to provide additional mode choice for residents and visitors moving from and within Wānaka and the satellite communities from 2030 onwards. This business case deems traditional public transport services infeasible in the near future, but by the mid-2050s proposes all day services across five routes to help mitigate network congestion in the Wānaka basin. The business case also notes the requirement of supporting infrastructure such as bus stops and interchanges.

The benefits of public transport initiatives were not monetised in the Strategic Responses assessment, nor were any demand estimates calculated. The impacts of public transport were included through a reduction in vehicle kilometres travelled in the 2043+ forecasted period.

Wānaka Community Shuttle Trials

The Wānaka Community Shuttle Trials consisted of two short-term public transport trial services which were led by Community Networks/LINK, a local community support and connection centre. The trials were designed to meet the community need for an affordable and sustainable transport option in the short term while demonstrating the demand for a potential public transport service in the long term.

The first trial ran from 28 September to 21 December 2022. It connected Hāwea, Hāwea Flat, Albert Town, Three Parks and the Wānaka CBD with six services a day, three days a week. In total it generated 665 person trips and feedback from service users was very positive.

Following the success of the first trial, and in order to test different options, it was decided that a second trial would be conducted with financial support from Queenstown Lakes District Council (QLDC) and Lake Wānaka Tourism (LWT), led by a working group with representatives from QLDC, LWT, Yello (Wānaka Transport Group), Community Networks/LINK and Otago Regional Council (ORC).

The second trial ran from 29 May to 18 September 2023. It featured a Hāwea - Wānaka express service with four centralised stops, running five days a week, as well as an urban loop service connecting outlying areas of Wānaka to the CBD. In total, there were 645 rides taken during the second trial, 552 of which were on the Hāwea-Wānaka express service. It was estimated that the second trial enabled a reduction of over 48,900 light fleet vehicle kilometres.

Passengers were charged $2 per person per ride for both trials.

The trials highlighted the demand for an affordable and sustainable transport option, especially noting the strong support of a direct express link between Lake Hāwea and Wānaka.

Strategic alignment

This section provides a summary of the strategic alignment of the proposed investment in public transport services for Wānaka and the Upper Clutha with legislation, and national and regional policy priorities.

Land Transport Management Act 2003 (LTMA)

Investigating public transport options for communities with limited or no public transport service fulfils the LTMA *s115(1)* principles of:

> *(a) well-used public transport services reduce the environmental and health impacts of land transport, including by reducing reliance on single-occupant vehicles and using zero-emission technology*
> *(b) public transport services support a mode shift from private motor vehicle use and equitable access to places, facilities, services, and social and economic opportunities if they are co-ordinated, integrated, reliable, frequent, accessible, affordable, and safe.*

Transport Outcomes Framework (Ministry of Transport)

An investment in public transport in Upper Clutha would primarily contribute to the Transport Outcomes Framework outcomes of inclusive access, economic prosperity, and environmental sustainability.

Government Policy Statement on land transport (2024-2034) (GPS)

The GPS has four strategic policy areas:

- Economic growth and productivity
- Increased maintenance and resilience
- Safety
- Value for money.

Implementing public transport in the Upper Clutha directly supports the GPS 2024 Economic Growth and Productivity priorities by:

- Easing congestion and parking demand through mode shift from private cars to shared transport.
- Increasing access to employment, services, and markets by connecting residents, workers, and visitors across Wānaka, Hāwea, and surrounding areas.
- Supporting workforce mobility and business productivity through improved connectivity between residential and commercial hubs.
- Building sustainable travel habits that support long-term economic growth and liveability.

Noting the size of the Wānaka Upper Clutha catchment and the scale of the proposed services, any reduction in travel times and congestion is likely to be minimal in the short-term. The introduction of public transport in the Wānaka region will enable mode choice and sustainable travel habits to be established supporting economic growth and liveability as well as resilience to rising energy prices in the longer term.

From a pragmatic perspective, the government outlines in the GPS 2024 (p.13) that it will continue to fund existing public transport services “where they are cost effective, achieve value for money, and achieve the expected outcomes of less congestion and increased patronage”. Further it includes

investment in targeted public transport projects in Auckland and Wellington. The GPS also sets an expectation for increased private share funding to:

- Support increased levels of public transport expenditure
- Reduce pressure on ratepayers and taxpayers

Consideration will need to be given to how an adequate balance between public funding and private contributions can be achieved to reduce long-term costs and be consistent with the government's expectation and current fiscal environment, including private share targets.

New Zealand's second emissions reduction plan 2026-2030

The second ERP focuses on urban public transport infrastructure and emissions reduction in cities. It doesn't provide direct justification for establishing public transport in areas like Upper Clutha, though the general principles (reducing emissions, zero-emissions vehicles, and integrating transport investment with housing and land-use planning) are still relevant.

National Policy Statement on Urban Development

The National Policy Statement on Urban Development (2020) (NPS-UD) sets objective and policies required for major urban centres to have well-functioning urban environments. Specifically, it mandates tier 1 and 2 centres to achieve "urban environments that enable all people and communities to provide for their social, economic, and cultural wellbeing, and for their health and safety, now and into the future".[14] It strongly encourages all smaller, or tier 3, urban centres such as those in the Upper Clutha to align with its objectives and policies.

Public transport is emphasised by the NPS-UD as a key component of urban environments and directs local governments to support good public transport provision in land use planning decisions.

Proposed Otago Regional Policy Statement 2021

Investment in public transport in the Upper Clutha aligns with implementing the proposed Otago Regional Policy Statement (pORPS) transport objectives:

- EIT-TRAN-O7 - Energy efficient and safe transport - Otago has an integrated air, land and water based transport network that:
    - is effective, efficient and safe
    - connects communities and their activities within Otago, with other regions, and internationally, and
    - is resilient to natural hazards and the effects of climate change, and the changing needs of communities.
- EIT-TRAN-08 - Transport system - The transport system within Otago supports the movement of people, goods and services, is integrated with land use, provides a choice of transport modes and is adaptable to changes in demand.

[14] Objective 1, https://environment.govt.nz/assets/publications/National-Policy-Statement-Urban-Development-2020-11May2022-v2.pdf

- EIT-TRAN-09 – Effects of the transport system - The contribution of transport to Otago's greenhouse gas emissions is reduced and communities are less reliant on fossil fuels for transportation.

Queenstown Lakes Spatial Plan

The Queenstown Lakes Spatial Plan (2021) provides a blueprint for Upper Clutha's future urban growth, emphasising the necessity of public transport to support new development. It assumes the introduction of a local regular frequency public transport network to connect Wānaka, Albert Town, Hāwea and Luggate as shown below in Figure 5 and sets the priority initiative to investigate establishing an Upper Clutha public transport network. Specifically, it highlights a high-quality public transport service is a pre-requisite for Hāwea to expand.

The plan was set to be replaced with a Future Development Strategy under the NPS-UD however draft resource management legislation indicates that Spatial Plans will be the future tool to set out land use and infrastructure opportunities.

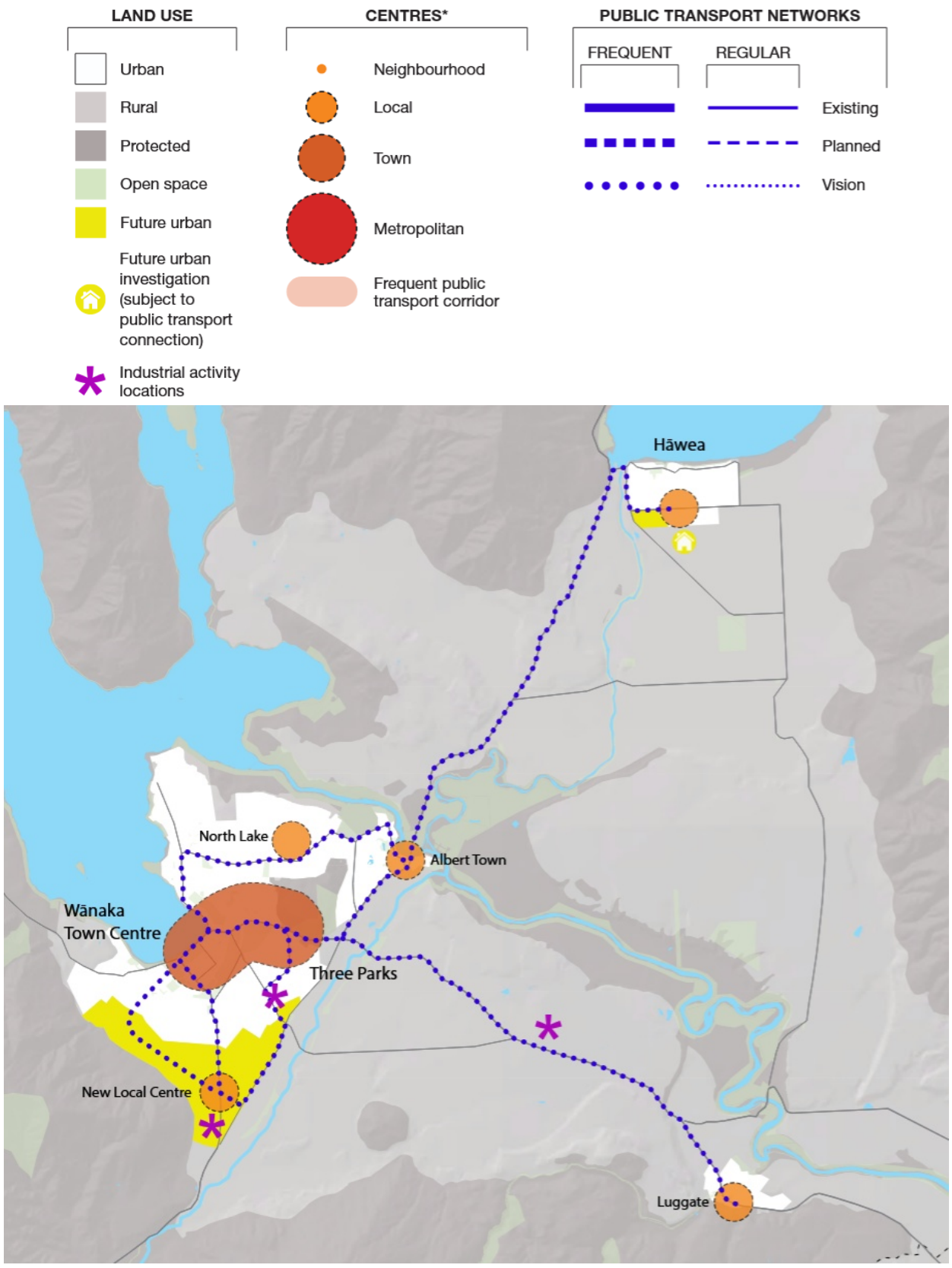

Figure 5 Future urban extent, centres and transport for the Upper Clutha (Source: Queenstown Lakes Spatial Plan)

Mid-term review Otago Southland Regional Land Transport Plans 2021-2031 (RLTP)

The strategic objectives and transport network improvement plans for the Otago Southland region are set out in the RLTP, and inform Otago's Regional Public Transport Plan (RPTP). Specifically, it contains a connectivity and choice objective to "develop a range of travel choices that are used by communities and business to connect", and an investment priority to "optimise an efficient and accessible transport network through enhanced mode choice provision across the regions".

Otago Regional Public Transport Plan (RPTP)

The RPTP sets Otago Regional Council's intentions to develop a regional public transport network that connects smaller towns and rural areas to key centres and provide an alternative to private vehicle travel (subject to funding and further study). This includes a Queenstown to Wānaka service and a local Wānaka service as per section 5.2 Regional Network Aspiration Maps as shown below in

Figure 6. Policy *NF P9*, (p.73) and Action *NF A2* (p.74) further detail prioritisation of transport solutions for smaller communities.

During public consultation on the RPTP, 23 submitters requested public transport for the Upper Clutha specifically, often citing the communities need for transport options beyond private vehicle travel to improve connectivity and accommodate growth, while an additional 25 requested an expansion of public transport beyond Dunedin and Queenstown more generally.

Figure 6 Otago regional network aspiration map (6-10 years) (Source: Otago Regional Public Transport Plan)

The problem/opportunity

Rapid population growth and dispersed settlement patterns across the Upper Clutha have occurred with limited investment in alternative mobility options. Consequently there is high car dependency and limited transport choice (particularly for those living outside of Wānaka). This has resulted in increasing network congestion at peak times, and poor connectivity and access for those who cannot reliably use a private vehicle.

The case for change outlined in the Wānaka Network Optimisation Business Case centres around the need to manage both the significant growth that has occurred, as well as the predicted future growth and settlement patterns. It identified the following two problem statements presented in *Figure 7*.

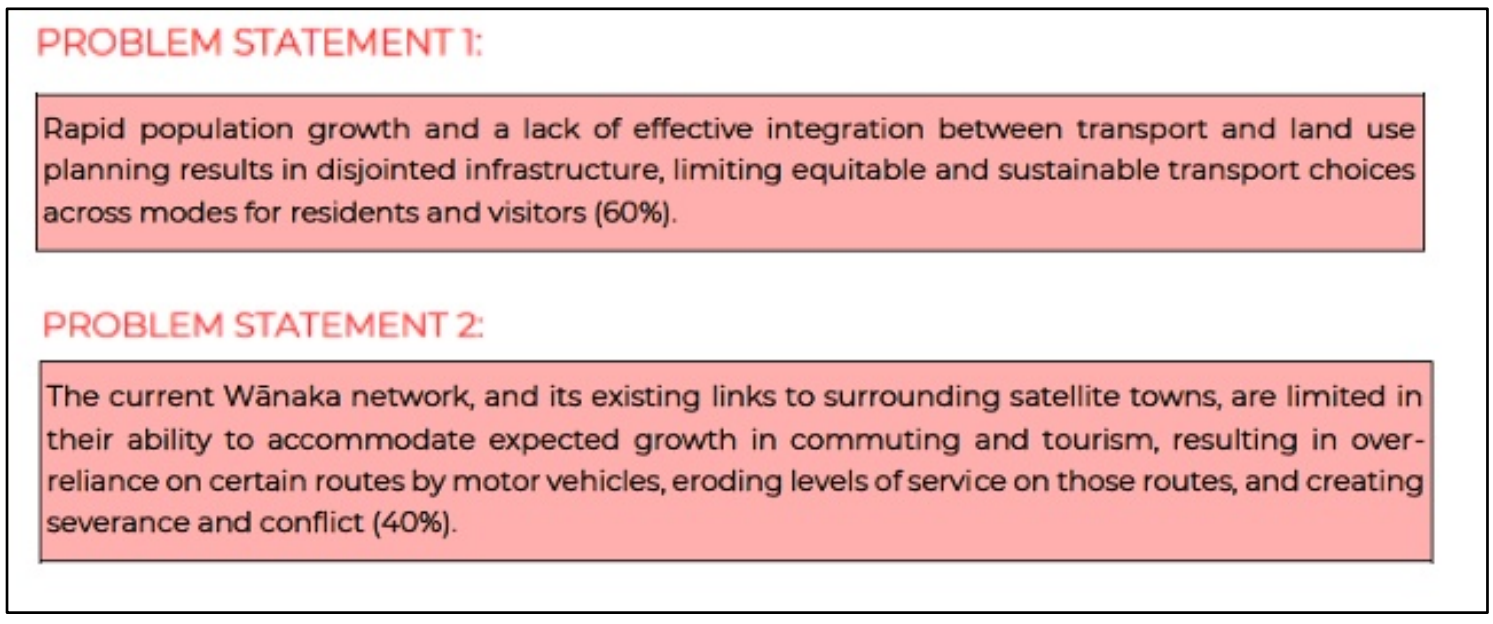

Figure 7 Wānaka Network Optimisation Business Case problem statements

The Wānaka Network Optimisation Business Case considers all modes, including emphasising the importance of public transport in meeting long-term growth, increasing access to opportunities and reducing transport-related greenhouse gas emissions. It does however conclude that traditional public transport services are infeasible in the short term, deferring the inclusion of public transport in the 'travel choice' strategic response from 2030 onwards, and frequent services over five routes not anticipated before 2050.

Informed by the evidence presented in the Wānaka Network Optimisation Business Case, two public transport specific problem statements have been developed for this investment case as shown below in *Figure 8.* Rapid and sustained population growth in the region is the root cause driving the wider problems such as poor land use integration, and high private vehicle use. With inadequate alternative transport options, people living in the Upper Clutha that do not have reliable access to a private car experience transport disadvantage and exclusion.

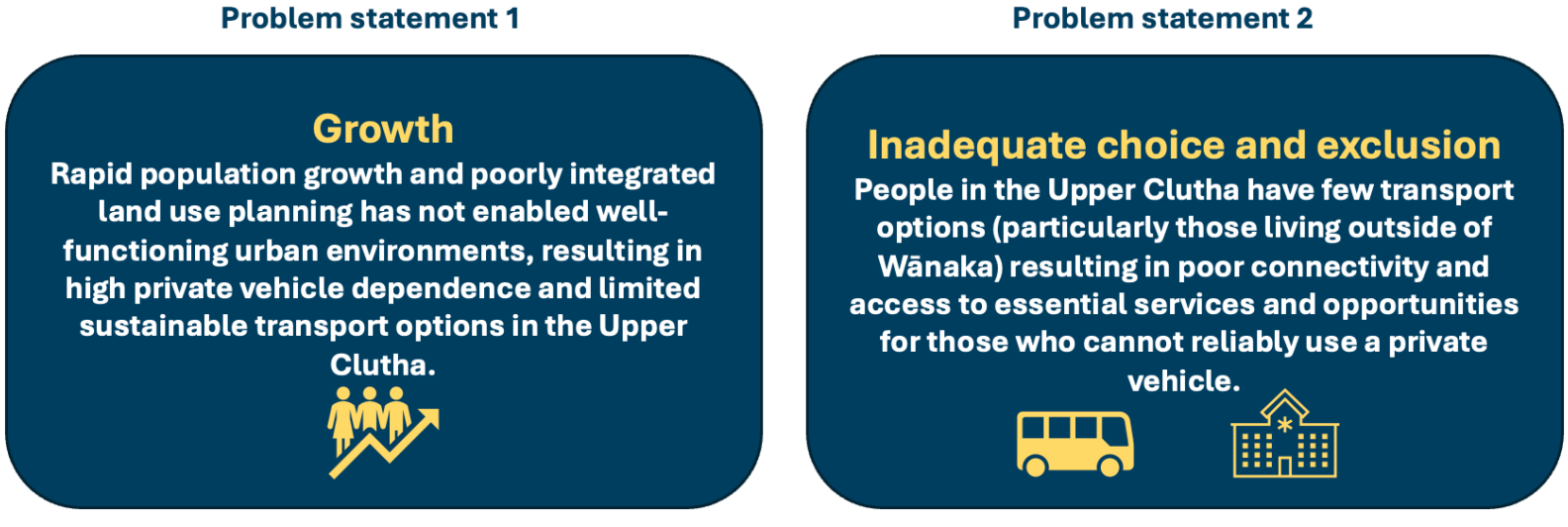

Figure 8 Problem statements

Status of the evidence base

There is a strong level of evidence to support these problem statements. Census data, reports and engagement feedback consistently demonstrate the challenges arising from rapid population growth and limited transport options. The evidence base for key components of the problem statements are described below:

- Evidence of population growth (Problem Statement 1):
    - The Upper Clutha population has doubled since 2012.
    - QLDC population and growth data forecasts high residential population growth (2.4% per annum) and average day visitor growth (2.3% per annum) between 2025 and 2055 in the Upper Clutha. Both these growth rates exceed those for Queenstown over the same period (1.8% and 1.9 per annum respectively).[15]
    - QLDC Demand Projections 2025 “High Plus” growth scenario is utilised for the district’s Housing and Business Capacity Assessment 2025. This reflects much higher growth than previous demand projections, responding to recent trends where actual growth has exceeded the anticipated growth projections.
    - The QLDC Housing and Business Capacity Assessment 2025 projects 3,400 more dwellings will be demanded by 2033, a 23.5% increase from 2026 housing demand.
- Evidence of lack of transport options (Problem Statements 1 and 2):
    - QLDC Wānaka Network Optimisation Business Case data provides a detailed case for change for investing in sustainable travel modes to improve overall network performance and equitable access to key activity centres
    - Queenstown public transport network data shows a 4% increase in PT patronage from 2024 to 2025, while the population of the Queenstown Urban area grew 2% during the same period. PT uptake outpacing population growth in Queenstown suggests demand for PT in the Upper Clutha may be greater than what population growth figures suggest.
    - The Community Trial Final Report demonstrates substantial demand for PT currently exists in Wānaka and Hāwea through both trials’ notable uptake.

[15] https://www.qldc.govt.nz/community/population-and-demand/

- Rates of people working and studying at home are notably above the national average. While this is partially due to the relatively large share of agricultural work in the area, it also suggests the inconvenience of commuter travel.
- Motor vehicle availability in the Upper Clutha is substantially higher than the national average. For instance, 26.7% of households in the Upper Clutha have zero or one motor vehicle compared to the 39.8% national average.
- Community engagement undertaken for The Better Ways to Go Queenstown Lakes District Mode Shift Plan identified poor connectivity between key locations and perceived safety issues of active travel infrastructure within Wānaka.

- Evidence of the share of population without reliable use of a private vehicle (Problem Statements 1 and 2):
  - Wānaka's share of people over age 65 is 3.1% above the national average
  - The Community Trial Final Report[16] articulated the social and economic benefits of increased connectivity from the provision of an affordable and sustainable PT service.

Investment Objectives

Four investment objectives have been identified and are central to this investment case. Each investment objective has been weighted to reflect ORC's level of responsibility and ability to impact through investment. The weighting will also help direct the level and focus of any investment. The sections below discuss each of these objectives and contrast the current state with the community needs or desired future state. The community needs represent the foundational reasons for initiating this project.

Table 3 Investment objectives

#	Investment Objective	Weighting
1	**Land use and transport integration**	**20%**
	Support good urban form Description: Public transport is well integrated with land-use and the built environment to support good urban form and well-functioning environments.	
2	**Connectivity and choice**	**35%**
	Increase connectivity and accessibility using sustainable modes Description: People have greater choice in how they move safely around and participate in social and economic opportunities in the Upper Clutha.	
3	**Environmental sustainability**	**15%**
	Carbon emissions are reduced and air quality is improved Description: Transport-related emissions are reduced through less reliance on private vehicles.	
4	**Affordability**	**30%**
	Increase access to affordable alternatives to private vehicle travel Description: Public transport is provided at a cost that is affordable to both users and funders.	

[16] https://www.communitylink.nz/shuttle-trial

Existing arrangements and community needs

Investment Objective 1: Land use and transport integration

IO1 statement: Support good urban form	
Existing arrangements	• Growth in the Upper Clutha has encouraged car reliance (transport – land use feedback loop) • Increasing transport demand generated by population and visitor growth is contributing to congestion at key points on the network • Satellite towns, particularly Lake Hāwea, are growing rapidly due to the lack of affordable housing near key destinations in Wānaka.
Community needs	• Key growth areas are served by good public transport • Enable future growth to be planned with the certainty that reliable public transport will be available for residents. • Increased travel demand is planned for. • New services adhere to principles of serving diverse trip types, prioritising a patronage-oriented network and mode-neutrality.

Investment Objective 2: Connectivity

IO2 statement: Increase connectivity and accessibility using sustainable modes	
Existing arrangements	• No public transport services in the Upper Clutha • Reliance on private vehicles for most journey types • Social isolation especially for those not able to drive • The satellite towns of Lake Hāwea and Luggate are disconnected from key activity centres in Wānaka.
Community needs	• People have greater choice for how they move around the Upper Clutha • Public transport connects and services diverse trip types • Public transport supports equitable access to places, facilities, services and social and economic opportunities • Services are delivered in a manner that is coordinated, integrated, reliable, accessible, and safe.

Investment Objective 3: Environmental sustainability

IO3 statement: Carbon emissions are reduced and air quality is improved	
Existing arrangements	• Reliance on private vehicles for most journey types • High private vehicle use is responsible for increasing transport-related emissions • With no public transport in the Upper Clutha, the rapid growth in population places further pressure on transport-related emissions from private vehicle use.

Community needs	• Public transport service performance is comparable with private car travel, incentivising its uptake • Well-used public transport services reduce the environmental and health impacts of land transport, including by reducing reliance on single-occupant vehicles • Vehicles use zero-emission technology.

Investment Objective 4: Affordability

IO4 statement: Increase access to affordable alternatives to private vehicle travel	
Existing arrangements	• Social isolation especially for those without reliable access to a private vehicle • Active transport is the only available affordable travel mode, but it is not accessible for everyone nor suitable for every trip. • The high cost of private travel excludes people from accessing essential services and opportunities.
Community needs	• Public transport is provided at a cost that is affordable to both users and funders • Reliable and affordable public transport supports greater social inclusion for all.

Case studies

The purpose of this section is to briefly compare Upper Clutha, which currently does not have publicly funded public transport services, with other areas in Otago and New Zealand with similar characteristics that do have services. It provides an example of "what is possible", and specifically what kinds of public transport services are currently receiving funding.

No single case study is a singular model for Upper Clutha. They each have significant differences as well as similarities, but in aggregate these examples show similarities with many aspects of Upper Clutha.

Table 4 Case studies

Location	Description of area	Description of service	Similarities and differences with Upper Clutha	Overall relevance
Taupō	Taupō is a town of around 30,000 in the central North Island.	• A limited "Taupō Connector" 8-trip-per-day urban service • Runs six days a week • Supplemented by a very limited "Connect2Taupō" bus service that connects outlying areas to Taupō less-than-daily.	• Taupō is a geographically distinct urban area a long way from larger settlements, and therefore its local public transport is not distorted by being a part of a wider network of any scale • Taupō also has a visitor-oriented economy like Upper Clutha, and even a similar lakeside geography. • Although larger in population this difference would be reduced when considering visitor numbers, and will likely decrease over time	Taupō is valuable because of its geographic similarities to Upper Clutha. Its PT service design is also quite distinct from other services listed here. The service design would form a good model for a very limited start-up service option in Upper Clutha. Because of the service's limitations, the patronage is satisfactory for a single service, while at the same time being low relative to the town's population. As such it illustrates potential lower bounds on trip generation.
Thames	Thames is a coastal settlement of around 8,000 people in north-eastern Waikato, on the Coromandel Peninsula	• A limited "Thames Connector" service of five trips a day in each direction operates. • This service is compressed in time relative to Taupō, running from 9:30am to 3:30pm, and is operated by a taxi company running a 14-seat minibus.	• Thames is substantially smaller than Upper Clutha, but is an area with high visitor numbers	The Thames Connector illustrates the potential demand for a highly limited service with different properties to the Taupō Connector; oriented towards inter-peak usage only with no commuter trips and operated using small vehicles. A service along these lines could be a minimum-level skeleton service in Upper Clutha and could potentially be delivered by more community-led mechanisms and could still deliver sufficient trips to generate acceptable patronage.

Location	Description of area	Description of service	Similarities and differences with Upper Clutha	Overall relevance
Arrowtown	Arrowtown is a historic settlement in the Whakatipu Basin, 20km from Queenstown. The resident population is around 3,000, and there are large numbers of tourists. The expected level of population growth is low.	• Two half-hourly bus routes, one to Frankton, one direct to Queenstown (net 48 trips per day per direction). • Full service 7 days a week • This is a 2025 improvement, splitting a previous service into two services and giving more direct travel options • The level of service is not justified by Arrowtown alone; intermediate destinations (Arthurs Point, Ladies Mile) contribute as well as its proximity to Queenstown urban area.	• Both Arrowtown and Lake Hāwea settlements are separated from the core urban area but are close enough to form a functional part of the urban area. • Similar populations at present. • Arrowtown is a significant tourist destination • There is significantly more residential growth expected in Lake Hāwea than Arrowtown • Despite distance, both Lake Hāwea and Arrowtown form effective anchors for public transport routes, supporting service for inner parts of routes.	Arrowtown is an example of an area with a high level of public transport service relative to population. This is because despite distance barriers, it generates sufficient trips to clearly “anchor” the bus routes. Lake Hāwea would fulfil a similar “anchor” function in an Upper Clutha network and could be a stronger trip generator due to planned long-term growth. Although the potential level of trip generation is weaker, the land-use implications of Lake Hawea public transport compare favourably.
Jacks Point, Hanleys Farm, Homestead Bay	These areas form the core of the Southern Corridor, one of the most significant growth areas in the Whakatipu Basin. The area’s population has risen sharply since Orbus services began in 2017, with a population already growing from 900 in that year to 5,400 at present. The future population is forecast to grow to 11,000 in 2055, driven largely by the Homestead Bay development.	• A half-hourly bus route with 24 trips a day in each direction, which since 2025 has connected directly into Queenstown (having previously terminated at Frankton). • Future services will become very frequent as Homestead Bay and other southern corridor developments are built, and the road network reaches capacity.	• Like the Southern Corridor, Upper Clutha is expecting to see a high level of future growth and increased importance of public transport • The Southern Corridor is more constrained and reliant on public transport due to limited roading connections.	While the Southern Corridor is likely to be one of the most significant public transport corridors in the South Island due to particular local factors, the scale of growth faced by Wānaka is similar in magnitude. The differences are in urban form and constraints which put limits on Upper Clutha public transport potential, but the overall similarity in scale is important to note.

Location	Description of area	Description of service	Similarities and differences with Upper Clutha	Overall relevance
Mosgiel	Mosgiel is a town on the outskirts of Dunedin City with a population of around 15,000. The town forms a part of a single functional urban area with Dunedin.	• A half-hourly (15min at peak, with additional express trips) service, which is well patronised and primarily delivers travel to/from destinations beyond Mosgiel • A limited On-Demand service operates 5 days a week until 6pm, delivering local trips within Mosgiel • On-Demand has demonstrated limited improvements on previous low-usage loop routes, but not a transformational change in usage for local trips	• Mosgiel is a small urban area with a strong bus service. • Although smaller than Wānaka it forms part of a larger functional urban area. • Although Dunedin does not have the growth of Upper Clutha, Mosgiel is where much of Dunedin's growth is concentrated • Mosgiel's On-Demand service is also important as this is one potential solution suggested for Upper Clutha	While more different to Upper Clutha than various examples in Whakatipu, Mosgiel is a reasonable comparator example of potential demand for public transport. The On-Demand component shows the opportunities and limits, although the scale is smaller.
Otago Peninsula	Otago Peninsula lies on the outskirts of the Dunedin network and has a number of small townships. The areas served by the Peninsula have a population of up to 5,000, and there are a number of tourist attractions that generate trips.	• An hourly service with additional peak trips due to high school-travel demands • Limited trips are extended past Portobello to Harington Point	• Although the core Peninsula service is classed as part of the urban network, it has relatively long trips and serves a dispersed population, more so than Upper Clutha would • However, it does form part of a larger Dunedin network • Like Upper Clutha, there are a significant number of visitors as well as residential PT users	The Peninsula service demonstrates the potential demand for a dispersed population, with strong trip attractors (Central Dunedin and tourist attractions).
Timaru	Timaru is a town of around 30,000 on the east coast of the South Island	• Previous fixed-route services have been replaced by an extensive on-demand service, which is subject to expansion	• Timaru and Upper Clutha are similar in being geographically distinct functional urban areas of similar populations (particularly daytime populations including visitors) and with urban forms that create public transport challenges • Timaru does not have the same level of growth, nor this same visitor-oriented economy. • Different demographics	The relatively successful and well-regarded on-demand service in Timaru is a valuable case study for on-demand elsewhere. It also demonstrates the value of investment in PT services of any form, in towns where size and urban form limitations constrain PT design.

Scope and key service requirements

The Queenstown Lakes Spatial Plan (2021) provides the basis for the geographical scope of this investment case. The following locations of the Upper Clutha are included within the investigation scope:

- **Wānaka:** largest activity centre in the Upper Clutha, high share of visitor accommodation
- **Northlake**: medium density development with over 1500 residents. Under five kilometres from Wānaka town centre
- **Three Parks**: high concentration of commercial activity and social infrastructure. Under four kilometres from Wānaka town centre
- **Albert Town**: low density suburb with over 2000 residents. Roughly five kilometres from Wānaka town centre
- **Southern Wānaka:** future high-density mixed-use development under five kilometres from Wānaka town centre
- **Lake Hāwea:** largest satellite town in Upper Clutha, high growth largely residential development with over 2400 residents in 2025 and 7200 expected by 2055.[17] 16 kilometres from Wānaka town centre
- **Luggate**: heritage satellite town limited commercial activity or social infrastructure. Home to 680 residents and 13 kilometres from Wānaka town centre.

The key service requirements are shown below and drawn from the RPTP's Focus area 4: A connected and integrated network, guiding principles and service design policies SD P1 to SD P6 (p.51, 52) to meet the business needs and investment objectives.

Table 5 Key service requirements

Service Requirements	Potential Scope
Serve diverse trip types	Services connect people to diverse destinations including shops, restaurants, libraries, workplaces and schools. Services also support complex travel patterns that are time and cost effective.
Prioritise a patronage-orientated network	Focus on serving high demand areas with high service frequency and maximum convenience. Whilst also optimising resources to deliver quality coverage to support equitable access where possible.
Support connections with other modes	Service design supports easy and convenient connections with other modes. Services will be planned in a way that aligns with existing infrastructure, allowing for safe seamless access or transition between modes.

[17] https://www.qldc.govt.nz/community/population-and-demand/

Out of scope

The following services and trip types are out of the scope for this investment case:

- **Ski field services:** as a popular recreation activity for both residents and visitors, trips to ski fields account for a large number of trips between June and September. Increased traffic concentrates in Central and Southern Wānaka as people travel west and south to nearby ski fields. While ski-related travel is a notable trip type for a portion of the year, this investment case prioritises public transport options that serve people's daily and essential travel needs over recreational interests. Moreover, transport to ski fields near the Upper Clutha already exists in the form of commercial services.
- **Park and Ride in Luggate:** park and ride increases the catchment of public transport by enabling easy access by private vehicle. Due to the relatively short driving times from Luggate to key activity centres in the Upper Clutha and the small population east of Luggate, park and ride is unlikely to attract enough passengers to achieve good value for money.
- **Regional connections:** connections from the Upper Clutha to nearby centres such as Queenstown and Cromwell have been excluded from this investment case. The case for these services will be evaluated in the related but separate Otago Central Lakes regional PT investigation being completed co-currently with this case.
- **Walking- and cycling-exclusive trips:** this investment case does not consider active travel modes such as walking or cycling specifically. It is however noteworthy the importance of good walking and cycling first and last mile connections to encourage use of public transport.

Related projects

Table 6 below provides a list of projects that relate to this investment. These projects have overlaps in terms of planning, investing and delivery timeframes. They also collectively contribute to improving outcomes in the Whakatipu and Upper Clutha region.

Table 6 Active projects that relate to implementation of public transport in Upper Clutha

Project	Description
Sub-Regional Public Transport Business Case (2025/26)	A Sub-Regional Public Transport Business Case is in progress to be completed early in the 2026/27 financial year. This investment case proposes public transport services for the Sub-Region linking Alexandra, Clyde, Cromwell, and Wānaka with Queenstown. Both projects seek to determine viable alternatives to private car travel within their respective townships and to Queenstown. It is expected both projects will have similar options frameworks (though different outcomes). There is likely to be a high level of integration of timetables and operating arrangements across these two projects, leading to them being procured co-currently.
Otago Central Lakes Regional Deal – sub-regional	As a part of the Otago Central Lakes Region Deal (as of June 2026) the three councils (CODC, ORC, QLDC) are producing a Sub-Regional

Transport Network Plan (2026)	Transport Network Plan. This will be a network level framework that defines how the transport system should function, be prioritised, and evolve over the long term. This project is being led by QLDC and will be the first all-mode analysis of the Otago Central Lakes sub-region. This Project will be consistent with the public transport components of this plan.
Otago Central Lakes Regional Deal – sub-regional spatial planning (unknown timeframe)	As a part of the Otago Central Lakes Region Deal (as of June 2026) it is expected that the three councils (CODC, ORC, QLDC) will collaboratively develop a combined spatial plan for the Otago Central Lakes subregion. The successful establishment of a regional deal is required to confirm this subregional spatial plan as an official work programme. The Project will inform the transport components of this plan.
Balclutha – Dunedin (via Airport) public transport investigation (2025/26)	The Balclutha - Dunedin investigation is expected to be completed in the first half of FY 2026/27. While a different geography, the close overlap in the projects' scales and processes warrant their coordination. Collectively the three public transport investigations (Balclutha, Queenstown Sub-regional and Upper Clutha) will form part of ORC's public transport improvements programme seeking funding through the 2027-2030 LTP and RLTP processes.
Queenstown Public Transport Business Case (2024)	This ORC and NZTA endorsed business case is the blueprint for public transport investment to increase mode share in Whakatipu. The preferred programme is presented in four distinct stages between 2024 and 2039. Stage 1 service improvements were completed in 2025 and planning for Stage 2 implementation is in progress.
Motu Move Ticketing system Rollout (2027)	Otago is scheduled to launch the new national ticketing system (Motu Move) in July 2027. The rollout involves the installation of new ticketing hardware and system across Otago's fleet. Any delays to the project may impact when the Upper Clutha service could commence as it would not be feasible to install the existing Bee Card system.

Timing

As detailed in the strategic context section above, population growth and dwelling consents in the Upper Clutha over the last five years are four times that of the national average. Coupled with increasing visitor numbers and limited transport choices, significant pressure is being placed on the existing transport network.

With limited ability to manage growth, there is a sense of urgency to plan and invest in improving transport choice for everyday journeys. Investing early in public transport could significantly reduce the risk of escalating network-level issues currently occurring in Queenstown, transpiring in Wānaka.

There is a need to recognise and respect the strong influence the public transport system can have in shaping urban form and future infrastructure needs. This investment case seeks to demonstrate that addressing the public transport deficit in the Upper Clutha should be an immediate priority.

Benefits of investment

The key benefits of investing in this proposal have been listed below in Table 7. The benefits and measures are linked to each of the investment objectives and are consistent with the Land Transport Benefits framework, RPTP performance measures, and recent NZTA research[18]. The numbers next to each of the benefits and measures directly relate to the transport outcomes and benefit classifications in the framework.

Baseline values for each of the measures have not yet been established.

Table 7 Key Benefits

Benefit	KPIs / Measures	Targets
Investment Objective 1:	**Land use and transport integration:** Support good urban form	
Improved access to economic opportunity (5.2)	5.2.6 Access to key economic destinations	Percentage of jobs in region less than 45-minutes door-to door travel time[19] for the average resident, (morning peak) is increasing
Improved spatial coverage of public transport (10.2, 10.3)	10.2.5 Spatial coverage of public transport for employees/Public transport access to jobs	The number of employees in Wānaka within 500m of a bus stop is increasing
	10.2.6 Spatial coverage of public transport for residents	The number of people resident in Wānaka/Upper Clutha within 500m of a bus stop is increasing
	10.2.6a Spatial coverage of public transport for new dwellings	% of recently built residential dwellings with access to PT
	10.3.1 Access to key social destinations	The percentage of key activity centres accessible in less than 45-minutes door-to-door travel time for Upper Clutha residents is increasing. OR The percentage of key activity centres in Wānaka within 500m of a bus stop is increasing
Investment Objective 2:	**Connectivity and choice:** Increase connectivity and accessibility using sustainable modes	

[18] Baker, K., Weir, D., Woodfield, C., Kelley, S., & Wallis, I. (2025). Vertically integrated public transport measurement (NZ Transport Agency Waka Kotahi research report 747).

[19] Door to door travel time includes the walk up access and egress as well as wait time.

Improved public transport mode choice (10.2)	10.2.1 Mode share	Percentage of the population in the Wānaka ward using public transport in the last year is increasing.
	10.2.2 Accessibility of public transport facilities	Number of bus stops that are fully accessible is increasing
	10.2.7 Temporal availability of public transport	Public transport frequency per hour weighted by percentage of the population living within 500m of a bus stop is increasing
	Service use/Passenger demand	Passenger boardings are increasing annually.
Investment Objective 3: Environmental sustainability: Carbon emissions are reduced and air quality is improved		
Reduced emissions from land transport (8.2)	8.1.1 CO_2 emissions	Total vehicle CO_2 emissions **per capita** is reducing
	8.1.3 Vehicle kilometres travelled (VKT) reduction	Light vehicle VKT is reducing
Investment Objective 4: Affordability: Increase access to affordable alternatives to private vehicle travel		
Improved transport affordability for users (10.2)	10.2.8 Cost of access to key destinations for all modes	Cost to access destinations is reducing with the introduction of affordably priced public transport
	Fair fares relative to other PT networks in the region (no corresponding NZTA measure)	Public transport fares remain comparable with other networks in Otago (Queenstown and Dunedin) (e.g. Less than a 50% difference from existing service fares)
Value for money (for funders) – using limited resources to best serve communities.	Private share of operating costs	Private share contributions to the costs of service delivery grow over time.
	Operating cost per passenger kilometre	Average operating cost per passenger kilometre remains comparable with the rest of the Otago network.
Changes in human health (3.1)	Physical and mental health benefits from availability of affordable reliable public transport.	[Qualitative] Improvement in quality of life experienced by users such as reduced financial stress, improved social interaction (reduced isolation), and improved physical health through use of active first/last mile trip legs.

Risks

The table below discusses the most significant strategic risks that might prevent, degrade, or delay the achievement of the investment objectives or otherwise undermine the outcomes being sought through this investment.

Table 8 Initial risk identification and assessment

Strategic risk	Risk management strategy
IF the preferred option does not align with central government policy direction or Council's priorities THEN the ability to progress public transport services in the Upper Clutha may be delayed.	Regular review of strategic alignment and priority with partners (QLDC and NZTA) and Council (via portfolio leads) throughout project development.
IF the project is not deemed a priority for inclusion through the 2027 Long-Term Plan and RLTP process THEN implementation and the realisation of benefits may be delayed.	The benefits of investing and value proposition will be articulated as strongly as possible through this business case. Staff will work in an integrated manner with the LTP and RLTP project prioritisation process.
IF there is engagement or consultation fatigue or people are disenfranchised, THEN it may be difficult to connect with the community and receive representative feedback.	Establish good communication, engagement and consultation plan. Engage early and meaningfully with the communities. Make sure purpose, scope, impacts and benefits are clearly communicated.
IF there is a change in government following the election in late 2026 or preferences of the government change THEN rework of the investment case may be needed.	Release of the draft GPS will signal government's priorities. This will provide an opportunity to assess early alignment (or not) of this project. A change in government may delay the GPS release and assessment.
IF urban development occurs out of sequence through processes, such as those set out in the Fast-Track Approvals Act 2024, THEN public transport may not be able to viably serve it.	Actively monitoring and responding to fast-track applications. Planning the service with consideration of potential future greenfield urban development locations. Working with QLDC to plan the service to be integrated with surrounding land uses, present and future.

Risk of not investing in public transport services in the Upper Clutha

The risk of not planning and investing in public transport in the Upper Clutha, is that there will be continued strain and deterioration of level of service on the road network, and limited transport choice for the growing number of residents and visitors. If unaddressed, access to essential services and opportunities will continue to be limited to those people that face transport disadvantage. Wānaka will continue to be disconnected from the surrounding growth areas, and car dependency further enforced.

Further there is an ongoing reputational risk and erosion of public confidence. The Upper Clutha community have been highly engaged, proactive and motivated to see the introduction of public

transport in their community. With funding for a trial not forthcoming in the last RLTP the community have continued to lobby strongly through public submissions.

Community board engagement

The Wānaka Upper Clutha Community Board has introducing public transport to the Upper Clutha as a top priority for the 2025-2028 triennium. Several engagement sessions with community board members were held in the development of this investment case, including a formal briefing session at the 12 May 2026 meeting.

As elected local community representatives, the Community Board provided important local context, expertise on the Community Link transport trials, and public priorities for a local public transport service.

The Economic Case – Identifying the preferred option

The purpose of the economic case is to identify the investment option that best meets ORC and its partners' investment objectives, and optimises value for funders. This economic case summarises the range of investment options that have been considered, how these have been evaluated, and confirms the preferred option.

The preferred option will address the lack of sustainable transport option and improve connectivity and liveability in the Upper Clutha through the introduction of a bus service connecting Lake Hāwea, Albert Town, Three Parks and Wānaka. It will be designed following Service Design Policy SD P1 as set out in the RPTP.

Critical Success Factors

Table 9 below outlines the critical success factors (CSF) determined for this investment case. These broadly follow Treasury's and Better Business Case standard CSFs.

Table 9 Critical Success Factors

Critical Success Factor	Broad Description
Strategic fit and organisational needs (Strategic)	Assesses the option against the investment objectives, related business needs and service requirements, integrates with ORC's other strategies, programmes, and projects.
Potential value for money (Economic)	Assesses whether the option represents good value to ORC and the community for the funds being spent.
Provider capacity and capability (Commercial)	Assesses the option against potential supplier capacity and capability to deliver the required services in a manner that is likely to result in a sustainable arrangement that optimises value for money.
Potential affordability current and future (Financial)	Assesses affordability of the option from potentially available or planned funding, and matches other funding constraints.
Potential achievability (Management)	Assesses whether ORC has the internal capacity and available skills required for successful delivery.

Long-list options

A broad range of possible public transport service options for the Upper Clutha were developed and refined through several working sessions. Table 10 below summarises the five dimensions for options that have been considered.

Table 10 Five dimensions for long-list options

Dimension	Options

1. Geographical scope What levels of coverage are possible?	GC1 – Do nothing (status quo) GC2 – Albert Town, Three Parks, Wānaka GC3 – Hāwea, Albert Town, Three Parks, Wānaka GC4 – Hāwea, Albert Town, Three Parks, Wānaka, Southern Wānaka GC5 – Hāwea, Albert Town, Three Parks, Wānaka, Southern Wānaka, Luggate (do maximum)
2. Service solution How could the preferred scope be delivered?	SC1 – Door to door community transport: Not-for-profit, designed and run by the community to serve most vulnerable/disadvantaged. Primarily social service (do nothing) SC2 – Skeleton: less than hourly - 8 trips per day SC3 – On-demand: bookable ride share service, no fixed route or schedules. SC4 – Basic: hourly frequency SC5 – Regular: Half-hourly frequency SC6 – Frequent: more than half-hourly to ten-minute frequency SC7 – Rapid transit: more than ten-minute frequency (do maximum)
3. Service delivery Who will deliver the service?	SD1 – Exempt (community led): community-led organisation plans, funds and operates the service SD2 – Subsidised (gross cost): ORC contracts an operator and pays a set fee to deliver the services. ORC collects the fare revenue and bears risk of patronage fluctuations. ORC controls fares, branding, service quality and integrated ticketing. SD3 – Subsidised (net cost): ORC contracts an operator and provides a subsidy to operate to cover operating costs and risk. The operator retains fare revenue. Net contracts incentivise operators to increase patronage. SD4 – Exempt (commercial): a private company plans, funds and operates the service without ORC involvement.
4. Implementation/ timing When will the service be delivered?	IM1 – Delay indefinitely (do nothing) IM2 – Phase over Years 1-10 of next LTP IM3 – Phase over Years 4-10 of next LTP IM4 – Immediately in Years 1-3 of next LTP (do maximum)
5. Funding How will it be funded?	FD1 – Fares/third party funding + ORC rates + NZTA co-funding: private share, local share and central government subsidy (BAU) FD2 – Fares/third party funding + ORC rates: private share and local share FD3–Fares/third-party funding: private share only (user pays and third-party subsidy) FD4 – Fares only: private share only (user pays 100%)

Initial consideration was given to including ‘service fleet’ (e.g. small bus, medium bus, large bus, high-capacity bus, high capacity non bus mode) as a dimension to the option analysis. It was subsequently removed as it was considered to be covered within the service solution/service frequency dimension. For instance, it would not be economical to run very small buses at a rapid frequency or run a skeleton service using a high-capacity non-bus mode.

Long-list assessment

Figure 9 on the following page shows the long-list assessment of each option dimension against the investment objectives (from the strategic case) as well as the critical success factors detailed above. The high-level assessment uses “Yes” to indicate strong alignment and ability to meet a criterion,

“No” where an option element does not meet a criterion, and “Partial” where an option element somewhat meets the criterion.

Further detail of the rationale behind the assessment of each option can be found in Appendix C.

The Upper Clutha currently has no public transport services. Rapid population growth and dispersed settlement patterns across the Upper Clutha have occurred, and with limited alternative mobility options, there is a high reliance on access to private vehicles. Without intervention, network level of service, connectivity and access will continue to deteriorate.		Three Parks, Wānaka	Albert Town, Three Parks, Wānaka	Albert Town, Three Parks, Wānaka, Southern Wānaka	Albert Town, Three Parks, Wānaka, Southern Wānaka, Luggate	community transport	(8 trips per day)		(hourly)	**(half-hourly)**	(more than half-hourly to ten-minute)	(more than ten-minute)	community-led)	**(gross cost)**	(net cost)	commercial)	indefi (do no
Investment Objectives																	
Land use integration: Support good urban	No	Partial	Partial	Yes	Yes	No	Partial	No	Partial	Partial	Yes	Yes	No	Yes	Yes	Yes	N
Connectivity and choice: Increase connectivity and accessibility using	No	Partial	Partial	Yes	Yes	Partial	Partial	Partial	Partial	Yes	Yes	Yes	Partial	Yes	Yes	Yes	N
Environmental sustainability: carbon emissions are reduced and air quality is	No	No	Partial	Yes	Yes	No	Partial	Partial	Partial	Yes	Yes	Partial	No	Yes	Yes	Yes	N
Affordability to users: increase access to affordable alternatives to private vehicle	No	Partial	Partial	Yes	Yes	Yes	Partial	Partial	Partial	Yes	Yes	Yes	Yes	Yes	Yes	Partial	N
Critical Success Factors																	
Strategic fit and organisational needs	No	Partial	Partial	Yes	Yes	Partial	Yes	Yes	Yes	Yes	Yes	No	Partial	Yes	Partial	Yes	N
Potential value for money/Benefit optimisation (Economic)	No	Partial	Partial	Yes	Yes	Partial	Yes	No	Yes	Yes	No	No	Partial	Yes	Partial	Partial	N
Provider capacity and capability	Yes	Yes	Yes	Yes	Yes	No	Yes	Yes	Yes	Yes	Yes	No	No	Yes	Yes	Yes	N/
Potential affordability - current and future (Financial)	Yes	Partial	Partial	Partial	Partial	Yes	Yes	No	Yes	Yes	No	No	Yes	Yes	Yes	Partial	N
Potential feasibility/achievability	Yes	Yes	Yes	Yes	Yes	No	Yes	Yes	Yes	Yes	Yes	No	No	Yes	Yes	No	Part
SUMMARY	Carry forward as comparator	Discount	Discount	Preferred	Preferred	Discount	Carry forward	Discount	Carry forward	Preferred	Discount	Discount	Discount	Preferred	Possible	Discount	Disc
Options progressed to Short-list				↓	↓					↓				↓			

Figure 9 Long-list options assessment

Short-list options

This section outlines the short-listed option solutions available to Council. Through the long-list assessment process two viable geographical scoping options and two viable service solutions were identified. There was only one preferred option for each of the delivery, funding and timing dimensions. A geographical scoping option and service solution option delivering lower levels of service were also carried forward as a do minimum comparator.

Based on the analysis of the long-list options, the recommended short-list is shown below in Table 11.

Table 11 Short-listed options

	Do nothing	Do minimum	Option 1	Option 2	Option 3	Option 4
Geographical scope	Do Nothing GC 1: Status Quo	GC3: Hāwea, Albert Town, Three Parks, Wānaka	GC4: Hāwea, Albert Town, Three Parks, Wānaka, Southern Wānaka	GC4: Hāwea, Albert Town, Three Parks, Wānaka, Southern Wānaka	GC5: Hāwea, Albert Town, Three Parks, Wānaka, Southern Wānaka, Luggate	GC5: Hāwea, Albert Town, Three Parks, Wānaka, Southern Wānaka, Luggate
Service solution	No scheduled PT services continue	SC2: Skeleton (8 trips per day)	SC4: Basic (hourly)	SC5: Regular (half-hourly)	SC4: Basic (hourly)	SC5: Regular (half-hourly)
Service Delivery	N/A	SD2: Subsidised gross cost contract				
Implementation Timing	N/A	IM2: Phase over Years 1-10 of the next LTP				
Funding	N/A	FD1: Fares, third-party funding, local rates and NZTA co-funding				
Description	Do nothing is taken forward as the status quo scenario and forms the base line comparator	Serve all urban centres in area **excluding** Luggate, at a minimum level of frequency.	Serves all urban centres in area **excluding** Luggate, at a basic hourly frequency	Serves all urban centres in area **excluding** Luggate, at a more regular half hourly frequency	Serves all urban centres in area **including Luggate**, at a basic hourly frequency	Serves all urban centres in area **including Luggate**, at a more regular half hourly frequency

The options carried forward to the short-list reflect the importance of having adequate geographic coverage and frequency to sufficiently achieve the investment objectives and critical success factors.

Figures 10-12 visualise possible routes corresponding to geographical scoping options GC3, GC4 and GC5.

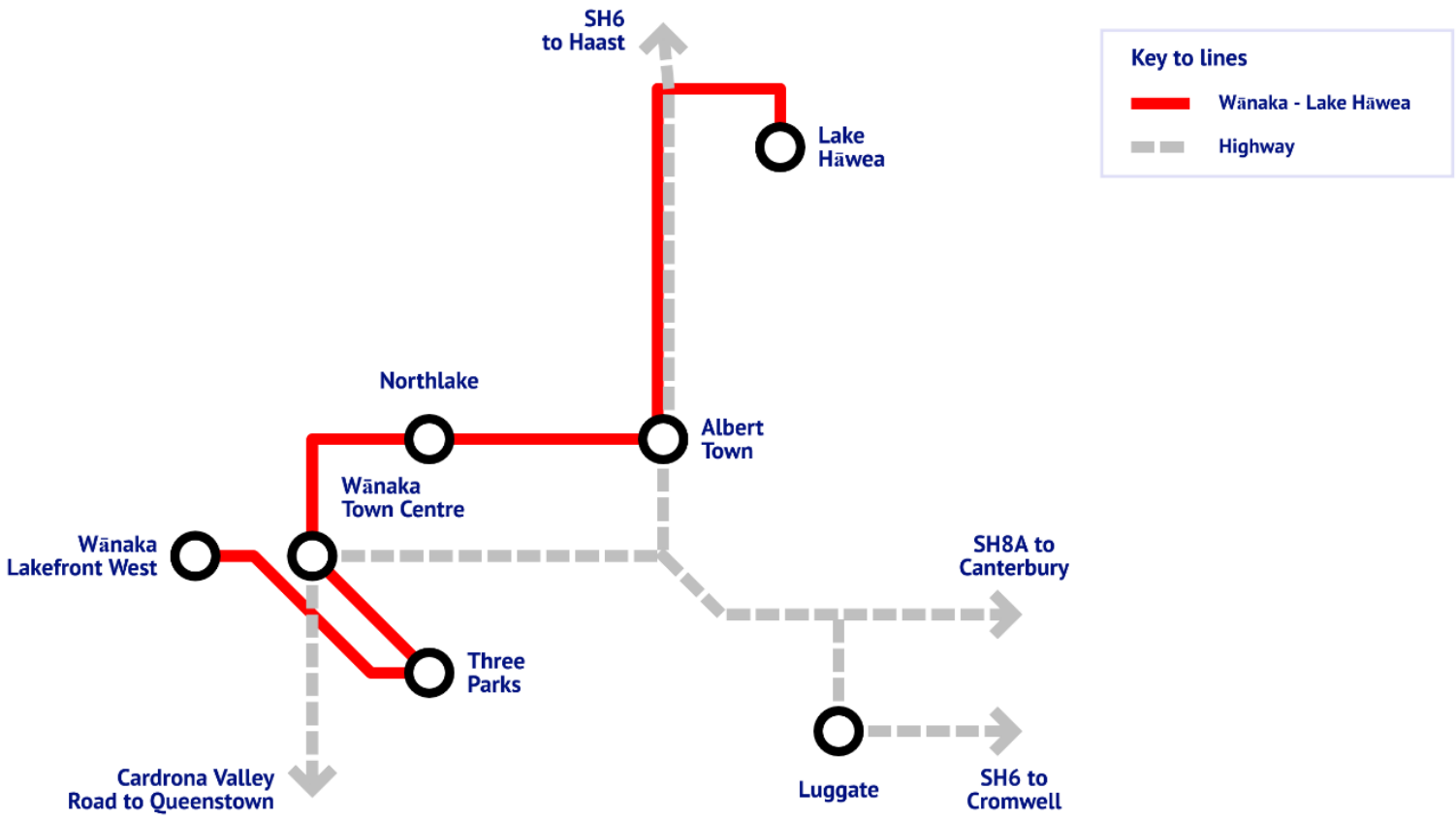

Figure 10 GC3: Hāwea, Albert Town, Three Parks, Wānaka

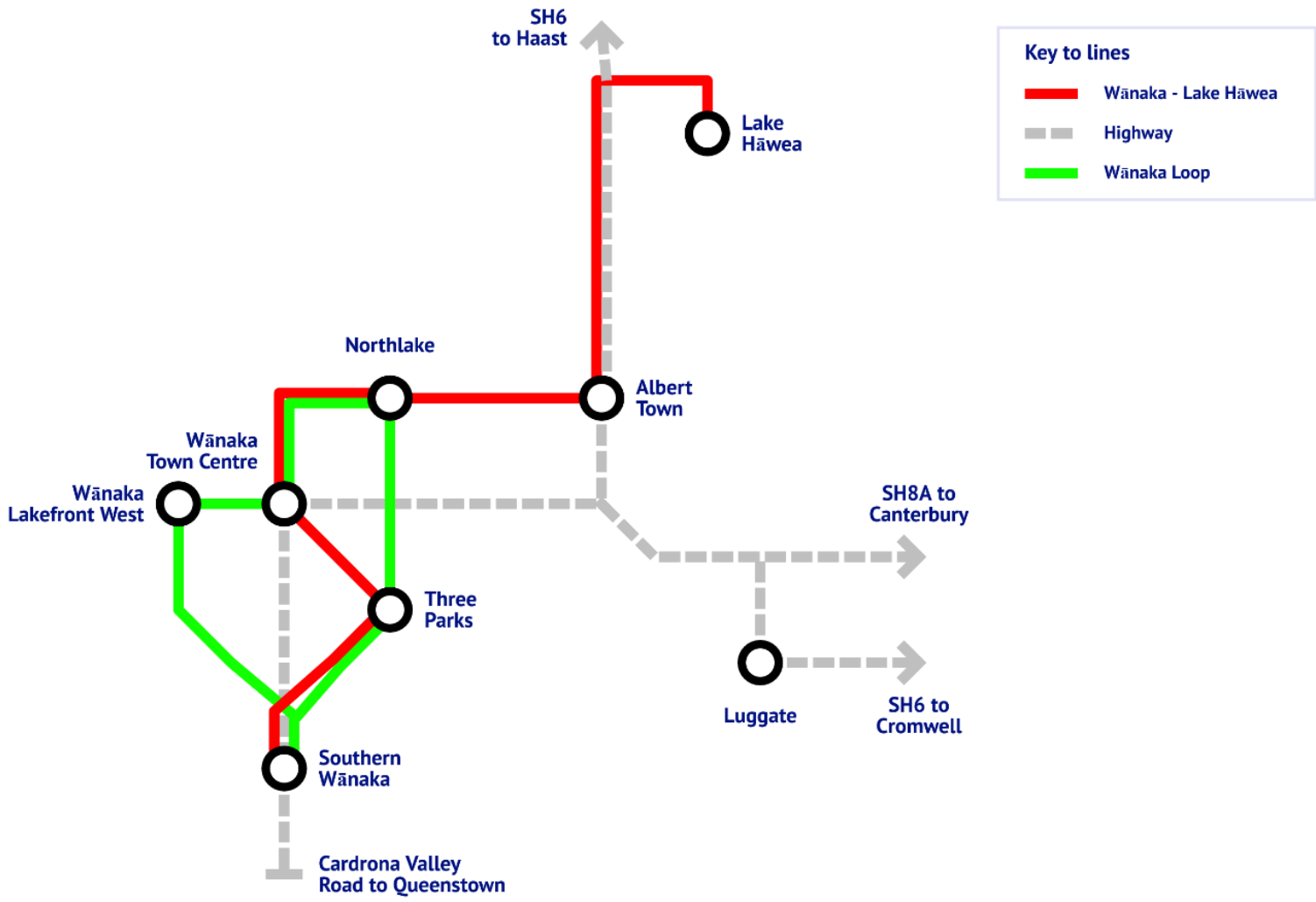

Figure 11 GC4: Hāwea, Albert Town, Three Parks, Wānaka, Southern Wānaka

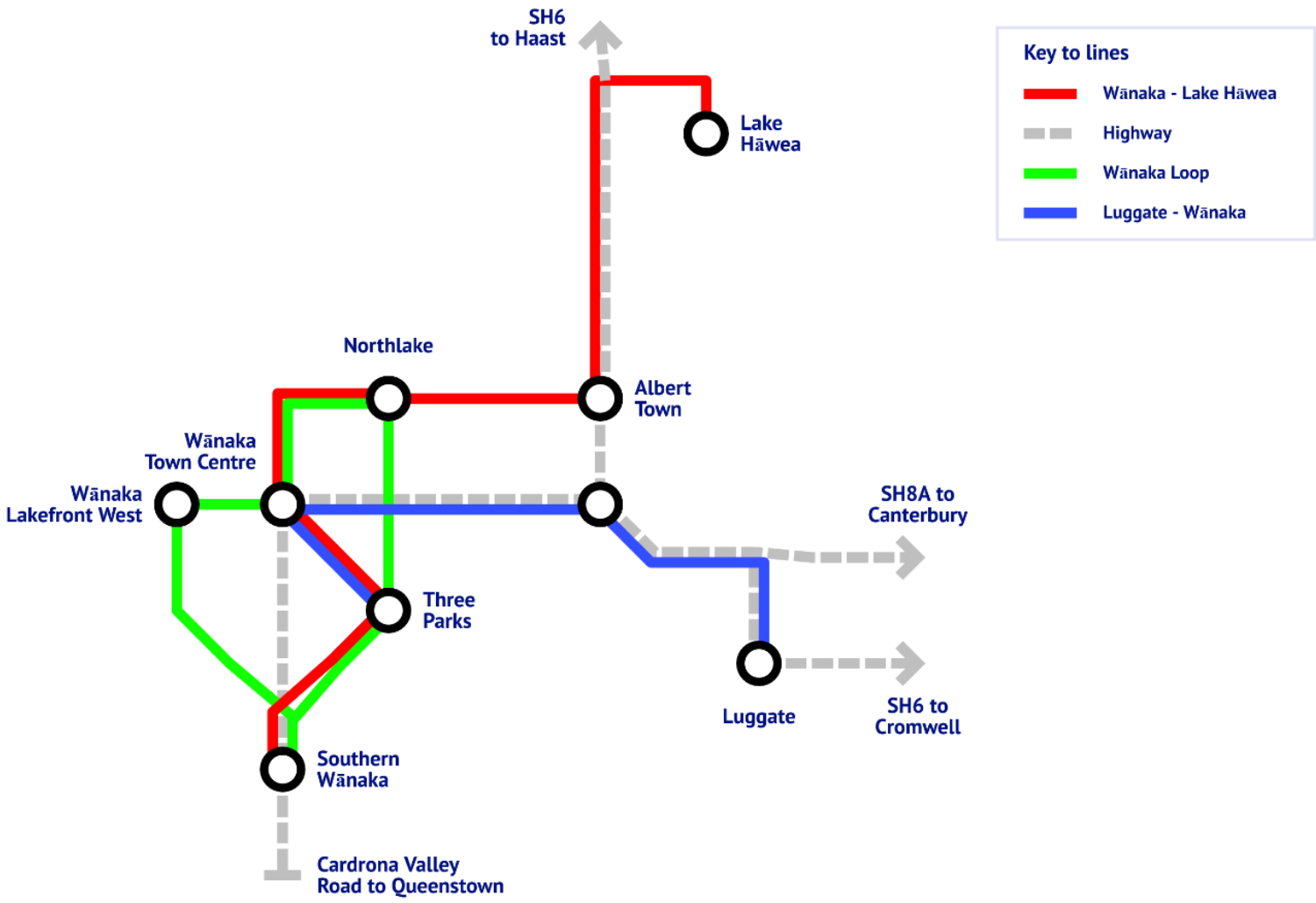

Figure 12 GC5: Hāwea, Albert Town, Three Parks, Wānaka, Southern Wānaka, Luggate

Short-list options assessment

Further analysis of the short-list of options has been undertaken to assess suitability for investment and determine a preferred option. A multi-criteria analysis (MCA) approach has been used to assess effectiveness and value for money in an integrated manner. The project team used their qualitative judgement to assess outcomes, impacts and alignment with objectives (effectiveness). While each option was assessed against the investment objectives and critical success factors in isolation in the long-list assessment, the MCA provides the opportunity to evaluate the short-list options across all service dimensions at once. Relevant environmental and social impacts not otherwise captured in the criteria were also assessed.

An economic assessment was undertaken using NZTA's simplified procedures to assess indicative costs, benefits and relative value (value for money).

Operational risks of the service options were identified and the option's level of exposure to each risk evaluated. A full assessment of the risks and mitigations is discussed in the management case.

Evaluation criteria

Table 12 below summarises the MCA evaluation criteria used to appraise each of the short-list options.

Table 12 MCA Evaluation criteria

Criteria	Description
Investment Objectives	How well will the option….
Land use integration	support good urban form?
Connectivity and choice	increase connectivity and accessibility using sustainable modes?
Environmental sustainability	contribute to reduction in carbon emissions and improvement in air quality?
Affordability to users	increase access to affordable alternatives to private vehicle travel?
Critical Success Factors	The extent to which the option….
Strategic Fit	meets ORC's public transport objectives (as set out in the RPTP). Specifically, to invest in a public transport system that reduces dependence on private vehicles, positive environmental outcomes and supports sustainable urban development.
	aligns to the ORC's strategic direction for transport and long-term business needs, including increasing transport choice, regional connectivity and planning to meet changing community needs as the region grows.
Potential value for money	optimises value for money (i.e., provides the optimal mix of potential benefits, costs, and risks for ORC).
	supports achievement of the benefits sought.
Provider capacity and capability	is likely to be deliverable in the market
	is likely to result in a sustainable arrangement with a supplier.

Potential affordability	can be delivered from available funding or rating mechanisms
	is likely to obtain funding from possible funding sources
Potential feasibility/achievability	can be delivered from existing ORC resources
	has a level of complexity and/or delivery risk that is acceptable to ORC.
Risks	
Patronage (overcapacity)	If the service is overcapacity due to high demand, then it may experience reliability and reputational issues
Patronage (insufficient)	If the service does not generate sufficient patronage to be considered good value for money, then social licence may be lost, and service reductions may occur
Revenue	If the service does not generate sufficient revenue to be financially sustainable, then service reduction or cancellation may be required
Traffic congestion	If increased traffic congestion on the road network negatively impacts service performance, then the service will experience lower patronage and reputational issues
Active transport interaction	If services disproportionately shift trips away from active transport rather than private vehicle travel, then the transport system's efficiency, equity and sustainability will worsen
Out-of-sequence development	If development occurs at unplanned times or in unplanned areas, then it may be poorly served by public transport
Lack of development	If the projected population growth does not occur then the service will fail to be right sized for the area, generating low patronage
Impacts	The extent to which the option can achieve…
Social and cultural impacts	Health benefits of active transport for first and last mile
Benefits	The extent to which the option can…
Improve access to opportunity	
Improve spatial coverage of public transport	
Improve public transport mode choice	
Reduce emissions from land transport	
Improve transport affordability for users	

Climate change mitigation impacts were excluded from the MCA to ensure the IO3 (Environmental Sustainability) was not double counted. Climate change adaptation/resilience impacts, impacts on te ao Māori and property impacts were excluded due to their lack of relevance to the service options.

Scoring

A standard NZTA seven-point scoring system was used to score the options against the criteria, as presented below in Table 13. All short-list options including the Do Nothing scenario were scored using this scale.

Costs are an input into the assessment of both the affordability and value for money CSFs. Costs and Benefit Cost Ratios (BCR) are recorded for each option as useful information to inform any investment decision but are not scored as part of the MCA.

Table 13 MCA seven-point scoring system

Score	Description
+3	Major positive impacts resulting in substantial and long-term improvements or enhancements of the existing environment.
+2	Moderate meaningful positive impact. Positive outcome may be in terms of new opportunities and outcomes of enhancement or improvement.
+1	Minimal or small positive impact. May be confined to a limited area.
0	Neutral – little or no discernible or predicted positive or negative impact.
-1	Small but minimal negative impact. May be confined to a small area.
-2	Moderate negative impact. Impacts may be short-, medium-, or long-term and are likely to detract from outcomes sought.
-3	Impacts with serious, long-term and possibly irreversible effect leading to serious damage, degradation or deterioration of the physical, economic, cultural or social environment.

Results

The results of the MCA are presented below in Table 14. The full MCA including detailed commentary of scoring rationale can be found in Appendix D.

The assessment process has revealed that a half hourly service frequency provides the strongest alignment to the investment objectives and contributes to the key benefits to the highest degree. Options 1 and 2 that focus on servicing the key growth areas and not extending out to Luggate meet the CSFs to the greatest extent. Extending service provision to include Luggate (Options 3 and 4) comes at significant additional cost. Whilst scoring low across the all the MCA criteria, when a relative assessment is made of the benefits score and the costs, the preferred option to take forward is the do minimum of eight trips per day.

Taking into account the current limited funding environment, there is a stronger focus on the affordability of options. Whilst the Do Minimum is considered to offer a lower level of service, the marginal gain in benefits relative to the additional investment required for options 1 and 2 is significant. Council could opt to go straight to an hourly service (option 1) to make the service as attractive as possible, but in the short-term getting an initial service in place for the Upper Clutha will be a step change, and as demand grows, there is the potential to increase the service level (Options 1 and 2) over time to realise greater benefits. Therefore, the do minimum is recommended as the preferred option as it could act as a ‘proof of concept’/trial for a future service based on option 1 or 2. The viability of the future service uplift is explored through the sensitivity testing that follows.

Table 14 MCA results summary of short-list options

Criteria category	Do Nothing	Do minimum *8 trips per day no Luggate*	Option 1 *hourly no Luggate*	Option 2 *half hourly no Luggate*	Option 3 *hourly with Luggate*	Option 4 *half hourly with Luggate*
Investment objectives	-1	2	2	8	3	6
Critical success factors	-1	4	7	7	6	6
Risks	-2	-7	-6	-6	-6	-6
Impacts	-1	0	0	1	0	1
Benefits	-2	4	6	10	6	10
Total unweighted score*	-7	3	9	20	9	17
Cost per annum (millions)	$0	$1.17	$2.09m	$3.59m	$3.08m	$5.36m
Indicative Benefit Cost Ratio (Benefit score divide by cost in millions)**	**n/a**	**3.41**	**2.87**	**2.78**	**1.94**	**1.86**
Emerging preferred option	No	Yes	No	No	No	No

*Each criteria is weighted equally, resulting in the criteria categories with a greater number of criteria receiving greater weight.

**The indicative benefit to cost ratio uses the derived benefits score divided by the estimated costs (detailed further in the economic analysis section) to calculate a BCR approximation for relative comparative purposes.

Assumptions

For the purposes of the multi-criteria analysis the following assumptions have been made:

- While the Upper Clutha currently has a relatively small population, it is assumed the high resident and visitor population growth rates persist as projected. Thus, future travel demand will be much higher than current resident population numbers suggest.
- That urban growth will occur primarily in planned locations as per the Queenstown Lakes Spatial Plan 2021. For instance, Luggate is not indicated as a priority growth area therefore its population is assumed to be relatively static in the short- and long-term.
- It is assumed central government's current strategic funding priorities of transport activities will continue for the foreseeable future.

Preferred option

Based on the combination of costs, risks and benefits, the **preferred option** is the do minimum to implement a skeleton bus service in the Upper Clutha. This option represents best value for money in the short term.

The preferred option includes:

Scope: GC3 Hāwea, Albert Town, Three Parks, Wānaka

Service:	SC2	8 trips per day, 7 days per week
Delivery:	SD2	Subsidised (gross cost contract)
Timing	IM2	Phase over Years 1-10 of the next Long-Term Plan
Funding	FD1	Fares, third-party funding, local rates and NZTA co-funding

This proposed bus route is shown below in Figure 13 and has an indicative cost of $1,172,700.

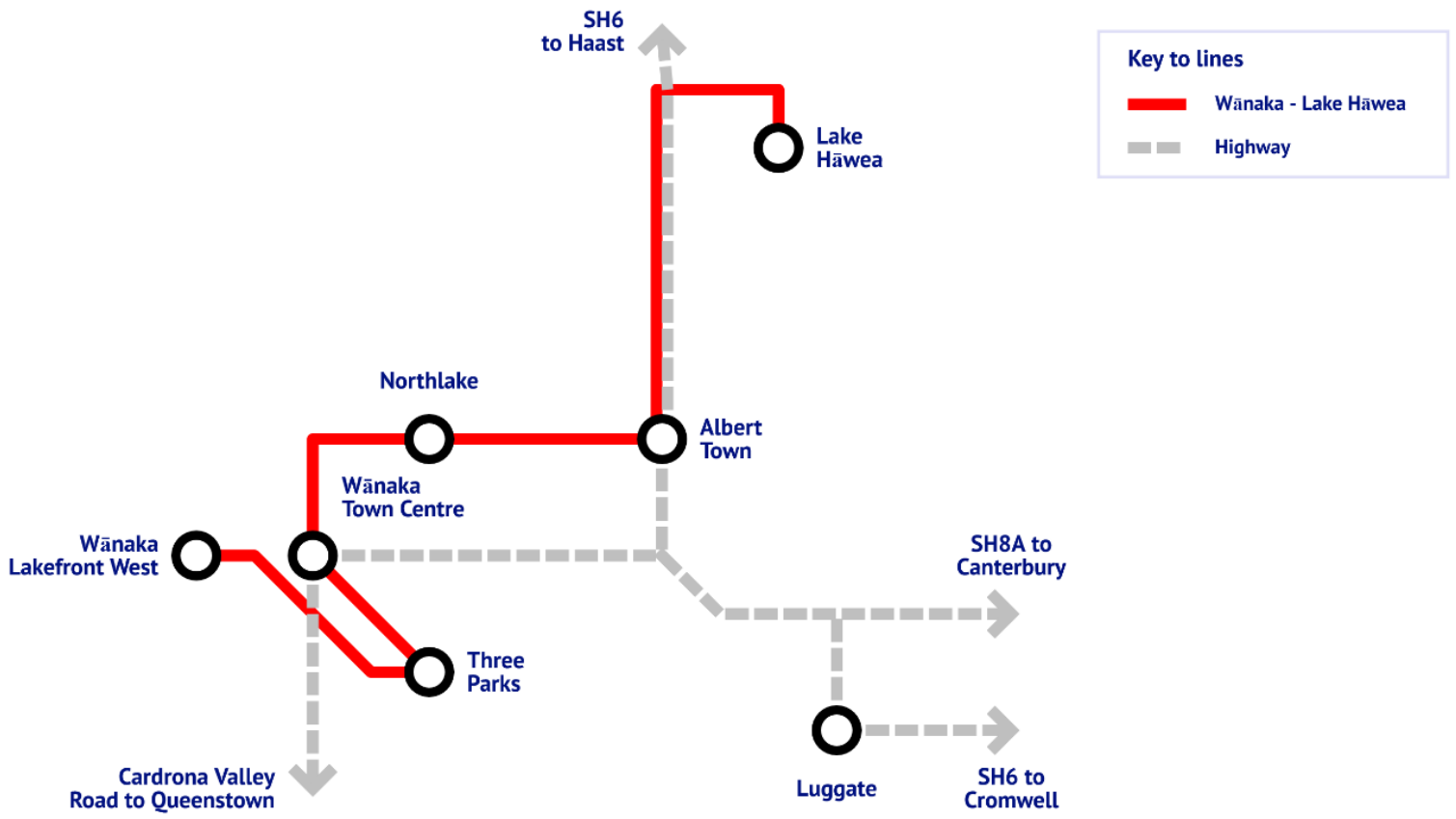

Figure 13 Depiction of the proposed Upper Clutha bus route - preferred option

Economic Analysis

An economic assessment has been undertaken using NZTA's simplified procedure SP9, which is a simplified method for appraising the economic efficiency of new public transport services and associated infrastructure.

Benefits

In this procedure, it is assumed that public transport (PT) benefits ultimately accrue to either PT users (who gain benefits from using the service) or road users (through lower traffic levels). As such, benefits can be reasonably estimated that:

- For a PT user taking a trip, the benefit relates to the difference between what a passenger would be willing to pay, and what they actually pay. For example, if someone is willing to pay $6 but only pays $3, they benefit by $3
- For a road user, the benefit of a PT trip comes from the likelihood of one PT trip taking a car off the road (typically around 70%) and the benefit of reduced road traffic.
- Outside of Wellington and Auckland, road user value is taken based on Christchurch, and is given a low value, $0.40 per vehicle, per kilometre (compared to $2.99 in Auckland and $1.83 in Wellington). Even with this value, the traffic impact is much larger than the user impact, so the low valuation outside of Auckland and Wellington limits the benefits able to be produced using this simplified procedure.

The key inputs to the economic analysis are estimations of costs, boardings, and willingness-to-pay. The following assumptions have been made:

Costs

Costs have been estimated using a value of $6 per kilometre (combining hourly and distance costs). This is derived from latest contract rates of $4 in Dunedin and $7.91 in Queenstown. Upper Clutha has a lot of similarities with Queenstown that would drive increased cost, but is unlikely to be as extreme, so the intermediate value was deemed appropriate. An assumption has been made that resources could concentrate on a single bus route, with a second bus route not required within the 9-year evaluation period of this assessment.

Boardings

The likely demand for a new public transport service has been estimated by considering population levels (daytime population – resident population plus average daily visitors) in the Statistical Area 2 (SA2), that would be served by an Upper Clutha service. This has been compared with boarding rates for identified SA2s in Whakatipu where boarding rates can be easily connected to SA2s. It was found that weaker SA2s generated around three boardings per year, per daytime head of population (six with return trips), while stronger areas generated 8-10. Due to urban form factors and longer walking distances to access a single bus route, it is assumed that Upper Clutha would not be a strong trip generator, so modelling based on six trips per year, per daytime population, for an hourly bus service, has been applied. Sensitivity testing has been used to test a range of possibilities for this factor.

Service elasticity

Service-level elasticity is the responsiveness to changes in service level – e.g. if there is a 100% increase in frequency, there should be a related increase in boardings. Typical short-term values are 0.5-0.6 at low frequencies, decreasing to 0.4 or less at high frequencies[20]. For example, improving a 20-minute frequency to a 10-minutes frequency will not create as large a percentage improvement in boardings as improving a 60-minute frequency to 30 minutes.

In the long-term, the elasticity increases by a further 12%.

Given that relatively low frequencies of 30-120 minutes were being considered, short-term elasticities of 0.5 (long-term 0.56) were used; 0.6 and 0.4 were also tested as part of sensitivity testing.

Willingness-to-pay

Willingness-to-pay has been estimated using an ORC fare model which (based on MCBM parameters including distance) calculates the likely fall-off in patronage for different fare levels. For example, if 1000 people are willing to ride for free, but only 900 are willing to ride for $0.50, it is assumed that the 100 people who stopped travelling had a willingness-to-pay of $0.25 (halfway between $0 and $0.50. The willingness-to-pay was taken for all passengers willing to pay a given fare, and so the average willingness-to-pay increases when the fare increases.

[20] NZ Transport Agency Waka Kotahi (NZTA) Monetised benefits and costs manual (MBCM)

The average willingness-to-pay of users with a $2.50 adult fare (the current fare), reduced according to concession rates, was estimated through this model to be an average of $4.69. (some people in the model were still willing to pay significantly higher than $2.50 to produce this average). Due to concessions and GST, the average fare paid for a $2.50 adult fare would actually be $2.05.

Further key assumptions included in the base analysis are:

- No adjustment has been made for optimism bias
- 2028 implementation
- 9-year analysis period to match current procurement cycles
- Discount rate of 4%
- Estimated patronage growth rate per annum of 2%
- The average car trip converted to a bus trip is 10km long (representing half the distance from Wānaka to Lake Hāwea)

Benefit cost ratios

A benefit-cost ratio (BCR) provides a measure to summarise the overall relationship between the relative costs and benefits of a proposed investment. It is one tool and should be used in conjunction with a range of analysis to help assess the viability of a project and compare alternate projects. In general, a BCR greater than 1 suggests benefits will outweigh costs and the option should be considered. If the BCR is less than 1, the costs outweigh the benefits.

The benefit-cost ratios have been calculated for the preferred option of an hourly service (17 trips per day in each direction), as well as a skeleton service (8 trips per day in each direction), and a regular half-hourly service (30 trips per day in each direction) for comparative purposes. Because there is no current service, and it is plausible that there could be no service in the future, options were therefore assessed against a do-nothing (counter factual) instead of the skeleton service (do-minimum). Incremental BCRs are calculated to show the value of upgrading between the different levels-of-service:

Value	Skeleton service	Hourly service	Half-hourly service
BCRg (relative to do-nothing)	1.1	0.9	0.6
BCRg (incremental)	1.1	0.6	0.4

Under these assumptions it is shown that a basic skeleton service is likely to achieve a BCR above 1 (and thereby be classed as “Low” efficiency rather than “Very Low”. Unless performance was higher or benefits were assessed as higher, improving on a skeleton service would not cross this threshold.

Sensitivity Analysis

Sensitivity analysis has been carried out to test how sensitive the assessed benefits and costs are to change. The levels of change vary by parameter, representing levels of uncertainty. For example, the levels of trip generation could vary significantly so are varied by a factor of 2, while costs are more well-established and so are only set to vary by 25%.

Table 15 below tests how sensitive some of the key inputs to the economic analysis are. The BCRs for each scenario are shown below for each of the options relative to the do-nothing.

For the preferred option (skeleton service) the BCRs range from 0.5 to 3.7 with the trip generation rate being the most sensitive of all the variables.

Table 15 Sensitivity testing

Sensitivity scenario		Skeleton service	Hourly service	Half-hourly service
Base		1.1	0.9	0.6
Extend service to Luggate		0.8	0.6	0.5
Delay implementation	5 years to 2033	1.4	1.0	0.7
	10 years to 2038	1.7	1.2	0.9
	20 years to 2048	2.5	1.7	1.2
Trip generation factor	Halved to 3	0.5	0.4	0.3
	Doubled to 12	3.7	2.4	1.6
Fares	Increased by 30% (reduced trip generation by 15%)	1.3	1.0	0.7
	Decreased by 30% (increased trip generation by 15%)	1.0	0.8	0.6
Service cost estimate	Increase cost estimate by 25%	0.8	0.6	0.5
	Decrease cost estimate by 25%	1.7	1.2	0.9
Length of car trip replaced	Increased by 25%	1.5	1.2	0.9
	Decreased by 25%	1.1	0.8	0.6
Service-level elasticity	Decreased from 0.5 to 0.4	1.3	0.9	0.6
	Increased from 0.5 to 0.6	1.0	0.9	0.7
Traffic / patronage growth	Increased from 2% to 6%	1.3	1.0	0.7
	Increased from 2% to 4%	1.2	0.9	0.7
Benefits profile for diversion rates and road traffic reduction benefits	Wellington profile instead of recommended Christchurch profile	5.0	3.9	2.8

This sensitivity analysis shows:

1. Extension of urban-scale service to Luggate performs very poorly, due to low population levels.

2. Significant improvements to the BCRs as populations grow over time, showing that there will be a strong case for service in the future. However, long-term population levels would not necessarily justify a very high level of service under these assumptions.
3. Very high trip generation rates would perform well economically at hourly or skeleton service levels; very poor trip generation rates produce poor economic efficiency.
4. The impact of fares changes on economic efficiency is low.
5. Service costs could significantly impact the economic efficiency, so an efficiently designed service that generates good pricing at tender could perform well.
6. If the car-trips replaced get longer (i.e. strong performance for Lake Hāwea – Wānaka trips and maybe weaker performance for shorter trips such as from Albert Town or closer), this improves the economic efficiency; and vice-versa.
7. Varying the service-level elasticity adjusts the relative performance of infrequent “skeleton” service levels and regular half-hourly service levels, although the difference is not major.
8. Increases in growth assumptions have a positive impact, but these are relatively muted over a 9-year timeframe.
9. Ultimately, the economic benefits are highly dependent on assumptions about the benefits of road traffic reduction, which vary significantly by geography. Centres outside Auckland and Wellington are assumed to have the profile of Christchurch, but using the Wellington profile generates very different outcomes, and shows how sensitive economics are to this assumption.

Investment Prioritisation Method (IPM) profile

At the time of writing this, NZTA are in the process of developing new guidance on the approval pathway for co-funding of new public transport services. Where previously service and infrastructure improvements were considered through a Low-Cost, Low Risk (LCLR) programme, for the upcoming 2027-2030 RLTP development, a new service improvement programme has been signalled. The new IPM and approach to assessment are yet to be released.

Under the 2024-2027 guidance, a new public transport network for Upper Clutha would fit into NZTA’s LCLR programme definition and have a starting IPM profile of HHM - High (GPS Alignment), High (Scheduling) and Medium (Efficiency) and priority order 3. It would then get moderated to fit within allocated funding based on the value proposition versus the other PT Services LCLR proposals nationally.

Under the GPS 2024 funds for public transport service improvements are limited. Given the size of the proposed service catchment area and its efficiency rating of ~1 (Low), this project is unlikely to receive co-funding from NZTA currently.

This assessment will be updated following the release of the 2027-2030 GPS and NLTP IPM.

Summary

The preferred option identified through the economic case is the do minimum option which is the introduction of a skeleton (8 trips per day) connector level bus service across the Upper Clutha area including Hāwea, Albert Town, Northlake, Three Parks, Wānaka, and Southern Wānaka. This option is considered best value-for-money and a good starting point for public transport in the Upper

Clutha. Over time as population and demand grows, higher frequency and longer service hours will likely be achievable. This will increase the convenience and attractiveness of public transport and achieve the investment objectives and benefits sought to a higher degree.

Commercial Case

The Commercial Case describes the planned procurement route to implement the preferred option.

The proposed preferred option will require a private operator to deliver the services through a service contract with ORC. Procurement will be in accordance with the ORC's NZTA endorsed Transport Procurement Strategy 2024-27, with a focus on achieving value for money for funders.

The purpose of this Commercial Case is to:

- Outline the commercial structure and risk allocation of the preferred delivery option
- Summarise the market sounding and insights gathered
- Discuss the proposed procurement approach, process, timeframes and contractual arrangements
- Identify any key contractual considerations and/or issues.

Preferred commercial approach to delivery

Four service delivery options were explored through the economic case. Two options considered variations of exempt services that would have little or no ORC involvement (community led or wholly commercial), while the other two options involved ORC procuring operators to deliver the service under a subsidised contract. The preferred commercial approach is a **subsidised gross contract.**

Under this model, ORC will contract an operator and pay a set fee to deliver the preferred services. ORC sets the fares, collects the fare revenue and carries the risk of fluctuations in patronage. ORC also controls branding, marketing and integrated ticketing; as the PTA ORC also oversees service quality. This is the standard commercial delivery approach of bus services and is consistent with existing contractual arrangements for bus service delivery across the Dunedin and Queenstown networks.

Market sounding

The potential introduction of a new service into a new area of Otago provides an opportunity to explore new ways of partnering with public transport operators. ORC wishes to take a collaborative approach to the planning, designing, delivering and scaling of new services, and therefore included a market sounding exercise as part of this business case.

The purpose of the market sounding was to seek the views of potential suppliers to inform the investigations into:

- local service options for Wānaka and Lake Hāwea (this business case), and
- expanding the wider sub-regional network, to include services between Queenstown and Wānaka, and between Queenstown and Alexandra.

It is also hoped that the early engagement with commercial operators through this market sounding exercise and follow up interactions may attract new suppliers to future tenders.

To engage with the market, ORC issued a 'Request for Information' (RFI) on the Government Electronic Tender Service (GETS) on 13 March 2026. The key outcomes sought from the RFI were to understand the views and perspectives of current industry operators on:

1. How public transport could be designed and delivered to best serve the communities of Wānaka, Lake Hawea, Alexandra, Cromwell, Clyde and Luggate, and their connections with Frankton and Queenstown.

2. Potential service delivery models

3. How ORC might be able to collaborate in the design and delivery solutions for one or both of the study areas

4. The capability and interest of the market in delivering public transport services in the Otago Central Lakes sub-region

5. The industry's perceptions of the primary commercial risks, market constraints and possible challenges with implementation and delivery of public transport services in the Otago Central Lakes sub-region.

The RFI also noted ORC's interest in understanding opportunities to collaborate on solutions with a high level of "private share" cost recovery. Such service delivery models may enable services to be introduced more rapidly than the highly-subsidised services that ORC typically contracts.

Respondents were given a deadline of 24 April 2026 to prepare and submit a response the RFI.

One formal response to the RFI was received from Tranzit Group through GETS. Responses were also received from Go-Bus and Ritchies following conversations with these existing ORC contracted operators. Individual on-line follow up meetings were held with each of the respondents to discuss responses and ideas in more detail.

Market sounding insights

Capability and capacity

All three respondents have a presence in the Central Lakes area operating across a range of services including small-vehicle services, coach and charter services, tourism services, school bus services and contracted public transport services. They each have strong operational capability, access to fleet and local depot facilities and have significant experience in the delivery of public transport services (and working with PTAs) across New Zealand.

One respondent cited experience operating regional services in the North Island having introduced several services as trials which have later become part of a core public transport network. Lessons learned from these trials were discussed. Another respondent mentioned specific experience providing services in tourism-driven regional environments where demand is variable. One operator stated they had the capability to mobilise and operate a time-limited trial service to test demand assumptions ahead of a full implementation.

All three operators conveyed a genuine interest in operating public transport in the Central Lakes area, with one stating it was a key strategic growth area for them and another affirming their support for improving regional connectivity outcomes in Otago.

Service design and timetables

Whilst this business case focuses on public transport options for servicing Wānaka and the Upper Clutha, the study of public transport for the wider sub-regional network is closely interrelated. From a delivery perspective there is likely to be commercial efficiencies through designing the timetables for each area in a coordinated manner.

The market feedback discussed in this section refers broadly to the implementation and operation of new services for Wānaka/ Upper Clutha and the broader sub-regional network collectively.

The RFI proposed a potential timetable consisting of three base routes:

- 101 Wānaka to Queenstown
- 102 Wānaka to Cromwell
- 103 Alexandra to Frankton.

It suggested a 150-minute headway and six trips per day for these routes which would allow for:

- Routes 101 and 102 to combine to give a local service with 75 minute headway, from Lake Hāwea to Wānaka via Albert Town and North Wānaka, and
- Routes 102 and 103 to connect with a timed transfer at Cromwell, six times per day.

Routes 101 and 103 could both serve Queenstown Airport, although only route 101 could extend into Central Queenstown under these timetables.

Market feedback on these potential timetables included suggestions for ORC to look at:

- Adopting a flexible approach to timetable development
    - Running initial services based on maximising operational efficiency such as reduced idle time rather than a ‘clockface’ timetable could reduce costs
    - Scenario modelling with operators with operator-side input on costs, fleet requirements and revenue assumptions. Use of this supply side optimisation is likely to eliminate costs associated with additional peak vehicle or unnecessary idle times.
    - A timetable that requires the fewest number of depots. A need for multiple depots attracts a higher cost due to additional infrastructure and considerations on how spare vehicles and servicing is conducted.
    - Could link Luggate to the 101 Wānaka to Queenstown route. This provides coverage for Luggate and keeps the local Wānaka and Lake Hawea service seperate.
    - Consideration of Arrowtown as a possible connection point.
- A staged delivery approach
    - Determine minimum viable service, but may need to over deliver initially to have an attractive services that generates interest. Focus on frequency over coverage.
    - Carefully consider and define peak demand - commuter, education and key employment travel.
    - Allow mechanisms to add services to meet growth in demand including through seasonal or event-based activities.
    - Need to be agile enough to move fast and adapt to changes in demand.
- Realistic timetabling
    - Prioritise reliability – making sure timetabling accounts for congestion on key corridors

    - Service timings to align with employment, education and visitor movements.
- Service design review
    - Practical operator input on route timing, stop placement, interchange design and timetable feasibility based on local operating conditions.
    - Data led continuous refinement and optimisation of timetables in partnership with ORC as the routes mature and network grows.
- Collaboration with developing the trial arrangements, vehicle options and specs to meet the unique service requirements.

Fleet

Key points raised by operators with respect to fleet included:

- ***Higher quality vehicles*** - The long distance and open road environment of some of these services may warrant consideration of a coach style vehicle for enhanced safety and comfort for passengers. This may require approval from NZTA for an exemption from Requirements for Urban Buses (RUB). A similar exemption has recently been received for Dunedin's Route 1 to Palmerston, so this should not pose a problem. Making the service as attractive and comfortable as possible is also likely to attract patronage (especially mode shift from private vehicles).
- ***Luggage*** – The nature and length of the service could mean passengers have more luggage. Vehicles will need suitable luggage capacity. This could be in the form of a larger luggage compartment or a trailer.
- ***Utilisation of existing fleet*** - It could be more cost efficient for operators to initiate the trial service with existing available fleet. This would allow for quick mobilisation of the service. Smaller vehicles could be used while the service is embedded in, then and as demand grows, larger vehicles could be introduced. This approach carries less risk and less capital investment.
- ***Electrification*** – Operators indicated that there are several suitable vehicle options for these routes available or coming to the market.
- ***Planning*** – It may be best to start with what we expect a year two operation to look like. This would allow for growth and mean that operators will not have to scramble for extra vehicles if the growth occurs quicker than anticipated in the first year.

Delivery model

The contracted service delivery model and partnership approach with ORC was preferred by all three respondents. Given the level of investment (in capital and workforce) required to set up, the contract model provides operators with a level of certainty that their costs are met, while quality early collaboration is likely to have a material impact on long-term network outcomes.

Respondents suggested ORC consider in the contract design:

- Flexibility with fleet and how vehicles, of varying sizes, might be able to be introduced easily throughout the contract period.
- Joint development of timetables to ensure the service strikes a balance between being cost competitive and attractive.

- KPIs that incentivises delivery of a reliable and punctual service, without being penalised for factors outside of their control such as congestion.
- Sharing of risk including incentives for growing patronage and alignment with other services to reduce some of the 'sunk costs' of the service.
- The length of the service contract. The longer the contracted delivery period, the more competitive the total cost. Potentially cost as a two-year trial, with a cost supplied separately if the trial proves successful and the contract is extended.

A hybrid model was proposed by one operator as the most practical and commercially sustainable approach for this sub-region. The preference for early implementation was a mix of private share cost recovery and ORC subsidy with the level of subsidy reviewed against actual performance as the network establishes.

The Queenstown to Wānaka route was considered to have the strongest commercial potential due to the airport, tourism and commuter volumes, while the regional corridor routes were more likely to require higher subsidy to maintain frequency and coverage, particularly outside peak periods.

Coordination of branding, integrated ticketing and timetable alignment would allow commercial flexibility while building customer familiarity.

Commercial risks, market constraints or implementation challenges

Drawing on their operational knowledge and market experience, operators raised the following risks:

- ***Depots***
    - The high cost of land in Queenstown poses a significant barrier to entry for new operators. With public transport contracts generally being for nine years (and no certainty beyond that), this exposes new operators to significant risk and challenges to purchase or lease land, and design and build a new depot.
    - Land for depots in Lake Hāwea or Alexandra is likely to be less challenging to source.
    - Land for one to two vehicles could also be easier to secure. However, changing fleet and increasing the number of vehicles required as patronage on the new services grow may create challenges if the size of the depot is not adequate or able to be adapted.
- ***Electrification***
    - The use of electric vehicles for this service will be reliant on the availability of necessary charging infrastructure (or ability to upgrade) at the depot. This becomes more complex if there are multiple depots.
    - The willingness of operators to introduce electric vehicles is likely to be contingent on the length of the service contract as operators will need to balance the investment in capital required with continuity risk.
- ***Workforce***
    - Driver availability is a persistent challenge across New Zealand. A high cost of living and housing affordability and availability challenges in the Central Lakes area

along with the high demand for seasonal workforce are likely to present challenges for attracting and retaining drivers. Wages and employment costs for locally based operational staff and drivers will be higher than comparable services in other areas.

- If the timetables are designed in a manner that is attractive to part-time drivers, this may attract a more sustainable workforce
- A significant portion of the costs of these services will be driver wages. Ensuring that the wage rate is competitive from tender will be key part of delivering services that are reliable. Competition for drivers will not only come from tour drivers but also other transport roles in the region.
- Drivers will also require comprehensive training for the open road setting and open road driving conditions.

- ***Geographic dispersion***
  - Given that terminus and depots (with the proposed timetable) could easily be more than one hour from each other, ensuring there are adequate vehicles available will require careful consideration.
  - To deliver a reliable service, a higher than usual (10%) spare bus ratio may be required to make sure routine servicing is able to be met, and that there is adequate vehicle coverage for vehicle breakdowns.
- ***Seasonal variance***
  - Seasonal variance is difficult to manage as an operator.
- ***Lead in times***
  - Lead-in times required varied across respondents, but generally it would take six to eight months to source new fleet and 12-18 months to mobilise depots. Staffing was highlighted as challenging, but no specific lead in time articulated. A key point raised was to get the timetables out as soon as possible for schedulers to start working on operational details.

Exposure to these risks and the costs associated with them is likely to be reflected in contract pricing. Mitigation and management of these risks will be critical to the success of new services in Wānaka/Upper Clutha and Central Lakes sub-region.

Current supplier market

The current supplier market for bus services is constrained, with only two market participants (Go Bus and Ritchies) in recent market tenders for bus contracts in Dunedin and Queenstown. Ritchies are the current contractor for the current Unit 6 and Unit 7 Queenstown contracts. They also operate the Wānaka to Queenstown SkyDrive commercial shuttle services.

The large tourism market in Queenstown means there are a number of other bus and coach operators as well as smaller vehicle operators operating commercial services in the area. This includes ski field transport, long distance commercial services to Te Anau and Milford, and transporting private tour groups.

Procurement of an operator

Public transport planning, procurement and delivery must follow the statutory framework laid out in the Land Transport Management Act 2003 LTMA and in accordance with NZTA requirements. As a PTA, ORC contract the delivery of public transport services to specialist public transport operators (PTO). Procurement of public transport services by a PTA must specifically follow the new Public Transport Procurement Procedures Manual (PTPPM), which as of July 1, 2026 has supplanted the NZTA Procurement Manual.

Procedures under the PTPPM are designed to obtain *'best value for money spent'* under the LTMA. Value for money in this context means "*achieving clearly defined outcomes in the public interest in a way that is both effective and efficient*". Value for money is not purely about minimising cost and is considered over a long strategic time period.

The approach to procurement of an operator to deliver the preferred option will be based on ORC's Transport Procurement Strategy. The current strategy was endorsed by NZTA in 2024 but will be renewed in the latter half of 2026. The update is required due to changes in ORC's procurement environment resulting from the most recent round of bus contracts, and a complex set of unit procurements scheduled in 2027 and 2028.

This following section describes the proposed approach to procuring the Upper Clutha and Central Lakes sub-regional services, but the Procurement Strategy update may result in some changes resulting from strategic considerations across the wider procurement programme.

Procurement approach

The procurement of an operator to deliver (initially through a trial) the Wānaka/Upper Clutha local service and the Central Lakes sub-regional network will follow the service delivery approach as set out in ORC's Transport Procurement Strategy.

Delivery model

The delivery model for this procurement will be the **relational delivery model**. This model supports collaboration for co-design and continuous improvement, and enhanced risk and reward sharing between the purchaser and supplier. It is built on trust, transparency, flexibility and mutual long-term goals. It encompasses all stages of planning, procurement and delivery, without detracting from the basic contractual management and obligations of each party. The relational delivery model is considered the standard NZTA approved delivery model for most scheduled public transport services. It must be governed by a relational contracting approach.

The conditions surrounding this procurement have been assessed below in Table 16. The assessment affirms that the standard approach is appropriate as this procurement is for scheduled public transport services identified in the RPTP. There is also value for both ORC (the purchaser) and suppliers to work closely together to design and deliver the services as well as share the risks appropriately between both parties.

Table 16 Delivery model assessment for procurement of the proposed activity

Procurement factors	Assessment of proposed procurement activity	
Type of service	Scheduled bus services	Identified in the RPTP

Complexity	Low	New sub-region and local service for new area
Scale	Small	Hourly or less than hourly
Contract term	To be determined	Initially a 2-year trial with possible extension for longer.
Timing and urgency	Moderate to high	Urgently need to respond to growth and community need. Identified as high priority in 2025 RPTP. Funding to be applied for through 2027-2030 RLTP and LTP processes. Queenstown Unit 7 contract due for re-tender in 2028 for 2029 commencement.
Innovation potential	Moderate	Opportunity to be innovative with use and size of vehicles and timetable design for new services in new area
Risk management	Low to moderate risk	A number of risks have been raised by commercial operators and will be managed through the procurement, delivery and management stages. Risk sharing mechanisms will be explored further through the tendering and contract development.
Supplier market	Good	Three operators expressed a strong interest in these services through the market sounding exercise.
Demand for PT in the region	High	Public transport does not currently exist for people living in Wānaka, Upper Clutha or the Central Lakes. There is a high interest in increasing mode choice in the sub-region and patronage uptake is anticipated to be good.

Supplier selection method

Based on the low value of the procurement and the low level of complexity and potential risk to ORC, the recommended approach to market for this project is a **one-step open competitive tender.**

This approach is deemed appropriate as pre-engagement with the market has occurred through the 'Request for Information' process to inform this business case (eliminating the need for a two-step process). This aligns with ORC's Transport Procurement Strategy.

The **price quality method** of tender evaluation will be used. Price quality is considered the standard approach for tendered units under the relational delivery model where the specified outputs can be priced by the supplier(s). ORC can then determine that best value for money will be obtained by

selecting the supplier that offers the best combination of price and quality requirements as set out in the RFP. Quality of the supplier is of high importance to ORC.

Procurement plan

The market sounding exercise has been useful in starting conversations with three potential operators for these new services. Each operator has indicated a willingness to work together in an open and collaborative way to refine the design and requirements for the new proposed services. If approved to proceed, ORC will continue to work with all three operators through the procurement and pre-tender phase to make sure a realistic trial service is implementable, right sized and scalable over time. This will draw on the industry's expertise to refine the timetable design (scheduling and rostering) to inform the scope of the procurement activity. It will also involve developing industry lead cost estimates improving on the generic rates used through the business case process.

Using the feedback from operators through the market sounding to develop an operator lead procurement and ownership is likely to provide the greatest level of benefits for all stakeholders in public transport.

Once funding approvals have been received through the Long-term Plan 2027 and Regional Land Transport Plan 2027-2030, a detailed procurement plan for the contract of these bus services will be developed. This will include a refinement of the contract scope including whether the Wānaka/Upper Clutha local service is contracted as a stand-alone contract, or part of a wider Otago Central Lakes service contract that includes services between Wānaka, Alexandra, Cromwell and Queenstown.

The detailed procurement plan will also outline the content of the Request for Proposal, required preconditions, the composition of the evaluation team, evaluation criteria and weightings, and contract terms.

Procurement schedule – key dates

Lead times for the procurement of bus contracts is generally 12 months, with three to six months required for the procurement process. However, in some locations a longer period may be required. For example, in Queenstown, the complexity of mobilising new contracts in that location, with regards to depot and workforce, indicates a period or 18 months is more likely.

Whilst this procurement to commence new public transport services in Wānaka, Upper Clutha and the Otago Central Lakes sub-region would be a new contract, there are several potential opportunities to coordinate the procurement process to align with the expiry of existing unit contracts.

The Unit 4 Dunedin contract is due to expire in late 2028. The tender process for this contract renewal will need to start in early to mid 2027. If the procurement of the Wānaka, Upper Clutha and sub-regional service was to align with the re-procurement of Dunedin Unit 4, although quite different, there would be efficiencies in tender document preparation, contract specifications and ORC staff time.

Unit 7 which includes all bus services on the Queenstown network is due to expire in November 2029. The procurement preparation for this unit will commence in late 2027 with the RFP released in the first half of 2028.

The procurement timing for these new services is also dependent on securing funding allocation approvals through ORC's LTP and RLTP processes. ORC are scheduled to approve their LTP in June 2027, but the availability of NZTA co-funding will not be confirmed until August 2027. The first timeline shown below in Table 17 outlines the proposed procurement schedule assuming funding allocation is secured through these processes.

The suggested procurement schedule is to coordinate the tender for these services with the Unit 4 contract re-tender. This would mean commencing procurement preparation in early 2027 aiming to go to the market mid 2027 (following approval of the LTP and NLTP funding). Ideally, the contract would be awarded and the trial would commence early in 2028. This would mean that trial would have been running for several months when the procurement planning for the re-tender of Unit 7 is started. At this point consideration could be given to the pathway for bringing the trial services into the continuous programme including how this may align or coordinate with future tenders of Unit 7. The new Unit 7 contract is due to commence in November 2029.

Proposed procurement timeline (Primary approach)

Subject to endorsement of this Investment Case, and an approved funding pathway the procurement milestones will be as shown below in Table 17. The period between contract award and contract start date is tight, however operators have indicated that if a trial is commenced using existing diesel fleet, they would be able to mobilise operations quickly. However, this mobilisation period may be extended through supplier engagement.

As ORC's Transport Activities Procurement Strategy requires updating in 2027 and there are several procurement activities in close succession, a procurement project team will be set up to manage the procurement requirements and tasks efficiently across the contracts.

Table 17 Proposed procurement timeline

Procurement Milestone	Indicative Date
Pre-procurement	
Detailed Business Case approved	July 2026
Set up procurement project team (cross contracts)	September 2026
Procurement Strategy update approved	November 2026
Pre-procurement market engagement	Jan/Feb 2027
Detailed Procurement Plan developed and approved (subject to funding approval)	Jan/Feb 2027
Tender documents completed	Apr/May 2027
Tender documents approved	May 2027
Advance notice published on GETS	May 2027
Inclusion in LTP approved	June 2027
NZTA co-funding secured	August 2027
Tender	
Tender advertised on GETS	August 2027
Supplier briefing/s	August 2027
Tender closing date	September 2027
Evaluation	
Evaluation panel meetings	October 2027
Recommendation to award contract presented to Council	November 2027
Post-evaluation	
Advise bidders of outcome	November 2027

Debrief unsuccessful suppliers	November 2027
Due diligence & contract negotiation	November 2027
Contract Award Notice published on GETS	November 2027
Contract start date for trial to commence	February/March 2028
Procurement coordination	
Unit 4 tender preparation complete	Mar/April 2027
Unit 4 new contract commencement	Late 2028
Unit 7 tender preparation	Dec-Feb 2028
Unit 7 new contract commencement	November 2029

Alternative procurement approach

Connecting Wānaka, Upper Clutha, Cromwell, Alexandra, Clyde and Queenstown with public transport is a high priority for the community. An alternative procurement approach could be to continue to work with operators in the design of timetables, refinement of costs and contract terms and then if negotiations are favourable **direct appoint** the contract (subject to approval from NZTA and legal review). Leveraging off the momentum gained through working with operators to develop this business case, by the end of 2026 ORC would be in a good position to understand whether a direct appoint approach would be feasible and offer the best value for money spent.

Value for money in direct-appointment negotiations are contingent on a strong fall-back position, if negotiations are not favourable. There would still be time to revert to the full open tender procurement process as outlined above, and because the service is new (not a continuation of an existing service) the start date can also be delayed if there are unsuccessful negotiations.

The constraints imposed by the funding timelines would not allow the start date of the trial to be expediated, but direct appointment would reduce the risk of the timeline being extended and could create improved continuity with the existing SkyDrive service. A direct appoint approach could also save on resources and effort. An alternative procurement timeline is outlined below in Table 18.

Table 18 Alternative procurement timeline

Procurement Milestone	Indicative Date
Pre-procurement	
Detailed Business Case approved	July 2026
Pre-procurement market engagement	Aug 2026
Timetable design and broad contract terms	Aug/Sept 2026
Cost negotiations	Oct/Nov 2026
Review point – if negotiations are not favourable revert to standard open tender	February 2027
Procurement	
Inclusion in LTP approved	June 2027
Inclusion in NLTP approved	August 2027
Direct appoint operator (subject to funding approval through the LTP/NLTP)	September 2027
Contract start date for trial to commence	February/March 2028

The procurement timelines proposed are based on the assumption that the trial will be started using existing fleet and depot arrangements. Scaling operations and fleet electrification will occur over the contract duration.

The primary approach is the planned approach to procurement however opportunities to expediate to the alternative approach will be explored during the Transport Activities Procurement Strategy update in the latter half of 2026.

Contractual arrangements

Type of contract

The contract for these services will be tendered on a **gross-cost** basis. This aligns with ORC's NZTA approved procurement strategy for bus contracts and is regarded as the industry standard. Financial and performance incentive mechanisms will be considered to grow patronage and share risk.

While the introduction of new service in a new area of Otago presents opportunity for alternative contract models to be explored, at this point the gross-cost is considered the most appropriate contract arrangement as it supports ORC's strategic position in the planning and integration of this service into the wider Whakatipu network.

Through the market sounding, operators did express an interest in exploring hybrid contracts that might include performance incentives. This could be in the form of a hybrid net contract where ORC guarantees a base payment that covers most of the service operating costs. The operators retain the fare revenue, and the operator shares in additional revenue that exceeds agreed targets. This contract approach with performance incentives would reward growing patronage and reliability. It would also provide an opportunity for operators to be creative and exert a level of control over this compact network. Hybrid net contract arrangements will be investigated further through pre-procurement market engagement. The final contract model would need to have the flexibility to work for both parties through the duration of the contract.

Contract length

Selecting the length of the contract will be a key decision made through the pre-procurement engagement and detailed procurement planning. New public transport services are generally funded and operated on a trial basis (usually a minimum of two years). The trial allows for a new service to embed and grow patronage before an evaluation of its viability and value for money is completed. Following a successful trial, ORC would apply to have the service incorporated into its Public Transport Continuous Programme with NZTA to secure continuity of long-term funding support.

The contract length would need to consider the trial length, as well as provide greater certainty to allow suppliers to invest in upgrading fleet and depot requirements for the longer term.

The contract length will also need consider the Unit 7 Queenstown contract expiry. Although the requirements of a trial make it challenging to tender these contracts at the same time, it is desirable for their expiries are aligned in the long-term. However, the contract length for the next Queenstown contract could be at the upper end of the standard range of 8-11 years, or there could even be an exemption for a contract longer than 11 years for various reasons. This could result in either a shorter Upper Clutha and Central Lakes sub-region contract (in order that it can be re-tendered halfway through the Queenstown contract's term) or a longer contract (potentially beyond 11 years) to stretch out to the Queenstown contract's expiry. A shorter contract could favour a direct appointment.

Flexibility will also be required to manage changes and support the evolution of the services over time. The types of mechanisms that will be included in the contract to assist with service adaptation will be periodic reviews, re-evaluation of appropriate risk allocation and contract variable pricing.

While accounting for the possibility of changes to this term for purposes such as contractual alignment, it is proposed that the contract length be tendered on a **1 + 2 + 6** basis for a **9-year total commitment** in line with the majority of PT relational bus contracts. This structure would provide a 1-year firm initial term for the one-year trial to commence in 2027 with existing fleet. There would be two unilateral options to renew in two years followed by a final six-year extension. A PTA Extension Option would also be included to provide ORC with a mitigation measure if the succession contract commencement date needs to be deferred for unforeseen future circumstances.

NLTP funding through the RLTP would be applied for the full 2027-2030 period providing the ability to extend the trial for another two years if the initial trial meets the outcomes sought and is deemed successful. In the following RLTP (2030-2033) the services would then be incorporated into the continuous programme to give the certainty for the six-year extension.

Contract price

The contract price for a relational contract will be based on the annual gross price of operating the service. The price will be set through a competitive process or negotiation if ORC pursue the direct-appoint procurement approach. Pre-engagement with operators will inform the contract price development.

Relationship management

The relational delivery model relies on parties committing to work together to achieve best value for money spent. The goal with public transport services in Otago is to grow patronage and private share of operating costs to reducing reliance on subsidy.

The work to date with the three operators that have expressed an interest in delivering these services has been collaborative and open. There has been a genuine interest and willingness to share information and work collectively to establish viable public transport options for the Central Lakes sub-area. These relationships will continue to be nurtured through pre-implementation tasks and into the future delivery contract.

Potential for risk sharing

Otago Regional Council acknowledges the commercial risks and constraints that have been raised by market participants. In order to achieve the key outcomes of these services ORC will be looking to share risk to maximise value for money by allocating risk in a manner that places risk with the party best placed to effectively manage it.

Otago Regional Council proposes to apportion the risks related to contracted services as follows:

Table 19 Summary of commercial risk allocation

Area of risk/ responsibility	Risk allocation			
	ORC	Operator	Shared	Rationale
Depot availability		X		The operator is responsible for purchasing or leasing depot space to fulfil fleet availability requirements. In Queenstown there is a high cost and

				financial risk, especially with uncertainty of contract length.
Lack of market competition - Barrier to market entry high	X			The high cost of land creates a barrier to entry for some operators. This limits competition and is likely to impact contract costs that will be passed on to ORC.
Workforce sustainability		X		The operator is responsible for attracting and retaining drivers and support staff, and managing any impact on service delivery
Electrification of fleet			X	Willingness to electrify fleet will be contingent on the length of the service contract as operators will need to balance the investment in capital required with continuity risk. Diesel vehicles are proposed short term.
Fleet decarbonisation			X	ORC risk meeting decarbonisation goals if fleet electrification is too expensive of complex for operators
Seasonal variance in patronage			X	Contract to include patronage incentives for operators. ORC can mitigate through comms and marketing
Timetable reliability and performance requirements			X	The operator is responsible for meeting performance requirements set out in the contract. Timetables will be designed collectively to manage uncertainties and reliability issues with the Queenstown traffic.
Contractor underperformance	X			ORC are responsible for managing contractor performance and addressing issues early.
Approvals and licenses			X	Funding and process approvals sit with ORC. All other licensing and regulation adherence is the responsibility of the operator.
Force majeure			X	Shared in line with standard contract terms
Changes in law (general)			X	General changes to law (for example employment law) which have an impact on cost or delivery will be shared. Specific changes in law, i.e. those which have a direct impact on the ORC projects will be held by the Council
Changes in law (specific)	X			
Variations			X	Managed in line with contract terms

Contract management

The responsibility for managing delivery under the contract, as well as supplier relationship management, will sit with ORC's public transport operations team. A contract- and relationship-management plan will be developed in consultation with the successful supplier as part of contract negotiations.

Variations to the contract will be based on detailed analysis, including impact on patronage, revenue and private share as well as wider benefits and timeframes. Market analysis and benchmarking will also be used. Significant variations involving an increase in price will only be made within the limit of ORC staff delegated financial authority and approvals processes. Any changes will be made in writing and signed by both parties.

Financial Case

The Financial Case outlines the estimated service operating costs and the proposed funding and affordability of the preferred option.

The proposed preferred option is estimated to have an annual operating expenditure of $1.073m (plus $100,000 of implementation costs in year 1). The proposed funding approach is to seek funding for the local share through ORC targeted rates in the 2027-2030 LTP and NZTA co-funding through the 2027-2030 RLTP/NLTP. There will be a focus on building patronage and fare revenue to reduce reliance on subsidy over time.

The purpose of this Financial Case is to:

- Outline the estimated cost of the preferred delivery option
- Determine the funding requirements and proposed funding approach
- Demonstrate that the recommended option is affordable.

Financial profile

Table 20 below outlines the operating expenditure, estimated fare revenue and funding for the preferred option of eight trips per day for the Wānaka and Upper Clutha service.

Through the market sounding exercise operators strongly suggested starting with an hourly service rather than the eight trips per day to make the service as attractive and convenient for a variety of trip types from the outset. They felt this higher level of service was important to attract and grow patronage quickly. Essentially it was pitched to start with what was envisaged as a year two service level and grow the patronage into it, rather than start with a more skeleton service and then grow the service level as demand and population grew. Table 21 below outlines an alternative financial profile for the high level of service. Collectively the two profiles provide a financial range for the proposed service. The trial will be used to test demand and consider optimum medium to longer-term service level requirements.

The project period of nine years spans FY2027/28 to FY2035/36. The service delivery contract structure would be for an initial 1-year fixed term with two unilateral options to renew after year 1 for a further two years followed by a final six-year extension. Each renewal is an opportunity to review affordability. Funding will be based around three-year long-term plan and National Land Transport Plan cycles, commencing with the 2027-2030 bid for funding for this service.

Table 20 Financial profile for the preferred option (8 trips per day)

	Financial year >	2027/28	2028/29	2029/30	2030/31	Yrs 5-9	Total
Operating Expenditure							
1	Service delivery contract (AGP)	1,072,690	1,072,690	1,072,690	1,072,690	5,363,450	9,654,210
2	General implementation costs	100,000					100,000
3	**Total Operating costs (OPEX) $**	**1,172,690**	**1,072,690**	**1,072,690**	**1,072,690**	**5,363,450**	**9,754,210**
Capital Expenditure							
4	Basic stop infrastructure	100,000			500,000		600,000
5	**Total Capital costs (CAPEX) $**	**100,000**			**500,000**		**600,000**
Total Expenditure							
6	**Total Project Costs (CAPEX + OPEX) $**	**1,272,690**	**1,072,690**	**1,072,690**	**1,572,690**	**5,363,450**	**10,354,210**
Funding							

	Financial year >	2027/28	2028/29	2029/30	2030/31	Yrs 5-9	Total
7	CAPEX funding (QLDC/NZTA)	100,000			500,000		600,000
8	OPEX funding (ORC)	407,852	355,517	352,181	348,846	1,697,535	3,161,931
9	NZTA PT improvements co-funding	424,499	370,027	366,556	363,085	1,766,822	3,290,989
10	Fare revenue	340,339	347,146	353,953	360,760	1,899,093	3,301,290
11	**Total funding $**	**1,272,690**	**1,072,690**	**1,072,690**	**1,572,690**	**5,363,450**	**10,354,210**

Table 21 Financial profile for an hourly service

	Financial year >	2027/28	2028/29	2029/30	2030/31	Yrs 5-9	Total
Operating Expenditure							
1	Service delivery contract (AGP)	1,992,590	1,992,590	1,992,590	1,992,590	9,962,950	17,933,310
2	General implementation costs	100,000					100,000
3	**Total Operating costs (OPEX) $**	**2,092,590**	**1,992,590**	**1,992,590**	**1,992,590**	**9,962,950**	**18,033,310**
Capital Expenditure							
4	Basic stop infrastructure	100,000			500,000		600,000
5	**Total Capital costs (CAPEX) $**	**100,000**			**500,000**		**600,000**
Total Expenditure							
6	**Total Project Costs (CAPEX + OPEX) $**	**2,192,590**	**1,992,590**	**1,992,590**	**2,492,590**	**9,962,950**	**18,633,310**
Funding							
7	CAPEX funding (QLDC/NZTA)	100,000			500,000		
8	OPEX funding (ORC)	771,021	716,934	711,847	706,760	3462581	6,369,142
9	NZTA PT improvements co-funding	802,491	746,196	740,902	735,607	3603911	6,629,107
10	Fare revenue	$519,078	$529,460	$539,842	$550,223	2,896,458	5,035,061
11	**Total funding $**	**2,192,590**	**1,992,590**	**1,992,590**	**2,492,590**	**9,962,950**	**18,633,310**

Expenditure

The service operating cost estimates are based on an estimated hourly and distance contract rate derived from our latest Dunedin and Queenstown contracted rates. As the timetable design and operational requirements are refined through the pre-tender engagement with operators, greater certainty of costs will be able to be achieved. The final cost will be determined through the competitive tender process.

The contract for the delivery of the preferred service option would be structured as an Annual Gross Payment (AGP) that is divided by 12 and paid monthly to the contracted operator. There are quarterly corrections for indexation and capital costs are operationalised over the course of the contract.

A small amount of upfront operating expenditure in FY 2027/28 would be required to cover general implementation costs such as installation of ticketing equipment, branding, marketing and advertising for the proposed new service.

Funding arrangements

Public transport services are generally funded through a combination of **public** funding (local rates and central government funding) and **private** revenue (fares and third party) as depicted below in Figure 14.

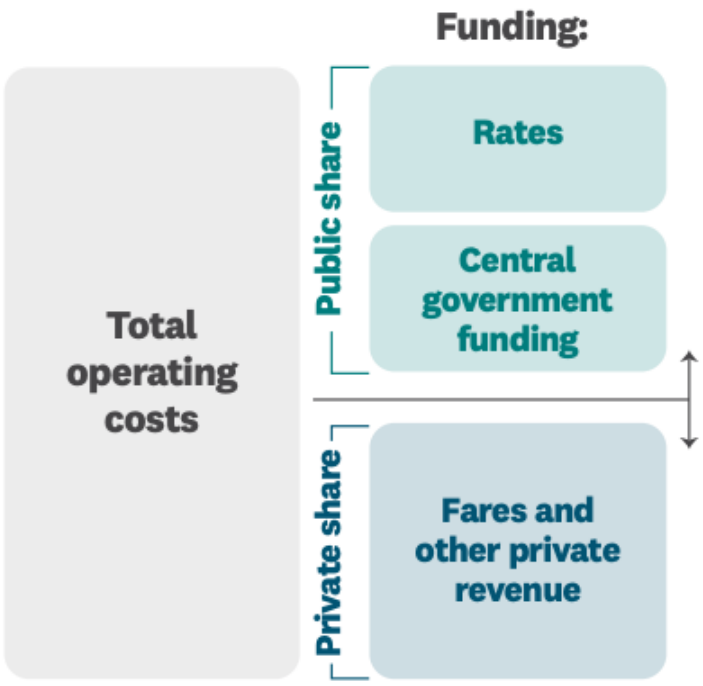

Figure 14 Depiction of how the service operating costs are funded

The level of public subsidy required for this service will be dependent of the amount of fare revenue collected from the users of the service. ORC would claim 51% of the net cost (i.e. gross contract cost less fare revenue) from NZTA with the remaining 49% of cost to be met with rate funding.

This proposed funding arrangements for this project will follow the above standard model. The components are discussed in more detail below.

Otago Regional Council

ORC collects rates from Otago ratepayers to help fund public transport services. Currently 80% comes from targeted rates applied to areas with immediate access to Orbus public transport services, and 20% comes from general rates paid by all ratepayers in Otago. The general rate contribution recognises the wider economic and environmental value that public transport has for all of Otago.

It is proposed that this project seek targeted rate funding through Otago Regional Council's Long-Term Plan 2027-2030 process to meet the local share (49%) of total operating costs of the two-year trial. If Council choose to include this in the LTP, staff will develop a suitable targeted rating area based on the service.

A trial provides an opportunity to establish and embed the service in the community before being evaluated and an assessment of its long-term viability completed. If the trial is considered successful and Council (and NZTA) approved the continuation of the service beyond a trial, a broader targeted rate review of the Queenstown, Upper Clutha and Central Lakes sub-region would be undertaken to understand the best approach to fund and support public transport across the Otago Central Lakes region.

New Zealand Transport Agency Waka Kotahi

As an approved organisation and the PTA for Otago, ORC is eligible to seek funding from the National Land Transport Fund for their public transport continuous programme (existing approved services) and a programme of public transport service improvements.

For the 2027-2030 NLTP, NZTA is progressing a programme-based approach to investment in improvements. This project will form part of ORC's 2027-2030 service improvement programme (Box A in Figure 15 below) bid for a three-year programme approval, supported by 10-year forecasts.

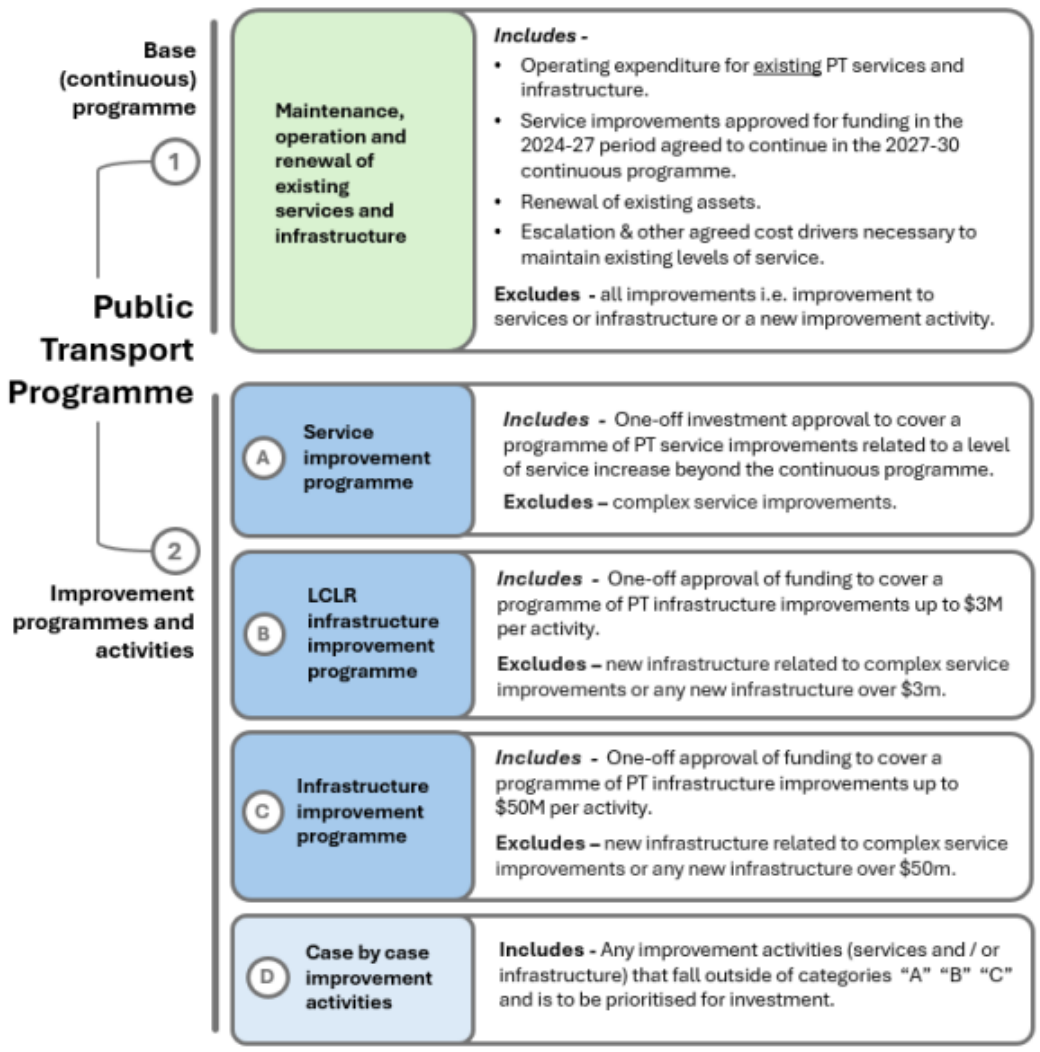

Figure 15 NZTA Public transport funding programme approach[21]

This business case will be a supporting document and form part of ORC's investment programme bid.

The GPS 2027 and NZTA's Investment Prioritisation Method and approach to the assessment of projects for inclusion in the NLTP 2027-2030 are not available at the time of writing. These documents guide the allocation of funding and approvals for co-funding.

If NZTA approve the inclusion of this project in ORC's 2027-2030 NLTP PT improvement programme, 51% of the net operating costs will be eligible for funding from NZTA.

Following the approval and delivery of the service in the 2027-2030 funding cycle, ORC will include it in its continuous programme of activities within the LTP 2030-2040 and RLTP 2030-2040 to be co-funded by NZTA.

Fares and fare revenue

Passenger fares contribute towards the cost of running the public transport system (private share). They are an important source of revenue and help reduce the subsidy required from public sources. Affordability also plays a key role in influencing passenger behaviour and use of public transport, Fare policy therefore needs to delicately balance maximising demand and revenue, with achieving wider mode shift, environmental and social outcomes.

Otago currently has a simple flat fare structure, where an adult Bee card fare is $2.50 per trip no matter how fare a passenger travels. Under a flat fare structure longer-distance trips are subsidised by shorter-distance trips, which indirectly supports disperse land use patterns rather than

[21] https://www.nzta.govt.nz/assets/planning-and-investment/nltp/2027/docs/pt-guidance.pdf

consolidated urban form. Flat fares are also a major obstacle to introducing services that improve regional connectivity due to their inability to recover a meaningful share of the longer-distance operational costs.

In June 2025 ORC approved moving to a zonal fare structure that had a small number of zones, and the price for multiple zone travel to be based on small to moderate increments of the base fare. At the time of writing this business case ORC were consulting with the public on several zone fare options.

It is proposed that the Upper Clutha network would operate under a two-zone fare structure (similar to that proposed for Queenstown) as shown below in Figure 16. Trips within the Wānaka and Albert Town area would be a one zone fare of $2.50, and trips travelling through two zones (for example Wānaka to Lake Hawea) would be subject to a two zone of fare of $3.00.

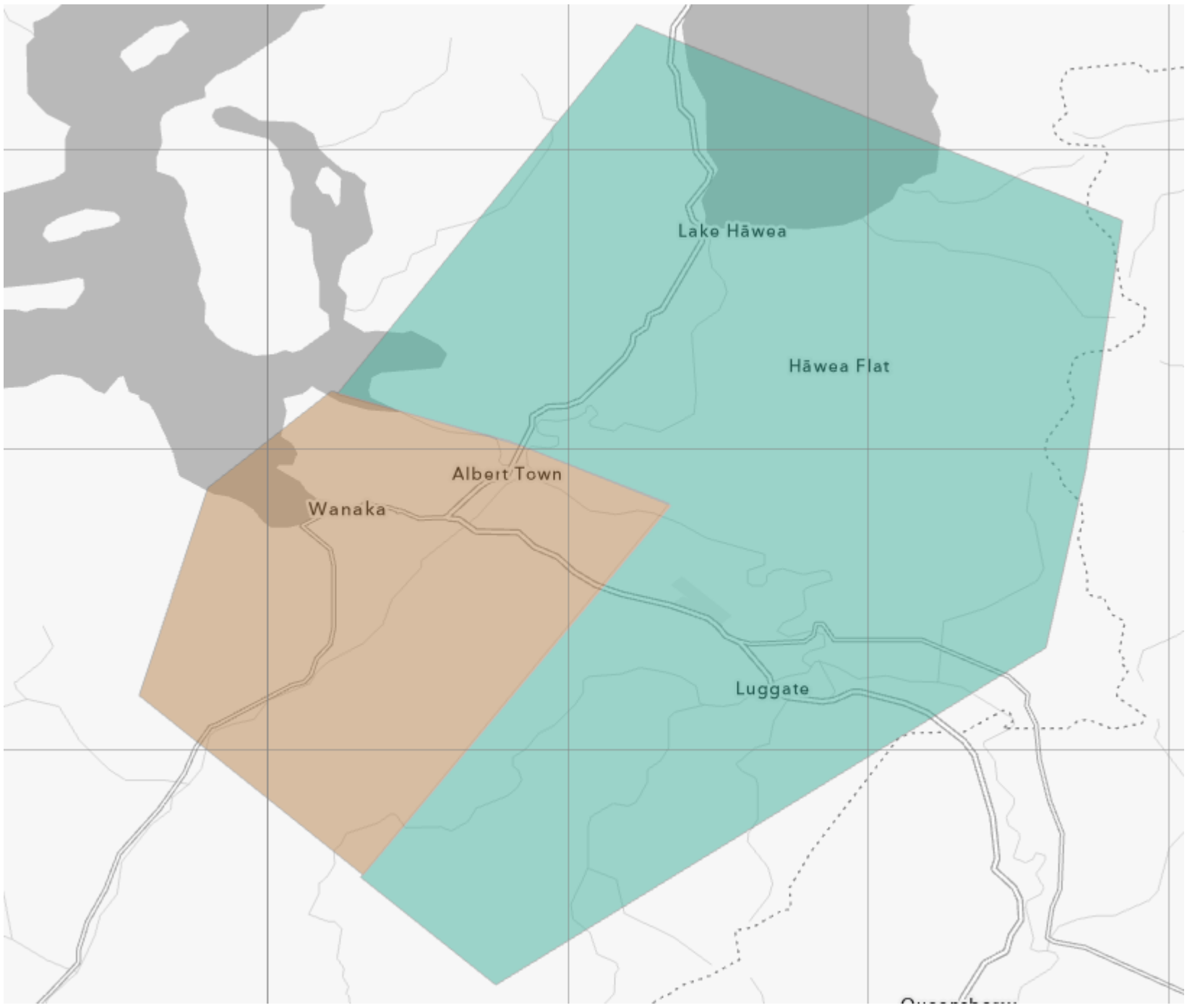

Figure 16 Proposed fare zones for the Upper Clutha

As the Otago public transport networks expand in the future, a consistent and integrated approach to the fare structure will be required. Early thinking suggests that a radial type approach to fare zones similar to that shown below in Figure 17 may be appropriate for the wider Otago Central Lakes area. These are based roughly on 15km rings from Queenstown. These options are not included in the current fare consultation and will require further work before being consulted on.

Figure 17 Potential radial zone fare structure for Otago Central Lakes

Private share

Estimates of costs and fare revenue have been provided above in Table 20 and Table 21. Based on the modelling undertaken for this analysis, the estimated private share ratios for the two service options have been calculated and are displayed below in Table 22.

Table 22 Private share ratio estimations

Financial year		2027/28	2028/29	2029/30	2030/31	2031/32	2032/33
Private share of operating costs							
1	Preferred option (8 trips per day)	0.29	0.32	0.32	0.33	0.34	0.34
2	Alternative options (hourly service)	0.26	0.26	0.27	0.28	0.28	0.29

Cost recovery is generally higher on lower frequency services because it is anticipated that there will be more passengers on each trip. A lower level of service would also typically have reduced costs associated with operational components such as fuel and driver time. Private share is an indicative measure and whilst interesting at an individual service level, care needs to be taken not to

overinterpret it. Public transport services operate as part of a network of services and some services will have higher or lower private share due the nature or role of that service within the wider network. The value of considering private share for this analysis is to gauge how the service might impact on Otago's overall private share ratio.

Public transport infrastructure

Public transport infrastructure is funded and delivered by the local road controlling authority (RCA). For the Upper Clutha service trial minimal infrastructure will be required. Bus stops will be 'basic' as classified in the NZTA One Network Framework[22] and shown in ORC's RPTP.

Basic	A very lightly used stop with a low level of service and requiring minimal infrastructure. Only a minority of stops are at a basic level.	

An allocation for additional bus infrastructure or improvement in stop facilities has been proposed for year 4.

Queenstown Lakes District Council would apply for funding for infrastructure through their LTP and RLTP processes. Bus infrastructure improvements are usually funded 49% with local share and 51% co-funding from NZTA.

Otago Central Lakes Regional Deal

The Otago Central Lakes Regional Deal may provide new pathways to implement this project. Regional Deals is the Government's initiative for establishing long-term agreements between central and local government.[23] The programme unlocks funding and resource opportunities to support councils to make improvements in their region; for example, to roads, infrastructure, and the supply of quality housing.

CODC, ORC and QLDC are negotiating with central government to establish a long-term agreement to promote economic growth, deliver infrastructure and improve the supply of quality housing under the 'regional deal' framework. Referred to as the 'Otago Central Lakes Regional Deal', the proposed deal is comprised of five areas, or 'packages', that the councils have identified as needing government support.[24] One package is Transform Transport, which seeks to introduce new funding tools and amend regulation to enable the transport network to support the sub-region's rapid population and economic growth.

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22 https://www.nzta.govt.nz/partners/design-guidance/public-transport-design-guidance/bus-stop/bus-stop-location-planning/bus-stop-classifications?_searchAnalytics=eyJpbmRleE5hbWUiOiJuenRhMi1wcm9kLW1haW4tc2l0ZSIsInF1ZXJ5U3RyaW5nIjoiYnVzIHN0b3AgY2xhc3NpZmljYXRpb25zIiwiZG9jdW1lbnRJZCI6InNpbHZlcnN0cmlwZV9jbXNfbW9kZWxfc2l0ZXRyZWVfMjgwOTkiLCJyZXF1ZXN0SWQiOiJKb1o0aG9xdVFobTlqblZvYUZnbG5nIn0%3D

23 https://www.dia.govt.nz/Regional-Deals

24 Link to ORC OCL webpage

Further detail on the deal and how it might impact this project will be known upon the finalisation of the deal. This is expected to be by the end of 2026.

Overall affordability

Subject to Council endorsement, the proposed project will be included in the transport programme for consideration in ORC's 2027-2030 Long-Term plan. It would also be included in the Otago Regional Land Transport Plan 2027-2030 and bid for co-funding through the NLTP. The project is considered to offer good value for money, but the decision of affordability will be made through the LTP and RLTP process, including consultation with the public.

Management Case

The Management Case demonstrates that the delivery of the preferred service option is achievable and details the arrangements needed to ensure successful delivery of the outcomes sought from the investment.

The proposed preferred option will initially be implemented as a trial service following approved funding pathways being established. The trial period is estimated to be one to three years with an estimated commencement date of late 2027. Initially implemented using existing fleet, service and fleet improvements will be planned on approval of longer-term funding.

The purpose of this Management Case is to:

- Outline management and governance arrangements
- Discuss project risks and risk management planning
- Demonstrate benefit management planning and project evaluation

Management strategy

The services and related infrastructure for this project are expected to be delivered as a long-term (9-year) project, commencing initially as a trial, but with the vision for the services to be incorporated into ORC's public transport services continuous programme. This project will be managed and the service developed and implemented incrementally to navigate uncertainties, constraints and dependencies

The Upper Clutha service has some complexities that arise from the following factors:

- The diversity of project components involved in implemented contracted public transport services in a new geography
- Interrelationship and alignment of funding approvals and processes across multiple agencies
- Collaboration between road controlling authorities across the local and state highway network
- High community expectations following previous studies, trials and targeted rates

The design and planning of the service will be directed by the legislation and policies described in the Strategic Alignment section of the Strategic Case, with particular focus on the RPTP service design policies. The findings from the market sounding discussed in the commercial case and previous studies discussed in the Strategic Case will also inform the design and planning.

Project management arrangements

ORC resources will be used wherever possible. ORC's Transport team will own and manage the project delivery including the design, planning, procurement and management of the service, collaborating with key partners, such as QLDC, NZTA, and the service operator, as well as stakeholders where relevant.

ORC has demonstrated its ability to plan and deliver high performing public transport services across multiple networks through the 26 routes it currently manages in Dunedin and Queenstown. Multiple ORC teams will be involved in the implementation of the service.

The Transport Planning team will lead the management of the service design and funding processes, while working collaboratively with the Transport Operations team through service procurement. Infrastructure planning will be a collective undertaking between Transport Planning and Operations and the RCAs.

The Transport Operations team will incorporate the service into its existing work programme. It will be responsible for activities including managing service disruptions, coordinating infrastructure interventions with the RCAs, resolving customer feedback, monitoring performance and overseeing the operator's service delivery as per its contract.

The Communications and Marketing Team will develop the public information and promotional material for service launch in collaboration with the Transport Planning and Operations teams. For service launch it will lead a marketing campaign and respond to initial community feedback. Once operational, the team will incorporate the service into its existing work programme.

These teams have all been evaluated to have the resource required to implement a new Upper Clutha service in the timeframe set out in Table 25 below.

As an investment, the service has been assessed to have a low level of complexity and is thus suitable to sit within the business-as-usual ORC work programmes. Its planning and operation activities are well established processes. Longstanding relationships with QLDC and NZTA exist for the delivery of the necessary infrastructure. Overall, is not expected that the introduction of the proposed service into a new geography will require substantially more resource than currently exists.

Project structure

Governance arrangements

ORC is the elected body responsible for the governance of the proposed service as the PTA for Otago. Council will make a decision on the inclusion of the proposed service in the ORC LTP 2027-2037 and RLTP 2027-2037 in mid-2026 following the completion of this investment case. If Council agrees to include this project in ORC's long-term planning, it will subsequently be responsible for approving the level of service and implementation timeline as a part of its decision to approve the proposed service operator contract following the tender process.

As a regulatory body and potential funder of the service, NZTA is also considered a governance body. As set out in The Economic Case – Identifying the preferred option, the preferred funding option for the service consists of a combination of NZTA funding, ORC rates funding and third-party funding (e.g. fares). Accordingly, this investment case plans for the proposed service to receive NZTA co-funding and be subject to the conditions of such funding as a result. For detail on preferred and alternative funding arrangements, refer to the Financial Case.

It is noted at the time of writing that local government reforms are underway, indicating regional governance structures will change in the coming years. It is expected that reforms will maintain continuity for existing local government work programmes to the greatest extent possible regardless of the change in governance arrangements.

Roles and responsibilities

Figure 18 provides a visual overview of the project's organisation structure while Table 23 describes each involved organisations' roles in the approval and delivery processes.

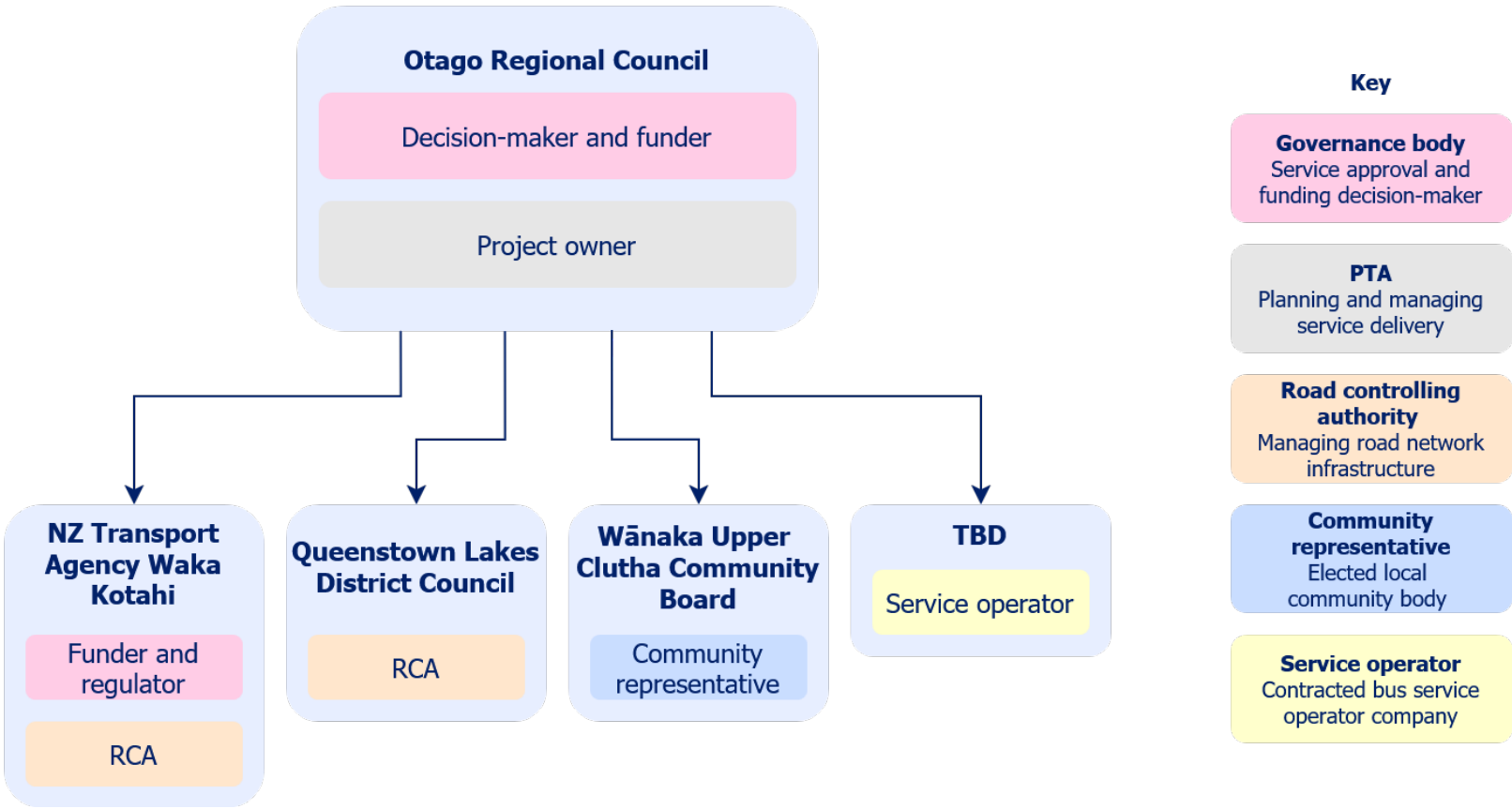

Figure 18 Project organisation chart

Table 23 Key project delivery roles and functions

Organisation	Role	Functions
Otago Regional Council	Public transport authority and procuring organisation	• Endorse investment case and approve local share funding • Manage procurement process and new contract • Service route design and timetable (collaboratively with operator) • Fleet specifications and application for any RUB exemptions • Implement ticketing system (coordinating device installation on vehicles, recruiting businesses to become local ticket retailers) • All comms and marketing - Produce and disseminate public information and marketing material. Plan and deliver advertising campaign. Update ORC website and General Transport Specification Feed (GTFS) to include the new service on online navigation platforms)
Queenstown Lakes District Council	Road controlling authority and community representative	• Approve local share funding for PT infrastructure • Lead the installation of bus stops on the local road network • Lead any intersection, road corridor or footpath changes needed to accommodate bus service
NZTA Waka Kotahi	Road controlling authority and regulator	• Approve central government funding support • Lead the installation of bus stops on the state highway road network • Lead any intersection changes needed to accommodate bus service on the state highway network

TBD	Contracted service operator	• Service route design and timetable (collaboratively with ORC) • Service operation (employing staff, owning and operating the fleet, and managing depot requirements)
Wānaka Upper Clutha Community Board	Community representative	• Manage community feedback and advocate for community needs • Disseminate public information and marketing material for the service

Project schedule and milestones

The project will follow the standard process for inclusion in the 2027-2030 central government transport funding cycle described in Table 24. Council will make a decision on the timing the local share of funding for the service through the LTP process, which will inform ORC's bid for NZTA co-funding in the RLTP. Central government's decision on NZTA co-funding the service would be determined in the National Land Programme 2027-2030. If NZTA does not co-fund the service this funding cycle, Council would then have an opportunity to amend (i.e. reduce, adjust or cancel) the service in the LTP through the Annual Plan 2028/2029 process.

Table 24 High level project approval schedule

Key project milestones for approval of the service	Owner	Approximate date
Council endorses this investment case	ORC	29 July 2026
Council includes the service as proposed in this investment case in the draft LTP and RLTP	ORC	September – December 2026
Public consultation on the draft LTP and RLTP	ORC	March – April 2027
Council approves the final LTP 2027-2037 with the service as proposed in this investment case included	ORC	June 2027
Otago Southland Regional Transport Committees approve the final RLTP 2027-2037 with the service as proposed in this investment case included	Otago Southland RTCs	June 2027
Government releases the National Land Transport Programme 2027-2030 with decision on NZTA co-funding for the service	Central Government	August 2027
Council decides on any amendments to the planned service following central government's decision on NZTA co-funding in the Annual Plan 2028/2029	ORC	February – June 2028

The delivery of the project is proposed for 2027-2037 (Years 1-10 of the next LTP) as described in Table 25. Service planning, design and pre-procurement would occur in 2026 and early 2027 in order for procurement and for service launch to occur in Year 1 and discussed in the Commercial Case. The required bus stop, roading and footpath infrastructure upgrades will be completed in collaboration with QLDC and NZTA, the road controlling authorities.

Motu Move is the new unified national ticketing solution which is scheduled for roll out in Otago in mid 2027. This new ticketing system allows the use of most bank cards to pay the bus fare. It requires the installation of new hardware across the bus fleet. The introduction of a new service in the Upper Clutha will follow the Motu Move system installation in Otago. ORC will work with the new ticketing system supplier Cubic for this service's integration.

The Wānaka Upper Clutha Community Board will be engaged to utilise its communication channels for promotion of the service and facilitate feedback between the community and ORC.

The trial period will be used to establish the service within the community and understand demand patterns. Service frequency and coverage will be evaluated through the first year of the trial and level of service improvements considered to accommodate community needs and service delivery optimisation. There is an aim to increase service frequency (and possibly coverage) as the demand, population and development in the Upper Clutha evolves.

Table 25 High level project delivery schedule

Key project milestones for delivery of the service	Owner	Approximate date
Council approves the final LTP 2027-2037 with the service as proposed in this investment case included	ORC	June 2027
NZTA approves the final NLTP 2027-2037 with the service as proposed in this investment case included	NZTA	August 2027
Procurement of an operator to deliver the service	ORC, service operator	September 2027 (LTP Year 1)
Lead time for service operator to make staffing, vehicle and depot arrangements	Service operator	Sep – Early 2028 (LTP Y1)
Service and infrastructure	ORC, QLDC, NZTA, Cubic	2027/2028 (LTP Year 1)
Communications and marketing campaign planning for service launch and awareness of the service	ORC, QLDC	2027/2028 (LTP Year 1/2)
Service launched at an introductory level	ORC, service operator	Early 2028 (LTP Year 1)
Incremental service improvements	ORC, service operator	2028-2037 (LTP Year 2-10)

The management case may need to consider alternative project implementation timelines and have some flexibility to adjust milestones based on any variation in funding approval timelines or availability of funding sources.

Stakeholder engagement and communications

Key stakeholders and the wider community will have the opportunity to provide feedback on the proposed service during the LTP and RLTP public consultation periods in March – April 2027. ORC will produce and disseminate promotional material and contact key stakeholders directly with an invitation to engage.

Risk management

Risk will be managed in a manner that aligns with ORC Risk Management processes and policies.

The strategic risks associated with this project were outlined above in the

Risks section of the Strategic case. In this section an initial identification and assessment of the project risks associated with delivering the preferred option has been completed. On approval of the project a risk register will be set up. The risk register will be continuously reviewed and updated as required.

Risks

Table 26 presents the most significant risks that have the potential to delay, prevent or minimise achieving the investment objectives or outcomes sought through the investment.

Table 26 Risk assessment and risk management strategies

	Risk	Consequence (H/M/L)	Likelihood (H/M/L)	Risk management treatment (mitigations)
1	IF there are **seasonal peaks in demand** THEN vehicle capacity may be intermittently insufficient.	Medium	Medium	Collaborate with seasonal tourism or commuter transport providers to share fleet. Plan the service in an iterative and evidence-led way. Work with contracted operator to take an adaptive management approach.
2	If **service frequency or coverage is too limited**, residents may perceive it as inadequate, reducing trust or ridership.	High	Medium	Engage community for feedback during design and early implementation phases. Plan the service in an iterative and evidence-led way. Take an adaptive management approach throughout the trial period.
3	IF projected **baseline travel patterns** between Lake Hāwea, Wānaka, and key destinations differ from those projected, THEN the service may be inappropriately scaled for demand.	Medium	Medium	Plan the service in an iterative and evidence-led way. Take an adaptive management approach throughout the trial period.
4	IF the launch of the service is met with **limited initial demand** due to entrenched travel behaviour patterns, THEN if may take time to promote and change behaviours, delaying the outcomes sought.	High	Low	Encourage buy-in through extensive engagement and communication. Market, promote and educate to remove barriers to use. Consider service refinement through an adaptive management approach.
5	IF **fare revenue** is consistently low, THEN the service may not be financially sustainable in the long term.	High	Low	Extensive engagement and communication: • Inform community of the implications of funding the service on rates and fare. • Consider opportunities to increase fare and private revenue opportunities
6	IF **NZTA co-funding** is not successfully secured for the initial trial service, THEN Council would	High	Medium	Continuously engage with NZTA to understand funding priorities. Produce comprehensive performance reports to

	need to consider funding in full with rate funding to procced with the trial, or delay the trial again.			demonstrate the service value. Explore opportunities for increasing the share of revenue from private sources.
7	IF **neither local share nor NZTA co-funding** is secured for trial service in the 2027-2030 funding cycle THEN introducing public transport in the Upper Clutha will not be able to proceed in a manner that meets community's expectation.	High	Low	Demonstrate need and value of the service in LTP and RLTP prioritisation processes. Communicate rationale of decisions with the community.
8	IF **funding streams or policy priorities** do not support ongoing operation THEN the continued delivery of the service may be threatened.	High	Medium	Continuously engage with NZTA to understand funding priorities. Explore opportunities for increasing the share of revenue from private sources. Produce comprehensive performance reports to demonstrate the service value.
9	If the funding of **infrastructure is not aligned** with the funding of services, THEN funding could go unspent and the service could be delayed.	Medium	Low	Coordinate service and infrastructure planning and funding with RCAs. Highlight the dependencies between service and infrastructure for funders.
10	IF **Ministry of Education bus services withdraw** due to the introduction of public transport, THEN students' access to school could be worsened and the service could experience capacity issues at peak times.	Medium	High	Proactively collaborate with the Ministry of Education to determine students' eligibility and potential additional service costs. Comprehensively engage community to provide information and receive feedback.
11	IF **state highway bus stop locations** are deemed unsafe due to the high-speed environments, THEN service coverage may be inadequate for certain catchments or trip types.	Medium	Medium	Engage NZTA Waka Kotahi early in the service planning process to determine the viability of state highway bus stop locations. Work with property owners along the state highway to utilise private land for alternative safe stop locations.
12	IF the **procurement timing** is competing with procurement of other major centre bus contracts THEN there may be less operator interest or less operator capacity to engage with the tender process	High	Low	ORC will consider the expiry dates of bus contracts in other major centres in the preparation of the detailed procurement plan. Timelines will be communicated with the operators that have engaged with this process to date to give as much prior warning of likely procurement timing.
12	IF there are **delays or difficulties in contracting a suitable operator**, THEN service launch could be postponed or service quality or	High	Low	Undertake pre-procurement engagement with potential operators to optimise service design and minimis

	affordability could be compromised.			commercial viability risks to attract good market competition.
13	IF the contracted operator is unable to secure **sufficient drivers, fleet or depot facilities** THEN the service commencement may be delayed.	High	Medium	Test through the procurement processes that operators have sufficient resources to deliver, or back up options available.
14	IF Motu Move roll out is delayed, THEN the service commencement may be delayed.	High	Low	Continue to work closely with the Motu Move implementation team managing processes and risks proactively to make sure roll out across Otago can happen on time as planned.

The sections below provide additional context to key risks and uncertainties identified.

Misalignment of service capacity and demand

Baseline year-round travel patterns between Lake Hāwea, Wānaka, and key destination areas in the Upper Clutha are not fully understood due to limited data and the high variability of visitor travel patterns. Beyond the insights that Statistics NZ census and NZTA traffic data provide, trip purpose, time-of-day patterns, and multi-stop journeys remain uncertain. Visitor flows and seasonal tourism demand generate uneven patterns that are challenging to provide suitable year-round capacity for in a financially viable way. The degree to which residents and visitors will shift from private vehicles or active travel modes to a public transport service is also untested.

If the demand for the service exceeds capacity (even for certain times of day or year) it will demonstrate the high value of the service. However, it will put the service's reliability and reputation at risk as users may lose confidence in the service as travel times become less predictable. People with other transport options will not be attracted to use the service and those without other options will be burdened with the inconvenience associated with an unreliable service.

Due to the community demand for sustainable and affordable transport modes and rapid growth in the area, this risk has a high likelihood of occurring in the medium-term. Mitigation will require a range of interventions. The service will need to be planned in an iterative and evidence-led way, and its delivery will require an adaptive management approach. Collaboration with seasonal tourism or commuter transport providers to explore fleet-sharing opportunities will also be required. Finally, ORC will need to continuously advocate for increasing the level of service to accommodate the high demand and achieve greater realisation of the project's investment outcomes.

If demand for the service is substantially below the capacity provided, then the value of the service may be questioned, and its existence may be short lived. This risk would have a high impact as insufficient demand puts the realisation of investment objectives in jeopardy. Fortunately, due to the anticipated high demand for the service, it is unlikely to eventuate beyond the initial period of service when users are yet to change their travel behaviour. Managing this risk will require extensive communication and engagement with the community, including the visitor demographic, to raise awareness and encourage use of the service.

Financial sustainability uncertainties

The willingness for users, ratepayers and government to pay for the cost of the service is uncertain. Users who have other transport options may not find the public transport offering appealing enough

(considering fares, wait times and timetables) to compete with private vehicle or active travel modes. There is a notably large share of active mode trips in the area.

Ratepayers may not support the rates increase required to fund the service. The service may also not receive funding from central government when assessed nationally against all other public transport improvement programmes competing for funding from the NLTP.

If demand for the service exceeded capacity in the initial trial stage, the council and central government investment required to transition to permanent service levels is not guaranteed. This risk has a medium likelihood of occurring as the current GPS priorities do not include public transport service expansion in a regional setting (refer to The Strategic Case – the Case for Change for further detail). The NLTF is constrained and bids for inclusion in the NLTP are currently oversubscribed.

To mitigate this risk, extensive engagement and communication will be undertaken so the community is informed on the level of funding required, whether from fares or rates, and ORC can reflect the preferred balance in the design of the service and fare structure. Like the risk of misaligned capacity and demand discussed above, the service will need to be planned in an iterative and evidence-led way, and its operation will require an adaptive management approach. To advocate for the value of the service, ORC will engage with NZTA to maintain an up to date understanding of the transport funding environment, explore opportunities for increasing the share of revenue from private sources and produce comprehensive performance reports to demonstrate the service value.

Other risks and uncertainties

Collaboration with RCAs will be required to manage potential risks involving public transport infrastructure. These include ensuring the necessary funding for bus stop infrastructure and any minor roading upgrades are secured alongside service funding. ORC will work with NZTA to determine safe stop locations along the high-speed environment of the state highway. Finding appropriate mechanisms for mitigating these risks will be necessary to ensure the end-to-end journey experience is safe, accessible and convenient for a variety of users.

Coordination with the Ministry of Education will be critical in ensuring students continue to be provided suitable bus transport as public transport is introduced. ORC will seek to work with the Ministry through any changes in students' eligibility for Ministry-provided bus service that arise.

Motu Move is scheduled to be rolled out across the Otago public transport network in July 2027. With the Upper Clutha service commencement scheduled for February 2028 this is unlikely to impact the new service timing. However, if Motu Move is delayed, the Upper Clutha trial start date would also likely need to be delayed as it would not be feasible to install the old Bee Card system and undertake the necessary system changes required to activate a new service of this scale.

Benefits management arrangements

This project will manage benefits delivery in accordance with published NZTA[25] and Treasury[26] guidance. This will enable the actual benefits realised to be documented and compared to those planned through this investment case process. Benefits realisation will be a key part of assessing the future viability of Upper Clutha public transport services and demonstrating the value of long-term funding beyond the initial trial period.

The benefits specific to the project are set out in Table 7 of the Strategic Case. All benefits are owned by the ORC Transport team, who will measure benefits and report on their realisation as a part of the existing network monitoring report presented to Council on a six-monthly basis.

Without the existence of public transport in the area, few benefits currently have established baselines. Accordingly, initial benefit realisation measures will be adjusted for scale.

Trial evaluation planning

As a trial service, periodic reviews of the trial's performance against outcomes sought will be undertaken. These will be used to inform ongoing adaptive management of timetables and operational efficiencies, inform future procurement opportunities and scaling of the services. They will also be used to support future funding requests.

The key measures that will be evaluated are:

Primary measures (compare annual actual with annual forecast)

- Patronage numbers and breakdown of user types (Adult/Child/Super Gold)
- Private share ratio
- Average passenger fare
- Passenger fare per passenger kilometre (fare revenue/passenger kilometres)
- Service expenditure cost per service kilometre (service expenditure/service kms).

Secondary measures (compare with other services in the Queenstown network)

- Number of cancelled services
- Punctuality
- Reliability

Narrative which incorporates community feedback and general observations will also be documented to provide wider context for decision makers.

Trial evaluation reviews are planned as follows:

Review date (after service commencement)	Purpose

25 https://www.nzta.govt.nz/assets/resources/land-transport-benefits-framework-measures-manual/Land-Transport-Benefits-Framework-measures-manual.pdf

26 https://www.treasury.govt.nz/publications/guide/managing-benefits-projects-and-programmes-guide-practitioners

Three months	• Review primary measures to understand service demand and more about the people using the service. • Engage with operators to get their feedback on service elements and any operational changes that could improve the service quality.
Six months	• Review primary measures to understand service demand and more about the people using the service. • Engage with operators to get their feedback on service elements and any operational changes that could improve the service quality. • Provide feedback to Council and Upper Clutha Community Board including value for money assessment
One year	• Review primary and secondary measures • Evaluate outcomes with existing fleet and consider longer term fleet requirements • Inform whether to commence second term of the operating contract • Inform Unit 7 procurement preparation • Provide feedback to Council and Upper Clutha Community Board including value for money assessment

Next steps

This business case outlines the case for investing in public transport for the Upper Clutha and seeks formal approval to progress with including the implementation of the preferred option, which is eight trips per day, seven days per week into ORC's 2027-2030 Long-Term Plan and Otago's Regional Land Transport Plan.

If approved, ORC's Transport team will:

- Include the Upper Clutha service trial in the transport projects for local share funding in ORC's 2027-2030 Long-Term Plan.
- Include the Upper Clutha service trial in ORC's public transport service improvement programme for inclusion in Otago's 2027-2030 Regional Land Transport Plan and 2027-2030 National Land Transport Plan bid.
- Continue market engagement to refine timetable design, service delivery costs and fleet requirements.
- Establish a procurement project team to progress procurement planning for upcoming procurement activities.

Appendix A. Ministry of Education school bus services

Route No.	School	Service Area
D130432 AM/PM	Te Kura O Take Kārara	Albert Town
D130433 AM/PM	Te Kura O Take Kārara	Wānaka Aerodrome, Albert Town, Wānaka
D130406 AM/PM	Hāwea Flat School	Pukerangi Dr, Luggate
D130402 AM/PM	Hāwea Flat School	Maungawera, Lake Hāwea
D130437 AM/PM	Hāwea Flat School	Lake Hāwea, Hāwea Back Road
D130401 AM/PM	Mt Aspiring College, Holy Family School, Wānaka Primary School	Maungawera Valley Road, Albert Town, Wānaka
D130407 AM/PM	Mt Aspiring College, Holy Family School, Wānaka Primary School	Lake Hāwea
D130403 AM/PM	Mt Aspiring College, Holy Family School, Wānaka Primary School	Tarras, Hāwea Flat, Maungawera, Wānaka
D130429 AM/PM	Mt Aspiring College, Holy Family School, Wānaka Primary School	Ballantyne Road, Mount Barker, Wānaka
D130410 AM/PM	Mt Aspiring College	Makarora
D130404 AM/PM	Mt Aspiring College, Holy Family School, Wānaka Primary School	Cardrona, Wānaka
D130435 AM/PM	Mt Aspiring College, Holy Family School, Wānaka Primary School	Lake Hāwea, Hāwea Flat, Maungawera, Albert Town
D130408 AM/PM	Mt Aspiring College, Holy Family School, Wānaka Primary School	Lake Hāwea, Hāwea Flat, Maungawera, Albert Town
D130430 AM/PM	Mt Aspiring College, Holy Family School, Wānaka Primary School	Luggate, Ballatyne Road, Wānaka
D130405 AM/PM	Mt Aspiring College, Holy Family School, Wānaka Primary School, Te Kura O Take Kārara	Matukituki River Valley, Glendhu Bay, Wānaka

Appendix B. Previous regional planning and transport investigations

Project	Description	Details and relevance
Wānaka Network Optimisation Business Case (2025)	Incomplete but concluded transport business case for the Upper Clutha	Considered the supressed demand of sustainable transport options in the Upper Clutha area and assessed the community led public transport trials (2022, 2023)
Queenstown Public Transport Business Case (2024)	PT Business Case for public transport provision in Queenstown to 2039	Did not consider transport connections from Queenstown to Upper Clutha and Central Otago other than a Cromwell park and ride option which was not recommended
Otago Community and Accessible Transport Study (OCATS) (2023)	High-level investigation into regional community and accessible transport.	Various regional public transport options across the region were briefly investigated and roughly costed, including the following fixed route services: • Ōamaru • Ōamaru – Dunedin • Alexandra – Queenstown • Wānaka • Balclutha – Dunedin
Upper Clutha Community Shuttle Trial (2022, 2023)	[insert info from https://www.communitylink.nz/shuttle-trial]	
Better Ways to Go – A mode shift plan for Queenstown Lakes District**(2022)**	Mode shift plan to increase the share of travel made on foot, by bike or bus in Queenstown Lakes District.	Sets a vision for a public transport network in Upper Clutha. Signals PT investment and uptake likely to make the greatest contribution to mode shift.
Queenstown Transport Business Case (2020) and Queenstown Integrated Transport Programme Business Case (2017)	Transport business cases to improve network performance through infrastructural, public transport and behaviour change measures	None - Areas outside Queenstown were out of scope
Wānaka Network Operating Framework (2018)	Development of a Network Operating Framework considering the inter-relationship with land use, transport networks, infrastructure and services.	Provision of: Primary Public Transport routes that provide major connections between the airport, suburbs, satellite towns and Wānaka town centre. Secondary Public Transport routes that enable movement of people from commercial centres and the town centre to primary public transport routes (i.e. pick up and drop off points). Including school buses and tourist buses with access to accommodation and ski fields

Appendix C. Long-list options assessment

	Option		Result	Commentary
Geographical Scoping Options	GC1	Do nothing	Carry forward as do minimum	Did not achieve any of the IOs. Does not align with strategic priorities but was considered affordable as there is no investment. Carried forward as the base comparator.
	GC2	Albert Town, Three Parks, Wānaka	Discount	Partially achieved most IOs and CSFs. Failed to meet IO3 (environmental sustainability) due to its inability to generate sufficient mode shift.
	GC3	Hāwea, Albert Town, Three Parks, Wānaka	Discount	Only partially achieved most IOs and CSFs.
	GC4	Hāwea, Albert Town, Three Parks, Wānaka, Southern Wānaka	Preferred	Achieved most IOs and CSFs. Found to partially align with the financial CSF due to the uncertainty around funding sources.
	GC5	Hāwea, Albert Town, Three Parks, Wānaka, Southern Wānaka, Luggate	Preferred	Achieved most IOs and CSFs. Found to partially align with the financial CSF due to the uncertainty around funding sources.
Service Solution Options	SC1	Door to door community transport	Discount	Fails to provide the level of service sufficient to achieve most IOs or CSFs. Meets affordability criteria as delivered by the community.
	SC2	Skeleton all-day (8 trips per day)	Carry forward	The level of service delivered by a basic (hourly) frequency partially achieves all IOs, while fully meeting all CSFs. Carried forward to short-list.
	SC3	On-demand	Discount	Fails to provide the level of service to achieve IO1 (land use integration). The high cost of on-demand services relative to the value they deliver caused it to fail to meet the economic and financial CSFs.
	SC4	Basic (hourly)	Carry forward	The level of service delivered by a basic (hourly) frequency partially achieves all IOs, while fully meeting all CSFs. Carried forward to short-list.
	SC5	Regular (more than hourly to half-hourly)	Preferred	The level of service delivered by a half-hourly regular service achieves all IOs and CSFs except for IO1 (land use integration) due to its moderate ability to reduce car reliance to the point of encouraging good urban form.

	SC8	Frequent (more than half-hourly to ten-minute)	Discount	While a frequent service would achieve all IOs and the strategic, commercial and management CSFs, it fails to provide sufficient value for money or be reasonable for funding sources to support. However, it could be a more achievable option in the long term once urban growth has generated greater transport demand and a basic or regular public transport service is well-established.
	SC9	Rapid transit (more than ten-minute)	Discount	This high level of service would fully achieve all IOs except for IO3 (environmental sustainability) due to the high environmental cost of rapid transport infrastructure and vehicles. However, it would require too much resource relative to the expected demand levels and small ratepayer base, resulting in excessive service provision and poor valuable for money.
Service Delivery Options	SD1	Exempt (e.g. community-led)	Discount	A community-led option, such as a door-to-door volunteer driver service, would be affordable for users and increase mode choice for some transport disadvantaged people. However, it fails across several IOs and CSFs due its inherently small scale. As a result, it cannot deliver a sufficient level of service it would provide to support urban form (IO1) or reduce transport-related emissions (IO3). Whilst considered affordable, the charity community transport model is fragile.
	SD2	Subsidised (gross cost)	Preferred	A gross cost contract is the widely preferred public transport service delivery model in New Zealand due to the control PTAs maintain over key service components such as network design and fare-setting.
	SD3	Subsidised (net cost)	Possible	A net contract delivery model is possible and could be viable as a pathway to gross contracts. However, it is not the preferred option as it would not guarantee the prioritisation of community needs over commercial interests.
	SD4	Exempt (e.g. commercial)	Discount	No urban public transport services are currently delivered by commercial operators, demonstrating it is not a commercially viable option.
Implementation/ Timing Options	IM1	Delay indefinitely (do nothing)	Discount	Delaying indefinitely fails to achieve all investment objectives and most critical success factors.
	IM2	Phase over Yrs 1-10 of next LTP	Preferred	Beginning implementation in the short-term and lengthening the phasing timeline ensures a flexible and iterative ‘trial and error’ approach that delivers the greatest value for money. It is noted that, in the context of a rates freeze, no options achieve complete affordability.

	IM3	Phase over Yrs 4-10 of next LTP	Possible	While possible, the delay in service provision would have negative impacts across the investment objectives.
	IM4	Immediately in Yrs 1-3 of next LTP	Discount	Implementing immediately (in Years 1-3 of the LTP 2027-2037) would not achieve the maximum value for money due to it forgoing a more flexible and iterative 'trial and error' approach.
Funding Options	FD1	Fares/third party funding + ORC rates + NZTA co-funding	Preferred	This funding model is employed by most integral public transport services in the country, generally representing a fair distribution of cost between the user and the community.
	FD2	Fares/third party funding + ORC rates	Possible	Carry forward this option due to the 2026 rates freeze and the Upper Clutha's strong local economy, enabling potential sponsorship, or employer fare-sharing opportunities.
	FD3	Fares/third party funding	Possible	This would be presented as the preferred option within a funding environment where no public funding is available.
	FD4	Fares only	Discount	Employing a user pays model would not achieve IO2 (Connectivity) or IO4 (Affordability) as it would fail to attract meaningful patronage or be affordable for much of the community.

Appendix D: Short-list options multi-criteria analysis

Criteria	Do Nothing	Do Min	Option 1	Option 2	Option 3	Option 4	Commentary
	Status Quo	8 trips per day	No Luggate Hourly	No Luggate Half Hourly	With Luggate Hourly	With Luggate Half Hourly	
Investment Objectives							
Land use integration: Support good urban form	-1	0	0	+2	0	0	Only when a regular frequency service (more than hourly to half hourly) is provided in areas where development is present or planned (i.e. not Luggate) are positive impacts experienced. To achieve major positive impacts, a greater frequency would be required.
Connectivity and choice: Increase connectivity and accessibility using sustainable modes	0	+1	+1	+2	+1	+2	All options increase connectivity and choice but only regular frequency services generate more than a minimal positive impact.
Environmental sustainability: carbon emissions are reduced and air quality is improved	0	0	+1	+2	+1	+2	The provision of hourly or regular services has the ability to offset enough private car travel to materially reduce transport-related emissions. Only a regular frequency would be expected to generate the mode shift required to achieve moderate positive impacts.
Affordability to users: increase access to affordable alternatives to private vehicle travel	0	+1	+1	+2	+1	+2	The provision of any service option, including the Do Minimum would generate at least minimal positive impacts on people's access to an affordable transport option. However, moderate positive impacts would only be expected to be achieved with a regular frequency of service.
Investment Objective total (/12)	**-1**	**2**	**2**	**8**	**3**	**6**	

Risks							
Service capacity: if the service is overcapacity due to high demand, it may experience reliability and reputational issues	0	-1	-1	0	-1	0	**Threat level**: across all service options there is a moderate impact of this risk. While it would worsen reliability for people it indicates the success of the service. **Likelihood**: unlikely in the short and medium term due to the area's relatively low population for services at an hourly frequency or less. For a regular frequency, the increased capacity reduces the risk to rare. **Treatment:** operator providing extra services ad hoc, a practice typically built into public transport contracts **Overall risk rating:** medium (Do Minimum and hourly options), low (regular frequency options)
Patronage: if the service does not generate sufficient patronage to be considered good value for money, social licence may be lost and service reductions may occur	0	-1	-1	-2	-1	-2	**Threat level:** insufficient patronage would have a moderate impact on the service, increasing to major over time due to the lack of value it would be delivering to the community for its cost. **Likelihood**: while it is possible for low patronage to occur initially, community feedback indicates there is high demand for public transport services, making it unlikely over time. In the short term the half hourly services may struggle to attract enough additional patronage revenue to offset the increased cost. **Treatment**: comms and marketing activities (general and targeted), stakeholder engagement **Overall risk rating**: medium

Revenue: if the service does not generate sufficient revenue to be financially sustainable, service reduction or cancellation may occur	0	-2	-1	-2	-1	-2	**Threat level:** low revenue would have a <u>moderate</u> impact on the service, increasing to major over time due to the service's demonstrated financial unsustainability **Likelihood:** while it is possible for all hourly and regular frequency service options to generate low revenue initially, community feedback indicates there is willingness to pay for public transport services, making it <u>unlikely</u> over time. In the short term the half hourly services may struggle to attract enough additional patronage revenue to offset the increased cost. For the Do Minimum option, the high start-up costs of planning, design, infrastructure relative to the low number of trips being offered (and therefore fewer opportunities for farebox recovery) results in low revenue remaining a <u>possible</u> risk over time. **Treatment:** comms and marketing activities (general and targeted), stakeholder engagement, fare changes **Overall risk rating:** <u>medium</u>

Traffic congestion: if increased traffic congestion on the road network negatively impacts service performance, then the service will experience lower patronage and reputational issues	-2	-1	-1	0	-1	0	**Threat level:** congestion does not pose a risk to public transport service performance if it is predictable and can be accommodated through timetabling. However if congestion occurs sporadically, timetables are unable to reflect the slower travel times, thus reliability worsens a moderate impact on service performance occurs. **Likelihood:** the area's relatively small population and generally well-performing road network reduce this risk's likelihood. Conversely, high population growth projections and the large share of visitor travel (which drive unpredictable travel patterns) increases it. Overall the short and medium term risk is unlikely, but with population growth (of both residents and visitors) it is expected to increase to possible in the long term. The higher half hourly services are more likely to induce mode shift which will positively impact on traffic congestion. **Treatment**: bus priority infrastructure to increase PT travel times, travel demand management **Overall risk rating:** medium

Active transport interaction: if services disproportionately shift trips away from active transport rather than private vehicle travel, then the transport system's efficiency, equity and sustainability will worsen	0	-1	0	0	0	0	**Threat level**: mode shift to public transport from active transport results in worse efficiency, equity and sustainability outcomes across the transport system. However the relatively low population of the area results in this risk causing a minimal impact on transport system performance. **Likelihood**: possible with the Do Minimum option, in which a service covers an area that is largely within walking or cycling distance from key destinations. For options serving the wider Upper Clutha area, including Lake Hāwea, Southern Wānaka and Luggate, this risk becomes unlikely due to the longer distances these services cover. **Treatment**: co-current improvements in active transport infrastructure, designing routes to complement and not compete with active transport routes, travel demand management **Overall risk rating**: low
Out-of-sequence development: if development occurs at unplanned times or in unplanned areas, then it may be poorly served by public transport	0	-1	-1	-1	-1	-1	**Threat level:** out-of-sequence develop would undermine the robust design and planning of the service. The negative impact of people travelling to or from the development relying on other transport modes would be moderate. **Likelihood:** due to the lack of unplanned land in the area it is not expected for significant development to occur out of sequence, however the high rate of out-of-sequence development in Queenstown demonstrates it is possible. **Treatment:** completing thorough assessments of out-of-sequence development applications, working with developers to fund services **Overall risk rating:** medium

Lack of development: if the projected population growth does not occur then the service will fail to be right-sized for the area, generating low patronage	0	0	-1	-1	-1	-1	**Threat level:** moderate for Options 1 and 2 due to the resulting risk of low patronage, which could lead to service reduction or cancellations. The Do Minimum option would experience minimal impact due to its service area covering already developed land. **Likelihood:** based on the high growth Queenstown has experienced, occurring at a faster rates than often projected, it would be rare for Wānaka's projected growth to go unrealised. **Treatment:** none **Overall risk rating:** low
Risk total (/21)	**-2**	**-7**	**-6**	**-6**	**-6**	**-6**	
Impacts							
Environmental impacts: air quality improvements due to reduced transport-related emissions from mode shift to PT	-1	0	0	+1	0	+1	Hourly services would achieve the mode shift required for minor improvements in air quality due to reduced private vehicle travel. At a regular frequency, moderate air quality improvements would be expected to be realised. No service will continue to degrade air quality and contribute to rising transport-related emissions.
Social and cultural impacts: health benefits of active transport for first and last mile	0	0	0	+1	0	+1	Hourly services would achieve the mode shift required to see minor health benefits to users accessing public transport by walking or cycling. At a regular frequency, moderate health benefits would be expected to be realised.
Impact total (/6)	**-1**	**0**	**0**	**2**	**0**	**2**	
Critical Success Factors							

Strategic fit and organisational needs (Strategic)	-1	0	+1	+2	+1	+1	While all hourly and frequent services would achieve at least minimal positive impacts. However, a regular frequency service excluding Luggate would align with policies of patronage-oriented service design in a way that aligns with good urban form (i.e. serving locations with current or planned transport-oriented urban development). Continuing to not serve the Upper Clutha does not align with strategic direction.
Potential value for money/Benefit optimisation (Economic)	0	0	+2	+1	+1	+1	Insufficient value is achieved from the Do Minimum option to achieve value for money. The high cost of serving Luggate relative to the value it adds only enables it to achieve minimal positive impacts, while hourly or regular services not serving Luggate achieve moderate positive impacts.
Provider capacity and capability (Commercial)	0	+1	+2	+2	+2	+2	While all options would be commercially achievable, the Do Minimum option would not achieve the economies of scale sufficient to deliver more than minimal positive impacts.
Potential affordability - current and future (Financial)	0	+1	0	0	0	0	In the current operating environment no funding is available, current or planned, from public sources. However, the low cost of providing the Do Minimum service would enable sufficient funding third party sources easier to raise.
Potential feasibility/achievability (Management)	0	+2	+2	+2	+2	+2	All options would be feasible to manage as they would be an extension of ORC's existing core service as the region's public transport authority.
CSF total (/15)	**-1**	**4**	**7**	**7**	**6**	**6**	
Costs							
Set up costs (capital expenditure, etc.)	$0	$100,000	$100,000	$100,000	$100,000	$100,000	

1 year of operational costs	$0	$1,072,690	$1,992,590	$3,491,336	$2,983,514	$5,260,024	
Cost total	**$0**	**$1,172,690**	**$2,092,590**	**$3,591,336**	**$3,083,514**	**$5,360,024**	
Key benefits							
Improved access to opportunity (5.2)	0	0	0	+1	0	+1	The Do Minimum and hourly options' frequencies do not enable people to reliably access key economic destinations within a 30-minute travel threshold, thus deliver negligible impacts. At a more than hourly to half hourly service, a 30-minute travel threshold becomes moderately more achievable, but still only realises minimal positive benefits.
Improved spatial coverage of public transport (10.2, 10.3)	0	+2	+3	+3	+3	+3	The introduction of any level of service would deliver material positive spatial coverage impacts. If the service served Lake Hāwea and Southern Wānaka (once developed), major positive impacts would be achieved as a substantial portion of existing and future urban dwellings would be within 400m of public transport. The inclusion of Luggate does not make a notable difference to the level of benefit.
Improved public transport mode choice (10.2)	0	+1	+1	+2	+1	+2	At least an hourly service frequency is required to induce noticeable mode shift. At a regular frequency, the impact on mode shift would be expected to increase from minimal to moderate, particularly over time as people change their travel behaviour.
Reduced emissions from land transport (8.1)	-1	0	+1	+2	+1	+2	These scores reflect the mode choice scores reflected above due to mode shift and transport-related emissions reductions are directly related. At least an hourly service frequency is required to induce noticeable reduction in emissions. At a regular frequency, emissions reductions would be

							expected to increase from minimal to moderate, particularly over time as people change their travel behaviour.
Improved transport affordability for users (10.2)	-1	+1	+1	+2	+1	+2	[same as Investment Objective 4 - affordability] The provision of any service option, including the Do Minimum would generate at least minimal positive impacts on people's access to an affordable transport option. However, moderate positive impacts would only be expected to be achieved with a regular frequency of service.
Benefits total (/15)	**-2**	**4**	**6**	**10**	**6**	**10**	

GUIDANCE – DELETE ON COMPLETION OF DBC

9.6. Bus Stop Audit Infrastructure Update

Prepared for:	Council
Report No.	TRN2614
Activity:	Public Transport
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Endorsed by:	Anita Dawe (General Manager Regional Planning and Transport)
Date:	29 July 2026
Portfolio Leads:	Cr Hollyer and Cr Somerville, Transport

PURPOSE

[1] The purpose of this paper is to update Council on progress made in relation to the Dunedin bus stop audit work programme, including completed and ongoing bus stop infrastructure improvements.

EXECUTIVE SUMMARY

[2] Since Council adopted the Bus Stop Upgrade Plan in September 2025, staff have completed or commenced improvements at 22 bus stop locations across Dunedin, exceeding the original programme of 10 priority projects.

[3] Through collaboration with Dunedin City Council, reuse of existing infrastructure and alignment with planned transport projects, staff have delivered improvements that enhance passenger safety, accessibility and amenity while achieving strong value for money.

[4] This report updates Council on completed works, projects currently underway and the proposed direction for the remaining program through 2026/27.

RECOMMENDATION

That the Council:

1) ***Notes*** *this report.*

BACKGROUND

[5] In 2024, Otago Regional Council commissioned ViaStrada to undertake a comprehensive audit of bus stops across the Dunedin network. The audit assessed 849 bus stops and recorded information on stop infrastructure, patronage, and the extent to which each stop aligned with NZ Transport Agency Waka Kotahi Public Transport Design Guidance.

[6] In September 2025, Council received the Bus Stop Upgrade Plan which outlined a proposed work programme for bus stop infrastructure and amenity improvements in 2025/26 [Council paper RTC2513]. The report set out a prioritised approach to bus stop investment using the Dunedin Bus Stop Audit, with a focus on improving accessibility, amenity, and health and safety outcomes for passengers and bus drivers.

DISCUSSION

[7] The Bus Stop Upgrade Plan presented to Council identified 10 priority bus stop projects across the Dunedin network to improve passenger safety, accessibility and amenity.

[8] Since the plan was adopted, staff have continued to refine priorities and identify additional opportunities across the network in collaboration with Dunedin City Council. By coordinating works with planned DCC projects, reusing existing infrastructure where practical, and delivering lower-cost operational improvements, the programme has expanded beyond the original priority projects. Throughout the programme, staff have focused on achieving value for money by reusing existing bus stop infrastructure wherever practical. Surplus shelters and other infrastructure have been relocated to higher-priority locations, reducing costs, minimising waste and allowing improvements to be delivered more quickly.

[9] As a result, improvements have now been completed or are underway at 22 bus stop locations across Dunedin, more than doubling the number of priority projects identified in the original plan. These include shelter installations and relocations, bus stop upgrades, taper installations, stop removals and other operational improvements that enhance passenger safety, accessibility and the efficiency of bus operations.

[10] With the 10 priority bus stop projects identified in the September 2025 paper now delivered, sufficient funding remained within the renewals Public Transport Infrastructure budget to continue progressing additional bus stop improvements. This has enabled staff to expand the programme beyond the original priorities, resulting in a further 22 bus stops being improved.

[11] The table below shows work completed to date and programmed improvements to June 2026/27.

ORC Pri	Stop	Change	Status
37	**Princes St, 138**	Dunedin City Council approved bus stop extension for a $25k contribution from ORC.	*Underway*
0	**Brighton Rd, cnr Main South Rd**	Consultation was completed where we received a lot of hesitant feedback regarding the proposed Green Island Superstop project. We are now looking at installing a design built shelter at bus stop Green Island Super Stop (Inbound).	*Underway*
0	**Green Island (Outbound)**	Completed installation of a second shelter. Relocated shelter outside Anderson Bay McDonalds which was decommissioned with the South Dunedin route changes.	*Complete*
40	**Taieri Rd, Nairn St**	Tapers installed for safer entry/exit from bus stop.	*Complete*
103	**Taieri Rd, 117**	Consultation complete/approved. Work with contractor for completion.	*Underway*
0	**King Edward St, 101**	Shelter installed at bus stop. Reallocated bus shelter from bus stop removed outside the Nissan car dealership on Andersons Bay Rd.	*Complete*
3	**George St, Knox Church garden**	Completed	*Complete*
23	**Hospital North**	Completed	*Complete*
24	**Forth St, Terminus on Leith Bridge**	Bus Stop Removed.	*Complete*
25	**SH88, Logan Park**	Completed (triple stop, multiple shelters).	*Complete*
29	**George St, 472**	Completed	*Complete*
30	**Harington Point Rd, 2 (Portobello)**	Completed	*Complete*
32	**Hospital South**	Completed	*Complete*
43	**Castle St, 53**	Bus Stop Removed.	*Complete*
51	**Princes St, 265**	Completed	*Complete*
56	**King Edward St, 134**	Completed	*Complete*
58	**St Clair Terminus**	Completed - double length bus stop with tapers.	*Complete*
27	**King Edward St, 275**	Bus Stop Removed.	*Complete*
N/A	**North Rd, 428**	Shelter installed 29/06. Relocating bus shelter from Pryde St decomissioned bus stop.	*Complete*
N/A	**Macandrew Rd, 272**	Reutilising Ravensdown shelter which had to be removed due to H&S issues with contractor cleaning accessibility.	*Complete*
N/A	**Hagart Alexander Dr, Chatsford/Birchleigh**	Reutilising Doon St shelter which had to be removed due to H&S issues with the ondemand bus accessing the bus stop.	*Complete*
N/A	**Harrington St, cnr Fox St**	Orbell St shelter relocated to Port Chalmers Terminus due to H&S issues related to previous structure.	*Complete*
South Dunedin Route Changes:			
N/A	**King Edward Street, 203**	Make permanent - July 22 DCC Hearings Committee for approval.	*Underway*
N/A	**King Edward St, 135**	Remove and replace with carparking - July 22 DCC Hearings Committee for approval.	*Underway*
N/A	**Andersons Bay Rd, cnr Princes St**	Remove and replace with carparking - July 22 DCC Hearings Committee for approval.	*Underway*
N/A	**King Edward St, 275**	Remove and replace with carparking -July 22 DCC Hearings Committee for approval.	*Underway*
N/A	**Andersons Bay Rd, 384**	Remove and replace with carparking -July 22 DCC Hearings Committee for approval.	*Underway*
N/A	**Andersons Bay Rd, 482**	Remove and replace with carparking -July 22 DCC Hearings Committee for approval.	*Underway*
N/A	**Andersons Bay Rd, Oval**	Remove and replace with carparking -July 22 DCC Hearings Committee for approval.	*Underway*
N/A	**Andersons Bay Rd, 280**	Remove and replace with carparking -July 22 DCC Hearings Committee for approval.	*Underway*
N/A	**Andersons Bay Rd, 357**	Remove and replace with carparking -July 22 DCC Hearings Committee for approval.	*Underway*
N/A	**Andersons Bay Rd, 393**	Remove and replace with carparking -July 22 DCC Hearings Committee for approval.	*Underway*

Table 1: List of completed and planned bus infrastructure works.

Examples of completed and planned works

Hagart Alexander Drive

[12] The well-used bus stop at the end of Doon Street servicing nearby retirement villages was temporarily taken out of service primarily due to safety concerns and longstanding wear and tear issues affecting the road and dropped kerbs, resulting in high maintenance and remedial works.

[13] The On-Demand service (introduced in July 2025) was re-routed directly through the Retirement Village to access the Doon Street bus stop. This trial ended due to safety concerns, meaning that there was no public transport infrastructure servicing the nearby villages.

[14] A shelter and seat were installed at the nearest practical pick-up point on Hagart Alexander Road, adjacent to the entrance to the retirement villages, improving passenger safety while providing a more accessible waiting location and a short walk for residents.

[15] **Figure 1** shows a photograph of the shelter in use by residents, featured in the Chatsford Lifestyle Choice Letter. The new stop is more accessible, in a good location and without the remedial repair issues that impacted the previous stop.

Figure 1

Green Island Inbound

[16] Green Island serves as a popular midway point between Mosgiel and Dunedin. It is the transfer point for connections between route 70 Brighton and the rest of the Dunedin network (Brighton is the only timetabled Dunedin service which does not have a direct connection to the City), the key interchange for multiple services which travel directly to schools, and for route 77 Mosgiel services which transport high volumes of school pupils in and out of the city during term time. It also connects Green Island and Abbotsford to the South Dunedin area via route 77.

[17] To address capacity issues, staff previously investigated the development of a NZ Transport Agency Waka Kotahi-funded "superstop" adjacent to the Green Island McDonald's site. The proposed superstop aimed to significantly increase passenger capacity and improve safety and accessibility. Initially the project was impacted by funding constraints but was reassessed as part of this project. Recent community consultation identified significant community opposition to the proposal.

[18] Given the lack of support for the superstop, staff have since reviewed alternative opportunities to improve passenger safety and amenity within the existing bus stop network in the Green Island area. New infrastructure improvements are now planned for the existing inbound bus stop, which will provide a practical improvement by providing passengers with shelter from the weather, create a more comfortable waiting environment, and reduce the number of people waiting close to the edge of the busy roadway. While this does not fully address the broader capacity constraints previously identified through the superstop proposal, staff consider it to be a significant improvement on the existing infrastructure.

[19] **Figure 2** shows a photograph of a potential shelter design to be implemented at the Green Island Inbound stop.

Figure 2

Draft Green Island Extended Bus stop design

[20] Additional bus stop improvements are currently underway, including works at Princes Street, North Road, Macandrew Road, Green Island and Taieri Road. Some projects remain subject to final design, consultation, contractor availability or approval.

[21] Staff have also progressed bus stop changes associated with the South Dunedin route changes, including making bus stops permanent and removing stops that are no longer required. These changes are being progressed through DCC's approval process to align bus stop infrastructure with the updated network.

[22] The improvements delivered to date reflect a practical, staged approach to implementing the Bus Stop Upgrade Plan, balancing lower-cost improvements with more complex projects requiring design, consultation or external approvals.

[23] Staff will continue delivering the remaining priority improvements based off the bus stop audit through the 2026/27 work programme, with priorities informed by available funding, site requirements and opportunities to coordinate works with other transport and streetscape projects.

[24] Some of the priority improvements for the 2026/27 program are as follows:

- **Green Island Extended Bus stop Inbound** – As mentioned above.

- **Princes St, 138 -** Extension of bus stop to facilitate two buses. This bus stop is located immediately north of the Duddingstone Steps near Dowling Street and is a high patronage bus stop for northbound buses approaching the bus hub/heading northbound. Currently, there is only adequate space for one bus resulting in oncoming buses to sit in the live lane until the bus stop becomes accessible.

- **Princes St, 151** – Extension of bus stop to facilitate two buses. This bus stop is located opposite the Duddingstone Steps near Dowling Street and is a high patronage bus stop, particularly for school students with many southbound routes servicing this stop. Currently, there is only adequate space for one bus resulting in oncoming buses to sit in the live lane until the bus stop becomes accessible.

- **Albany Street Connection Project -** In collaboration with Dunedin City Council, Otago Regional Council is improving bus stops on Albany Street in association with the Albany Street Connection project. This project will involve removing, creating and relocating bus stops.

[25] Once the above large-scale projects are completed, we will continue to work through the bus stop audit list by priority.

OPTIONS

[26] As this is a noting paper, no options are presented.

SUMMARY OF CONSIDERATIONS

COMMUNITY OUTCOMES

This work aligns with the following community outcomes from the ORC 2024-2034 Long-Term Plan:

Transport

Otago has an integrated transport system that contributes to the accessibility and connectivity of our community, reduces congestion and supports community wellbeing aspirations.

ALIGNMENT WITH CENTRAL GOVERNMENT LEGISLATION

There is no specific national policy statement or central government direction that is directly applicable to this work.

ALIGNMENT WITH ORC INTERNAL POLICY

This work is consistent with relevant ORC policies, in particular the Regional Public Transport Plan.

FINANCIAL CONSIDERATIONS

This work is funded out of existing capital expenditure budgets for public transport infrastructure.

LEGAL/COMPLIANCE RISK

There is insignificant/minor risk that decisions arising from this report could expose Council to litigation, regulatory non-compliance, or breach of policy/legislation.

REPUTATIONAL RISK

There is insignificant/minor risk that decisions arising from this report could adversely impact Council's reputation or community trust.

CLIMATE RESILIENCE

The impacts of climate-related risks (e.g. flooding, drought, extreme winds, coastal erosion, wildfires) on this work has not been assessed.

CARBON EMISSIONS

The implications of this work on organisational or regional greenhouse gas emissions have not been assessed.

HE MAHI RAU RIKA: SIGNIFICANCE, ENGAGEMENT AND MĀORI PARTICIPATION POLICY

Not Applicable

ENGAGEMENT WITH MANA WHENUA

There has been no engagement with mana whenua or Māori specifically for this work.

STAKEHOLDER ENGAGEMENT

No specific engagement is planned however operations staff regularly catch up with stakeholders and issues such as bus stop upgrades are discussed.

COMMUNICATIONS

This report does not have direct communications considerations. However, staff will continue to undertake targeted communications where required.

NEXT STEPS

[27] Staff will continue progressing this work in a phased approach in 2026/27.

ATTACHMENTS

Nil

9.7. Customer Satisfaction Survey Dunedin and Queenstown

Prepared for:	Council
Report No.	TRN2612
Activity:	Public Transport
Author:	Gemma Wilson (Analyst Transport), Julian Phillips (Implementation Lead - Transport)
Endorsed by:	Anita Dawe (General Manager Regional Planning and Transport)
Date:	29 July 2026
Portfolio Leads:	Cr Hollyer and Cr Somerville, Transport

PURPOSE

[1] To update Council on the 2026 Public Transport Annual Customer Satisfaction Survey results for the Dunedin and Whakatipu bus networks.

EXECUTIVE SUMMARY

[2] Dunedin satisfaction with the public transport system overall for 2026 is 89% - a decrease from 90% in 2025.

[3] Whakatipu satisfaction with the public transport system overall for 2026 is 91% - a decrease from 92% in 2025.

[4] Dunedin 3-year rolling average for satisfaction with the public transport system overall is 89% - which means the LTP target of (≥90%) has not been met.

[5] Whakatipu 3-year rolling average for satisfaction with the public transport system overall is 91% - which means the LTP target of (≥90%) exceeded has been met.

RECOMMENDATION

That the Council:

*1) **Notes** this summary of results for Public Transport Annual Customer Satisfaction 2026.*

BACKGROUND

[6] The Annual Customer Satisfaction Survey is mandated by NZTA and uses a nationally standardised set of questions to ensure consistency across regions. It is also an LTP level of service measure.

[7] Surveys are conducted by temporary staff, using a random sample of bus trips selected across three consecutive days, including a weekend day, with surveying undertaken from early morning through to late evening. Surveys are conducted in person, by two staff in Whakatipu and three staff in Dunedin, on the bus, using iPads. Children under 15 years of age are excluded from the survey sample.

[8] The Dunedin surveys were conducted 7-9 May 2026, and the Whakatipu surveys were conducted 23-25 April 2026.

[9] The primary performance measure is “Satisfaction with the public transport system overall”. This measure is a key performance indicator within Council’s Long-Term Plan 2025/26, forming part of the Level of Service framework for public transport. The associated performance target is “Maintain or increase the three-year rolling average ≥ 90%”. This target is applied separately to the Dunedin and Whakatipu networks.

DISCUSSION - DUNEDIN

[10] Figure 1 shows a summary of the results, with comparisons to the previous 2 years.

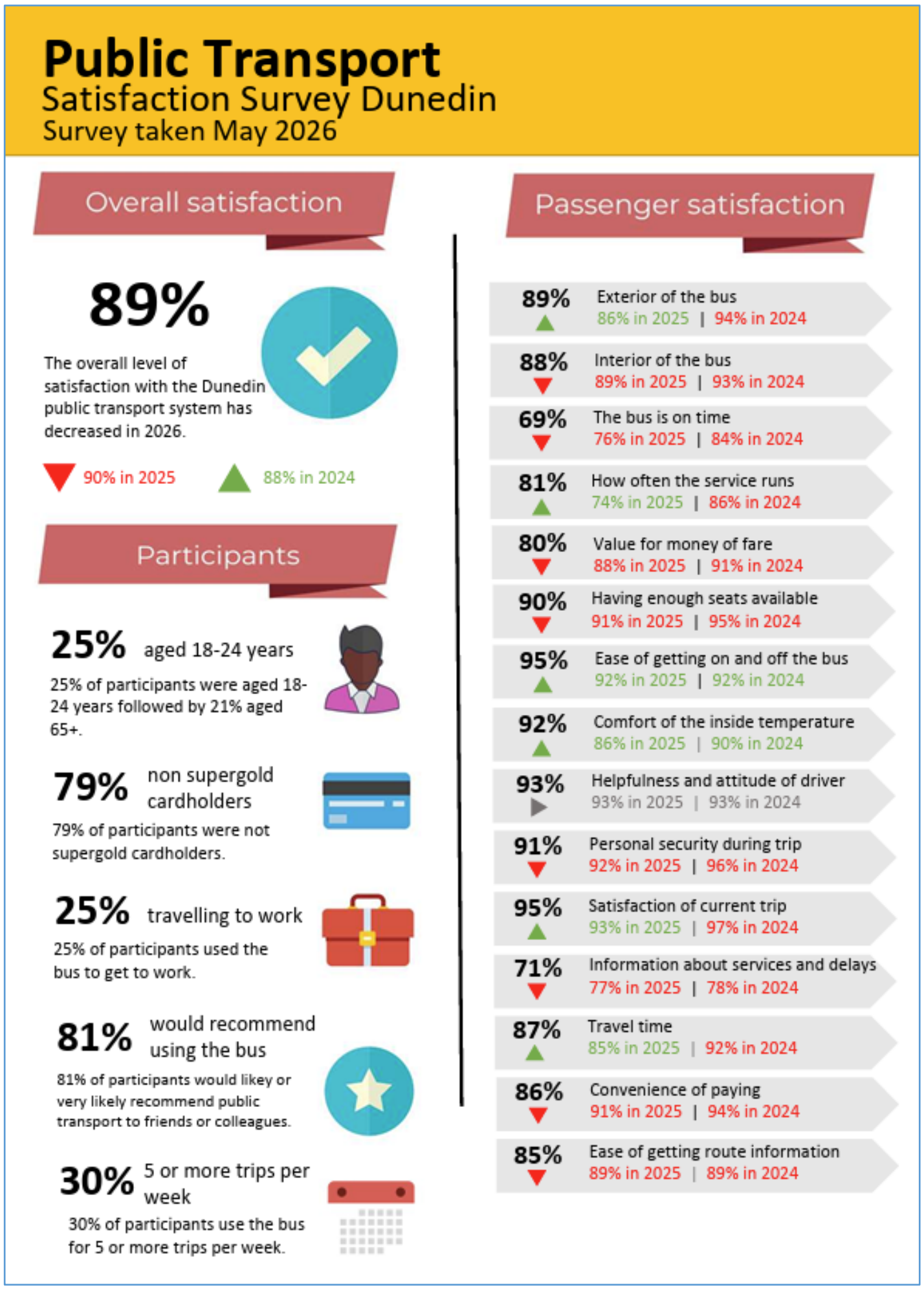


Figure 1: Dunedin Customer Satisfaction Results

[11] Dunedin overall level of satisfaction is 89% for 2026. This is down from 90% in 2025, but an increase from 88% in 2024.

[12] Overall satisfaction remains high in Dunedin, with only minor year-on-year variation.

[13] The three-year rolling average is 89% which is slightly below the LTP target of ≥ 90%. While performance is consistent, it is marginally under the threshold.

[14] Highest satisfaction areas (90% and above) in 2026 are shown below. These indicate strong performance in onboard experience and safety:

- 95% Ease of getting on/off
- 95% Current trip satisfaction
- 93% Driver helpfulness
- 92% Comfort/temperature
- 91% Personal security
- 90% Seat availability

[15] Importantly, almost all other measures scored above 80%, showing a consistently strong performance across the network.

[16] Key exceptions for areas below 80% were:

- 69% On-Time performance
- 71% Information about services and delays

[17] In addition to ongoing traffic congestion and roadworks, the lower satisfaction score for on-time performance may have been influenced by the network and timetable changes introduced in mid-2025. These changes expanded coverage through South Dunedin and have been well-received by customers. However, longer route alignments have in some cases resulted in journey times that were greater than originally anticipated.

[18] The introduction of redesigned timetables later this year is expected to improve on-time performance by better aligning scheduled journey times with actual operating conditions.

[19] Improvements are also planned for the customer alerts system, which will enable real-time service information and disruption alerts to be published simultaneously across electronic street displays and other passenger information channels – this is currently a manual process.

[20] A diverse age profile is seen with 18–24-year-olds the largest group surveyed, followed by the 65+ age group. 25% of respondents were commuters, 25% were shopping, with the balance split between university/study, visiting family/friends and other.

DISCUSSION – WHAKATIPU

[21] Figure 2 shows a summary of the results, with comparisons to the previous 2 years.

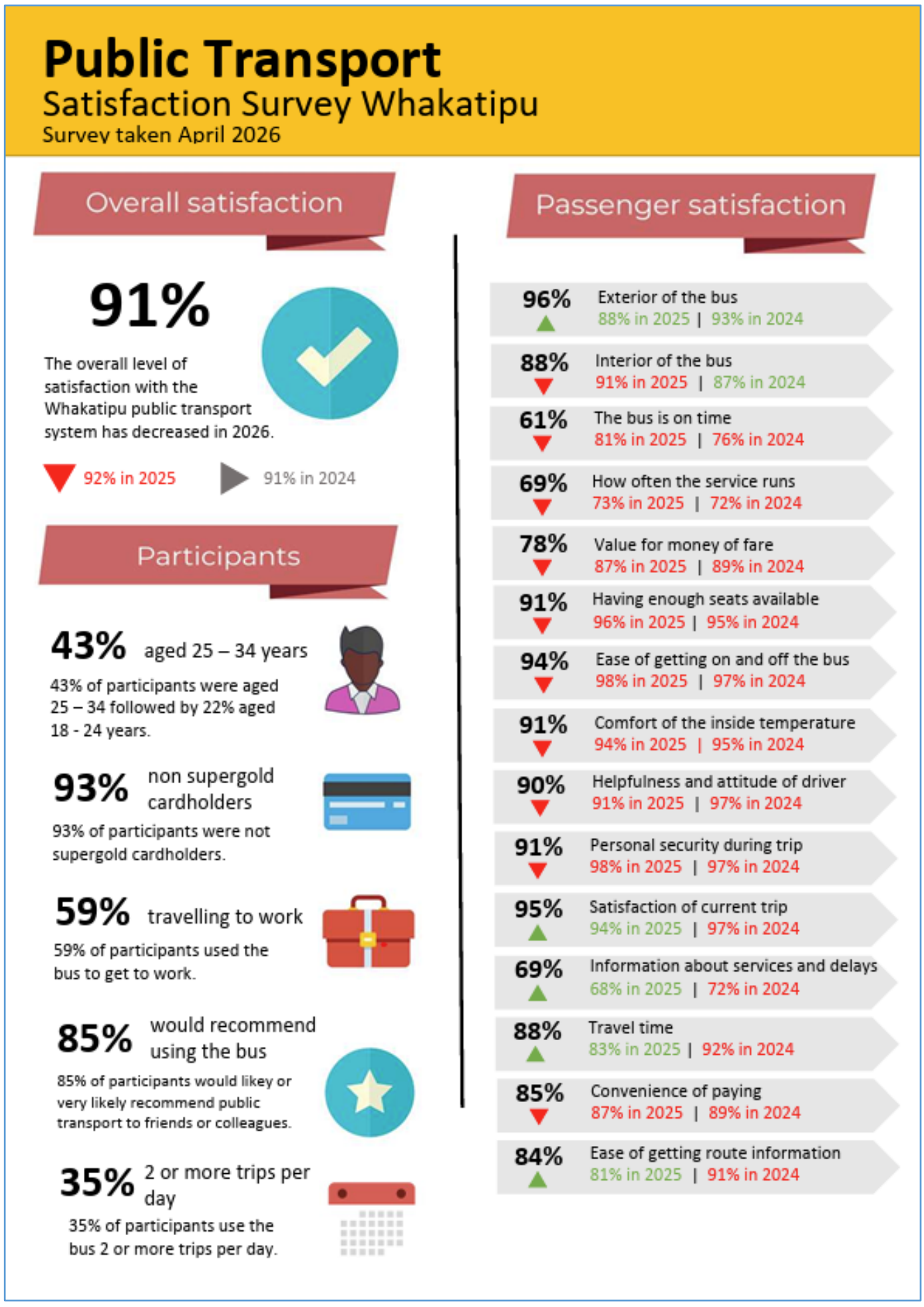


Figure 2: Whakatipu Customer Satisfaction Results

[22] The Whakatipu overall level of satisfaction is 91% for 2026, which is down from 92% in 2025 and equal to 91% in 2024.

[23] Overall satisfaction remains strong, maintaining consistently high levels over the past three years.

[24] The three-year rolling average is 91%. This meets the LTP target of ≥ 90% and performance is stable across the three-year period.

[25] Highest satisfaction areas (90% and above) in 2026 are shown below. These indicate strong performance in the onboard experience, particularly in comfort, safety, accessibility and driver interactions:

- 96% Exterior of the bus
- 95% Current trip satisfaction
- 94% Ease of getting on/off bus
- 91% Having enough seats available
- 91% Comfort of the inside temperature
- 91% Personal security during the trip
- 90% Helpfulness and attitude of the driver

[26] Almost all other measures were above 80%, showing a consistently strong performance across the network. Key exceptions for areas below 80% were:

- 61% On-time performance
- 69% Information about services and delays
- 69% How often the service runs
- 78% Value for money

[27] The low score for on-time performance (61%) is likely influenced by significant traffic congestion across the Whakatipu network, along with disruption from major infrastructure projects, including the NZTA Alliance works in Frankton and construction of the Frankton Bus Hub and nearby roundabout. While these projects will provide significant long-term benefits for public transport, the associated delays and traffic management measures have made it more challenging for services to maintain scheduled running times.

[28] Satisfaction with information about services and delays (69%) is expected to improve through planned enhancements to the public transport alerts system, enabling service updates and disruption notifications to be communicated simultaneously across electronic passenger information displays and other customer information channels.

[29] It was notable that 59% of surveyed passengers were using the bus to travel to work, countering the perception that bus services are used predominantly by tourists. Whakatipu showed a younger customer base for respondents with those aged 25-34 years making up 43% of those surveyed, followed by 18-24 year olds at 22%.

OPTIONS

[30] Because this report is for noting, no options have been considered.

SUMMARY OF CONSIDERATIONS

COMMUNITY OUTCOMES
This work aligns with the following community outcomes from the ORC 2024-2034 Long-Term Plan:

Transport

Otago has an integrated transport system that contributes to the accessibility and connectivity of our community, reduces congestion and supports community wellbeing aspirations.

ALIGNMENT WITH CENTRAL GOVERNMENT LEGISLATION
This work is consistent with relevant central government policy and direction. Specifically, it aligns with the Land Transport Management Act 2003 and reporting requirements from New Zealand Transport Agency (NZTA).

ALIGNMENT WITH ORC INTERNAL POLICY
This work is consistent with relevant ORC policies, in particular the 2025-2035 Regional Public Transport Plan (RPTP). The annual survey delivers on all five focus areas for the RPTP, which are *Passenger experience, Build trust, Environmental sustainability, a connected and integrated network, and Value for money.*

FINANCIAL CONSIDERATIONS
The budget for this work was approved through the 2024-2034 Long-Term Plan and comes from the Transport activity budget.

LEGAL/COMPLIANCE RISK
There is insignificant/minor risk that decisions arising from this report could expose Council to litigation, regulatory non-compliance, or breach of policy/legislation.

REPUTATIONAL RISK
The annual survey is an important process to understand public sentiment around the existing network. It highlights challenges and opportunities and enables Council to consider the survey results and direct any actions to mitigate reputational risks and community trust.

CLIMATE RESILIENCE
The impacts of climate-related risks (e.g. flooding, drought, extreme winds, coastal erosion, wildfires) on this work has not been assessed.

CARBON EMISSIONS
Having a reliable and efficient public transport network supports mode shift, and increased patronage, which in turn contributes to ORC's carbon emissions reduction goals.

HE MAHI RAU RIKA: SIGNIFICANCE, ENGAGEMENT AND MĀORI PARTICIPATION POLICY
This work is of low significance as assessed against He Mahi Rau Rika.

ENGAGEMENT WITH MANA WHENUA
There has been no engagement with mana whenua or Māori specifically for this work.

STAKEHOLDER ENGAGEMENT

The survey is undertaken with members of the public who use our public transport services. As such it provides valuable information to inform decisions around public transport.

COMMUNICATIONS

The results of the satisfaction survey will be communicated as part of reporting. The survey provides an opportunity to publicly thank our commuting public for using the services.

NEXT STEPS

[31] The 2026/27 survey will take place in April/May 2027.

ATTACHMENTS

Nil

9.9. Cruise Ship Season 2025/26

Prepared for:	Council
Report No.	TRN2615
Activity:	Transport: Public Passenger Transport
Authors:	Sumit Saini (Implementation Advisor - Transport), Julian Phillips (Implementation Lead - Transport)
Endorsed by:	Anita Dawe, General Manager, Regional Planning and Transport
Date:	29 July 2026
Portfolio Leads:	Cr Hollyer and Cr Somerville, Transport

PURPOSE

[1] To present information on the performance of 2025/26 cruise ship public transport services, and information on the upcoming 2026/27 cruise ship season.

EXECUTIVE SUMMARY

[2] The cruise ship season lasts seven months, from October 2025 to April 2026.

[3] The Port Chalmers community has seen significant disruption to its bus services in recent years due to the influx of cruise ship passengers using up capacity on public Orbus services.

[4] Since 2023, ORC staff have collaborated with DCC, Port Otago, and stakeholders to deliver a Cruise Ship Action Plan to better manage bus services on the Port Chalmers route over the Cruise Ship season. Key actions include proactively scheduling additional services and providing mechanisms to sell tickets off-bus to reduce delays to loading buses.

[5] Following the success of the 2024/25 cruise ship season, the operational approach was refined and implemented during the 2025/26 cruise ship season. The result has again been positive, with favourable community feedback and minimal complaints across the season. The successful delivery of the programme has informed planning for the upcoming 2026/27 cruise ship season.

[6] Cruise ship passengers have generated an estimated 3,800 trips for additional fare revenue of $11,400.

[7] Port Otago have agreed to underwrite the cost of running this programme.

RECOMMENDATION

That the Council:

1) ***Notes*** *this report summarising the public transport response to the 2025/26 cruise ship season.*

BACKGROUND

[8] Dunedin is a key destination for cruise ship operators, with each season operating for seven months, from October to April. Most larger cruise vessels dock at Port Chalmers.

[9] On the busiest days, over 5,000 cruise ship passengers disembark at Port Chalmers, with transport options to the city primarily commercial shuttle operations or public transport.

[10] The significantly higher cost of commercial shuttle services compared with the fixed $3 one-way Orbus cash fare, together with increasing awareness of the Orbus service, has contributed to exceptionally high demand for the Port Chalmers service when ships are in port.

[11] The Port Chalmers – City service operates every 30 minutes on weekdays and 60 minutes on weekends, with a bus capacity of around 55 passengers.

[12] When cruise ships restarted post COVID in Dunedin in 2022, public transport services quickly reached capacity on cruise ship days. Passengers waiting to board buses from and to Port Chalmers resulted in substantial queues, leading to bus departure delays. Residents were unable to board at peak times, generating a high level of complaints.

[13] Midway through the 2022/23 cruise ship season, Council provided a limited number of 'overflow' buses to support demand. While well-received, these services were insufficient to cater to demand.

[14] At the end of the 2022/23 cruise ship season, ORC began planning with key stakeholders for a robust solution to service the 2023/24 cruise ship season and beyond.

[15] To support the cruise ship passengers using the public transport network, a new fare was created, costing $6 for a return trip. Tickets were sold from the Port Chalmers Library, which reduced footpath congestion and the need for on-bus ticket sales. A dedicated electronic retail device was used to issue return paper tickets to cruise ship passengers.

[16] The planning approach outlined has been used for the past three cruise ship seasons. This report provides a summary of the recently completed 2025/26 cruise ship season and outlines the proposed actions and planning for the 2026/27 cruise ship season.

DISCUSSION

[17] Across the 2025/26 cruise ship season, improvements to the cruise ship services were made, including:

- Daily operational briefings with ORC and Ritchies staff.
- ORC staff on site at Port Chalmers at the beginning of the season, and when required thereafter. This resulted in continuous operational improvements early in the season.
- Weekly update meetings held between ORC and Port Otago.
- Weekly briefings held between the Transport, Customer Experience, and Communications teams at ORC.

[18] During the 2025/26 cruise ship season, there were 56 cruise ship days and 69 cruise ship visits to Dunedin. Of those, 38 were higher-capacity vessels of 2,000+ passengers, where ORC ran extra trips to facilitate the demand.

[19] 233 additional bus trips on the Route 14 (Port Chalmers/City) route were added. Services were added during peak periods, specifically in the morning and afternoon, based on cruise ship arrival times and passenger loadings.

[20] The return cash ticket was implemented all season, and bus drivers were instructed to fill Port Chalmers and return buses to seated capacity only. This left around 25% of bus capacity available to passengers who wished to board further along the route. This approach will continue during the 2026/27 cruise ship season.

[21] Due to fleet availability, some additional cruise ship services may be operated using standard 50-seat buses where Orbus-compliant vehicles are unavailable. This applies only to supplementary cruise ship services and ensures additional capacity can continue to be provided during periods of high demand.

[22] During the 2025/26 cruise ship season, the portable ticket machine recorded approximately 3,800 passenger trips, with return tickets counted as two trips each.

[23] Cruise ship passengers were advised to disembark at New World in the central city to reduce Bus Hub congestion, embarking at the same location for the return trip to Port Chalmers.

[24] 'Tear-off' information pads were distributed at the retail point to provide detailed service information, including disembarking locations, to cruise ship passengers.

[25] A dedicated Orbus cruise ship webpage was also created, containing schedules, maps, ticketing information, timetables, and media releases, with further media releases and social media updates posted throughout the season.

[26] Analysis of Bee Card data indicated no reduction in resident patronage during cruise ship operations, based on information that most cruise ship passengers pay in cash, and most locals pay with Bee Cards.

[27] Demand from cruise ship passengers was lower than originally anticipated because:

- Cruise operator awareness of Council support from the previous season, leading to more attractively priced commercial shuttle services.
- Some ships offered free shuttle services to their passengers.

[28] The overall response to the transport plan remained very positive throughout the season, with only minor complaints received due to capacity issues in the afternoon trips.

[29] Positive feedback was received from Bus Drivers, Port Otago, Port Chalmers Library, and stakeholders, and internally from the Customer Experience team.

[30] In comparison to the 2024/25 cruise ship season, the number of points of customer feedback has dropped.

[31] Summary of feedback received by ORC (excluding social media posts):

- General enquiries: There were five questions about times, fares, and logistics.
- Complaints: Seven complaints relating to full buses, overcrowding, service timeliness and on-board behaviour.

[32] Figure 1 displays the ORC cruise ship webpage:

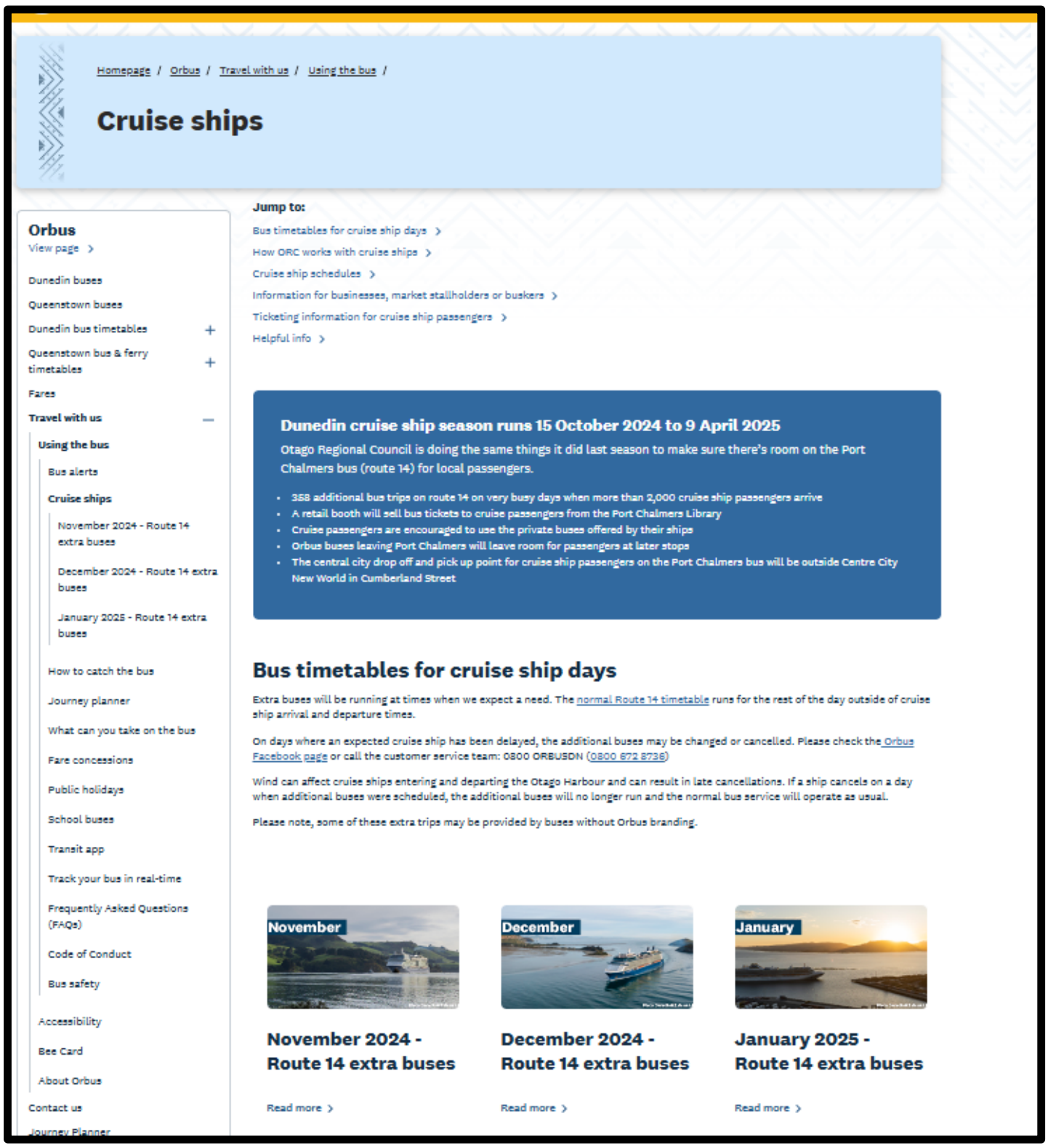


Figure 1 – Screen shot of ORC Cruise ship web page

[33] Figure 2 provides the city pickup and fare information for cruise ship passengers:

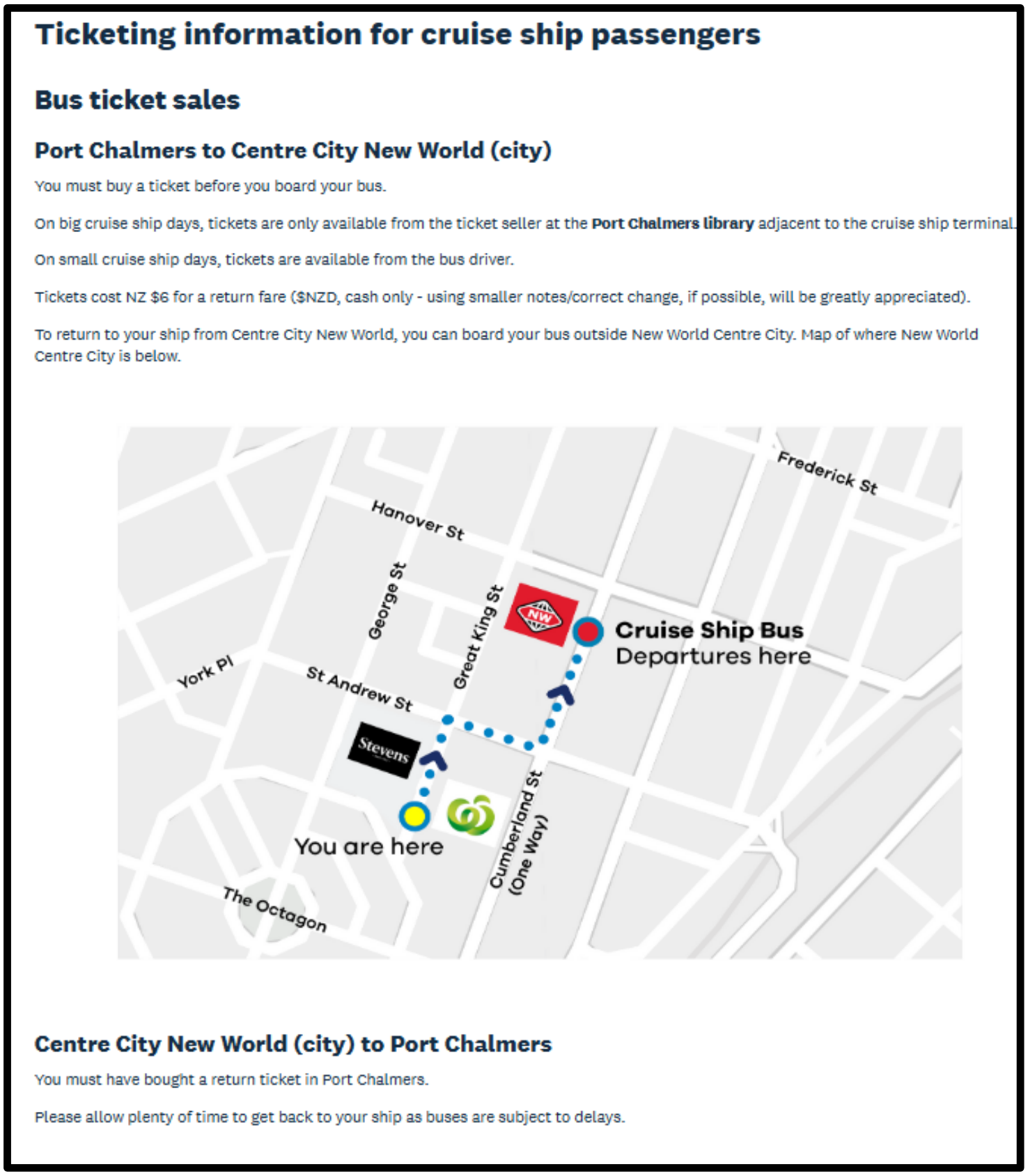


Figure 2 – City pick up and fare information provided to passenger

[34] Overall, the 2025/26 cruise ship public transport programme successfully reduced impacts on scheduled public transport services while maintaining access for local passengers. The collaborative approach between ORC, Port Otago, Ritchies and other stakeholders has provided a strong operational model that will continue to be refined for the 2026/27 cruise ship season.

[35] The 2026/27 cruise ship season will see an increase in cruise ship visits to Dunedin, with 71 cruise ship days and 85 vessel visits scheduled. Of those, 43 are higher-capacity vessels of 2,000+ passengers. Also, according to Port Otago stats, Port Chalmers will be the busiest port in NZ for the 2026/27 cruising season.

[36] For the 2026/27 cruise ship season, staff plan to provide additional services for 28 of the 43 higher-capacity vessels, as several cruise operators provide complimentary or discounted shuttle services for their passengers. 159 additional bus trips on the Route 14 (Port Chalmers/City) route will be provided. Extra trips will be added to peak periods, morning and afternoon, based on cruise ship arrival times and passenger loadings.

[37] Compared with the 2025/26 cruise ship season, the 2026/27 cruise ship season will have more cruise ship visits while requiring fewer additional bus services, reflecting changes in cruise operator shuttle arrangements and more targeted deployment of additional services for the big cruise ships, as shown in Figure 4 below. This reflects the optimisation staff have been able to undertake, reflecting on each season and adjusting accordingly.

Category	2025/26 Season	2026/27 Season	Change
Total Cruise Ships	69	85	↑ 16 ships
Extra Trips on Route 14	255	159	↓ 96 trips

Figure 4 – Cruise Ship and Trip Information for Seasons 2025/26 and 2026/27

CONSIDERATIONS

SUMMARY OF CONSIDERATIONS

COMMUNITY OUTCOMES
This work supports the ORC 2024–2034 Long-term Plan by providing a safe, reliable and accessible public transport network. The cruise ship programme helps maintain access to public transport for residents while accommodating increased seasonal demand from visitors. It also supports positive visitor experiences and contributes to efficient transport operations across the region.

ALIGNMENT WITH CENTRAL GOVERNMENT LEGISLATION
None.

ALIGNMENT WITH ORC INTERNAL POLICY
The provision of public transport services in Otago is consistent with the vision to provide safe, sustainable, and inclusive transport.

FINANCIAL CONSIDERATIONS
Figure 3 summarises the operational costs, fare revenue and Port Otago contribution, resulting in no net cost to ORC.

Port Otago covered the shortfall as part of cruise operations. NZTA did not co-fund the programme.

Updated Cost Table

Cost Item	Amount (NZD)
Additional bus services (Ritchies)	$47,946
Ticket seller (Ritchies)	$6,548
Total Operational Cost	**$54,494**
Revenue from cruise ship ticket sales	$11,400
Net Cost (Operational - Revenue)	**$43,094**
Port Otago contribution	$43,094
Cost to ORC	**$0**

Figure 3 – Operational costs and revenue

LEGAL/COMPLIANCE RISK

There is a low compliance risk associated with the use of non-Orbus compliant vehicles on a limited number of additional cruise ship services where compliant vehicles are unavailable. This approach ensures additional capacity can still be provided during peak cruise ship demand while maintaining contracted services for regular passengers

REPUTATIONAL RISK

Provided we can continue to provide capacity for local residents, there is a low reputational risk associated with this programme. The successful delivery of the 2025/26 cruise ship season, together with positive feedback from stakeholders and a reduction in customer complaints, demonstrates that the operational approach has been effective. Continuing the programme will help maintain community confidence in ORC's ability to manage seasonal demand while balancing the needs of residents and visitors.

CLIMATE RESILIENCE

None.

CARBON EMISSIONS

The additional bus services increase vehicle kilometres travelled during the cruise ship season. However, by encouraging passengers to use high-capacity public transport rather than multiple private vehicles or taxis, the programme supports more efficient transport movements and may reduce overall transport-related emissions.

HE MAHI RAU RIKA: SIGNIFICANCE, ENGAGEMENT AND MĀORI PARTICIPATION POLICY

The matters addressed in this report are operational in nature and are of low significance under ORC's He Mahi Rau Rika: Significance, Engagement and Māori Participation Policy. No additional consultation is required.

ENGAGEMENT WITH MANA WHENUA

None.

STAKEHOLDER ENGAGEMENT

The cruise ship programme has been developed and delivered through ongoing collaboration with Port Otago, Dunedin City Council, NZ Transport Agency Waka Kotahi, Ritchies, Port Chalmers Library and other operational stakeholders. Regular meetings throughout the season supported continuous improvements to service delivery.

COMMUNICATIONS

Dedicated communications targeting the West Harbour community are part of the cruise ship season communications. This will continue to be the case going forward.

NEXT STEPS

[38] Staff are using the lessons learned from the 2025/26 season to inform planning for the 2026/27 cruise ship season, but plan to use the same public transport model to accommodate demand during the 2026/27 cruise ship season.

[39] For the 2026/27 cruise ship season, Go Bus will operate the additional cruise ship services following the award of the Unit 1 and 2 public transport contracts. ORC staff will ensure the same service model is implemented, with the expected outcomes consistent with those successfully delivered by Ritchies Transport Holdings during previous cruise ship seasons.

ATTACHMENTS

Nil

9.9. LTP Development - Non-Financial Forecasting Assumptions

Prepared for:	Council
Report No.	FIN2612
Activity:	Organisational Planning and Performance
Authors:	Jasmin Lamorie (Senior Corporate Planner), Hilary Lennox (Manager Strategy)
Endorsed by:	Amanda Vercoe (General Manager Strategy and Customer)
Date:	29 July 2026
Portfolio Leads:	Cr Malcolm and Cr Gardner, Finance

PURPOSE

[1] This report seeks Council endorsement of the draft non-financial significant forecasting assumptions which underpin development of the Long-Term Plan 2027-37 (LTP).

EXECUTIVE SUMMARY

[2] Development of a Long-Term Plan for 2027-37 and the elements it contains are specified in the Local Government Act 2002 (the Act). The Act specifies that a Long-Term Plan must clearly identify all the significant forecasting assumptions and risks underlying the financial estimates, the degree of uncertainty, and the potential impact of uncertainty.

[3] Understanding the external factors, trends and key issues facing Otago and the organisation helps staff to make clear assumptions and outline the likely impact on our financial estimates if the assumptions are incorrect.

[4] Staff have drawn on multiple sources including subject matter experts, sector advice, and professional information to draft the attached non-financial significant forecasting assumptions for ORC's Long-Term Plan 2027-37.

[5] Financial forecasting assumptions – which are also required - will be brought to council for endorsement along with draft LTP budgets in December

RECOMMENDATION

That the Council:

1) ***Approves*** *the draft non-financial Significant Forecasting Assumptions for the Long-Term Plan 2027-37 as described in this report and attached.*
2) ***Notes*** *that assumptions are based on available data, therefore some factors will be established later in the year when further data is available; final assumptions will be presented to Council for approval along with the draft Long-Term Plan budgets.*

BACKGROUND

[6] The LTP is a key planning document, outlining the long-term vision for the Otago region and setting out the activities and services we intend to deliver and how these will be funded. It is a statutory process defined in the Local Government Act 2002 (LGA) and substantive guidance material developed from local government sector experience is available.

[7] Although significant changes to the sector are currently proposed through the Local Government (Systems Improvement) Bill and the Simplifying Local Government policy, Councils are currently still required to produce an LTP for 2027-37. Until legislative change is confirmed, ORC has important work to do for the region across caring for our rivers, freshwater and land, managing our air, protecting against floods, emergencies and pests and weeds, and keeping people connected through public transport. Maintaining financial discipline and affordability are critical and our communities will continue to expect strong delivery of core services. Long-term planning and resilience still matter regardless of wider structural change, which is why the LTP process remains relevant and important.

[8] A workshop was held in May which included contextual information including an environment scan and asked for Councillor insights on key external issues facing Otago. The session reviewed political, economic, social, technological, legal and environmental macro-factors. This step emphasised that the LTP takes place against, and is shaped by, the wider factors. As the operating environment is uncertain, analysis of risks, challenges and opportunities supports informed decision-making and the development of an externally focused, effective and integrated LTP.

DISCUSSION

Significant forecasting assumptions

[9] The Local Government Act 2002 (LGA) outlines requirements relating to assumptions in development of an LTP. Assumptions underpin multiple aspects of LTP development including the financial strategy, the infrastructure strategy, the consultation document and the audit of the LTP.

[10] Schedule 10 (point 17) specifies that a long-term plan must clearly identify all the significant forecasting assumptions and risks underlying the financial estimates. It must also indicate where there is a high-level of uncertainty and outline the potential effects of that uncertainty on the financial estimates.

[11] The financial strategy must include a statement of the factors that are expected to have a significant impact on Council over the 10-year LTP timeframe, including:

- expected changes in population and the use of land in the region
- costs of providing for those changes
- expected capital expenditure on network infrastructure, flood protection, and flood control works to maintain existing levels of service
- other significant factors affecting Council's ability to maintain existing levels of service and to meet additional demands for services

[12] Similarly, the infrastructure strategy must include assumptions related to:

- life cycle of significant infrastructure assets
- growth or decline in the demand for relevant services
- increases or decreases in relevant levels of service

[13] ORC's significant forecasting assumptions are designated as either financial or non-financial.

[14] Proposed non-financial forecasting assumptions are provided in Attachment 1. The process for developing these was as follows:

a. Identify factors that could have a significant impact on our financial estimates.
b. Form assumptions about how these factors may or may not change over the next 10 years based on forecasting and evidence from multiple sources including a wide range of reports, sector advice, and financial modelling (which was provided by Infometrics using their regional forecasting model that makes projections based on employment, GDP, and national industry trends).
c. Assess the degree of uncertainty about these assumptions.
d. Describe the anticipated impact on financial estimates if the assumptions are incorrect.
e. Test these with subject matter experts and the Executive Leadership Team.
f. Review and finalise the draft non-financial forecasting assumptions for consideration by Councillors.

[15] The factors identified are similar to those identified in the 2024-2034, but the assumptions made for some of these (e.g. 'the role of local government') are understandably quite different now. Assumptions made for others (e.g. 'climate change') remain relatively consistent.

[16] The non-financial forecasting assumptions will be used to form a consistent base for ORC's LTP work planning and budgeting. It is, however, recognised that these assumptions may need to evolve as things change in our operating environment over the next 6 months. Any significant changes required will need to be discussed with managers and Council.

[17] Development of financial assumptions are based on advice from organisations such as Business Economic Research Limited (BERL) and Infometrics who provide advice for the sector on factors such as the consumers price index (CPI) and inflation. This advice is not yet available for the period covered by the LTP 2027-37; therefore staff are not proposing draft financial assumptions at this stage in the LTP process. Financial assumptions will be brought to council for endorsement along with draft LTP budgets in December

OPTIONS

[18] No alternative options are presented.

[19] Council has the option of directing staff differently or deferring decision-making.

SUMMARY OF CONSIDERATIONS

COMMUNITY OUTCOMES
This work aligns with the following community outcomes from the ORC 2024-2034 Long-Term Plan:

Whole of Organisation

This work supports the whole organisation and, therefore, all Community Outcomes.

ALIGNMENT WITH CENTRAL GOVERNMENT LEGISLATION
This work is consistent with relevant central government policy and direction. Specifically, it aligns with Local Government Act 2002; Schedule 10, point 17 outlines the LTP requirements related to significant forecasting assumptions.

ALIGNMENT WITH ORC INTERNAL POLICY
There is no specific ORC policy that is directly applicable to this work.

FINANCIAL CONSIDERATIONS
The budget for the development of the 2027-2037 Long-Term Plan was approved through the 2024-2034 Long-Term Plan 2026-2027 Annual Plan.

LEGAL/COMPLIANCE RISK
Local Government Act 2002 specifies that a long-Term plan must clearly identify all the significant assumptions and risks underlying the financial estimates, the degree of uncertainty, and the potential impact of uncertainty. The matters set out in this paper help to satisfy this requirement.

REPUTATIONAL RISK
Provided that the assumptions made are reasonable and evidence-based then there is insignificant/minor risk that decisions arising from this report could adversely impact Council's reputation or community trust.

CLIMATE RESILIENCE
The impacts of climate-related risks (e.g. flooding, drought, extreme winds, coastal erosion, wildfires) on this work has not been assessed.

CARBON EMISSIONS
The implications of this work on organisational or regional greenhouse gas emissions have not been assessed.

HE MAHI RAU RIKA: SIGNIFICANCE, ENGAGEMENT AND MĀORI PARTICIPATION POLICY
No external engagement is planned specifically on the assumptions discussed in this paper, rather this will occur along with broader LTP engagement.

ENGAGEMENT WITH MANA WHENUA
There has been no engagement with mana whenua or Māori specifically for this work.

STAKEHOLDER ENGAGEMENT
There has been no engagement with external stakeholders and/or the public specifically for this work.

COMMUNICATIONS

The assumptions will be communicated internally with all teams to inform the LTP development process. No external communication is planned specifically on the assumptions discussed in this paper, rather this will occur along with broader LTP communications.

NEXT STEPS

[20] The draft non-financial significant forecasting assumptions will be shared with staff to inform their LTP work planning and budgeting processes.

[21] Drafting of financial significant forecasting assumptions will be undertaken once sector guidance and data is available.

[22] The full list of significant forecasting assumptions (both financial and non-financial) will be presented to Council for approval along with the draft LTP budgets in December.

ATTACHMENTS

1. Non financial Forecasting Assumptions 2027 2037 (3) [**9.9.1** - 9 pages]

Non-financial Forecasting Assumptions 2027-2037

<table>
<tr><th>Assumption</th><th>Level of uncertainty</th><th>Impact on financial estimates if assumption is incorrect</th></tr>
<tr><td colspan="3">Environment</td></tr>
<tr><td>Climate change
Climate projections for the region include warmer temperatures, longer dry periods, more intense rainfall events, reduced snow cover, and sea level rise[1, 2].

Key projected changes[3, 4]
<table><tr><th>Metric</th><th>Projected change by 2060</th></tr><tr><td>Annual avg. temperature</td><td>↑ 0.7 – 1.6°C</td></tr><tr><td>Annual rainfall</td><td>↕ -3.5% – 6.4%</td></tr><tr><td>Extreme hot days</td><td>↑ 0.0 – 24.9</td></tr><tr><td>Frost days</td><td>↓ 1.2 – 47.3</td></tr><tr><td>Sea-level rise (NZ avg.)</td><td>↑ 0.2m – 0.3m</td></tr></table>
Among other impacts, these changes can exacerbate existing natural hazards, place pressure on biodiversity, shift growing seasons, impact water availability, and influence the regional economy.

We assume such impacts will place additional importance on council work programmes including but not limited to biosecurity, river management, natural hazards, environmental monitoring, and emergency management. We assume these impacts will put increased pressure on council infrastructure and challenge the levels of service it can provide. We assume these impacts will also require council to be adaptable to future changes, which may require reprioritisation of work programmes and resources.</td><td>Medium</td><td>Impacts on our financial estimates will be most significant if climate change impacts over the next 10 years are greater than (instead of less than) we have assumed.

Should the impacts of climate change in Otago be more severe in the next decade than anticipated, this could result in the need for new or expanded work programmes and resourcing, as well as additional emergency response work and expenses for council.

A rapid increase in the severity of climate change impacts in the next decade could also lead to greater demands from the public to prioritise climate action.</td></tr>
<tr><td>Land use change and ecosystem health
Otago’s landscapes, ecosystems, and natural resources support the region’s economy and the health of the people and other species who call Otago home. This natural infrastructure is facing increasing pressures from changes in land use, pollution, climate change, and invasive species. Such pressures impact the ability of our environment to support Otago communities, biodiversity, and businesses.</td><td>Low</td><td>Land use change could occur in unexpected ways or in unexpected areas over the next 10 years. Regional trends could differ from national-scale trends.

Should additional and unexpected land use change occur, this could result in the need for new or expanded infrastructure, work programmes, and resourcing.</td></tr>
</table>

<table>
<tr>
<td>Land use in Otago (2025)[5]
<table><tr><th>Category</th><th>Regional extent</th></tr><tr><td>Livestock farming</td><td>62%</td></tr><tr><td>Conservation land and native canopy cover</td><td>22%</td></tr><tr><td>Dairying</td><td>6%</td></tr><tr><td>Plantation forestry</td><td>4%</td></tr><tr><td>Residential, commercial, and infrastructure</td><td>3%</td></tr><tr><td>Freshwater</td><td>3%</td></tr><tr><td>Arable</td><td>0.3%</td></tr><tr><td>Horticulture</td><td>0.3%</td></tr><tr><td>Pig and poultry</td><td><0.1%</td></tr></table>
We assume that some national-level trends in land use change will also occur in Otago. These include[6]:
• An increase in the land area used for plantation forestry.
• Increased requirement for flood protection services (natural and engineered) resulting from development and climate change.
• Increased pressure on biodiversity and ecosystems from climate change, land use change, and pest species.
• A decrease in the availability of highly productive land due to urban expansion.
• Increased risk of impacts to surface water, groundwater, air quality, and the coastal environment resulting from land use intensification.
• Increased economic risks for land-based industries as degradation of the environment impacts the natural services they rely on.

We assume that this will be spatially variable, with some areas seeing more change and others less. Council’s work programmes - including planning, consenting, and compliance - will need to expand and adapt in response.</td>
<td></td>
<td>Land use change could result in increased pressure on flood and drainage schemes if it results in alterations to hydrological regimes in catchments.

This can all have a significant impact on our financial estimates.</td>
</tr>
<tr>
<td>Natural hazards
Otago is exposed to a range of natural hazards including flooding, seismic hazards, slope stability hazards, and coastal hazards. The level of risk posed by each of these hazard groups varies by and within districts. River and lake flooding and liquefaction pose risks to the greatest number of people, with 30,000+ people and 10,000+ dwellings exposed to each of these hazard types[7].</td>
<td>Medium</td>
<td>Impacts on our financial estimates will be most significant if natural hazard impacts over the next 10 years are greater than (instead of less than) we have assumed.

Should the impacts be greater, this could result in additional emergency response work and expenses for</td>
</tr>
</table>

<table>
<tr><td>Some natural hazards are expected to increase in frequency or intensity due to climate change[8].

We assume natural hazard events will pose a greater risk over the next 10 years than in the past. We assume that emergency responses will be more frequent, that elected members and senior staff will be called upon to fulfil governance and operational roles more regularly, and that maintaining capacity alongside core council functions will present an increasing organisational challenge. We assume that we will, however, be able to continue our operations and deliver essential services in the face of natural hazard events.</td><td></td><td>council (e.g. repairs to our infrastructure). Furthermore, elected members and senior staff may experience competing and unsustainable demands between their emergency management roles and core council functions. This could all lead to a reprioritisation of council work programmes.

Should a natural hazard event interfere with council's ability to operate this could impact the region severely and require significant additional resources from beyond council if council's Emergency Response Fund is insufficient.</td></tr>
<tr><td colspan="3">Evidence:<ol start="1"> Otago Climate Change Risk Assessment Climate change projections for the Otago Region Climate projections summary dashboard | MfE Factsheets – NZ SeaRise | Our Changing Coast Land Use Mapping for the Otago Region Our land 2024 | MfE Otago Region Natural Hazards Exposure Analysis Otago CDEM Group Plan 2018-2028</td></tr>
<tr><td colspan="3">Communities</td></tr>
<tr><td>Population growth and demographic change
Otago is home to an estimated 253,900 people[9], spread unevenly across 5 unique districts. Roughly 85% of the population identifies as European, 9.9% as Māori, 8.5% as Asian, and 3.4% as Pacific peoples, with all other ethnic groups at less than 3% of the regional population[10]. The population of the region has been steadily increasing and is projected to reach 281,600 in 2038.

Population by district[11]<table><tr><th>District</th><th>2023</th><th>2038 projection</th></tr><tr><td>Waitaki</td><td>24,000</td><td>26,700</td></tr><tr><td>Central Otago</td><td>25,100</td><td>31,300</td></tr><tr><td>Queenstown Lakes</td><td>51,500</td><td>68,500</td></tr></table></td><td>High</td><td>The population of Otago could increase faster than we assume or could decrease. Population growth or decline could also occur in unexpected areas.

Should Otago's population grow more quickly than anticipated, this could require greater investment in infrastructure and public transport services, while also placing increased pressure on ecosystem services in the region.

Should the population increase more slowly than expected or decrease, rateable units may be lower than</td></tr>
</table>

	Dunedin City	131,300	138,100	
	Clutha	18,550	18,550	

Roughly half of the Otago population resides in Dunedin. Queenstown Lakes is one of the fastest-growing districts in the country and draws significant numbers of visitors each year. Central Otago is also growing quickly and currently has a similar size population to Waitaki. Clutha is the smallest by population.

Otago is not uniform on the New Zealand Deprivation Index[12]. Queenstown Lakes and Central Otago sit largely at the least deprived end of the scale. Higher deprivation is concentrated in parts of coastal Waitaki, urban Dunedin, and rural Clutha.

We assume the Otago population will continue to increase steadily, with variability by district. We assume more rapid growth will continue to occur in Queenstown Lakes and Central Otago, which will require significant infrastructure investment.

**Forecasted rating units and resulting revenue will be covered by in the Finance Strategy.*

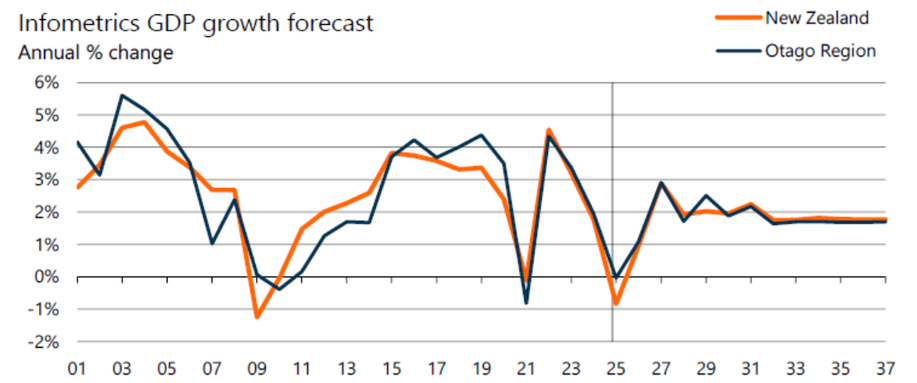
		forecast. A lower than forecast rating base, over which costs are spread, could increase the rates required per property, which may impact forecast revenue and affordability.
Iwi Māori Partnerships ORC works closely with seven Papatipu Rūnaka, facilitated by Aukaha Ltd and Te Ao Marama Inc. This has enabled a partnership approach to be taken across a broad range of activities including strategy development, projects, regulatory plan making/consenting, and corporate projects, and ensures that cultural, environmental, and community perspectives are considered across boundaries. ORC has also worked with Te Rūnanga o Ngāi Tahu, the recognised iwi authority under the Ngāi Tahu Claims Settlement Act 1998 for over 30 years, to build strong, collaborative relationships across the region. The relationship between iwi māori and local government is currently addressed in both the Local Government Act (2002)[13] and the Resource Management Act (1991)[14]. Other formal agreement/policies specific to ORC include: Memorandum of Understanding and Protocol (2003) between ORC, Te Rūnanga o Ngāi Tahu and Kai Tahu Ki Otago; Mana to Mana Terms of Reference (2022); Charter of Understanding between Murihiku Rūnanga, and Southland Councils and Clutha, Queenstown Lakes and ORC (2025); and He Mahi Rau Rika - ORC's Significance, Engagement and Māori Participation Policy (2021).	Medium	Should the case for collaborating and consulting with iwi māori be greater over the next ten years than we have assumed, then our financial estimates may be incorrect if we haven't allowed adequate resourcing for this. Similarly, if the relationship between ORC and iwi māori is eroded and there are fewer opportunities for collaboration, there may be inadequate ORC resources available to deliver on projects that previously took a collaborative approach.

We assume that while overarching legislation and other agreements/policies formalising the relationship between ORC and iwi māori may change in the next 10 years, there will still be a strong need to collaborate with iwi māori, and to support iwi māori to collaborate with us.		
Evidence: 9. Otago Region Population Structure | Stats NZ 10. Otago Region Ethnicity | Stats NZ 11. Subnational population projections Otago region TAs | Stats NZ 12. Otago Region socioeconomic deprivation 2025 | Infometrics 13. Local Government Act, s. 4 and Parts 2 and 6 14. Resource Management Act, s. 6, 7, 8, 66(2A), 74(2A), and 104(1)(c)		
Government		
Role of Local Government Reform of local government is underway, after the Government released its Simplifying Local Government proposal in November 2025. In response to submissions received, the government introduced a Head Start pathway, which enables willing and able councils to reorganise ahead of the 2028 local body elections. For all other councils, the Backstop pathway means reform will take place after the 2028 local body elections. Regional council elections will not take place in 2028[15]. Costs for transition are not being budgeted or planned for as part of this LTP due to uncertainty about timeframes and expectations. We assume regional council operations will continue at least until the end of the current 2026-2028 term. Following this term, we assume regional council functions will still be essential but will be undertaken under a transitioning local government system, which may involve new organisation structures. We assume that following the transition period, regional council organisations will cease to exist, with regional council functions re-delegated to other local government bodies or centralised government agencies. We assume regional councils will need to be adaptable to rapid changes over both the current term and the transition period.	High	It is unclear what the outcome of the Simplifying Local Government process will look like. Should the process and outcome differ significantly from our assumptions, this could result in significant impacts on our financial estimates. For example: • Should local government reform progress without ample forewarning and transition time, this could affect our ability to meet delivery timeframes for other legislative changes. See also *Legislative changes* assumption below. • Should the transition period be drawn out for a significant period, this could create an even more uncertain planning and operating environment, making it difficult to allocate budgets accordingly. There is also a risk that central government direction on local government reform could change significantly – particularly following the general election – making our financial estimates even less relevant.

We assume that recruitment and retention of staff will become increasingly challenging as the future of the organisation becomes more uncertain, and we may need to rely increasingly on consultants and contractors to deliver services. We assume that ongoing local government reform will add complexity in terms of how councils are expected respond to legislative changes, especially those relating to resource management reform. See also '*Legislative changes'* assumption below.		
Legislative changes Changes to legislation that directly and significantly impact council work programmes are presently underway or have recently come into effect. *Systems Improvements Bill* This Bill proposes a revised purpose for local government focused on delivering good-quality, cost-effective core services including infrastructure (e.g. flood protection and river management), public services (e.g. public transport), and regulatory functions (e.g. environmental regulation)[16]. As the Bill has not yet been enacted, uncertainty remains regarding the definition of 'core' services; new performance measurement, benchmarking, and reporting requirements; the degree of central government oversight; and rates capping. *Resource Management Reform* The Resource Management Act 1991 is set to be replaced by the Planning Bill and the Natural Environment Bill[17], and council plan changes are on pause until the RMA replacement is complete[18]. The new planning framework will require regional councils to prioritise significant planning work during the LTP period, including developing regional spatial plans and natural environment plans, working collaboratively with territorial authorities, and aligning work programmes and strategic approaches with the new planning framework. Some changes to national direction are already in force[19], with updates to the following, among others: • NPS-Natural Hazards • NPS-Freshwater Management • NES-Freshwater • NPS-Indigenous Biodiversity • NPS-Highly Productive Land	High	Additional and unexpected changes to legislation may come into force in the coming years, requiring substantial implementation efforts from council. Such changes could fundamentally impact the responsibilities of council, leading to a reprioritisation of council work programmes, a need for additional resources, or new work programmes altogether. This can all have a significant impact on our financial estimates. Should new legislation not include a transition period, this would place significant stress on council to make potentially major changes immediately, which may require additional resourcing.

Emergency Management Bill The Emergency Management Bill (No. 2) has been introduced to replace the Civil Defence Emergency Management Act 2002[20]. Once enacted, this will impose a statutory obligation on ORC to continue to function to the fullest possible extent during and after an emergency. We assume that staff involved in natural hazard management and flood protection will increasingly be required to take preventive or precautionary actions before a formal emergency declaration is made, and that extended civil liability immunity provisions will apply to those actions. We assume that the 2027-2037 LTP will need to set out explicit steps to implement the requirements of the regional emergency management plan. Where ORC's work programmes need to be brought in line with the regional emergency management plan, this could displace other planned work. *Fast-track Approvals Regime* The Fast-Track Approvals Act 2024 is in force[21]. The fast-track approvals process moves at pace[22], placing pressure on councils to engage in a timely manner. We assume that significant effort and redirection of council resources will be needed to effectively implement the incoming and recent legislation changes. We assume the local government reforms (see *Role of Local Government* assumption above) will create an additional layer of complexity regarding the implementation of other recent and future legislative changes. We assume further changes to legislation will occur following the 2026 general election. We assume any further changes to legislation will include a transition period for understanding and implementing these changes.		
Technology Technological advances and changes impact how council operates. Over the past few years, council has dedicated resources to the improvement of business systems, including our finance, rates, information management, and HR systems, as well as the cross-council IRIS Next Gen project. Artificial Intelligence (AI) systems are evolving rapidly. Opportunities for the use of AI in the public sector are evolving and being explored across council and the wider sector. The use of Generative AI also poses risks regarding privacy, security, and misinformation[23, 24].	High	If our assumptions are incorrect, the following impacts on our financial estimates might occur: • Should a major cyber security breach happen, this could release sensitive information and erode public trust, all at a significant cost to council. • Integration and adoption of new technologies may need to happen at a faster pace than anticipated.

Threats to cyber security pose risks to council privacy and data security. While current cyber defences are effective, cyber threats are evolving at a pace never seen before. We assume that implementing council's new business systems will require continued investment of resources in the short-term, resulting in efficiency improvements over the next 10 years. We assume that AI use at council will continue to increase, streamlining some operations and improving productivity while also creating new risks and changing how staff work. We assume that cyber security threats will continue to pose a significant risk to council, and that investment in cyber security will be essential, but that any breaches will be managed within budgeted resources. We assume that council will adopt new technologies at the pace of other councils, and to best-practice standards.		• AI integration and/or automation may happen at a faster pace than anticipated.
Evidence: 15. Simplifying Local Government | Department of Internal Affairs 16. Local Government (System Improvements) Amendment Bill | NZ Legislation 17. Planning Bill and Natural Environment Bill | NZ Parliament 18. Government to stop Council plan changes | Beehive 19. Changes to National Direction now in force | Minter Ellison Rudd Watts 20. Emergency Management Bill | NEMA 21. Fast-track Approvals Act 2024 | NZ Legislation 22. Process guidance for local authorities | Fast-track 23. Responsible AI Guidance for the Public Service: GenAI | Digital.Govt.NZ 24. Full results: 2024 cross-agency survey of use cases for artificial intelligence (AI) | Digital.Govt.NZ		
Regional Economy		
Economic growth[25] Gross Domestic Product (GDP) in Otago Region grew faster than the national average between 2016 and 2025, growing 2.9%pa on average, compared to 2.5%pa nationally. Slower growth is forecast, with Chart 1 showing that both Otago and New Zealand are forecast to grow 1.9%pa between 2025 and 2035.	Medium	Impacts on our financial estimates will be most significant if economic growth over the next 10 years is lower than (instead of greater than) we have assumed. Examples of impacts include:

Chart 1  In the past decade, construction, professional services and health were the key drivers of growth for Otago and are expected to continue leading growth in the coming decade. Retail trade and hospitality services following closely behind, reflecting ongoing growth of the population and tourism in the region. Agriculture, forestry and fishing was the second largest industry in Otago in 2025 and is forecast to continue growing. However, by 2037, agriculture, forestry and fishing are forecast to slip to be the fifth largest industry group, overtaken by health, professional services, hospitality, and rental services. Construction is forecast to remain the largest industry in the region.		• If the rating base grows slower than projected, this could limit the revenue council can collect from new developments. • Externally managed investment fund and/or Port Otago dividends could see reduced yields. • A sluggish economy usually translates to higher unemployment and lower business confidence, which impacts on affordability, increases the likelihood of unpaid rates, which affects forecasted revenue. • Because debt limits are usually calculated as a percentage of overall revenue, lower revenue streams mean the council's ability to borrow for essential infrastructure is restricted, potentially pushing us toward covenanted debt ceilings.
Evidence: 25. Otago Region Economic Forecasts, June 2026, Infometrics		

9.10. Remuneration Authority Determination 2026/27

Prepared for:	Council
Report No.	S&C2633
Activity:	Governance Report
Author:	Amanda Vercoe (General Manager Strategy and Customer)
Endorsed by:	Richard Saunders, Chief Executive
Date:	29 July 2026
Portfolio Leads:	Chair Calvert and Cr Laws, Strategy and Customer

PURPOSE

[1] To note the 2026/27 Local Government Members Remuneration Determination, and adopt the 2026 Councillor Expenses, Reimbursements and Allowances Policy.

EXECUTIVE SUMMARY

[2] The Remuneration Authority (the Authority) has undertaken its annual review of elected members' remuneration and allowances and issued its determination for local government elected members.

[3] The link to the 2026/27 determination is available here.

Remuneration

[4] The 2026/27 Determination shows no change to the existing remuneration for the Otago Regional Council Chairperson and councillors. The remuneration rates listed in the Determination are below:

Local Government Elected Members (2026/27) Determination 2026

Otago Regional Council

Office	Annual remuneration ($)
Regional Council Chairperson	173,309
Regional Council Deputy Chairperson	105,006
Portfolio Lead (10)	75,847
Councillor (minimum allowable remuneration)	61,677

Guidance note

The governance remuneration pool for the Otago Regional Council is $863,476. *See* the explanatory note to this determination for further information about the Remuneration Authority's methodology when fixing members' remuneration.

Allowances

[5] There was one change made to current allowances in the Determination which is listed below for information:

- The mileage allowance set by Inland Revenue has increased to $1.20

[6] The ORC's Councillor Expenses, Reimbursements and Allowances Policy for 2026 is attached for adoption, noting the changes made are to align of clauses referenced to the 2026/27 Determination clauses. This will be made available on the website once adopted, in line with guidance from the Remuneration Authority.

RECOMMENDATION

That the Council:

*1) **Notes** this report.*
*2) **Approves** the 2026 ORC Councillor Expenses, Reimbursements and Allowances Policy.*

BACKGROUND

[7] Remuneration for elected members at the ORC is set by an independent Remuneration Authority, under the Local Government Act and the Remuneration Authority Act 1977. Each year, a new determination is issued.

DISCUSSION

[8] Nil.

OPTIONS

[9] Nil.

CONSIDERATIONS

COMMUNITY OUTCOMES
Not Applicable.

ALIGNMENT WITH CENTRAL GOVERNMENT LEGISLATION
This work is consistent with relevant central government policy and direction. Specifically, it aligns with The Local Government Act 2002 provides for the Remuneration Authority to set the remuneration, allowances and expenses of regional chairs and other elected members.

ALIGNMENT WITH ORC INTERNAL POLICY
There is no specific ORC policy that is directly applicable to this work.

FINANCIAL CONSIDERATIONS
Elected member remuneration is budgeted for in the governance budget for the 2026/2027 financial year.

LEGAL/COMPLIANCE RISK
Not Applicable.

REPUTATIONAL RISK
Not Applicable.

CLIMATE RESILIENCE
Not Applicable.

CARBON EMMISSIONS
Not Applicable.

HE MAHI RAU RIKA: SIGNIFICANCE, ENGAGEMENT AND MĀORI PARTICIPATION POLICY
Not Applicable

ENGAGEMENT WITH MANA WHENUA
Not Applicable.

STAKEHOLDER ENGAGEMENT
Not Applicable.

COMMUNICATIONS
Not Applicable.

NEXT STEPS

[10] The increased mileage rate will be implemented and any backdates made.

[11] The ORC's Councillor Expenses, Reimbursements and Allowances Policy for 2026 will be made available on the website once adopted, in line with guidance from the Remuneration Authority.

ATTACHMENTS

1. Expenses Reimbursement and Allowances Policy Draft July 2026 [**9.10.1** - 3 pages]

Expenses, Reimbursements and Allowances Policy July ~~2025~~2026

The following is the expenses regime for elected members of the Otago Regional Council.

Principles

- Reimbursement of expenses incurred is available where required by virtue of membership for Council and Committee meetings, workshops, consent hearings, Council approved representation and Council organised events, and Chair-approved constituency activity including invitations from constituency groups, or general Council invitations.
- Reimbursement will be in line with the Remuneration Authority's latest determination – link here.
- Claims are to be made by Councillors in the GO Expense claim system (GO). Expense claims will not be automatically generated by staff. Claims will be approved by the General Manager Finance.
- When an expense claim is submitted in GO the Councillor certifies that the expenses are incurred on legitimate Council business in accordance with Council policy, that the amounts were incurred and paid for by the Councillor and no claim for reimbursement of any sum will be made from another source for these costs.
- Travel shall be shared where practicable. Whereby virtue of private arrangements a Councillor chooses not to utilise Council provided or shared travel, expenses shall not be reimbursed.
- Accommodation and travel arrangements to be made through the Governance Support Officers or an Executive Assistant.
- The basis of reimbursement is actual and reasonable.
- Claims are to be supported by itemised GST invoices / receipts.
- No alcohol can be claimed, with the exception being a Councillor required to do so as a hosting requirement and the expenditure is pre-approved by the Chairperson.
- Costs of spouse/partner accompaniment to be met privately.
- Where Council provided transport is available and not used, mileage allowance is not claimable.
- Claims for travel are to be based on distance from normal residences, or such shorter distance as may be involved.
- Mileage is for travel in a private motor vehicle and by the most direct route that is reasonable in the circumstances.
- Travel time is to be by the quickest form of transport and most direct route that is reasonable in the circumstances.
- Claims should be made as soon as is practicable following the meeting or activity claimed for.

Otago Regional Council

Specific Considerations

Hearing Fees

The amount payable to a Councillor who acts as Chair of a hearing panel is $130 per hour. The amount payable to a Councillor who is a member of a hearing panel, but not the Chair, is $104 per hour. Other conditions that apply to these payments including the hearings that apply and time that may be claimed are set out in the determination (Clause 16).

Motor Vehicle Mileage Allowance

The maximum motor vehicle mileage allowance authorised by the determination will be paid for qualifying travel (Clause ~~11~~10).

Travel Time Allowance

A travel time allowance as authorised by the determination will be paid for qualifying travel (Clause ~~12~~11).

ICT allowance

- iPads (or a similar device of Council's choice) will be supplied to each Councillor, with an appropriate data connection. Ownership is retained by the Council.
- An appropriate printer will be supplied on request for the use of each Councillor. Ownership is retained by Council. Cost of reasonable consumables for Council use to be met by the Council.
- Where a Councillor prefers to utilise their own equipment, allowances are available as per the determination (Clause ~~13~~12). This equipment and internet connection must be of a standard acceptable to Council
- A communication allowance of $550 per annum will be paid as per the determination (Clause ~~13~~12). This covers:
  - use of personal mobile phone equipment $150,
  - use of a member's own mobile phone service (call and data costs) $400.
- The communications allowance will be paid 6-monthly in arrears (in April and October).

Childcare allowance

A childcare allowance as authorised by the determination will be paid when a member is engaged on qualifying Council business. Claims are to be on an actual reimbursement basis and need to be supported by itemised GST invoices / receipts (Clause ~~14~~13).

Home security system allowance (available post-2025 elections)

Reimbursement will be provided towards a home security system to cover the installation and monitoring at an elected member's primary place of residence within the council's area as authorised by the determination.

The payment of this reimbursement allowance, following the completion of an authorised threat and risk assessment, is at the discretion of the council up to the maximum amounts shown in the determination. The local authority must have the Authority's approval before making any reimbursements above the specified maximum amounts (Clause ~~15~~14).

Incidental Costs

Incidental costs such as accommodation, meals, parking, fares and other such costs incurred on Council business are recoverable on an actual and reasonable basis. Such claims are to be supported by itemised GST invoices / receipts and approved by the Chief Executive or General Manager Finance. As stated in the principles, it is Council's preference that accommodation and travel arrangements are booked by Council though the Governance Support Officers or an Executive Assistant.

Where a Councillor chooses to stay privately when otherwise Council provided accommodation would be provided, an allowance of $65 per night is payable.

Unforeseen Expenses and Costs

Any unforeseen expenses or costs of any Councillor related to Council activities (except for constituency work which must be approved by the Chairperson) may be reimbursed at the discretion of the Chief Executive or General Manager Finance.

Chairperson

In recognition of the Chairperson's wider Council role, the following additional entitlements are available:

- Provision of a Council vehicle in accordance with the Remuneration Authority's use formula.
- Provision of a cell phone including call and data costs (if this is taken up, the communications allowance outlined above is not applicable).
- Membership of Air New Zealand Koru Club.

9.11. Port Otago Statement of Corporate Intent 2026-2029

Prepared for:	Council
Report No.	FIN2610
Activity:	Finance
Author:	Nick Donnelly (General Manager Finance)
Endorsed by:	Richard Saunders (Chief Executive)
Date:	29 July 2026
Portfolio Leads:	Cr Malcolm and Cr Gardner, Finance

PURPOSE

[1] To receive Port Otago's Draft Statement of Corporate Intent for the three years to 30 June 2029.

EXECUTIVE SUMMARY

[2] Each year the Board of Port Otago Limited is required to provide Council as shareholder, a Statement of Corporate Intent (SCI). The draft SCI for the three years to 30 June 2029 has been received and is attached.

[3] The SCI sets out the objectives of the Port Otago group, and the intended nature and scope of activities for the three-year period to 30 June 2029. The three-year scenario covered by the SCI is reviewed annually on a rolling three-year basis.

[4] The SCI process is the formal opportunity for Council, as 100% shareholder of Port Otago, to have input into the intended activities of the company and its subsidiaries.

[5] The SCI format is consistent with previous years and aligns with Port's Annual Report integrated reporting framework and includes a focus on sustainability and materiality.

[6] A Letter of Expectations was sent to Port on 10 March 2026 following discussion at the 25 February 2026 Council meeting. A copy of that letter is attached and the SCI addresses the matters included that letter.

RECOMMENDATION

That the Council:

1) ***Receives*** *this report and the attached Draft Statement of Corporate Intent for Port Otago Limited to 30 June 2029.*
2) ***Endorses*** *the Statement of Corporate Intent for Port Otago to 30 June 2029.*

PERFORMANCE TARGETS

[7] Performance targets in relation to health, safety and wellbeing, financial, environmental, and compliance with the Port and Harbour Safety Code are set out on page 14 of the SCI.

[8] The target level of shareholders' funds as at June 2027 is $809 million rising to $868 million at June 2029.

[9] The dividend policy remains consistent with previous years. Dividends are:
"Based on the intention to pay dividends within the range of 50%-70% of the group's normalised operating surplus after tax".

[10] Target dividend amounts are $20m for the year ending 30 June 2027, $20m for 2028 and $20m for 2029. These amounts align with the amounts included in Council's Long-Term Plan 2024-34 and Annual Plan 2026-27.

BACKGROUND

[11] The Port Companies Act 1988 requires the draft SCI to be delivered to Council within one month of the commencement of each financial year and for the SCI to be finalised within three months of the commencement of the financial year.

[12] Port's actual performance may differ from the targets set out in the SCI and a significant variation may impact the Port's ability to pay dividends to Council. Dividend levels outlined in the SCI are not guaranteed and are dependent upon the Port's underlying financial performance and Directors being satisfied the company will satisfy the Companies Act 1993 solvency test requirements when those dividends are approved.

SUMMARY OF CONSIDERATIONS

COMMUNITY OUTCOMES
This work aligns with the following community outcomes from the ORC 2024-2034 Long-term Plan:

Whole of Organisation
This work supports the whole organisation and, therefore, all Community Outcomes.

ALIGNMENT WITH CENTRAL GOVERNMENT LEGISLATION
There is no specific national policy statement or central government direction that is directly applicable to this work.

ALIGNMENT WITH ORC INTERNAL POLICY
There is no specific ORC policy that is directly applicable to this work.

FINANCIAL CONSIDERATIONS
The budget for this work was approved through the 2024-2034 Long-Term Plan / 2026-2027 Annual Plan and sits in the Council Organisation activity budget.

LEGAL/COMPLIANCE RISK
There is insignificant/minor risk that decisions arising from this report could expose Council to litigation, regulatory non-compliance, or breach of policy/legislation.

REPUTATIONAL RISK
There is insignificant/minor risk that decisions arising from this report could adversely impact Council's reputation or community trust.

CLIMATE RESILIENCE
The impacts of climate-related risks (e.g. flooding, drought, extreme winds, coastal erosion, wildfires) on this work has not been assessed.

CARBON EMISSIONS
The implications of this work on organisational or regional greenhouse gas emissions has not been assessed.

HE MAHI RAU RIKA: SIGNIFICANCE, ENGAGEMENT AND MĀORI PARTICIPATION POLICY
Not Applicable.

ENGAGEMENT WITH MANA WHENUA
There has been no engagement with mana whenua or Māori specifically for this work.

STAKEHOLDER ENGAGEMENT
There has been no engagement with external stakeholders and/or the public specifically for this work.

COMMUNICATIONS
The decision will be communicated with the Board of Port Otago Limited.

NEXT STEPS

[13] Any feedback from this meeting will be sent to Port who will finalise the SCI by 30 September 2026.

ATTACHMENTS

1. 2026 Port Otago Statement of Corporate Intent to June 2029 [**9.11.1** - 17 pages]
2. 2026 03 10 Port Otago Letter of Expectations 2027-2029 [**9.11.2** - 2 pages]

Statement of Corporate Intent

For FY2027, FY2028 and FY2029

Approved by the Port Otago Board

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Anne McLeod
Rick Herd
Kate Stainton-Herbet – Intern

Chief Executive

Kevin Winders

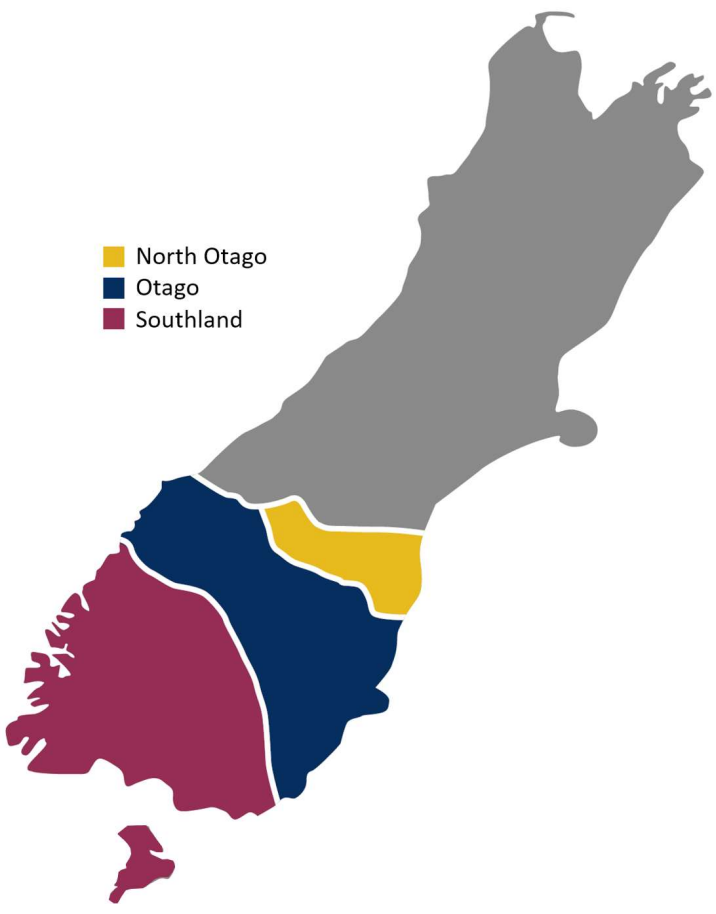
Introduction

This Statement of Corporate Intent (SCI) outlines our plans for the next three years, FY2027, FY2028 and FY2029. We encourage you to read this SCI in conjunction with our 2026 Integrated Report.

About Port Otago

It was from Port Chalmers that New Zealand's first cargo of frozen meat left for London aboard the refrigerated ship *Dunedin* in February 1882, signalling the start of our country's modern export trade. The Otago Harbour Board managed the port and harbour from 1874 until 1988, when the Port Companies Act 1988 saw the registration of Port Otago Limited and the company's shares vested in the Otago Regional Council (ORC).

Port Otago remains 100% owned by the ORC and its stated principal objective is to operate as a successful and sustainable business that delivers value to shareholders in the form of both financial and non-financial returns on investment.



Port Otago is located on the Otago Harbour of the South Island of New Zealand. Port Otago benefits from a deep natural harbour taoka, its strategic location for vessel rotation to and from deep-sea destinations and a large primary export cargo region.

Port Otago is a Lifeline Utility under the Civil Defence Emergency Management (Act) 2002, defined as entities that provide essential infrastructure services to the community. The company has a responsibility to ensure its ability to function at the fullest possible extent during and after a civil defence emergency.

Our region

Port Otago's role facilitating trade for the region's exporters and importers has a significant impact on the economic, as well as the social and environmental, well-being of the Otago-Southland region.

Our region has the infrastructure required for a successful port, including a fit-for-purpose road and rail network and a well-developed warehouse and cool storage sector.

Port Otago operates two wharf systems – Port Chalmers and Dunedin Bulk Port – within Otago Harbour. The lower harbour channel depth is 14.0m, while the upper harbour channel is 8.5m.

Port Chalmers is one of New Zealand's two deepest container ports and can service the largest container ships in New Zealand. It can store more than 7000 containers and has one of the highest number of reefer points of any New Zealand port, with 1650.

The company has more than 38,000m^2 of covered warehousing at Port Chalmers, built to the high standards required by the dairy industry. It also has two wharf-side cold storage facilities in Dunedin, able to hold up to 10,500 tonnes of chilled product. This is used primarily to service fishing customers.

Port Otago provides 7.6 hectares of log storage area at Port Chalmers and Dunedin Bulk Port.

Port Chalmers is the primary South Island port for cruise ships and generally the port of call immediately before or after visiting Fiordland.

Economic contribution

Port Otago operates across four sites: Port Chalmers, Dunedin Bulk Port, Dunedin Depot and Fiordland. It employs about 330 people and paid $43.7 million in wages and salaries during 2025/26.

To better understand Port Otago's impact and role in the region and wider economy, the New Zealand Institute of Economic Research (NZIER*) was commissioned with quantifying what it would mean for the local community's economy if Port Otago could not operate for a year.

The resulting report, *Regional economic impact assessment: Assessing the contribution of Port Otago to the economy* (February 2024), shows significant negative economic impacts at a national and regional level.

With no economic contribution from Port Otago for 12 months, modelling indicates Gross Domestic Product (GDP) decreased by:

	GDP
Otago region~	- $154 million
New Zealand-wide	- $118 million
Southland region	- $38 million

The report estimates that Port Otago contributed $61 million to the Otago economy through its export and import trade activities during the year to June 2023. Furthermore, between June 2012 and June 2023, Port Otago's GDP contribution grew at an average annual rate of 7%^.

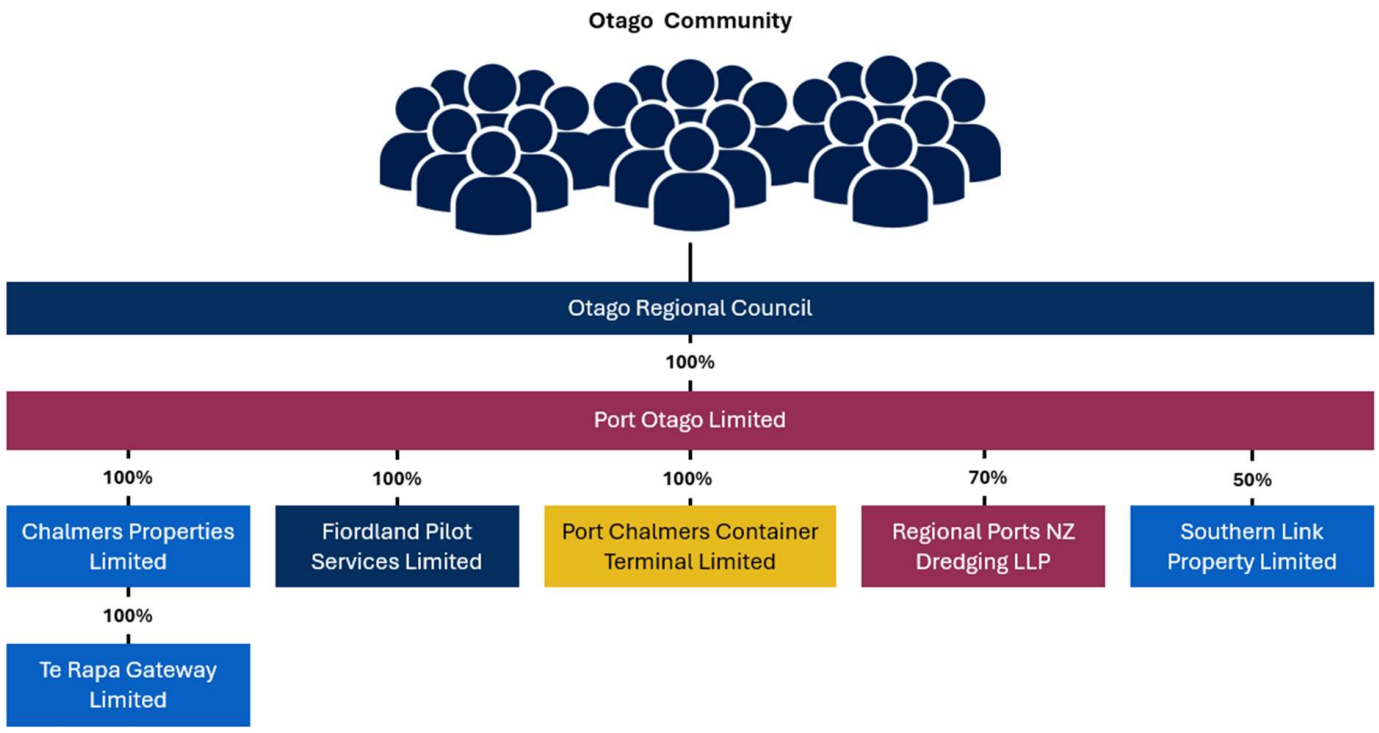
** NZIER is an independent, not-for-profit, incorporated society*
~ Otago region covers Dunedin city, Queenstown, Central Otago and Clutha
^ Disrupted by Covid 19, which led to a decline in trade activities from 2020 to 2022

Company structure

This SCI sets out Port Otago's overall intentions and objectives. It also covers our wholly owned subsidiary companies, Chalmers Properties Limited, Fiordland Pilot Services Limited, Port Chalmers Container Terminal Limited and Te Rapa Gateway Limited, and the joint arrangements Regional Ports NZ Dredging LLP a joint operation with Napier Port Limited and Southern Link Property Limited a joint venture with Dynes Transport Tapanui Limited.

Port Otago and its subsidiaries are "Port Companies", pursuant to the Port Companies (Act) 1988. This SCI has been prepared in accordance with this Act. Pursuant to section 5 of the Act, our principal objective is to operate as a successful business.

The company reviews and updates its SCI annually, in consultation with its shareholder. This SCI covers FY26, FY27 and FY28.



Integrated Sustainability Policy

Port Otago is committed to working with stakeholders to understand our material issues. We try to be open and honest about what we need to work on. Our commitments in this policy span the six capitals* and aim to create value, working hard to improve wherever we can.

* Integrated Reporting is based on creating value across the six capitals:

1. *Human capital:* Our kaimahi.
2. *Social and relationship capital:* Our wider team.
3. *Natural capital:* Our harbour taoka and beyond.
4. *Intellectual capital:* Our know how and skills.
5. *Manufactured capital:* Our assets.
6. *Financial capital:* Our financial value.

Our value chain

The port's business model to create value

Inputs

Our kaimahi

- Our team of 330 people
- Trained in safety and relevant skills
- In-depth safety risk assessments and inspections

Our wider team

- Customer relationships
- Partnerships with shipping lines, landside operators and suppliers
- Community and iwi engagement

Our harbour taoka and beyond

- Use of air, land and water
- Consumption of energy and other resources
- Listening to community and iwi about any changes to our harbour taoka
- Climate change impacts
- Responsible dredging

Our know how and skills

- Experienced people
- Quality new recruits
- Investment in upskilling
- Investment in secure technology

Our assets

- Assets owned and productivity optimised
- Land owned and space utilised efficiently
- Investment in long-term infrastructure
- Climate change mitigation and resilience planning

Our financial value

- Diverse and balanced portfolio
- Long-term agreements with customers, partners and suppliers

Our business activities & outputs

Outcomes	Work ons	Progress
Our kaimahi • A safety culture where our people look out for each other so that everyone goes home safely • Employees who are proud to work for the port	– Failing safely to minimise the impact of any incidents – Onboarding new recruits making the most of the "fresh eyes" on the job – Workplace culture focus as we adapt to change	✓ ✓ –
Our wider team • A good neighbour who respects our social licence to operate • A strong central link in the value chain, connecting our customers, partners and suppliers from the lower South Island to the world, for mutual growth	– Log customer relationships as we plan for the future – Container customer relationships as we collaborate on storage solutions – Multi-stakeholder approach across the supply chain	✓ – ✓
Our harbour taoka and beyond • Respect for our beautiful harbour • Understanding we need to improve by listening to our community and iwi • Reduced contribution to climate change and understanding and adapting to potential future climate change impacts	– Understanding nature's tipping points and partnering to address them – Preparing for the impacts of climate change on the port using results from our climate adaptation scenario modelling – Reducing our own contribution to climate change – Influencing others in the supply chain to do the same	✓ ✓ – ✓
Our know how and skills • A considered approach to the future • A talented workforce with individuals who are willing to learn and have a wealth of knowledge • Improved productivity and resilience by embracing new, agile and efficient ways • Effective processes to protect the port from cyber attacks	– Process innovation for efficiency gains – Equipment innovation on port for the future – Channel Innovation for shipping and load flexibility	– – ✓
Our assets • Continued investment in infrastructure to the benefit of the local, regional and national economy • Proactive development of dynamic solutions to counter shipping volatility	- Collaborating on an Inland Port at Southern Link and making progress - Responding quickly to operational disruption in our port network - Being flexible to attract more services to Port Otago and the South Island	✓ ✓ ✓
Our financial value • Reliable sustainable dividends for our shareholders, to support regional economic development and benefit our community • A sustainable future built on solid investment in infrastructure and long-term customer, partner and supplier relationships	- Building operational returns year-on-year - Maintaining returns in a tight property market - Communication of our contribution to the people of Otago	✓ ✓ –

Our material issues

Port Otago is seven years into Integrated reporting and identifying its material issues*. The first three years involved a survey and interviews with key stakeholders. The full materiality process is now undertaken every two years, with stakeholder engagement continuing in alternate years. We call this interim process, undertaken in 2025, a materiality pulse, as we effectively check the pulse of what is most important to our business and stakeholders. The material issues detailed below and integrated throughout this SCI are based on the results of our latest full materiality process in 2026.

2026 materiality process

For currency and completeness, here are the most up-to-date findings from our 2026 materiality process:

1. Safety - *same as 2025*
2. Leadership - *up from 3rd in 2025*
3. Shipping volatility - *up from 5th in 2025*
4. The best team - *up from 8th in 2025*
5. Wharf capacity and infrastructure - *down from 4th in 2025*
6. Financial performance - *same as 2025*
7. Innovation - *same as 2025*
8. Culture and wellbeing hauora - *up from 10th in 2025*
9. Growth - *same as 2025*
10. Strong relationships - *down from 8th in 2025*
11. Cyber-security - *up from joint 14th in 2025*
12. Nature - *up from joint 14th in 2025*

Key themes included:

- *Leadership:* Local government reform, progressing Southern Link inland port and supply chain disruption from global geopolitics are just some of the challenges. Leadership needs to be strong.
- *The best team:* Succession planning and capacity building in the wider leadership team are prominent. Training is one thing, but ongoing development, mentoring and collaboration is another.
- *Culture and wellbeing hauora:* Working with the unions to align and support our Always Open strategy. This is key to improving our culture.
- *Growth:* Southern Link is the port's growth story. It needs to happen as soon as possible.
- *Nature:* Our place in the harbour is precious, and a more strategic approach is warranted.

** Our materiality-related work is undertaken independently by Materiality Counts.*

Top 12 material issues in order of priority

#1 Safety (same priority as 2025)

Ensuring safety is the number one priority for everyone using the port, including our customers, partners and suppliers. A team that is always looking for ways to improve safety and looking out for each other, so everyone goes home safely.

#2 Leadership (up 1)
Leadership across the business and the wider community that is transparent and accountable, with strong governance. Aiming for diversity and the right mix of skills within our leadership to be agile and to adapt into the future.

#3 Shipping volatility (up 2)
Working closely with shipping lines to build their confidence in visiting the port, achieving as many services with as far a reach, and as much certainty, as possible for all stakeholders. Demonstrating agility to come up with solutions to shipping challenges across New Zealand as a dynamic port where the team pulls together to get the job done, with efficient container turnaround times and optimum moves per week.

#4 The best team (up 4)
Attracting and retaining the best team for the job by promoting our values in the community and respecting the human rights of our people. Engaging our team by investing in training, including leadership training, providing recognition and succession planning.

#5 Wharf capacity & infrastructure (down 1)
Balancing wharf capacity between bulk, container and cruise ships. Using a simulator to explore what's possible in the channel, allowing increased volumes of logs to be loaded at Dunedin Bulk Port. Efficient container throughput to optimise space on a resilient wharf, alongside an inland storage depot for expansion.

#6 Financial performance (same as 2025)
Generating healthy financial returns for our shareholder from a strong capital base via increased revenue and EBITDA. Contributing to the people of Otago via shareholder dividends facilitating reduced regional council rates.

#7 Innovation (same as 2025)
Improving resilience and efficiency in our supply chain with automatisation and digitisation. Working with our customers, shipping lines, infrastructure and logistics partners and peers to innovate and become more agile, using container packing optimisation for example, and supply chain services such as green corridors.

#8 Culture and wellbeing hauora (up 2)
A positive workplace culture prioritising wellbeing (including the Good Yarn programme), where everyone feels they belong and their diversity is valued. Open, honest and consistent communication and leadership across our whole team and the unions on topics such as rosters for better work-life balance.

#9 Growth (same as 2025)
Investing in the growth of our diversified business model across bulk, containers, cruise and property.

#10 Strong relationships (down 2)
Building strong relationships and true partnerships with our stakeholders (community, iwi, customers, partners, suppliers, shareholder, peers, government, regulators, interest groups, industry bodies) by taking the time to listen to what matters to them, such as farmers doing it tough, and sharing the port's plans. Being a great neighbour by doing what we say we will do for the community and iwi, such as keeping noise levels down, supporting their needs and human rights. Communicating effectively on the day-to-day, such as progress towards performance commitments on container moves and storage space.

#11 Cyber security (up 3)
Refreshing our IT system to protect cyber security and data privacy. Making cyber-security part of every decision, like safety, and implementing well-rehearsed processes to respond to attacks.

#12 Nature (up 2)
Protecting nature in our harbour by listening to the community and iwi, monitoring things closely and taking action well ahead of any tipping points in harbour health. Protecting the wider environment by developing an overall Harbour Management Plan with our partners. Implementing biosecurity measures specifically to protect our native flora and fauna from these hazards.

Our vision: New Zealand's *always open* port

We exist to provide a **safe**, **efficient** and ***always open*** gateway to and from the world for our customers. We provide such **excellent service** that no customer wants to leave, while at the same time providing a **secure return** to our owners and being a **respected neighbour** in our community. We balance the short, medium and long term needs of the business with those of our shareholder and stakeholders.

SAFE Our people go home safe everyday	EFFICIENT Clever use of data delivers benefits to be shared
"ALWAYS OPEN" We are always open to shipping, ideas, change, feedback	EXCELLENT SERVICE Customers collaborate with us on their future plans
SECURE RETURN Reliable dividends are paid to our owners	RESPECTED NEIGHBOUR We do the right thing. We respond.

Our strategy

Always Open Leverage existing infrastructure to be always open	
• Our in-house dredging • Renewable harbour defences • We adapt quickly	• Open for growth • First port open post an extreme event • Consenting is smoother
Space to Grow Provide buffer capability to be "always open"	
• Mosgiel Hub increases windows/storage • Attract imports • Remove trucks from road	• Provide great service • Sustainable growth • Lower carbon outcomes
Data Led Decisions based on accurate and real-time data	
• Doing more with the same, safely • Reduce property climate change risk • Property enables the Port	• Higher margins • Less volatility • Reliable returns

Our strategy consists of the above *always open* goals developed in 2025 and our ongoing goals developed in 2026 to tackle our material issues and create value for stakeholders and the port.

** Goals presented below are directly related to our* always open *strategy.*

Our kaimahi

Material issues

- Safety
- Leadership
- The best team
- Culture and wellbeing hauora

Goals

- Develop a culture where workforce safety is the number one priority and our team looks out for each other so that everyone goes home safely.
- Build a workplace where the wellness of our team is supported through teamwork, accessible leadership, and open and honest communication.
- Build our planning capability to improve our service offering to our customers.
- Make decisions based on accurate real-time data.

Our wider team

Material issue

- Strong relationships

Goals

- New Zealand's always open port: Leverage existing infrastructure to be always open.
  - Adapting, building on our social licence, making our consenting smoother.
- Space for customers adapted to their needs: Provide buffer capability to be always open.
  - Increased storage at Mosgiel Inland Port for better delivery windows, making us the preferred option for our customers.
- Be a great neighbour by respecting what is important to our community and iwi and enhancing our social licence to operate.
- Build stronger relationships with our customers, partners and suppliers to better understand them, measure progress and plan for the future.

Our harbour taoka and beyond

Material issue

- Nature
- Climate change

Goals

- Execute our climate change plan covering climate change risk assessment, adaptation/mitigation strategies, reporting framework and current baseline.
- Understand and adapt to potential future climate change impacts on our assets.
- Preserve our beautiful harbour and its biodiversity by listening to our community and iwi, taking care and monitoring these precious taoka closely.
- Reduce our noise.

Our know-how and skills

Material issues

- Innovation
- Cyber-security

Goals

- Decisions based on accurate real-time data.
- Doing more with the same, safely.
- Improve our efficiency through automation and digitisation, such as systems for berth management, property management and supply chain connectivity.

Our assets

Material issues

- Wharf capacity and infrastructure
- Shipping volatility

Goals

- Leverage existing infrastructure to be Always open:
  - In-house dredging capability making us open for growth.
  - Renewable harbour defences making us the first port open post extreme weather, ready to support others.
- Space for customers adapted to their needs: Provide buffer capability to be Always open:
  - Increased storage at Mosgiel Hub for increased acceptance windows, making us the preferred option for our customers.
- Grow the bulk business by increasing storage capacity and enhancing shipping flexibility with Victoria Channel improvements. Relocate storage (where it makes sense), develop wharf replacement options and work with customers on fit-for-purpose infrastructure to meet future needs.
- Work with our government, New Zealand Cruise Association and ports to market New Zealand as a cruise friendly destination to attract cruise ships back to New Zealand
- Continue to build a sustainable property portfolio as a fundamental part of the port's financial sustainability.

Our financial value

Material issues

- Financial performance
- Growth

Goals

- Space for customers adapted to their needs: Provide buffer capability to be Always open:
  - Attract exports/imports for sustainable growth.
- Provide consistent shareholder dividends with a portfolio that optimises returns, builds resilience and facilitates investment in the future.

Performance targets

Capital reference	Objectives	Key performance measures	Targets		
			2027	2028	2029
Our kaimahi	Health, safety and well-being	Critical Risk Control assurance outcomes	>95%	>95%	>95%
Our kaimahi	Health, safety and well-being	Total recordable incident frequency rate (per 1 million hours)	<10	<10	<10
Our financial value	Financial	EBIT	$50m	$59m	$64m
Our financial value	Financial	Shareholders' funds (Equity) or Net Assets *	$809m	$836m	$868m
Our financial value	Financial	Return on equity *	4.5%	5.8%	6.2%
Our financial value	Financial	Equity Ratio*	Between 70%-85%		
Our financial value	Financial	Interest cover ratio	7.2	7.6	8.2
Our financial value	Financial	Dividend **	$20m	$20m	$20m
Our financial value	Financial	Otago Rescue Helicopter Trust	$0.35m	$0.35m	$0.35m
Capital reference	Objectives	Key performance measures	Targets		
			2027	2028	2029
Our harbour taoka and beyond	Environmental	Number of harbour spills caused by Port Otago	0	0	0
Our know-how and skills	Environmental	Percentage of resource consent compliance monitoring events achieving full compliance	100%	100%	100%
Our harbour taoka and beyond	Compliance with Port & Harbour Safety Code (PHSC)	The requirements of the PHSC continue to be met	Yes	Yes	Yes
Our know-how and skills	Compliance with Port & Harbour Safety Code (PHSC)	Risk assessments of new tasks or reviews post incident completed	Yes	Yes	Yes

*Excludes future unrealised fair value movements of investment properties and hedging interest rate swaps.

** Based on the intention to pay dividends within the range of 50-70% of the group's normalised operating surplus after tax.

Financial performance measure	Definition
EBIT	Earnings before interest, taxation, realised and unrealised investment property gains
Return on equity	Profit divided by average shareholder's equity
Equity ratio	The percentage that equity represents of total assets within the target range between 70% and 85%
Interest cover ratio	The number of times interest is covered by the profit before tax, interest, unrealised fair value movements and unrealised impairment charges.

Governance and leadership

The board

Port Otago's shareholder appoints the directors to govern and direct the company's activities. The board is the overall and final body responsible for the proper direction and control of the company's activities and decision making. The board's responsibilities include the overall objectives, strategy, stewardship, performance and reporting of the company.

Statement of corporate intent (SCI)

The SCI is prepared based on the requirements within the Port Companies Act 1988. The board submits a draft SCI to the company's shareholder after due consultation with the shareholder and, after considering its comments, the board approves the final SCI and delivers it to the shareholder.

Board operation

The Port Otago board's operation is subject to the company's constitution and board charter, which sets out how the board and directors shall undertake their responsibilities.

The board chair leads the board and its relationship with the shareholder and other major stakeholders. The chair maintains a close professional relationship with the company's CE and, through the CE, the leadership team (LT).

New directors undertake an induction process to familiarise them with matters related to the company.

Conflicts of interest policy

These documents require all directors and employees to:

- Act with integrity, honesty, transparency, openness and in good faith
- Comply with the law, apply good judgment and proactively identify, disclose and manage conflicts of interest
- Promptly disclose or report any significant potential or perceived conflict or wrongdoing.

The company maintains an Interests Register that is reviewed at the start of every scheduled board meeting.

Policies

The board reviews the company's key policies at regular intervals.

Board performance and review

The board regularly reviews its performance and the performance of the CE. The reviews aim to identify opportunities and set plans for performance development and improvement.

Board meetings and committees

The board meets approximately 10 times per year. Additional meetings are convened as and when required. The board's annual work programme is set by the board before the start of each financial year. The board receives formal agenda papers and regular reports, generally a week in advance of meetings. Senior managers are regularly involved in board discussions. Directors also have other opportunities to obtain information and may seek independent expert advice.

The board delegates some responsibilities and tasks to board committees, but the board retains the ultimate responsibility and accountability for any committee's actions or inactions. Subject to any conflict

issues, all directors receive agenda papers for committee meetings and all directors may attend committee meetings.

The board's four standing committees are:

- Health and Safety Committee (full governance committee) – which assists the board in discharging its responsibilities with respect to health, safety and well-being.
- Audit and Risk subcommittee – which liaises with the company's independent external auditor, and reviews the quality and reliability of internal controls and financial and regulatory information used by and issued by the board.
- People and Remuneration subcommittee – which reviews the company's remuneration policies and practices, and reviews and sets the remuneration of the company's CE and LT.
- Sustainability subcommittee – to help ensure the company is meeting its responsibilities around sustainable business practices.

Liability insurance and indemnity

Port Otago arranges comprehensive liability insurance policies for the company, directors and officers within the limits and requirements set out in the Companies Act 1993 and the company's constitution. The company also indemnifies directors and employees within the limits and requirements set out in the Act.

Legislative compliance

The board receives regular updates and representations from management on legislative compliance. Areas of relevant law include industry-specific regulation, health and safety, corporate, taxation, financial reporting, commercial, environmental, human resources and privacy.

Auditor

Ernst & Young, on behalf of the Auditor-General, is auditor of the company.

Our compliance with relevant legislation

Port Otago will continue its legislative compliance programmes and aim to ensure we meet our obligations under relevant legislation and regulations.

Reporting to our shareholders

Port Otago submits its draft SCI to its shareholder for consultation annually, as required under the Port Companies Act 1988. Where appropriate, we will submit a revised SCI to our shareholder. (See Page 14 for performance targets.)

We will submit an annual report to our shareholder. This annual report will include:

- Audited financial statements
- Performance relative to the targets set in this SCI
- Key issues and progress with sustainability
- Other information to enable an informed assessment of the group's performance and financial position.

Port Otago values shareholder communication facilitated by the Port Liaison Committee which enables periodic interchange with our shareholder

We will also submit an interim report to our shareholder. This report will contain unaudited information similar in content to our annual report and will comply with financial reporting standard NZ IAS 34 – Interim Financial Reporting.

Port Otago's accounting policies comply with applicable NZ IFRS standards and interpretations. We have applied the same accounting policies when preparing the SCI's financial forecasts, as for our audited financial statements for the year ended 30 June 2026. Our actual accounting policies during the three-year period of this SCI may change as a result of changes to NZ IFRS standards and interpretations.

No surprises policy

The company will endeavour to inform our shareholder prior to any significant decision being made public and will engage via the Port Liaison Group as required.

The commercial value of our shareholder's investment

Port Otago estimates the commercial value of its shareholder's investment in the group is at least that which is stated as shareholder's equity in our audited financial statements. This is reassessed annually, alongside our audited financial statements.

Activities subject to compensation

The company will provide the following services for the Otago Regional Council, for which Port Otago expects to be remunerated or reimbursed by the council:

- Assistance in matters of good navigation and safety on Otago Harbour.
- Provision of such services as may be requested by the Regional Council.

Otago Regional Council

10 March 2026

Tim Gibson
Chair
Port Otago Limited

By Email: tim@tuhana.co.nz

Dear Tim

Letter of Expectations – Port Otago Limited

This Letter of Expectations (LOE) sets out the Otago Regional Council's (Council) priorities and expectations to inform the development of Port Otago Limited's (Port Otago) draft Statement of Corporate Intent (SCI) for the years ended 30 June 2027 to 30 June 2029.

Context

Port Otago Limited is a port company as defined in the Port Companies Act 1988. The principal objective of every port company is to operate as a successful business.

Port Otago is defined as a strategic asset for Council which recognises the significant benefit the Port brings Council and the entire Otago region. Council is the sole shareholder of Port Otago and dividends derived from this shareholding are used annually to offset Council's general rate requirement ensuring all ratepayers enjoy a direct benefit from ownership of the Port.

Over the years Port Otago has continued to make a vital contribution to the Otago community through its dividend which helps fund Council's services to the Otago environment and people, and also through its direct investment in the regional economy.

Council thanks Port Otago for its contribution and its ongoing commitment to regular collaboration and information sharing with Council staff and elected members.

As part of developing its Long-Term Plan 2024-34, Council updated its strategic directions and identified its priorities for the next three years. That includes Council wanting to place emphasis on working with its partners, stakeholders and communities to identify opportunities to collaborate and deliver on the key focus areas identified in its strategic directions.

As sole shareholder, Council sees Port Otago's SCI as a key mechanism to ensure both entities are aligned in their strategic objectives. Council would like to acknowledge the significant changes the Port Otago's Board has made to the SCI over recent years especially the increased focus on materiality and sustainability. This has included Port Otago establishing a Sustainability Committee which Council is very supportive of.

Council, through this letter of expectation, largely affirms the direction Port Otago has outlined in its existing (2026 to 2028) SCI and wishes to take the opportunity to highlight the key areas Council would like Port Otago to focus on in development of the 2027-2029 SCI.

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Otago Regional Council

Financial

Council endorses Port Otago intention to pay dividends within the range of 50-70% of the group's normalised operating surplus after tax and to maintain an equity ratio of 70-85%.

In preparing its draft Long-Term Plan 2024-34, Council has included that it expects to receive dividends over of the 2027-2029 SCI period of $20 million per annum.

Council expects the $350,000 donation it has historically made to the Otago Southland Rescue Helicopter Trust will now be negotiated and paid by Port Otago in the 2026/27 financial year and subsequent years. If satisfactory arrangements are unable to be negotiated between the Helicopter Trust and the Port, the ability is reserved to return the financial support back to the responsibility of Council.

Environment

Port Otago operates a diverse range of business activities and Council wants to ensure Port Otago's commitment to ongoing environmental stewardship and the environmental impact of their business is adequately considered in the SCI. Council notes this is an area already covered in Port Otago's current SCI and integrated annual report and endorses the continued focus on understanding and mitigating the wider environmental impact of all Port Otago's activities.

Decarbonisation

Council acknowledges the significant focus Port Otago has on reducing its carbon emissions and acknowledges the progress made to date, along with the Port's leadership role in influencing others in the supply chain to reduce their carbon emissions. Council endorses these remaining priorities for Port Otago and anticipates the Port reporting progress back to Council and the wider community.

In addition to maintaining strong commercial performance and dividend discipline, the Council expects Port Otago to continue to steward and, where appropriate, develop strategic assets that preserve long-term earnings capacity, resilience, and optionality for the Otago region. This includes ensuring port-owned infrastructure is assessed not only for short-term financial return, but for its role in supporting the port's "always open" operating system and its contribution to regional economic confidence over the medium to long term.

In closing, Council looks forward to working with Port Otago to reflect the expectations in this letter in developing Port Otago's SCI for the 2027-2029 years.

Yours sincerely

Chairperson, Otago Regional Council

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9.12. Regional Software Holdings Limited Statement of Intent 2026-2027

Prepared for:	Council
Report No.	FIN2611
Activity:	Finance
Author:	Nick Donnelly (General Manager Finance).
Endorsed by:	Nick Donnelly (General Manager Finance)
Date:	29 July 2026
Portfolio Leads:	Cr Malcolm and Cr Gardner, Finance

PURPOSE

[1] To receive Regional Software Holdings Limited's Statement of Intent for 2026-2027.

EXECUTIVE SUMMARY

[2] Regional Software Holdings Limited (RSHL) has delivered its finalised Statement of Intent 2026-2027 (SOI) which sets out the company's objectives, the nature and scope of its activities, performance targets and financial forecasts for the next three financial years.

[3] A draft SOI was received in February 2026 and presented to Council at the 25 March 2026 Council meeting for Council's review. Council did not provide any specific feedback on the draft SOI and that document has now been formally adopted by the Board of RSHL.

[4] Key point to note in the SOI are:

- Services provided by RSHL include the flagship IRIS NextGen Programme, hosting of Te Uru Kahika and other support services to the regional sector including public transport, emissions modelling and well / bore data.
- The board has considering how RSHL should respond to Local Government reform and aiming to reposition RSHL over time to support wider local government through the delivery of national and inter-regional shared services. The purpose and objectives of RSHL have been reworded in the SOI to reflect this.

[5] The budgets included in the SOI are grouped into six activities:

- IRIS Next Generation
- IRIS Classic
- Shared Services
- Te Uru Kahika Support Services
- Public Transport Ticketing Programme
- Corporate

[6] All programmes operate on a cost-recovery basis and the SOI provides details of the fee allocations applied to Council's participating in the various programmes.

[7] The SOI budget for 2026-2027 shows a cash deficit of $460,424 (deficit of $762,219 less amortisation of $301,795, see page 24) which is being funded by cash surpluses held on behalf of specific work programmes.

RECOMMENDATION

That the Council:

*1) **Notes** this report and the attached RSHL Statement of Intent 2026-2027.*

BACKGROUND

[8] Otago Regional Council became a shareholder of RSHL in August 2023.

[9] The purpose of RSHL is to provide high-quality shared services for Local Government (and associated agencies) at a national scale to deliver value to customers, shareholders and their communities.

[10] RSHL enables the local government sector and councils to be better prepared to respond to current and future challenges, achieve better returns on investment and achieve consistent good practice across the sector and within councils.

[11] Otago Regional Council has a 10% shareholding in RSHL Control Shares. RSHL is a Council Controlled Organisation (CCO) owned by 10 Councils.

[12] Section 64 of the Local Government Act 2002 requires CCO's to prepare and adopt a statement of intent. Part 1 of Schedule 8 requires a draft to be sent to shareholders by 1 March, comments considered up to 1 May and the SOI finalised and delivered to shareholders by 30 June.

[13] Section 66 of the Local Government Act 2002 requires CCO's to send a half year report to shareholders within 2 months of the first half of each financial year.

[14] Section 67 of the Local Government Act 2002 requires CCO's to send an annual report to shareholders by 30 September each year.

SUMMARY OF CONSIDERATIONS

COMMUNITY OUTCOMES

This work aligns with the following community outcomes from the ORC 2024-2034 Long-term Plan:

Whole of Organisation

This work supports the whole organisation and, therefore, all Community Outcomes.

ALIGNMENT WITH CENTRAL GOVERNMENT LEGISLATION

There is no specific national policy statement or central government direction that is directly applicable to this work.

ALIGNMENT WITH ORC INTERNAL POLICY

There is no specific ORC policy that is directly applicable to this work.

FINANCIAL CONSIDERATIONS
The budget for this work was approved through the 2024-2034 Long-Term Plan / 2026-2027 Annual Plan and comes from the various activity budgets for the work programmes outlined in the SOI.

LEGAL/COMPLIANCE RISK
There is insignificant/minor risk that decisions arising from this report could expose Council to litigation, regulatory non-compliance, or breach of policy/legislation.

REPUTATIONAL RISK
There is insignificant/minor risk that decisions arising from this report could adversely impact Council's reputation or community trust.

CLIMATE RESILIENCE
The impacts of climate-related risks (e.g. flooding, drought, extreme winds, coastal erosion, wildfires) on this work has not been assessed.

CARBON EMISSIONS
The implications of this work on organisational or regional greenhouse gas emissions has not been assessed.

HE MAHI RAU RIKA: SIGNIFICANCE, ENGAGEMENT AND MĀORI PARTICIPATION POLICY
Not Applicable.

ENGAGEMENT WITH MANA WHENUA
There has been no engagement with mana whenua or Māori specifically for this work.

STAKEHOLDER ENGAGEMENT
There has been no engagement with external stakeholders and/or the public specifically for this work.

COMMUNICATIONS
The final version of the Statement of Intent 2026-2027 will be published on Council's website.

NEXT STEPS

[15] The final version of the Statement of Intent 2026-2027 will be published on Council's website.

ATTACHMENTS

1. RSHL Statement of Intent 2026-27 [**9.13.1** - 38 pages]

Council Meeting - 29 July 2026

Regional Software Holdings Ltd—2026-2027 Statement of Intent

Document ID : RSHL-1877002180-17486

1. Kupu Takamua | Foreword

Regional Software Holdings Limited (RSHL) is pleased to present its 2026-27 Statement of Intent.

RSHL enables councils to act collaboratively and deliver solutions that, in the normal course of events, would be unaffordable or unachievable.

This statement of intent shows the depth and breadth of services that RSHL is providing. This includes our flagship IRIS NextGen Programme focussed on regulatory systems and processes, and our support services agreement with Te Uru Kahika. Alongside those cornerstone programmes we deliver services in many other domains, including transport, emissions modelling, wells & bores and others.

RSHL has delivered significant operational and financial benefits to the regional sector. Shareholders can be confident in our continued commitment to deliver these benefits and increase our delivery of customer value over time.

RSHL is of course aware of reform initiatives that will fundamentally change local government in New Zealand. While delivering value to our customers is our primary focus, we must also have an eye to the future. With the support of our shareholders, it is our intention to position RSHL to support local government through the delivery of national and inter-regional shared services. We believe this to be a critical service that we can provide to local government, consistent with our purpose. We are grateful that feedback received from our shareholders on our draft Statement of Intent supported the view that this purpose transcends the final shape of local government. We continue to welcome shareholders feedback on our intent to reposition RSHL for the future.

Going forward our purpose and objectives are as follows:

Purpose
To provide high-quality shared services for Local Government (and associated agencies) at a national scale to deliver value to shareholders, customers, and their communities.

Objectives
Primary objectives

- Ensure the local government sector is better prepared to respond to current and future challenges.
- Achieve a better return on investment with a focus on quality of outcome and realising the value proposition for the sector.
- Achieve consistent good practise process across the sector and within councils.

Supporting objectives

- Increase credibility of the sector as a trusted deliverer with a unified and consistent sector profile.
- Improve key staff attraction and retention.

In the short term our primary focus is the successful implementation of IRIS NextGen in participating councils and supporting the sector to navigate resource management reform. We are constantly seeking to improve the value of the services we provide and looking for new ways to contribute to the sector.

The challenges and opportunities presented to local government are many. The best outcomes for our communities and country will be achieved if we work together. RSHL looks forward to playing a part in the creation of our shared future.

Nāku noa nā

Bruce Robertson

Board Chair

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3. Kupu Whakataki | Introduction

This Statement of Intent is a declaration of the activities and intentions of Regional Software Holdings Limited (RSHL). The statement outlines the Directors' accountabilities to the shareholders for corporate performance, as is intended by Schedule 8 of the Local Government Act 2002.

Subsidiaries

RSHL has no subsidiaries or joint ventures.

Purpose

To provide high-quality shared services for Local Government (and associated agencies) at a national scale to deliver value to customers, shareholders and their communities.

Objectives

Primary objectives

- Ensure the local government sector is better prepared to respond to current and future challenges.
- Achieve a better return on investment with a focus on quality of outcome and realising the value proposition for the sector.
- Achieve consistent good practise process across the sector and within councils.

Supporting objectives

- Increase credibility of the sector as a trusted deliverer with a unified and consistent sector profile.
- Improve key staff attraction and retention.

Values

In all RSHL decisions and interactions the Board and staff, together with sector participants who may be working within the RSHL framework, will observe the following values and ethos:

- We are forward thinking and innovative.
- We are focussed on delivering value.
- We are professional and accountable.
- We are flexible and open.

Environmental and Sustainability Ethics

As part of the local government sector, we are fully cognisant of the realities of climate change. We are committed to reducing our environmental impact and promoting sustainability in all our operations. We will continue to look for ways to reduce our carbon footprint, conserve natural resources, and minimise our environmental impact.

4. Te Āhua me te Hōkaitanga o ngā Mahi ka Whakahaeretia | Nature and Scope of Activities to be Undertaken

RSHL provides a framework for collaboration in local government, supporting and delivering shared services on a national scale.

We develop and support shared solutions that drive greater consistency and efficiency to reduce cost. RSHL provides a more cost-effective alternative than individual councils can achieve on their own.

The company operates by facilitating collaborative initiatives between councils and through managed contractual arrangements.

RSHL activities are grouped as follows:

Activity	Description
IRIS Next Generation Programme	Ten councils are working with RSHL and Datacom on the delivery of the IRIS NextGen Programme, under a formal partnership agreement. The goal of the IRIS NextGen Programme is to deliver game-changing productivity improvements to the regional sector through sector alignment around good practice process, supported by fit for purpose software. IRIS Next Generation (IRIS NextGen) will be a cloud-based Software as a Service solution (SaaS) based on the Datacom Datascape platform. IRIS NextGen will deliver a modern software platform to councils, including an online customer portal and a mobile field service application. Along with the software solution, the programme will implement consistent “good practice” processes for the sector, IRIS NextGen will: • Make council staff work easier. • Promote operational excellence and efficiency. • Demonstrate collaboration at a sector level. • Ensure the development of the technical solution is fit for purpose. Over the next two years the IRIS NextGen Programme will roll out the software platform to the councils, starting with implementation at the pilot council in 2026. *Performance* When assessing the performance of the IRIS NextGen Programme we consider whether RSHL has appropriately managed the programme. This includes budget, vendor management, product roadmap and communications with councils. We place an emphasis on predictability, delivery and consistency. Performance against budget, delivery against milestones, and customer feedback are used to assess performance.

Regional Software Holdings Ltd—2026-2027 Statement of Intent

Activity	Description
Te Uru Kahika Support Services	Te Uru Kahika Is the collective name for the 16 Regional Councils and Unitary Authorities in New Zealand. Through Te Uru Kahika, the regional sector: • Shares knowledge and resources between councils, • Coordinates input into national direction setting, • Works together to more effectively implement central government policy and respond to nationally significant events. The Virtual Office of Te Uru Kahika is made up of a team who coordinate the activity of cross-functional groups from different councils. RSHL provides support services that enable Te Uru Kahika to achieve its objectives. Te Uru Kahika organises its activities into Work Programmes. RSHL collects funding from councils for each of these programmes in a coordinated way, contracts service providers to assist with the delivery of the programmes, pays provider and reports on the use of the funding. The services that RSHL provides to Te Uru Kahika are defined in a Memorandum of Agreement. When assessing RSHL's performance for this activity, the focus is different for each service. The performance measures are defined in the MoA. These services are: **Financial/Operations Management** — These are foundational services, the focus is on compliance with policy, alignment with good practice. **Operation of shared services/solutions.** — The focus is on achieving the intended outcome of the shared service, while effectively managing staff and finances. **Employment of Staff** — The focus is on providing a working environment where staff are supported, motivated and safe. **Programme Management** — The focus is on delivering high quality, skilled and trusted programme management, so that Te Uru Kahika maximises the benefits of investment into shared programmes. **Management Services (As requested)** — The focus is on being an enabler and problem solver, allowing Te Uru Kahika to maintain momentum towards its goals.

Regional Software Holdings Ltd—2026-2027 Statement of Intent

Shared Services	RSHL operates shared services and solutions for councils. These services involve the engagement of a vendor to deliver a solution to a group of councils.
	RSHL leads councils through a process to define their shared objectives. RSHL then works with councils and vendors to implement a solution.
	RSHL is constantly evaluating new opportunities to deliver more value to the regional sector through shared services and solutions.
	
	Current Shared Services
	WellsNZ
	Service Description:
	Regional and Unitary Councils collect and manage large amounts of data on wells, geothermal bores and galleries. This data is essential for planning, consenting, compliance and science processes. It is also a valuable resource for well owners, drilling companies and consultants. Through the WellsNZ website, Te Uru Kahika presents data on location, construction, geology and more.
	Participating Organisations:
	Auckland Council, Waikato Regional Council, Environment Canterbury, Otago Regional Council, Bay of Plenty Regional Council, Greater Wellington Regional Council, Marlborough District Council.
	Objectives:
	• To make data about Wells and Bores more easily available to all stakeholders.
	• To develop and apply consistent standards for the recording of data about wells and bores.
	Link:
	https://wellsnz.teurukahika.nz/
	
	Data Emissions Platform
	Service Description:
	The solution provided is a web-based data analytics platform to support historical, current and future community greenhouse gas emissions reporting based on the GPC methodology and identification of decarbonisation pathways.
	Participating Organisations:
	• Northland Regional Council
	  ○ Whangarei City Council
	  ○ Far North District Council
	• Auckland Council
	• Waikato Regional Council
	  ○ Hamilton City Council
	• Bay of Plenty Regional Council
	  ○ Tauranga City Council
	  ○ Western Bay of Plenty District Council
	  ○ Whakatane District Council
	  ○ Rotorua Lakes Council
	• Gisborne District Council
	• Hawkes Bay Regional Council
	• Nelson City Council
	• Tasman District Council
	• Environment Canterbury
	  ○ Selwyn District
	  ○ Waimakariri District
	  ○ Ashburton District Council
	  ○ Christchurch City Council
	  ○ Hurunui District Council
	  ○ Mackenzie District Council
	  ○ Timaru District Council

Activity	Description
	○ Waimate District Council ○ Waitaki District Council ○ Kaikōura District Council • Kapiti Coast District Council • Ministry for the Environment **Objectives:** To enable a consistent and cost-effective approach for local government to understand and report on local emissions profiles and projections, to support evidenced-based decisions on emissions reduction priorities and actions using a standardised platform.
	N-Cap **Service Description:** The N-Cap solution allows farmers and their representatives to record their synthetic nitrogen use via an online portal, OR alternatively to submit the required records through their fertiliser company. **Participating Organisations:** All Regional Sector Councils. **Objectives:** • To provide farmers with a pathway to meet their obligation to record synthetic nitrogen use under regulations that came into force in 2022. • To provide regional councils with the tools they need to meet their regulatory responsibilities. • To ensure national consistency on the rollout of the N-Cap Regulations. **Link:** https://n-cap.teurukahika.govt.nz
	Retrolens **Service Description:** Retrolens allows public access to historical aerial photography of New Zealand. **Participating Organisations:** Retrolens is overseen by The Local Government Geospatial Alliance (LGGA) which includes representatives from all Regional Sector Councils, and a number of local authorities. **Objectives:** To inform and educate the public on historical changes to the landscape in New Zealand. **Link:** https://retrolens.co.nz/

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Activity	Description
Public Transport Ticketing Programme	This team is responsible for operation of the Regional Integrated Ticketing System (Bee Card) in use at 11 councils. The participating councils are: • Invercargill City Council • Otago Regional Council • Nelson City Council • Taranaki Regional Council • Horizons Regional Council • Hawkes Bay Regional Council • Bay of Plenty Regional Council • Waikato Regional Council • Northland Regional Council • Gisborne District Council. The focus of that activity is on ensuring system and vendor performance is maintained during the transition to NTS, and that councils can transition seamlessly. The team is also coordinating the rollout of the National Ticketing System (Motu Move) to these 10 councils by 2028. The focus of that activity is ensuring participating Councils are adequately represented and that the solution provided matches expectations. *Performance* When assessing the performance of both these workstreams, we consider whether RSHL has appropriately managed the programmes. This includes budgets, vendor management (for Bee Card), communications with councils and broader stakeholder engagement.
IRIS Programme	The IRIS Programme delivers the IRIS software platform to shareholder and customer councils. The IRIS software has been in use for 10 years and is currently in use at 7 councils. The 7 councils actively collaborate on the use of IRIS and the future development roadmap. The IRIS Programme is overseen by the IRIS Advisory Group. This group agrees the roadmap and sets the budgets for the programme. RSHL and the member councils will replace the IRIS software platform via IRIS NextGen by the end of 2028. This means that the programme is now in the sunset phase. Expenditure is kept to a minimum to allow councils and staff to focus on IRIS NextGen. *Performance* When assessing the performance of the IRIS Programme we consider whether RSHL has appropriately managed the programme. This includes budget, vendor management, product roadmap and communications with councils. We place an emphasis on value, predictability, and delivery. Performance against budget and delivery of releases are used to assess performance.

5. Ngā Tūpono Āheinga hei Whanaketanga | Possible Opportunities for Growth

RSHL constantly seeks to increase the value delivered to shareholders, councils and the local government sector.

New opportunities will be identified, and priorities set in the Business Plan. Other opportunities may arise and be investigated on a case-by-case basis. New activities will require explicit Board approval.

The primary market for RSHL to offer products and services is New Zealand regional councils and unitary Authorities. The secondary market is the wider local government sector.

Current Opportunities in development:

- We are currently working with 4 councils to assess the feasibility of creating a subsidiary of RSHL to deliver the Clean Vessel Plan in the top part of the North Island.
- We are currently engaging with MCERT on opportunities for RSHL to support the implementation of the new planning system, through the IRIS NextGen Programme.

6. Te Huarahi Whāinga a te Poari ki te Mana Whakahaere | Board's Approach to Governance

The Board is the overall body responsible for all decision-making within the company. The Board is accountable to its shareholders for the financial and non-financial performance of the company.

Directors' behaviour is to comply with Institute of Directors' standards for Code of Conduct. The purpose of the code is to clarify how the Board of Directors shall define and deal with:

- The role and fundamental obligations of the Board,
- Independence and conflict of interest, including conflict with management,
- Board procedures, including the role of the Chairman and interaction with the Chief Executive,
- Reliance on information and independent advice,
- Confidentiality of company information,
- Board and Director performance review and development.

RSHL will conduct itself in accordance with its Constitution, its annual Statement of Intent agreed with shareholders, the provisions of the Local Government Act 2002 and the Companies Act 1993.

Members of the RSHL Board of Directors are appointed by the shareholders according to the company constitution.

Board Composition

The board is made up of up to 6 council directors and up to 3 independent directors. The council directors are senior staff from shareholding councils, but do not represent their councils in their duties as a board member.

Each year 2 directors retire by rotation and the shareholders appoint replacements at the Annual General Meeting, which is to be held before 30 December each year.

With the support of shareholders, in response to the increase in scale of the organisation and the complexity of the operating environment the board has appointed Bruce Robertson as Independent Chair. This change was signalled in the FY26 Statement of Intent.

7. Ngā Poutohutohu | Directors

The following directors are in office on 1 July 2026

Director	Council
Asbjorn Aakjaer	Independent
Janine Becker	Waikato Regional Council
Bruce Robertson	Independent (Chair)
Michael Nield	Taranaki Regional Council
Ged Shirley	Horizons Regional Council
Mat Taylor	Bay of Plenty Regional Council
Patrick Ng	Southland Regional Council

Interest Register

All directors listed their interests in the register on being appointed to the company and interest are reviewed at each board meeting. The following interests are registered:

Director	Organisation	Interest
Janine Becker	Waikato Regional Council	Director, Customer & Corporate Services, Waikato RC (an RSHL Shareholding Council)
Mike Nield	Taranaki Regional Council Taranaki Stadium Trust	Director, Corporate Services Taranaki RC (an RSHL Shareholding Council) Trustee
Ged Shirley	Horizons Regional Council	General Manager, Regional Services & Information Horizons RC (an RSHL Shareholding Council)
Asbjorn Aakjaer	Negotiate Limited Aakjaer Trustee Company Ice Bear Holdings Limited EMD Advantage Limited (Infor Channel partner) Waikato Regional Council Healthcare Logistics (a division of EBOS Group Limited)	Director & Shareholder Director & Shareholder Director & Shareholder Independent Chairperson Negotiate Limited provides post implementation support to the WRC Finance Team. Employed to deliver Supply Chain transformation.
Bruce Robertson	R B Robertson Limited Ministry of Primary Industries (MPI) Local Authorities: Thames-Coromandel District Council Taupo District Council Bay of Plenty Regional Council Gisborne District Council Napier City Council South Wairarapa District Council Kapiti Coast District Council Timaru District Council Central Otago District Council Southland District Council Christchurch City Council Kaipara District Council New Plymouth District Council Dunedin City Council Upper Hutt City Council	Director and Shareholder (Governance and advisory services). Audit & Risk Committee Chair Audit & Risk Committee Chair Audit & Risk Committee Chair Audit & Risk Committee Deputy Chair Audit & Risk Committee Chair Audit & Risk Committee Chair Audit & Risk Committee Chair Audit & Risk Committee Chair Audit & Risk Committee Chair Audit & Risk Committee Chair Audit & Risk Committee Chair Audit & Risk Committee Chair Audit & Risk Committee Chair Audit & Risk Committee Chair Audit & Risk Committee Chair Audit & Risk Committee Chair

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Patrick Ng	Southland Regional Council Ava Technologies Limited	General Manager Corporate Services, Southland RC (an RSHL Shareholding Council) Director
Mat Taylor	Bay of Plenty Regional Council	Tumu Herenga Mahi, General Manager Corporate, Bay of Plenty RC (an RSHL Shareholding Council)

8. Ngā Ūnga Mahi me Ētahi Atu Ine | Performance Targets and Other Measures

Performance targets by which success may be judged in relation to our objectives are:

Theme: Programme Delivery

Performance Statement: We will maintain a high standard of delivery of our programmes to customers.

Target	Timing
All projects and programmes will follow an appropriate approval pathway for their size, scope and complexity. All programmes will have an effective governance structure and planning processes appropriate to the size and complexity of the programme. Draft plans and budgets will be set before 1 March, final plans and budgets will be set by 30 June. An independent assurance review will be completed for major programmes each year.	To be completed by 30 June each year.
All programmes will meet agreed delivery targets set by the programme governance group each year. Annual performance surveys will be completed with participating councils. Survey feedback will be considered and actioned where appropriate – including sharing feedback with the Board.	November each year.

Theme: Service Delivery

Performance Statement: We will maintain a high standard of delivery of our services to customers.

Target	Timing
All services are clearly defined, including service definition, service level expectations and funding models.	To be completed by 30 June each year.
All services will have an effective customer advisory structure appropriate to the size and complexity of the service.	To be completed by 30 June each year.
All services will meet or exceed agreed service level expectations each year.	To be completed by 30 June each year.

*Services delivered by RSHL are defined currently under a range of Statements of Work, Memorandum of Understanding/Agreement, and scope documents. In FY2026 we will consolidate these services under standard service agreement documents.

Theme : Operational Excellence

Performance Statement: We will set a high standard for the governance and management of the company.

Target	Timing
We will operate within approved budget, with any material variations approved by the board.	Assessed at year-end.
We will meet all statutory governance and reporting deadlines.	Assessed in July for the previous year.
The board will operate according to the Institute of Directors' Code of Practice.	Self-assessment to be completed in June for the previous financial year.

9. Ngā Mōhiohio Kaiwhaipānga | Shareholders Information

Shareholding

Regional Software Holdings Limited (RSHL) was formed on 17 October 2012. At the time of formation, the company issued 10,000 shares to its shareholders based on a previously agreed sizing formula.
In 2022 as part of the restructure of the Company a new shareholders' agreement and constitution were adopted. The company:

- Issued a single Class A "Controlling" Share to each existing shareholder of the Company.
- created a Class B shareholding which holds the ownership rights over IRIS classic. All Ordinary Shares in the Company were converted to Class B Shares. This enabled the founding shareholders to retain their rights and ownership of the IRIS asset and to reduce the impact of the transition the current shareholding.
- Issued a single Class A share to Bay of Plenty Regional Council, Gisborne District Council and Hawke's Bay Regional Council on completion of the necessary processes and documents.

In August 2023 Otago Regional Council completed the necessary process to become a shareholder and was issued a single Class A share.

The current shareholding of the Company is as follows.

Organisation	Class A (Control) Shares	Class B (IRIS) Shares
Waikato Regional Council	1	3,275
Northland Regional Council	1	1,675
Horizons Regional Council	1	1,550
Taranaki Regional Council	1	1,550
Southland Regional Council	1	1,550
West Coast Regional Council	1	400
Bay of Plenty Regional Council	1	
Gisborne District Council	1	
Hawke's Bay Regional Council	1	
Otago Regional Council	1	

Estimate of Commercial Value of The Shareholder's Investment

The Directors' estimate of the commercial value of the Shareholders' investment in RSHL and any subsidiary companies is equal to the Shareholders' equity in the Company. Reassessment of the value of this shareholding shall be undertaken on or about 30 June each year.

Distribution of Profits to Shareholders

RSHL does not have an objective to make a profit. It seeks to provide products and services at lower costs, and/or higher levels of service than councils can achieve on their own.

In order for RSHL to be subject to tax, generally it must meet the business test. Fundamental to this is a profit motive. Given the basis under which this CCO operates is to minimise the costs and generally operate on a cost recovery basis and that a pecuniary profit is not intended and highly unlikely, the lack of a profit motive is real.

As a CCO, RSHL is required to be subject to tax on its income. Under tax law, RSHL is considered a business which is carried on for the purpose of profit. However, RSHL operates on a cost recovery basis and seeks to minimise costs to customers. Because of this the company is unlikely to operate at a profit.

Regional Software Holdings Ltd—2026-2027 Statement of Intent

Information to Be Provided to the Shareholders

The company will deliver the following Statements to shareholders:

- Within two months of the end of the first half of the financial year the following unaudited statements: **Statement of Financial Performance, Statement of Financial Position, Statement of Cashflows and Service Performance.**
- Within three months of the end of the financial year the following audited[1] statements: **Statement of Financial Performance, Statement of Financial Position, Statement of Cashflows, Service Performance** plus a summary of how the company has fared against its objectives and prospects for the next financial year, and a report on the company's medium to long-term plans.
- The Directors shall approve by 1 March of each year a **Draft Statement of Intent** for the consideration of shareholders. The Directors must then consider any comments on the Draft Statement of Intent that are made by the shareholders and deliver the completed Statement of Intent to the shareholders by 30 June each year.
- Any new developments which have not been covered in the statement of corporate intent for the year. Including, but not limited to, an update on any outcomes arising from any changes in shareholding, including the effect on individual Council's shareholdings and apportionment of costs.
- Details of possible scenarios that might be foreseen that could result in annual fees increasing above approved budgets.
- Any other information which would normally be available to a shareholder, thereby enabling the shareholder to assess the value of its investment in the company.

[1] Delivery of audited statements is subject to availability of suitably qualified auditors from AuditNZ.

Procedures for Major Transactions and Other Acquisitions and Disposals

The Company will not enter into major transactions as defined in Section 129(2) of the Companies Act 1993 without the consent of the shareholders by special resolution.

Procedures for Issue of Shares

The RSHL shareholder agreement requires the approval 75% of the Directors of the company for “the issuing or acquisition of any Shares or any change to the rights attaching to any Shares”.

10. Ngā Mahi e Rapua Nei Te Utu Paremata | Activities for Which Compensation Is Sought

Payment of annual fees will be sought for the following activities:

<table>
<tr><th>Activity</th><th>Description</th></tr>
<tr><td>IRIS Next Generation</td><td>The IRIS NextGen Partnership agreement sets out the funding to be collected from each participating council and the activities that the funds will be used for. The 10 Participating Councils share the programme costs of the IRIS NextGen programme according to the following contribution model:
<table>
<tr><th>Large Councils</th><th>Medium Councils</th><th>Small Councils</th></tr>
<tr><td>17.20% per council (Total 34.40%)</td><td>10.40% per council (Total 41.60%)</td><td>4.20% per council (Total 8.40%)</td></tr>
<tr><td rowspan="3">Waikato Regional Council
Bay of Plenty Regional Council</td><td>Horizons Regional Council
Otago Regional Council
Northland Regional Council
Hawke’s Bay Regional Council</td><td rowspan="3">Nelson City Council
West Coast Regional Council</td></tr>
<tr><td>7.80% per council (Total 15.60%)</td></tr>
<tr><td>Taranaki Regional Council
Southland Regional Council</td></tr>
</table>
Over the 10-year term of the Partnership Agreement, the programme costs are expected to total $31.8M

Programme costs include:

• Datacom software solution delivery
• Datacom programme management
• Datacom support and maintenance
• Datacom council implementation costs
• Datacom Good Practice Process Operating Model development
• RSHL programme management
• Travel and meeting expenses.
• RSHL Corporate Costs

In FY27 RSHL expects to collect $4.7M from participating councils for IRIS NextGen. In addition, there will be a budget provision to collect a contingency if required and approved by the IRIS NextGen Steering Group. The contingency provision for FY2027 is $538K.

In addition to the shared programme costs stated above, each Participating Council will directly incur costs. These costs are the responsibility of each Participating Council and will not be shared according to the council contribution model.</td></tr>
</table>

Regional Software Holdings Ltd—2026-2027 Statement of Intent

Te Uru Kahika Support Services	Payment of annual contributions will be sought from all Te Uru Kahika councils for the operation of the programmes within the Te Uru Kahika construct. For some programmes, additional contributions may be sought from other local government organisations and government ministries. Contributions will be according to the agreed models. This activity includes: • Bio-Management • Science & Data • Freshwater • Kaupapa Māori • Climate Adaptation • Transport • Resource Management • Local Government Reform • Business Services The funding contribution for most programmes is based on the size of the Council. The total amounts to be collected vary year to year based on the work programmes. *Auckland Council does not fund all sector programmes. In cases where they do not fund a programme, their contribution will be collected from the remaining councils according to the model above. BioControl, and the Science & Data Programme have custom funding models based on the value of the programmes to the region. The budget and funding arrangements for Te Uru Kahika are documented in the Briefing Paper which is approved with the Te Uru Kahika Business Plan before the start of each financial year. In FY27 RSHL expects to collect $5M in funding from councils for Te Uru Kahika.

Tier 1 – 9.4% each	**Tier 2 – 6.2% each**	**Tier 3 – 3.2% each**
Auckland Council*	Horizons RC	Tasman DC
Environment Canterbury	Otago RC	Nelson City Council
Greater Wellington RC	Hawke's Bay RC	Gisborne DC
Waikato RC	Northland RC	Marlborough DC
Bay of Plenty RC	Taranaki RC	West Coast RC
	Southland RC	
Total 47%	**Total 37%**	**Total 16%**

Regional Software Holdings Ltd—2026-2027 Statement of Intent

<table>
<tr>
<td>Shared Services</td>
<td>WellsNZ</td>
<td>Contributions will be collected from councils participating in the programme according to the agreed funding model.

Funding is collected for support and maintenance of the WellsNZ solution and also for repayment of the loan provided by Environment Canterbury which was used to fund the development of the solution.

It is anticipated that one new council will sign up for this service in FY27. Total funding to be collected is ~$270K, collected according to the following model:

<table>
<tr><th>Council</th><th>% Service Contribution</th></tr>
<tr><td>Environment Canterbury</td><td>16.67</td></tr>
<tr><td>Waikato Regional Council</td><td>16.67</td></tr>
<tr><td>Auckland Regional Council</td><td>16.67</td></tr>
<tr><td>Bay of Plenty Regional Council</td><td>16.67</td></tr>
<tr><td>Greater Wellington Regional Council</td><td>16.67</td></tr>
<tr><td>Marlborough Regional Council</td><td>5.56</td></tr>
<tr><td>Otago Regional Council</td><td>11.11</td></tr>
<tr><td>Total</td><td>100.00</td></tr>
</table>
</td>
<td></td>
</tr>
<tr>
<td>Data Emissions Platform</td>
<td></td>
<td>Service Description:
The solution provided is a web-based data analytics platform to support historical, current and future community greenhouse gas emissions reporting based on the GPC methodology and identification of decarbonisation pathways.

Contributions will be based on a regional model with a funding allocation from each participating region, with the councils within each region determining how the contribution will be allocated.

The total funding amount to be collected in FY27 is $425K.</td>
<td></td>
</tr>
<tr>
<td>N-Cap</td>
<td></td>
<td>Service Description: The N-Cap solution allows farmers and their representatives to record their synthetic nitrogen use via an online portal, OR alternatively to submit the required records through their fertiliser company.

The N-Cap solution is funded from contributions collected Te Uru Kahika Essential Freshwater Programme. The total allocated for N-Cap is $28K.</td>
<td></td>
</tr>
<tr>
<td>Retrolens</td>
<td></td>
<td>Service Description:
Retrolens allows public access to historical aerial photography of New Zealand.

The total funding to be collected in FY2026 is budgeted as $50K. 50% of this is budgeted to be collected from Land Information New Zealand | Toitū Te Whenua, with the balance to be collected from the Te Uru Kahika councils using the standard ReCoCo model.

<table>
<tr><th>Category</th><th>% Share</th><th>Council</th></tr>
<tr><td rowspan="3">Large Councils</td><td rowspan="3">9.40%</td><td>Auckland</td></tr>
<tr><td>Environment Canterbury</td></tr>
<tr><td>Waikato Region Council</td></tr>
</table>
</td>
<td></td>
</tr>
</table>

				Greater Wellington Regional Council
				Bay of Plenty Regional Council
		Medium Councils	6.20%	Horizons Regional Council
				Otago Regional Council
				Hawkes Bay Regional Council
				Northland Regional Council
				Taranaki Regional Council
				Southland Regional Council
		Small Councils	3.20%	Tasman District Council
				Nelson City Council
				Gisborne District Council
				Marlborough District Council
				West Coast Regional Council.

Public Transport Ticketing Programme

10 Councils contribute to the Public Transport Ticketing System Programme under a funding agreement signed by RSHL in 2024.
Contributions are collected according to the following model agreed by the councils and RSHL.

Council	Cost share %
Waikato Regional Council	24.3%
Bay of Plenty Regional Council	24.3%
Otago Regional Council	24.3%
Horizons Regional Council	6.3%
Hawkes Bay Regional Council	6.3%
Taranaki Regional Council	2.9%
Nelson City Council	2.9%
Invercargill City Council	2.9%
Northland Regional Council	2.9%
Gisborne District Council	2.9%

$2M in funding is budgeted to be collected from participating councils in FY27

<table>
<tr>
<td>IRIS</td>
<td>
Payment of an Annual Fee for IRIS will be sought from all councils that use the Software for annual support and development fees, as set out in the License Agreement.

Proportion of Contributions to the IRIS Programme
Contributions for IRIS will be collected in the following proportions.
<table>
<tr><th>Council</th><th>Share</th></tr>
<tr><td>Waikato Regional Council</td><td>32.39%</td></tr>
<tr><td>Northland Regional Council</td><td>11.93%</td></tr>
<tr><td>Horizons Regional Council</td><td>16.00%</td></tr>
<tr><td>Taranaki Regional Council</td><td>11.93%</td></tr>
<tr><td>Southland Regional Council</td><td>11.93%</td></tr>
<tr><td>West Coast Regional Council</td><td>3.87%</td></tr>
<tr><td>Hawkes Bay Regional Council</td><td>11.93%</td></tr>
</table>
In FY27 RSHL expects to collect $533K in funding from participating councils with the remainder of the programme funded from surplus funds from previous years held by RSHL.
</td>
</tr>
<tr>
<td>RSHL Corporate Costs</td>
<td>
Corporate costs are for the operation and development of the company.

All work programmes will contribute to RSHL Corporate Costs, with the contribution based on the programmes proportion of revenue in the financial year.

In the 2027 Financial year (and the following 2 years) the budgeted proportion of Corporate Costs to each programme is as follows:
<table>
<tr><th></th><th>2025/26</th><th>2026/27</th><th>27/28</th><th>28/29</th></tr>
<tr><td>IRIS</td><td>3.0%</td><td>3.9%</td><td>3%</td><td>3%</td></tr>
<tr><td>IRIS NextGen</td><td>35.3%</td><td>38.5%</td><td>45%</td><td>22%</td></tr>
<tr><td>Te Uru Kahika</td><td>48.6%</td><td>36.5%</td><td>39%</td><td>65%</td></tr>
<tr><td>Shared Services</td><td></td><td>6.1%</td><td>5.7%</td><td>10%</td></tr>
<tr><td>PTTP</td><td>13.1%</td><td>15.0%</td><td>8%</td><td>0%</td></tr>
</table>
RSHL Corporate budget is typically stable year-to-year, with a number of recurring costs such as audit and accounting fees, insurance, staff salaries and insurance.

In FY27 the budget includes one-off costs for development of a new name for the organisation ($20K).

In FY27, the RSHL Corporate activity is budgeted to have a deficit of $568K to be recovered from work programmes.
</td>
</tr>
</table>

It is noted that other products or services may be delivered by RSHL. Any such services will only be delivered after the Directors have considered each individual business case including the proposed budget and agreed that the proposed service meets the objectives of RSHL.

Any ongoing activities to identify, develop or procure additional products or services will be budgeted for in advance, subject to a business case. The subsequent recovery of costs will be agreed on a case-by-case basis.

11. Ngā Tahua FY2026 | FY2027 Budgets.

The budgets provided in this Statement of Intent are based on the latest budget information from each activity.

Budgeting process.

Budgets are structured into four activities. Each of these activities receives funding from a different group of organisations, with different funding models and governance.

Activity	Budget Setting	Contractual Basis	Funded by
IRIS NextGen	IRIS NextGen Steering Group.	IRIS NextGen Partnership Agreement. The Programme has a 10 year budget which is set by agreement with the participating councils and RSHL.	10 Participant councils.
IRIS	IRIS Advisory Group	IRIS Advisory Group Terms of Reference.	7 Participating Councils.
Te Uru Kahika Support Services	Te Uru Kahika RCEOs Group	Te Uru Kahika Services Agreement and various service agreements/Statements of Work.	16 participating councils, and government entities.
Shared Services	RSHL Board and service steering groups	Service Agreements	Participating councils.
Public Transport Ticketing Programme	The budget and work programme for PTTP is set by the Transport Ticketing Governance Group on behalf of the participating councils.	Funding Agreement	11 Participating councils.

- The IRIS NextGen Partnership agreement stipulates that they will prepare a draft budget in February and final budget in June. This aligns with the SOI Process. The draft budget will also be sent directly to each participating councils for feedback in March/April.
- For IRIS, common practice is to prepare a budget when the SOI budget is developed which is then ratified with participating councils.
- Budget setting for Te Uru Kahika aligns with the Te Uru Kahika Business Plan. Planning is coordinated by the Te Uru Kahika Executive Director.
- Other shared services budgeting is completed by their respective governance groups.

Regional Software Holdings Ltd—2026-2027 Statement of Intent

Consolidated Statement of Financial Performance

For the 12 Months to 30 June 2027

2025/26 SOI Budget		2026/27 Budget	2027/28 Indicative	2028/29 Indicative
	Income			
522,571	IRIS Programme	533,066	418,361	248,293
4,146,603	IRIS NextGen Programme	5,217,809	6,443,669	1,919,480
3,946,179	Te Uru Kahika Core Funding	3,637,429	4,446,349	4,438,051
622,703	Te Uru Kahika Alternate Funding	813,937	722,532	721,183
369,164	Te Uru Kahika 3rd Party Funding	499,598	389,056	388,329
786,317	Shared Services	826,450	820,082	848,538
1,784,357	Public Transport Ticketing Programme	2,027,007	1,086,499	-
-	Central Government Funding	-	-	
12,177,895		*13,555,297*	*14,326,547*	*8,563,876*
	Other Income			
25,000	Interest Received	60,000	60,000	60,000
70,414	Council Specific Software Funding	-	-	-
95,414		*60,000*	*60,000*	*60,000*
12,273,309	**Total Income**	**13,615,297**	**14,386,547**	**8,623,876**
	Expenditure			
600	Bank Fees	800	800	816
100,360	Accounting & Technical Support	97,800	99,756	101,751
72,131	Audit Fees	76,000	77,520	79,070
52,510	Legal and HR Advice	52,510	42,860	33,217
300,000	Datacom Support Services (IRIS)	330,000	336,000	170,000
3,289,170	Technology Services	3,997,721	5,214,106	1,195,231
148,850	IT Hosting Charges	485,878	494,996	384,204
112,901	Loan Onpayment	108,273	103,644	103,644
-	Finance Costs	-	-	-
125,713	Training Providers	129,420	132,008	134,648
2,804,187	Personnel Costs	2,707,093	2,659,275	2,316,505
350,000	Contractors	-	-	-
217,990	Communications Services	359,058	366,239	373,564
1,330,050	Subject Matter Consultants	1,005,345	1,025,451	1,045,960
1,329,856	Service Providers	1,423,449	1,420,089	1,392,161
2,223,599	Project Services	2,329,924	1,417,413	472,706
13,000	Promotional Costs	30,300	13,506	13,716
103,348	Governance	110,855	110,702	112,790
289,644	Travel & Meeting Costs	320,424	325,532	251,197
80,000	IT Support Services	83,200	84,864	82,361
70,414	Council Specific Software Purchases	-	-	-
2,000	Staff Support Services	2,060	2,101	- 2,057
3,642	Software Subscriptions	12,500	7,550	7,601
80,668	General Consulting	413,112	421,374	332,433
13,100,633		**14,075,721**	**14,355,787**	**8,601,520**
	Other Expenditure			
400,429	Amortization	301,795	1,043	1,043
13,501,062	**Total Expenditure**	**14,377,516**	**14,356,830**	**8,602,563**
(1,227,753)	**Surplus/ (Deficit) before tax**	**(762,219)**	**29,717**	**21,312**
	Income Tax Expense			
(1,227,753)	**Surplus/(Deficit) after Tax**	**(762,219)**	**29,717**	**21,312**

Regional Software Holdings Ltd—2026-2027 Statement of Intent

Consolidated Statement of Financial Position

As at 30 June 2027

2025/26 SOI		2026/27 Budget	2027/28 Indicative	2028/29 Indicative
	ASSETS			
	Current assets			
3,143,575	Cash and Cash Equivalents	2,910,509	2,941,269	2,963,624
-	Term Deposit	2,500,000	2,500,000	2,500,000
1,869,214	Debtors and Prepayments	2,146,018	2,268,119	1,355,797
	Non Current Assets			
3,152	Property, Plant & Equipment	1,556	771	771
309,360	Intangible Assets	9,163	8,905	8,905
5,325,302	**Total Assets**	7,567,246	7,719,064	6,829,097
	LIABILITIES			
	Current liabilities			
2,207,290	Creditors and Accrued Expenses	1,874,479	1,993,671	1,104,123
-	Income Received in Advance	-	-	-
44,257	GST payable	51,116	54,025	32,294
	Non Current Liabilites			
-	Deferred Tax Liability	-	-	-
2,251,547	**Total Liabilities**	1,925,595	2,047,696	1,136,417
3,073,754	**NET ASSETS**	**5,641,651**	**5,671,368**	**5,692,680**

REPRESENTED BY:

2025/26 SOI		2026/27 Indicative	2027/28 Indicative	2028/29 Indicative
	Equity			
5,149,150	Equity	5,149,150	5,149,150	5,149,150
(1,227,753)	Current Year Earnings	- 762,219	29,717	21,312
(915,580)	Retained Earnings	1,254,720	492,501	522,218
3,005,817	**Total Equity**	**5,641,651**	**5,671,368**	**5,692,680**

Statement of Movement in Equity

4,233,570	Opening Equity	6,403,870	5,641,651	5,671,368
(1,227,753)	Comprehensive income for the year	(762,219)	29,717	21,312
3,005,817	**Total Equity**	**5,641,651**	**5,671,368**	**5,692,680**
58%	equity to assets (>60%)	75%	73%	83%

Regional Software Holdings Ltd—2026-2027 Statement of Intent

Consolidated Statement of Cash Flows

For the 12 Months to 30 June 2027

2025/26 SOI		2026/27 Budget	2027/28 Indicative	2028/29 Indicative
	Cashflows from Operating Activities			
	Cash received from:			
12,248,309	Receipts from customers	13,555,297	14,326,547	8,563,876
-	Shareholder contributions	-	-	-
25,000	Interest	60,000	60,000	60,000
-	Income Tax Paid (refunded)	-	-	-
12,273,309	*Total Operating Receipts*	**13,615,297**	**14,386,547**	**8,623,876**
	Cash applied to:			
13,100,633	Payments to suppliers	14,075,721	14,355,787	8,601,520
	Net GST movement			
-	Income Tax Paid (refunded)	-	-	-
-	Interest W/holding tax paid	-	-	-
13,100,633	*Total Operating Payments*	**14,075,721**	**14,355,787**	**8,601,520**
(827,324)	**Net cash from operating**	**- 460,424**	**30,760**	**22,355**
	Cashflow from Investing Activities			
	Cash received from:			
-	Sale of Fixed Assets	-	-	-
-	Investment Maturities	-	-	-
-	*Total Investment Receipts*	**-**	**-**	**-**
	Cash applied to:			
-	Purchase of Fixed/ Intangible assets	-	-	-
-	Investment deposits	-	-	-
-	*Total Investment Payments*	**-**	**-**	**-**
-	**Net cash from investing**	**-**	**-**	**-**
	Cashflow from Financing Activities			
	Cash received from:			
-	Capital contributions	-	-	-
	Proceeds from Loan Borrowings			
-	*Total Financing Receipts*	-	-	-
	Cash applied to:			
	Capital repaid	-	-	-
-	Loan interest paid	-	-	-
	Loan repayment of debt			
-	*Total Financing Payments*	-	-	-
-	**Net cash from financing**	**-**	**-**	**-**
(827,324)	**Net increase (decrease) in cash-flow for the year**	- 460,424	30,760	22,355
3,902,962	Opening cash balance	3,370,933	2,910,509	2,941,269
3,075,638	**Closing cash balance**	**2,910,509**	**2,941,269**	**2,963,624**
	Made up of:			
500,000	Current account	500,000	500,000	500,000
2,575,638	Auto-call account	2,410,509	2,441,269	2,463,624
3,075,638		**2,910,509**	**2,941,269**	**2,963,624**

Regional Software Holdings Ltd—2026-2027 Statement of Intent

IRIS Programme Activity - Statement of Financial Performance

For the 12 Months to 30 June 2027

2025/26 Budget		Notes	2026/27 Budget	2027/28 Indicative	2028/29 Indicative
522,571	IRIS Programme		*533,066*	418,361	248,293
-	IRIS NextGen Programme		-	-	-
-	Sector Work Programmes		-	-	-
-	Central Government Funding			-	-
522,571			*533,066*	*418,361*	*248,293*
	Other Income				
-	Interest Received		-	-	-
70,414	Council Specific Software Funding		-	-	-
70,414			-	-	-
592,985	**Total Income**		**533,066**	**418,361**	**248,293**
	Expenditure				
-	Bank Fees		-	-	-
-	Accounting & Technical Support		-	-	-
-	Audit Fees		-	-	-
	Legal and HR Advice		-	-	-
300,000	Datacom Support Services (IRIS)		*330,000*	*336,000*	*170,000*
300,000	Technology Services		*100,000*	-	-
30,000	IT Hosting Charges		*30,000*	*30,000*	*30,000*
	Loan Onpayment		-	-	-
-	Finance Costs		-	-	-
-	Training Providers		-	-	-
42,386	Personnel Costs		*40,021*	*30,021*	*25,021*
	Contractors		-	-	-
	Communications Services		-	-	-
	Subject Matter Consultants		-	-	-
	Service Providers		-	-	-
	Project Services		-	-	-
-	Promotional Costs		-	-	-
-	Governance		-	-	-
-	Travel & Meeting Costs		-	-	-
-	IT Support Services		-	-	-
70,414	Council Specific Software Purchases		-	-	-
	Staff Support Services		-	-	-
2,200	Software Subscriptions		*10,000*	*5,000*	*5,000*
-	General Consulting		-	-	-
27,571	Overhead Recovery - Expense		*23,045*	*17,340*	*18,272*
772,571			*533,066*	*418,361*	*248,293*
	Other Expenditure				
400,429	Amortization		*301,795*	1,043	*1,043*
1,173,000	**Total Expenditure**		**834,861**	**419,404**	**249,336**
(580,015)	**Surplus/ (Deficit) before tax**		**(301,795)**	**(1,043)**	**(1,043)**
	Income Tax Expense				
(580,015)	**Surplus/(Deficit) after Tax**		**(301,795)**	**(1,043)**	**(1,043)**

Regional Software Holdings Ltd—2026-2027 Statement of Intent

IRIS NextGen Programme Activity - Statement of Financial Performance

For the 12 Months to 30 June 2027

2025/26 Budget		Notes	2026/27 SOI	2027/28 Indicative	2028/29 Indicative
	Income				
-	IRIS Programme		-	-	-
3,718,797	IRIS NextGen Programme		4,680,097	5,809,147	1,727,361
427,806	IRIS NextGen Contingency		537,712	634,522	192,119
-	Sector Work Programmes		-	-	-
-	Central Government Funding		-	-	-
4,146,603			*5,217,809*	*6,443,669*	*1,919,480*
	Other Income				
-	Interest Received		-	-	-
-	Council Specific Software Funding		-	-	-
			-	-	-
4,146,603	**Total Income**		**5,217,809**	**6,443,669**	**1,919,480**
	Expenditure				
-	Bank Fees		-	-	-
-	Accounting & Technical Support		-	-	-
-	Audit Fees		-	-	-
	Legal and HR Advice		-	-	-
-	Datacom Support Services (IRIS)		-	-	-
2,533,864	Technology Services		*3,291,669*	4,509,877	1,003,112
-	IT Hosting Charges		-	-	-
	Loan Onpayment		-	-	-
-	Finance Costs		-	-	-
-	Training Providers		-	-	-
386,686	Personnel Costs		*414,726*	431,720	410,000
	Contractors		-	-	-
	Communications Services		-	-	-
	Subject Matter Consultants		-	-	-
	Service Providers		-	-	-
539,849	Project Services		*681,174*	532,188	135,876
-	Promotional Costs		-	-	-
-	Governance		-	-	-
61,200	Travel & Meeting Costs		*62,424*	63,672	30,000
4,000	IT Support Services		*4,120*	4,202	7,733
-	Council Specific Software Purchases		-	-	-
400	Staff Support Services		*412*	420	- 617
	Software Subscriptions		-	-	-
-	General Consulting		-	-	-
427,806	IRIS NextGen Contingency		*537,712*	634,522	192,119
192,798	Overhead Recovery - Expense		*225,572*	*267,066*	*141,258*
4,146,603			*5,217,809*	*6,443,669*	*1,919,480*
	Other Expenditure				
-	Amortization		-	-	-
4,146,603	**Total Expenditure**		*5,217,809*	*6,443,669*	*1,919,480*
-	**Surplus/ (Deficit) before tax**		**-**	**-**	**-**
	Income Tax Expense				
-	**Surplus/(Deficit) after Tax**		**-**	**-**	**-**

Regional Software Holdings Ltd—2026-2027 Statement of Intent

Te Uru Kahika Support Services - Statement of Financial Performance

For the 12 Months to 30 June 2027

2025/26 SOI		Notes	2026/27 Budget	2027/28 Indicative	2028/29 Indicative
	Income				
3,946,179	Te Uru Kahika Core Funding		3,637,429	4,446,349	4,438,051
622,703	Te Uru Kahika Alternate Funding		813,937	722,532	721,183
369,164	Te Uru Kahika 3rd Party Funding		499,598	389,056	388,329
-	Central Government Funding		-	-	-
4,938,047			*4,950,965*	*5,557,936*	*5,547,564*
	Other Income				
-	Interest Received		-	-	-
-	Council Specific Software Funding		-	-	-
-			-	-	-
4,938,047	**Total Income**		**4,950,965**	**5,557,936**	**5,547,564**
	Expenditure				
-	Bank Fees		-	-	-
-	Accounting & Technical Support		-	-	-
-	Audit Fees		-	-	-
-	Legal and HR Advice		*10,000*	-	-
	Datacom Support Services (IRIS)		-	-	-
27,500	Technology Services		*68,340*	69,707	-
118,850	IT Hosting Charges		*455,878*	464,996	354,204
-	Loan Onpayment		-	-	-
-	Finance Costs		-	-	-
125,713	Training Providers		*129,420*	132,008	134,648
1,699,424	Personnel Costs		*1,453,847*	1,482,024	1,510,764
350,000	Contractors		-	-	-
217,990	Communications Services		*359,058*	366,239	373,564
1,330,050	Subject Matter Consultants		*1,005,345*	1,025,451	1,045,960
627,000	Service Providers		*770,000*	783,400	797,068
543,750	Project Services		*323,750*	330,225	336,830
10,000	Promotional Costs		*10,300*	10,506	10,716
-	Governance		-	-	-
168,444	Travel & Meeting Costs		*178,000*	181,160	184,783
56,000	IT Support Services		*58,480*	59,650	59,163
-	Council Specific Software Purchases		-	-	-
800	Staff Support Services		*824*	840	- 823
-	Software Subscriptions		-	-	-
80,668	General Consulting		*413,112*	421,374	332,433
229,597	Overhead Recovery - Expense		*214,036*	*230,356*	*408,254*
5,585,785			*5,450,389*	*5,557,936*	*5,547,564*
	Other Expenditure				
-	Amortization		-	-	-
5,585,785	**Total Expenditure**		***5,450,389***	***5,557,936***	***5,547,564***
(647,738)	**Surplus/ (Deficit) before tax**		***- 499,424***	**-**	**-**
	Income Tax Expense				
(647,738)	**Surplus/(Deficit) after Tax**		***- 499,424***	**-**	**-**

Regional Software Holdings Ltd—2026-2027 Statement of Intent

Shared Services- Statement of Financial Performance

For the 12 Months to 30 June 2027

2025/26 SOI		Notes	2026/27 Budget	2027/28 Indicative	2028/29 Indicative
	Income				
786,317	Shared Services Revenue		826,450	820,082	848,538
786,317			*826,450*	*820,082*	*848,538*
	Other Income				
-	Interest Received		-	-	-
-	Council Specific Software Funding		-	-	-
-			-	-	-
786,317	**Total Income**		**826,450**	**820,082**	**848,538**
	Expenditure				
-	Bank Fees		-	-	-
-	Accounting & Technical Support		-	-	-
-	Audit Fees		-	-	-
-	Legal and HR Advice		-	-	-
-	Datacom Support Services (IRIS)		-	-	-
-	Technology Services		-	-	-
-	IT Hosting Charges		-	-	-
112,901	Loan Onpayment		108,273	103,644	103,644
-	Finance Costs		-	-	-
-	Training Providers		-	-	-
94,000	Personnel Costs		65,000	65,000	65,000
-	Contractors		-	-	-
-	Communications Services		-	-	-
-	Subject Matter Consultants		-	-	-
542,856	Service Providers		578,449	586,689	595,093
-	Project Services		-	-	-
-	Promotional Costs		-	-	-
-	Governance		-	-	-
-	Travel & Meeting Costs		-	-	-
-	IT Support Services		-	-	-
-	Council Specific Software Purchases		-	-	-
	Staff Support Services		-	-	-
	Software Subscriptions		-	-	-
-	General Consulting		-	-	-
36,560	Overhead Recovery - Expense		*35,728*	*33,989*	*62,445*
786,317			*787,450*	*789,322*	*826,183*
	Other Expenditure				
-	Amortization		-	-	-
786,317	**Total Expenditure**		***787,450***	***789,322***	***826,183***
-	**Surplus/ (Deficit) before tax**		***39,000***	***30,760***	***22,355***
	Income Tax Expense				
-	**Surplus/(Deficit) after Tax**		***39,000***	***30,760***	***22,355***

Regional Software Holdings Ltd—2026-2027 Statement of Intent

Public Transport Ticketing Programme - Statement of Financial Performance

For the 12 Months to 30 June 2027

2025/26 SOI			Notes	2026/27 Budget	2027/28 Indicative	2028/29 Indicative
-	**Income**					
-		IRIS Programme		-	-	-
-		IRIS NextGen Programme		-	-	-
1,784,356		PT Ticketing Programme		2,027,007	1,086,499	-
-		Central Government Funding		-	-	-
1,784,356				2,027,007	1,086,499	-
	Other Income					
-		Interest Received		-	-	-
1,784,356	**Total Income**			**2,027,007**	**1,086,499**	**-**
	Expenditure					
-		Bank Fees		-	-	-
-		Accounting & Technical Support		-	-	-
-		Audit Fees		-	-	-
20,000		Legal and HR Advice		*20,000*	10,000	-
-		Datacom Support Services (IRIS)		-	-	-
-		Technology Services		-	-	-
-		IT Hosting Charges		-	-	-
-		Loan Onpayment		-	-	-
-		Finance Costs		-	-	-
-		Training Providers		-	-	-
346,992		Personnel Costs		*469,845*	376,845	-
-		Contractors		-	-	-
-		Communications Services		-	-	-
-		Subject Matter Consultants		-	-	-
160,000		Service Providers		*75,000*	50,000	-
1,140,000		Project Services		*1,325,000*	555,000	-
-		Promotional Costs		-	-	-
-		Governance		-	-	-
30,000		Travel & Meeting Costs		*45,000*	45,000	-
4,000		IT Support Services		*4,120*	4,202	-
-		Council Specific Software Purchases		-	-	-
400		Staff Support Services		*412*	420	-
-		Software Subscriptions		-	-	-
-		General Consulting		-	-	-
82,964		Overhead Recovery - Expense		*87,630*	45,031	-
1,784,356				***2,027,007***	***1,086,499***	**-**
	Other Expenditure					
-		Amortization		-	-	-
1,784,356	**Total Expenditure**			***2,027,007***	***1,086,499***	**-**
-	**Surplus/ (Deficit) before tax**			**-**	**-**	**-**
	Income Tax Expense					
-	**Surplus/(Deficit) after Tax**			**-**	**-**	**-**

Regional Software Holdings Ltd—2026-2027 Statement of Intent

RSHL Corporate Activity - Statement of Financial Performance

For the 12 Months to 30 June 2027

2025/26 Budget		Notes	2026/27 Budget	2027/28 Indicative	2028/29 Indicative
	Other Income				
25,000	Interest Received		*60,000*	*60,000*	*60,000*
-	Council Specific Software Funding		-	-	-
-	Overhead Recovery - Income		-	-	-
-			60,000	60,000	60,000
-	**Total Income**		**60,000**	**60,000**	**60,000**
	Expenditure				
600	Bank Fees		*800*	*800*	*816*
100,360	Accounting & Technical Support		*97,800*	*99,756*	*101,751*
72,131	Audit Fees		*76,000*	*77,520*	*79,070*
32,510	Legal and HR Advice		*22,510*	*32,860*	*33,217*
-	Datacom Support Services (IRIS)		-	-	-
-	Technology Services		-	-	-
-	IT Hosting Charges		-	-	-
	Loan Onpayment		-	-	-
-	Finance Costs		-	-	-
-	Training Providers		-	-	-
234,700	Personnel Costs		*263,654*	*273,664*	*305,720*
-	Contractors		-	-	-
-	Communications Services		-	-	-
-	Subject Matter Consultants		-	-	-
-	Service Providers		-	-	-
-	Project Services		-	-	-
3,000	Promotional Costs		*20,000*	*3,000*	*3,000*
103,348	Governance		*110,855*	*110,702*	*112,790*
30,000	Travel & Meeting Costs		*35,000*	*35,700*	*36,414*
16,000	IT Support Services		*16,480*	*16,810*	*15,466*
-	Council Specific Software Purchases		-	-	-
400	Staff Support Services		*412*	*420*	- *617*
1,442	Software Subscriptions		*2,500*	*2,550*	*2,601*
-	General Consulting		-	-	-
594,491			*646,011*	*653,783*	*690,229*
	Other Expenditure				
-	Amortization		-	-	-
594,491	**Total Expenditure**		**646,011**	**653,783**	**690,229**
(569,491)	**Surplus/ (Deficit) before tax**		**(586,011)**	**(593,783)**	**(630,229)**
	Income Tax Expense				
(569,491)	**Surplus/(Deficit) after Tax**		**(586,011)**	**(593,783)**	**(630,229)**

12. Ngā Kaupapahere Kaute | Accounting Policies

Statement of Compliance

The financial statements of RSHL have been prepared in accordance with the requirements of the Local Government Act 2002 and the Companies Act 1993, which include the requirement to comply with New Zealand Generally Accepted Accounting Practice (NZGAAP).

The financial statements have been prepared to comply with Tier 2 Public Benefit Entity (PBE) Standards. RSHL is not publicly accountable, and expenditure is not higher than $30 million.

These financial statements comply with PBE Standards.

Reporting Entity

Regional Software Holdings Limited (RSHL) is a Council Controlled Organisation (CCO) owned as follows:

Organisation	Class A (Control) Shares	Class B (IRIS) Shares
Waikato Regional Council	1	3,275
Northland Regional Council	1	1,675
Horizons Regional Council	1	1,550
Taranaki Regional Council	1	1,550
Southland Regional Council	1	1,550
West Coast Regional Council	1	400
Bay of Plenty Regional Council	1	
Gisborne District Council	1	
Hawke's Bay Regional Council	1	
Otago Regional Council	1	

RSHL was incorporated on 17 October 2012.

RSHL was originally incorporated for the purposes of managing the investment and development of IRIS Software. RSHL now exists for the purpose of supporting collaborative and shared services projects for Te Uru Kahika. RSHL has designated itself a Public Benefit Entity (PBE), in keeping with the designation of the shareholders.

Public Benefit Entity Simple Format Reporting

The financial statements of RSHL have been prepared in accordance with the requirements of the Local Government Act 2002, which include the requirement to comply with New Zealand Generally Accepted Accounting Practice (NZGAAP).

The financial statements have been prepared to comply with Public Benefit Entity Standards (PBE Standards) for a Tier 2 entity. RSHL is not publicly accountable, and expenditure is not higher than $30 million. These financial statements comply with PBE standard.

Basis of Preparation of the Financial Statements

The prospective financial statements have been prepared on the going concern basis, and the accounting policies have been applied consistently throughout the period. The financial statements will be prepared on a historical cost basis.

Presentation Currency and Rounding

The prospective financial statements have been prepared in New Zealand dollars and there will be rounding in the numbers in the financial statements, as the financial model used calculates to the cent but the annual report is rounded to the nearest dollar.

Regional Software Holdings Ltd—2026-2027 Statement of Intent

The functional currency of RSHL is New Zealand dollars.

The reporting period for these prospective financial statements is the year ending 30 June.

Summary of Significant Accounting Policies

Revenue
Revenue is measured at the fair value of consideration received or receivable.

Members Contributions and Other forms of Revenue (excluding investment revenue), including fees, charges, and other revenues are recognised on an accrual basis.

Interest revenue is recorded as it is earned.

Expenditure
Expenditure is recognised on an accrual basis when the service was provided, or the goods received.

Costs associated with maintaining the IRIS software suite are recognised as an expense when incurred.

Bank Accounts and Cash
Cash and cash equivalents include cash on hand, on demand or call deposits, other short-term deposits with original maturities of three months or less, and bank overdrafts.

Bank overdrafts are presented as a current liability in the Statement of Financial Position.

Debtors
Debtors are initially recorded at the amount owed. When it is likely the amount owed (or some portion) will not be collected, a provision for impairment is recognised and the loss is recorded as a bad debt expense.

Inventories
Inventory is initially recorded at cost. Goods held for sale are subsequently measured at the lower of cost and their selling process. Goods for use or distribution are subsequently measured at cost and written down if they become obsolete.

Goods and Services Tax (GST)
RSHL is registered for GST; these financial statements are presented net of GST, except for receivables and payables which are inclusive of GST. Where GST paid is not recoverable, due to it relating to exempt items, the GST inclusive amount is recognised as part of the related asset or expense including the GST relating to investing and financing activities.

The net amount of GST recoverable from, or payable to, the IRD is included as part of receivables or payables in the statement of financial position.

The net GST paid to, or recovered from, the Inland Revenue Department is recognised as an item in operating cash flow in the statement of cash flows.

Commitments and contingencies are disclosed exclusive of GST.

Income Tax
Income tax expenses calculated using the taxes payable method. As a result, no allowance is made for deferred tax. Tax expense includes the current tax liability and adjustments to prior year tax liabilities.

Creditors and Accrued Expenses
Creditors and accrued expenses are measured at the amount owed.

Property, Plant and Equipment
Software acquisition and development
Costs that are directly associated with the development of software owned by RSHL or its subsidiaries are recognised as property, plant and equipment.

Depreciation
Depreciation begins when the asset is available for use and ceases at the date that the asset is derecognised. The depreciation charge for each period is recognised through the Statement of Financial Performance.

The carrying value is depreciated on a straight-line basis over its useful life. The default useful life and associated depreciation rate for the developed software is 10 years and 10%. If an alternative rate is used this will be noted in the financial statements.

Where software in this category is replaced, upgraded, or determined by RSHL to be of no further operational benefit, a change in value will be recognised through the Statement of Financial Performance. This change in value will be the difference between the carrying value of the original item and its fair value.

Critical Accounting Estimates and Assumptions
In preparing these financial statements, RSHL has made estimates and assumptions concerning the future. These estimates and assumptions may differ from the subsequent actual results. Estimates and assumptions are continually evaluated and are based on historical experience and other factors, including expectations or future events that are believed to be reasonable under the circumstances.

Additional Disclosure
The Companies Act 1993 requires disclosure of the amount of donations, audit fees, fees for other services from the auditor, and the number of employees of the company who received remuneration and other benefits above $100,000 per annum, in brackets of $10,000.

13. Note For Information: Requirements for Statement of Intent

Source: Office of the Auditor General
http://www.oag.govt.nz/2007/corporate-intent/appendix2.htm

Item	Section
Statement of intent	This document
Coverage over three financial years and updated annually	3,9,11,12
Objectives of the group	3
A statement of the board's approach to governance	7
Nature and scope of the activities to be undertaken	4
Accounting policies	13
Performance targets and other measures by which the performance of the group may be judged in relation to its objectives	9
An estimate of the amount or proportion of accumulated profits and capital reserves that is intended to be distributed to the shareholders	10
The kind of information to be provided to the shareholders/ shareholding Ministers by the organisation during the course of the next three financial years	10
Procedures to be followed before any member or the group subscribes for, purchases, or otherwise acquires shares in any company or other organisation	10
Any activities for which the board seeks compensation from any local authority, Harbour Board, or the Crown (whether or not the relevant entity has agreed to provide the compensation)	11
The board's estimate of the commercial value of the Crown/shareholders' investment in the group and the manner in which, and the times at which, that value is to be reassessed	10
Other matters that are agreed by the shareholders/ shareholding Ministers and the board	N/A
Annual report should contain information that is necessary to enable an informed assessment of the operations of the parent entity and its subsidiaries, including a comparison of performance with the relevant statement of intent or statement of corporate intent	10

Council
Collaboration
Into Action

9.13. Register of the Common Seal

Prepared for: Council

Report No. S&C2634

Activity: Governance

Author: Kylie Darragh (Governance Support Officer)

Endorsed by: Amanda Vercoe (General Manager Strategy and Customer)

Date: 29 July 2026

Portfolio Leads: Chair Calvert and Cr Laws, Strategy and Customer

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PURPOSE

[1] To inform the Council of delegations which have been exercised requiring application of the Council Seal during the period of 24 September 2025 to 30 June 2026.

EXECUTIVE SUMMARY

Ref No.	Date of seal application	Description
844	24/09/2025	Deed of Extension of Lease 32 Ribble Street Oamaru
855	30/10/2025	Deed of Lease - Outram Glen
856	30/10/2025	Westpac Bond to Secure Compliance with Terms and Conditions of Resource Consents
857	20/11/2025	Deed of Lease - 279 Thames Street, Oamaru
858	1/12/2025	Oceana Gold Bond Variation
859	18/12/2025	Deed of Agreement - Private Development relating to stormwater management (FBG Developments Ltd/DCC/ORC)
860	18/12/2025	Deed of Agreement - Private Development for vehicle access (FBG Developments Ltd/DCC/ORC)
861 – 874	14/01/2026	Otago Regional Council Bylaws Enforcement Warrants
875 - 888	14/01/2026	Land Drainage Act 1908 Enforcement Officer Warrants
889 - 902	14/01/2026	Soil Conservation and Rivers Control Act 1941 Warrants
903	25/02/2026	Deed of Renewal of Lease 54 Tiverton Street Palmerston

904	29/04/2026	Deed of Extension and Variation of Lease 32 Ribble Street Oamaru
905	27/05/2026	Navigational Safety Bylaw Adoption
906	24/06/2026	Otago Regional Policy Statement 2021

RECOMMENDATION

That the Council:

1) ***Notes*** *this report.*

That the public be excluded from the following items under LGOIMA 48(1)(a):

1.1 Public Excluded Minutes of Council 24 June 2026

2.1 Otago Central Lakes Regional Deal: Approval

2.2 Chief Executive Annual Performance Review and KPIs for 2026/2027

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

General subject of each matter to be considered	**Reason for passing this resolution in relation to each matter**	**Ground(s) under section 48(1) for the passing of this resolution**
1.1 Minutes of Council 24 June 2026	To protect the privacy of natural persons, including that of deceased natural persons – Section 7(2)(a)	Section 48(1)(a); Subject to subsection (3), a local authority may by resolution exclude the public from the whole or any part of the proceedings of any meeting only on 1 or more of the following grounds: (a)that the public conduct of the whole or the relevant part of the proceedings of the meeting would be likely to result in the disclosure of information for which good reason for withholding would exist.
2.1 Otago Central Lakes Regional Deal: Approval	To enable Council to carry out, without prejudice or disadvantage, negotiations with the Crown. 7(2)(i)	Section 48(1)(a); Subject to subsection (3), a local authority may by resolution exclude the public from the whole or any part of the proceedings of any meeting only on 1 or more of the following grounds: (a)that the public conduct of the whole or the relevant part of the proceedings of the meeting would be likely to result in the disclosure of information for which good reason for withholding would exist.

2.2 Chief Executive Annual Performance Review and KPIs for 2026/2027	To protect the privacy of natural persons, including that of deceased natural persons – Section 7(2)(a)	Section 48(1)(a); Subject to subsection (3), a local authority may by resolution exclude the public from the whole or any part of the proceedings of any meeting only on 1 or more of the following grounds: (a)that the public conduct of the whole or the relevant part of the proceedings of the meeting would be likely to result in the disclosure of information for which good reason for withholding would exist.

This resolution is made in reliance on section 48(1)(a) of the Local Government Official Information and Meetings Act 1987 and the particular interest or interests protected by section 6 or section 7 of that Act or section 6 or section 7 or section 9 of the Official Information Act 1982, as the case may require, which would be prejudiced by the holding of the whole or the relevant part of the proceedings of the meeting in public.