

Ashburton District Council

AGENDA

Notice of Meeting:

A meeting of the Ashburton District Council will be held on:

Date: Wednesday 21 May 2025

Time: 1pm

Venue: Hine Paaka Council Chamber
Te Whare Whakatere, 2 Baring Square East, Ashburton

Membership

Mayor	Neil Brown
Deputy Mayor	Liz McMillan
Members	Leen Braam
	Carolyn Cameron
	Russell Ellis
	Phill Hooper
	Lynette Lovett
	Rob Mackle
	Tony Todd
	Richard Wilson

Meeting Timetable	
Time	Item
1.00pm	Council meeting commences
2.15pm	Kainga Ora – Liz Krause (Regional Director Canterbury)
2.45pm	New and long-serving staff

1 Apologies

2 Extraordinary Business

3 Declarations of Interest

Members are reminded of the need to be vigilant and 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.

Minutes

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Reports

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8	Local Water Done Well – Service Delivery Option	30
9	Water Races Bylaw – Adopt Draft for Public Consultation	40
10	Draft Climate Change & Sustainability Strategy and Consultation Document	63
11	Lake Hood Issues and Options	127
12	Mayor’s Report	204

Business Transacted with the Public Excluded

13	Council – 7/05/25		PE 1
	<ul style="list-style-type: none"> Forestry land Land purchase Glasgow lease People & Capability report ACL quarterly report 	<ul style="list-style-type: none"> Section 7(2)(h) Commercial activities Section 7(2)(h) Commercial activities Section 7(2)(h) Commercial activities Section 7(2)(a) Protection of privacy of natural persons Section 7(2)(h) Commercial activities 	
14	Award of Solid Waste Management Contract	Section 7(2)(h) Commercial activities	PE 3

4. Council Minutes – 7 May 2025

Minutes of the Council meeting held on Wednesday 7 May 2025, commencing at 1.00pm in the Hine Paaka Council Chamber, Te Whare Whakatare, 2 Baring Square East, Ashburton.

Present

His Worship the Mayor, Neil Brown; Deputy Mayor Liz McMillan and Councillors Leen Braam, Carolyn Cameron, Russell Ellis, Phill Hooper, Lynette Lovett, Rob Mackle, Tony Todd and Richard Wilson.

In attendance

Hamish Riach (Chief Executive), Helen Barnes (GM Business Support), Toni Durham (GM Democracy & Engagement), Ian Hyde (GM Compliance & Development), Neil McCann (GM Infrastructure & Open Spaces), and Phillippa Clark (Governance Team Leader).

Staff present for the duration of their reports: Ian Soper (Open Spaces Manager), Mark Low (Strategy & Policy Manager), Femke van der Valk (Policy Advisor), Lou Dunstan (Policy Advisor), Jill Watson (District Librarian), Erin Register (Finance Manager), Alifia Baramatiwala (Financial Accountant), Mark Chamberlain (Roading Manager), Renee Julius (Property Manager), Tania Paddock (Legal Counsel) and Jacqui Watson (Property Legal Counsel).

1 Apologies

Nil.

2 Extraordinary Business

Nil.

3 Declarations of Interest

Nil.

Public Forum

Neysa Koizumi and Vanessa Clarke from Digital Waitaha spoke about the Youth Digital Wellbeing Research Report 2024 – a collaboration between Digital Waitaha and the University of Canterbury.

Key points –

- Study focused on years 5-8 students from Waitaha who participated in the Stop, Block & Talk programme.
- Set out to understand students' digital wellbeing and safety concerns, identify online risks and understand what youth need to navigate the online world confidently.
- Positive findings show that students manage their digital wellbeing and safety but would benefit from structured strategies. They can recognise a range of online risks and want guidance and accountability from adults and tech companies.

The presentation concluded at 1.22pm.

4 Confirmation of Minutes – 16/04/25

That the minutes of the Council meeting held on 16 April 2025, be taken as read and confirmed.

Cameron/Hooper

Carried

5 Methven Community Board – 14/04/25

That Council receives the minutes of the Methven Community Board meeting held on 14 April 2025.

Lovett/Todd

Carried

6 Library Collection Policy 2025

That Council adopts the Library Collection Policy 2025, as attached in Appendix 1.

Braam/McMillan

Carried

7 Procurement Policy 2025

Retaining the Policy's 'buy local' provision for larger expenditure, where a local supplier's estimate is within 5% of the most competitive estimate, was not fully supported.

1. That Council adopts a buy local premium applied for all evaluation models for minor and moderate expenditure.

2. That Council adopts the 2025 Procurement Policy as attached in appendix 3.

3. That Council authorise the Mayor and Chief Executive to approve the final wording of any amendments to the Procurement Policy made at the Council meeting, if necessary.

Cameron/Todd

Carried

Cr Lovett recorded her vote against the motion.

8 Public Transport Trial

That Council has further discussions with ECan on the understandings of the district's public transport requirements.

McMillan/Cameron

Carried

9 Ashburton Community Water Trust – exemption of CCO requirements

That Council exempts the Ashburton Community Water Trust from being classified as a Council Controlled Organisation for the period ending 30 June 2027.

Mayor/Wilson

Carried

10 Financial variance report

Officers were asked to check where references to favourable variances are at odds with the narrative. Clarification was sought on how the memorial hall costs are applied and further detail on Library depreciation and the 3.8m Glasgow lease variance has been requested.

That Council receives the March 2025 financial variance report.

Cameron/McMillan

Carried

11 Councillor reports

That Council receives the LGNZ Zones 5 & 6 Conference reports of Crs Cameron and Wilson.

Lovett/Wilson

Carried

NZTA

The Mayor welcomed NZTA Project Director, Lonnie Dalzell who provided an update on the second bridge project.

Lonnie spoke positively about the work that has already been undertaken by Council, including land designation and acquisition, and community consultation. With Ngai Tahu approval confirmed for the project, NZTA can now progress the inground transfer of the remaining piece of land in the river area.

NZTA propose to lodge consent directly with ECan in August and call for tenders by September. A collaborative approach will be taken for the design process and for project communications.

ADC roading officers are currently meeting weekly with the NZTA team with updates to be reported to Council as frequently as required. Lonnie advised that the project is currently tracking to start construction in March 2026, but that will depend on the outcome of the consenting process.

The Chief Executive advised that Council's wish to see local river extraction for the bridge project has been raised with ECan. Council will work with NZTA on this, but discussions with ECan will need to be held now to ensure the gravel extraction proposal is reflected in the tender.

Business transacted with the public excluded 2.57pm.

That the public be excluded from the following parts of the proceedings of this meeting, namely – 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:

Item No	General subject of each matter to be considered:	In accordance with Section 48(1) of the Act, the reason for passing this resolution in relation to each matter:	
12	Council 16/04/25 [Now in open meeting] <ul style="list-style-type: none">• Development of Methven for Birdsong Initiative	Section 7(2)(h)	Commercial activities
13	Forestry land	Section 7(2)(h)	Commercial activities
14	Land purchase	Section 7(2)(h)	Commercial activities
15	Glasgow lease	Section 7(2)(h)	Commercial activities
16	People & Capability Report	Section 7(2)(a)	Protection of privacy of natural persons
17	Ashburton Contracting Ltd	Section 7(2)(h)	Commercial activities

Ellis/Cameron

Carried

Council adjourned for afternoon tea from 2.57pm to 3.16pm.

Council concluded at 4.54pm.

Confirmed 21 May 2025

MAYOR

5. *Rating Boundary Maps Review 2025*

Authors	<i>Tayyaba Latif, Policy Advisor & Richard Mabon, Senior Policy Advisor</i>
Activity Managers	<i>Mark Low, Strategy & Policy Manager</i>
Executive Team Members	<i>Toni Durham: GM Democracy & Engagement</i>

Summary

- The purpose of this report is to enable Council to make a decision on the review of rating boundary maps.
- Proposed changes to rating boundary maps are minor to ensure property rates align with accurate boundaries.
- The proposed changes are administrative and tidying up our database and do not impact the rates payable by individual ratepayers. Consultation is not required.

Recommendation

1. **That** Council approves changes to Map 2 (Rural Amenity Rate Boundary) and Map 7 (Ashburton Urban Amenity Rates Boundary).
2. That Council approves the Rating Area Map Book 2025 with the changes to Maps 2 & 7.

Attachment

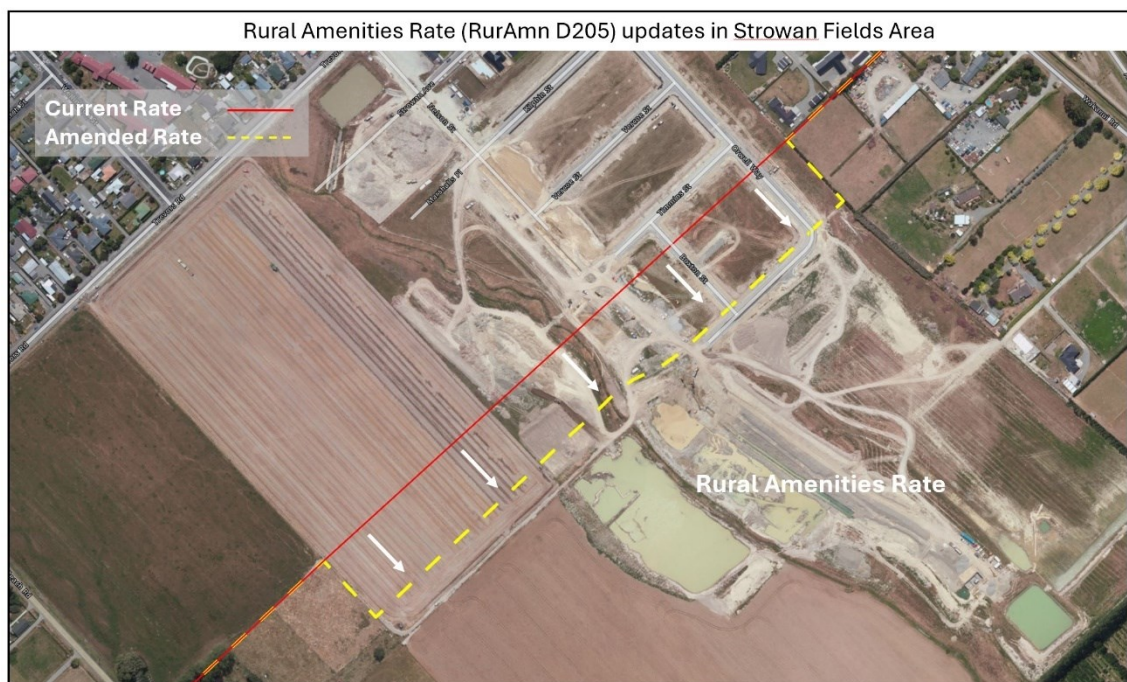
Appendix 1 Rating Area Map 2 (Rural Amenity Rate Boundary) and Map 7 (Ashburton Urban Amenity Rate Boundary).

Background

The current situation

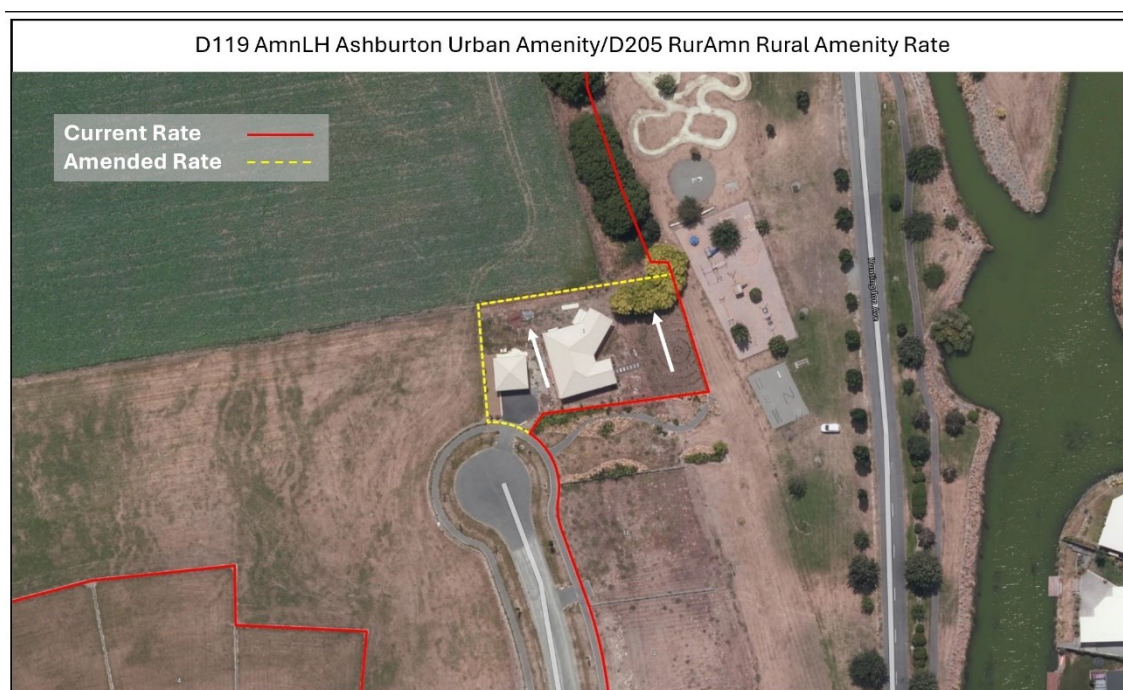
1. Officers are proposing to update the Ashburton urban amenities boundary for two locations.
2. Properties on both locations are already paying Ashburton urban amenities rate but are part of the rural amenities rating boundary.
3. The changes in urban amenities boundary would mean that the rural amenities boundary will also be updated to reflect the changes.
4. **Strowan Field Subdivision (Proposed Change)**

The current boundary map shows urban and rural amenity rate boundary overlap. The overlap is not replicated in the rates system therefore, only maps need to be adjusted to represent boundaries accurately. Along Orwell Way the rural amenity boundary needs to move east.



5. **18 Village Green Drive (Proposed Change)**

Property at 18 Village Green Drive is mapped as being under rural amenity and needs to come inside the urban amenity boundary. The property is already paying urban amenity rate, therefore, this is a boundary update and has no impact on rates.



Consultation Requirement

6. The proposed changes aim to address anomalies in Council's GIS database, bringing properties into the boundary that accurately reflect the rates they are paying.
7. The proposed changes do not impact rates the properties are paying and the service the properties are receiving therefore, do not require consultation.

Options analysis

Option one – Council approves the rating boundary changes as proposed (Recommended).

8. This option would see Council approving all rating boundary changes as proposed.

Advantages: <ul style="list-style-type: none"> Necessary corrections are made 	Disadvantages: <ul style="list-style-type: none"> None identified
Risks: Low reputational risk to Council as the property owners may wish to be consulted before boundary updates are made.	

Option two – Council makes further changes to the rating boundary maps.

9. This option would see Council making further changes to some or all the boundary map areas.

Advantages: <ul style="list-style-type: none"> Some other necessary rating boundary updates or corrections may come into light. 	Disadvantages: <ul style="list-style-type: none"> Rating boundary review will not be completed within legislative timeframe.
Risks: Reputational risk and legal risk if not adopting rating maps book before adopting rating resolution.	

Legal/policy implications

- The proposal is legally compliant with Council's powers to amend rating boundary maps under the Local Government Act (Rating) 2002.

Climate change

- The changes are administrative in character and have no implications for climate change adaptation or mitigation.

Strategic alignment

Wellbeing		Reasons why the recommended outcome has an effect on this wellbeing
Economic	✓	Council's prudent financial management will support economic wellbeing across the district
Environmental	✗	
Cultural	✗	
Social	✗	

Financial implications

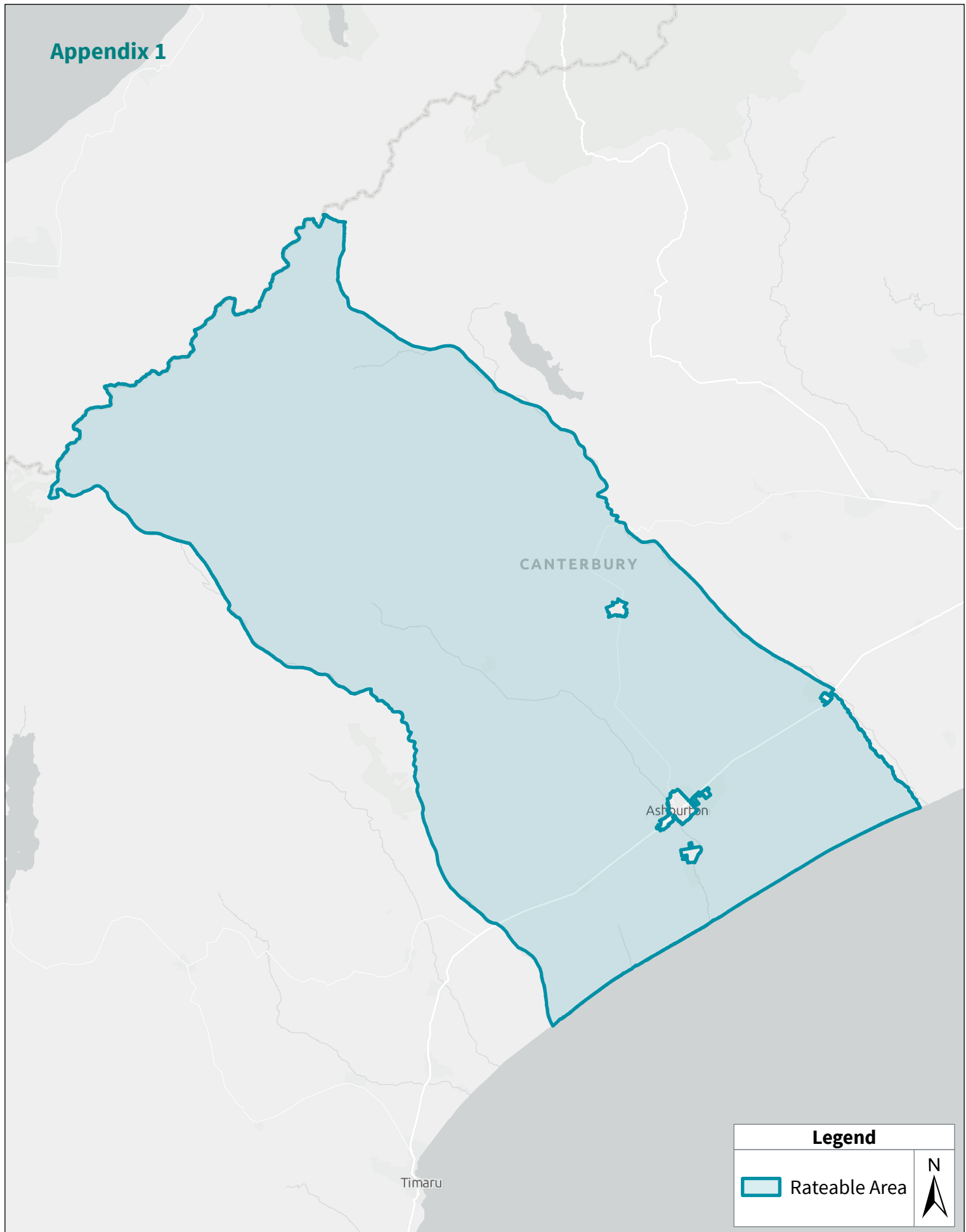
Requirement	Explanation
What is the cost?	Costs covered by existing budgets.
Is there budget available in LTP / AP?	Yes
Where is the funding coming from?	N/A
Are there any future budget implications?	No
Reviewed by Finance	Erin Register, Finance Manager

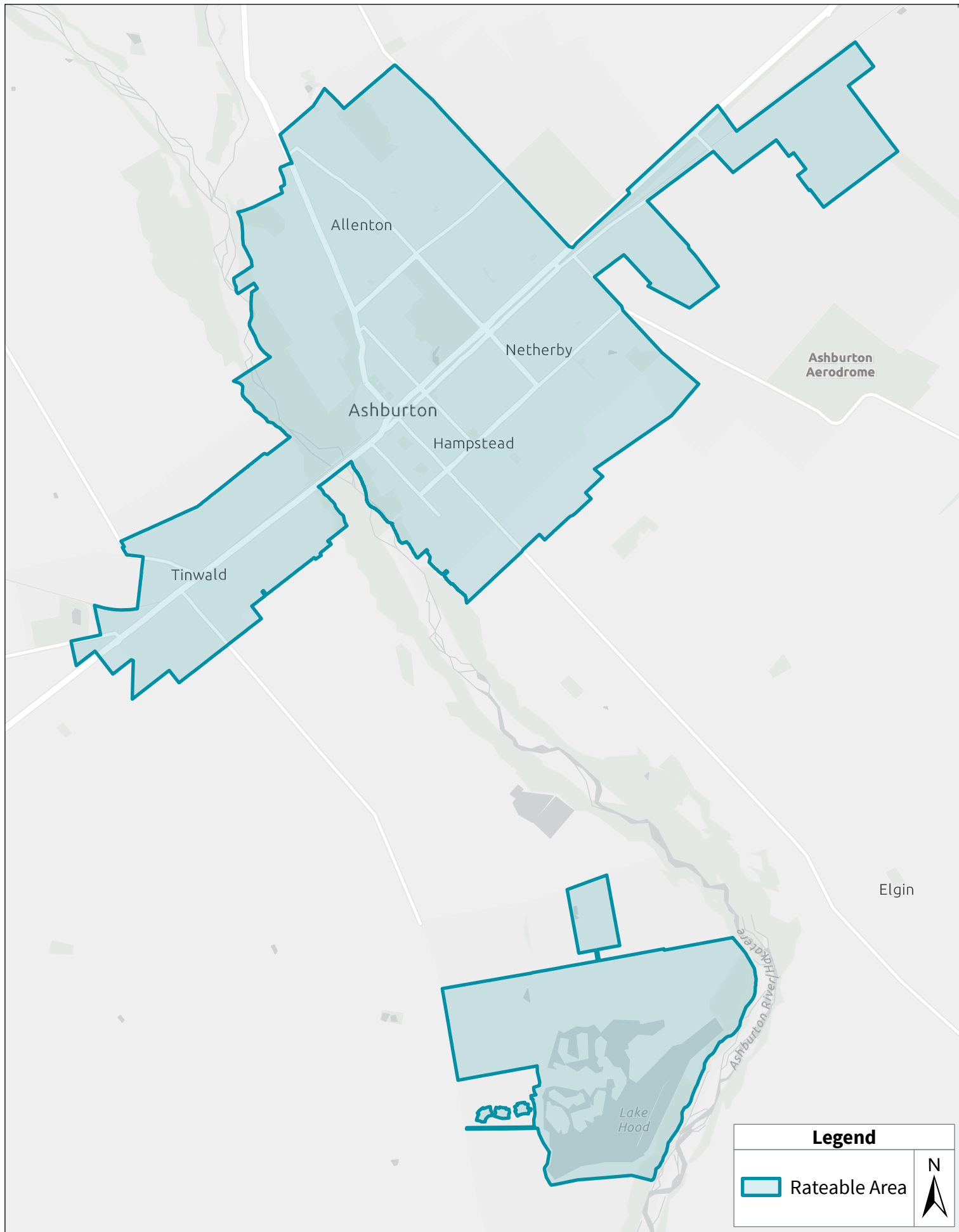
Significance and engagement assessment

Requirement	Explanation
Is the matter considered significant?	No
Level of significance	Low
Rationale for selecting level of significance	N/A
Level of engagement selected	1. Inform
Rationale for selecting level of engagement	This reflects the overall significance of the matter and the complete absence of rating impact for affected properties.
Reviewed by Strategy & Policy	Mark Low; Strategy and Policy Manager

Next steps

Date	Action / milestone	Comments
21 May 2025	Council approves proposed rating boundary changes.	
1 July 2025	New rating boundary areas takes effect.	





Rating Area Map

Ashburton Urban Amenity Rates; Ashburton Business Amenity Rates

D113AshBus Ashburton Business Amenity; D115AmnUrb Ashburton Urban Amenity; D051LHBusA Lake Hood Business Amenity; D119AmnLH Ashburton Urban Amenity

6. *Annual Plan 2025/26*

Author	<i>Emily Reed; Corporate Planner</i>
Activity manager	<i>Mark Low; Strategy & Policy Manager</i>
Group manager	<i>Toni Durham; Group Manager, Democracy & Engagement</i>

Summary

- The purpose of this report is to adopt the Ashburton District Council Annual Plan for 2025/26, including the Fees & Charges Schedule, which includes the fees for the registration and control of dogs.

Recommendation

1. **That** Council adopts the Ashburton District Council Annual Plan 2025/26 and sets the fees and charges for the 2025/26 year.
2. **That** Council delegates to the Chief Executive the authority and responsibility to make minor editorial changes and correction of minor errors to the Annual Plan 2025/26 document.

Attachment

Appendix 1 Annual Plan 2025/26 [*\[Supplementary document\]*](#)

Background

The current situation

1. The Ashburton District Council Annual Plan 2025/26 has been prepared based on Year 2 of Council's Long Term Plan 2024-34.
2. A number of workshops were held with Elected Members to discuss and confirm the budgets across January, February and March 2025.
3. The draft Annual Plan was sent to Elected Members on 13 May 2025.

Differences between Year 2 of the Long Term Plan and the 2025/26 Annual Plan

4. The draft Annual Plan has an overall increase in Council's rate take of 7.3%, compared with 10.1% signalled in the Long Term Plan. The rate increase for individual properties will vary across the district, depending on their location, capital value and services they receive.
5. The key differences between Year 2 of the Long Term Plan 2024-34 and the Annual Plan 2025/26 are the following:
 - Removal of the planned upgrade to Robilliard Park, saving \$251,500.
 - 5% increase to the drinking water rate (from \$706.10 in 2024/25 to \$741.50 in 2025/26).
 - Deferral of the stormwater attenuation and treatment facility on West Street to 2026/27.
 - \$83,000 added to bulk purchase heat pumps, to replace units as they fail in our Elderly Persons Housing units.
 - Alignment of the transportation budget with the reduced NZTA Waka Kotahi funding – note the Council portion of this funding (\$2.2 million) has remained in the budget but moved to 'unsubsidised work'.
 - Removal of \$144,000 that was budgeted for moving the Havelock Street Council Chambers to Tinwald to create an emergency hub.
 - Use of the Reserve Contributions Reserve to fund Open Spaces projects rather than loan funding.
 - Reduction in depreciation funding for open spaces and stormwater.
6. Fees and charges have been increased by 2.5%, with the exception of food licence fees which were increased by 12% and animal control fees which increased by 7%. Refuse and recycling fees, where the material is destined for Kate Valley, have been increased by 9.25% to align with the cost to Council. There are also a number of additional minor changes throughout the other fees and charges.

Previous Council decisions

7. On 2 April 2025, Council adopted the recommendation to not consult on the Annual Plan in accordance with section 95 (2a) of the Local Government Act, 2002. It was assessed there were no significant variances from the Long Term Plan, which meant that there was no requirement for community consultation.

Next steps

8. Following adoption, the document will be finalised by the design team and then distributed via our email database and social media channels. We will also publish a two-page spread as part of the Council Brief, explaining key projects and example rates changes for the 2025/26 year. A number of hard copies will be available at Customer Services for the public to read.
9. Dog registration and control fees and charges are required to be publicly notified at least once during the month preceding the start of the registration year on 1 July. Following adoption, Council will notify the community of the 2025/26 dog control fees using typical media channels.
10. In addition to the above, we will also notify the users of the EA Networks Centre of changes to fees.

Options analysis

Option one – adopt the Ashburton District council Annual Plan 2025/26 and sets the fees for the 2025/26 year (recommended option)

11. Council would adopt the Annual Plan for the 2025/26 financial year and sets the fees for the 2025/26 year.

Advantages <ul style="list-style-type: none">• The plan has been produced in accordance with the Local Government Act 2002 and meets our legislative obligations under the Act.• Allows appropriate time to publicly notify the community of changes to the dog registration and control fees (legislatively required) and the EA Networks Centre's fees (good practice).• Enables Council to set the rates for the 2025/26 year.• Enables Council to progress the work programme for 2025/26.	Disadvantages <ul style="list-style-type: none">• The community do not get an opportunity to voice their disagreement with the plan - however, Council have assessed there are no significant variances to the plan and adopted not to consult on the plan at a previous meeting.
Risks <ul style="list-style-type: none">• The community disagrees with aspects of the plan.	

Option three – do not adopt the Annual Plan 2025/26 or set the fees for the 2025/26 year

12. This option would mean Council does not adopt an Annual Plan for 2025/26 and set the fees for the 2025/26 year.

Advantages <ul style="list-style-type: none">• There will be no need to publicise changes to the dog registration and control fees, and the fees at EA Networks Centre, as there will be no change enacted.	Disadvantages <ul style="list-style-type: none">• Council would not meet its legislative obligations under the Local Government Act 2002.• The 2025/26 rates will not be able to be set for the 2025/26 year.• The work programme will not happen / be delayed, unless the plan was adopted prior to 30 June.• The fees and charges will not be set for the 2025/26 year.
Risks <ul style="list-style-type: none">• Community upset over projects they were expecting not happening.• Additional work required to finalise the plan would potentially delay other projects.	

Legal/policy implications

13. Council is required, under section 95 of the Local Government Act 2002, to adopt an Annual Plan for the 2025/26 year before the commencement of the year to which it relates. The Annual Plan 2025/26 has been prepared within the requirements of the Local Government Act 2002.
14. Council has specific requirements in relation to setting fees under the Dog Control Act 1996:
- a. Section 37(1) requires Council to set reasonable fees by resolution for the registration and control of dogs;
 - b. Section 37(4) requires Council to prescribe reasonable dog registration and control fees plus associated penalties for each registration year by having regard to the relative costs of this activity and all other matters that Council considers relevant; and
 - c. Section 37(6) requires Council to publicly notify these dog fees and charges at least once in the month prior to the start of the registration year on 1 July.
15. The fees included in the fees and charges schedule for 2025/2026 were reviewed for reasonableness during the development of the Long Term Plan 2024-34. In doing so, Council reviewed the relative costs of registration and dog control and decided to increase these fees 7% annually for five years to meet the funding mix required by the Revenue and Financing Policy for this activity. Officers still consider this increase to be reasonable to cover relative costs for the 2025/2026 year.

Strategic alignment

Well-being		Reasons why the recommended outcome has an effect on this well-being
Economic	✓	The Annual Plan includes all Council activities and services which contribute to all four well-beings.
Environmental	✓	
Cultural	✓	
Social	✓	

Financial implications

Requirement	Explanation
What is the cost?	Cost of adoption is covered within current budgets.
Is there budget available in LTP / AP?	Yes
Where is the funding coming from?	See Annual Plan 2025/26 for details.
Are there any future budget implications?	See Annual Plan 2025/26 for details.
Reviewed by Finance	<i>Erin Register</i>

Significance and engagement assessment

Requirement	Explanation
Is the matter considered significant?	No
Level of significance	Low
Rationale for selecting level of significance (if different from assessment)	While the plan may impact and be of interest to the community, overall, the variations to the plan are not significant from that set out in Year 2 of the Long Term Plan.
Level of engagement selected	1. Inform – one way communication
Rationale for selecting level of engagement	There were no significant variations from the Long Term Plan 2024-34. As a result, Council decided consultation on the plan was not required. Information on the plan will be provided to the community via the Council brief and other mechanisms.
Reviewed by Strategy & Policy	<i>Mark Low; Strategy and Policy Manager</i>

7. *Setting of the Rates 2025/26*

Author *Erin Register; Finance Manager*
Executive Team Member *Helen Barnes; Group Manager – Business Support*

Summary

- The purpose of this report is to recommend that the Ashburton District Council resolve to set the 2025/26 Annual Rates, as per the Funding Impact Statement contained in the 2025/26 Annual Plan.
- The resolution sets dues dates for rates payments for the 2025/26 year.
- The resolution also includes penalty rates for instalments 1-4 in the 2025/26 year and for those rates outstanding from previous year.

Recommendation

1. **That** Council sets the following rates under the Local Government (Rating) Act 2002 on rating units in the district for the financial year commencing 1 July 2025 and ending on 30 June 2026.

All section references are to sections in the Local Government (Rating) Act 2002. All amounts are GST inclusive.

- The definition of connected and serviceable is contained in Council's Funding Impact Statement – Rating Information.
- The definition of separately used or inhabited part of a rating unit is contained in Council's Funding Impact Statement – Rating Information.
- The definition for the amenity rating area is contained within Council's Funding Impact Statement – Rating Information.

Uniform Annual General Charge (UAGC)

A uniform annual general charge (UAGC) of \$853.70 per separately used or inhabited part of a rating unit, set under section 15.

The UAGC funds wholly or in part the following activities of Council:

- Public Conveniences
- Community Grants & Funding
- Ashburton Library
- Ashburton Youth Council
- Council
- Community Safety
- Ashburton Art Gallery and Museum
- EA Networks Centre
- Emergency Management

General rate

A general rate set under section 13 of \$0.000407 per dollar of capital value of a rating unit in the district.

The general rate will be used to fund either wholly or in part the following activities of Council:

- Footpaths and Cycleways
- Stormwater
- Solid Waste Management
- Emergency Management
- Environmental Health
- Cemeteries
- Stockwater Management
- Reserves and Campgrounds
- Elderly Persons Housing
- Business and Economic Development
- Ashburton Water Management Zone Committee
- District Promotion
- Community Safety
- Rural Beautification
- Urban Beautification
- Alcohol Licensing & Gambling Venue Consenting
- Animal Control
- Building Regulation
- District Planning (including land information)
- District Plan (policy and development)

Roading rate

A targeted rate for road services set under section 16 of \$0.000512 per dollar of capital value on each separately used or inhabited part of a rating unit in the district.

Water supply rates

The following differential targeted rates are set under section 16 for each water supply area listed below. In each case the differential categories are:

- a) Connected rating units
- b) Serviceable rating units

The differential targeted rates are set as a fixed amount per separately used or inhabited part of a rating unit. Rating units outside the defined water supply areas listed below, but which are nonetheless connected to a water supply scheme servicing a particular water supply area, will be charged the connected rate for that water supply area.

Water supply area	Connected	Serviceable
Ashburton urban	\$741.50	\$370.75
Lake Hood	\$741.50	\$370.75
Methven	\$741.50	\$370.75
Rakaia	\$741.50	\$370.75
Fairton	\$741.50	\$370.75
Hakatere	\$741.50	\$370.75
Hinds	\$741.50	\$370.75
Mayfield	\$741.50	\$370.75
Chertsey	\$741.50	\$370.75
Mt Somers	\$741.50	\$370.75
Dromore	\$741.50	\$370.75
Methven -Springfield*	\$741.50	-

*No serviceable charges apply

Water meters – Extraordinary and non-residential supply

In addition to the above targeted rates, a targeted rate for water supply, set under section 19, will apply for:

- a) Rating units which fall outside a defined water supply area, but which are nonetheless connected to a water supply scheme servicing a water supply area (except Montalto, Lyndhurst and Barrhill); or
- b) Rating units which are used for non-residential purposes, and which are connected to a water supply scheme in a water supply area (except Montalto, Lyndhurst and Barrhill).

The rate is \$1.00 per 1,000 litres of water consumed in excess of 90 cubic metres consumed in the quarterly periods during each year. The quarterly periods are 1 July to 30 September, 1 October to 31 December, 1 January to 31 March, and 1 April to 30 June. These properties will be billed quarterly.

Water meters – Residential extraordinary supply

Defined as properties connected to the Council water supply network located in Residential D, or Rural A zones of the Ashburton District Plan; or Methven-Springfield rural water supply.

In addition to the above targeted rates, a targeted rate for water supply, set under section 19, will apply for:

- a) Rating units which fall outside a defined water supply area, but which are nonetheless connected to a water supply scheme servicing a water supply area (except Montalto, Lyndhurst and Barrhill); or
- b) Rating units which are used for non-residential purposes, and which are connected to a water supply scheme in a water supply area (except Montalto, Lyndhurst and Barrhill).

The rate is \$1.00 per 1,000 litres of water consumed in excess of 438 cubic metres per annum. The period is 1 July – 30 June. These properties will be billed annually.

Montalto water supply rate

A targeted rate under section 16 of \$2,252.00 per rating unit in the Montalto water supply scheme, plus \$75.30 per hectare of land in the Montalto water supply scheme.

Lyndhurst water supply rate

A targeted rate under section 16 of \$193.20 on all rating units connected to the Lyndhurst water supply.

Barrhill village water supply rate

A targeted rate under section 16 of \$391.60 on all rating units within the scheme boundary for the Barrhill Village water supply.

Residential wastewater disposal rates

The following differential targeted rates are set under section 16 for wastewater (sewage) disposal for the Ashburton urban area, Methven, and Rakaia townships, as listed below. In each case the differential categories are:

- a) Connected rating units
- b) Serviceable rating units

The targeted rates are set as a fixed amount per separately used or inhabited part of a rating unit.

	Connected	Serviceable
Ashburton urban area	\$603.60	\$301.80
Methven township	\$603.60	\$301.80
Rakaia township	\$603.60	\$301.80

The following additional targeted rates are set under section 16 for wastewater disposal on connected rating units (other than those rating units used primarily as a residence) within the Ashburton urban area, Methven and Rakaia townships as listed below. These rates are set differentially based on location and the number of urinals / pans in excess of three, in each rating unit, as listed below.

	Urinal / pan charge from 4+
Ashburton urban area	\$201.20
Methven	\$201.20
Rakaia	\$201.20

Solid waste collection rates

The following rates are set under section 16 for waste collection for each area to which the service is provided as listed below. The targeted rates are set as a fixed amount per separately used or inhabited part of a rating unit.

Ashburton urban	\$276.30
Ashburton CBD (inner)	\$428.60
Methven	\$276.30
Rakaia	\$276.30
Hinds	\$276.30
Mayfield	\$276.30
Mt Somers	\$276.30
Chertsey	\$276.30
Fairton	\$276.30
Lake Clearwater	\$160.20
Rangitata Huts	\$162.20
Ashburton District extended	\$276.30

Stockwater rate

A targeted rate under section 16 on all rating units within the general stockwater scheme. The rate is to be determined in accordance with the following factors:

- a) A rate of \$700.00 per rating unit within the general stockwater scheme; and
- b) For those rating units where the total length of any stockwater races, aqueducts or water channels that pass through, along or adjacent to, or abuts the rating unit exceeds 246 metres in length an additional rate of 65 cents per metre will be applied.

Amenity rates

Targeted rates for amenity services under section 16 are as follows:

Ashburton CBD (inner) footpath cleaning rate

\$0.000503 per dollar on the capital value of each business rating unit within the Ashburton CBD (inner) rating area (as more particularly described by reference to the Ashburton District Council Rating Areas Map Book), for footpath services.

Ashburton urban amenity rate

\$0.000724 per dollar of capital value of each rating unit in the Ashburton urban area (as more particularly described by reference to the Ashburton District Council Rating Areas Map Book) to meet the costs of stormwater services, footpaths, and parks and open spaces.

Ashburton business amenity rate

\$0.000250 per dollar of capital value of each business rating unit within the Ashburton urban area (as more particularly described by reference to the Ashburton District Council Rating Areas Map Book) for the provision of public conveniences, and district promotion.

Methven business amenity rate

\$0.000306 per dollar on the capital value of each business rating unit within the Methven township area (as more particularly described by reference to the Ashburton District Council Rating Areas Map Book) for the purposes of public conveniences, and district promotion.

Methven amenity rate

\$0.000473 per dollar on the capital value of each rating unit within the Methven township (as more particularly described by reference to the Ashburton District Council Rating Areas Map Book) to meet the costs of stormwater services, footpaths, parks and open spaces, and reserve boards.

Rakaia business amenity rate

\$0.000258 per dollar on the capital value of each business rating unit within the Rakaia township area (as more particularly described by reference to the Ashburton District Council Rating Areas Map Book) for the provision of public conveniences, and district promotion.

Rakaia amenity rate

\$0.000387 per dollar on the capital value of every rating unit within the Rakaia township (as more particularly described by reference to the Ashburton District Council Rating Areas Map Book) to meet the costs of stormwater services, footpaths, parks and open spaces, and reserve boards.

Hinds stormwater rate

\$0.000103 per dollar on the capital value of every rating unit within the Hinds township area for the provision of stormwater services.

Rural amenity rate

\$0.000036 per dollar on the capital value of every rating unit within the rural area, for the provision of footpaths, and parks and open spaces.

Methven Community Board rate

A targeted rate to fund the Methven Community Board under section 16 of \$115.20 per rating unit within the Methven township (as more particularly described by reference to the Ashburton District Council Rating Areas Map Book).

Mt Hutt Memorial Hall rate

A targeted rate to partially fund the Mt Hutt Memorial Hall under section 16 of \$0.000128 per dollar on the capital value of each rating unit in the Methven township (as more particularly described by reference to the Ashburton District Council Rating Areas Map Book).

Due dates for payment of rates

The rates will be payable in four equal instalments due on:

- 20 August 2025
- 20 November 2025
- 20 February 2026
- 20 May 2026

Where the 20th of a month in which rates are due does not fall on a working day, rate payments will be accepted without penalty up to and including the first working day after the 20th of that month.

Due dates for payment of water meter charges – Extraordinary Supplies

That water meter charges are due on:

Quarterly period	Reading dates completed	Due date
1 July to 30 September 2025	15 October 2025	20 November 2025
1 October to 31 December 2025	15 January 2026	20 February 2026
1 January to 31 March 2026	15 April 2026	20 May 2026
1 April to 30 June 2026	15 July 2026	20 August 2026

Due dates for payment of water meter charges – Extraordinary residential supply

That water meter charges are due on:

Annual period	Reading date completed	Invoice date
1 July 2025 to 30 June 2026	15 July 2026	20 August 2026

Penalties

In accordance with sections 57 and 58, the Council will apply the following penalties on rates unpaid by the due date.

A 10% penalty will be added to instalment balances remaining unpaid as at the following dates:

- 21 August 2025
- 21 November 2025
- 21 February 2026
- 21 May 2026

In addition, unpaid rates and charges levied prior to 30 June 2026 will attract a further 10% penalty if still unpaid as at 1 July 2026. The penalty will be applied on 31 August 2026.

A further penalty of 10% will be added to any rates that were assessed prior to 30 June 2026 and remain unpaid on 28 February 2027 .

Background

1. The Ashburton District Council Rates 2025/26 have been set based on Council's Funding Impact Statement in the 2025/26 Annual Plan. The setting of rates meets the requirements of the Local Government (Rating) Act 2002.

Options analysis

Option one – set the rates 2025/26 by resolution of Council – recommended

2. Council would set the rates in accordance with the Local Government (Rating) Act 2002. This option would mean the Council would be able to levy rates for the 2025/26 year.

Advantages: Council is able to levy rates for the 2025/25 financial year	Disadvantages: None identified
Risks: This option is considered to have little risk associated with it.	

Option two – do not set the rates 2025/26 by resolution of Council

3. This option would mean Council would be unable to levy rates for the 2025/26 year.

Advantages: None identified.	Disadvantages: Council would be unable to levy rates for the 2025/26 financial year
Risks: This option would not allow Council to be able to levy rates for the 2025/26 financial year.	

Legal/policy implications

4. Council is required, under section 23 of the Local Government Act (rating) 2002, to set rates by a resolution of Council.

Climate change

5. There are no obvious linkages between the content of the report and climate change mitigation or adaption.

Strategic alignment

Wellbeing		Reasons why the recommended outcome has an effect on this wellbeing
Economic	✓	The recommendation allows for Council to be able to levy rates for the 2025/26 financial year.
Environmental	X	
Cultural	X	
Social	X	

Financial implications

Requirement	Explanation
What is the cost?	Up-to-date financial and rating information is included in the 25/26 Annual Plan.
Is there budget available in LTP / AP?	Yes
Where is the funding coming from?	See the 2025/26 Annual Plan for details
Are there any future budget implications?	This is a key Council resolution to allow rates to be levied to provide for Council's budgeted spending for the 2025/26 Annual Plan.
Reviewed by Finance	Helen Barnes; Group Manager Business Support

6. If rates are not set for the 2025/26 year, Council will be unable to levy rates and, therefore, will not have revenue available to undertake the work programmes outlined in the 2025/26 Annual Plan.

Significance and engagement assessment

Requirement	Explanation
Is the matter considered significant?	Yes
Level of significance	Low
Rationale for selecting level of significance	N/A
Level of engagement selected	1. Inform – one way communication
Rationale for selecting level of engagement	Adopting a rates resolution is the final step in the annual plan and rates setting process to enable Council to conduct its work

	programme for the 2025/26 year. The resolution must be published online within 20 working days of adoption.
Reviewed by Strategy & Policy	<i>Name; Position</i> <If no, provide brief explanation>

8. *Local Water Done Well Service Delivery Model*

Author *Mark Low: Strategy & Policy Manager*
Toni Durham: GM Democracy & Engagement
Executive Team Member *Hamish Riach: Chief Executive*

Summary

- The purpose of this report is for Council to decide on the service delivery model for Local Water Done Well (LWDW).
- Council consulted with the community from late March to late April on two delivery models:
 - a. Stand-Alone Business Unit (SABU) (proposed option)
 - b. Water Services Council-Controlled Organisation (WSCCO) Model
- 234 submissions were received, and Council deliberated on these on the 15 May.

Recommendation

1. **That** Council adopts the Stand Alone Business Unit (SABU) as the delivery model for Council's Water Services Delivery Plan (WSDP) for the future delivery of water services in Ashburton District.

Attachment

Appendix 1 Council Hearings & Deliberations minutes – 15/05/25

Background

The current situation

1. The LWDW reforms require Council to develop a Water Services Delivery Plan (WSDP). This must detail the current state of water infrastructure, identify future investment needs, and outline the financial and operational strategies required to comply with current and anticipated regulatory standards set out under the LWDW reforms.
2. The WSDP must also include detail on Council's proposed or anticipated model for delivering water services. This is a statutory requirement under the Local Government (Water Services Preliminary Arrangements) Act 2024, with Council required to submit its WSDP to the Department of Internal Affairs (DIA) by September 2025.
3. The Local Government (Water Services) Bill also establishes specific criteria and financial oversight mechanisms that delivery models must comply with, including information disclosure and economic regulation under the Commerce Commission and water quality regulation under Taumata Arowai.
4. To prepare a WSDP, Council needs to undertake a consultation process as part of making a decision on the anticipated or proposed model or arrangement for delivering water services that will be included in its WSDP.

LWDW Consultation

5. Council consulted with the community from the 27 March – 27 April. Given the significance of the decision, a copy of the consultation document was delivered to each household.
6. The consultation document asked the community to choose their preferred delivery model from the options as follows:
 - Stand-Alone Business Unit (Our proposal) – Ashburton District Council continues to deliver drinking water, wastewater, and stormwater services after making all necessary changes to meet new requirements.
 - Water Services Council Controlled Organisation – Ashburton District Council establishes a WSCCO which manages and delivers water services independently, with Council as shareholder.
 - Don't know/Other
7. Council received 234 submissions, with the majority preferring the Stand-Alone Business unit.

Please choose the water service delivery model that you support	%	Count
Option 1 - Stand-Alone Business Unit (<i>Our Proposal</i>)	88	200
Option 2 – Water Services Council Controlled Organisation	9	20
Option 3 – Don't Know/Other	3	7
Skipped		7
Total	100.0	234

8. Council deliberated on the submissions received on 15 May. As a result of the deliberations, officers were asked to prepare a report to Council confirming the Stand-Alone Business Unit as Council's water services delivery model for the Water Services Delivery Plan.

Options analysis

Option one – Council confirms the Stand Alone Business Unit as the water services delivery model for the future delivery of water services in Ashburton District (recommended option)

9. This option would see Council keep water services governance and management directly with the Council. Council oversees all aspects of water supply, wastewater, and stormwater services, ensuring alignment and coordinated service delivery with other Council functions like parks, transport, and urban planning.
10. The SABU model was Council's proposed option for consultation. It was also the community's preferred proposal from the 234 submissions received.

Advantages:

- Council elected members remain directly accountable for the governance of water services.
- Builds on existing systems and processes, avoiding disruptions associated with transitioning to a new governance structure.
- Avoids establishment and transition costs associated with creating new governance and operational structures under a CCO model.
- Retains Council authority over funding mechanisms, such as general rate, targeted rates, or volumetric pricing.
- Maintains current borrowing capacity provided by the Local Government Funding Agency (LGFA) of 250%, with sufficient debt headroom.
- Financially viable, with modelling indicating a lower household cost compared to the WSCCO model.

Disadvantages:

- New rules and expectations, and more stringent and detailed regulation, may mean that elected members' ability to influence and guide the activity is diminished, leaving a risk of elected members being held accountable for aspects of the service that they can't influence / change.
- The Bill introduces a new legislative framework for operating which will require upskilling of staff to ensure compliance with new legislation and additional staffing resource which may be difficult to recruit for in a provincial town (particularly in the pricing & regulation, financial/business analyst and general finance areas).

Risks:

Operational Risk – While this option will have the least impact on Council operations, it will still require a significant change to operations and governance that will need adaptation.

Option two – Council confirms the Single Council Water Services Council Controlled Organisation (WSCCO) model as the water services delivery model for the future delivery of water services in Ashburton District

11. This option would see Council establish a WSCCO, which is an independent entity established to govern and manage water services, with the Council retaining ownership of the entity and strategic oversight. This model focuses exclusively on water services and operates under its own governance and financial framework.

<p>Advantages:</p> <ul style="list-style-type: none"> • The CCO has an increased borrowing capacity, increasing the potential capacity to fund large-scale infrastructure investments. • Independent governance allows for focused attention on water service delivery, potentially improving efficiency. • Well-suited to scale and accommodating future growth • Offers borrowing limit of up to 500% of total revenue supported by Council guarantee. 	<p>Disadvantages:</p> <ul style="list-style-type: none"> • Establishing a new governance structure and transitioning operations to the CCO involves substantial costs, including IT, legal, administrative, and staffing expenses. • Transferring operational control to an independent entity reduces the Council’s direct oversight of water services, potentially reducing consideration of local priorities and community expectations. • Strategic decisions made by the CCO may not fully reflect Ashburton District’s broader priorities • Establishing and transitioning to the WSCCO will incur costs, and financial modelling indicates a slight increase in household costs compared with a SABU. • Is not preferred by a significant portion of the community (88%) as measured by submissions received
<p>Risks:</p> <p>Operational Risk – Council will need to adapt its approach from being operationally-focused to governance-focused to ensure that the directors, who are accountable to Council, ensure the accountability of the WSCCO.</p> <p>Community backlash based on submissions received.</p>	

Legal/policy implications

Local Government (Water Services Preliminary Arrangements) Act 2024 (Preliminary Arrangements Act)

- Enacted in September 2024, this Act provides the establishment framework for LWDW. It requires councils to develop and submit a Water Services Delivery Plan (WSDP) to the Department of Internal Affairs (DIA) by September 2025 (unless an exemption is granted). The WSDP must set out the Council’s proposed service delivery model, and include baseline infrastructure and financial data, and strategies for meeting financial, operational, and regulatory obligations.

Local Government (Water Services) Bill (Water Services Bill)

13. Introduced in December 2024, this Bill sets enduring legislative framework for water services delivery. It sets out the options available for service delivery models, establishes a new economic regulation and consumer protection regime regulated by the Commerce Commission, and implements changes to water quality regulations, including enhanced standards for wastewater and stormwater.
14. The Water Services Bill is currently at Select Committee stage. The Finance and Expenditure Select Committee report is due by 17 June 2025, with the Government intending to enact the Bill into law in mid-2025.

Water Services Delivery Plan

15. The WSDP is a core requirement of the LWDW reforms. Mandated under the Preliminary Arrangements Act, the WSDP ensures that water service providers can meet enhanced regulatory standards while demonstrating financial sustainability in the delivery of water services.
16. The Council is actively developing its WSDP. This plan will detail the current state of Ashburton's water infrastructure, identify future investment needs, and outline the financial and operational strategies required to comply with current and anticipated regulatory standards set out under the LWDW reforms. The WSDP must be finalised and submitted to the DIA by September 2025.
17. Central to the WSDP is the selection of the anticipated or proposed service delivery model for water services. This model will shape how the Council meets its obligations under the LWDW framework, ensuring water services are efficient, financially sustainable and meets regulatory requirements. The decision in this report is a fundamental stage in the WSDP development.
18. The WSDP will come to Council for adopting in August 2025.

Climate change

19. The decisions of this report will have a minor impact on climate change, however the water services activities are all impacted by changing weather patterns.

Review of legal / policy implications

Reviewed by In-house Counsel

Tania Paddock; Legal Counsel

Strategic alignment

20. The recommendation relates to Council's community outcomes of '*A prosperous economy built on innovation, opportunity and high quality infrastructure*' and '*A balanced and sustainable environment*'.

Wellbeing		Reasons why the recommended outcome has an effect on this wellbeing
Economic	✓	The future delivery of water services will impact on all wellbeing's for our community.

Financial implications

Requirement	Explanation
What is the cost?	Preparing the material presented and undertaking consultation has largely been met from within existing staff resource, with \$30,000 spent on financial modelling and preparation.
Is there budget available in LTP / AP?	Yes
Where is the funding coming from?	Strategy & Policy, Treasury and Communications cost centres
Are there any future budget implications?	Yes – both options presented will have implementation costs. These have been included in the financial modelling but not in future budgets. These will need to be included ahead of implementing either option.
Reviewed by Finance	Helen Barnes; Group Manager Business Support

Significance and engagement assessment

Requirement	Explanation
Is the matter considered significant?	Yes
Level of significance	Medium
Rationale for selecting level of significance	N/A
Level of engagement selected	2. Consult
Rationale for selecting level of engagement	Council has undertaken the consultation for the LWDW water services delivery model under the Local Government (Water Services Preliminary Arrangements) Act 2024. This provided a tailored consultation process, designed to streamline procedural requirements and focus consultation on the statutory requirements of the Act.
Reviewed by Strategy & Policy	Mark Low; Strategy and Policy Manager

Council Hearings

15 June 2025



Local Water Done Well Submission Hearings & Deliberations

Minutes of Council's Hearing of Submissions on the Local Water Done Well Proposal, commencing at 9am on Thursday 15 May 2025, in the Hine Paaka Council Chamber, 2 Baring Square East, Ashburton.

Present

Deputy Mayor Liz McMillan (Chair); Councillors Leen Braam, Carolyn Cameron, Russell Ellis, Phill Hooper, Lynette Lovett, Rob Mackle, Tony Todd and Richard Wilson.

In attendance

Hamish Riach (CE), Toni Durham (GM Democracy & Engagement), Neil McCann (GM Infrastructure & Open Spaces), Helen Barnes (GM Business Support), Mark Low (Strategy & Policy Manager), Tayyaba Latif (Policy Advisor) and Phillipa Clark (Governance Support).

Apologies

Mayor Neil Brown

Sustained

Submissions

Stuart Wilson 9.02am

Supports the Stand-Alone Business Unit option

- Doesn't believe the CCO option is the right one for Ashburton district.
- All users of 3 Waters must be responsible for all costs associated with the supply of these services.
- Understands future compliance will come at a cost and Council needs to be able to justify and show this.
- Council should introduce water meters and charge according to water use. Those in Residential D are already subject to this regime. Over the summer, looking at Tarbottons Rd, it was evident properties are charged for water and which are able to use extra water without charge.
- Meters should be read monthly, but the water use charges could be on an annual basis. Advice to ratepayers should be restricted to showing only when excess water has been used.
- Disagrees with more expense being incurred on the well in Tinwald that sits in a high nitrate plume. Suggested Council looks for areas / wells where there are low nitrates.
- Relying on a pipe over the river is a risk. Should have an emergency well for the area of Ashburton town south of the river. Aware that this option is under consideration by Council and believes the well would be a cheaper option.

Deliberations

Officers presented the summary of the 234 submissions and feedback received.

Option 1 - Stand-Alone Business Unit (<i>Council's Proposal</i>)	88	200
Option 2 – Water Services Council Controlled Organisation	9	20
Option 3 – Don't Know/Other	3	7
Skipped		7
Total	100.0	234

Option 1: Stand Alone Business Unit

- Cost and the affordability of an in-house (SABU) model has been commented on in a number of submissions.
- Local control and accountability are seen as positives, and Council responsibility is key.
- Officers envisage no change to rates notices. Water rates are currently isolated as a targeted rate, and as a business unit within Council, officers wouldn't anticipate change to the accounts system.
- Council will need to make it clear to people that there will be increased costs resulting from the in-house proposal.
- References to stormwater, fluoridation, tradewaste and rainwater collection have been noted. While these are outside the water proposal under consultation, officers will advise submitters of how these issues are being addressed.
- Council will continue to install meters and monitor leak detection but it's not intended to use meters to charge for water use, unless directed otherwise. Submitters can be reminded that no one pays for water in NZ, just for the infrastructure.
- Noted submitters concerned about cost increases. Responses will reference the role of the Commerce Commission and the extent of local control.
- Responses will clarify that the proposal is for people on Council water schemes and that governance oversight (directors) are the Council's elected members.

Option 2: Water Services CCO

- Acknowledged comments about elected councillors being held accountable and the community's ability to choose / elect people with the necessary skills.
- Will clarify ACL's role as a CCO and the contracts the company delivers for Council.

Option 3: Don't Know / Other

- Responses will include explanations on the focus of the LWDW reform and the role of Taumata Arowai as regulator.
- Acknowledged the need to address language barriers and, where possible, provide translations with consultation documents (officers are exploring use of Google Translate).

Concluding comments

- Council agreed that, given the number of submissions received and the heavily weighted response in favour of Council's preferred option, the consultation process has provided a clear direction.

- With 88% of submitters in favour of the SABU proposal, Council can be confident in making its decision. Noted that the SABU is not 'business as usual' and there will be more strengthening of the governance around the water services delivery plan.
- Acknowledged the work undertaken by past councils and staff.

Next Steps

- Officers will present a report to Council next week (21 May)
- Council's decision to be provided to DIA in August
- Water Services Delivery Plan to be in place by 3 September

It was reported that the date for implementation is not yet known and will depend on a number of factors, including how quickly DIA will be able to assess and approve each councils' WSDP.

Officers are planning and budgeting for the required resources and systems and a decision on when to implement the proposal will become clearer as the DIA start the assessment process.

The outcome of the final Water Services Bill, currently in Select Committee stage, is also awaited.

The submission hearing and deliberations concluded at 10.10am.

9. *Water Races Bylaw – Next steps*

Author	<i>Richard Mabon, Senior Policy Advisor</i>
Activity Manager	<i>Mark Low, Strategy and Policy Manager</i>
Executive Team Member	<i>Toni Durham, Group Manager, Democracy and Engagement</i>

Summary

- The purpose of this report is to decide how to proceed with the Water Races Bylaw. which will expire on 26 September 2026.
- Officers have considered whether a bylaw will be required to remain in place until the conclusion of the stockwater exit process. Officers recommend that Council makes a new Bylaw which closely resembles the expiring Bylaw, with very minor changes.

Recommendation

1. **That** Council, having considered the tests under s. 155 of the Local Government Act 2002, determines that the preferred course of action is to make the Water Races Bylaw 2025.
2. **That** Council confirms that the draft Water Races Bylaw 2025 set out in Appendix 1 is the preferred form of bylaw for public consultation.

Attachment

Appendix 1	Draft Ashburton District Water Races Bylaw 2025
Appendix 2	Section 155 report
Appendix 3	Clause-by-clause analysis

Background

The current situation

The Stockwater Exit Transition Project

1. Council consulted within the 2024-34 Long-Term Plan process (“Five for the Future”) on the future of Council delivery of stockwater and decided on a managed and inclusive exit process.
2. A Stockwater Transition Working Group (STWG) was established to develop a transition plan for exit by 30 June 2027.

The Water Races Bylaw 2019

3. The Water Races Bylaw was made by Council resolution on 26 September 2019, commencing on 27 September 2019.
4. The purpose of the existing bylaw is to:
 - Ensure the water race network is managed appropriately to maintain water quality and quantity for stockwater;
 - Provide for the cultural and ecological values of identified parts of the network; and
 - Provide for the safety of water race users and the public.¹
5. The Water Races Bylaw sets out conditions of use, responsibilities of owners, and council’s powers to manage the water race network.
6. As it was a new Bylaw, statutory review was required within five years. As this did not occur, section 160A Local Government Act 2002 provides that the Bylaw will expire on 26 September 2026. There is time for Council to replace the Bylaw if that is preferred.

Interested and affected parties (i.e. Tangata whenua, community groups, Council team, elected members etc)

7. Interested and affected parties include all stock water users and ratepayers, environmental interests, tangata whenua, irrigators, Rangitata Diversion Race Management Ltd, Heritage New Zealand Pouhere Taonga, Environment Canterbury and the general public. Officers would include Maori and tangata whenua within the engagement and consultation process. Arowhenua are also represented on the STWG.

Options analysis

Objective of the decision

8. The objective of this decision is to consider the next steps for the Water Races Bylaw. Key criteria for this decision are:

¹ Clause 2, *Ashburton District Council Water Races Bylaw 2019*, p.1

- The decision will support the successful completion of the Stockwater Exit Transition Plan and the purpose of the Bylaw;
- The decision is lawful; and
- The decision is affordable

Decision-making requirements

9. Each of the three options presented must meet the decision-making requirements for Council under the Local Government Act 2002 (LGA02).
10. For Option One – there is no decision-making requirement. The Bylaw simply expires after two years from the review falling due – i.e. on 26 September 2026.
11. For Options Two and Three – Council must make a new Bylaw. This requires Council to:
 - Complete the s.155 tests
 - Consult on a draft bylaw. Depending on the extent of the change, this is either a special consultative procedure under section 83 or a consultation under section 82.
 - Hear and deliberate on submissions to the draft bylaw
 - Adopt the final bylaw

Long-list of Options

12. Officers considered this list of five options before reducing that list to three.
 1. Do Nothing
 2. Maintain 100% status quo
 3. Make minor improvements to support network management (“95% status quo”)
 4. Make more substantive improvements to improve network management or implementation of the Stockwater Exit Transition Plan (SETP) or both
 5. A new Bylaw to manage through to completion of the SETP and into the post-exit environment.
13. Option four is most likely to raise concerns for parties concerned about the impacts of the SETP if the bylaw rules on water race closures change while the exit process is incomplete. This brings a higher risk of 'reopening' the stockwater exit debate and/or compromising community buy-in. For these reasons, Option Four was not favoured.
14. Option five has the most ambitious scope, as it seeks to foresee what kind of regulatory framework will be needed in the Post-SETP environment. The greatest disadvantage is the uncertainty surrounding what the future policy/regulatory framework needs to be, raising the risk that we get it wrong by starting before we adequately understand the needs. Option five is not favoured because of the current level of uncertainty.

Option one – Do nothing

15. Under this option, Council would do nothing and the Bylaw would expire at 26 September 2026. This means that Council would not have the enforcement measures available to it under the Bylaw beyond that date and would manage the network under the statutory powers in the LGA02.

Managing under statutory powers

16. If Officers were confident that they could continue to manage the network under the statutory powers in the LGA02, this option could be preferred. Officers have compared the provisions in the Bylaw with the relevant clauses in the LGA02.

Closure of water races

17. The biggest challenge to managing under statutory powers would be the lack of specific provisions in the LGA02 on the closure and alteration of water races. As the SETP is based on the process and criteria outlined in the Bylaw, removal of those powers could prove very problematic. This may raise concerns about the rules changing mid-process and affect public confidence and buy-in. In a worst case, it might see Council challenged as to the extent of its powers to close races.

Maintenance of local races

18. The next biggest issue is likely to be maintenance of local races. The pending exit has led to some landowners indicating that they will no longer maintain the local races as the race will soon close. Council has powers under the Bylaw to undertake this work and recover the costs from the landowner. It is also a breach of the bylaw to impede access for cleaning machinery. This is necessary to ensure that others downstream still receive a service.
19. The same powers to require maintenance by the landowner do not exist under the LGA02 except for breach of a statutory duty. None of the statutory duties in the Act are as comprehensive as the Bylaw requirements for maintenance. Finally there is no equivalent power in the Act to compel a landowner to allow access for council machinery to clean a local race. In a worst case scenario, a landowner could decline to clean a race, refuse or obstruct Council access to clean it, or refuse to reimburse Council for cleaning it. These outcomes will result in higher costs for Council.

Wastage

20. There is also no equivalent power in the Act that mirrors the requirements under the Bylaw to prevent wastage of water.

<p>Advantages:</p> <ul style="list-style-type: none"> • This is the least-cost option in terms of expenditure on the Bylaw process. Options 2 and 3 both require consultation. 	<p>Disadvantages:</p> <ul style="list-style-type: none"> • Council will not have the full suite of enforcement opportunities available to it after the Bylaw expires. See discussion in paragraphs 17-20. • Council's ability to recover the costs of maintenance done on behalf of landowners may be compromised. See paragraphs 17-20. • Increased maintenance costs could easily surpass reduced consultation costs.
<p>Risks:</p> <p>Criteria for the closure and alteration of water races are set out in the Water Races Bylaw. The process in the Stockwater Exit Transition Plan (SETP) is designed to ensure that the decisions to give effect to the exit reflect the requirements of the bylaw. Council is seeking a "managed and inclusive" process and there is some risk that failure to replace the bylaw could harm the process.</p>	

Option two – maintain 100% status quo

21. Under this option, Council would resolve to make a new Bylaw, identical to the existing bylaw. This would mean that the current bylaw would be revoked as the new bylaw comes into effect. The new bylaw would support day-to-day management of water race operations until the SETP is completed.

<p>Advantages:</p> <ul style="list-style-type: none"> • Council will retain the full suite of enforcement opportunities available to it. See discussion in paragraphs 17-20. • Council's ability to recover the costs of maintenance done on behalf of landowners would be retained. See paragraph 18. • A new Bylaw that replicates what is already in place should help to retain community buy-in through the SETP work. 	<p>Disadvantages:</p> <ul style="list-style-type: none"> • This Option involves more expenditure (operational costs in developing a new Bylaw) than Option 1. • This option misses the opportunity to make correct errors that, in any other context, we would choose to fix.
<p>Risks:</p> <p>We need to understand the potential opportunity cost in a "no change" new Bylaw, compared with making minor changes as proposed under option three. The risk appears LOW.</p>	

Option three – Make minor improvements to support network management (95% status quo") (Recommended option)

22. Under this option, Council would make a new Bylaw to "substantially roll-over" the current Bylaw while making minor but beneficial improvements that support network management. This would not impact any aspects relating to the SETP.

23. Appendix 1 is the proposed draft Water Races Bylaw 2025. Appendix 2 details the changes from the 2019 bylaw and assesses their impact. The overall impact is very minor.
24. Since the Council Workshop on 30 April, officers have identified other minor changes and these are highlighted in Appendix 1 and 2.
25. Officers also note two other issues that could be addressed later in the consultation process.
26. The first is the use of the term animal or animals. This term is used in 12 places in the Bylaw. In some places, the context implies that the animals are stock, and in other places it is intended to refer to animals more broadly. The bylaw definition also includes “stock” within the definition of animals. If Council is of a mind to adjust the bylaw, Officers recommend that Council direct them to bring back a set of changes at the deliberation phase.
27. The second is the reference in Schedule 1 – 1 n. to the Ashburton Water Zone Implementation Plan. The Zone Committee model is currently under review, and a paper is to go to the Canterbury Mayoral Forum in May. It may be relevant to take a closer look at Schedule 1 – 1.n. at the deliberation phase after the new model is resolved.

<p>Advantages:</p> <ul style="list-style-type: none"> • Council will retain the full suite of enforcement opportunities available to it.. • Council’s ability to recover the costs of maintenance done on behalf of landowners would be retained. • Minor errors in the Bylaw will be corrected. • A Bylaw that replicates what is already in place should help to retain community buy-in. 	<p>Disadvantages:</p> <ul style="list-style-type: none"> • This Option involves more expenditure (operational costs in developing a new Bylaw) than Option 1.
<p>Risks:</p> <p>The key risk is the difference to community buy-in between a 100% rollover and a 95% rollover. As noted in Appendix Two, the risk appears LOW.</p>	

Legal/policy implications

Section 155 determinations

28. These matters are fully discussed in Appendix 2, and supported by a clause-by-clause analysis of the draft Bylaw (Appendix 3).
29. For the reasons set out in Appendix 2, Officers conclude that:

- The proposed Bylaw is the most appropriate way of addressing the actual and perceived problems; and
- The proposed Bylaw is the most appropriate form of bylaw; and
- The proposed bylaw does not give rise to implications under the NZ Bill of Rights Act 1990 (“NZBORA”) and is not considered to be inconsistent with the NZBORA.

Climate change

30. As noted in paragraph 4, one of the purposes of the Bylaw is to *...provide for the ... ecological values of identified parts of the network*. Those ecological values include supporting biodiversity values, including those associated with adaptation to climate change, by preserving habitat and supporting blue-green corridors.

Review of legal / policy implications

Reviewed by In-house Counsel	Tania Paddock; Legal Counsel
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Strategic alignment

31. The recommendation relates to Council’s community outcomes as set out in the table below:

Community outcome		Reasons why the recommendations have an effect on this outcome
Residents are well-represented, included and have a voice	✓	Public consultation on the Bylaw gives residents a say and the conduct of Council business in public contributes to open, transparent and democratically accountable local government.
A district of great spaces and places	✓	The water race network contributes to the quality of open spaces in rural areas.
A balanced and sustainable environment.	✓	The water race network supports ecological values, including biodiversity.
A prosperous economy based on innovation, opportunity and high quality infrastructure	✓	The water race network supports farming operations in the district and agriculture is the cornerstone of the economy.

32. The recommendations relate to the four well-beings as set out in the table below:

Wellbeing		Reasons why the recommended outcome has an effect on this wellbeing
Economic	✓	An efficient and effective water race network supports the agricultural economy.
Environmental	✓	The water race network supports ecological values, including biodiversity.
Cultural	✓	The water race network supports cultural values, such as mahinga kai.
Social	✓	Public consultation on the Bylaw contributes to open, transparent and democratically accountable local government.

Financial implications

Requirement	Explanation
What is the cost?	Officers note that the Bylaw consultation and implementation of the adopted bylaw is expected to be delivered within operating budgets. No additional expenditure is required.
Is there budget available in LTP / AP?	Yes
Where is the funding coming from?	Operating budgets for Strategy and Policy will cover the direct costs of consultation. Implementation (including enforcement) is covered by operating budgets for stockwater management.
Are there any future budget implications?	No.
Reviewed by Finance	Erin Register, Finance Manager

Significance and engagement assessment

Requirement	Explanation
Is the matter considered significant?	No
Level of significance	Low
Rationale for selecting level of significance	The overall impact of the recommended decision is minor updates to the current bylaw, consistent with maintaining current levels of service, and minor updates for changes in the operating environment and to correct errors.
Level of engagement selected	3 Consult – formal two-way communication using consultation under s.82 of the LGA02
Rationale for selecting level of engagement	Consultation is always required for bylaws, and s.82 is required for bylaw matters that are not of significant interest to the public.
Reviewed by Strategy & Policy	Mark Low, Strategy & Policy Manager

Next steps

33. Council will hear and deliberate on public submissions on the draft Bylaw, before making its final decision.
34. As the SETP nears completion, officers anticipate that Council would launch an investigation to determine what regulation or policy, if any, would be required to ensure the successful operation of the remainder of the water race network in a post-exit environment. The review would also establish whether, as part of a future regulatory/policy framework, the new Bylaw should be: revoked, amended, revoked and replaced, or continue without change.

Date	Action / milestone	Comments
21 May 2025	Complete S.155 Review and adopt draft bylaw for public consultation	
30 May 2025	Public consultation commences	
29 June 2025	Closing date for public submissions	
13 August 2025	Hearings and deliberations	Timing assumes that volume and nature of submissions can be addressed on the same day.
3 September 2025	Adoption of final Bylaw after consideration of matters raised in hearings and deliberations	Bylaw must be notified after adoption.
June/July 2027	Review the Water Races Bylaw 2025 following the conclusion of the SETP in June 2027.	

Bylaw

WATER RACES

TITLE:	Ashburton District Council Water Races Bylaw 2025
TEAMS:	Assets
RESPONSIBILITY:	Group Manager, Infrastructure and Open Spaces
DATE ADOPTED:	3 September 2025
COMMENCEMENT:	12 September 2025
NEXT REVIEW DUE:	3 September 2030 (as required by LGA s.158 and 159)
RELATED DOCUMENTS:	Ashburton District Council Explanatory Bylaw 2016 Ashburton District Council Stormwater Bylaw 2022 Ashburton District Council Wastewater Drainage Bylaw 2021 Ashburton District Council Water Supply Bylaw 2016 Ashburton District Plan Ashburton District Surface Water Strategy 2018-2028 Health Act 1956 Health and Safety at Work Act 2015 Local Government Act 2002 Resource Management Act 1991

1. Title

The title of this bylaw is Ashburton District Council Water Races Bylaw 2025. This bylaw revokes and replaces the Ashburton District Council Water Races Bylaw 2019.

2. Purpose

The purpose of this bylaw is to:

- a. Ensure the water race network is managed appropriately to maintain water quality and quantity for stockwater;
- b. Provide for the cultural and ecological values of identified parts of the network; and
- c. Provide for the safety of water race users and the public.

3. Contents

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2. Purpose	1
3. Contents	1
4. Application	2
5. Definitions	2

6.	Use of Water Race Network	3
7.	Responsibilities of owner/occupiers'	3
8.	Power and responsibilities of Council	4
9.	Alterations to water race network	5
10.	Non-permitted uses of the water race	6
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4. Application

This bylaw applies to the water race network within Ashburton District managed by the Ashburton District Council. This bylaw is to be read in conjunction with the requirements of the Local Government Act 2002. Where a conflict occurs the provisions of that Act take precedence.

5. Definitions

Affected parties: means, in the context of an application to alter or close a section of race, the property owner or occupier who use that section of race or whose land the race channel runs through or is adjacent to a roadside race.

Animal: means stock, poultry and any other animal that is kept in a state of captivity or is dependent upon human beings for its care or sustenance and those that are not.

Appointed crossing: means any location at which there is a culvert or bridge to allow for animals to cross over the water race.

Authorised Person: means any person to whom authority is delegated by Council to take action in relation to this bylaw or to undertake the duties of a Council officer under this bylaw, including a contractor or agent of the local authority.

Bylaw: means the Ashburton District Council Water Races Bylaw 2025.

Council: means the Ashburton District Council or any Authorised Person

District: has the meaning provided in the Ashburton District Council Explanatory Bylaw 2016.

Local race: means a race that sources its water from a main race and is maintained by the occupiers/landowners whose land the race runs through or is adjacent to a roadside race.

Owner or occupier: means the person or persons who use/s the race or whose land the race channel runs through or is adjacent to and includes their agents.

animal

Main race: means a race that sources its water directly from an intake point for distribution through local races. Main races are operated and maintained by Council.

Maintenance: means ensuring channels and banks are maintained and kept clear from obstructions to allow water to flow freely.

Pollution: means the discharge, whether directly or indirectly into a water race, which will contaminate that water so as to change the physical condition in such a manner as to:

- a. Make the water unclean, noxious or impure; or
- b. Be detrimental to the health, safety or welfare of persons using the water; or
- c. Be poisonous or harmful to animals, birds or fish around or in the water; and

Includes any other action or inaction which renders the water in the water race to be classified as all or any of the points above.

Service: means a pipe, pond, trough, tank or reservoir or other service connected to the water race. **Council no longer rates specifically for services.**

Stock: has the meaning provided in the Ashburton District Council Explanatory Bylaw 2016.

Water race: has the meaning given in the Local Government Act 2002, and in general means the land occupied by a constructed water channel, including its sides and banks, under the authority of a local authority to be used for farming purposes. It can include other waterworks, buildings and machinery relating to or used in connection with a water race. For the purposes of this bylaw, it includes both local races and main races.

6. Use of water race network

- 6.1 The water race network's primary purpose is to supply water for stock consumption.
- 6.2 The water race network is not intended to supply water for drinking or domestic use.
- 6.3 The Council may prevent the use of any water from the water race network if the owner or occupier of the land receiving the water fails to comply with provisions of this bylaw or fails to pay the annual charges for the supply of water from the water race network.
- 6.4 No owner or occupier of any land or other person shall direct, consume or use any water from any water race without the permission in writing of the Council and without having first paid the appropriate charges.
- 6.5 No owner or occupier responsible for a local race shall cause or permit water to run to waste from any water race or service.
- 6.6 For the avoidance of doubt, water running to approved discharge points (including soak pits, drains and rivers) is not considered waste for the purposes of clause 6.5.

7. Responsibilities of owners or occupiers

- 7.1 The owners or occupiers are responsible for ensuring all necessary fees are paid and permissions obtained for any use of the water race network.
- 7.2 The owners or occupiers responsible for a local race shall, at their own cost, keep and

- maintain the local race in good condition to ensure a continuous flow and prevent any overflow, leakage or wastage of water to land or roads.
- 7.3 Where the local race is located on or about the common boundary between lands in different ownership, the responsibilities of owners or occupiers lie between them in equal shares.
- 7.4 The owners or occupiers shall clean and maintain the local race in good order and repair and allow easy access to race cleaning machinery.
- 7.5 The owner or occupier shall ensure that any damage to the local race bank is promptly and properly repaired and ensure that the local race is maintained in its original condition in relation to its depth and width following any maintenance and or repair, unless otherwise authorised.
- 7.6 The owner or occupier may, at the written direction of an Authorised Person, be required to erect an appropriate fence to allow animal access to the water race for drinking purposes only.
- 7.7 The owner or occupier shall maintain and keep all on-farm local race bridges and culverts in proper repair and condition.
- 7.8 The owner or occupier of the land through which any local race runs shall remove or dispose of all matter or debris dislodged as part of cleaning and/or maintenance of that local race, and shall:
- 7.8.1 Ensure that removal or disposal occurs at the time that cleaning and/or maintenance occurs or as soon as practicable thereafter.
- 7.8.2 Bear the cost of the removal and disposal of that matter and debris.
- 7.9 The owner or occupier will allow access to machinery used for race cleaning (as per clause 10.1.15.2 d. and Figure 1) and take all reasonable steps to prevent any matter or debris removed from the local race from re-entering the race.
- 7.10 The owner or occupier must make a Corridor Access Request in writing to the relevant road controlling authority for any work within a road reserve. The person undertaking the work shall then comply with all the requirements of the subsequent Works Access Permits.

8. Powers and responsibilities of Council

- 8.1 Council sets annual rates under the Local Government (Rating) Act 2002 and may impose fees and charges under the Local Government Act 2002 for the ability to use the water race network on all properties with a water race running through or adjacent to it.
- 8.2 Rates are levied on a property served by the water race network regardless of whether the water is used or not.
- 8.3 Fees and charges shall be set in accordance with the provisions of the Local Government Act 2002 and this bylaw.
- 8.4 Nothing contained in this bylaw shall restrict Council's ability to manage its water race network and infrastructure associated with it.
- 8.5 Council is responsible for the cost of network operation and the management and maintenance of main water races, control structures, flow measurement facilities and road crossings (including associated culverts).
- 8.6 Where a water race has been altered, diverted or closed, Authorised Persons and/or Council's appointed agents shall have rights of unrestricted access to the water race and

- other occupied land for the purposes of construction, maintenance, alteration and inspection of water races, associated structures and closure works.
- 8.7 Council may impose restrictions on taking water from the water race network from time to time.
 - 8.8 Council does not guarantee an uninterrupted or constant supply of water to any property or its quality.
 - 8.9 Council is not responsible or liable to any person or body for the total or partial failure of any part of the water race network.
 - 8.10 Council may stop the flow of water in any water race for the purposes of:
 - 8.10.1 Carrying out repairs, maintenance, alterations, or any other purpose deemed necessary by the Council;
 - 8.10.2 Managing the distribution of water; and/or
 - 8.10.3 Permanently closing the race (see Schedule 1)
 - 8.11 Council may carry out fencing, cleaning, maintenance or repair of a local race in the event that the owner or occupier fails to do so satisfactorily.
 - 8.12 Council may recover the cost of works carried out under clause 8.11 of this bylaw from the owner or occupier. Where the work involves two or more owners or occupiers, Council shall recover its costs **either:**
 - 8.12.1 By equal shares; **or**
 - 8.12.2 By allocating each owner or occupier a fair and just proportion of the total costs of the work where this will produce a fairer outcome than equal shares.

9. Alterations to the water race network

- 9.1 Alterations to the water race network include:
 - 9.1.1 Diverting an existing section of water race;
 - 9.1.2 Constructing a water race in a road reserve or under carriageways;
 - 9.1.3 Installing a pipe service, pump service or pond service as described in Schedule 2 to this bylaw; or
 - 9.1.4 Permanent closure of a water race.
- 9.2 Assessment of an alteration to the water race network is triggered by application in writing to Council from
 - 9.2.1 Any owner or occupier; or
 - 9.2.2 An Authorised Person
- 9.3 An application under clause 9.2 shall include:
 - 9.3.1 Any applicable fees and charges
 - 9.3.2 A completed "Application for Alterations to Water Race" form, and
 - 9.3.3 "Affected Parties Consent" form signed by affected parties
 - 9.3.4 The information necessary to enable assessment under the criteria in Schedule 1
- 9.4 Council will assess the application against the criteria in Schedule 1.
- 9.5 Council has the right to decline any application.
- 9.6 Council may grant permission for any application subject to conditions.
- 9.7 Works cannot begin until Council has provided written permission.

10. Non-permitted uses of the water race network

Explanatory Notes:

Clause 10.1.7 is intended to reinforce regulatory and voluntary efforts to protect water quality from the activities of larger animals including cows, deer, horses and pigs that will stand, wallow, urinate and/or defecate in water races. Environment Canterbury has developed stock exclusion rules for the same purpose and our intention is to align our enforcement approach with the position set out in the stock exclusion rules.

Clause 10.1.15 is intended to enable efficient and effective maintenance of the water race network and to prevent inappropriate plantings that reduce the efficiency of that work. In particular, Council notes that riparian plantings may occur within 3 metres of the sides of a water race and may provide ecological benefits without constraining race maintenance.

- 10.1 The owner or occupier or any other person shall not:
 - 10.1.1 Allow any pollutant to enter a water race.
 - 10.1.2 Do anything that will increase or decrease the flow of water in the water race without the consent of the Council
 - 10.1.3 Obstruct the flow of water in any water race by any means whatsoever
 - 10.1.4 Remove, displace, alter or interfere with any gauge, meter, weir, dam, reservoir, crossing, culvert, pipe, headworks, gate, screen, building or other structures which form part of the water race network.
 - 10.1.5 Obstruct or interfere with any person employed by Council in connection with the water races in the discharge of their duties.
 - 10.1.6 Widen or deepen any water race or alter its course without the consent of the Council
 - 10.1.7 Allow any animals to enter a water race, except that a drinking station may be provided outside the water race.
 - 10.1.8 Wash or cleanse any vehicle, plant, equipment, animal carcass, hide or skin or any other substances in any water race, or place or allow to remain, any animal dead or alive in any water race or on the bank of the water race.
 - 10.1.9 Obstruct any crossing over a water race.
 - 10.1.10 Ride, drive or lead any animal into or through any water race other than at an appointed crossing.
 - 10.1.11 Ride or drive any vehicle or machine across or through any water race other than at an appointed crossing.
 - 10.1.12 Allow any person to bathe in any water race, reservoir or pond.
 - 10.1.13 Allow domesticated ducks, geese or exotic fish access to the water race.
 - 10.1.14 Allow the disposal of cuttings or clippings from any plant or hedge to remain in a water race, culvert, channel or within 3 metres of the banks of any water race, culvert or channel.
 - 10.1.15 Sow, plant or allow to grow, any tree, hedge, shrub or other plant of any kind within a distance of 3 metres of either side of a water race except for:
 - 10.1.15.1 Crops and pasture are permitted; and
 - 10.1.15.2 Shrubs or plants forming a live fence are permitted provided that :
 - a. They are maintained to less than 1.5 metres in height;
 - b. They are sown or planted on one side of a water race only;

- c. They are at a distance of not less than 1 metre from the edge of the water race; and
 - d. A strip of not less than 6 metres wide (adjacent to one side of the water race) is left unplanted to enable access to the water race for machinery used for cleaning; (as per Figure 1) or
- 10.1.15.3 As otherwise approved by Council.
- 10.1.16 Direct, divert or cause or permit direction or diversion of the water of any stream, water course, pond, swamp or stormwater runoff from its natural flow into any water race, associated structure or piece of equipment without written permission of the Council.
- 10.1.17 Permit a person who does not pay any water race rates to take water from a water race.
- 10.1.18 Pitch or erect, or cause to be pitched or erected, any tent, building or other structure, whether of a permanent or temporary nature, or shall tether or fasten any animal, or shall drive or fix any post, stake, hurdle or other thing, within the limits of a water race.
- 10.1.19 Place any boat, or other craft, in any water race.
- 10.1.20 Use a water race in any other manner contrary to the provisions of this bylaw or of the Local Government Act 2002 and any regulations.

11. Amendment by resolution

Council may, by resolution publicly notified, amend any matter relating to Schedules 1 and 2 of this bylaw.

12. Offences and penalties

Every person who breaches this bylaw commits an offence and is liable on summary conviction to a fine not exceeding \$20,000 or such other amount as may be provided for under the Local Government Act 2002.

Schedule 1 – Criteria to assess proposals and/or applications or proposals for alterations to water races (including closures)

The criteria below will be used to assess proposals and/or applications to make alterations to water races (including closures). Council will consider all relevant criteria. The final decision will reflect the overall merits of the application as a whole.

1. Criteria to be considered
 - a. Length and location of section of race to be altered or closed
 - b. Number of properties that will be affected
 - c. Current use of the section of race proposed to be altered or closed
 - d. Percentage of landowners/occupiers in support of closure
 - e. Economic analysis of race closures and alterations, including the operating and capital costs and benefits for all affected parties, and the equitable distribution of those costs and benefits.
 - f. Cost-effective alternative water sources available to properties, including costs of in-farm infrastructure, such as wells, pumps, tanks and reticulation
 - g. Whether the race is a main race or a local race
 - h. Cultural values affected by the alteration or closure
 - i. Ecological values affected by the alteration or closure
 - j. Land/stormwater drainage values affected by the alteration or closure
 - k. Fire-fighting values affected by the alteration or closure, such as the availability of water within that section of race to provide a source for fire-fighting
 - l. Physical effects of closure on other network infrastructure
 - m. Impacts of mitigation measures that may reduce the effects of race closures or alterations
 - n. Achievement of the objectives of the Surface Water Strategy, the Ashburton Water Zone Implementation Programme, and the Canterbury Water Management Strategy and the Council meeting its obligations under the Canterbury Land and Water Regional Plan

Schedule 2 – Specification for services

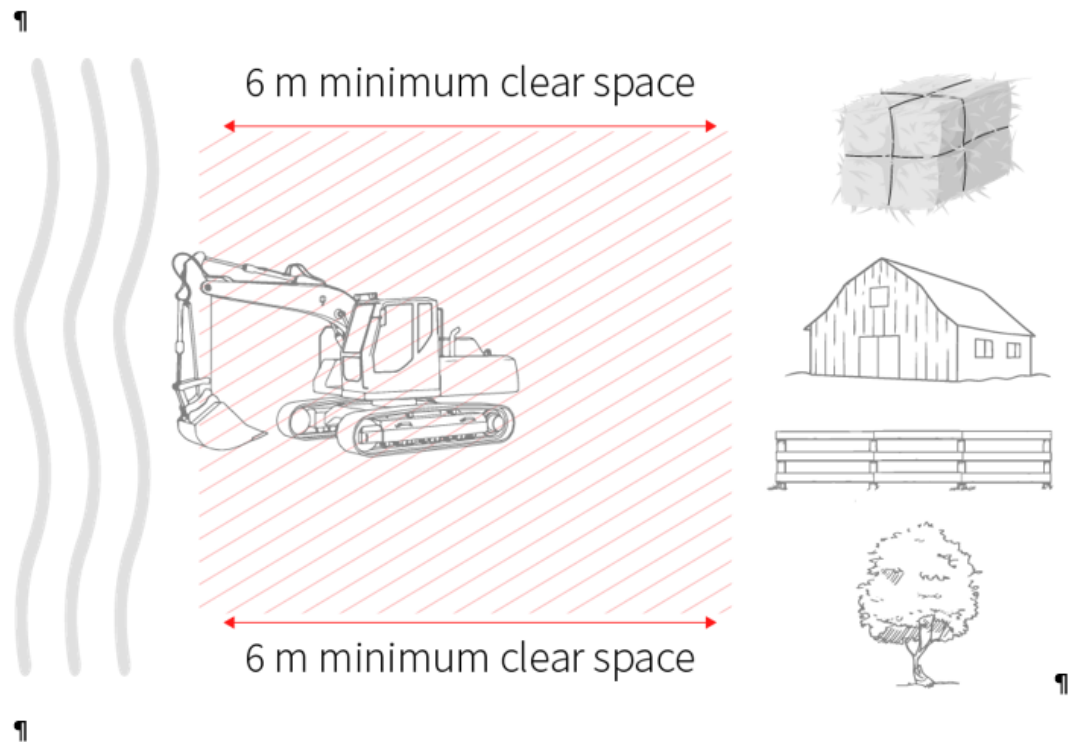
An application to Council is required for the installation of the following permitted services:

1. Pipe service consists of a pipe of internal diameter less than or equal to 40mm used to convey water under gravity flow from a water race via a standard “take off” to a storage tank or trough.
2. Pump service consists of a suction pipe fitted to the outlet of a standard “take off” cylinder. The cylinder is fed from the water race via a 40 mm internal diameter pipe with the cylinder capacity sufficient to match the pump performance. The suction pump may be used to convey water from the cylinder to a storage tank. Dwellings, outbuildings or water troughs may be supplied from the storage tank.
3. Pond service consisting of a pond of:
 - a. A maximum depth of 0.6 m
 - b. A maximum surface area of 35 m²
 - c. A maximum capacity of 21 m³
4. The pond is to be constructed of impervious material and connected to a water race via a small loop race having adjustable control gates fitted at the intakes and outlet at the junctions with the principal race. The supply of water to any pond service may be temporarily closed during drought or be terminated in writing by the Council at any time.
5. Extension services apply to pipe and pump services and require the approval of the Council. Where approved each extension service shall permit the supply of water to one additional trough.

Schedule 3

Figure 1 – Access for Race Cleaning Machinery

Figure 1.1



Minimum of 6-metre set-back required from the water race edge to allow digger access from trees, sheds, fences, hay and baleage and any other materials that can prevent a digger from cleaning the water race.

Appendix 2- Making of the Ashburton District Council Water Races Bylaw 2025- Section 155 Report

Bylaw review requirements – section 155 determinations

1. Council must follow the process set by section 160 of the Act when it makes a bylaw. Part of this process requires the Council to make three determinations required by section 155 of the Act.
2. The three determinations are:
 - a. Whether or not a bylaw is the most appropriate way of addressing a perceived problem or issue; and
 - b. If the Council decides that a bylaw is (still) appropriate, whether the bylaw is the most appropriate form of bylaw; and
 - c. Whether or not the bylaw gives rise to any implications under the New Zealand Bill of Rights Act 1990 (NZBORA).

What are the perceived and actual problems?

3. Officers note the following issues where Council could improve its performance in managing the water race network. These include:
 - a. Ensuring that adjoining landowners fulfil their obligations for local race maintenance; and
 - b. Ensuring that Council enjoys access to undertake maintenance of local races if required; and
 - c. Ensuring that council can recover the costs of local race maintenance; and
 - d. Ensuring that Council can hold landowners accountable for wasting water.
4. The staff analysis identifies the following specific problems and issues with the current bylaws which need to be addressed (in an amended bylaw):
 - a. Update of Bylaw title, staff titles, adoption date, commencement date, and next review date.
 - b. Addition of three waters bylaws to list of related documents
 - c. Need to revoke the current bylaw with the adoption of the new Bylaw.
 - d. Update definition of “Service” for changes in Council funding and rating policies.
 - e. Fixing of minor grammar errors.
 - f. Addition of a diagram to clarify access requirements for water race cleaning and cross reference to clause 10.1.15.2.
 - g. A need to clarify how the Bylaw interfaces with stock exclusion rules.
 - h. An error in clause 10.1.17 where the word “not” is omitted.
 - i. Clumsy expression in clause 10.1.19

Is a bylaw the most appropriate way of addressing the perceived problems?

5. The Council is required by legislation to determine (what are) the best options for addressing perceived problems. This requires consideration as to whether, or not, a bylaw is the most appropriate way of addressing the perceived problems. The options considered are:
 - a. Amend the current bylaw: This Option is unavailable as the statutory review was not completed in time and the current bylaw will expire. Bylaw powers will not be available to support important elements of water race network management after September 2026.
 - b. Revoke the current bylaw and not replace them: This is not the preferred option as Bylaw powers will not be available to support water race network management after September 2026.
 - c. Revoke the current bylaw and replace with a new bylaw: This is the preferred option. It will address the perceived problems.

- d. Status quo – retain the current bylaws: This is not preferred as the current bylaw will expire in September 2026.
- 6. The analysis suggests that the best approach is for the Council to revoke the current bylaw and replace with a new bylaw, i.e. the draft Water Races Bylaw 2025.

Are there any NZBORA implications?

- 7. In reviewing the current bylaw and proposing an amended bylaw, the Council is required to consider whether or not the proposed amendment to the bylaw gives rise to any implications under the NZBORA. Section 155(3) of the Act states that no bylaw may be made which is inconsistent with the NZBORA.
- 8. The NZBORA specifically identifies 22 specific rights under four broad headings, namely life and security of the person; democratic and civil rights; non-discrimination and minority rights; and search, arrest, and detention. The proposed amendment to the Bylaw does not give rise to any implications under the NZBORA.

Conclusion

- 9. Having carried out the review of the Bylaw in terms of section 155 of the Act:
 - a. The proposed amendment to the Bylaw is the most appropriate way of addressing the perceived problems; and
 - b. The proposed amendment to the Bylaw is the most appropriate form of bylaw; and
 - c. The proposed amendment to the Bylaw does not give rise to implications under the NZBORA and is not considered to be inconsistent with the NZBORA.

Appendix 3- Review of the Ashburton District Council Water Races Bylaw 2019 – Clause-by-Clause Analysis

1. As the making of a new bylaw is considered to be the most appropriate approach, staff have prepared a clause by clause analysis of the proposed draft Ashburton District Water Races Bylaw 2025.
2. In undertaking this analysis, two main options were identified with respect to most bylaw clauses: retaining the provision stated in the 2019 Bylaw, or making a provision that improves water race network management. In considering which of the options is the most appropriate, the following questions were asked:
 - Does the clause address an identified problem or is it necessary for the efficient management of water race services?
 - Does it provide an appropriate level of control?
 - is it consistent with other Council bylaws?
 - Is it specific and easy to interpret for the public and Council officers?
 - Is this provision enforceable?
 - Does the provision materially affect the rights and duties of the public and/or water consumers?
3. The following table describes the changes proposed in the making of the new Water Races Bylaw 2025.

CLAUSE-BY-CLAUSE ANALYSIS	
BYLAW CLAUSE	COMMENT/ REASON FOR AMENDMENT OR NEW CLAUSE
Title Headings	<ul style="list-style-type: none"> Responsible Manager information changed to reflect structural changes and job title changes. Date adopted changed to date that new bylaw is proposed to be adopted. Commencement date changed to date that new Bylaw is expected to become effective. Next review date changed to five years after new Bylaw is expected to be adopted. List of related documents updated to include three waters bylaws.
1. Title	<ul style="list-style-type: none"> Title updated and Bylaw notes that the 2019 Bylaw will be revoked.
3. Contents	<ul style="list-style-type: none"> Schedule 3 added which contains Figure 1 – Diagram showing access for race cleaning machinery
5. Definitions	<ul style="list-style-type: none"> Bylaw definition amended to reflect date of new Bylaw Service definition expanded to note relevant change in rating policy Water race definition corrected for grammatical error. Comma added after “bylaw’ in final sentence.
7. Responsibilities of owners and occupiers	<ul style="list-style-type: none"> Clause 7.9 amended to add reference to clause 10.1.15.2d. and Figure 1 – a diagram clarifying access for race cleaning machinery
10. Non-permitted uses of the water race network	<ul style="list-style-type: none"> Addition of an explanatory note clarifying that the intent of clause 10.1.7 is to reinforce the regional stock exclusion rules. Addition of reference to figure 1 in clause 10.1.15.2d. Correction of clause 10.1.17 by including the word “not” which was omitted in error from the 2019 Bylaw. This change can be said to directly impact on the rights and obligations of the public and water consumers. The clause should read that: <i>The owner or occupier or any other person shall not: Permit a person who does not pay any water race rates to take water from a water race.</i> This correction is consistent with Council’s revenue and financing policy, rating policies and operational practice over many years. While the wording change reverses the meaning of the clause, the current meaning was completely unintended and has never been applied. For these reasons, officers see this change as minor. Correction of clause 10.1.19, to read that an owner or occupier shall not “Place any boat, or other craft, in any water race”. Existing word reads “Place any boat, or other craft, in the water or any water race. That wording seems to expand the application of the Bylaw beyond the Water race network which is inconsistent with the purpose of the Bylaw.
Schedule 3 – Access for Race Cleaning Machinery	<ul style="list-style-type: none"> Schedule 3 added which contains Figure 1 – Diagram showing access for race cleaning machinery

10. *Draft Climate Change and Sustainability Strategy for public consultation*

Authors	<i>Femke van der Valk; Policy Advisor Richard Mabon; Senior Policy Advisor</i>
Activity Manager	<i>Mark Low; Strategy and Policy Manager</i>
Executive Team Members	<i>Toni Durham; GM Democracy and Engagement Neil McCann; GM Infrastructure and Open Spaces</i>

Summary

- The purpose of this report is to approve the draft Climate Change and Sustainability Strategy for consultation.
- Council has the following options regarding the policy:
 - Consult on the draft Climate Change and Sustainability Strategy (no changes), or
 - Make changes to the strategy prior to consultation.

Recommendation

1. **That** Council approves the draft Climate Change and Sustainability Strategy for public consultation from 26 May to 18 June 2025.

Attachments

Appendix 1	Draft Climate Change and Sustainability Strategy
Appendix 2	Draft Climate Change and Sustainability Strategy consultation document

Background

The current situation

1. Council adopted its first Climate Change Policy in 2019, in response to a request from Elected Members at the time. The policy outlines key goals and guiding principles for Council's climate change response.
2. During the review of the Climate Change Policy in 2022, it was identified that there was no framework for meeting the goals contained within the policy. In response to this, the Climate Resilience Plan was developed and adopted in 2022.
3. The Climate Resilience Plan outlines a number of actions that Council plans/planned to take in regard to climate change adaptation and mitigation. The plan has a focus on Council's internal business, as the aim was to get our own house in order before developing a community focussed plan.
4. In 2024 Council also committed to being a part of the Canterbury Climate Partnership Plan, which was adopted by the Canterbury Mayoral Forum in September.
5. Council's Climate Change Policy and Climate Resilience Plan were both due for review in 2025.
6. Instead of reviewing both documents, officers recommended to develop a Climate Change and Sustainability Strategy to:
 - Have better coordination of actions across Council activities
 - Have the two separate documents consolidated to one
 - Take sustainability into account
 - Enable community input
7. On 30 October 2024, Council adopted the recommendation to proceed with the development of the Ashburton District Climate Change and Sustainability Strategy.
8. Early engagement with the community and stakeholders on the strategy content took place from 20 January to 23 February 2025.
9. Council was presented with the engagement feedback and proposed strategy structure during a workshop on 27 March and later confirmed the proposed vision, goals, objectives and action plan during the 30 April workshop.
10. Te Runanga o Arowhenua has reviewed the draft strategy and provided feedback which has been incorporated in the draft.

Proposed Climate Change and Sustainability Strategy

11. The strategy purpose is to:
 - Explain why we are involved in these inter-related areas;
 - Allow a long-term vision for a challenge that will affect current and future generations;
 - Create a clear connection between our existing plans and strategies;
 - Share what our over-arching vision and objectives are;
 - State how Council aims to reach the goals and at what estimated costs
12. The proposed strategy includes a vision statement, guiding principles, background information on climate change and sustainability and the identified priority areas, goals, objectives and an action plan including estimated costs for implementation.
13. The draft strategy incorporates relevant parts of the existing Climate Change Policy and Climate Change Resilience Plan.
14. The priority areas identified during the engagement and included in the draft strategy are:
 - Sustainable water management
 - Nature-based solutions
 - A resilient, engaged and informed community
 - Waste reduction and minimisation
 - Transition to a low carbon future

Consultation approach

15. Officers propose to emphasize online engagement for the community consultation on the draft and to only have printed copies available upon request. This effort to reduce printing matches the strategy goals and is considered appropriate considering the limited number of paper submissions (three) that were received during previous engagement on the strategy.
16. The option for a member of the community to request a printed copy of the draft strategy and/or consultation document at Te Whare Whakatere will be mentioned in the engagement communication.
17. The possibility of using the service of the [digi coaches](#) at the Ashburton Library to provide assistance with making an online submission will also be promoted.

Options analysis

Option one – Approve draft Climate Change and Sustainability Strategy for public consultation (recommended option)

18. Under this option, Council approves the draft strategy for public consultation from 26 May to 18 June 2025.

Advantages: <ul style="list-style-type: none">The community's views will be heard and able to be included in the final strategy to refine a shared vision and goals for the district.	Disadvantages: <ul style="list-style-type: none">Current draft may not accurately reflect elected members' position.
Risks: <p>No risks identified in consulting with the community</p>	

Option two – Approves the draft strategy for public consultation with amendments.

19. Under this option, Council approves the Strategy with amendments, for public consultation. Depending on the nature of the changes the timeline could be affected.

Advantages: <ul style="list-style-type: none">The community's views will be heard and able to be included in the final strategy to refine a shared vision and goals for the district.The document will better reflect Councils position.	Disadvantages: <ul style="list-style-type: none">Depending on the complexity and number of amendments, timing for the consultation may be delayed.
Risks: <p>No risks identified in consulting with the community</p>	

Legal/policy implications

20. There is no legal requirement to have a Climate Change and Sustainability Strategy.

Local Government Act 2002

21. Council is, however, legally obligated to take community wellbeing, future generations and sustainable development into account when making decisions ([sections 10](#) and [14](#), Local Government Act 2002). This can be interpreted as a legal obligation to consider the

environmental, economic, social and cultural impacts of climate change on the community. Under section 14(1)(h) in “*taking a sustainable development approach, a local authority should take into account—*

- (i) the social, economic, and cultural well-being of people and communities; and*
- (ii) the need to maintain and enhance the quality of the environment; and*
- (iii) the reasonably foreseeable needs of future generations.”*

22. For this reason, a large number of Councils throughout the country are developing policies, plans and strategies for addressing climate change.

Climate Change Response Act 2002

23. Council is legally required to report on climate change risks and adaptation planning upon request of the Minister of Climate Change or Climate Change Commission, as part of its contribution to national climate risk assessment and adaptation planning ([Section 5ZW](#), Climate Change Response Act 2002, “the CCRA”).
24. The CCRA states that the Minister or Commission may request any or all of the following information:
- (a) a description of the organisation’s governance in relation to the risks of, and opportunities arising from, climate change;
 - (b) a description of the actual and potential effects of the risks and opportunities on the organisation’s business, strategy and financial planning;
 - (c) a description of the processes that the organisation uses to identify, assess and manage the risks;
 - (d) a description of the metrics and targets used to assess and manage the risks and opportunities, including, if relevant, timeframes and progress;
 - (e) any matters specified in regulations.

Other duties

25. Council has duties under other enactments that are affected by climate change or will be in future. We also have duties to ensure sustainable development within the district. These include duties under the Resource Management Act 1991, the Civil Defence Emergency Management Act 2002, the Building Act 2004, the Water Services Act 2021, and the Health Act 1956, amongst others.

Long-Term Plan 2024-34

26. The Long-Term Plan 2024-34 notes Council’s commitment to increase resilience against climate change impacts and to reduce our carbon emissions.

Climate change

27. The purpose of the development of a Climate Change and Sustainability Strategy is to better co-ordinate Council's actions in terms of climate change mitigation and adaptation and to involve the community in the process of doing so.

Review of legal / policy implications

Reviewed by In-house Counsel

Tania Paddock; Legal Counsel

Strategic alignment

28. The recommendation relates to all four of Council's community outcomes because taking climate action and increasing our sustainability will have a positive impact on all aspects of the community.

Wellbeing		Reasons why the recommended outcome has an effect on this wellbeing
Economic	✓	<p>Climate change and sustainability is likely to have an impact on our:</p> <ul style="list-style-type: none">economy through impacts on our infrastructure, the agricultural industry and other parts of the economyenvironment through increasing temperatures and increased severity and frequency of adverse weather events,culture through impacts on mahika kai and connections to whakapapa, andsocial wellbeing through impacts on society and inequities. <p>While some impacts will be a mix of negative and positive, unmitigated climate change is expected to be more negative than positive. Taking climate action and increasing our sustainability will have a positive impact on wellbeing. Planning and adapting to climate change will be important to protect these well beings.</p>
Environmental	✓	
Cultural	✓	
Social	✓	

Financial implications

Requirement	Explanation
What is the cost?	Consultation costs covered by existing budgets. However, the strategy implementation will have budget implications going forward.
Is there budget available in LTP / AP?	Yes
Where is the funding coming from?	Existing budgets – Strategy and Policy and Communications Teams
Are there any future budget implications?	Depending on the direction of the strategy and action plan there may be future budget implications. If there are implications these will be assessed as part of the Annual Plan / Long-Term Planning process, when actions are included in our forward planning.
Reviewed by Finance	Erin Register; Finance Manager.

Significance and engagement assessment

Requirement	Explanation
Is the matter considered significant?	No
Level of significance	Medium
Rationale for selecting level of significance	N/A
Level of engagement selected	3. Consult – formal two-way communication
Rationale for selecting level of engagement	The draft strategy development process has been outlined in this report, including engagement with community, Te Runanga o Arowhenua, stakeholders and Council workshops. This consultation allows the entire community to have their say on the draft strategy and for stakeholders to provide their feedback in a more formal process through submission and hearings.
Reviewed by Strategy and Policy	Mark Low; Strategy and Policy Manager

DRAFT Climate Change & Sustainability Strategy

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From the Mayor

The Ashburton Domain was once renowned as an ice-skating destination but fast forward a hundred years to the present day and the idea of seeing people ice skating on the ponds is hard to imagine, as the ponds no longer freeze. And although our district has dealt with serious rainfall before, the intense heavy rain causing our rivers to flood on those grim days in May 2021, was unprecedented. While these are local events, we see across New Zealand and the globe, many more examples of a changing climate. And even though we might not all agree on the cause of climate change, Council has a responsibility to look after our district, prepare our core infrastructure for the future, help our community understand what to expect and show how we can be more sustainable.

This strategy is considered as an overarching document that considers all the existing work, ensuring we do not duplicate actions but integrate and align across the existing strategies, policies and plans. A goal of this strategy is to improve what we know about climate change, how our essential services will be affected, and how each of us can play a role in reducing negative effects.

In the document we describe how our district will be impacted by a changing climate and how we're planning for it. We're focused on strengthening our district's resilience with the strategy's six priority areas, goals and actions. These include nature-based solutions, making sure we use our water in a sustainable way and our shared effort to reduce waste.

Alongside preparing for the future, the strategy intends to reduce our input to the changing climate, including reducing greenhouse gases.

The strategy also celebrates the sustainable efforts our community are committed to and highlights the work Council is currently doing to contribute to a more sustainable future. It also acknowledges the opportunities that a changing climate might bring to the district.

As a medium-sized district on a small island in a remote corner of the world, what impact do we think we have on the changing climate of the world? We believe every small actions counts, we are all in this together, and all have a part to play. We believe we have a responsibility to look after our place, to protect the prosperity of our district for future generations, providing the opportunity for them to enjoy living in our place, our district – just as we do now.

Part 1 – The Strategy

What is Climate Change?

Climate change is described as a change in the average climate conditions that we experience, such as temperature and rainfall, over a long period of time. While the earth's climate has varied naturally over millions of years, recently, the dramatic changes of the past 200-300 years can be linked to human activities, like burning fossil fuels that emit greenhouse gases into Earth's atmosphere.¹ When these gases are released into our atmosphere, they create a barrier so that when the heat from the sun comes in, it gets trapped (like heat gets trapped in a greenhouse), slowly warming our planet.

New Zealand, along with 195 other members of the United Nations, signed the Paris Agreement in 2015 to ensure that global warming is limited to well below 2 degrees Celsius above pre-industrial levels. This agreement commits signatory countries to mitigate and adapt to the effects of climate change by reducing national greenhouse gas emissions in accordance with Nationally Determined Contributions².

There are two main approaches to addressing or minimising the impacts of climate change. These work hand-in-hand and both are part of our draft strategy:

Mitigation: Some actions can be taken to reduce the amount of these gases (e.g. we can replace fossil fuels with clean energy sources, carbon dioxide can be absorbed/sequestered by trees etc).

Adaptation: We can take action to adjust to or minimise the impacts of climate change (e.g. we can manage our stormwater networks to prepare for increased volume and frequency of rainfall, we can build higher stop banks around rivers to minimise chances of flooding nearby properties etc).

Early engagement with the community on the strategy highlighted that there are differing views on the science referencing human responsibility for the changing climate. This strategy is based on the facts and science presented by New Zealand institutes like NIWA (National Institute of Water and Atmospheric Research), and government departments like the Ministry of the Environment and Ministry of Primary Industries. The international standard is the work produced by the Intergovernmental Panel on Climate Change (IPCC). For more details on this, please visit:

- <https://niwa.co.nz/climate-change-information-climate-solvers/climate-change-and-possible-impacts-new-zealand>
- <https://www.mpi.govt.nz/funding-rural-support/environment-and-natural-resources/climate-change-primary-industries>
- <https://environment.govt.nz/facts-and-science/climate-change/>
- <https://www.ipcc.ch/about>

¹ <https://itstimecanterbury.co.nz/about>

² *Canterbury Climate Partnership Plan 2024-2027*, p 15.

The impact of a changing climate on our district

“Climate change in Ashburton District may have a variety of impacts, from higher sea level to more intense rainfall, warmer temperatures and droughts. The effects may include increased frequency of flooding and coastal erosion, and changes to the sorts of crops that can be grown. Sea level could rise by up to 0.28 metres by 2050. Increased coastal erosion is likely to impact rural and hut settlements near our river mouths. Water quality could be impacted by reduced access to natural water sources in drought times, and turbidity in flood times”³.

Global warming has different impacts around the world and even within our district we are noticing a variety of impacts. For the Canterbury region, this varies from **higher temperatures** leading to an increasing likelihood of **drought** and in combination with more or **stronger winds**, a higher **wildfire risk**. It may also lead to more **severe storms**. Although the changes of **rainfall** will differ within the region, a combination of **drier summers** and **wetter winters** is expected for Canterbury.

As a district bounded by two large rivers on a flat plain, we know all too well about the risk of **flooding**, but the changes in seasons are likely to have real impacts on the region’s agricultural economy. A **rising sea level** will be the biggest impact for our coastal communities with changes to the coastline and coastal erosion. A **warmer ocean** will impact on a rising in sea level but also make our oceans more acidic and impact aquatic life.

For a more detailed description of the impacts on the Canterbury region visit: itstimecanterbury.co.nz

Locally, the district features a diverse range of landscapes, including the Canterbury Plains, the Southern Alps, coastal cliffs, rivers and wetlands. Our major urban centre is Ashburton with smaller centres including Methven, Rakaia, Hinds, Mayfield and Mount Somers. Each area faces its own climate risks.⁴

Urban centres

For all communities, risks from climate hazards generally include damage to infrastructure from flooding and disruption to transport routes and supply chains. Changing climate conditions also pose a risk to supporting utilities such as landfills and power supply.

Alpine

Higher temperatures, decreases in snow and ice, and changing rainfall will create risks to alpine biodiversity. These changes are likely to impact some of our major tourist attractions like the operation of the Mt Hutt ski field, and other alpine tourism.

³ <https://itstimecanterbury.co.nz/ashburton>

⁴ Canterbury Climate Partnership Plan 2024-2027, p 17.

Montane/high country

Temperature increases are likely to be even greater in the mountains and high country, where by 2090, if no action is taken, average spring and summer maximum temperatures could soar as much as 6°C higher than today's average. Increased temperatures, drought, and fire weather will increase erosion, and impact forestry, tourism, and unique ecosystems, contributing to biodiversity stress. Remote communities in the district may face increased disruption to transport routes and increasing isolation.

Plains

The fertile lowlands of the Canterbury Plains are highly important to agriculture. An increasing temperature poses risk of increased heat stress in stock, as well as increases in the occurrence of pests and invasive species. Increased drought potential may amongst others impact on water availability. Increased storms, wind, and flooding may increase erosion, and damage crops, pasture, stock, and infrastructure.

Coastal

As a result of sea level rise, transport connections, coastal ecosystems, unique wetlands, and communities at the coastal fringe will be exposed to increasing risk of coastal flooding, salinity stress, and erosion. Changes in temperature and ocean chemistry will impact marine ecosystems.

Water resources

Increased temperatures, drought potential, and changing rainfall patterns pose risks to the reliability of water supply, with impacts on agriculture, other water users and biodiversity. Increasing flooding, sediment transport, water temperatures, and low flows pose a risk of damage to aquatic ecosystems, irrigation and hydropower systems. The unique rivers, lakes, and streams are also significant to mahika kai (food gathering) for mana whenua.

Biodiversity

Biodiversity is affected by every aspect of climate change which includes more frequent and intense droughts, storms, heatwaves, rainfall, increasing bushfires, changes in ocean currents and water temperatures, estuary and ocean acidification and sea level rise. These events can result in changes to ecosystem services and species biology. Biological changes include shifts in some species range, bird migration, changes in plant phenology such as flowering time and earlier timing of leaf-unfolding, and changes in gestation length in some species⁵ are being observed locally and globally. Climate change can also encourage changes in predator behaviour, weed proliferation⁶ and increased pest problems, including more insect infestations and the spread of existing pests.

⁵ Macinnis-Ng et al., 2021

⁶ Ashburton District Biodiversity Strategy 2024 – Our Natural Place, p19

What is sustainability?

Sustainability revolves around the idea of balancing environmental, social, and economic needs to ensure long-term well-being for both present and future generations. In 1987, the United Nations Brundtland Commission defined sustainability as “meeting the needs of the present without compromising the ability of future generations to meet their own needs.”⁷

In 2015, the United Nations adopted 17 sustainable development goals⁸. These are legally non-binding policy objectives agreed by governments, including New Zealand. Some of the goals are relevant to the work of local government including aspects of good health and wellbeing, clean water and sanitation, affordable and clean energy, decent work and economic growth, Industry, innovation, technology and infrastructure, reduced inequality, responsible consumption and production, climate action, and partnerships for the goals.

How is Climate Change linked with sustainability?

Climate Change is a major threat to achieving sustainability, impacting resources, ecosystems, and human wellbeing. While climate change is a threat to sustainability, sustainability also offers a range of solutions to combating climate change. By taking more sustainable actions, we will also reduce our emissions and better prepare us for the impacts of climate change.

Climate Change as a threat to sustainability:

- Climate change, with its effects like rising temperatures, altered precipitation patterns, and sea-level rise, directly impacts the availability and quality of essential resources like water, food, and energy, which are crucial for sustainable development.
- Climate change causes extreme weather events, habitat loss, and shifts in ecosystems, threatening biodiversity and the services ecosystems provide, such as pollination, water purification, and carbon sequestration.
- Climate change can lead to displacement, conflict, and economic losses, undermining social stability and economic growth, which are key pillars of sustainable development.

Sustainability as a solution to Climate Change:

- Sustainable development emphasises the transition to renewable energy sources, reducing reliance on fossil fuels and mitigating greenhouse gas emissions, the primary drivers of climate change.
- Sustainable practices promote efficient resource use, waste reduction, and the development of a circular economy, minimising environmental impacts and resource depletion, which are crucial for long-term climate stability.

⁷ United Nations Brundtland Commission 1987, Our Common Future

⁸ <https://sdgs.un.org/goals>

- Sustainable land management practices, such as reforestation, soil conservation, and sustainable agriculture, can help remove carbon from the atmosphere (carbon sequestration) and reduce greenhouse gas emissions from land use.
- Sustainable development also involves adapting to the unavoidable impacts of climate change, building resilience in communities and ecosystems to withstand extreme weather events and other climate-related risks.

What have we done so far?

In 2019, Council adopted its first Climate Change Policy, in response to a request from elected members at the time. The policy outlines key goals and guiding principles for Council's climate change response. When the policy was reviewed in 2022, it was identified there was no framework for meeting the goals it contained. In response to this, the Climate Resilience Plan was developed, which outlined several actions that Council proposed to take on climate change adaptation and mitigation. It was mainly focused on Council's internal business, as the aim was to get our own house in order before developing a community focused plan.

Through the Climate Resilience Plan, Council has reduced emissions by significantly reducing electricity use at the EA Networks Centre, supported planting through the biodiversity grants, considered the impacts of larger rainfall for new stormwater pipes and developed Community Response Plans to prepare communities for natural disasters as a result of changing climate.

In 2024, Council also committed to being a part of the Canterbury Climate Partnership Plan. This regional plan, developed by all 11 councils in Canterbury, sets out 'how councils will work together and with others to support our transition to a thriving, climate-resilient, low-emissions region'⁹.

With the Climate Change Policy and Climate Resilience Plan both due for review in 2025, it was proposed to Council to consolidate this work into a Climate Change & Sustainability Strategy and in October 2024 Council adopted this recommendation.

There are many initiatives that show our community cares about sustainability and climate change. From our local farmers planting large stretches of native plants on their properties to the volunteers committing their time to 'litter free Ashburton' this shows the community in action. From the person choosing to support local when they go out shopping to the parent encouraging their child to ride their bike to school rather than dropping them off in the car, these are all examples of Climate Change mitigation.

⁹ <https://itstimecanterbury.co.nz/climate-partnership-plan>

Why do we need a strategy?

We value the people and places of the Ashburton District and we know the community does too. Adopting more sustainable practices and taking appropriate, effective collective climate action within our capability and resources is a responsible path to choose. The changes in climate are already impacting our infrastructure, communities and local ecosystems with future projections of worse storms, floods and droughts happening more often, sea levels continuing to rise, and changes in the diversity of plants and animals in our region. This means that climate change and sustainability are subjects that require a long-term vision and a long-term commitment.

Economy and the environment are inter-dependent

Our government and business partners and stakeholders have also encouraged us to take action and prepare our communities for the impacts of climate change. These will be physical and potentially financial. Insurance costs are rising because of climate change impacts. Our businesses, including our dairy industry, driven by international market requirements, are expecting farmers to have an emissions reduction plan and rewarding those financially who do this best. Mt Hutt, the major tourist attraction of our district whose existence depends on cold winters and sufficient snowfall, committed to be carbon neutral by 2030 and is inspiring others to make similar commitments.

Impacts on council activities

A changing climate affects many Council activities, that have strategic documents and plans, requiring a coherent approach across Council. Therefore, this strategy is considered as an overarching document that considers all the existing work, ensuring we do not duplicate actions but integrate and align across the existing strategies, policies and plans, making the most effective use of time and money. The strategy also provides the opportunity to become more energy efficient as a district.

Council also has statutory responsibilities, or a legal duty, when 'considering the effects of climate change when making decisions, including those related to natural hazards, civil defence, emergency management, and community resilience.'

Our economy and greenhouse gas emissions

In a district whose economy is reliant on agriculture, the transition to a lower carbon economy can be confronting. Council believes that the future prosperity of Ashburton District will be influenced by the ability of our business, including agriculture to reduce emissions and maintain profitability. The expectations of our international markets may mean that our long-term profitability is compromised without emissions reduction. The cost of new technologies and more resilient infrastructure means there is no emissions reduction and climate adaptation without a profitable economy.

What is true for the economy in Ashburton is true for the economy throughout Canterbury, New Zealand and overseas. Our outcomes will be heavily influenced by decisions made elsewhere. That reality is not a reason for inaction, as we believe there is value in acting collectively to do what we can, with what we have, where we are, to ensure the best future we can for the people and the places we call home. In Canterbury, regional work is underway to help identify pathways for moving to a lower carbon economy that support the ongoing and long-term prosperity of Canterbury.

Enduring & resilient infrastructure

Also, although it requires serious financial commitments, as a country, we have learnt the hard way that investing in climate resilient infrastructure is cheaper in the long run than having to rebuild entire infrastructure networks following severe climate impacts. Making it the responsible thing to do. With impacting events expected to increase in frequency and severity, making wise decisions now will reduce further disruption later.

The effects won't all be negative. We refer to the challenges and impacts of a changing climate on our district, but in Councils' Economic Development strategy there is also a reference that changes may bring opportunities to our district, such as opening up new agricultural or horticultural opportunities and adjusting growing seasons.

Our aim is a strategy that provides guidance for investment, helps to understand a complex issue, that educates and motivates. It explains what Council is doing and why. The community is already doing a lot and also asking for Council to take more action. This document is to show an element of community leadership and as one of the largest organisations in Ashburton district to lead by example

Sustainability and Climate change are interrelated. Sustainable actions and practices help to reduce our impact on a changing climate, enable efficient use of our resources, and help harness the power of a community.

We intend this strategy to be a living document that identifies the challenges facing our district and the opportunities to tackle these challenges. It includes stakeholder, Manawhenua and community input, and contains measurable and achievable actions that will help to prepare the district for the impacts of a changing climate and creating a sustainable future.

Funding and Costs

Action requires funding and that is why we have indicated **estimated** costs for each of the actions that are not currently included in existing budgets. You will see this in detail in the action plan in part two of the strategy. Please note that these are estimates and would be confirmed via a business case to Council when they make the decisions on annual or long-term plan budgets.

The resilience of infrastructure will require some significant investment in the coming years, but experience has told us that the costs of recovering from unprepared infrastructure will be much higher. These costs are not shown in this strategy but will be part of our infrastructure budgets.

Finally, this strategy relies upon partnership with the community for its success. While we understand that we can't address everything and some efforts may seem minor, it's crucial to do what we can.

Did you know?

*- Small countries together make up 30-35% of global emissions (www.sustainabilitybynumbers.com/p/small-emitters)
- While New Zealand's total contribution to global emissions is small, its gross emissions per capita are relatively high, more than the 'world' average and the United Kingdom for example.*

Good news is, for the past years there has been a slight decrease in New Zealand's national emissions.

<https://rep.infometrics.co.nz/new-zealand/environment/greenhouse-gas-emissions/per-capita>

www.stats.govt.nz/indicators/new-zealands-greenhouse-gas-emissions

<https://ourworldindata.org/co2/country/new-zealand>

How has this strategy been prepared?

Following Councils decision to create a Climate Change & Sustainability Strategy in October 2024, early engagement with the community on the content of the strategy took place in January-February 2025. This included a public workshop with community members and a stakeholder workshop, with local businesses and organisations joining the session. The engagement highlighted the need for:

- The district to be made more resilient (investment)
- Clear and transparent communication from Council
- Community engagement and education
- Better water management
- Nature-based solutions
- A plan to reduce greenhouse emissions
- Improvement of waste management

Council was presented with this feedback during the preparation of the draft and it has been incorporated in the draft where agreed. Consultation on the draft strategy will provide the opportunity for the community to provide feedback.

What does this strategy include?

The strategy contains a 20-year action plan setting out how goals will be achieved, who will be involved in achieving them and how much they are estimated to cost.

The document is divided into two sections: Part 1 provides the background information on strategy topics, the strategy development process, and the strategic framework, while Part 2 outlines the strategy vision, principles, goals, objectives and the action plan.

For a comprehensive understanding of the goals, it is recommended to read the background information on the priority areas described in the upcoming chapter.

The priority areas this strategy will focus on

Building on our prior climate change policy and resilience plan, our regional collaboration and the recent strategy engagement, we identified six priority areas for the strategy. These areas touch on all the services we provide as a council. The goals, objectives and actions linked to each priority area can be found in Part 2 of this document.

1. Sustainable water management¹⁰

Water is the lifeblood of Ashburton District. The district is surrounded by water on all sides, from unique braided rivers to crystal clear alpine lakes to the rolling Pacific Ocean. Water has enormous value and is critical for the district – drinking water to sustain life and health, water to support our economy and agricultural sector and water to play in – our lakes and rivers. Alongside that water is an integral part of our landscape, it sustains our biodiversity, it is strongly connected to our identity. Climate change will impact water in multiple ways. It may lead to more intense and harsher droughts. It will mean more rainfall at greater intensity falling over shorter timeframes. While we cannot stop these climate effects, we must prepare for them. We must value the water we have, be proactive and positive stewards and seek to sustainably manage its use, while enhancing water quality for current and future generations.

¹⁰ Management of Water resources such as rivers, streams, natural lakes, and wetlands is regulated via the Canterbury Land and Water Regional Plan, which falls under the responsibility of Environment Canterbury. This means that any action related to these waterbodies, will have to be a collaborative effort, as you will see in the action plan

2. Using nature-based solutions to mitigate climate change and enhance sustainability

Nature-based solutions (NbS) are approaches that use natural processes to address societal challenges and improve biodiversity. These approaches harness the power of nature to provide benefits for both the environment and human wellbeing. For instance, nature-based solutions such as green roofs, rain gardens, or constructed wetlands can minimize damaging runoff by slowing and absorbing stormwater, reducing flood risks and preserving freshwater ecosystems.

Nature-based solutions help nature and people by protecting and restoring ecosystems. A key aspect and reflected throughout the strategy goals for this priority area, is their ability to mitigate climate change effects. For example, planting trees and restoring forests can absorb carbon dioxide from the atmosphere, and reducing greenhouse gas levels. Wetlands and blue-green networks act as natural buffers against storms and flooding, protecting communities along the river channels. These ecosystems also store carbon, helping to regulate the climate

Wetlands - natural or constructed, serve as a reservoir for greenhouse gas (GHG) emissions storage. While wetlands are the largest natural source of methane, healthy and undisturbed wetlands tend to sequester more carbon than they emit, making them more valuable for climate change mitigation. Research has also found that rewetting drained wetlands as seen in Mid Canterbury could reduce emissions by storing more carbon but the resulting impact on climate mitigation from wetlands will depend on the balance between future degradation and restoration of existing wetlands around the district.

NbS also promote sustainability by enhancing biodiversity and ecosystem services. Other aspects of NbS includes protecting and restoring natural areas to provide climate resilience to reduce floods and minimize risks from extreme weather events, creating green infrastructure such as green spaces in urban environments and urban forests, and promoting sustainable land use practices. These actions can improve air and water quality, reduce urban heat islands, and enhance the quality of life for communities.

3. A resilient, engaged and informed community

Our community is our main partner in this strategy. A lot of the work we do to prepare the district for climate impacts affects all ratepayers and many of the proposed actions are a collaborative effort. For this strategy we consider the community to be 'everyone' in the district.

Both sustainability and climate change are complex and sometimes contentious matters. Exposure to climate-related events, either directly or through news media, has been linked to climate anxiety, especially in younger people. At a community level Council is keen to give people access to good information and enable collective community action on things we can control. This means we will continue to help people prepare for natural events through our response plans, host educational community events and campaigns and celebrate the sustainable actions our community already undertakes.

4. Waste reduction and minimisation

Waste reduction and minimisation can improve sustainability, climate adaptation and emissions reduction outcomes. Councils have provided waste services in the district for many years and Council has a Waste Management and Minimisation Plan (WMMP) that sets out how Council plans to minimise and manage the waste in our district. Council has a key role in collecting, sorting and transferring waste and work in partnership with our community, businesses and industry to achieve our goals.

This Climate Change & Sustainability Strategy aims to highlight existing sustainability and climate change links to waste management and capture improvements that have emerged since the WMMP was last reviewed in 2022. More detail is provided in the action plan in part two (see [pages XXXX](#))

Reducing the amount of waste to landfill reduces the overall costs to ratepayers and extends the life of existing infrastructure. Reducing the amount of organic waste to landfill reduces the amount of methane generated in landfills. Composting of organic waste generates carbon dioxide and is generally accepted as creating less emissions than landfilling. Compost itself helps to build soil structure which enhances carbon sequestration. Council will be introducing a food organic/garden organic collection from September 2026.

Council disposes of its residual waste to Kate Valley landfill, which is a comprehensively engineered and modern landfill facility that operates to the highest international standards. Kate Valley also generates electricity from the biogenic methane created in the landfill. Today it generates enough electricity to power 2,000 homes. Kate Valley will continue to capture methane for energy generation well after the landfill is at capacity.

Closed landfills are threatened by the potential for flooding to scour landfills in the vicinity of waterways. The southwest slope of the closed Ashburton Landfill faces the Ashburton River and over time has been affected by weather and water runoff. Council has budgeted \$1.2 million across the 2024-29 financial years for capping remediation and adding material to the slope to make it less steep and less prone to erosion. Council has also budgeted \$195,000 for annual monitoring and maintenance of the closed landfill in Mt Somers, which has been remediated after scouring in 2021.

5. Resilient Infrastructure

Climate change is making weather patterns more unpredictable and introducing new risks to areas that previously had none. As floods, extreme heat, and wildfires become more severe, we need to ensure both existing and future infrastructure will withstand future climate challenges. Climate-resilient infrastructure is developed with these evolving climate impacts in mind. Carefully planned, designed, built, and managed to endure extreme conditions. Resilient infrastructure must also be capable of rapidly recovering from disruptions.

The effects of climate change are putting significant strain on infrastructure in various ways, such as:

Heavy Precipitation and Flooding:

With rising temperatures, heavy rainfall events are becoming more frequent and intense. Severe storms and floods damage critical infrastructure, including bridges, roads, buildings and energy systems. As we experienced firsthand in 2021, flooding can cause rivers to overflow, threatening nearby communities and causing widespread damage to our roading infrastructure¹¹. Environment Canterbury, responsible for the riverbank repairs following the floods, stated that wherever possible, the expected effects of climate change were assessed and design solutions modified to incorporate this as part of the recovery work, rather than simply replacing the flood protection infrastructure that was in place. This included repairs and strengthening of stop banks, tree planting and installation of anchored tree protection.¹²

Heat:

Rising temperatures can cause roads to soften and melt, while also leading to the buckling of railroad tracks. In both the northern and southern hemispheres, thawing permafrost is contributing to infrastructure damage, including deteriorating roads and weakening building foundations.

Drought:

Decreasing precipitation and rising temperatures are increasing the risk of drought, putting strain on water supplies as increased evaporation reduces reservoir levels. Lower water levels can deplete aquifers essential for drinking water and irrigation.

Wildfires:

Rising temperatures and prolonged drought can lead to an increase in wildfires. These warmer, drier conditions are also extending wildfire seasons. Wildfires not only destroy homes, buildings, and infrastructure but also harm ecosystems and habitats.

¹¹ In June 2024 flood damage repairs were completed at a total cost of \$22.6 million (funded through Environment Canterbury loans and the National Emergency Management Agency (NEMA)

¹² <https://www.ecan.govt.nz/your-region/your-environment/river-and-drain-management/canterbury-flood-recovery>

6. Transition to a low carbon future

Human-induced greenhouse gas (GHG) emissions have accelerated global warming at an alarming rate, causing average global temperatures to rise significantly from pre-industrial levels. As a result, many regions across the world are experiencing more frequent and severe climate events—extremes in temperature and rainfall, rising sea levels, and rapid changes in ecosystems. These environmental shifts are contributing to biodiversity loss, species extinction, and degradation of natural systems that communities rely on for survival. The consequences are already being felt: increased climate-related risks to public health, food and water security, livelihoods, infrastructure, and economic development. Without urgent and sustained efforts to reduce emissions, these impacts will worsen, placing even greater pressure on future generations.

Read more about Green House Gases in the Canterbury Climate Partnership Plan [here](#)

Limiting global temperature rise to 1.5 degrees Celsius above pre-industrial levels is critical. Surpassing this threshold significantly increases the risk of irreversible damage, especially for our vulnerable communities ecosystems, and low-lying regions. Recent messaging suggests we have already reached this limit, which highlights the urgency of action at all levels—global, national, and local.

New Zealand's Climate Change Response (Zero Carbon) Amendment Act 2019 sets a framework for the country to develop and implement climate change policies aimed at reducing greenhouse gas emissions. The Act establishes a target to reduce net emissions of all greenhouse gases (except biogenic methane) to zero by 2050 and sets specific reduction targets for biogenic methane.

Understanding the concept of 'net zero' is key to this transition. Net zero refers to a balance between the amount of greenhouse gases emitted and the amount removed from the atmosphere. However, because of the vast accumulation of emissions over the past two centuries—primarily due to human activity—reaching net zero requires more than just offsetting; it demands deep reductions in emissions at their source.

With agriculture¹³ being our main industry, the per capita greenhouse gas emissions for our district (66 tonnes per capita) are significantly higher compared nationally (15 tonnes per capita)¹⁴. Council has no authority and intention to intervene but, as stated in the action plan, we aim to reduce our own emissions and see our role as to provide clear information and engage with and educate the community on greenhouse gas emissions.

¹³ <https://tools.summaries.stats.govt.nz/places/TA/ashburton-district#business-demography>

¹⁴ <https://rep.infometrics.co.nz/ashburton-district/environment/greenhouse-gas-emissions/per-capita?compare=new-zealand>

How this strategy links to other strategies, plans and policies

Council sees this Strategy as having a role in bringing together planned actions in other Council strategies, plans and policies including regional documents like the Canterbury Climate Partnership Plan.

Canterbury Climate Partnership Plan

All 11 councils in Canterbury have worked together to develop the Canterbury Climate Partnership Plan (CCPP) which sets out how we intend to work together and with others to support Canterbury's transition to a thriving, climate-resilient, low emissions region. This does not prevent individual Councils from taking extra, local, actions on climate change. It sets out the things we believe can best be achieved by working together.

Ashburton District Council has committed funding of \$50,000 per year for three years beginning in 2024/25, plus staff time to support regional work. Where actions in this Strategy reflect content in the CCPP, these are cross-referenced.

Council strategies and plans

Council has other strategies and plans that touch on themes related to sustainability and climate change. These include the Biodiversity Strategy 2024, the Economic Development Strategy – Rautaki Whanake Ohaoa – 2023, the Open Spaces Strategy 2016, the Surface Water Strategy 2018, the Walking and Cycling Strategy 2020, the Long Term Plan 2024-34, Infrastructure Strategy and the Waste Management and Minimisation Plan 2022. Each of these has been developed and adopted after public consultation.

Where actions in this Strategy reflect content in any of these strategies or plans, these are cross-referenced.

Relevant legislation

Council has statutory duties in relation to sustainable development and climate change under various pieces of legislation including the Climate Change Response Act 2002, the Local Government 2002, the Resource Management Act 1991, and the Waste Minimisation Act 2008. These duties are reflected in council's operating budgets and many of the strategies and plans referred to above.

Part 2 – Vision, Goals and Action plan

What is our vision?

Our proposed vision:

“Working together for a sustainable and resilient future for the Ashburton District: empowering our people, supporting our businesses, fortifying our infrastructure and protecting our environment”

The vision links to Council’s vision for the district and all four Community outcomes as envisioned in our current Long Term Plan.

What are the strategy principles?

In making decisions that can impact on (or are impacted by) climate change and sustainability, Council will consider the following principles, alongside other decision-making considerations:

a. Manaakitaka – Council shares in a collective duty of care to safeguard the natural environment and the communities it supports. Policies and decisions on climate change and sustainability need to be flexible and enabling to allow for local decisions and empower organisations and individuals to reduce emissions and improve the sustainability of community activities. Our work also needs to be focussed on pragmatic local and regional actions that will move us forward.

b. Anticipatory governance – Council will think and act with the long-term in mind to provide clear and consistent plans towards a sustainable, low emissions economy, environment, and society.

c. Equity/Inclusion/Kauawhi – Council will consider the needs and contributions of all partners and stakeholders including the most vulnerable and those without a voice – including future generations – as it responds to climate change and sustainability opportunities. This includes recognising and advocating for the needs of communities and individuals disproportionately affected by climate change and unsustainable practices.

d. Informed decision-making – Council will use the best available information to understand the potential impacts of climate change and sustainability issues. It will also use the best available information on options for responding to those impacts – including their costs and benefits. Council will make this information available to engage in meaningful conversations with communities and be clear with each other and communities on what we don't know and where there are limitations or uncertainties with our information.

e. Work as one/Mahi Tahi – Wherever practicable, Council will work co-operatively and collaboratively with partner organisations and communities, including our manawhenua in the District and the wider Canterbury region. Council will also strive to ensure greater alignment and integration of its activities relating to climate change including the maximising of co-benefits wherever practicable and affordable.

f. Resilience – Some impacts of the changing climate are already inevitable. Council will work with communities and businesses to improve their understanding of climate change risks and sustainable practices and what they can do to manage risks and apply practices to continue to thrive.

Note: For a good understanding of the goals, please refer to the background information on the six priority areas, referencing the expected impacts and specific challenges for each area, as described in part 1 of the strategy.

What are our goals and objectives?

Priority Area 1: Sustainable Water management

Goal 1: *Attain sustainable and resilient water management, ensuring reliable access, environmental stewardship, and improved water quality*

This means to (objectives):

- Ensure a forward-thinking approach to the sustainable management of water resources in the Ashburton District.
- Promote and engage in initiatives to maintain and enhance water quality in district water bodies
- Foster a culture of water conservation and efficiency within the community.
- Track and communicate water usage and quality data to ensure transparency and informed decision-making.

Priority Area 2: Nature-based solutions

Goal 2: *Encourage nature-based solutions and support our communities to help understand how nature-based solutions to climate disruption will work.*

This means to (objectives):

- Support blue-green networks development for Mid-Canterbury
- Continue biodiversity restoration and ecosystem health enhancement (Biodiversity Strategy)
- Build a climate-resilient environment in the district
- Continue to promote sustainable land use and soil conservation

Priority Area 3: A resilient, engaged and informed community

Goal 3: *Build a community that is well-informed about the changing climate and actively engaged in sustainable practices and resilience efforts.*

This means to (objectives):

- Improving Council understanding of the impacts of a changing climate and sustainable responses and advocate on behalf of the district in climate change matters
- Engage with and educate the wider community to improve understanding of climate change and sustainability practices
- Support the community to be prepared/ on resilience and adaptation to climate change impacts
- Encourage and promote sustainable good practice in Council operations and activities.
- Promote and connect community and stakeholder groups working on sustainable projects and establish partnerships and initiatives to engage the community and promote collective action.

Priority Area 4:
Waste reduction and minimisation

Goal 4: *Enable responsible waste management that reduces waste and protects community and environmental wellbeing.*

This means to (objectives):

- Implement methods to reduce the amount of waste sent to landfill or other disposal
- Lower waste management costs and increase economic benefits to ensure financial sustainability
- Reduce the risk of environmental damage and protect public health through sustainable waste management
- Engage and involve our community to achieve waste management goals and objectives

Priority Area 5:
Resilient Infrastructure

Goal 5: *Prepare our infrastructure for the long-term impacts of climate change to ensure resilience and safety for our community.*

This means to (objectives):

- Ensure all critical infrastructure within the district is assessed and upgraded for climate resilience
- Incorporate climate resilience and sustainability in new infrastructure projects and subdivisions
- Make greater use of durable, low-carbon materials for infrastructure projects

Priority Area 6:
Transition to a low carbon future

Goal 6: *Reduce greenhouse gas emissions to mitigate the impacts of climate change and create a more sustainable future.*

This means (objectives):

- Set an emissions reduction target with a focus on Council activities
- Continue to measure Council's greenhouse gas emissions, and adopt and implement emissions reduction plan
- Promote and encourage sustainable transport in the community
- Increase carbon sinks in the Ashburton District
- Engage with and educate the community on greenhouse gas emissions
- Monitor emissions and report to the public

How will we reach these goals?

Implementation timeframe

The lifespan for the strategy is expected to be 20 years. However, some actions may be achieved sooner. Achievement is also dependent on financial availability, legislative changes and commitment. As a guide, we have split the timeframes into the four categories below. Actions that run for the entire life of the strategy are designated as “ongoing”.

Short-term (ST)	: 1-3 years
Medium-term (MT)	: 3-10 years
Long-term (LT)	: 10+ years
Ongoing	: Actions that are already happening and that are expected to run throughout the life of the strategy.

Reporting and review

We will report annually on the progress of the Action Plan’s implementation through the end of year strategy report to Council (note this is at the end of the financial year, which means in July). A full review of the action plan, to ensure it remains current and meets the needs of our community is to be undertaken every three years.

A full review of the entire Strategy will be undertaken every five years or sooner if considered necessary.

Role of Ashburton District Council

The role of Council in the Strategy and Action Plan is defined in broad terms below. For some actions, Council may have more than one role.

- **Advocate** – collecting and sharing community views with government, agencies or organisations to help improve the district. This can be locally-driven advocacy for local concerns or reactive advocacy in response to draft legislation, plans or proposals.
- **Influence** – educate and work to change people’s perceptions or behaviour to provide positive community outcomes.
- **Support** – support agencies leading the work (e.g. research, funding or bringing stakeholders together).
- **Plan and Resource** – take direct lead and involvement to achieve specific outcomes (e.g. developing plans, consultation, funding, resourcing, staff time). Resourcing may include funding and staff time. Funding may be full or partial.

Partners and organisations involved

The “Who” column in the Action plan table indicates the organisations involved in the action with the first named organisation being the lead agency. This strategy uses teams across Council with the Strategy & Policy Team considered the driver of the strategy. When there is a specific team that will be working on the action within Council, the team will be specified.

The strategy is intended to be delivered through a community council partnership and Council will be seeking the views of, and hoping to work with, collaborating with other interested stakeholders.

Manawhenua is consulted on as one of the stakeholders in the development of the draft strategy.

Resource and Funding

Resourcing will come from a range of sources, with contributions to the success of the strategy coming from other agencies and the community. Funding is available within the existing Council operations or budgets (staff time or operational budget) or may come from specific central government support to local councils, external contractors or other sources.

Where the Action Plan refers to new budget, these sums are preliminary estimates and are intended to highlight that some of these actions will require more resources, and the likely extent of those resources. This funding will be required to pass normal budget scrutiny through Long Term Pla/Annual Plan budget processes, including the preparation of business cases, scrutiny by elected members, public consultation and submissions.

There will also be a potential to seek external grants/funding from other agencies involved with climate change and sustainability. As part of the strategy, it is the intention to also inform the Community of the grants/funding that are available for community projects.



Actions with this tag are also part of the Canterbury Mayoral Forum’s Canterbury Climate Partnership Plan (CCPP)



Actions with this tag are also part of another Ashburton District Council Strategy, Plan or Policy

The Action plan

Note: For a good understanding of the goals, please refer to the background information on the six priority areas, referencing the expected impacts and specific challenges for each area, as described in part 1 of the strategy.

1. Sustainable Water management

Goal 1: Attain sustainable and resilient water management, ensuring reliable access, environmental stewardship, and improved water quality					
Objective	Action	Role of ADC	Who	When	Budget
1.1 Ensure a forward-thinking approach to the sustainable management of water resources in the Ashburton District.	A. Foster, support, advocate for or lead strategies or plans to ensure the sustainable management of water resources.	Advocate, Plan and Resource, Influence, Support	ADC, Environment Canterbury, Irrigation companies, Stakeholder groups, Community, Te Rūnanga o Arowhenua via Aoraki Environmental Consultancy Limited (AECL) ¹⁵	Ongoing	Existing budgets
	B. Involve local communities and manawhenua in water management	Advocate, Support	ADC,	Ongoing	Existing budgets

¹⁵ Aoraki Environmental Consultancy Limited (AECL) are mandated to represent Te Rūnanga o Arowhenua (Arowhenua).

Goal 1: Attain sustainable and resilient water management, ensuring reliable access, environmental stewardship, and improved water quality

Objective	Action	Role of ADC	Who	When	Budget
	decisions and encourage stewardship of water resources.		Environment Canterbury, AECL		
	C. Strengthen governance frameworks to support and sustainable management of water resources.	Advocate, Plan and Resource, Influence, Support	ADC, Environment Canterbury, AECL	Ongoing	Existing budgets
	D. Regularly review and adapt water management strategies based on new data and changing conditions	Advocate, Plan and Resource, Influence, Support	ADC, Environment Canterbury, AECL	Ongoing	Existing budgets
1.2 Promote and engage in initiatives to maintain and enhance water quality in district water bodies.	A. Encourage use of nature-based solutions to improve water quality (see Goal 2)	Plan and resource	ADC	ST	See goal 2
	B. Support community education programmes on water quality (see Goal 3.2C)	Plan and resource	ADC (Comms, Infrastructure services), Environment Canterbury	ST-MT	Funded in 3.2.C
1.3 Foster a culture of water conservation and efficiency within the community.	A. Launch educational and public awareness campaigns to educate residents and businesses about water conservation and storage.	Plan and resource	ADC (Comms, Infrastructure services)	ST-MT	Funded in 3.2.C

Goal 1: Attain sustainable and resilient water management, ensuring reliable access, environmental stewardship, and improved water quality

Objective	Action	Role of ADC	Who	When	Budget
	B. Implement water metering throughout the district for leak detection and water conservation	Plan and resource	ADC	ST-MT	\$5M estimated budget in Infrastructure Strategy for capital costs of installing meters in Ashburton and Rakaia- no money in LTP for this and no operating budgets (approx \$100K per annum)
	C. Continue the ongoing renewal programme focused on reducing water leaks	Plan and Resource	ADC (Water Services)	Ongoing	TBC
	D. Promote the adoption of residential rainwater tanks in urban areas and investigate implementation through the District Plan	Plan and resource	ADC (Building & Planning)	MT	Existing budgets
	E. Ensure all new Council facilities are designed and built including water-saving technologies	Plan and Resource	ADC	Ongoing	To be incorporated into future facility budgets

Goal 1: Attain sustainable and resilient water management, ensuring reliable access, environmental stewardship, and improved water quality

Objective	Action	Role of ADC	Who	When	Budget
	F. Audit existing Council facilities for water saving capability and retrofit with water saving technologies over time	Plan and Resource	ADC	Ongoing	Incorporated into future budgets
	G. Explore other opportunities for Council activities to maximise water saving in delivering their services	Plan and Resource	ADC	Ongoing	Existing budgets
1.4 Track and communicate water usage and quality data to ensure transparency and informed decision-making. ¹⁶	A. Continue to monitor and manage water demand on Council operated water supplies and make information available to community.	Plan and resource	ADC	Ongoing	Existing budgets
	B. Improve visibility of residential and business water usage	Plan and resource	ADC	ST	Considered incl. in OPEX to be added to 1.3B

¹⁶ Drinking water measures are part of Councils performance measures that are reported on via the mid-year and end of term performance report to Council.

2. Nature-based solutions

Goal 2: Encourage nature-based solutions and support our communities to help understand how nature-based solutions to climate disruption will work.					
Objective	Action	Role of ADC	Who	When	Budget
2.1 Support blue-green networks development for Mid-Canterbury	A. Develop a District Spatial layer to support CCPP blue-green network (BGN) and ecological connectivity model in Mid-Canterbury, including investigation potential Council lands use for ecological connectivity model.	Plan and resource	ADC (Open Spaces, GIS & Planning), Environment Canterbury, Community, AECL	ST	NEW \$40,000
	B. Support the blue-green Network project implementation across Canterbury (Canterbury Climate Partnership Plan Action 4.2).	Plan and resource	ADC	Ongoing	LTP 24-34 – commitment of \$50,000 per year Y1-10
	C. Support climate risk assessments for the Mid-Canterbury ecosystem. (Canterbury Partnership Plan Action 4.1).	Plan and resource	ADC		LTP 24-34 – commitment of \$50,000 per year Y1-10
2.2 Continue biodiversity restoration and ecosystem health enhancement	A. Support the development of micro forestry projects	Support	Community, ADC	ongoing	Existing budgets
	B. Support the development of food forests and community gardens (See Goal 3)	Support	Community, ADC	ongoing	Existing budgets (refer community to ADC grants)
	C. Advocate for extensive native plantings to reduce runoff and hold stop banks along the major rivers and streams where native species are fit for purpose.	Advocate	ADC, Community	ongoing	Existing budgets

Goal 2: Encourage nature-based solutions and support our communities to help understand how nature-based solutions to climate disruption will work.

Objective	Action	Role of ADC	Who	When	Budget
2.3 Build a climate-resilient environment in the district	A. Support the implementation of the Natural Environmental Fund to support adaptation projects.	Plan and Resource	ADC	Ongoing	NEW \$20,000
	B. Advocate for river stop banks strengthening and shingle extraction to enhance flood resilience.	Advocate	ADC	Ongoing	Existing budgets
	C. Investigate and support the development of constructed wetlands around the district.	Support	ADC, Community, Environment Canterbury, AECL	MT-LT	LPT 27-37
	D. Develop consistent stormwater design with nutrient filters and provide native planting opportunities.	Plan and resource, Support	ADC, AECL	Ongoing	Existing budgets
2.4 Continue to promote sustainable land use and soil conservation	A. Educate and inform the community about scientifically proven methods on sustainable land use and soil conservation (e.g. regenerative farming, sustainable burn off alternatives, the use of natural fibres for grass bales and on-farm activity, nitrate removal techniques from soil and wetlands using denitrifying bacteria etc.)	Support	ADC (Comms, Open Spaces) Community, AECL	ST	Funded in 3.2.C
	B. Continue to apply and investigate other methods for sustainable land use on council land including forestry (e.g. mulching grass clippings into land to add to soil fertility and maintaining vegetation cover in open spaces etc).	Plan and resource	ADC, AECL	ongoing	Existing budgets

3. A resilient, engaged and informed community

Goal 3: Build a community that is well-informed about the changing climate and actively engaged in sustainable practices and resilience efforts.					
Objective	Action	Role of ADC	Who	When	Budget
3.1 Improving Council understanding of the impacts of a changing climate and sustainable responses, and advocate on behalf of the district in climate change matters	A. Continue to support regional collaboration in response to climate change through the Canterbury Climate Partnership Plan (CCPP) - CRP: 1.1.1	Plan and Resource	ADC	Ongoing	LTP 24-34 – commitment of \$50,000 per year Y1-10
	B. Undertake a Local Climate Change Risk Assessment of the impacts identified as a priority by the community (e.g. flooding, fire, heavier rainfall, drought and severe storms or e.g. risk to agriculture, economic risk) - CRP 1.1.2	Plan and resource	ADC / consultancy, AECL	ST – MT	NEW \$50,000
	C. Provide information and training to staff and elected members on climate change issues. (Include in Council & staff induction) - CRP 2.3.2	Plan and resource	ADC (S&P)	Ongoing	Existing budgets
	D. Advocate on behalf of the district in climate change matters e.g. by responding to Government agencies when they seek feedback on climate related proposals - CRP 2.4	Advocate	ADC (S&P)	Ongoing	Existing budgets
3.2 Engage with and educate the wider community to improve	A. Actively be part of and spread awareness of the 'It's Time Canterbury' campaign. - CRP 1.2.1 / CCPP	Plan and resource	ADC (Comms, S&P)	Ongoing	LTP 24-34 – commitment of \$50,000 per year Y1-10
	B. Ensure Council's climate change webpage is kept up to date. -CRP 1.2.2	Plan and resource	ADC (Comms, S&P)	Ongoing	Existing budgets

Goal 3: Build a community that is well-informed about the changing climate and actively engaged in sustainable practices and resilience efforts.

Objective	Action	Role of ADC	Who	When	Budget
understanding of climate change and sustainability practices	C. Establish and support community education programmes on strategy goals, focusing on different stakeholder groups e.g. youth/schools, businesses, farming community, general public (events and/or campaigns, approx. 4 per year)	Plan and resource, Support	ADC (relevant topic team, Comms, S&P), Community, AECL	ST-MT	NEW \$60,000 events and/or campaigns
3.3 Support the community/ to be prepared/ on resilience and adaptation to climate change impacts	A. Continue the development of community response plans (response to all natural events, including climate change impacts) for all Ashburton communities and review existing plans. - CRP 3.2.1	Plan and resource	ADC (Emergency Management), AECL	Ongoing	Existing budgets
	B. Develop a district adaptation plan based on the outcome of the local risk assessment described in 3.1.B. - CRP 3.3.1	Plan and resource	ADC, AECL	MT	NEW \$50,000 LTP 27-37
	C. Economic Development Strategy Objective 2.B 'Our businesses have access to the expertise, knowledge and skills to make informed decisions that enable them to successfully adapt to the changing business environment' - Action 3: Develop a plan for addressing risks and utilising opportunities for the objective	Support	Business Leadership Group	ST (2-4Y in 2023)	Existing budget (Economic Development strategy)




Goal 3: Build a community that is well-informed about the changing climate and actively engaged in sustainable practices and resilience efforts.






Objective	Action	Role of ADC	Who	When	Budget
3.4 Encourage and promote sustainable good practice in Council operations and activities.	A. Council to demonstrate sustainable actions in its own operations.	Plan and resource	ADC	ST-MT	Existing budgets
3.5 Promote and connect community and stakeholder groups working on sustainable projects and establish partnerships and initiatives to engage the community and promote collective action.	A. Council to research incentives, financial benefits or set requirements that encourage sustainable action within the community (e.g. building consents, green roof, passive housing, solar panels, water tanks etc)	Plan and resource	ADC (Building, property, roading, waste)	ST	Existing budget
	B. Promote sustainable projects and initiatives, such as community clean-up events, tree planting drives and sustainability fair (Council involvement)	Plan and resource	ADC (Comms, S&P, relevant ADC team), Community	Ongoing	Existing budget
	C. Establish a Community Sustainability Advisory Panel with Council support	Plan and resource, Support	ADC	MT	NEW \$5,000
	D. Celebrate community action on World Sustainability Day (last Wednesday in October)	Plan and resource	ADC	MT	NEW \$15,000
	E. Establish a sustainability grant to support community projects that address climate change and sustainability objectives and targets.	Plan and resource	ADC	MT	NEW \$20,000
	F. Set up the 'ADC gift a native tree' project where people can buy a gift certificate	Plan and resource	ADC (Open Spaces,	MT	NEW \$10,000

Goal 3: Build a community that is well-informed about the changing climate and actively engaged in sustainable practices and resilience efforts.

Objective	Action	Role of ADC	Who	When	Budget
	and 'gift' someone a native tree that ADC will then plant in an allocated area.		Finance, Comms), Community		

4. Waste reduction and minimisation

Goal 4: Enable responsible waste management that reduces waste and protects community and environmental wellbeing					
Objective	Action	Role of ADC	Who	When	Budget
4.1 Implement methods to reduce the amount of waste sent to landfill or other disposal	 A. Implement the food organic/ garden organic (FOGO) kerbside collection service and extend the service to businesses on a user-pays basis (Waste Management & Minimisation Plan, p 12)	Plan and resource	ADC (Projects and Operations)	ST (Service in place by September 2026)	Existing Budget
	 B. Work with Council's contractors and other providers to encourage uptake of green waste collections (WMMP, p 11)	Plan and resource; Influence	ADC (Projects and operations, Communications); Contractors	Ongoing	Existing Budget
	 C. Implement the Solid Waste Management and Minimisation Bylaw (WMMP, p 11)	Plan and resource	Projects and Operations; Environmental Services	Ongoing	Existing Budget
	D. Continue to work regionally and lobby central Government	Advocate	ADC	Ongoing	Existing Budget
	E. Continue to seek ongoing improvements that reduce waste to landfill across all facets of waste management.	Plan and resource, Influence, Advocate	ADC (Projects and Operations, Communications, Strategy and Policy)	Ongoing	Existing Budget
	F. Continue to reduce waste to landfill from all council activities (e.g. Office waste).	Plan and resource	ADC (all activities)	Ongoing	Existing Budget
	G. Investigate the economic feasibility of a local composting operation for food organics/garden organic and other compostable materials.	Plan and resource	ADC	LT	NEW \$60,000

Goal 4: Enable responsible waste management that reduces waste and protects community and environmental wellbeing					
Objective	Action	Role of ADC	Who	When	Budget
4.2 Lower waste management costs and increase economic benefits to ensure financial sustainability	 A. Collect data through regular surveys and weighbridges. Continue recording and analysis to enable public reporting and performance monitoring over time. (WMMP, p 12)	Plan and resource	ADC (Projects and Operations)	Ongoing	Existing Budget
	 B. Use data collection, analysis and research to ensure Council and the community know where District waste is going. (Based on WMMP, p. 11)	Plan and resource	ADC (Project and Operations), Waste contractors	ST	Existing Budget
	 C. Revise rates and charges for waste management services on an ongoing basis, having regard to user-pays principles. (based on WMMP, p12)	Plan and resource	ADC (Project and operations, Finance), Waste contractors	ST	Existing Budget
4.3 Reduce the risk of environmental damage and protect public health through sustainable waste management	 A. Improve processes to consider the environmental impact of all reuse, recycling and recovery options and seek to choose options with the least overall environmental impact. (Based on WMMP objective 8, p5)	Plan and resource	ADC (Projects and Operations, Strategy and Policy, Executive Team, Council Elected Members), AECL	ST	Existing Budget
	 B. Improve processes to consider the public health impacts of all waste management options and seek to choose those options which protect human health. (Based on WMMP objective 9, p5)	Plan and resource	ADC (Projects and Operations, Strategy and Policy, Executive Team, Council Elected Members), AECL	Ongoing	Existing Budget

Goal 4: Enable responsible waste management that reduces waste and protects community and environmental wellbeing					
Objective	Action	Role of ADC	Who	When	Budget
4.4 Engage and involve our community to achieve waste management goals and objectives	A. Improve existing levels of communication, and carry out one-off campaigns where necessary, such as the FOGO service or other significant service change.	Plan and resource	ADC (Projects and Operations, Communications); Community partners	Ongoing	Existing Budget + Funded in 3.2.C
	B. Establish a working group with waste companies and building businesses to facilitate improved and targeted services for construction and demolition waste. (based on WMMP, p12)	Support	ADC, Waste businesses, Building & construction businesses	ST (establishment of working group) MT	Existing Budget
	C. Support and work with local community initiatives. (Based on WMMP, p.12)	Support	ADC (Projects and Operations), Community, Stakeholder groups	ST, MT, LT	Existing Budget
	D. Continue the promotion and requirement of sustainable waste management at Council or Council funded events	Plan and resource	ADC (Events, Waste)	Ongoing	Existing budget

5. Resilient infrastructure

Goal 5: Prepare our infrastructure for the long-term impacts of climate change to ensure resilience and safety for our community.					
Objective	Action	Role of ADC	Who	When	Budget
5.1 Ensure all critical infrastructure within the district is assessed and upgraded for climate resilience	A. Continue to assess and monitor critical infrastructure for its capacity to deal with the effects of climate disruption. - 2.2.1 CRP: Invest in climate-resilient core infrastructure	Plan and resource	ADC (Infrastructure Services, Open Spaces)	ongoing	Existing budgets / LTP 27-37
	B. Continue to maintain and upgrade infrastructure to deal with the effects of severe weather events and climate disruption /	Plan and resource	ADC (Assets Team, Roding Team, Projects & Operations Team)	ongoing	Existing budgets / LTP 27-37
	C. Manage climate change risks to existing infrastructure, particularly water supply, wastewater and key lifeline utilities (e.g. bridges, roading, electricity)	Plan and resource	ADC (Infrastructure Services, Open Spaces)	ongoing	Existing budgets / LTP 27-37
5.2 Incorporate climate resilience and sustainability in new infrastructure projects and subdivisions	A. Integrate climate resilience and sustainability principles into the planning phase, including consideration of options, for all new Council infrastructure projects and infrastructure to be vested in Council - 2.2.3 CRP	Plan and Resource, Advocate, Influence	ADC (Infrastructure Services, Open Spaces)	Ongoing	LTP infrastructure commitments (roading, stormwater, wastewater, drinking water)
	B. Integrate climate resilience and sustainability principles into the design, and construction of all new Council infrastructure projects and	Plan and Resource, Advocate, Influence	ADC (Infrastructure Services, Open Spaces), AECL	Ongoing	LTP Budgets current and future

Goal 5: Prepare our infrastructure for the long-term impacts of climate change to ensure resilience and safety for our community.

Objective	Action	Role of ADC	Who	When	Budget
	infrastructure to be vested in Council - 2.2.3 CRP				
	C. Investigate sustainable funding and financing opportunities for Councils infrastructure investments.	Plan and resource	ADC (Finance, Assets, S&P)	Ongoing	Existing budgets
5.3 Make greater use of durable, low-carbon materials for infrastructure projects	A. Investigate different types of construction materials and prioritise the use of durable, low carbon alternatives in all new designs and builds where possible. Measure outcomes and report to Council to assess whether the investment has realised the expected benefits	Plan and resource	ADC (Infrastructure Services, Open Spaces), AECL	MT	NEW \$25,000 (future budget provision)

6. Transition to a low carbon future

Goal 6: Reduce greenhouse gas emissions to mitigate the impacts of climate change and create a more sustainable future.					
Objective	Action	Role of ADC	Who	When	Budget
6.1 Set an emissions reduction target for Council activities	A. Research and present emission reduction scenarios to Council.	Plan & Resource	ADC	ST (within 6 months)	Existing budgets
	B. Adopt an overall emissions reduction target for council greenhouse gas emissions that is achievable.	Plan & Resource	ADC	ST (by 30 June 2026)	Existing budgets
	C. Set interim emission reduction targets to ensure we are progressing to our overall reduction target	Plan and resource	ADC	ST, Ongoing	Existing budgets
6.2 Continue to measure Council's GHG emissions, and adopt and implement emissions reduction Plan	A. Continue to measure Council's GHG emissions annually and audit the inventory	Plan and resource	ADC (Infrastructure Services)	Ongoing	NEW: \$9,000 per annum (audit)
	B. Make use of the emissions reduction plan to reduce ADC's emissions and report progress to the community	Plan and resource	ADC (Comms, Infrastructure Services)	Ongoing	Majority in existing budgets NEW: \$30,000 for EV chargers (LTP 27-37)
6.3 Promote and encourage sustainable transport in the community	A. Invest in walking & cycling infrastructure to reduce emissions through the Walking & Cycling Strategy 2020 – 2030.	Plan and resource	ADC (Roading)	Ongoing	Existing budgets (when funding available)

Goal 6: Reduce greenhouse gas emissions to mitigate the impacts of climate change and create a more sustainable future.					
Objective	Action	Role of ADC	Who	When	Budget
	B. Encourage community to make use of sustainable ways of transport as stated in goal 4 Walking & Cycling Strategy (<i>Goal 4: A district committed to walking and cycling for health, well-being, safety, <u>environmental</u> and economic reasons</i>)	Plan and resource	ADC (Roothing, Comms)	ST	Existing budget
	C. Advocate for the implementation of a public transport service in Ashburton (town) and Canterbury.	Advocacy	ADC, Environment Canterbury	ongoing	Existing budget
	D. Investigate implementation of workride benefit programme for ADC and promote to other organisations	Plan and resource, Support	ADC (Comms, P&C)	ST	Existing budget
6.4 Increase carbon sinks in the Ashburton District	A. See Goal 2.3.C – ‘Investigate and support the development of constructed wetlands around the district.’ (This also includes planting trees) + acknowledge the existing carbon sinks in the district	Support	ADC, Community, Environment Canterbury, AECL	MT-LT	See 2.3.C (LPT 27-37)
6.5 Engage with and educate the community on greenhouse gas emissions	A. Launch an education and outreach program, aimed at increasing awareness and understanding of greenhouse gas emissions among community members and local businesses, with the goal of fostering sustainable practices and reducing emissions.	Plan and resource	ADC (Infrastructure Services, Comms)	ST	Funded in 3.2.C

Goal 6: Reduce greenhouse gas emissions to mitigate the impacts of climate change and create a more sustainable future.

Objective	Action	Role of ADC	Who	When	Budget
6.6 Monitor emissions and report to the public	A. Publish the annual emissions report detailing Council's progress, key sources of emissions, and reduction achievements	Plan and resource	ADC (Infrastructure Services)	Ongoing	Existing budgets
	B. Develop an emissions dashboard that the public can access online that displays real-time or regular updated emissions data, trends and targets	Plan and resource	ADC (Infrastructure Services)	ST and ongoing	NEW \$10,000

Action plan indicative costs

	LTP 24-34	LTP 27-37								
Objective / Action	Year 3 (26-27)	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9
1.2B	3.2C									
1.3A	3.2C									
1.3B		\$5M	\$100,000	\$100,000	\$100,000	\$100,000	\$100,000	\$100,000	\$100,000	\$100,000
2.1A	\$40,000									
2.3A	\$20,000	\$20,000	\$20,000	\$20,000	\$20,000	\$20,000	\$20,000	\$20,000	\$20,000	\$20,000
2.4A	3.2C									
3.1B	\$50,000					\$50,000				
3.2C	\$60,000	\$60,000	\$60,000	\$60,000	\$60,000	\$60,000	\$60,000	\$60,000	\$60,000	\$60,000
3.3B				\$50,000					\$50,000	
3.5C				\$5,000	\$5,000	\$5,000	\$5,000	\$5,000	\$5,000	\$5,000
3.5D				\$15,000	\$15,000	\$15,000	\$15,000	\$15,000	\$15,000	\$15,000
3.5E				\$20,000	\$20,000	\$20,000	\$20,000	\$20,000	\$20,000	\$20,000
3.5F				\$10,000	\$10,000	\$10,000	\$10,000	\$10,000	\$10,000	\$10,000
4.1G				\$60,000						
4.4A	3.2C									
5.3A				\$25,000						
6.2A	\$9,000	\$9,000	\$9,000	\$9,000	\$9,000	\$9,000	\$9,000	\$9,000	\$9,000	\$9,000
6.2B				\$15,000	\$15,000					
6.5A	3.2C									
6.6B	\$10,000	\$5,000	\$5,000	\$5,000	\$5,000	\$5,000	\$5,000	\$5,000	\$5,000	\$5,000

Glossary

Below is a glossary of terms in the context of this Strategy.

Adaptation - in human systems, the process of adjustment to actual or expected climate and its effects, to moderate harm or exploit beneficial opportunities in natural systems, the process of adjustment to actual climate and its effects

Biodiversity – is a short term for “biological diversity”. Biodiversity describes the level of diversity in natural life. This includes the variety of different species (micro-organisms and fungi, trees, plants and animals), the genes they comprise, and the ecosystems they are a part of.¹⁷

Blue Green Network (BGN) – Blue-green networks are a planning approach that focuses on creating a network of interconnected waterways, wetlands, parks, greenways, and other natural areas to provide multiple benefits, including flood management, stormwater management, climate change resilience, improved water quality, protection of biodiversity, and opportunities for recreation, tourism and community engagement.

Carbon sequestration is the process of capturing and storing carbon dioxide. It is one method of reducing the amount of carbon dioxide in the atmosphere with the goal of reducing global climate change.

Carbon sink - a natural or artificial system that absorbs more carbon dioxide (CO₂) from the atmosphere than it releases, effectively storing it. Examples include forests, oceans, and soils. Carbon sinks play a vital role in the carbon cycle by helping to regulate the amount of CO₂ in the atmosphere.

Climate Change - a change of climate which is attributed directly or indirectly to human activity that alters the composition of the global atmosphere and which is in addition to natural climate variability observed over comparable time periods

Denitrifying bacteria are microorganisms that convert nitrates in the soil into nitrogen gas. This is essential for preventing its accumulation in the soil and maintaining the balance of the nitrogen cycle.

Ecosystem is a community of living organisms (plants, animals and microbes) in a particular area

Greenhouse Gases (GHG) – these are also known as GHGs and are gases in the earth’s atmosphere that trap heat. The main greenhouse gases are carbon dioxide (CO₂), methane (CH₄), nitrous oxide (N₂O), sulphur hexafluoride (SF₆), hydrofluorocarbons and perfluorocarbons.

¹⁷ Ashburton District Biodiversity Strategy, p 9.

Infrastructure is the basic structures and facilities (e.g. buildings, roads, water supplies, power supplies) needed for the operation of a community or organisation

Manaakitaka an outward-looking behaviour, demonstrating a genuine desire to care for the well-being of a person, area or environment

Mitigation - a human intervention to reduce greenhouse gas emissions or enhance the sinks of greenhouse gases

Nature-based solutions – see Blue-Green network

Nutrient filters - any mechanism or process that removes or reduces the concentration of nutrients, such as nitrogen, phosphorus, or other essential elements, from water or soil. In soil, for example, riparian buffers and other vegetation can act as filters, reducing nutrient runoff into waterways.

Precipitation - rain, snow, sleet, or hail that falls to or condenses on the ground.

Regenerative farming - a holistic approach to agriculture that aims to rebuild and enhance soil health and biodiversity, ultimately creating more resilient and productive farms. Key aspects of regenerative farming include: focus on soil health, reducing synthetic inputs, restoring biodiversity, carbon sequestration, improved water cycle and increased resilience.

Resilience - the capacity of social, economic and environmental systems to cope with a hazardous event or trend or disturbance, responding or reorganising in ways that maintain their essential function, identity and structure while also maintaining the capacity for adaptation, learning, and transformation.

Salinity stress – negative impacts, including impaired plant growth and development, caused by excessive salt accumulation in soil or water. This can be caused by rising sea-levels in coastal areas.

Sediment transport -. is the movement of solid particles (sediment), typically due to a combination of gravity acting on the sediment, and the movement of the fluid which carries the sediment. For example, the transport of sediment in river flows. See also wheelbarrow

Appendix 2

Draft Climate Change & Sustainability Strategy - Consultation Document

Climate Change & Sustainability Strategy

We're developing a strategy to prepare our district and communities for the impacts of a changing climate and to plan for a sustainable and resilient future for everyone in the district.

We want to hear what you think. Find out more and have your say!

We are accepting feedback until Wednesday 18 June 2025.

Introduction

Whether it are local events, like the floods that heavily impacted our district in May 2022, or across New Zealand and the globe, we see many examples of a changing climate. And even though we might not all agree on the cause of climate change, Council has a responsibility to look after our district, prepare our core infrastructure for the future, help our community understand what to expect and show how we can be more sustainable.

One of the goals of this strategy is to improve what we know about climate change, how our essential services will be affected, and how each of us can play a role in reducing negative effects.

In the strategy we describe how our district will be impacted by a changing climate and how we're planning for it. We're focused on strengthening our district's resilience with the strategy's six priority areas, goals and actions. These include nature-based solutions, making sure we use our water in a sustainable way and our shared effort to reduce waste.

Alongside preparing for the future, the strategy intends to reduce our input to the changing climate, including reducing greenhouse gases.

We also aim to celebrate the sustainable efforts our community are committed to and highlight the work Council is currently doing to contribute to a more sustainable future. The document also acknowledges the opportunities that a changing climate might bring to the district.

We believe we are all in this together, and all have a part to play. We have a responsibility to look after our place, to protect the prosperity of our district for future generations, providing the opportunity for them to enjoy living in our place, our district – just as we do now.

It's time for you to have your say. We want to know what is important to you, whether you support the draft strategy and what you think the Council should be doing to plan for the future.

If you'd like to find out more, we encourage you to read the full draft strategy on itsourplace.nz/XXXX

Why do we need a strategy?

The changes in climate are already impacting our infrastructure, communities and local ecosystems with future projections of worse storms, floods and droughts happening more often, sea levels continuing to rise, and changes in the diversity of plants and animals in our region.

This means that climate change and sustainability are subjects that require a long-term vision and a coherent approach across Council activities. This strategy is an overarching document that integrates existing work, making sure we align our actions across our existing strategies, policies, and plans.

Council also has legal duties to consider climate change impacts in decisions related to natural hazards, emergency management, and community resilience.

Our aim is a strategy that provides guidance for investment, helps to understand a complex issue, that educates and motivates. It explains what Council is doing and why. The community is already doing a lot and also asking for Council to take more action.

And although it requires financial commitments, as a country, we have learnt the hard way that investing in climate resilient infrastructure is cheaper in the long run than having to rebuild entire infrastructure networks following severe climate impacts. Making wise decisions now will reduce further disruption later.

Sustainability and Climate change are interrelated. Sustainable actions and practices help to reduce our impact on a changing climate, enable efficient use of our resources, and help harness the power of a community.

Funding and Costs

Action requires funding and that is why we have indicated **estimated** costs for each of the actions that are not currently included in existing budgets. You will see this in detail in the action plan. Please note that these are estimates and would be confirmed via business case by Council when they make the decisions on annual or long-term plan budgets.

The resilience of infrastructure will require some significant investment in the coming years, but the costs of recovering from unprepared infrastructure will be much higher. These costs are not shown in this strategy, but will be part of our infrastructure budgets.

A bit of background

What is climate change?

Climate change means the long-term shifts in temperatures and weather patterns which are predominantly caused by human activities that release greenhouse gases - like the burning of fossil fuels (coal, oil and gas).

There are two main approaches to addressing or minimising the impacts of climate change. These work hand-in-hand and both will be required in our draft strategy:

Mitigation: Some actions can be taken to reduce the amount of these gases (e.g. we can replace fossil fuels with clean energy sources, carbon dioxide can be absorbed/sequestered by trees).

Adaptation: We can take action to adjust to or minimise the impacts of climate change (e.g. we can manage our stormwater networks to prepare for increased volume and frequency of rainfall, we can build higher stopbanks around rivers to minimise chances of flooding nearby properties).

What is sustainability?

Sustainability means meeting the needs of the present without compromising the ability of future generations to meet their own needs. (e.g. recycling means we don't need to source more material, and reduce the amount of waste going to landfill, using renewable energy rather than fossil fuels). Sustainability is complex and has implications across what we do, how we do it and how it impacts on the natural environment, which underpins everything we do.

How are the two linked?

By taking more sustainable actions, we will also reduce our emissions or better prepare us for the impacts of climate change. For example reducing the amount of food waste that goes to landfill is a sustainable practice, and also means less methane will be released into the atmosphere.

What have we done so far and who else is involved?

In 2019, the Council adopted its first Climate Change Policy. A 2022 review found no framework to meet the goals, leading to the creation of the Climate Resilience Plan, which focused on councils' internal operations. Through this plan we reduced emissions at EA Networks Centre, considered climate impacts on our infrastructure and supported biodiversity.

In 2024, the Council joined the Canterbury Climate Partnership Plan and later that year council decided to consolidate its own efforts into a Climate Change & Sustainability Strategy.

Community initiatives, such as planting native plants and reducing litter, demonstrate local commitment to sustainability and climate change mitigation.

There are many local initiatives that show our community cares about sustainability and climate change, and stakeholders in the district are encouraging Council to take action and prepare for impacts. This strategy should help with connecting community activities, being a guideline for people who want to contribute but don't know how to do that.

How has this strategy been prepared?

Following Councils decision to create a Climate Change & Sustainability Strategy in October 2024, early engagement with the community on the content of the strategy took place in January-February 2025. This included a public workshop with community members and a stakeholder workshop, with local businesses and organisations joining the session.

Through this engagement, Councils prior climate change policy and resilience plan and our regional collaboration we identified six priority areas for the strategy. These areas touch on all the services we provide as a council and are the foundation for the goals, objectives and actions of the strategy.

Priority areas

- | | |
|--|--------------------------------------|
| 1. Sustainable water management | 4. Waste reduction and minimisation |
| 2. Nature-based solutions | 5. Resilient infrastructure |
| 3. A resilient, engaged and informed community | 6. Transition to a low carbon future |

Note: For a good understanding of the goals, please refer to the background information on the six priority areas, referencing the expected impacts and specific challenges for each area, as described in part 1 of the draft strategy here: itsourplace.nz/XXXX.

Proposed vision and goals

Our vision:

“Working together for a sustainable and resilient future for the Ashburton District: empowering our people, supporting our businesses, fortifying our infrastructure and protecting our environment”

Our goals and objectives:

Goal 1: Attain sustainable and resilient water management, ensuring reliable access, environmental stewardship, and improved water quality.

This means to (objective):

- 1.1** Ensure a forward-thinking approach to the sustainable management of water resources in the Ashburton District.
- 1.2** Promote and engage in initiatives to maintain and enhance water quality in district water bodies.
- 1.3** Foster a culture of water conservation and efficiency within the community.
- 1.4** Track and communicate water usage and quality data to ensure transparency and informed decision-making.

Goal 2: Encourage nature based solutions and support our communities to help understand how nature-based solutions to climate disruption will work.

This means to (objective)

- 2.1** Support blue-green networks development for Mid-Canterbury
- 2.2** Continue biodiversity restoration and ecosystem health enhancement
- 2.3** Build a climate-resilient environment in the district
- 2.4** Continue to promote sustainable land use and soil conservation

Goal 3: Build a community that is well-informed about the changing climate and actively engaged in sustainable practices and resilience efforts.

This means to (objective)

- 3.1** Improving Council understanding of the impacts of a changing climate and sustainable responses, and advocate on behalf of the district in climate change matters.
- 3.2** Engage with and educate the wider community to improve understanding of climate change and sustainability practices.
- 3.3** Support the community/ to be prepared/ on resilience and adaptation to climate change impacts.
- 3.4** Encourage and promote sustainable good practice in Council operations and activities.
- 3.5** Promote and connect community and stakeholder groups working on sustainable projects and establish partnerships and initiatives to engage the community and promote collective action.

Goal 4: Goal 4: Enable responsible waste management that reduces waste and protects community and environmental wellbeing

This means to (objective)

- 4.1** Implement methods to reduce the amount of waste sent to landfill or other disposal
- 4.2** Lower waste management costs and increase economic benefits to ensure financial sustainability
- 4.3** Reduce the risk of environmental damage and protect public health through sustainable waste management
- 4.4** Engage and involve our community to achieve waste management goals and objectives

Goal 5: Goal 5: Prepare our infrastructure for the long-term impacts of climate change to ensure resilience and safety for our community.

This means to (objective)

- 5.1** Ensure all critical infrastructure within the district is assessed and upgraded for climate resilience.
- 5.2** Incorporate climate resilience and sustainability in new infrastructure projects and subdivisions
- 5.3** Make greater use of durable, low-carbon materials for infrastructure projects

Goal 6: Reduce greenhouse gas emissions to mitigate the impacts of climate change and create a more sustainable future

This means to (objective)

6.1 Set an emissions reduction target for Council activities

6.2 Continue to measure Council's GHG emissions, and adopt and implement emissions reduction Plan

6.3 Promote and encourage sustainable transport in the community

6.4 Increase carbon sinks in the Ashburton District

6.5 Engage with and educate the community on greenhouse gas emissions

6.6 Monitor emissions and report to the public.

Draft strategy

The full draft strategy is available at itsourplace.co.nz/XXXX

You can submit on any or all of the questions below. You don't have to complete every question and you can comment on any aspect of the draft strategy. You can provide attachments to support your submission. The full draft strategy is available at itsourplace.nz

Questions:

Our vision for the district in the future is:

“Working together for a sustainable and resilient future for the Ashburton District: empowering our people, supporting our businesses, fortifying our infrastructure and protecting our environment”

1. Do you support this vision?

Yes/No

Please explain:

2. Do you think the goals and objectives of the strategy capture what you see as the key challenges and opportunities regarding climate change and sustainability in the district?

Yes/No

Please explain:

- 3. If we would have \$100 to spend on climate change initiatives across the six priority areas, how would you divide the funding? Show us your priorities by using the budget spending tool here:**

<https://demo.socialpinpoint.com/community-funding/your-vote>

for paper CD - set up table as below:

Indicate # of the objective here (see under goals and objectives):	Amount
Sustainable water management	
Nature-based solutions	
A resilient, engaged and informed community	
Waste reduction and minimisation	
Resilient infrastructure	
Transition to a low carbon future	
TOTAL	\$100

- 4. We have identified 81 actions to reach the goals in the strategy. You can read about them on in the action plan on itsourplace.nz/XXX. Is there any specific additional action or anything else Council should be doing with regards to climate change and sustainability for the district?**

See action plan on page X-X

5. Do you have any other comments or feedback?

Review process and timeline

We're accepting feedback from the community until Wednesday 18 June.

On Thursday 26 June, submitters will have the opportunity to present their views to Council in person at the hearing. Councillors will consider and deliberate on all the submissions received on 7 August.

Monday 26 May – Wednesday 18 June
Community Consultation

Thursday 26 June
Submission hearings

Thursday 7 August
Submission deliberations

August
Strategy finalisation

Wednesday 1 September
Final Strategy Adoption

Have your say

Your feedback will help us to know whether we are on the right track.

Please note all submissions are public documents and will be made available on Council's website with the names of submitters included.

Submissions presented in the form of a petition or accompanied by multiple signatures will be processed as a single submission.

The easiest way to provide your feedback is online at [Itsourplace.nz](https://itsourplace.nz)

Alternatively, you can provide feedback by filling in the attached submission form and getting it back to us using one of the following methods:

Freepost to Ashburton District Council
Freepost 230444
PO Box 94
Ashburton 7740
Email to submissions@adc.govt.nz
Hand in to Ashburton District Council reception, 2 Baring Square East

You have until Wednesday 18 June to get your feedback in.

Your details

Name*

Organisation (if appropriate)

Address

Phone

Email*

*these fields are required

Do you wish to speak in support of your submission at the hearing?

(if no boxes are ticked, it will be considered that you do not wish to be heard)

☐ Yes:

The hearing will be held in Hine Paaka (Council Chamber) on Thursday 26 June 2025.

☐ No:

I do not wish to speak in support of my submission and ask that the following written submission be fully considered.

Please note that by making a submission, your information will be used in the following ways:

- *Submission material, including your name and organisation (if applicable) but excluding your contact details, will be included in material available to Council, media and the public at our office and on our website.*
 - *The contact details you provide will be used for administration of the consultation process, including informing you of the outcome of the consultation.*
 - *The information you have provided will be stored and held by Council. If you would like to request access to, or make a correction to your personal information, please contact the Council staff.*
-

11. Lake Hood Water Quality Options

Author *Tania Paddock; Legal Counsel*
Neil McCann; Group Manager Infrastructure & Open Spaces

Executive Team Member *Hamish Riach; Chief Executive*

Summary

- The purpose of this report is to provide an update on Lake Hood water quality.
- This report will provide an overview of the issues, actions undertaken to date, and current and proposed workstreams.
- Two expert reports commissioned by Council are also included with this report. The first report is by Tonkin & Taylor, and provides an overview of issues at the lake (including water quality, water volume, lake circulation), along with a suggested high level programme of works and estimated costs. The second report from Environmental Matters Limited focusses solely on water quantity, and assesses options for increasing waterflow into the lake.
- It is important to note that there is no single or simple solution towards improving water quality in Lake Hood. Further, expert advice received to date suggests that Council is most likely only going to be able to lessen the impact of cyanobacteria blooms through any mitigation measures, as based on attempts at other lakes around New Zealand, the possibility of eliminating cyanobacteria from the lake entirely is unlikely.
- This report is an information only report, as officers will bring further reports to Council in due course once options are further refined.

Recommendation

1. **That** Council receives this report.

Attachment

Appendix 1 Tonkin & Taylor - Strategic Business Case Report

Appendix 2 Environment Matters – Assessment of Options for Increasing Waterflow into Lake Hood

Background

Cyanobacteria Blooms in Lake Hood

1. In early 2023, Lake Hood experienced its first significant cyanobacteria algal bloom since the lake opened in 2002. This resulted in Health New Zealand issuing a public health warning for Lake Hood on 16 March 2023, which remained in place until 15 May 2023. Public health warnings have been issued in the subsequent two summers, from January-June 2024, and March 2025 (and remains in place at the time of writing).
2. Expert advice received to date is that once the predominant cyanobacterial species in the lake (*Dolichospermum*) appears to levels equating to a bloom, recurrences tend to be more frequent. Recurrence is expected due to the species producing seeds which drop to the lake floor when regermination conditions are unfavourable. These seed banks allow *Dolichospermum* to survive harsh conditions, then regerminate from the lake bottom sediments when environmental conditions are favourable. For this reason alone, it is unlikely to be eliminated from a water body once it is present.
3. *Dolichospermum* is also able to use atmospheric nitrogen dissolved in the water as a nitrogen supply when the usual inorganic dissolved forms of nitrogen are limited, meaning it can outcompete other species to survive and flourish. *Dolichospermum* can also regulate its buoyancy and move vertically in the water column to optimise its access to light and nutrients.
4. *Dolichospermum* is considered to be 'potentially toxic' as it can produce toxins harmful to humans and animals.
5. The 2024/2025 summer has also seen elevated levels of a second species of cyanobacteria, *Microcystis*, which is considered to be 'toxic', rather than just potentially toxic.
6. The algal blooms have started in the poorly flushed canals on the western side of the lake, spreading from there into the main lake. Satellite imagery below shows the visual presence of the blue-green algal bloom on 8 April 2023 (**Figure 1**) and 28 January 2024 (**Figure 2**).



Figure 1. 8 April 2023



Figure 2. 28 January 2024

Water Quality Monitoring

7. Environment Canterbury undertake weekly water quality monitoring over the contact recreation season. This monitoring is undertaken for public health reasons, to ensure the lake remains safe for contact recreation. Water samples taken are assessed for various factors including cyanobacteria and *e.coli*.

8. The Ministry for the Environment and Health New Zealand's [Aotearoa New Zealand Guidelines for Cyanobacteria in Recreational Freshwaters](#) provides the green/amber/red alert level framework for cyanobacteria in recreational freshwater¹. Under this framework, a public health warning is issued if the total biovolume of cyanobacteria present in a water sample is $\geq 10 \text{ mm}^3/\text{L}$ (red alert level).
9. This alert level framework is used in Health New Zealand's *Recreational Water Monitoring and Response Protocol for Planktonic Cyanobacteria in Canterbury and South Canterbury Fresh Water Recreation Sites 2024-25*, which contains specific monitoring procedures for some Canterbury lakes, including Lake Hood. This Protocol treats Lake Hood as one water body, therefore any water sample taken that exceeds $\geq 10 \text{ mm}^3/\text{L}$ will result in a public health warning being issued for the entire water body.
10. The Lake Hood Water Quality Taskforce had previously discussed with Health New Zealand and Environment Canterbury the possibility of the Protocol splitting the lake into three sections (e.g. the ski lane, canals and main lake), and therefore only issuing a public health warning for the section that exceeds the red alert level threshold. However, as the lake is one connected water body, this approach was not considered appropriate and was not adopted in the Protocol. Algal blooms move and disperse through water with wind and rainfall and this can happen quickly and unexpectedly. From the satellite imagery shown above, it is clear that cyanobacteria blooms move throughout the lake and cannot be contained to specific sections of the lake, which supports the 'one water body' position in the Protocol.
11. Further, as Council continues to work on mechanisms to increase water circulation throughout the lake (particularly through and out of the canals), these improvements to water circulation will increase the likelihood of cyanobacteria blooms moving around the lake.

The Issues

12. Since the first algal bloom, a large volume of work has been undertaken to understand the complex nature of the issues within the lake.
13. The Lake Hood Water Quality Taskforce was established by interested stakeholders, and assessed and evaluated mitigation options during 2023-2024.

Issues Identified Through NIWA Report

14. The Taskforce engaged NIWA to provide expert advice. In April 2024, [NIWA's Report](#) provided data analysis to inform Lake Hood water quality management. NIWA's assessment found that the high nutrient load into the lake is the likely key driver for the bloom growth. Other relevant factors included air temperature increase, pH and dissolved oxygen and

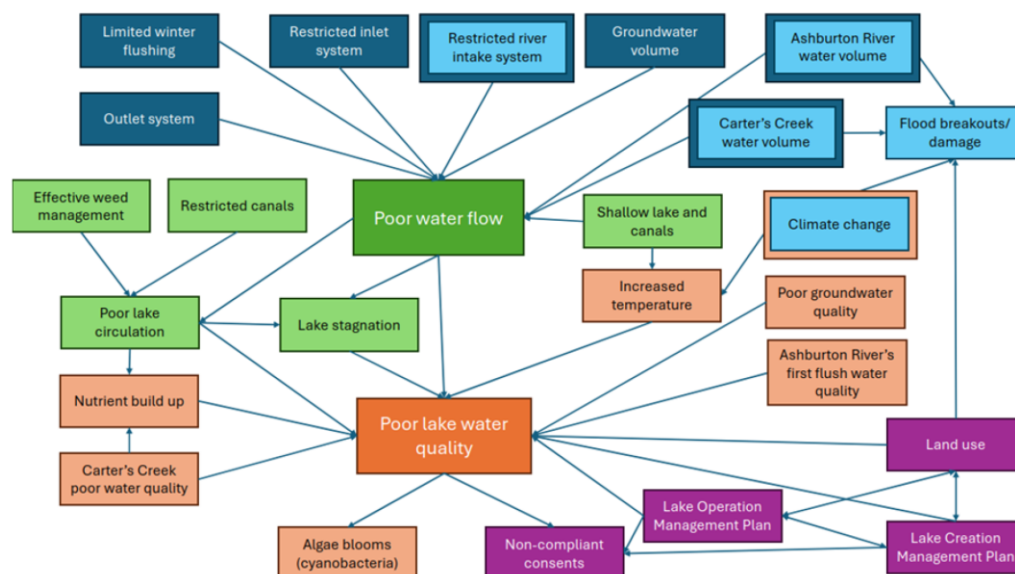
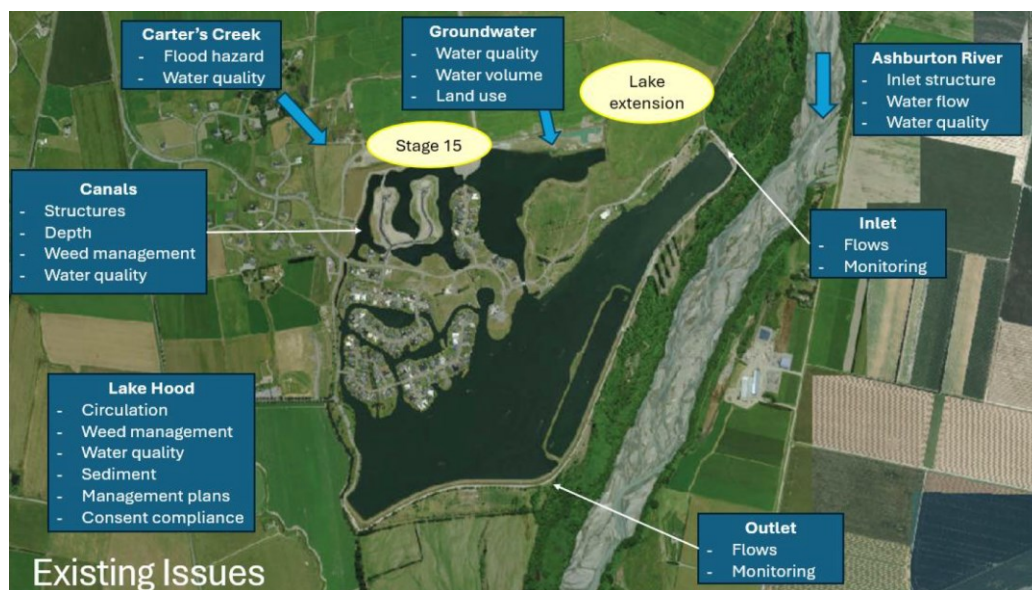
¹ See Decision Chart 1 on page 19

stratification. While the NIWA report could not identify the main contributing nutrient load to the lake, it did consider the lake intake, Carters Creek, groundwater and sediments are all relevant nutrient sources.

15. A summary of options for addressing water quality issues can be found at Table 0-1 of that Report (pages 7-9). NIWA's main recommendations were lake flushing, nutrient controls in inflows, sediment capping, and potentially sonication. There is however limited historical lake data and monitoring for NIWA to have any real confidence that these methods could be successful in improving water quality. Therefore, before committing significant expenditure by implementing any large-scale, costly control efforts, NIWA recommended the following further work be undertaken:
 - a. Modelling:
 - i. A hydrodynamic model to understand residence times in different parts of the lake, i.e., the canals and the main lake.
 - ii. A linked catchment and lake water quality model to quantify the nutrient loads from each source and estimate sediment nutrient fluxes over time, allowing for determination of the main nutrient source driving cyanobacteria blooms.
 - iii. Scenario modelling using the linked models to allow for testing of different management / mitigation options (e.g. reduced nutrient loads, sediment capping) before implementing any control methods.
 - b. Data collection for development of these models, including regular water column phosphorus (**P**) and nitrogen (**N**) sampling, field measurements of fluxes of P from the sediment for comparison with inflow nutrient loads and controlled lab experiments using cyanobacteria from the lake to understand the growth rate as a function of N and P concentration.
 - c. Ongoing water quality monitoring to assess the effectiveness of mitigation measures.
16. The lack of long term, good quality data is a significant issue in committing to any substantial water quality mitigation measures. Therefore, NIWA's proposed modelling, data collection and ongoing water quality monitoring would ensure that any control efforts are chosen through robust science-based decision making and are specifically targeted to address the particular drivers of the algal bloom, rather than undertaking a myriad of untested mitigation measures in the hope that something may be successful.
17. Due to the significant cost in undertaking this modelling work, the Water Quality Taskforce decided not to proceed with seeking funding for this modelling. However, as discussed later in this report, officers are now progressing an opportunity to partner with NIWA and Lincoln University to undertake this modelling and further research to provide science-based evidence to support decisions on appropriate mitigation options.

Issues Identified Through Tonkin & Taylor Report

18. Following the NIWA report, Council officers engaged Tonkin & Taylor to undertake a review of the ongoing management and operational practices of Lake Hood, with the aim of developing a high level strategy for future lake management (**T&T Report**). The T&T Report is in **Appendix One**.
19. Below is an overview from the T&T Report of the various issues identified with Lake Hood, along with a visual representation of how these issues are interconnected². The T&T Report splits these issues into the following themes: water quality, water volume, lake circulation, flood hazard and future lake management.



² T & T Report, pages 6-7.

20. Section 4 and Appendix A of the T&T Report provide potential solutions, a proposed programme and indicative costs for future improvements, management and operations at the lake. While officers are not recommending that Council undertakes all actions in this programme (and note that there are other actions outside this programme that are also likely to be recommended), the report provides a helpful overview of the complex range of actions required at the lake for its ongoing and future management and operation.
21. An overview of the proposed solutions from the T&T report is shown below³, noting T&T's advice that there are many steps in these solutions that have not been provided in the report, as each solution would comprise a number of steps, including research, review, fieldwork, data collection, preliminary design, testing/field trials, detailed design, resource consenting, tender, construction and long term monitoring.



22. The T&T Report provides indicative annual costs of the programme up to June 2029 if it was to be implemented, which are summarised below. Officers are not recommending through this report that Council commit to this level of funding, but consider it provides helpful context.

Timeframe	Present-June 2025	June 2025-June 2026	June 2026-June 2027	June 2027-June 2028	June 2028-June 2029
Estimated Annual Cost	\$480,000-\$490,000	~\$1.79 million	~\$1.87 million	>\$4.39 million	>\$7.65 million ⁴

³ T&T Report, page 14

⁴ \$5M of the \$7.65M in 2028-2029 relates to civil construction and development works for future residential stages. Council currently has no plans to undertake residential development, as development at Lake Hood has traditionally been undertaken by private developers.

Reconsenting the Lake by 2031

23. The T&T Report goes further than just addressing water quality issues, as it also focuses on the ongoing future management and operation of the lake. As well as water quality, there are other significant challenges looming at Lake Hood in the next five to ten years. In particular, all the Environment Canterbury lake construction and operation resource consents expire in 2031. These 25 consents enable a wide range of activities including ongoing lake construction, water take/use, water discharge, structures in the lake (including the dam) and quarry operations.
24. Currently, the lake is extended by excavating the extension area and removing gravel which is processed at the Fulton Hogan quarry above Lake Hood. This lake construction is managed through a number of ECan resource consents and a Lake Construction Management Plan. Lake operation is similarly managed through a complex suite of ECan consents, and a Lake Management Operation Plan.
25. With the signalled repeal of the Resource Management Act 1991 and the flow on changes that will be required to the regional planning framework, it is not possible to surmise the likelihood of obtaining new resource consents (and what they will look like). However, the general consenting process and framework is considerably different now compared to when these resource consents were originally obtained in the late 1990s. Therefore, the T&T Report predicts the reconsenting process will be challenging and could cost Council in excess of \$2 million⁵.
26. While water quality is one of the ongoing and most important issues with Lake Hood, any work undertaken to improve water quality must occur in a way that is consistent with the wider vision and strategy for the lake. By way of example, any infrastructure changes that are made now, such as to the intake or outlet, should only occur if there is a reasonable level of confidence that this infrastructure will be adequate for the reconsenting process that will occur in the next 6 years, and will not require further alterations or improvements in several years in order to obtain resource consent.

The Options – Three Areas of Focus

27. Having regard to the expert advice received to date, along with the issues identified above, officers are currently focussed on assessing and delivering options under three main themes:
 - a. Obtaining robust, science based evidence to make decisions on mitigation measures that can improve water quality;
 - b. Engineering/infrastructure design changes to the lake and its infrastructure; and

⁵ T&T Report, section 5.2, page 27

- c. Reviewing consents to improve water inflows into the lake.
28. These focus areas are discussed in more detail below.

1. Science Based Evidence, Decision Making and Mitigation Measures

29. This area of focus is complex, with some action having already been undertaken and some further work recommended, with the support of scientific experts to ensure robust decision making.

Weed harvester

30. High nutrient levels in the lake (particularly N and P) are a significant contributor to the algal bloom. Following a recommendation from the Lake Hood Water Quality Taskforce, in late 2023 Council committed to fund the purchase and operation of a weed harvester. Removing lake weed removes nutrients bound up in those weeds from the lake. This method was also predicted to prevent anoxia in the lake bottom.
31. Weed harvesting replaces previous lake weed control methods of spraying weeds and the use of grass carp. Spraying and carp are now considered likely to actually have contributed to the build-up of nutrients in the lake. It is important to note the weed harvester was never intended to be the immediate solution to water quality issues, as it is instead a long-term step towards better lake management which, among other mitigation measures, will result in better water quality outcomes.
32. The weed harvester will only operate over the weed growth season. Over the 2024/2025 summer period, ACL estimated the weed harvester removed 1,100 tonnes of weed from the lake.

Modelling and Data Collection

33. A robust understanding of how Lake Hood functions, both physically and biologically, is required to identify and implement effective mitigation measures.
34. As initially recommended by the NIWA report, officers agree there is a need for modelling, data collection and ongoing water quality monitoring to ensure that any water quality mitigation measures are targeted to address and control the particular drivers of the bloom. This science-based decision making will ensure ratepayer money is directed to the methods that are more likely to be effective in reducing blooms.
35. While initial work had begun on this area of focus, a recent opportunity has arisen for Council to work with Lincoln University, NIWA and Environment Canterbury to collaborate on the investigation of cyanobacterial blooms and mitigation options for the lake. While this collaboration is at the early stages of development, from the initial discussions the parties are considering:

- a. Development of a hydrodynamic model to simulate water circulation patterns, which is critical to understanding the transport, distribution, and accumulation of nutrients, sediment and cyanobacterial blooms. This model would be set up by NIWA.
 - b. A PhD research project with objectives such as utilising the model and its outputs to investigate the cyanobacteria species and their environmental drivers, assessing internal nutrient cycling and external nutrient sources to understand how these sources could be reduced through mitigation measures. It is also hoped that this two-three year project could result in findings to improve the management and mitigation of cyanobacteria blooms in other man-made lakes.
36. A potential PhD candidate and supervisors from Lincoln University and NIWA have been identified. This project is being led by Professor Susie Wood, a leading expert on toxic cyanobacteria. It is anticipated that Council would need to contribute to some resource funding, including travel costs for sampling and water quality and sediment analysis. However, if this research project comes to fruition, ultimately this would see the modelling, research and monitoring work undertaken for a fraction of the cost compared with if Council was funding this work entirely itself. Officers will look to use existing budgets (including money allocated to Lake Hood water quality in the 2024/2025 Annual Plan) to fund this initial work.
37. Further information on this research project will be released, once details are confirmed.

Trials

38. Officers are also receiving independent scientific advice on the feasibility of setting up trials for products that can manage and mitigate cyanobacterial blooms.
39. Council has been inundated by vendors and salespeople who want to sell Council their chemical or biological products or technologies. However, independent expert advice received is that few, if any, of these products and technologies have been rigorously and independently tested to be successful in lakes in New Zealand, particularly lakes similar in size to Lake Hood.
40. These products include bacteria, sediment capping, flocculation and nutrient controls in inflows. For example, flocculants can be applied to the water column to remove cyanobacteria blooms in hours/days, but will only be a very short term measure, as it does not remove the cause of the bloom and cyanobacteria will bloom again in subsequent days or months. Until scientific evidence is available (for example, through the PhD research project discussed above) that shows a particular product is both cost effective, and likely to provide long term benefits for the lake, then officers do not consider these products to be an efficient or effective use of ratepayer funds. Council will however be guided by independent expert advice on these products or technologies, and are discussing possible trials of some of these products with Lincoln University. Officers are also aware of a recent trial undertaken by

residents in a small pool next to the lake using Pond Boost and have provided the trial results to Dr Wood to assess whether this product could form part of a trial in the lake canals.

41. Officers are also evaluating whether ultrasound treatment could be an effective control measure in Lake Hood. Ultrasound equipment is placed in the water to break cyanobacteria cells using sonic pressure waves that ruptures the gas vacuoles in the cells. Ultrasound is also highly unlikely to provide a long-term solution as it does not remove the drivers of the blooms, such as nutrients. However, it may have merit to reduce the severity of the blooms in selected parts of the lake such as the problematic canals.
42. In conjunction with Lincoln University, officers are at the early stages of developing research trials for ultrasound treatment in the lake, including a 'before and after' monitoring programme to determine the effectiveness of the treatment.
43. Further details on these trials will be released, once confirmed.

2. Engineering, Infrastructure and Design

Overview

44. It is well established that the original lake design, with the complex canal network and poor water circulation, is a predominant reason for the ongoing water quality issues. Water enters the lake through one controlled method (the Ashburton River intake), and two uncontrolled methods (Carters Creek and groundwater flows). As shown below, water entering the lake from the river largely travels straight down the lake to the outlet, leaving water circulation in the majority of the lake to the mercy of wind circulation or the uncontrolled inflows. As a result of the poor circulation, the algal blooms have initially formed in the canal network in each of the last three years.



45. The intake and outlet infrastructure are also a limiting factor, for example, as the existing Ashburton River intake and delivery canal is generally not able to physically take the full consented volume from the river. Further, the river intake is not resilient and has been extensively damaged on multiple occasions during flood events in the river. In recent years, Council has spent over \$83,000 + GST rebuilding the intake after multiple flood events.
46. While Council was not involved in the original lake design and construction, through the transfer of lake ownership to Council, the lake is now Council's to manage and improve to ensure the lake remains a high quality asset for the community.

Solutions

47. In mid 2024, Council constructed a new channel which diverts river flows from the intake channel to the northern end of the lake extension (rather than the full inflow going into the main lake area). This channel is intended to divert more water to the northern part of the lake, and down through the canal system.
48. Further work is required (likely through the hydrodynamic modelling and research project outlined above), to better understand the hydrology of the lake and develop options for how to better improve water circulation.
49. In addition, further work is also required on the river intake system. This work would assess the benefits of improving existing structures and considering alternative intake designs and/or locations, with the end goal of enabling the intake to better withstand flood events, and to take the maximum consented flow. With reconsenting of the river take and use resource consents in 2031, Council is extremely unlikely to obtain resource consent for the currently consented volume of 2.5 cubic metres/second if it cannot demonstrate that it can take this volume through the intake.
50. The T&T Report has estimated this review of the intake system and construction work to potentially cost over \$2.35 million. The eventual cost will depend on the option chosen and the extent of construction required. However, an initial feasibility and resilience assessment and reconstruction is considered critical to improve the chances of ensuring the maximum water volumes are diverted into the lake for flushing and also given the looming reconsenting dates.
51. Below are two photos of the river diversion and intake:
 - a. The photo below shows the diversion channel from the river (with the river in the distance). Water flows into the settling pond on the left of the photo, then through the intake structure into the intake channel. This photo demonstrates the challenge with diverting the maximum consented flow into the lake, as the take is dependent on the location of the braided channels within the riverbed and there being enough head (or pressure) in the flow to push enough water through the intake. ACL (who are contracted

to manage the lake on Council's behalf) routinely check and maintain the intake and diversion to maximise the available water.



- b. The photo below taken from the opposite direction and shows the settling pond and the intake structure. Flows through the intake structure are currently limited by the existing infrastructure, including pipe size.



52. A second outlet has also been considered to draw water from the western side of the lake and improve canal circulation. The Lake Hood Extension Project (**LHEP**) previously obtained resource consent [CRC093113.1](#) for a second outlet located at the rowing start area in the south-western corner of the lake. The second outlet was proposed to discharge up to 4 m³/s. However, the outlet was not progressed in its proposed location, as subsequent high-level modelling concluded that there was potentially inadequate benefit for the canal circulation in the chosen location.⁶ Any change to the location would require the resource consent to be varied.

⁶ T&T Report, section 4.3.2, page 18

53. The location of the currently consented second outlet and associated infrastructure required to eventually discharge water into the Ashburton River is shown on the extract from the consent decision below:



54. The T&T Report estimates the design of a second outlet to cost approximately \$200,000 and construction of the outlet and related infrastructure (including diversion infrastructure to discharge diverted water to the river) to cost over \$1 million.
55. Carters Creek is perceived to be a key contributor to poor lake health by stakeholders. However, there is limited scientific evidence to conclusively show that Carters Creek water quality is an actual problem,⁷ particularly outside of flood events/flows. It is intended that the hydrodynamic modelling and research project outlined above will review and assess external nutrient sources into the lake (including from Carters Creek) to provide scientific evidence required to justify any mitigation measures for Carters Creek. Further, as Environment Canterbury has responsibility for this Creek, it will be for Environment Canterbury to approve any mitigation measures on the Creek. Council could also consider lobbying Environment Canterbury to redirect the Creek so it does not flow directly into the lake.
56. Further, officers would also like to progress a Lake Hood development plan for Lake Hood. This plan is wider than just water quality, and will ensure an effective allocation of resources and prioritisation of actions to inform the future planning and management of the lake, particularly with regard to reconsenting of the lake and future land uses around the lake. With

⁷ T&T Report, section 4.1.2, page 15

several future residential development stages possible on the northern side of the lake, there is the potential to redevelop above this future residential area for urban amenity and recreational benefits, as well as potential water quality benefits through changing land use and the introduction of wetlands. All interested stakeholders and the wider community would have input into this development plan. Formal commencement of this development plan would be subject to sufficient internal resource being available.

57. It is also anticipated that further infrastructure improvements, particularly in relation to water circulation to improve residence time in the lake, will be recommended through the hydrodynamic modelling and research project outlined above.
58. Finally, there are other, more extreme options, which have not been investigated in any detail by officers to date due to cost and impact. These include shutting off and permanently draining the problematic canal network, or alternatively draining the entire lake, dredging the sediment from the lake bottom and then refilling the lake.

3. Water Volume

59. Water is taken into Lake Hood from an intake on the Ashburton River under resource consent [CRC200217](#). This consent enables a take of up to 2.5 cubic metres per second (m^3/s) from the river when the river flow is at or above $15 \text{ m}^3/\text{s}$ (measured at the SH1 bridge). The maximum allowable take then reduces progressively depending on measured flow in the river, for example:
 - a. When the River is flowing between $8.5 \text{ m}^3/\text{s}$ and $15 \text{ m}^3/\text{s}$, water can be taken at a rate of up to 400 l/s; and
 - b. Once the River flow at SH1 is below $6 \text{ m}^3/\text{s}$, no water can be taken into the lake.
60. Depending on lake levels, a similar volume of water is discharged through the lake outlet, back into the Ashburton River.
61. As outlined earlier in the report, it is not generally physically possible to take the full consented water volume of $2.5 \text{ m}^3/\text{s}$ through the intake due to the nature of the braided river moving course and the location and design of the intake infrastructure. Depending on the location of the river channels where water is diverted from, generally only up to $2 \text{ m}^3/\text{s}$ can be diverted into the intake. Therefore, any demand for 'more water' is futile unless the intake design issue is rectified.
62. Officers are therefore instead focussed on options for taking more water at times that the river is on full or partial restriction (that is, at flows below $15 \text{ m}^3/\text{s}$ when only up to 400 l/s can be diverted into the lake). It is at these times of restriction that having water into the lake would be of significant benefit for flushing and water circulation.

63. Under Environment Canterbury's Canterbury Land and Water Regional Plan (**CLWRP**), it is not possible to apply for a resource consent to take more 'A Block' allocation water from the Ashburton River, as this is a prohibited activity. Officers have however explored other options for increasing water flows into the lake, including:
- a. Exempting Lake Hood from Ashburton River minimum flows (or providing lower minimum flow restrictions for the Lake Hood take). For example, by providing a separate flow and allocation regime for Lake Hood in CLWRP to allow water to be taken when the River is otherwise on full or partial restriction (that is, flows below 15m³/s). This exemption could only occur through Council applying for a private plan change to the CLWRP. A private plan change would take considerable resource, would likely take 1-2 years through to a decision and would need to be supported by sufficient evidence and assessment to justify both the need for the plan change and the effects of any change. It is not possible to apply for resource consent for this exemption option as any change to the CLWRP rules can only occur through a plan change. Officers understand that Environment Canterbury are targeting a full review of the CLWRP in 2028.
 - b. Apply for a new long-term non-consumptive take resource consent. Non-consumptive takes are not subject to the same River minimum flow rules in the CLWRP as consumptive takes (including Lake Hood's current consumptive take in CRC200217). 'Non-consumptive' is not defined in the CLWRP, but it is generally considered to be a take where the same amount of water is returned to the same water body at or close to the location from which it was taken, with no significant delay between the taking and returning of the water. There is roughly 2.8km between the river take and discharge points, and an uncertain residence time in the lake. Therefore, Lake Hood's surface water take is currently deemed to be consumptive. LHEP previously applied for a non-consumptive take ([CRC164641](#)) and discharge ([CRC174196](#)) consents in 2017, but withdrew the application prior to the application being publicly notified.
 - c. Apply for a short term 'trial', flushing non-consumptive take. This is similar to the above option, but for a short term consent duration only.
 - d. Amend the existing river water take consent (CRC200217), for example, to change it from a consumptive to a non-consumptive take.
 - e. Surrender water from the river take consent CRC200217 and convert to groundwater take. This water swap option is supported by the CLWRP, but would require the drilling of deep bore(s) and pumping of sufficient volumes of water.
 - f. Utilise Council's Ashburton River stockwater take consents. With Council's planned exit from stockwater delivery from 1 July 2027, this is an option open to Council in the future, depending on whether there is volume available in these stockwater consents following this transition. Any take (if considered consumptive) would still be subject to the

minimum flow restrictions in the River but could potentially enable a greater rate of water to be abstracted when the River is flowing between 6 m³/s and 15 m³/s. Progressing this option is not feasible in the short term until stockwater exit plans are further advanced.

- g. Obtain water with other users (e.g. a water users group). Forming or joining a water users group is a potential option, however this would require other abstractors to share or transfer water allocations to Council. Also, as with the stockwater take consent option, any such consumptive take will still be subject to the minimum flow restrictions in the River.
 - h. Use water shortage directions under section 329 of the Resource Management Act (**RMA**). This would involve requesting ECan issue a water shortage direction to enable flushing flows when the river is otherwise on total restriction. This would only be a temporary option, and was approached with ECan when the lake was on severe restriction in 2024. It was not supported by ECan and therefore not formally progressed.
64. Council officers obtained expert advice from Bianca Sullivan of Environment Matters on the above options. Her full report is contained in **Appendix Two**. Of note is the summary of options in Table 1 with the advantages, disadvantages and chance of planning success discussed for each option.
65. Officers remain in ongoing discussions with Environment Canterbury regarding the feasibility of the above options. Officers are currently investigating and scoping up a two-stage approach:
- a. Apply for a short term / trial non-consumptive resource consent for up to five years to take water from the river and discharge back into the river. Ideally this would enable a greater rate of water to be abstracted when the river is flowing between 6 m³/s and 15 m³/s.
 - b. Target the CLWRP plan review process in 2028 to lobby for a separate flow and allocation regime for Lake Hood.
66. It is hoped that the short term consent, in conjunction with data collected during the research trial discussed above, could provide sufficient evidence to justify a different flow and allocation regime when the CLWRP is reviewed in several years.

Summary of Ongoing Work

67. In summary, officers will continue with the following work:
- a. Advance the hydrodynamic modelling and PhD research project with Lincoln University and NIWA to provide scientific-based evidence for water quality mitigation measures.

- b. Commence trials in conjunction with suitably qualified independent experts, such as the ultrasound treatment trial.
- c. Undertake a feasibility and resilience assessment of the Ashburton River intake.
- d. Preparation of a Lake Hood development plan.
- e. Continue discussions with Environment Canterbury on water volume, with the intention of scoping up a resource consent application for a non-consumptive take.

Funding Options

- 68. Through the 2024/2025 Annual Plan, Council committed \$250,000 for water quality improvements at Lake Hood. To date, Council has spent some of this budget, including on the channel construction works, small improvements to the intake and expert advice (including the reports mentioned earlier). The remaining funding is proposed to be spent on the options discussed earlier in this report, with the likelihood that some of these remaining funds will be subject to a carryover request into the 2025/2026 Annual Plan.
- 69. It is evident that Council will need to spend significantly more money on Lake Hood than is currently budgeted. At a high level, Council's options to fund water quality options include the following immediate funding options:
 - a. Capital works can be loan funded, with the loan repaid through rates or reserves over time.
 - b. Reserve accounts, such as Reserves Contributions Reserve. This Reserve is anticipated to have a balance of \$6.93 million as at 1 July 2025⁸. The land at Lake Hood is not reserve land, as it is normal freehold land. The use of reserve contributions is however not limited to use on reserve land. Rather, Council's [Development and Financial Contributions Policy](#) (section 2.15) and Policy 9.3C of [Chapter 9](#) of the Ashburton District Plan set the framework for how reserve contributions can be used by Council. The Policy and District Plan explicitly limit the use of this Reserve account to the following purposes:
 - i. provision of new neighbourhood parks in areas where there are existing or potential deficiencies in the provision of local parks;
 - ii. development of neighbourhood and district parks to a level at which they are usable and enjoyable for children's play, general recreation and visual amenity; and

⁸ Draft Annual Plan 2025/26, page 125

- iii. provision and development of neighbourhood walking and cycling linkages.

Officers believe there is significant doubt as to whether the above Policy and District Plan wording extends to the Reserve Contribution Reserve being used to fund water quality mitigation measures at Lake Hood. Officers are not requesting that Council commit to any funding through this report and would recommend a review of whether this Reserve can be used to improve Lake Hood water quality before Council made any final decision on the use of this Reserve.

70. In addition to the above options, other long term funding options include:

- a. Operating or capital expenditure funded in a future Annual Plan through rates, such as through the urban beautification activity as per [Revenue and Financing Policy](#). This activity is funded 50% general rate and 50% Ashburton urban amenity rate (paid by urban Ashburton and Lake Hood residents). The Lake Hood cost centre, (which includes the current water quality budget and general lake management costs), is currently funded through this urban beautification activity.
- b. Reviewing how Lake Hood is funded and consulting with the public on options, such as through other mechanisms like recreational user charges, targeted rates or as a community infrastructure development contribution. It is anticipated that funding for Lake Hood will be reviewed as part of the wider review of Council's Revenue and Financing Policy for the Long-Term Plan 2027-2037.

Legal/policy implications

Open Spaces Strategy

- 71. Lake Hood is recognised in the [Open Spaces Strategy 2016-2026](#) as a significant recreational asset in our District which has potential for enhancement.
- 72. One of the Action Plan Priorities in the Open Spaces Strategies to achieve objectives 4.4⁹ and 4.9¹⁰ is to encourage opportunities to assist in the enhancement of Lake Hood, in particular, to enhance the recreational potential of the area. Lake Hood is one of the 'Special Projects' referred to in Appendix 5 of the Strategy.

⁹ Objective 4.4: Open spaces with scenic, heritage natural and cultural values are made as accessible as possible without comprising their biodiversity values - especially those areas along District waterways, the coast, and lakes.

¹⁰ Objective 4.9: Open space experiences across the district are enhanced through the investigation and implementation of special projects identified in Appendix 5.

Climate change

73. One of the goals of Council's [Climate Resilience Plan](#) is to ensure the sustainability of Council's assets for the present and future wellbeing of the Ashburton District.
74. The changing climate is predicted to result in increases to both extreme dry and wet conditions in the future¹¹. These changing conditions may affect both water quantity and water quality in Lake Hood. As Lake Hood is a significant Council asset, Council must ensure it effectively manages this asset to take into account the effects of climate change.

Strategic alignment

75. This report relates to Council's community outcomes of 'a district of great places and spaces' and 'a prosperous economy built on innovation, opportunity and high quality infrastructure' because Lake Hood is an important recreational asset for the District which must be managed effectively for the benefit of both residents, as well as the wider community.

Wellbeing		Reasons why the recommended outcome has an effect on this wellbeing
Economic	✓	Lake Hood is an important asset for the community, as the wider community benefits from recreational events held at the Lake, as well as residential development that occurs. Therefore, the district will benefit from a well-managed lake.
Environmental	✓	Good water quality is important for the environment including the Ashburton River downstream of where the lake discharge enters the river.
Cultural	✓	Any changes to river water takes and water quality in the river are of significant interest to Arowhenua.
Social	✓	If nothing is done about lake water quality, public health warnings on the lake are likely to be a frequent occurrence, meaning the lake will not be as freely available for recreational and social use.

¹¹ See page 4 of the Climate Resilience Plan

Financial implications

Requirement	Explanation
What is the cost?	As an information report, this does not commit Council to any cost.
Is there budget available in LTP / AP?	Officers are currently working within the 2024/2025 Annual Plan budget for Lake Hood water quality improvements.
Where is the funding coming from?	Cost centre 175 is funded as an urban beautification activity as per Revenue and Financing Policy . This activity is funded 50% general rate and 50% Ashburton urban amenity rate (paid by urban Ashburton and Lake Hood residents).
Are there any future budget implications?	Yes as projects are at varying stages of development and will require Council to commit to significant financial resource.
Reviewed by Finance	Erin Register; Finance Manager.

Significance and engagement assessment

Requirement	Explanation
Is the matter considered significant?	No
Level of significance	Medium
Rationale for selecting level of significance	This is an information only report but a matter of high community interest and impact, particularly to the Lake Hood community, regular lake users and event organisers.
Level of engagement selected	1. Inform – one-way communication
Rationale for selecting level of engagement	As this is an information only report, no wider community engagement is required at this point. Stakeholders were involved in the preparation of the T&T Report, and Council will continue to engage with affected parties as development of mitigation options progresses. Further, through regular hui with Aoraki Environment Consultancy, officers have been keeping Arowhenua updated with issues and options, as the impacts on the Ashburton River from any potential mitigation options are of particular interest to Arowhenua. Officers will further consult with AEC on proposed mitigation measures, once refined. In future, this may have high significance, and depending on options chosen to remediate, costs over time, funding approach and associated levels of service implications, some community engagement is highly likely to be required in the future.
Reviewed by Strategy & Policy	Mark Low; Strategy and Policy Manager



Lake Hood

Strategic Business Case

Prepared for
Ashburton District Council

Prepared by
Tonkin & Taylor Ltd

Date
December 2024

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Executive summary

Tonkin & Taylor Ltd (T+T) has been engaged by Ashburton District Council (ADC) to undertake a review on the ongoing management and operational practices of Lake Hood with the aims to help develop a future strategy for the Lake.

The purpose of this project has been to take a science-based approach whilst considering the drivers that contribute to the Lake condition and quality (lake health). The goal has been to determine the key tasks on how to effectively manage the Lake into the future. Engagement with stakeholders, chosen for their historical and existing connections with the Lake was a key component to developing this future strategy. This report summarises the stakeholder engagement process and the identified issues of Lake Hood. The resulting key activities ensure a science-based approach is used to inform future lake management.

In recent years, the water quality at Lake Hood has deteriorated and last year lake activities were prohibited due to the poor lake health as a result of a cyanobacteria outbreak. Lake Hood has a complex history associated with the resource consents and subsequent non-compliance issues with multiple consent conditions. These non-compliance issues are primarily associated with poor water quality. The tipping point for the Lake's health occurred in the summer of 2022/2023 when there was a cyanobacteria growth and algae bloom breakout. This resulted in Lake Hood needing to be closed for durations of the summer season, ceasing recreational activities. This cyanobacteria incident reoccurred in the summer of 2023/2024.

Interviews were carried out with 9 individual stakeholders to discuss their perceived issues with Lake Hood including how the issues have arisen, why they are important, their significance, and whether they are intrinsically related to other issues. This work led on to a workshop, held at ADC with the aims to:

- Share information obtained from the stakeholder engagements with all parties.
- Identify the scale of the management and operational issues required.
- Communicate the next steps in the management and operation of Lake Hood
- Discuss ADC aims for developing a future strategy for the next generations.
- Comment on non-compliant consents.
- Provide an awareness of current consent expiry dates and reconsenting timeline.
- Raise the opportunities available for future work within the existing consent framework.

Multiple issues with the operation and management of the Lake have been identified with many issues having developed and been ongoing since the Lake creation and the early years of operation. The main issues are grouped into themes; surface waters (Hakatere/Ashburton River and Carters Creek), groundwater, structures (inlet and outlet), lake and canals with the main overarching issue of lake health (water quality) the biggest concern. Many of the issues are intrinsically linked to other issues resulting in a complex system to manage.

Discussion on the resource consents held for the Lake is also featured at the workshop with most consents expiring in July 2031 and an acknowledgement that the current consents provide for a large amount of flexibility in the operations and current developments.

Both issues and proposed solutions have been plotted on a matrix which balances the perceived effects against the complexity of the issue and solution. Most of the broad issues and solutions fall within the high complexity and effect quadrant and many are intrinsically linked with other issues, all leading toward the Lake health.

Solutions are proposed with a focus on a stepped approach commencing with obtaining scientific evidence-based research to re-design and construction activities. The broad solution themes are tabulated as a programme of works. The purpose of this programme is to identify which activities can be implemented immediately, those activities that are reliant on others, and any precursor activities. The programme identifies activities that are “quick wins”. An indicative budget is provided for the programme which is spread over the next five (financial) years, extending out to June 2029. Depending on the work item, some activities and steps may take many years before progressing, therefore, all works identified, particularly in this year should be initiated as soon as possible to ensure the project programme is maintained on track.

The indicative budget of the proposed solutions for Year 1 exceeds ADC’s anticipated budget. Therefore, refinement and prioritisation of activities needs to be undertaken. As a starting point, we recommend the top three priorities are:

- Develop initial future vision for Lake Hood (FLM 1.1).
- Feasibility assessment/ resilience assessment for improved river inlet & intake both improved existing & alternative (WV 2.1).
- Feasibility assessment for improved lake outlet to existing and potential alternative second outlet (WV 3.1).

The outcomes of this strategic report are intended to contribute to the ADC future Lake Hood Strategic Plan to support the Lake’s health. This report has been developed to help inform ADC of the funding requirements (CAPEX and OPEX) to effectively manage and operate the Lake over the next five years and beyond to enable a resilient intergenerational facility.

1 Introduction

Tonkin & Taylor Ltd (T+T) has been engaged by Ashburton District Council (ADC) to undertake a review on the ongoing management and operational practices of Lake Hood (also, referred to as “the Lake”) at Huntingdon. The project aims were to help develop a future strategy, identify key issues associated with Lake Hood to allow ADC to make informed decisions on future work tasks and expenditure. This report provides the findings of our review, detailed stakeholder engagement, and workshop discussions.

This report has been completed in accordance with our letter of engagement dated 10 September 2024.

1.1 Purpose

“This year Lake Hood is 23 years old. ADC need to ensure Lake Hood is a desirable and resilient destination in 2050 as an intergenerational community asset for all”

The purpose of this project is to take a science-based approach whilst considering the drivers that contribute to the Lake condition and quality (lake health). A further goal is to determine the key tasks on how to effectively manage the Lake into the future.

In recent years, the water quality at Lake Hood has deteriorated and in 2023 lake activities were prohibited due to the poor lake health as a result of a cyanobacteria outbreak. ADC know that there are many issues, both associated with management and operational practices at Lake Hood that need attention and need to be changed. A large number of these issues stem from historical events or activities which have persisted over more than a decade. There are work items, many of them as sizable individual projects, that are under performing and can be improved which are likely to lead to better Lake health outcomes.

This strategic report focuses on the management and operational tasks for the next five years which have been categorised into activity themes and assigned indicative cost estimates where possible. This report summarises the stakeholder engagement process and the identified issues of Lake Hood. The resulting key activities ensure a science-based approach is used to inform future lake management. The outcomes of this strategic report are intended to contribute to the ADC future Lake Hood Strategic Plan to support the Lake’s health. This report has been developed to help inform ADC of the funding requirements (CAPEX and OPEX) to effectively manage and operate the Lake over the next five years and beyond.

1.2 Background and key milestones of Lake Hood

Lake Hood was completed at the end of 2001 and officially opened in 2002 after over a decade of concept planning, design, consenting and construction. The Lake was excavated into the Canterbury Plains gravels to create a community lake, and the extracted gravel was used to help fund the lake development. Water is taken from the Hakatere/Ashburton River at an inlet approximately 800 m from the northern end of the Lake with water discharged back into the river down gradient of the Lake.

The operation of Lake Hood has been under the management of the Joint Venture and Ashburton Aquatic Park Charitable Trust (AAPCT) in previous years. They contracted the operational and management work to Ashburton Contracting Limited (ACL). In 2012, ADC became the Lake owners whilst most of the operations and management remained the same as previously. In recent years, ADC have taken a more active role to understand the management and operational processes.

Lake Hood has a complex history associated with the resource consents and subsequent non-compliance issues with multiple consent conditions. These non-compliance issues are primarily

associated with poor water quality. The tipping point for the Lake's health occurred in the summer of 2022/2023 when there was a cyanobacteria growth and algae bloom breakout. This resulted in Lake Hood needing to be closed for durations of the summer season, ceasing recreational activities. This cyanobacteria incident reoccurred in the summer of 2023/2024.

All resource consents are held by the Lake Extension Trust Ltd, although it is understood that this is represented by the Joint Venture and Lake Hood Extension Project (LHEP). These consents are currently in the process of being transferred to ADC once non-compliance issues have been remedied.

1.3 Importance of Lake Hood

Lake Hood is an important recreational feature and asset to the Ashburton District, providing many benefits for the community (social and wellbeing), natural environment, local economy and built environment (Table 1.1). It is essential that this ADC asset is maintained and enhanced so that the benefits can grow, and future generations can continue to enjoy the unique environment at Lake Hood.

Table 1.1: Benefits of Lake Hood for the Ashburton District

Outcome areas	Benefits	Details
Natural environment	Biodiversity	<ul style="list-style-type: none"> Improvement of the existing environment. Provide habitats for various species of flora, fauna, and aquatic life.
Social	Wellbeing	<ul style="list-style-type: none"> Encourages fitness with walking and cycling paths around the Lake. Blue and green spaces.
	Community connectedness	<ul style="list-style-type: none"> Recreational sports including water skiing, jet skiing, sailing, rowing, kayaking, and swimming. Picnic areas, BBQ equipment, boat ramp. Family friendly, with a local bus route.
Economic	Local revenue	<ul style="list-style-type: none"> Local events encourage local spending at restaurants, cafes, etc.
	District revenue	<ul style="list-style-type: none"> Wider events such as other aquatic sports and land-based activities not yet established to bring people from outside of the District, resulting in district-wide spending for accommodation, transport, supermarkets, and local shopping.
	Local tourism	<ul style="list-style-type: none"> The district can use Lake Hood as a tourist attraction, especially with increased marketing.
Built environment	Subdivision development	<ul style="list-style-type: none"> Real estate, with lake views having higher market prices. Residential development. Commercial development. Developers such as Joint Venture. Construction companies.

2 Engagement

Engagement with stakeholders was a key component to developing this future strategy. The goal of the engagement was to gain an initial understanding from each stakeholder of the perceived and real issues with operational and/or management practices at Lake Hood. The stakeholders were selected based on their historical and existing connections with the Lake through either and/or a combination of association with the design, construction, environment, management and operational processes. They were able share different experiences of Lake Hood based on their previous involvement and area of expertise. All stakeholders have an invested and passionate interest either through the management, operations, and/or residential living.

The stakeholders were engaged through two main processes: individual 1-hour interviews and a collaborative 2-hour workshop. These engagement methods are further outlined below.

Stakeholders from the following organisations shared their knowledge and experiences:

- 1 Environment Canterbury (ECan).
- 2 Ashburton Contracting Limited (ACL).
- 3 Joint Venture (JV).
- 4 Ashburton Aquatic Park Charitable Trust (AAPCT).
- 5 Lake Hood Residence Association.
- 6 Fox & Associates.
- 7 McCracken Consulting Ltd.

Discussions were also held with ADC; Neil McCann and Tania Paddock.

The information gathered from the engagement was used to create a preliminary list of priority issues and solutions to inform the future operations and management of Lake Hood.

2.1 Stakeholder engagement

Interviews were carried out with 9 individual stakeholders over a 3-week period between the 2 – 24 October 2024. The meetings were 1-hour long, either held virtually on MS Teams or in person at the Tonkin + Taylor Christchurch office, depending on the stakeholder preference. The only organisation whose views and knowledge were not captured during this phase of work was from the Lake Hood Residence Association.

The interviews were individual-based rather than group-based to ensure all knowledge and experience was captured without imposed-bias from others and so each party felt that they were listened to. Through these discussions on Lake Hood, we explored what the issues are, how the issues have arisen, why the issues are important, their significance, and whether they are intrinsically related to other issues. Given the wealth of history and knowledge from most of the stakeholders, many of the issues raised could be counter balanced with a potential solution offered by the stakeholder. These discussions helped inform and develop the creation of the initial list of priority issues and solutions which are summarised in Sections 3 and 4.

2.2 Workshop

A 2-hour workshop was held on 14 November 2024 in person at ADC offices. Five stakeholder groups were represented and actively participated in the workshop.

The purpose of the workshop was to collaborate with the stakeholders, sharing the information gained during the engagement process and providing a consolidated list of the issues and solutions raised during these discussions.

The aims of the workshop were to inform ADC and the stakeholder groups and:

- Share the summarised information obtained from the stakeholder engagements with all parties.
- Identify the scale of the management and operational issues required.
- Communicate the next steps in the management and operation of Lake Hood, including the ADC aim in developing a future strategy and involving the next generation and future users of the Lake in discussions.
- Provide an overview of the non-compliant consents.
- Raise the awareness of when the existing consents expire, the opportunities available, and the consenting timeline of the renewal process.

The workshop slides that provide an overview of the problems and solutions have been used in Sections 3 and 4.

3 Lake Hood issues

3.1 Overview

There are multiple issues with the operation and management of the Lake. Many issues have developed and been ongoing since the Lake creation and the early years of operation. For example, the ability to take and consistently use the full consented water volume take. Other issues have arisen in recent years, such as the cyanobacteria outbreak, although this issue is intrinsically linked to other issues. The main issues raised by the stakeholders are presented in Figure 3.1. These issues are summarised below:

- Surface waters; Ashburton River and Carters Creek.
- Groundwater.
- Structures; Inlet and outlet.
- Lake and canals.

Many issues have common themes as identified in Table 3.1. Each theme is colour coded throughout this report so that they can be easily identified and referenced throughout the Strategy. Each theme is further explained in the following sub-sections.

Table 3.1: Themes of Lake Hood

Theme		
1	Water quality (WQ)	
2	Water volume (WV)	
3	Lake circulation (LC)	
4	Flood hazard (FH)	
5	Future lake management (FLM)	

Note: The acronyms above are used in the proposed programme of works in Table 5.1 and Appendix A.

It is apparent that although the issues of Lake Hood can be grouped into themes, they are complex, multifaceted and interrelated. The interconnectedness in the diagram shown in (Figure 3.2), where there are multiple contributors to the main issues. Overall, the stakeholder engagement revealed that problems with the Lake health are the biggest issue.

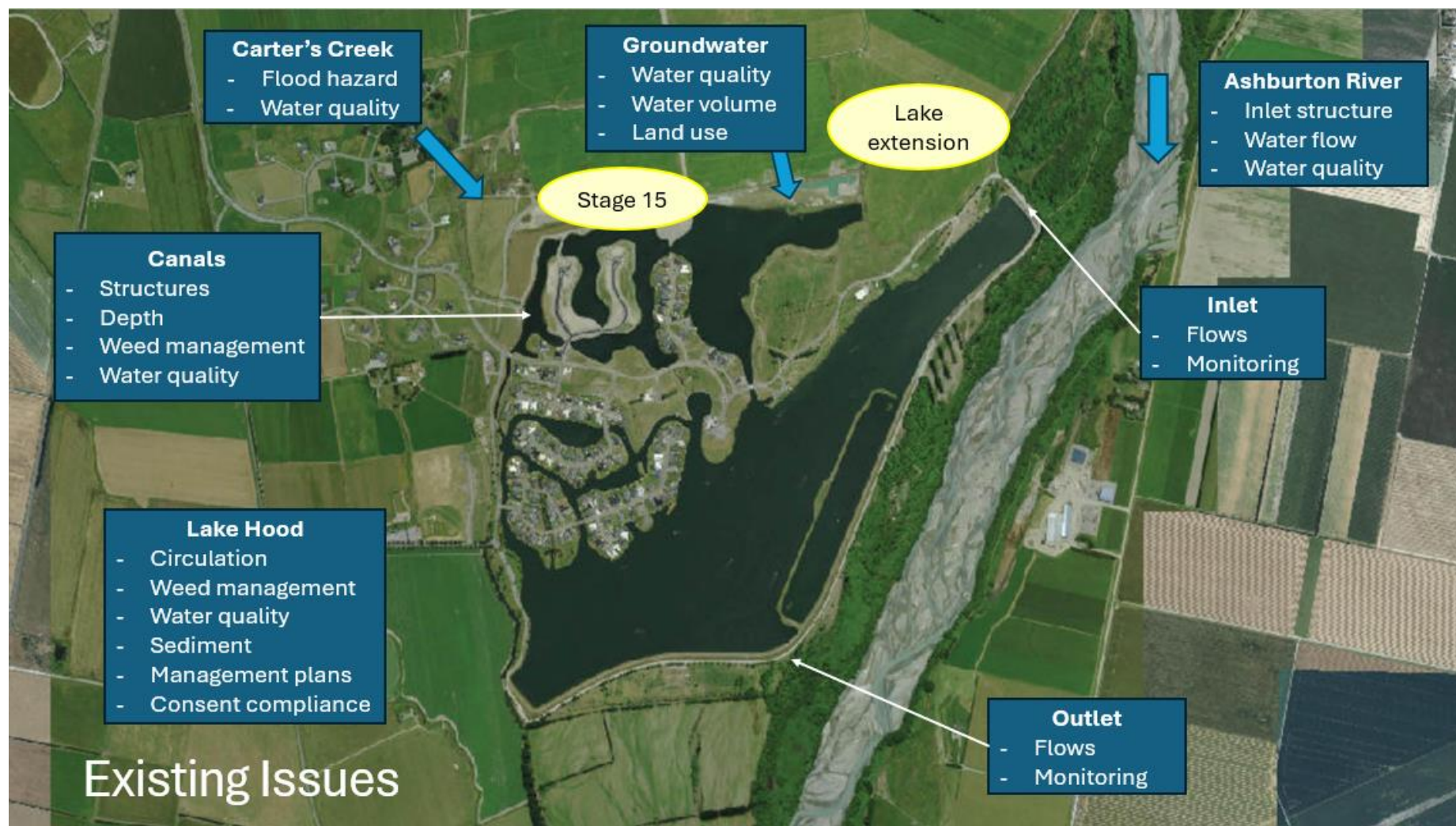


Figure 3.1: Existing issues identified for Lake Hood through the stakeholder engagement.

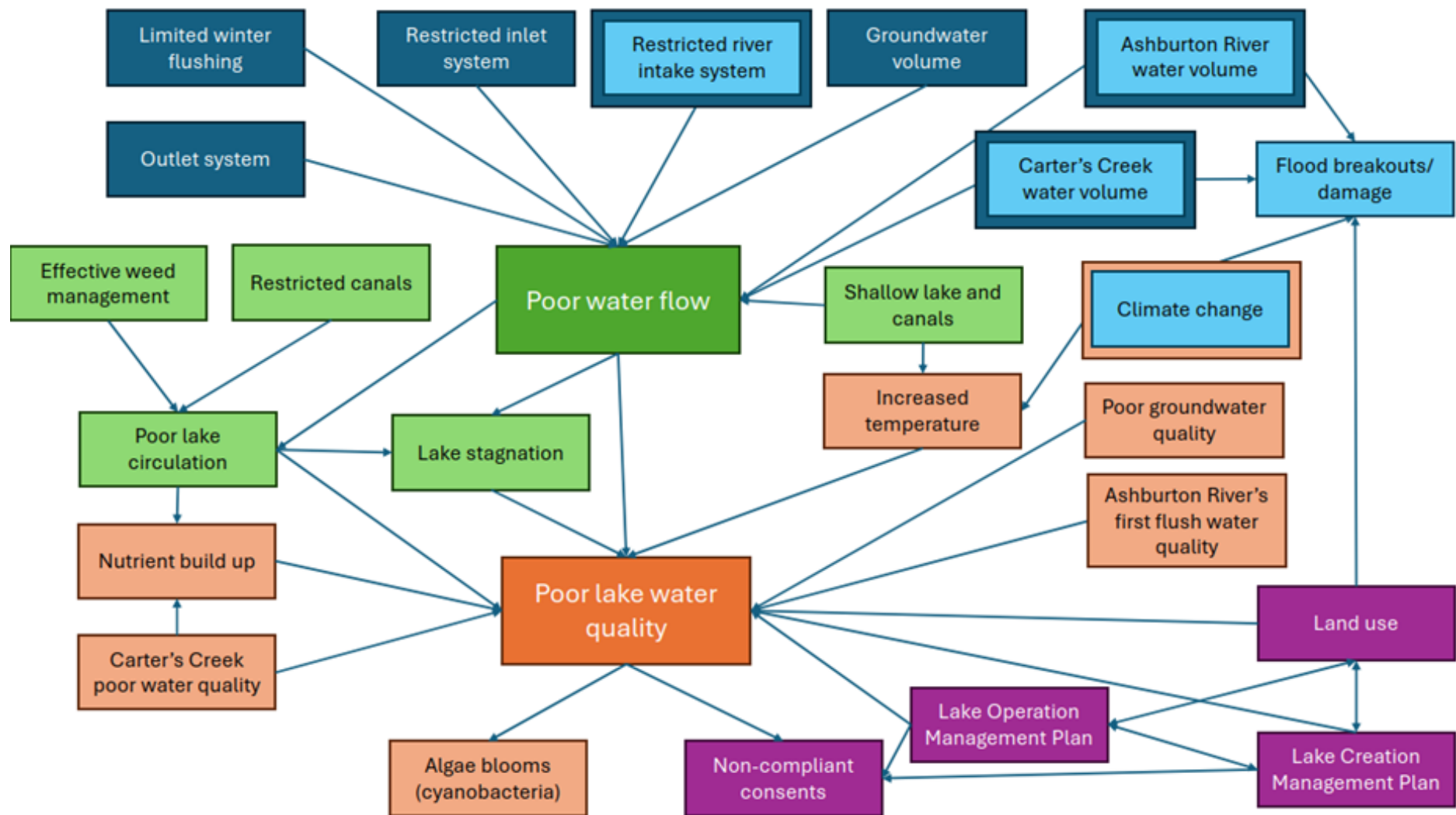


Figure 3.2: Spider diagram of Lake Hood problems, showing their complexities and relationship. Orange: water quality, dark blue: water volume, light blue: flood hazard, green: lake circulation, purple: future lake management.

There are numerous reports, investigations, and research items that have been completed over the years at varying scales and detail to investigate the sources of some of the issues described below. A review of these reports is beyond the scope of this strategy document and is recommended to be undertaken by ADC, if not already completed. Each theme is described at a high level to identify the likely required actions and to assess the potential costs associated with each solution and/or sequence of actions. Most of these issues require further scientific evidence to determine the best possible or most effective solution.

3.2 Water quality

Poor water quality is the imbalance of nutrients and suspended sediments in the Lake water. Elevated concentrations of nutrients are considered to be derived from various water sources as inflows into the lake. Sediments are transported into Lake Hood from river inflows and accumulate on the Lake floor, these are disturbed during various water-based recreational activities due to the shallow depth of the Lake. Lake Hood has a significant amount of weed growth in the lake. This is part is managed by Grass Carp, although the nutrients and sediments remain an issue, and they accumulate and become locked in the Lake floor sediments.

The Hakatere/Ashburton River and groundwater are the key water sources for Lake Hood. It is understood that the river water quality has changed over the life of Lake Hood. For example, wastewater discharges from ADC wastewater treatment plant (WWTP) no longer discharge to the river upstream of the inlet and the resulting water quality has improved.

Poor water quality and elevated nutrients have resulted in the recent summer algal blooms such as cyanobacteria blooms. These blooms have occurred due to a combination of factors such as the shallow depth of the Lake and canals, increased lake temperature, poor lake circulation, nutrient build up, and increased pH.

3.2.1 Surface water contributions

The Hakatere/Ashburton River water is perceived to have a better water quality than groundwater inflows. However, during storm events increased suspended sediment loading and high turbidity of the river flows occur, often identified as “first flush” where sediment within the catchment is washed overland and into the river during the initial stages of the rainfall event. During this time, a higher concentration of pollutants may be entrained in the water associated with runoff. Due to the way the resource consent is structured as part of the consent conditions, the increased water take during the first 24 hrs of any increase in river flows is often avoided. However, post-24 hrs of the storm event, surface water can be taken and water with increased sediment loads have been released into the Lake.

By comparison, contributions of flow into the Lake from Carter’s Creek are very small. This Creek has been identified as a key contributor to poor lake health by all stakeholders. The water quality in Carter’s Creek is reported to have elevated levels of phosphorus and *E. Coli*. Some contaminant sources are believed to be from historical point source discharges from old wastewater infrastructure and septic tanks. Other ongoing sources are a result of livestock having direct access to the Creek which results in elevated nutrient and sediment loading. Carter’s Creek catchment extends north to include and extend beyond Tinwald. This surface water is a spring-fed ephemeral creek, which flows for approximately half of the year. It is understood that overland flows are the largest contributor to stream flows during and after storm events, subject to rainfall amounts. High levels of nutrients are entrained in the stormwater and overland flows which contributes to the overall poor water quality. Carter’s Creek has a history of flooding (further explained in Section 3.5) which also results in increased sediment loading and high turbidity.

3.2.2 Groundwater contributions

Groundwater inflows occur to the northern part of the Lake. Groundwater quality is reported to be poor, primarily associated with elevated nitrates from intensive farming adjacent to and up-gradient of Lake Hood. This causes excess nitrate and microbial contaminants to infiltrate through the soil layers (vadose zone) and into the shallow groundwater. There is limited groundwater monitoring data and further research is required to understand the significance of the groundwater contribution on the Lake water quality.

3.3 Water volume

The water volume is the balance of water coming in and going out of the Lake to ensure there is consistent and constant water flow and turnover.

Surface water is the is a key contributor to the lake's water volume, which is measured at the inlet with volumes limited by flows in the Hakatere/ Ashburton River and by the relevant consent conditions. Groundwater contributions also support the Lake volumes, but these volumes are not measured. Therefore, the groundwater volumes contribution to support the Lake volume and flows is not known.

Winter flushing is a strategy used to help water turnover, and this is considered to be a key activity for mitigating algal and cyanobacteria blooms. To allow for winter flushing, water levels in the Lake need to be lowered for large water volumes to replenish the Lake. In previous winters, the Lake has not been lowered sufficiently due to the difficulty in predicting whether the river volumes will be adequate to replenish the Lake between the winter and summer. The lack of winter flushing means the nutrient-rich lake water is not being diluted and flushed by the cleaner surface water. Therefore, the risk of cyanobacteria bloom growth in the summer months is increased.

3.3.1 Inlet system

A key concern is the ability to obtain sufficient water volumes from the Hakatere/ Ashburton River due to the limited river flow volumes and the resource consent minimum flow conditions. This is particularly restricted during the summer months where low flows are prevalent. The consented take of surface water for Lake Hood is on a sliding scale and up to 2.5 cubic metres per second (cumecs). This leads to challenges in the management of water volumes and in maintaining consistent through flows, particularly when additional flows are needed. In addition, the current design of the river intake system means that inflow volumes into the Lake are restricted, and this appears to limit the volume of water that can be taken at one time.

The Hakatere/ Ashburton River is a braided and dynamic system, and the location of the river inlet is vulnerable to the migration of the braided channels and frequent damage from high flows and flood events of the Hakatere/ Ashburton River. The intake system is also vulnerable to high river flow, such as in the 2021 flood event where there was significant damage. To repair the inlet, machinery is used to dig out the accumulated gravel in the river and redirect part of the river flow to the inlet. The cost of this activity is increasing annually as are the number of storm events damaging the inlet structure. Whilst this is currently a consented activity, this method of repair works will likely may not be renewed in the 2031 consent renewal.

3.3.2 Outlet system

Issues with the outlet system were raised by the stakeholders, particularly associated with the volumes of discharge. Flow volumes are uncertain due to the complexity of measuring flows under turbulent flow conditions. However, it is understood that there have never been issues where the outflow volumes have not been able to be managed. Losses of lake volumes by evaporation are relatively large at the peak of summer during a 'nor wester'. Therefore, the Lake can operate with

inflows being greater than outflows. On occasions, overtopping of the Lake occurs at the spillway, but this occurs as a result of wind effects rather than the overfilling of the Lake.

Discussions also included comments regarding the proposed second outlet which has been investigated previously by T+T with a suggested location at the southern end of the canals on the western side of Lake Hood. The introduction of the Building (Dam Safety) Regulations 2022 means any work within the lake banks would require rigorous controls and construction works would likely be challenging.

3.4 Lake circulation

Lake circulation is critical for the Lake health with the movement of lake water predominantly driven by wind. It is also driven from lake throughflow which has been assessed to occur directly between the point of intake and outlet.

Lake Hood is shallow with depths typically at 2.5 to 3 m, and at a maximum of 6 m depth at the outlet. Lake depth and temperature differences are not the major drivers of lake circulation at Lake Hood, primarily due to the very shallow nature of the lake.

Since the Lake circulation is dominated by wind, it has been identified that is important to allow space for the wind to funnel and interact with the Lake. In places, the canals have been excavated at a shallower depth than the main lake and in some areas at shallower depths within the wider canal system. It is understood that this further restricts lake flows and impacts on the potential circulation resulting in:

- The shallow depth of the canals allows for the water body to become warmer than the lake.
- An increased water temperature supports a potential growth of cyanobacteria and algae blooms.

Originally, the proposed design of the canal structures between the promontories were bridges so that the canal width was maintained and to facilitate increased water conveyance. However, box culverts have been installed in place of bridges and these have restricted lake circulation within the canals.

Weed overgrowth can inhibit the circulation of water. Grass carp are used to manage weed growth initially. A recent purchase of a weed harvester will help to further reduce weed overgrowth. Whilst some weed species are known to be pests, other species are beneficial for lake health, as well as providing habitat for Grass carp and other fish species. The balance of weed growth is not currently well documented and the potential impact on lake circulation requires further investigation.

3.5 Flood hazard

The potential for flood hazard occurs when river or surface floodwater interacts with people and assets. Carter's Creek and the Hakatere/ Ashburton River are the two main sources of flooding that may affect Lake Hood.

The Hakatere/ Ashburton River flows immediately north and east of Lake Hood, presenting a flood hazard. Flood hazard and management measures are already implemented, associated with a flood protection bund to the north of the existing residential area. However, the Hakatere/ Ashburton River poses further flood hazards for Lake Hood as:

- Direct flood damage to the river inlet and intake systems.
- Flood Breakout further upstream, i.e. above the current river inlet, where flooding may reach the Lake by flowing overland damaging farmland and properties.

Carter's Creek enters Lake Hood in the western canals. Carter's Creek has a known flood history, with a recent event in 2021 resulting in a flood breakout which washed out some of the Creek's banks. Historical flooding between 2014 and 2016 has resulted in several breakouts within the Creek channel further upstream, resulting in farmland and terraces becoming flood damaged. These had direct impacts on the Lake associated with water quality as sediment loading increased.

Some mitigation works have already been undertaken, with future work planned between 2024-2034 to investigate and construct overland flow stormwater diversions.

3.6 Future lake management

Future lake management refers to the management and operation practices at Lake Hood, and further development of Lake Hood to ensure a sustainable, operational future. The future of Lake Hood is dependent on current and future community expectations, utilisation, land use, and development. Community expectations for the future Lake development are vital and need to be included into a broader management and operational strategy to ensure Lake Hood has a prosperous and sustainable future.

The Lake Creation Management Plan (LCMP) and Lake Operation Management Plan (LOMP) are the key documents used to support the management and development of Lake Hood. Descriptions of the management plans are provided below:

- The LCMP *"guides the Lake excavation, materials management and materials removal for the expanding lake, and to set out the environmental management activities to ensure compliance with contractual requirements, resource consent conditions, standards in the APZ and the LHEP JV's environmental objectives"*¹.
- The LOMP *"guides the operational management of the Lake in accordance with the discharge permit granted by Environment Canterbury and requires that suitable actions are taken to maintain, enhance, and protect the water quality of the Lake and enhance the wider lake environment. The plan will also help identify solutions and deal with future issues as they arise"*².

These Plans are required as part of the consent conditions with bi-annual review requirements. These plans are currently in draft issue with 2024 updates, having not been updated since 2021. There could be further outstanding issues to be addressed, such as the management of cyanobacteria outbreaks. If water quality issues at Lake Hood are not addressed, this has direct implications on the Lake use and the surrounding land-based activities.

3.6.1 Consenting

Originally, there were 32 resource consents for Lake Hood. Based on consent compliance summaries from ECan, there are now 25 resource consents, of which:

- 12 are compliant.
- 10 are non-compliant and action is required.
- 2 require further compliance review.
- 1 is non-operational.

The 25 consents relate to specific activities associated with operations and management of the Lake and are currently held in name by Lake Extension Trust Ltd. Many consents are complex and have a history of non-compliances since commencement of the consent. It is anticipated that some non-

¹ LHEP JV (November 2024) Lake Creation Management Plan (Draft V4).

² LHEP JV (November 2024) Lake Operation Management Plan (Draft V4).

compliance issues may not be achieved within the expected timeframes posed to the JV and LHEP for handover of these consents to ADC. Many consent non-compliances are intrinsically related to the Lake health and as shown in Figure 3.2, these are multi-layered issues to address.

The consent expiry date for 23 consents is July 2031 with two consents expiring in 2037. Therefore, there is six years remaining for most consents, and consent renewal is required before this period ends. Due to the age of the consents, many consents have broad consent conditions that are less constrained and restrictive than if they were granted today, meaning the consent conditions will likely change.

3.7 Summary of issues

All broad issues discussed have been plotted on a quadrant chart (matrix) which balances the perceived effects against the complexity of the issue based on the current understanding (Figure 3.3). Descriptors of “x” and “y” axes have been selected based on accommodating the broad range of issues. The scale of increasing effect and complexity increases along the axes with the top right quadrant being those broad issues considered to have high complexity and high effect on Lake Hood. The degree of complexity has been selected because it is recognised that most issues raised by the stakeholders are intrinsically linked with other issues, all leading toward the Lake health. It is beneficial to understand which issues have high complexity and effect to allow further ranking of the possible solutions (described in Section 4). Each issue has been grouped into themes, as identified in Table 3.1 with coloured numbered circles representing individual issues listed beneath each theme.

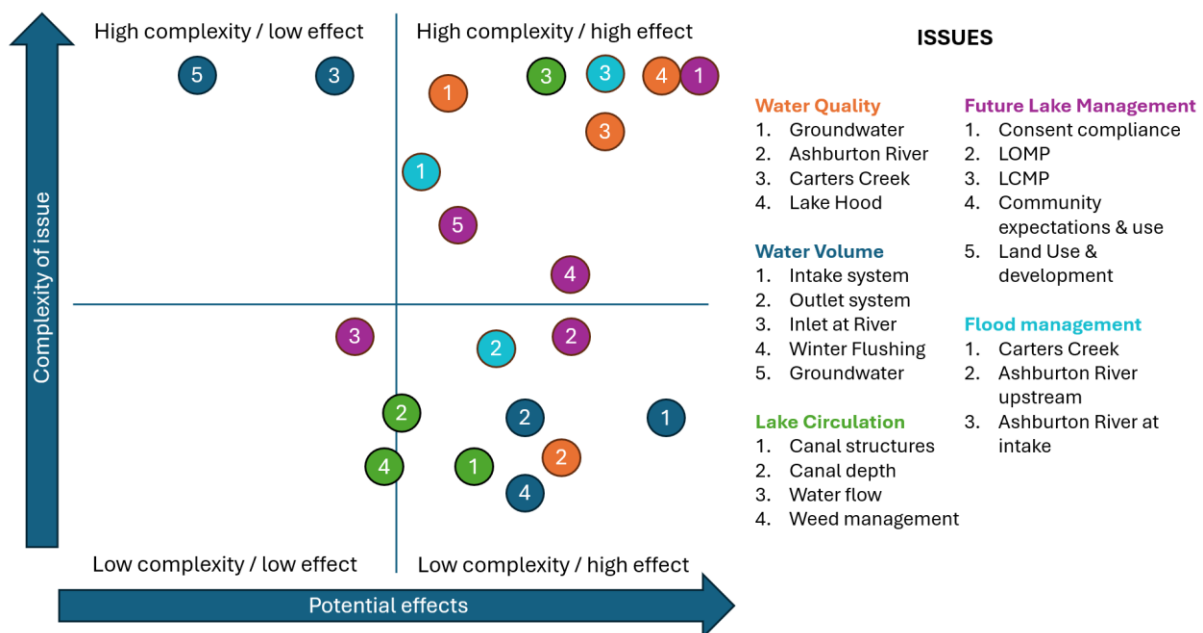


Figure 3.3: Potential effects and complexity matrix for broad issues at Lake Hood based on stakeholder engagement.

The results shown on the matrix were shared at the workshop with the opportunity given to alter the positions and ranking of each item. Most issues raised are considered to be high effect ranging in low to high complexity i.e. the right side of the chart. The grouping of the issues was considered individually although in reality many issues would need to be approached together, for example, “Inlet at River” and “Intake System”.

4 Potential solutions

The stakeholder engagement and previous experience held by T+T with Lake Hood's creation and operation have allowed for potential solutions to be offered to help resolve many issues at Lake Hood, specifically related to water quality. These solutions range from undertaking scientific evidence-based research to re-design and construction activities. This section outlines these solutions and feeds into the proposed budget and programme for applying these potential solutions in Section 5. The main solutions proposed by the stakeholders are presented in Figure 4.1.

The solutions provided include an indication of the relative ease of implementation and whether they are linked to other activities. Most of the solutions provided commence with data gathering to support scientific research that will be used to validate the issue and to target the proposed solution. The solutions are not extensive and provide a high-level overview. There are many steps in the solutions that have not been provided. It is considered that each solution would comprise the following steps:

- Research and review.
- Fieldwork and data collection.
- Preliminary design.
- Testing/field trials and review.
- Detailed design.
- Resource consenting.
- Tender and contract.
- Construction.
- Long-term monitoring and evaluation.

Depending on the work item, some steps may take many years before progressing.

Indicative programming of the implementation of each solution is provided to give a perspective on the suitable time to commence the work (Table 5.1 and Appendix A). The duration for each solution is extremely variable, and not all tasks will be achievable within the programme timeframes provided.



Figure 4.1: Potential solutions identified for Lake Hood's issues through the stakeholder engagement.

4.1 Water quality

4.1.1 Groundwater

Groundwater quality is a key issue raised by the stakeholders. There is limited evidence for whether the existing groundwater quality is a perceived or actual issue due to the limited groundwater quality monitoring. Therefore, a suggested solution is to **install additional groundwater monitoring wells** to monitor the groundwater levels and water chemistry to provide the necessary field data to assess the potential contaminant loading and nutrient concentrations discharging into the Lake.

Groundwater monitoring, wind speed and direction should be expected to be undertaken for the life of Lake Hood, to gain long-term information on the shallow groundwater system including details on the groundwater quality. Examples of how this information on groundwater quality can later be used include (but not limited to):

- Provide evidence that there is a significant issue associated with groundwater discharges in terms of water quality.
- Identify potential contaminant sources to the groundwater.
- Consider possible remedial and/or mitigation options to treat groundwater.
- Inform the design of potential future lake extensions e.g. whether groundwater inflows are included or excluded.
- Contribute and support technical reports for the future resource consent renewals due in 2031.

This solution is a **“quick win”** with relative low costs and ease of implementation. From a programming perspective, this could be implemented within the remainder of the current financial year (June 2024 – 2025). The findings will allow ADC to take appropriate actions and to build up a dataset to support future resource consent renewals or consent variations.

Based on our current understanding, one solution to improve water quality could be to **alter or change the land use upgradient** of Lake Hood. The current land use within ADC land is dairy farming/livestock grazing. It is inferred that livestock effluent is leaching into the groundwater and consequently, flowing into the lake. Groundwater quality monitoring will allow a more detailed understanding of how the local land use could be impacting on the groundwater quality. This could inform a review of the current upgradient land use or activities. This work item could be considered as feasible to achieve within 3-5 years (June 2026 - 2029).

A more detailed action could be to construct a **groundwater treatment system** upgradient of Lake Hood. This solution is reliant on whether the groundwater quality data concludes that groundwater needs to be treated before entering the Lake. Options for consideration may include, but are not limited to, additional smaller treatment lakes or a wetland system.

4.1.2 Carter’s Creek

Carter’s Creek is identified as a key contributor to poor lake health by all stakeholders and is therefore an important problem to tackle early. However, there is limited scientific evidence for whether Carter’s Creek water quality is a perceived or actual problem. **ECan has the responsibility for the regulation of waterways/surface waters.** Management of the Creek is beyond the jurisdiction of ADC. Therefore, ADC should drive change to promote ECan to develop a long-term monitoring programme for assessing Carter’s Creek water quality within the current financial year (June 2024 – 2025). A monitoring programme may include water volume, water chemistry, sediment loading, and nutrients so ECan can gain a better understanding on the condition of Carter’s Creek. This will allow ADC to understand if the Creek is a significant contributor to the Lake’s water quality.

Alongside development, the implementation of the monitoring programme could occur in the next financial year, June 2025 – 2026, with the intention to undertake monitoring into future years. The data will be used to support other science-based assessments identified in the proposed programme of works, and to support resource consent renewals and/or consent variations. If monitoring is not undertaken, the water quality issues with Carter’s Creek will remain perceived and there will be no evidence for how it impacts and contributes to Lake Hood’s health.

Alongside this science-based approach, ADC should promote ECan to enforce regulation and fence off Carter’s Creek to mitigate livestock entering the waterway. When livestock enters waterways, they can directly pollute the streams and hence the receiving environment, being Lake Hood. This is through disturbance of the channel bed and banks, and faecal bacteria. Fencing off Carter’s Creek from livestock is considered a **“quick win”** as it is neither time or cost dependent to ADC. It is suggested ECan should be encouraged to undertake this activity in the next financial year.

4.1.3 Other water quality solutions

Another **“quick win”** is to **review both the NIWA report³ and LHEP Water Quality Task Force Management Plan⁴ relating to cyanobacteria blooms**. Both reports provide views and recommendations on strategies to improve water quality and advancing this work would help understand the issues and potential solutions available. It would be most beneficial to complete a review early in the programme (June 2024 – 2025), so an implementation plan can be developed for the following years and to reduce the risks of future algal and cyanobacteria blooms. This is a **“quick win”** because the reports are available and no precursor activities are needed.

4.2 Water volume

Surface water inflows from the Hakatere/ Ashburton River is the key water source for Lake Hood with flows from Carter’s Creek and groundwater being a smaller contribution. Currently, the only measurement of inflows is at the river intake with water from Hakatere/ Ashburton River. Other inflows, although considered to be minor volumes in comparison to the Hakatere/ Ashburton River, are not well understood. Therefore, systems for monitoring the balance of inflows and outflows do not exist resulting in minimal evidence for how each water inflow impacts Lake Hood’s health.

4.2.1 Groundwater inflows

Groundwater inflows are difficult to quantify. Groundwater models can be created to support assessments of groundwater volumes; however, such an approach may not be warranted at this initial stage in the strategy. Gaining an **understanding of shallow groundwater levels** adjacent to the Lake would be more beneficial. This is likely to provide additional information to support resource consent renewals and/or any consent variations that may be sought. Groundwater levels can be measured electronically at monitoring wells. The monitoring can support other existing data to understand long-term patterns and seasonal trends in groundwater levels. The initial monitoring network may be small, but could be built up over an extended period where sufficient data can become available to estimate hydraulic gradients and flow volumes. This solution is deemed a **“quick win”** and is further detailed in the earlier Section 4.1.1.

4.2.2 River Intake

A critical function of balancing the water volume in Lake Hood, is the **river intake system**. As described in Section 3.3, the intake structure has issues with operating on a regular basis and the

³ NIWA (April 2024) Data analysis and literature review to inform Lake Hood water management.

⁴ McCracken, L. & West, D. (7 May 2024) Management Plan for control of cyanobacteria blooms. Prepared for LHEP Water Quality Task Force.

inlet at the river is vulnerable to extensive damage during flood events. Therefore, short term and long-term solutions are necessary in order to support the function of the intake.

Undertaking a **feasibility and resilience assessment** is essential to assess the operations at the river inlet and intake. This report should assess the benefits of improving the existing structures and considerations of alternative designs and/or locations. This should also include, but not limited to:

- **Review the river intake gate** that has recently been upgraded and installed.
- Further **monitor and review the performance of the river intake system** and structure to determine what additional operational issues may exist or occur in the future.
- **Review the ECan telemetry monitoring system** for the inlet of the Hakatere/ Ashburton River to understand the missed opportunities for increasing inflow volumes.

Once the feasibility and resilience assessment is complete, a **detailed assessment of selected options** should be assessed. The desired option can later be designed to provide a resilient intake system that meets the future needs and intentions of Lake Hood, as outlined in the future vision for Lake Hood (Section 4.5.1).

It is expected that this solution will put considerable financial constraints on ADC but this is likely to be a critical step in building a resilient intake system. This work item could be considered as feasible within the next years providing it is commenced in Year 1 (June 2024 - 2029).

4.2.3 Lake Outlet

Water inflows to the Lake need to be balanced with water outflows either through direct outflows returning to Hakatere/ Ashburton River or indirect losses via evaporation. As described in Section 3.2.2, the outlet has some operational issues, but overall, the direct discharges appear to be managed. However, if lake flows were increased, this could result in an imbalance of flows and an increase in discharges could be required.

Commissioning a **feasibility and resilience assessment** is essential to assess the operations, future improvements and/or consideration of an alternative second lake outlet. This report should assess the benefits of improving the existing structure (as listed below), including, but not limited to:

- Consideration of the future needs and development of the Lake as proposed in the future vision for Lake Hood to determine the required discharge volumes.
- Inclusion of recommendations made elsewhere relating to lake circulation improvements and other changes to the water balance at the lake.
- Assessment of the Building (Dam Safety) Regulations 2022 and how maintenance, improvements and changes to lake banks may be affected by future works to the Lake outlet.

Once the feasibility and resilience assessment is complete, a **detailed assessment of selected options** should be assessed. The desired option can then be designed to provide a resilient outlet system(s) that meet the future needs and intentions of Lake Hood, as outlined in the future vision for Lake Hood (Section 4.5.1).

It is expected that this solution will put considerable financial constraints on ADC but this is likely to be a critical step in building a resilient outlet system. This work item should be completed in tandem to the river inlet /intake assessment. It could be considered as feasible within the next years providing it is commenced in Year 1 (June 2024 - 2029).

As discussed above, if the feasibility and resilience assessment warrants, **design improvements to the existing structure**, as raised by the stakeholders, could be completed. These include:

- Review and replace the butterfly valve on the outlet with a new design, to reduce the high head loss and increase the volume of water that can outflow.

- Replace the outlet pipes to have the same diameter to reduce turbidity, which may support the flow meter's functionality.
- Review the flow meter functionality once the butterfly valve and outlet pipes have been replaced, to understand whether the sources of the issues have been remediated, or whether the flow meter also needs replacement.

4.2.4 Lake Flushing

Winter flushing is a strategy used to help water turnover, and this is considered to be a key activity for maintaining good lake water quality and mitigating algal and cyanobacteria blooms. To allow for winter flushing, water levels in the Lake need to be lowered for the replenishment of new water volumes. Having the ability to take water is the main influencing factor in whether this activity occurs at the intended frequency. **A review of flushing management practices** needs to be completed to inform future winter flushing. Consideration to when flushing has previously been completed, under what conditions, the reasons behind the decision to flush and whether it was successful needs to be documented.

A methodology should be developed to support the implementation of the flushing and monitoring of the effects. Records can be created to understand the contributing factors, benefits and constraints for whether the Lake should and can be flushed. The findings should record the process for decision making which could influence how the current and future decisions are made and how the process could help reduce the growth of cyanobacteria blooms. The methodology should be included in the Lake Operations Manual as further explained in Section 4.5.2.

Whilst this activity may not be deemed a “quick win” due to the reported risk associated with the inability to replenish lake water levels, this work item is relatively simple task and low cost with potentially large benefits when linked with other water quality initiatives. It is a long-term, repeatable activity that could be commenced in Year 1 (June 2024 - 2025).

4.3 Lake circulation

4.3.1 Canal circulation

Issues with canal water health and circulation have been attributed to canal orientation, size, and depth. As described in Section 3.4, Lake Hood water circulation is dominated by wind. A high-level **review of the limitations of localised water circulation in canals and a structured inventory** could be completed. Subject to the findings, a redesign of the canals, increasing canal depths and/or improvements to structures such as replacement of box culverts with bridges, could be completed to support increased circulation.

This is deemed a “**quick win**” due to the minimal planning and implementation required. This item could be feasible within the next couple of years and if commenced in Year 1 could easily be completed by Year 4 (June 2024 - 2028).

Recently, a new channel diverting river flows downstream of the intake to the northern end of the canals has been constructed. **A review and monitoring the effectiveness of this new channel** should be completed so that the results can inform other aspects of the lake health.

4.3.2 Lake Hood circulation

Previous assessments include preliminary modelling for a second outlet at the southern end of the canals on the western side of Lake Hood. The model's purpose was to provide a high-level assessment on whether a second outlet would improve canal circulation. The high-level model concluded that there was potentially inadequate benefit for the canal circulation. However, in

combination with the new water channel diversion it could be beneficial to **review and reassess the option for a second outlet to understand the effects on Lake Hood's circulation**. As the model has already been built, this is a natural progression from the initial review. These work items could be undertaken in Year 1 (June 2024 – 2025) and are likely to have relatively low costs.

Once the model has been reviewed, it may be deemed as feasible and appropriate to implement a second outlet. Therefore, a design for the second outlet could be implemented in the subsequent years (if applicable).

4.3.3 Weed management

Weed management has been noted a lesser issue at Lake Hood, with management practices already in place. However, **monitoring and a review of the weed practices** could be completed to assess the effectiveness and the required finances of the current practices to inform future weed control. If new weed management practices are deemed necessary, these could be implemented in the following years. This review could commence in the current financial year (June 2024 – 2025). The weed management review is considered to be a **“quick win”**, because weed management is routinely carried out and there is no precursor activities required. This activity is initially considered to be a low-cost activity, relying on documentation and review processes, although this could lead onto other work items associated with water quality.

4.4 Flood hazard

4.4.1 Carter's Creek

ECan have responsibility for the regulation of waterways/surface waters, this includes management of flooding risks. ADC should promote discussions, while actions and implementation of activities are by ECan. ECan may **review the existing flood hazard information for Carter's Creek** within the current financial year, then build a flood model (if not currently available) to inform the potential flood risk. Management of the Creek is beyond the jurisdiction of ADC.

The results from the flood modelling and implementation of mitigation measures could help reduce peak stream flows, first flush discharges, and subsequent sediment laden flood water. This would benefit the Lake water quality. This solution has not been presented in the programme of works () because it must be managed by ECan.

4.4.2 Hakatere/ Ashburton River

There is a potential flood risk from the Hakatere/ Ashburton River to the developments and land areas surrounding Lake Hood. Under consent CRC162119, a **flood protection bund is required** between the extended lake and the transmission line corridor, to protect residential areas from potential flooding. T+T has designed a flood protection bund for a 1-in-200-year breakout event of the Hakatere/ Ashburton River, specific for Lake Hood. The bund will protect residential, and commercial development as well as recreational assets. As this design has already been completed for ECan and the only precursor activity required before construction is attaining consents. **ECan have the responsibility for the management of these flooding risks and** construction should commence as soon as possible within the next or following financial years. This solution has not been presented in the programme of works (Section 5 and Appendix A) because it must be managed by ECan.

4.5 Future lake management

4.5.1 Lake Hood strategy

To allow for an effective allocation of resources and appropriate prioritization of recommendations, it is important to create a Lake Hood strategy. The outlook and projected community growth need to be considered and understood, which in turn can inform the design and planning of future lake structures, as well as shape management strategies. Moreover, this strategy will serve as an essential document for prioritising actions, assigning budget expenditures and establishing feasible timelines. An indicative project outlook with work items, costs and programme is detailed in Section 5 and Appendix A. This long-term perspective is crucial in making sustainable and impact-aware decisions that align with the optimal future state of Lake Hood.

To make this plan effective and built for purpose the following actions should be implemented:

- **Create the 2050 vision of Lake Hood** with input from the community including Lake Hood residents, lake users from the District and beyond, potential future stakeholder groups and considerations from future generations. This will strengthen the vision so that it is robust and diverse to accommodate different user's needs, both locals and visitors. This vision will be a key document in identifying the improvements, growth and development of the Lake and directly linked to financial assessments and modelling required to support future operations.
- **Consider what capital works need/should be undertaken before the consents run out in 2031.**
- **Plan early, start monitoring, and action early** to reduce future complexities and costs as the existing resource consents expire in the 2031 (described below). Some of the monitoring activities will be able to inform whether development plans are achievable and will be able to be used as evidence for future consents.
- **Develop a resilience plan** to ensure ADC are proactive managers and custodians of Lake Hood, including:
 - Identifying and reducing risks.
 - Ensuring the Lake system and community can handle shocks (sudden and intense events causing immediate disruptions) or stressors (ongoing or long-term issues).
 - Sustainability practices including efficient resources use, climate-responsive designs, and disaster resilience.
 - Adapting to changing conditions including climate change and demographic changes.
 - Economic and social stability of infrastructure and services.

The wider strategy should include the **development of a long-term plan or future strategy plan** to incorporate the 2050 vision. It will help set out actions and the detail for individual projects associated with the Lake. This document should also provide input on future approaches to risk management and mitigation as well as describing the overall development needs to ensure Lake Hood has a sustainable future driven by local community and District demands.

4.5.2 Management plans

The Lake Operations Management Plan (LOMP) and Lake Creation Management Plan (LCMP) are documents able to be consented requiring bi-annual updates. They provide detail on the general operational procedures and where future construction works are required. It is not clear what further updates are required to these plans since they are yet to be finalised from November 2024 draft versions^{1,2}.

Additional to these management plans, it could be beneficial to **create a Lake Operations Manual** to outline all the current methods used to operate the different systems of the Lake that are not included in the LOMP and LCMP. This is to ensure the transfer of management is smooth and well communicated when there is a turnover in staff. A key outcome of this document is to help maintain Lake health and viability by identifying inefficiencies in the method and management and/ or operations, streamlining workflows, reducing OPEX and improving financial management, and ensuring resources are used efficiently. The Lake Operations Manual would be a live document and require frequent updates when operating processes change.

When the consents expire and renewal is sought, the consenting package prepared to support the renewals will need to be more comprehensive than the original applications. There are more technical assessments required to demonstrate the existing environmental setting, lake operations and how the Lake is functioning demonstrated by evidence e.g. monitoring and compliance records. Environmental standards and management of natural resources have heightened, with new regulations in place and it is likely that some current consented activities will not be consented under the same terms as the existing consents.

Therefore, with the future expiry and renewal of the existing consents it is considered necessary to **create a resource consent renewal strategy**. This strategy should be tied in with the development of a long-term plan or future strategy plan, as described above. This means the outlook of Lake Hood is identified and there is a clear understanding on what the future activities are required. As an example, there is an opportunity to complete some one-off work items within the existing consent term i.e. within the next 6 years to reduce on potential design changes and increased expenditure after consent expiry in 2031. These activities need to be clearly identified in the plans and strategies in a timely manner to allow for the detailed design and implementation of these items. As part of the consent renewal strategy, a **planning review is required** to review of the current consents against new regulations and standards to ensure the requirements of the existing operations and activities will be met in 2031 when consent renewal is sought.

There are non-compliant activities occurring at Lake Hood. Whilst the JV and LHEP are working on these non-compliance issues before consent transfer to ADC, it is understood that some consent conditions will not be met due to significant changes required. This means that variation to these consents will be required. Since it is uncertain who will manage these variations given the extensive time already taken, ADC should allow for some input into this issue. In addition to this, most of the consents are up for renewal in 2031. Therefore, the **development of a plan and programme to address all existing non-compliance issues** is required. This could be either through working with the JV and LHEP with strict timelines or allocating resource from ADC. This plan will streamline and help prioritise activities to ensure non-compliances are achieved or an alternative solution is proposed within the established timeframes. It is expected that some of the potential changes or subsequent variations to the consents would be addressed in the solutions provided in the above section.

4.6 Summary of solutions

As described for the issues, we have plotted the proposed solutions on a quadrant chart (matrix) which balances the perceived effects against the complexity of the issue based on the current understanding.

The results of the possible solutions shown on the matrix reflect a similar distribution to the issues raised by the stakeholders. Each solution has been grouped into a theme, as identified on Table 3.1 with the coloured numbered circles representing the individual solutions listed beneath each theme. These solutions are broken into broad actions which are presented in Section 5.

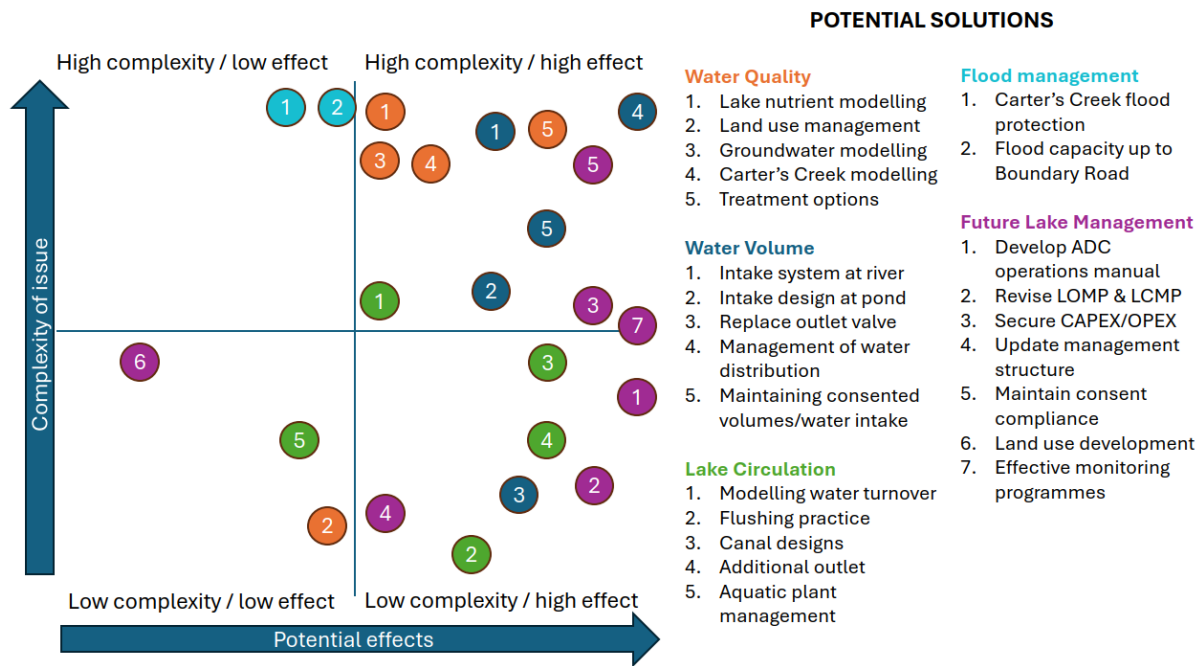


Figure 4.2: Potential effects and complexity matrix of potential solutions at Lake Hood based on stakeholder engagement.

5 Indicative programme of works

The solutions outlined in Table 5.1 and Table 1 in Appendix A provide a proposed programme of all-encompassing works addressing the high level issues at Lake Hood. Table 5.1 provides a summary of activity purpose with details on the proposed timing of initial project work for the **main programme listed in Appendix A**. Both tables contain “Work ID’s” based on the four main themes, noting that Flood Hazard has been omitted due to ECan’s regulatory requirements to manage these risks.

The purpose of this programme is to identify which activities can be implemented immediately, those activities that are reliant on others, and any precursor activities. Precursor activities are those activities that are intrinsically linked to the proposed activity in the adjacent cell of that year or have been cross referenced elsewhere in the table.

The programme identifies activities that are “quick wins” for ADC where they can be completed independently of other activities. These are generally simpler tasks to implement and have relatively low costs in comparison to other items.

The programme has been created for five (financial) years, extending out to June 2029. Year 1 is the current financial year (June 2024 – 2205) and has a 6-month timeline. All works identified in this year should be initiated as soon as possible to ensure the project programme is maintained on track.

The overall costs provided are indicative, particularly where the activities require designed solutions of an unknown scale. As described at the start of this report section, each solution would comprise a series of steps commencing with scientific-based research and review backed up by fieldwork and data collection right through to construction and ongoing long-term monitoring and evaluation.

Due to the high costs associated with the proposed solutions for Year 1 compared to ADC’s anticipated budget, we understand that ADC are unlikely to implement all solutions within the indicative timeframes. Therefore, it is important for ADC to utilise this table to refine and prioritise the programme of activities that will be undertaken.

As a starting point, we recommend the top three priorities are:

- Develop initial future vision for Lake Hood (FLM 1.1).
- Feasibility assessment/ resilience assessment for improved river inlet & intake both improved existing & alternative (WV 2.1).
- Feasibility assessment for improved lake outlet to existing and potential alternative second outlet (WV 3.1).

Table 5.1: Summary of activity purpose (as listed in Appendix A) and proposed timing of initial project work

Theme	Works ID	Activity	Purpose	Year initiated	Reason for timing & other comments
Water quality (WQ)	WQ 1	Install additional boreholes and develop GW monitoring programme.	To understand the existing groundwater quality by detailed monitoring.	Year 1	Task not directly linked to other activities, simple task, low risk, low-cost, long-term benefits.
	WQ 2	Assess results of GWQ.	As per above.	Year 2	More GWQ data available from Year 2.
	WQ 3	Concept design of GW treatment/mitigation.	To determine if improvements to GWQ are practicable and likely to be effective.	Year 3	Reliant on data from WQ2.
	WQ 4	Review LHEP Cyanobacteria report and develop a plan to implement action.	Identify tangible actions for implementation over the future years.	Year 1	Initial stages of task can be completed independently, research task, low risk, low cost, high benefits.
	WQ 5	ADC to work with ECan to develop SW monitoring system and programme for Carter's Creek.	Initiate action & collaboration with ECan.	Year 1	Historical issue, improvements to SW beneficial regardless of overall effect on Lake.
	WQ 6	Fencing off Carter's Creek from livestock via regulation.	Reduce nutrient loading to Creek & improve SWQ.	Year 2	Allowing time for ECan to action WQ5.
Water volume (WV)	WV 1	Groundwater level monitoring.	To understand the existing groundwater levels by detailed monitoring in conjunction with the GWQ.	Year 2	Task linked GWQ monitoring programme, simple task, low risk, low cost.
	WV 2	Feasibility assessment for River inlet & intake.	To investigate the future options, improve resilience of critical structure.	Year 1	Task directly linked to other activities, potentially complex task, needs long lead in time for future design & construction, essential to commence asap to achieve existing consenting window.
	WV 3	Feasibility assessment for improved Lake outlet to existing & potential alternative second outlet.	To investigate the future options, improve discharge capacity and resilience of critical structure.	Year 1	Task directly linked to other activities, potentially complex task if second outlet is adopted, needs long lead in time for future design & construction, essential to commence asap to achieve existing consenting window.
	WV 4	Review Lake flushing practices/management.	To establish if this activity can occur more frequently whilst limiting the risk	Year 1	Task linked to other WQ activities, simple task, low cost, potentially large benefits.

Theme	Works ID	Activity	Purpose	Year initiated	Reason for timing & other comments
			profile, develop maintenance of records to that constraints & benefits are recorded.		
Lake circulation (LC)	LC 1	Review the weed growth & existing weed management practices.	To understand if weed growth has significant effect on WQ, circulation, flow etc.	Year 1	Task not directly linked to other activities, simple task although could increase in complexity, low risk, low cost.
	LC 2	Prepare high level review of issues with canals & structures inventory.	To understand the extent of the limitations of the existing structures & design on flows & circulation of the canals. Potentially address WQ issues.	Year 1	Task linked to other activities, simple task, low risk, low cost.
	LC 3	Review & monitor effectiveness of new water channel (top of lake).	To record the evidence of improvements to the canal circulation.	Year 1	Task directly linked to other activities, initial stages of task can be completed independently, research task, low risk, low cost, high benefits.
Future lake management (FLM)	FLM 1	Develop initial future vision for Lake Hood.	To understand the vision & strategy for the Lake, to plan for and obtain funding to longevity of the Lake.	Year 1	Critical activity directly linked to all other activities.
	FLM 2	ADC dedicated Project Manager for Lake Hood.	To effectively manage the project tasks & programme of works.	Year 1	Essential activity directly linked to all other activities.
	FLM 3	Update the Lake Operational Management Plan.	** Action by JV & LHEP**	Year 1	Outstanding activity, required by Regulatory Authority.
	FLM 4	Develop an ADC Lake Operations Manual.	To document all procedures and practices undertaken at the Lake during operation.	Year 1	Essential activity directly linked to all current and future operational activities.
	FLM 5	Update the Lake Creation Management Plan.	** Action by JV & LHEP**	Year 1	Outstanding activity, required by Regulatory Authority.
	FLM 6	Develop plan to address all existing non-compliance issues.	For consent compliance purposes and to determine where consent variations are required.	Year 1	Task linked to other activities, long term issues, simple processes, low cost.
	FLM7	Implement planning review & develop resource consent renewal strategy.	To identify all current activities with large flexibility in operations and to	Year 2	Critical activity directly linked to all other operational and future construction activities.

Theme	Works ID	Activity	Purpose	Year initiated	Reason for timing & other comments
			future plan how activities will be undertaken without the current consenting regime.		
	FLM 8	Develop & implement resource consent strategy for any consent variations & new designs to facilitate operational improvements.	To identify all non-compliance conditions & gain consent variations if non-compliances cannot be rectified and if no further design improvements are implemented.	Year 2	Critical activity directly linked to operational and management activities.

5.1 Discussion

There are many factors that will drive the selection and commencement of the activities. A number of decisions need to be made by ADC before initiating the programme of proposed works. These decisions will be dependent on ADC staff resources and budget. An example of the decisions is provided below:

- Who will complete each work item?
- Will ADC oversee the management of the future Strategy or contract out?
- Does ADC have staff resources for a full-time project manager with Environmental Scientist and/or Engineering skills to actively contribute to the Management Plans, prepare feasibility studies and review other scientific data?

It is now “decision time” on what and which actions should be implemented so that the opportunity of completing work within the existing consenting structure can be undertaken. The amount of time and effort in collecting science-based data, conducting investigations and working toward achieving specific tasks is large. A lot of this information will be required to support the future consent renewal process whereby future consent applications and effects assessments need to demonstrate the environmental effects of Lake Hood with the relevant data and evidence.

There are time constraints on securing finances and completing the work activities before the end of the current consenting term, but we consider the benefits to be significant in terms of flexibility of how the work could be completed and costs. We anticipate that certain activities will be more difficult to implement and/or require different management approaches to the solution post-2031, such as maintenance of the river inlet on the braided riverbed. It is expected that many of these activities are likely to require larger budgets to complete the works under the new consents i.e. consents after 2031, in comparison to if they were undertaken within the next six years, therefore there are likely benefits and opportunities to complete some work items in the near future. Therefore, this is a consenting aspect that should not be under-estimated.

We consider community engagement, both local and throughout the District is essential in securing the future of Lake Hood, to drive the increased use of this ADC amenity as well as the key to gaining acceptance to provide additional finances through rate increases. This is the reason for our proposed top activity “Develop initial future vision for Lake Hood” and the reason for all future actions.

5.2 “Do nothing”

This report has extensive information and considerations on different solutions to improve Lake Hood, but what if these activities were not adopted and no future development is proposed?

At Lake Hood, there is no such thing as a “do nothing” option. Lake management and operations are essential to ensure the Lake provides a safe and healthy environment for the local community and District. Addressing water quality issues are necessary as part of the day-to-day operations and management of the lake. However, adopting an approach where no further lake development occurs will put more emphasis to be placed on these operations rather than expanding the opportunities at the Lake and creating a future vision for the community. This minimalistic approach will mean that smaller finances are to be sourced, although costs are expected to remain in the millions of dollars.

The consent compliance of Lake Hood means that there is always ongoing and improved operations, maintenance and management requiring resources and finances to support these activities. With most consents expiring in 2031, the re-consenting process is likely to cost >\$2M. This is because the current consenting process requires a lot more detail than that required for the original consent applications and the whole process will require significant time i.e. > 2 years to be invested.

6 Conclusion

The purpose of this project has been to take a science-based approach whilst considering the drivers that contribute to the Lake condition and quality (lake health). The goal has been to determine the key tasks on how to effectively manage the Lake into the future. Engagement and the following workshop with stakeholders, chosen for their historical and existing connections with the Lake was a key component to developing this future strategy.

Multiple issues with the operation and management are grouped into themes; surface waters (Hakatere/Ashburton River and Carters Creek), groundwater, structures (inlet and outlet), lake and canals with the main overarching issue of lake health (water quality) the biggest concern. Many of the issues are intrinsically linked to other issues resulting in a complex system to manage. When plotted on a quadrant matrix, most broad issues and solutions fall within the high complexity and effect quadrant, and all leading toward the Lake health.

Discussion with the resource consents held for the Lake is also featured with most consents expiring in July 2031 and an acknowledgement that the current consents provide for a large amount of flexibility in the operations and current developments.

Propose solutions focus on a stepped approach commencing with obtaining scientific evidence-based research to re-design and construction activities. The broad solution themes are tabulated as a programme of works designed to identify which activities can be implemented immediately, those activities that are reliant on others, and any precursor activities. An indicative budget is provided for the programme which is spread over the next five (financial) years, extending out to June 2029. The indicative budget of the proposed solutions for Year 1 exceeds ADC's anticipated budget. Therefore, refinement and prioritisation of activities needs to be undertaken. As a starting point, we recommend the top three priorities are:

- Develop initial future vision for Lake Hood (FLM 1.1).
- Feasibility assessment/ resilience assessment for improved river inlet & intake both improved existing & alternative (WV 2.1).
- Feasibility assessment for improved lake outlet to existing and potential alternative second outlet (WV 3.1).

There are many factors that will drive the selection and commencement of the activities, and a number of decisions need to be made by ADC before initiating the programme of proposed works.

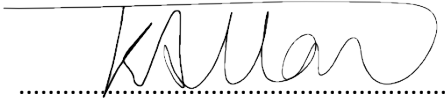
A minimalistic approach as a "do nothing" option can be considered but lake management and operations are essential to ensure the Lake provides a safe and healthy environment for the local community and District. However, the adoption of such an approach misses the future opportunities at the Lake and the development of a future vision for the community.

7 Applicability

This report has been prepared for the exclusive use of our client Ashburton District Council, with respect to the particular brief given to us and it may not be relied upon in other contexts or for any other purpose, or by any person other than our client, without our prior written agreement

Tonkin & Taylor Ltd
Environmental and Engineering Consultants

Report prepared by:



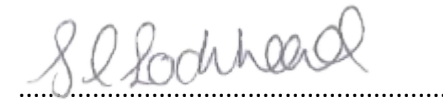
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Appendix A Programme and cost of activities

Appendix A Table 1: Proposed programme & indicative costs estimates for future improvements, management and operations at Lake Hood

Theme	Works ID	Present – June 2025		June 2025 – June 2026			June 2026 – June 2027			June 2027 – June 2028			June 2028 – June 2029		
		Year 1	Budget Estimate	Precursor activities	Year 2	Budget Estimate	Precursor activities	Year 3	Budget Estimate	Precursor activities	Year 4	Budget Estimate	Precursor activities	Year 5	Budget Estimate
Water quality (WQ)	WQ 1	WQ 1.1 Install additional four boreholes, and develop GW monitoring programme	\$30-40 k	WQ 1.1	WQ 1.2 Year 1 Monthly GW monitoring (water chemistry/ nutrients)	\$20 k	WQ 1.2	WQ 1.3 Year 2 Quarterly GW monitoring (water chemistry/ nutrients)	\$10 k	WQ 1.3	WQ 1.4 Year 3 Quarterly GW monitoring (water chemistry/ nutrients)	\$10 k	WQ 1.4	WQ 1.5 Quarterly GW monitoring (water chemistry/ nutrients)	\$10 k
	WQ 2			WQ 1.1	WQ 2.1 Assess results of GW quality	\$ 40 k	WQ 1.2, 2.1	WQ 2.2 Implement changes to upgradient land use and assess GW quality data	\$25 k	WQ 1.3, 2.2	WQ 2.3 Annual review of GW quality data	\$20 k	WQ 1.4, 2.3	WQ 2.4 Annual review of GW quality data	\$20 k
	WQ 3						WQ 1.2, 2.1	WQ 3.1 Concept design of GW treatment/ mitigation	\$50 k	WQ 1.3, 3.1	WQ 3.2 Detailed design of GW treatment/ mitigation	\$100 k	WQ 3.2	WQ 3.3 GW treatment e.g. reedbed construction	>\$100 k
	WQ 4	WQ 4.1 Review LHEP WQ Task Force Management Plan for control of cyanobacteria blooms and implement actions	\$30 k	WQ 4.1	WQ 4.2 Implement a framework to test and/or trial actions from LHEP WQ Task Force report	\$150k	WQ 4.2	WQ 4.3 Implement selected actions from LHEP WQ Task Force report	\$150 k	WQ 4.3	WQ 4.4 Ongoing Implementation of actions from LHEP WQ Task Force report	\$100 k	WQ 4.4	WQ 4.5 Ongoing Implementation of actions from LHEP WQ Task Force report	\$100 k
	WQ 5	WQ 5.1 ADC to work with ECan to develop SW monitoring system and programme for Carter's Creek	ECan	WQ 5.1	WQ 5.2 Promote ECan to install monitoring system for Carter's Creek	ECan	WQ 5.2	WQ 5.3 Carter's Creek monitoring results reported to ADC	ECan	WQ 5.3	WQ 5.4 Carter's Creek monitoring results reported to ADC	ECan	WQ 5.4	WQ 5.5 Carter's Creek monitoring results reported to ADC	ECan
	WQ 6			None	WQ 6.1 Fencing off Carter's Creek from livestock via regulation	ECan									
Water volume (WV)	WV 1			WQ 1.1	WV 1.1 Groundwater monitoring (level)	\$10 k	WQ1.1, WV 1.1	WV 1.2 Groundwater monitoring (level)	Refer to WQ 1 budget	WV 1.2	WV 1.3 Groundwater monitoring (level)	Refer to WQ 1 budget	WV 1.3	WV 1.4 Groundwater monitoring (level)	Refer to WQ 1 budget
	WV 2	WV 2.1 Feasibility assessment/ resilience assessment for improved river inlet & intake both improved existing & alternative	\$50 k	WV2.1	WV 2.2 Detailed assessment on future River inlet & intake systems	\$100 k	WV2.2	WV 2.3 Design a resilient inlet system/ structure	\$200 k	WV 2.3	WV 2.4 Construct a new river intake system/ structure	>\$1 M	WV 2.4	WV 2.5 Ongoing construction of a new river intake system/ structure	>\$1 M
	WV 3	WV3.1 Feasibility assessment for improved lake outlet to existing and potential alternative second outlet	\$50 k	WV 2.1, 3.1	WV 3.2 Detailed assessment on future Lake outlet systems	\$50 k	WV3.2	WV 3.3a Design a second resilient outlet/ structure	\$200 k	WV 3.3a	WV 3.4a Construct a new lake outlet/ structure	>\$1 M	WV 3.4a	WV 3.5a Ongoing construction of a new lake outlet/ structure	>\$1 M
							WV3.2	WV3.3b Design improvements to existing outlet system/ structure	\$50 k	WV3.3b	WV 3.4b Implement improvements to lake	\$500 k			

Theme	Works ID	Present – June 2025		June 2025 – June 2026			June 2026 – June 2027			June 2027 – June 2028			June 2028 – June 2029		
		Year 1	Budget Estimate	Precursor activities	Year 2	Budget Estimate	Precursor activities	Year 3	Budget Estimate	Precursor activities	Year 4	Budget Estimate	Precursor activities	Year 5	Budget Estimate
											outlet system/structure				
	WV4	WV4.1 Review lake flushing practices/management	\$30 k	WV 4.1, WQ 4.1	WV 4.2 Implement flushing practice and monitor	\$30 k	WV 4.2, WQ 1.2	WV 4.3 Implement flushing practice and monitor	\$30 k	WV 4.3, WQ 1.3	WV 4.4 Implement flushing practice and monitor	\$30 k	WV 4.4, WQ 1.4	WV 4.5 Implement flushing practice and monitor	\$30 k
Lake circulation (LC)	LC 1	LC 1.1 Review the weed growth and existing weed management practices	\$20 k	LC 1.1	LC 1.2 Implement updated weed management and continue as BAU maintenance	\$20 k	LC 1.2	LC 1.3 Review effectiveness and continue to implement updated weed management practises	\$20 k	LC 1.3	LC 1.4 Review effectiveness and continue to implement updated weed management practises	\$20 k	LC 1.4	LC 1.5 Review effectiveness and continue to implement updated weed management practises	\$20 k
	LC 2	LC2.1 Prepare high level review of issues with canals and structures inventory	\$20 k	LC 2.1	LC2.2 Redesign of canals and structures (if applicable)	\$50 k	LC 2.2	LC2.3 Canal construction works e.g. Replace box culverts with bridges, deepen canal floor.	\$250 k	LC 2.3	LC2.4 Additional ongoing improvements to canals	\$100 k			
	LC 3	LC 3.1 Review and monitor effectiveness of new water channel diverted to canals	\$20 k	LC 3.1, WV 3.1	LC 3.2 Review and update previous T+T model of the second outlet with the new water channel diversion	\$50 k	LC 3.2, WV 3.2	LC 3.3 If further works required, see WV3.3a	Refer to WV 3.3a budget	LC 3.3	LC 3.4 See WV 3.4a	Refer to WV 3.4a budget	LC 3.4	LC 3.5 See WV 3.5a	Refer to WV 3.5a budget
Future lake management (FLM)	FLM 1	FLM 1.1 Develop initial future vision for Lake Hood	\$50 k	FLM 1.1	FLM 1.2a Refine the vision and community/District wide engagement	\$200 k	FLM 1.2a WV 2.2, WV 3.2	FLM 1.3a Implement work and designs as per WV 2.3, WV 3.3	Refer to WV 2.3, 3.3 budget	FLM 1.3a WV 2.3, WV 3.3	FLM 1.4a Construction as per WV 2.3, WV 3.3	Refer to WV 2.3, 3.3 budget	FLM 1.4a WV 2.4, WV 3.4	FLM 1.5a Construction as per WV 2.4, WV 3.4	Refer to WV 2.3, 3.3 budget
				FLM 1.1	FLM 1.2b Develop Lake Hood strategy with consideration of the vision	\$100 k	FLM 1.2b	FLM 1.3b Initiate design and plans for future developments i.e. lake extension, subdivisions	\$200 k	FLM 1.3b	FLM 1.4b Continued design and plans for future developments	\$350 k	FLM 1.4b	FLM 1.5b Start construction/development	>\$5 M
							FLM 1.1, FLM 1.2b	FLM 1.3c Develop a Lake Hood Resilience Plan	\$50 k						
	FLM 2	FLM 2.1 ADC dedicated Project Manager for Lake Hood	\$80 k	FLM 2.1	FLM 2.2 Project Manager	\$150 k	FLM 2.2	FLM 2.3 Project Manager	\$150 k	FLM 2.3	FLM 2.4 Project Manager	\$150 k	FLM 2.4	FLM 2.5 Project Manager	\$150 k
	FLM 3	FLM 3.1 Update the LOMP	Joint Venture				FLM 3.1	FLM 3.2 Update the LOMP (bi-annual review)	\$20 k				FLM 3.2	FLM 3.3 Update the LOMP (bi-annual review)	\$20 k
	FLM 4	FLM 4.1 Develop an ADC Lake Operations Manual	\$50 k	FLM 4.1	FLM 4.2 Finalise ADC Lake Operations Manual and implement	\$50 k	FLM 4.2	FLM 4.3 Review new processes and implementation of ADC Lake Operations Manual	\$50 k	FLM 4.3	FLM 4.4 Update ADC Lake Operations Manual	\$10 k	FLM 4.4	FLM 4.5 Update ADC Lake Operations Manual	\$10 k
	FLM 5	FLM 5.1 Update the LCMP	Joint Venture				FLM 5.1	FLM 5.2 Update the LCMP (bi-annual review)	\$10 k				FLM 5.2	FLM 5.3 Update the LCMP (bi-annual review)	\$10 k

Theme	Works ID	Present – June 2025		June 2025 – June 2026			June 2026 – June 2027			June 2027 – June 2028			June 2028 – June 2029		
		Year 1	Budget Estimate	Precursor activities	Year 2	Budget Estimate	Precursor activities	Year 3	Budget Estimate	Precursor activities	Year 4	Budget Estimate	Precursor activities	Year 5	Budget Estimate
	FLM 6	FLM 6.1 Develop plan to address all existing non-compliance issues	\$50 k	FLM 6.1	FLM 6.2 Address non-compliance issues	\$250 k	FLM 6.2 + multiple other items	FLM 6.3 Ongoing work to address non-compliance issues	\$250 k*	FLM 6.3	FLM 6.4 Ongoing work to address non-compliance issues	\$100 k*	FLM 6.4	FLM 6.5 Ongoing work to address non-compliance issues	\$100 k*
	FLM 7			None	FLM 7.1 Implement planning review	\$20k	FLM 7.1	FLM 7.2 Develop resource consent renewal strategy	\$50k	FLM 7.2	FLM 7.3 Action consent renewal programme	\$100k*	FLM 7.3	FLM 7.4 Action consent renewal programme	\$100 k*
	FLM8			FLM 7.1 + multiple other items	FLM 8.1 Develop resource consent strategy for any consent variations & new designs to facilitate operational improvements	\$50k	FLM 8.1	FLM 8.2 Implement resource consent strategy for any consent variations & new designs to facilitate operational improvements	\$100k	FLM 8.2	FLM 8.3 Gain resource consents for consent variations & new designs to facilitate operational improvements	\$100k			
TOTAL COSTS		\$480 k – \$490 k		c. \$1.79 M			c.\$1.87 M			>\$4.39M			>\$7.65M		

Note: *some costs may be covered by other activities listed above

Acronyms

GW – Groundwater

SW – Surface water

LHEP – Lake Hood Extension Project

LOMP – Lake Operations Management Plan

LCMP – Lake Creation Management Plan

Assessment of options for increasing waterflow into Lake Hood



Ashburton District Council

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Appendix A : Recommended control options from NIWA report

1 Introduction

The Ashburton District Council (ADC) has engaged Environment Matters Limited (EML) to assess the planning implications of options to improve water quality in Lake Hood. The lake has recently experienced two blooms of blue green algae (cyanobacteria), which appear to be partly attributable to elevated concentrations of phosphorous in the lake water. It is possible that increasing the flow of water through the lake may reduce the potential for algal blooms; however, water availability in the catchment is limited and obtaining more for lake throughflow is not likely to be straightforward.

The National Institute of Water and Atmospheric Research Limited (NIWA) has prepared a report considering the likely sources of the blooms and potential management options¹. The NIWA report identifies several potential management options including physical measures (such as flushing, dredging or aeration), chemical measures (sterilisation, flocculation or other treatment), and biological measures (such as weed harvesting, control by other species or the use of treatment wetlands).

This EML report focusses on the planning issues associated with obtaining increased water flows. The other suggested options in the NIWA report are all conceptual and require further technical evaluation, however will be discussed as applicable. The options summary table from the NIWA report is attached to this report as Appendix A and it should be noted that NIWA has recommended that further monitoring and measurement be undertaken before any control options are implemented.

Lake Hood is in the Ashburton/Hakatere River catchment, where surface water is over-allocated and no new water is available under Environment Canterbury's (ECan's) Canterbury Land and Water Regional Plan (CLWRP). However, potential methods exist for obtaining water other than by obtaining a resource consent for a new take, and ADC has provided EML with eight potential options for achieving this. ADC has discussed the eight suggested options with ECan senior consents staff.

The scope of this report is to assess the planning requirements and potential risks associated with each option, indicate if any other methods of increasing inflow to the lake may be available, and if so, assess the planning implications and risks for these.

2 Background

Lake Hood is a constructed recreational lake spanning over 80 hectares. It is 2.3 km long and 1 km wide and is located 6 km southeast of Tinwald adjacent to the Ashburton/Hakatere River. The lake was opened in 2002 and supports a residential development on peninsulas adjacent to canals.

Water enters the lake via a consented intake in the northeast and via Carters Creek which flows into the northwest corner of the lake. Lake water discharges to the Ashburton/Hakatere River in the southeast corner of the lake. The resource consents are held by the Lake Extension Trust Limited, with the lake and surrounding recreational areas managed by ADC.

Lake Hood has experienced two cyanobacteria blooms, one each in 2023 and 2024. The NIWA report attributes this primarily to high phosphorus levels in the lake, with elevated water

¹ NIWA (2024): *Data analysis and literature review to inform Lake Hood water quality management Prepared for Ashburton District Council and Ashburton Aquatic Park Charitable Trust April 2024*. Unpublished NIWA client report 2024068CH, 54 pages.

temperatures and other parameters at times favouring phosphorus release from lake sediments and cyanobacteria growth. Phosphorus levels are high at the intake and Carters Creek and, among other things, NIWA have recommended increased flushing of the lake

NIWA consider that taking more water into the lake at times of low flow would flush blooms out of the lake faster. However, they caution that the benefits of this may only be seen in the main lake, with the canal area still not having enough water movement to address algal blooms. Phosphorus-rich Carters Creek flows into the canal area and this source of nutrients would also need to be addressed.

Restrictions on the rate of take authorised by resource consents, discussed below, mean that water inflows to the lake are limited. This is particularly the case when river flows are low, which generally coincides with favourable conditions for algal blooms.

2.1 Existing resource consents

Activities associated with Lake Hood are currently authorised by the following three resource consents.

- 1 **CRC200217** is to take surface water from the Ashburton River, and use it for the filling and flushing of the lake and the maintenance of water levels in the lake and adjacent wetlands. A maximum of 2.5 cubic metres per second (m^3/s) of water can be taken from the Ashburton/Hakatere River, when the river flow is at or above $15 \text{ m}^3/\text{s}$. The take then reduces progressively depending on measured flow in the river, such that once the river flow is below $6 \text{ m}^3/\text{s}$, no water can be taken. An important aspect of this consent is that it has two separate take components, which are additive:
 - Filling and flushing of the lake, governed by condition 1, which allows a take of $2.4 \text{ m}^3/\text{s}$ when the river flow is at or above $15 \text{ m}^3/\text{s}$, reducing to a rate of 400 litres per second (l/s) when the river flow is between 15 and $8.5 \text{ m}^3/\text{s}$.
 - Maintenance of water level in the lake and adjacent wetlands, governed by condition 11. This condition allows a combined abstraction of 100 litres per second (l/s) to maintain water levels in the lake and wetlands, with 20 l/s specifically for the wetland. These abstractions are subject to progressive reductions based on river flows, and the takes must cease when the river flow is at or below $6 \text{ m}^3/\text{s}$.

The river flows specified in this water permit are those measured at the State Highway 1 bridge, upstream of Lake Hood. This consent is held by the Lake Extension Trust Limited (LETL) and expires in July 2031.

- 2 **CRC230078** allows the take and use of groundwater from four bores for a variety of uses at and around Lake Hood. The uses include crop and pasture irrigation, domestic supply, the irrigation of public amenity areas, and gravel processing, with a maximum combined annual volume of abstraction of $1,110,958 \text{ m}^3$. One of these bores is shallow and hydraulically connected to the river system, and is subject to minimum flow restrictions, while the remaining three are deep, unrestricted wells. This consent is held by ADC and expires in December 2028.
- 3 **CRC162113** allows the discharge of water and contaminants (including phosphorous and nitrogen) from Lake Hood into the Ashburton/Hakatere River, at three discharge points. This consent is held by LETL and expires in July 2031.

In 2017, LETL applied for short-duration consents for a non-consumptive take of water from the river, and associated discharge, to temporarily address water quality issues in the lake while longer-term solutions were investigated. These applications were withdrawn but are relevant to the discussions in this report.

3 Planning environment

The CLWRP is the operative regional plan for the Ashburton/Hakatere catchment, and it contains regional provisions as well as catchment-specific sections. The Ashburton/Hakatere catchment is managed by section 13 of the CLWRP.

Surface water in the catchment is over-allocated, and a clear direction of the plan is to remedy this situation. A number of catchment-specific policies and rules apply directly to this intent, for example:

- Policy 13.4.2 requires that no consents for new surface water or stream depleting groundwater abstractions will be granted until the minimum flow in the river is increased to 10,000 l/s (which applies from 1 July 2033, as per Table 13(b)).
- Policy 13.4.3 states that when existing water permits are replaced, additional rates or volumes will not be granted.
- Several policies are aimed at enabling and managing the exchange of surface water takes for deep groundwater takes.
- Policy 13.4.8 sets minimum flows for the river, with a bottom line that all surface water and hydraulically connected groundwater abstractions, other than those for the Rangitata Diversion Race, must cease when the river flow drops below 6 m³/s. A 10 m³/s minimum flow applies to all abstractions from 1 July 2033.
- Policy 13.4.9 relating to the review of all water permits in the catchment to ensure that the abstractions comply with the plan allocation limits and minimum flow requirements. ECan completed a review to apply the CLWRP minimum flow requirements prior to 1 July 2023.
- Rule 13.5.5 makes the take and use of surface water or stream depleting groundwater a discretionary activity if it is a replacement of a lawfully established take, or if it complies with allocation limits. Otherwise, the activity is prohibited under rule 13.5.6.

ECan completed a review of existing surface water and hydraulically connected groundwater permits to apply the CLWRP minimum flow requirements prior to 1 July 2023. Resulting from these reviews, a number of surface water abstractions 'swapped' their abstractions to deep groundwater. While this reduced the extent of the over-allocation, the catchment remains over-allocated and new surface water permits are prohibited activities under rule 13.5.6.

4 Options assessment

4.1 Summary of ADC suggested options

The eight ADC options are summarised below and discussed in more detail in the following sections.

1. Exempt Lake Hood from Ashburton River minimum flows.
2. Apply for a new long-term non-consumptive take resource consent.
3. Apply for a short term 'trial', flushing non-consumptive take.
4. Amend the existing river water take consent (CRC200217).

5. Surrender water from the river take consent and convert to groundwater take.
6. Utilise ADC's Ashburton River stockwater take consents.
7. Share water with other users.
8. Use water shortage directions under section 329 of the Resource Management Act (RMA).

4.2 Exemption from minimum flows

A specified exemption from the CLWRP minimum flow restrictions for Lake Hood would enable water abstraction to occur when the river flows are less than the consented cutoffs. There is currently no ability under the CLWRP to apply for an exemption of this type and it would be contrary to the plan's intent, particularly as set out in policy 13.4.8 as already discussed. Such an exemption could only be progressed either through engagement in the next regional plan process, or requesting a private plan change under Part 2 of Schedule 1 of the RMA.

ECan intend to notify the next iteration of the CLWRP in 2028 and work is already underway to prepare this plan. ADC and the local community should consider engaging early with the ECan planning team to discuss acceptable planning options for Lake Hood.

A private plan change would require considerable resources to progress and could take several years to reach a resolution. It is unlikely that ECan would adopt a request for a private plan change² as their preference may be to consider the issue through the 2028 full review of their regional plan. This would mean that ADC would need to cover ECan's costs to progress the private plan change. Such costs would be significant and a successful outcome could not be guaranteed. The proposal would likely meet opposition from some stakeholders and members of the community, especially so soon prior to a full review of the regional plan.

4.3 Apply for a new “non-consumptive” take consent

“Non-consumptive” is not defined in the CLWRP; however, regulation 4(2) of the Resource Management (Measurement and Reporting of Water Takes) Regulations 2010 defines it as follows:

(a) the same amount of water is returned to the same water body at or near the location from which it was taken; and

(b) there is no significant delay between the taking and returning of the water.

In this scenario, a resource consent could be sought for a non-consumptive take and discharge of water. This would negate the need for minimum flow restrictions. This would enable water to enter the lake during times of low river flows to enable continued flushing of the lake water and reduce the risk of algal blooms. Such an application would be underpinned by the assumption that all of the water taken under the consent would be returned to the river.

The CLWRP does not include catchment-specific rules for non-consumptive takes in section 13, but several regional rules apply. Rule 5.126 makes non-consumptive takes restricted discretionary activities subject to conditions, however two of these conditions are potentially problematic.

Section 13 sets water allocation limits for the Ashburton/Hakatere River but not water quality limits. We consider that this would satisfy condition 1 of Rule 5.126, which states “*Limits have been set for that surface waterbody in Sections 6 to 15...*”. Condition 2 states that “*The taking of water and*

² Section 25(2) of Schedule 1 of the RMA enables a local authority to adopt or accept a private plan change request. If adopted, the local authority proceeds as if it proposed the plan change. This includes covering the local authority's costs of the plan change.

subsequent discharge does not result in any exceedance of any limit set for that waterbody in Sections 6 to 15.... The discharge from Lake Hood would arguably not result in an exceedance of the environmental flow and allocation limits set by Table 13(b) of the CLWRP, as the minimum flow measuring site at the SH1 Bridge is upstream of the point of the abstraction for Lake Hood. However, this could be contentious.

Condition 3 of rule 5.126 states that “...*the maximum distance from the point of take to the point of discharge is not more than 250 m*”. In this case these locations are approximately 3 kilometres apart and as a result, condition 3 cannot be complied with.

A non-consumptive take and discharge would not meet rule 5.126 and would be non-complying activities under rule 5.127.

As discussed earlier, applications were made on this basis in 2017 but met some resistance from ECan and were eventually withdrawn. ECan has since indicated to ADC that it does not consider this approach to be an appropriate use of these rules, primarily because the water may not be of the same quality as that which was abstracted. Further work would need to be done to address these concerns.

The key considerations for an application under rule 5.127 would likely be:

- Whether the take and discharge can be considered as non-consumptive. ADC would need to demonstrate that the take and discharge rates are roughly the same and that the quality of the discharge reflects that of the take, albeit after initial flushing. Consideration could be given to changing the take location to shorten the distance between the take and discharge points.
- The effect on river flow between the abstraction and discharge points, including effects on the river hydrology, water quality, aquatic ecology and other abstractors within this reach;
- The effects of the discharge, including effects on water quality if the discharge quality is different to the quality of the river water. Note that with increased flushing the quality of the water is likely to improve, however water quality is likely to remain variant for a variety of reasons, including as a result of inflows from Carters Creek.
- The effects on iwi especially given the Ashburton/Hakatere River’s status as a Statutory Acknowledgement under the Ngāi Tahu Claims Settlement Act 1998.

Given ECan’s current reluctance to consider the Lake Hood take and discharge as non-consumptive, any consent application would potentially be time-consuming and costly, with an uncertain outcome.

4.4 Apply for a shorter term non consumptive take to allow time to assess other options

In this scenario, ADC would apply for a short-duration non-consumptive consent to enable flushing of the lake for a period of 1-2 years while it assesses other long-term options. The consent would be for periodic discrete takes, at lower rates and volumes than the long term consent discussed above, and ADC only envisages using it when the river is on restriction and water cannot be otherwise taken under CRC200217.

Acquisition of this consent would still rely on ECan accepting that the take is non-consumptive, as discussed above, and the take and discharge would still be classified as non-complying under rule 5.127 of the CLWRP. The shorter duration and restricted rate of take would likely aid the process.

4.5 Change the conditions of existing consent CRC200217

ADC suggests the modification of this consent to treat the “maintenance” takes of condition 11 as non-consumptive. As with the previous two options, this relies on acceptance of the take as non-consumptive. This option is conceptually similar to obtaining a new consent as discussed above, but has the advantage that in processing an application for a change of conditions, only the effects of the change need to be considered. However, by enabling the taking of more water, it potentially increases the scope of the consent which may impede acceptance as a change of conditions.

4.6 Surrender some water from the surface take consent and move to groundwater

Under this option, some of the water taken under resource consent CRC200217 would be surrendered and the equivalent rate and volume taken from deep groundwater. This approach is supported by the CLWRP, which provides an allocation for ‘swaps’ of surface water and hydraulically connected groundwater to deep groundwater. A resource consent application under this option would likely be a restricted discretionary activity under rule 13.5.2.

The full rate of 2.5 m³/s authorised by resource consent CRC200217 is currently unable to pass through the intake structure. Water could therefore be surrendered with or without materially affecting the existing surface water operation.

This option would likely be straightforward from a planning perspective, however the costs of drilling deep bore(s) and pumping sufficient volumes of water are likely prohibitive. Therefore, while it would be relatively easy to obtain consent for this option, it may not be practically feasible.

It may also be possible to use water from ADC’s existing groundwater consent for Lake Hood (CRC230078). ADC has advised that there is potentially water available in this consent, but it would need to be investigated further with the relevant users. Such an approach would require a change to the use of water on the resource consent, and this may not be straightforward.

4.7 Use water from ADC’s existing stockwater consents

ADC hold several consents to abstract water from the North Branch and South Branch of the Ashbuston/Hakateri River for community stockwater schemes. These consents have varied uses; some are limited to stockwater, community drinking water and essential domestic and community use (e.g. CRC231876), while others include an additional irrigation component (e.g. CRC200219). Minimum flows are included for irrigation uses.

ADC’s stockwater takes are consented but the council’s intent is to exit from providing this service by 2027, as set out in its Long Term Plan 2024-2034. This approach is supported by policy 13.4.1 of the CLWRP, which required ADC to reduce a portion of the water authorised for community stockwater supplies by 1 July 2023 to increase the amount of water in the river.

The potential exists to shift some of this consented allocation to Lake Hood. From a planning perspective, it would likely involve the transfer of water to the Lake Hood intake location under section 136 of the RMA, and a change of conditions under section 127 of the RMA to provide for the use of water for flushing.

While this would increase water availability above the 6m³/s minimum flow, under the CLWRP it would not enable the taking of this water when the river is flowing at less than the 6m³/s minimum flow. Achieving this would still require acceptance from ECan that the take is non-consumptive

irrespective of whether the source consent has a minimum flow. That said, this option would enable a greater rate of water to be abstracted between 6 m³/s and 15 m³/s which could be of considerable benefit. Table 13(c) of the CLWRP sets the flow restriction regime, which would provide for a 75% reduction of the rate of take at 6.245 m³/s, a 50% reduction at 6.850 m³/s and a 25% reduction at 7.275 m³/s.

The water would be transferred downstream from an existing ADC community stockwater abstraction point to the Lake Hood intake. With the water staying in the river for longer before being abstracted, the effects of the transfer could be assessed as positive for the river. While the change of use would currently be problematic³, ECan are intending to notify Plan Change 8 to the CLWRP in November 2024, which includes a pathway for changes to the use of water on a consent.

This approach has potential through either providing additional water above the 6 m³/s minimum flows, or with no restriction should the take and discharge be considered as non-consumptive. It will be reliant on water becoming available to transfer.

4.8 Obtain water from other users

The potential exists to form or join a water users' group with other abstractors or to share or obtain water from RDRML or one of the three mid-Canterbury irrigation schemes. Water users' groups gain collective consents and distribute water accordingly, while irrigation schemes and RDRML have their own water permits.

Joining or forming a water users' group would likely result in the same minimum flow restriction and consenting issues identified above. It may be difficult to find other users with which to share water given the unique use of water for Lake Hood.

Minimum flow restrictions would also apply if water were obtained from an irrigation scheme or RDRML, as these operators all have minimum flows on their water permits. Such schemes have a water charge for shareholders, however this may be negotiable due to the arguable non-consumptive nature of the Lake Hood use.

An ideal scenario would be for an irrigation scheme to discharge irrigation bywash water to the Ashburton River via Lake Hood. We are unaware of any irrigation scheme networks or proposed network extensions in the vicinity of Lake Hood, however this could be a potential option for ADC in the future.

4.9 Use water shortage directions under s329 of the RMA

Section 329 allows regional councils to issue directions to apportion, restrict or suspend the take, use, damming or diversion of water, and discharges to water, if the council considers that *“there is a serious temporary shortage of water in its region”*. The potential exists to request that ECan issues water shortage directions to enable flushing flows when the river is otherwise on total restriction; however, the intent of the directions is to reduce consumption during times when water shortages are acute, and using them to take additional water is likely to meet with resistance, both from ECan and from the wider community. ECan has provided a preliminary indication that this is not an appropriate use of such directions.

³ Refer to *Cloud Ocean Water Limited v Aotearoa Water Action Incorporated* [2023] NZSC 153 [20 November 2023]

4.10 Potential other approaches

Engineering solutions such as aeration and modifications to the lake have been assessed separately and are outside the scope of this review. No other planning-based approaches are immediately obvious.

4.11 Summary of potential options

Table 1 below summarises the available options and comments on their timing, cost and chance of planning success.

Table 1: Summary of options assessment

Option	Advantages	Disadvantages	Chance of planning success
1. Exempt Lake Hood from Ashburton River minimum flows through a private plan change, or involvement in ECan's next generation regional plan	With both options, ADC would have the opportunity to shape the planning outcome. ECan are intending to notify their plan in 2028 so there is opportunity to engage prior to notification.	Both options time consuming and expensive. A private plan change would likely not be adopted by ECan and would be more expensive than input to the next regional plan process.	Plan change: low Input to next regional plan: moderate
2. Apply for a new long-term non-consumptive take resource consent	This would provide sufficient water long term.	There is considerable risk that ECan will not accept the take and discharge as non-consumptive with a 2.5 km gap between. A consent application could be expensive, time-consuming and contentious with an uncertain outcome.	Low
3. Apply for a short term 'trial', flushing take, either as a consumptive or non-consumptive take.	This would buy ADC time while it finds a longer term solution. ECan may be more relaxed in considering a shorter term trial consent as non-consumptive. Seeking consent for a consumptive take would provide additional water at flows above 6 m ³ /s	As above, ECan may still not consider the take and discharge as non-consumptive.	Non-consumptive: moderate Consumptive: high
4. Amend the existing river water take consent (CRC200217)	Providing for 100 L/s with no minimum flow would provide a low level of lake flushing.	Such a change would likely be considered as outside of the scope of a change of conditions, unless ECan considered it to be non-consumptive (see above).	Moderate
5. Surrender water from the river take consent and convert to groundwater take	The CLWRP is supportive of surface water allocation swapping to deep groundwater.	Expensive to install bore(s) and pump water. Could be mixing of water issues, especially with iwi.	High
6. Utilise ADC's Ashburton River stockwater take consents, either with a minimum flow but with more water available above 6 m ³ /s, or without a minimum flow	This approach could be utilised to obtain water if ADC is successful in exempting Lake Hood from minimum flows in the next plan iteration.	Both options rely on consented ADC stockwater becoming available. For a consent to be transferred without a minimum flow, ECan would need to consider the take/discharge as non-consumptive (see above).	With a minimum flow: moderate Without a minimum flow: low ⁴
7. Share water with other users	ADC would be unlikely to require consents, as these would be held by the irrigation scheme or other user.	Is reliant on water becoming available. Could require ongoing costs to obtain water.	High
8. Use water shortage directions under section 329 of the RMA	No consenting requirements.	Unlikely to be supported by ECan. More of a one-off rather than a permanent solution.	Low

⁴ Under the current CLWRP

5 Discussion and recommendations

There is no clear cut and quick solution to this issue, and many of the potential approaches will rely on gaining acceptance from ECan that the take and discharge for Lake Hood is non-consumptive and therefore not subject to the minimum flow restrictions. Given the considerable distance between the take and discharge points, and the potential for the water to entrain contaminants from the lake, this will require considerable technical support and most probably the acquisition of written approval from users in the affected river reach, iwi and possibly other stakeholders.

Irrespective of any consenting solutions, we recommend that ADC engage early with the ECan Planning Section to explore planning options for exempting the Lake Hood abstraction from a minimum flow regime in the next regional plan. Ideally this would involve a separate allocation for Lake Hood.

Alongside this, the most promising consenting options appear to be:

- Transfer water from an existing ADC community stockwater consent to enable higher rates of water abstraction between river flows of 6 m³/s and 15 m³/s. The restriction regime in Table 13(c) of the CLWRP would apply but considerably more water could be abstracted than is provided for by the consent CRC200217. This is a long term but only partial solution as the abstraction would still be subject to minimum flow restrictions. Importantly, it does not rely on ECan accepting the take and discharge as non-consumptive.
- Gain a short term consent for a non-consumptive flushing flow. It is questionable whether ECan would consider the flushing flow non-consumptive regardless of the duration of consent, but the trial nature of such a consent may assist ADC's case.
- Engage with irrigation schemes and RDRML to determine the likelihood of their infrastructure extending in the vicinity of Lake Hood. This option has potential but is uncertain at this stage. Should ADC consider transferring any stockwater scheme consents to one of the three irrigation schemes, provision of water to Lake Hood could form part of the negotiations.
- Further investigate surrendering some of the unused consented surface take and using groundwater for flushing flows. While expensive and potentially low-yield, this is a potentially straightforward option from a planning perspective.
- If the distance between the take and discharge points is reduced, there would be a higher likelihood of ECan considering the take and discharge as non-consumptive. This would mean that an application for a long-term consent with no minimum flow would be a more feasible option.

The use of water storage directions, while meriting further investigation, is unlikely to be successful for the provision of long term flushing flows at the volume and frequency required.

6 Applicability statement

This report has been prepared by Environment Matters Limited for Ashburton District Council based on the agreed scope. No other parties may rely on this report for any purpose without the written permission of Environment Matters Limited.

Appendix A:

Recommended control options from NIWA report

Table 0-1: Summary of options, their purpose, and associated risks for controlling cyanobacteria in Lake Hood. Green options are considered potentially feasible for Lake Hood. Red options are not recommended for Lake Hood. Uncoloured options require further investigation before recommendations regarding their application to Lake Hood can be made.

Intervention	Target/purpose	Risks
Physical controls		
Hydraulic flushing, inflow diversion	<p>Increase flow through the lake and thus decrease the hydraulic residence time, which would flush blooms out of the lake faster. Records show that there were only eight days in a 92-day period on which water was taken. More frequent water intake times could reduce the residence time in the lake but likely not (or only minimally) in the canals.</p> <p>A secondary outlet could be useful in rapidly releasing water from the main lake and enhancing circulation.</p> <p>Divert inflowing water from Carters Creek to better flushed parts of the lake.</p>	<p>While the main lake may profit from this, the canals may still not have enough water movement and keep blooms trapped in areas with longer water residence times. Surface scum formation may be prevented but cyanobacteria blooms are unlikely to be prevented just by creating another outlet.</p> <p>A nutrient-rich diverted inflow could negatively affect the new receiving environment.</p>
Phytoplankton harvesting	<p>Water filtration</p> <p>Withdraw water from near the surface rather than the lake bottom to remove cyanobacteria concentrated at the surface.</p>	<p>Water filtration may not be cost-effective and will not prevent bloom formation.</p> <p>The lake is quite shallow and easily mixed by wind, which means that cyanobacteria likely only form surface scums during calm conditions. This will not prevent bloom formation.</p>
Artificial destratification	<p>Install aerators to increase vertical mixing and prevent stratification and deoxygenation of bottom waters and thus P release from the sediments.</p>	<p>This could be promising but would only affect the sediment P load to the lake. If blooms are primarily fuelled by external nutrient sources (e.g., Carters Creek or groundwater), then this method is unlikely to be effective. In addition, if this is not timed well, then nutrients released from the sediments during stratification would be mixed to the surface and actually fuel blooms.</p>
Aeration/oxidation	<p>Increase dissolved oxygen to avoid hypoxia and reduce phosphorus release from the sediments. Phosphorus fuels algal growth.</p>	<p>This is considerably more expensive than destratification and Lake Hood is likely too shallow for this to work well.</p>
Nanobubbles	<p>Produce very small oxygen bubbles (nanobubbles), to oxygenate the water and sterilise and/or kill cyanobacteria and deactivate toxins.</p>	<p>The process has not been well defined and this is currently an expensive option.</p>

Intervention	Target/purpose	Risks
Drawdown	Reduce the lake water volume or even entirely empty the lake to expose sediment and dry it out. This would eliminate seed populations of cyanobacteria.	This may be cost-effective but not aesthetically pleasing and would disrupt recreational use of the lake for weeks to months at a time. It would be harmful to fish and desirable macrophyte communities.
Dredging	Remove lake sediments that can release P during thermal stratification.	This does not affect external nutrient loading from Carters Creek and groundwater that may fuel blooms.
Benthic barriers	Apply clay, silt, sand, and gravel from external sources to bury the surface nutrient-enriched sediment.	This does not affect external nutrient loading from Carters Creek and groundwater that may fuel blooms.
Sonication	Break cyanobacteria cells using sonic pressure waves to rupture the gas vacuoles in the cells. This could be very effective in the summer. Reseeding of populations will be prevented.	This does not remove the driver of the blooms. This would require repeated treatments.
Chemical controls		
Hydrogen peroxide	Liquid application of this sterilising agent to lyse cyanobacteria cells.	Cyanobacteria blooms could return after a few weeks or months and repeated application may be required.
Flocculation and sediment capping	Apply a metal salt (alum or Phoslock®) to prevent sediment P release. Alum is also a floccing agent that can remove a cyanobacteria bloom in hours by flocculation and settling it to the sediment, clearing the water column. Alum floc on the sediment surface can strongly suppress germination of the algae spores ("seed banks") in the sediments.	Multiple or regular application may be required.
Phosflow	Apply a bead form of Phoslock® in pouches that can be placed in the inflows (Carters Creek and Ashburton River intake culvert) to reduce inflow phosphorus concentrations.	The number of pouches required and disposal and pouch replacement costs need to be calculated. This may become a long-term commitment unless upstream phosphorus controls are put in place.
Algicides	Apply chemical compounds (usually copper-based) to kill cyanobacteria.	This can result in unwanted ecotoxicological effects or secondary pollution.
Biological controls		

Intervention	Target/purpose	Risks
Weed harvesting	Remove weeds and thus nutrients bound up in those weeds from the lake. This could also prevent anoxia in bottom waters.	<p>If a hired weed harvester that is used elsewhere were used periodically, there is a risk of introducing fragments of other weeds to Lake Hood.</p> <p>Nutrient loads from inflows and the sediments (in anoxic conditions) could still fuel algal blooms.</p>
Biomanipulation	Introduce new bacteria species to either outcompete cyanobacteria for nutrients or directly kill cyanobacteria.	With any new species introduction, there is risk of extreme perturbation of the lake ecosystem (e.g., one introduced species becomes dominant and outcompetes desirable native species) and unwanted consequences. Controlled laboratory and field trials are required before any such approach is considered for Lake Hood.
Floating wetlands	Construct floating wetlands that remove contaminants, especially nitrogen from the lake.	This could be an aesthetically pleasing option but restrict some recreational use of the lake. It may be difficult to quantify the effectiveness of nutrient removal by floating wetlands.

12. Mayor's Report

12.1 Local Government New Zealand

- **All of Local Government/Rural & Provincial Meetings**

Along with Councillors Phill Hooper and Tony Todd and CE Hamish Riach, I attended the All of Local Government and Rural & Provincial meetings in Wellington on 1-2 May.

Highlights from the meetings can be found below:

Whether you joined us in person or if the weather kept you online, thank you for being part of last week's All-of-local government and sector meetings. This media story illustrates the event's focus on infrastructure – [Council debt risk grows amid population challenge](#).

On Thursday we recognised the leadership and dedication of this triennium's sector chairs. Thank you to:

- *Metro: Mayor Grant Smith and Mayor Paula Southgate; Deputy Chair Jules Radich*
- *Regional: Chair Doug Leeder; Deputy Co-Chair Rehette Stoltz; Deputy Co-Chair Rachel Keedwell*
- *Rural: Mayor Alex Walker*
- *Provincial: Mayor Neil Holdom*

SPEAKER SLIDES

All-of-local-government

- Adam Lynch, Principal Consultant, Reliance Risk – [Addressing abuse and harassment](#)
- Dominick Stephens, Deputy Secretary, Chief Economic Advisor, Treasury – [Fiscal policy and infrastructure financing](#)
- Peter Nunns, General Manager, Strategy, Infrastructure Commission – [Infrastructure for Growth](#)
- Anthony Walker, Director, Standard and Poor's Global Ratings – [Unpacking financing of infrastructure: the current challenge](#)
- Gareth Kiernan, Chief Forecaster, Infometrics – [LGNZ update and Q&A](#)
- Matthew Blaikie, NZ Climate and Sustainability Leader, Arup – [Case study: Resilience and climate adaptation](#)
- Matt Body, Sports and Recreation Sector Leader, Warren and Mahoney – [Case study: Changing the equation](#)
- Hamish Sutherland, Team Leader Consents Monitoring (Infrastructure), Horizons Regional Council and James Kendrick, Ngai Tuhoe – [Case study: Compliance, monitoring and enforcement of Te Ahu a Turanga](#)

Rural and Provincial

- James Kilty, CEO, Transpower – [Dry winter power risks, impact on manufacturing in NZ and longer-term energy outlook](#)
- Lori Hand, Executive Director, Water Services Reform, DIA and Caroline Dumas, Partnerships Director, DIA – [Update from DIA](#)
- Allan Prangnell, Chief Executive, Taumata Arowai and Tim Cadogan, Local Government Engagement Specialist, Taumata Arowai – [Taumata Arowai](#)
- Frances Duignan, International Trade, Beef and Lamb NZ and Stephen Jacobi, New Zealand International Business Forum – [Impact of Donald Trump trade wars on NZ, in particular on councils and businesses](#)
- Peniel Prabhakaran-Elliott, Strategic Advisor, Homelessness & Housing Stress, Tauranga City Council – [How rural and provincial councils can prepare to prevent, respond and reduce homelessness in their local area](#)

12.2 Canterbury Architecture Awards

At the recently held 2025 Canterbury Architecture Awards Ashburton's library and civic building, Te Whare Whakaterere was declared a winner and was awarded a Public Architecture Award.

The citation for the award read:

A benchmark for contemporary civic architecture in Aotearoa. Te Whare Whakaterere unites cultural expression, functional excellence and sustainability in a single cohesive form. Designed to serve Ashburton's growing needs, the building includes a state of the art library, Council offices, Emergency Operations Centre, public event spaces, and integrated amenities. It welcomes and reflects its community through collaboration with mana whenua. Material references to the region's farming identity – mass timber, pivot-inspired trusses, and silo-like mesh – anchor it firmly in place. Historic Pioneer Hall is thoughtfully restored within the children's library, while artesian heating and energy strategies support long term resilience. A civic building of meaning, purpose and place.

I would like to congratulate Athfield Architects on their award and I am pleased they have been acknowledged for their skill and effort in creating something physical from all the things the community told them were important to our district.

12.3 Meetings

- **Mayoral calendar**

April 2025

- 25 April: Methven ANZAC Day service
- 25 April: Ashburton ANZAC Day service
- 25 April: Mt Hutt College 100 year centennial
- 28 April: Pete Donald and Jim Collins – Aquifer Locations Ltd
- 28 April: Advance Ashburton
- 29 April: Hokonui Radio Interview
- 29 April: Lauriston Solar Farm official opening/ribbon cutting
- 29 April: Tony McCormick – RDR with CE Hamish Riach

- 30 April: Omnibus Plan Change workshop
- 30 April: Climate Change & Sustainability workshop
- 30 April: Water Races By-law workshop

May 2025

- 1 May: All of Local Government meeting, Wellington with Crs Hooper, Todd and CE Hamish Riach
- 2 May: Rural & Provincial meeting, Wellington with Crs Hooper, Todd and CE Hamish Riach
- 3 May: RDR meeting
- 7 May: Grants workshop
- 7 May: Council meeting
- 7 May: Federated Farmers AGM with Cr Wilson
- 8 May: Water Services site visits
- 8 May: Emergency Operating Centre equipment demonstration
- 8 May: Minigolf project update
- 8 May: Environment Canterbury draft Gravel Management Strategy hearing with CE Hamish Riach
- 9 May: Hakatere Marae Mokopuna Ball
- 12 May: CDEM – Strengthening Emergency Management meeting
- 13 May: Hokonui Radio Interview
- 13 May: Airport Authority subcommittee
- 14 May: Three Waters Committee
- 14 May: Audit & Risk Committee
- 14 May: Canterbury Architecture Awards with Deputy Mayor Liz McMillan and CE Hamish Riach
- 16 May: HHWET
- 17 May: Mid Canterbury Sports Awards with Deputy Mayor Liz McMillan, Cr Lynette Lovett and CE Hamish Riach
- 19 May: Ben Stock, Chris Watson, Hugh Copland and Richard Lemon – A&P Association
- 19 May: Willy Leferink and Phil Everest re: Lake Hood water quality
- 20 May: CDEM Joint Committee agenda review
- 20 May: Tony McCormick – RDR, with CE Hamish Riach
- 20 May: Braided Rivers/Lion Foundation
- 21 May: Council meeting

Recommendation

<p>That Council receives the Mayor’s report.</p>

Neil Brown
Mayor