Item 2: Shotover Wastewater Treatment Plant Long Term Disposal Options

SESSION TYPE: Workshop

PURPOSE/DESIRED OUTCOME:

Following the resolution by Council in March 2026 to undertake further identification and assessment of wastewater disposal options, this workshop will be facilitated by Dr Alayna Ra and led by Pennie Pearce (General Manager, Strategy & Policy) to provide Councillors with the project background on the Shotover Waste Water Treatment Plant (WWTP) long term disposal options, and an overview of the process undertaken to date, including the long list of options, multi-criteria analysis (MCA), short list of options, and land-only disposal options. External presenters from WSP and GHD will facilitate early insights, reflection and inquiry from Councillors. This is the first of two workshops planned, with a further workshop to follow in September 2026.

DATE/START TIME:

Thursday, 30 July 2026 at 10.45am

TIME BREAKDOWN:

- Introduction by WSP to the proposed process: 15 minutes
- Presentation - GHD presentation on the project background and overview of the process up to the March 2026 Council decision: 1 hour
- Presentation - WSP facilitation of early insights, reflection and inquiry: 1 hour

PRESENTERS:

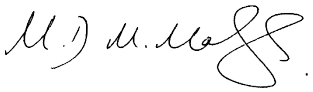
External
Dr Alayna Ra - Technical Director (WSP)
Maurice Hoban - Principal (GHD)
Anthony Kirk - Principal (GHD)
Helen Barclay - Associate (GHD)

Internal
Pennie Pearce, General Manager, Strategy & Policy
Tony Avery, General Manager Property & Infrastructure

Prepared by:

Name: Tony Avery
Title: General Manager, Property & Infrastructure
21 July 2026

Reviewed and Authorised by:



Name: Michelle Morss
Title: Interim Chief Executive

21 July 2026

ATTACHMENTS:

A	GHD Presentation - Shotover WWTP Disposal Options

Shotover WWTP Disposal Options

→ Council Alternative Options Workshop

30th July 2026

Overview

- Background and scope
- Legislation changes
- Options development
- Long list scoring
- Short list development
- Short list scoring
- What's happened since

Purpose

To guide Councillors through the work completed to date in the development and assessment of options for the long-term disposal of treated wastewater from the Shotover WWTP

Background

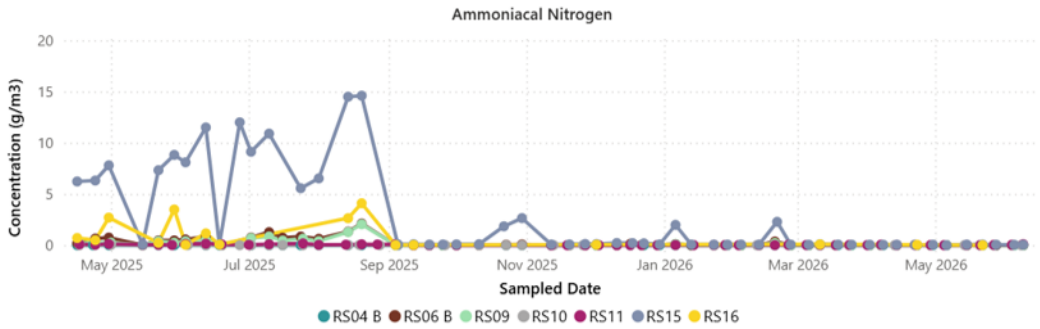
1990s to 2013: Traditional oxidation pond treatment with discharge to the Shotover River.

2013 to 2019 ("Project Shotover"): Major transition from oxidation ponds to MLE modern activated sludge treatment for 25% of flow. 75% of WW treated in oxidation ponds and discharge to Shotover River

2019 to 2024: Land disposal via the Dose-and-Drain (DAD) infiltration field on the Shotover Delta.

2021 to 2025: Progressive failure of the DAD disposal field and increasing regulatory intervention. Emergency river discharge to Shotover in March 2025

2024 onwards: Commissioning of second MLE and clarifier for full treatment through MLE from November 2025. Options for a new long-term disposal solution.



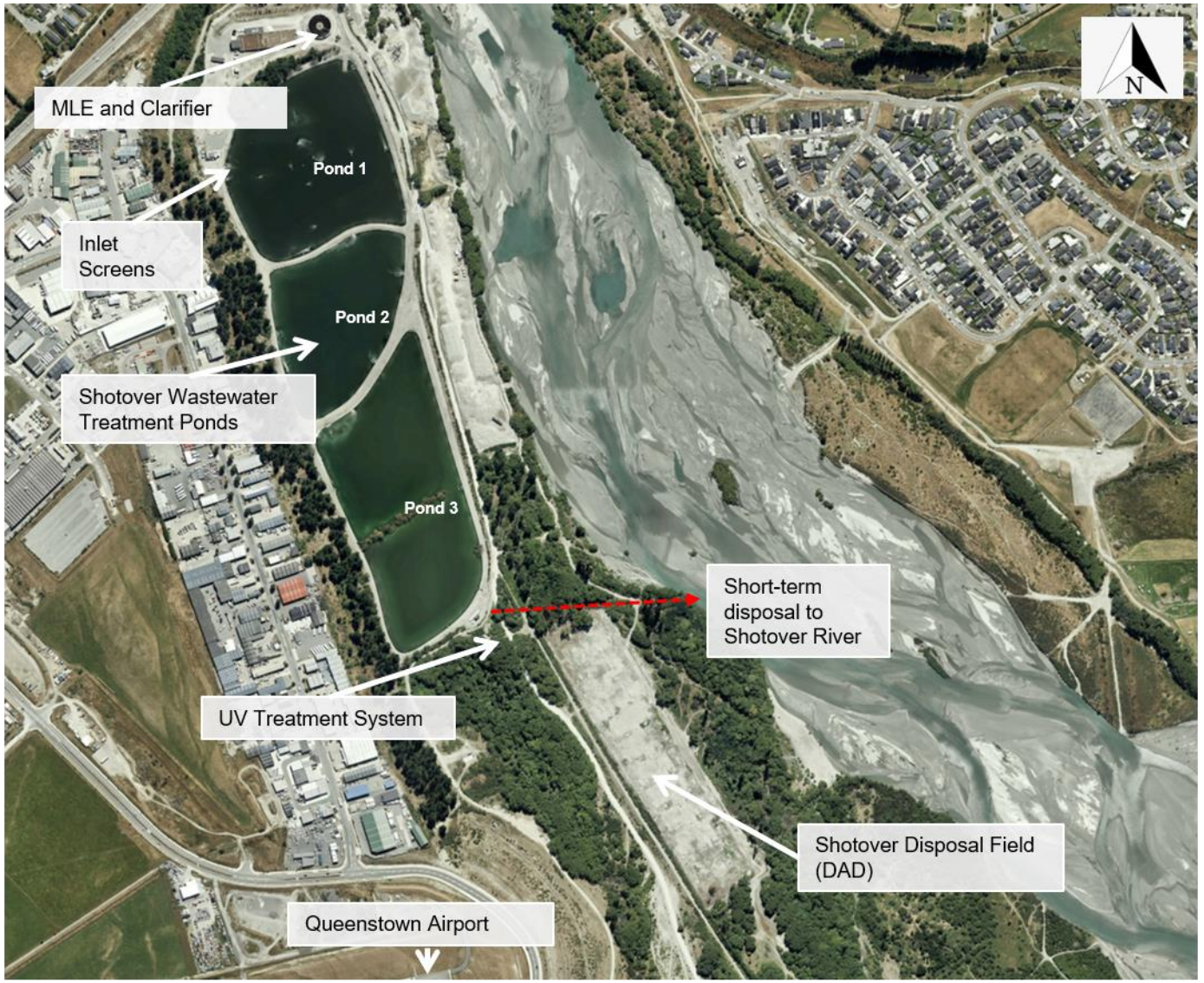


Photo from 2023

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Why does this project exist?

- Dose and drain (DaD) wastewater disposal field
- Clogging issues
- Not compliant
- Ponding
- Bird strike risk
- Emergency discharge needed
- Discharge to Shotover
- Short term consent applied for

2019

2021

2024

2024 Project Scope

Scope of the long term disposal project:

- To identify, design, consent, and construct a new long term disposal solution for treated effluent from the Shotover WWTP
- To find a solution that is affordable, culturally appropriate, and environmentally responsible
- To investigate additional treatment options to improve the quality of the discharge where this would have benefits for enabling alternative discharge techniques

What is not in scope:

Looking at other options for wastewater treatment eg, decentralised system, or alternative treatment plant locations

Core Project Team

QLDC	Andrew Hill	Project Manager	Nov24 to Dec 25
	Scott Paterson	Project Manager	Jan 26 onwards
	Simon Mason	Project Sponsor	
GHD	Ryan Orr	Project Director	
	Helen Barclay	Project Manager	
	Ian Ho	Design Manager, Technical Lead - Process	
	Anthony Kirk	Technical Lead - Environmental	
	Tim Eldridge	Business Case Advisor	
Landpro	Claire Perkins	Planner	

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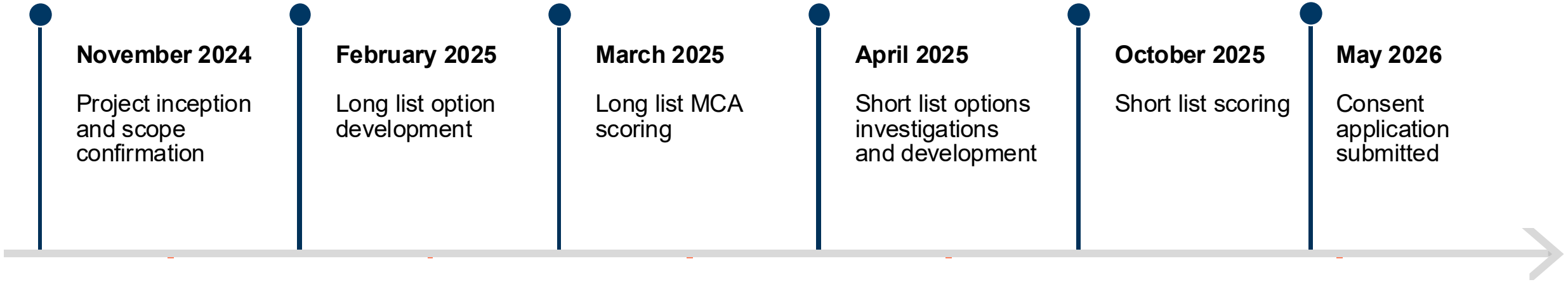
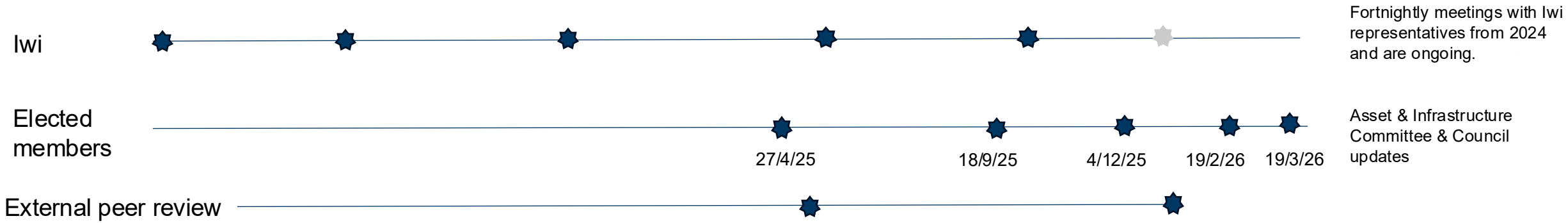
Process and timing

Long-term Solution



Stakeholder participation & reviews



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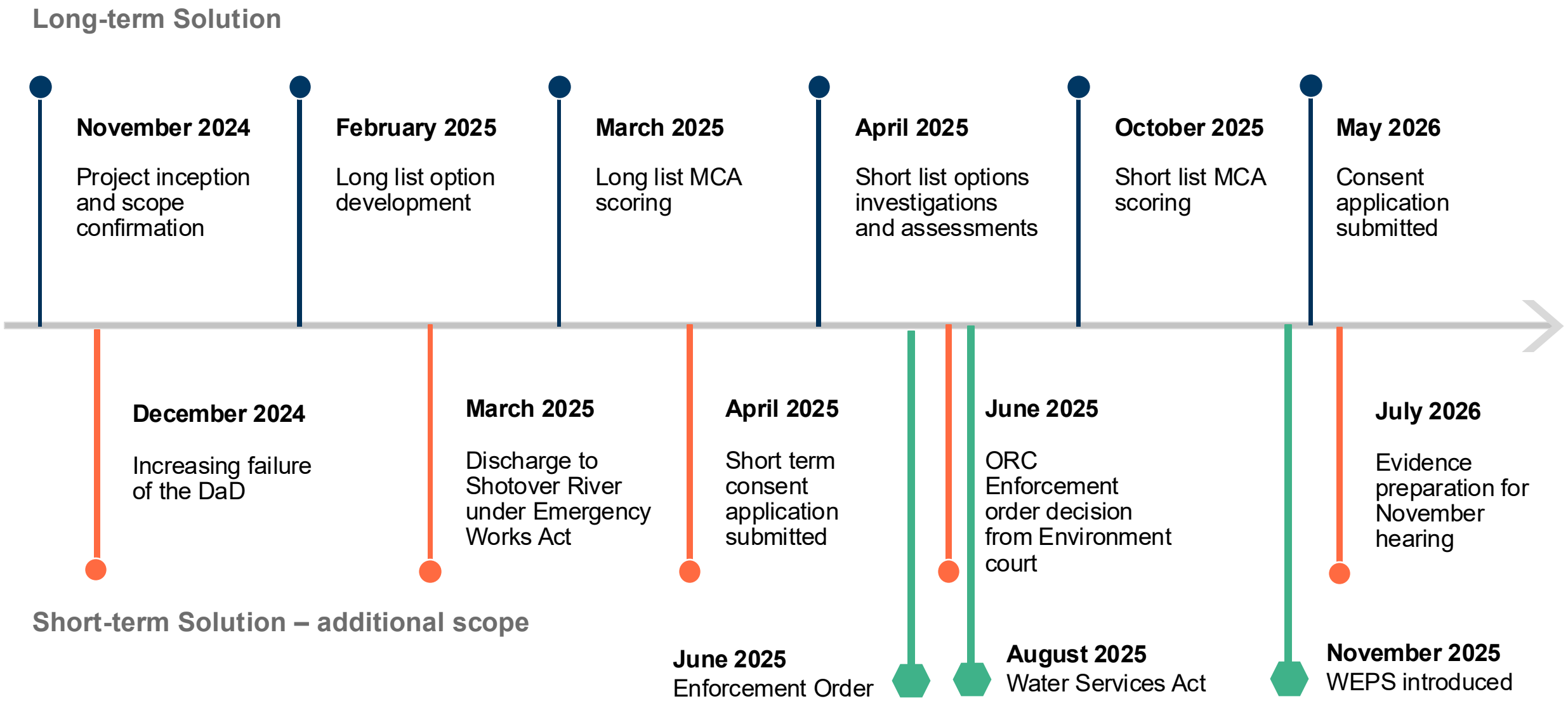
Mana whenua involvement

- Iwi engagement workshop held at project inception Nov 2024
- Representatives from Aukaha and Te Ao Marama
- Iwi involvement in establishing MCA criteria and in the long list options development
- Attendance at in-person long list scoring workshop
- Fortnightly meetings held throughout project and are ongoing
- Kai Tahu position statement provided October 2025 when it became clear that there wasn't a land-only short-listed option available
- No scoring provided for short list scoring

Extracts from Kai Tahu Position Statement

- Wastewater is waikino (polluted) and wastewater leaving treatment plant is considered tapu (restricted)
- Water has mauri (life force) and is a taonga that must be protected. Mixing of waters is unacceptable
- Direct discharge of human waste to natural water is abhorrent
- Treatment through natural processes in the land is needed to reach a state of noa (unrestricted)
- To restore the mauri of the water it needs to be cleansed through nature, through Papatūānuku (earth) Tāne (forest), Tāwhirimātea (wind) and Tama-nui-te-Rā (sun)
- Superficial or token land contact that does not have any additional treatment effect is not sufficient

Process and timing



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ORC Enforcement Order

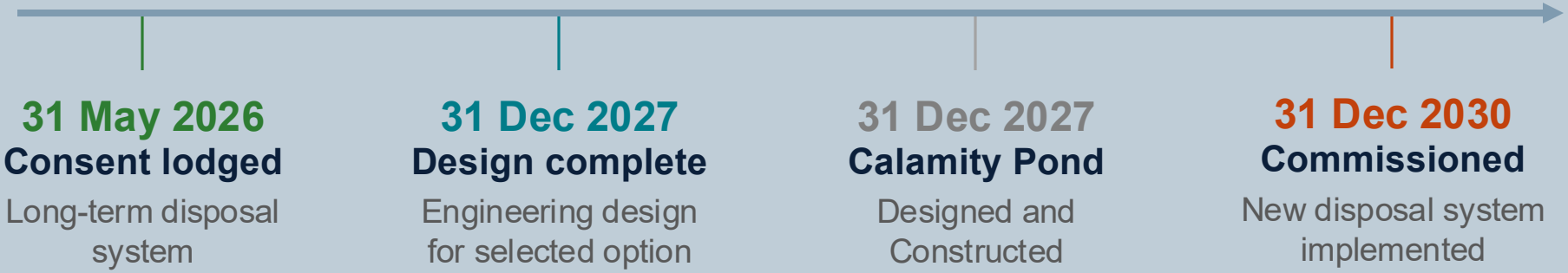
- ORC applied for Enforcement Order in January 2025
- Approved by Environment Court in June 2025

Enforcement Order requires:

- Ongoing monthly monitoring
- Improvements to current system, operator training
- Calamity pond for off-spec wastewater storage
- Key milestone dates to be achieved

Project Implications

- **Programme:** set dates for resource consent, design and implementation
- **Parallel work stream:** consent application and process for short-term discharge needed
- **Delivery focus:** option selection need to align with 2030 commissioning.



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Local Government (Water Services) Act 2025

- Local Government (Water Services) Act 2025 introduced in **August 2025**
- Water service provider must choose “the most cost-effective option”

254 Obligation to consider cost-effectiveness of wastewater options

(1) This section applies when a water service provider makes a decision relating to—

(a) options for providing wastewater infrastructure:

(b) options for treating wastewater.

(2) The water service provider must, when making a decision under subsection (1), choose the option it considers to be the most cost-effective option for providing wastewater services over the life of the infrastructure assets required to implement that option.

Extract from Local Government (Water Services) Act 2025

What does cost effectiveness mean?

Further guidance on what “cost effective” means is expected in the Local Government (Systems Improvements) Amendment bill that is currently partway through its second reading in parliament (24th June 2026). The bill would remove social, **economic**, **environmental**, and **cultural wellbeing** from local government's objectives, and change the purpose of local government to focus on core services and infrastructure.

Legal Opinion – Buddle Findlay

28. Further, if the option that is the most cost-effective is likely to result in significant public opposition, and therefore years of litigation, this may not be cost effective either. If the Council clearly sets out the reasons for considering additional factors, what regulatory regime they apply to, and how they tie into cost-effectiveness, it can defend its decision.

Select Committee recommended legislation wording

cost-effective, in relation to the delivery of infrastructure and public services, and the performance of regulatory functions, means ensuring that the public receives value for money by—

(a) using resources effectively, economically, and without waste; and

(b) taking into account the total costs and benefits of any decision or action

Wastewater Environmental Performance Standards

Came into effect **December 2025**

For discharges to water

- Dilution categories based on mixing
- Periphyton risk assessment for “hard bottomed” rivers
- Limits for contaminant
- Exception for “pristine environment”

Contaminant	Unit and statistic	Lake	River – Very low dilution	River – Low dilution	River – Moderate dilution	River – High dilution
cBOD5	mg/l, Annual median	15	5	10	15	20
TSS	mg/l, Annual median	15	5	10	15	30
Total N	mg/l, Annual median	10	4	5	10	35
Total P	mg/l, Annual median	3	0.5	1	5	10
Ammoniacal N	mg/l, 90th %	3	1	1	3	25
Ecoli	cfu/100ml, 90th %	3,250	130	650	3,250	16,250

For discharges to land

- Rapid or slow infiltration categories (<6m/year)
- Land classes based on soil type, drainage, climate, slope, ground water depth and plant uptake
- Limits for TN and TP
- Exceptions for some land types, discharges from bypasses, wetlands, to crops, or from oxidation ponds
- Not applicable to soak holes and deep bores

Land application requirements for Shotover WWTP

- Land assumed to be Class 2 and an application rate of 25 mm/day
- Nutrient limits likely to be 250 kg TN/ha/yr and 50 kg TP/ha/yr

Design basis

Parameter	Current - as at 2024	Future - 2060
Usual Population	49,000 people	95,000 people
Peak Population	72,000 people	141,200 people
Average Dry Weather Flow	12,000 m^3/day	26,000 m^3/day
Peak Dry Weather	15,900 m^3/day	31,000 m^3/day
Peak Wet Weather	32,700 m^3/day	60,000 m^3/day

26,000m^3 average day

- 10 Olympic pools every day
- 300 litres per second all day every day
- If spread ankle deep (100 mm)
  - cover 26 hectares or about 37 rugby fields
  - over a year this would be 52 times the average annual rainfall for this area
- 0.15% of the average Kawarau River flow

60,000 m^3 peak day

- 24 Olympics sized pools for a peak day
- 700 litres per second all day and night
- If spread ankle deep (100 mm)
  - cover 60 hectares or about 85 rugby fields
  - this depth is equivalent to two months worth of rain for the area in just one day

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What disposal methods are there?

Discharge to land

High-rate	✓	Highly permeable soils via infiltration basins and trenches.
Moderate-rate	✓	More moderate loading to match soil infiltration capacity.
Low-rate	✓	Subsurface drip or similar; dependent on soil geology.
Spray irrigation	✓	Sprayed over land for soakage, evaporation and plant uptake.

Discharge to water

Land flow path	✓	Overland / subsurface flow path conveying treated water to a river or lake.
Direct pipe	✓	Pipe discharge to river or water body; may include diffuser.
Rock filter	✓	Flow through rock media before discharge to water.
Surface wetland	✓	Shallow ponded wetland treatment via biological processes.
Sub-surface wetland	✓	Flow through gravel media beneath planted wetland surface.

Discharge to groundwater

Deep bores	✓	Injection into groundwater via deep wells.
Shallow injection	✓	Shallow wells or trenches to promote infiltration.

Other reuse / infrastructure options

Potable reuse	×	Advanced treatment before introducing to drinking water supply.
Relocation	×	Rebuild WWTP at an alternative site.
Non-potable reuse	✓	Irrigation, process water, dust suppression and similar uses.

[Shotover WWTP Disposal Options]

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Things to consider for discharges to land

Discharges to land

- **Land suitability**
  - Soil type, soil profile and properties
  - Slope and geotechnical stability
  - Nutrient uptake potential and seasonal constraints
- **Groundwater and surface water protection**
  - Potential for preferential discharge paths
  - Groundwater mounding and aquifer changes
  - Environmental impact on lakes, rives, and wetlands
- **Cultural alignment and community acceptance**
  - Surrounding land use and land zoning
  - Buffer distances and public health
- **Operational complexity and storage requirements**
  - Peak flows, storage availability and total land area
  - Disposal network and vegetation management

How much land is needed for land disposal?

Disposal method	Irrigation Rate	Advantages	Disadvantages	Approximate Land area required (2060)
Rapid infiltration basins or trenches	High rate	• Smaller area	• Impacts to ground water levels and flow which can cause land instability • Needs highly permeable ground	**10 – 20 ha**
Trenches, beds or similar	Moderate rate	• Suitable in less permeable soils compared to high rate	• Relatively large land area required • Storage needed when irrigation not possible • Not suitable in silty or clayey soils	**70 ha +**
Subsurface drip or similar	Low rate	• Suitable for broad range of soils and conditions • Lower risk of groundwater impacts and improved nutrient uptake • Larger range of uses (eg, sports fields, parks)	• Very large area required • Infrastructure requirements, potentially including storage to buffer wet conditions and/or high flows • Unlikely to be suitable in clayey soils	**600 ha +**
Spray irrigation	Low rate	• Above ground infrastructure for ease of maintenance	• Not suitable in winter due to low temps. • Less suitable in high wind areas	**600 ha +**

What possible disposal locations are there?

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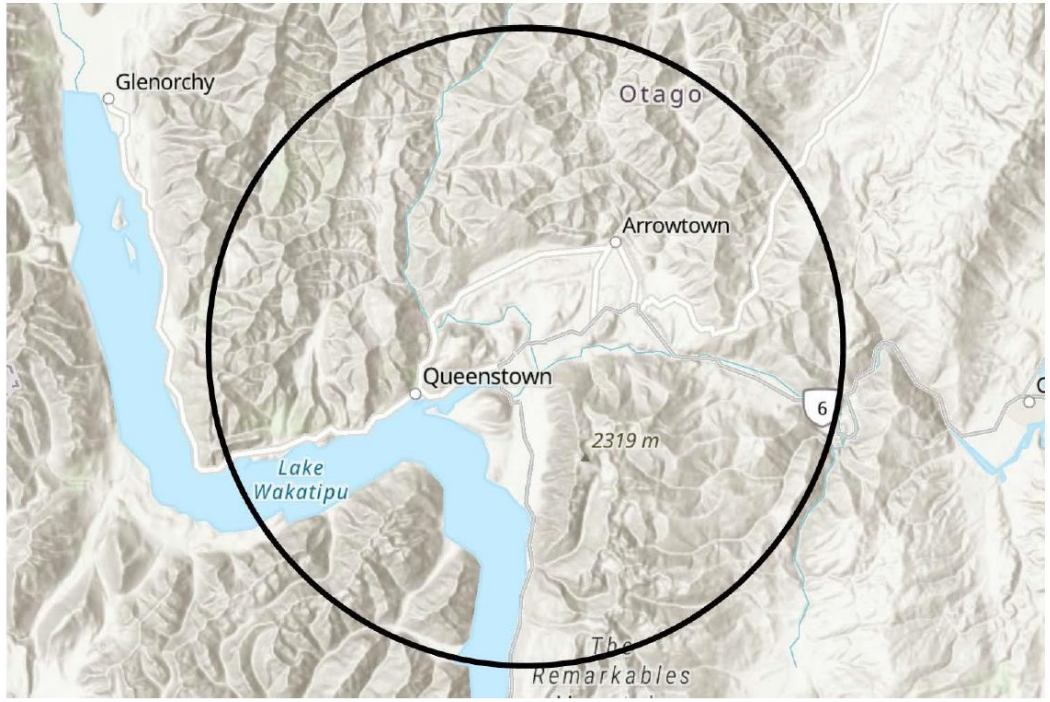
Constraints scoring and mapping

Scores of 1 – 100 or 999 given to land parcels based on level of constraint for each aspect.
Scores cumulated and mapped

Aspect	Reason for constraint
Lake Hayes or Lake Wakatipu catchments	Ecological impact and recreational water body contamination
Water supply catchment	Contamination risk
Distance from WWTP	Greater distance leads to increased operating costs. Constrained to <25km
Soil permeability	Low permeability soil not suitable
Soil type	Rock/schist unsuitable
Residential and industrial property	Considered unsuitable
Elevation change	Pumping up hill has greater operating costs.
Slope	Greater than 20deg not suitable for land application
Road and buildings	Setbacks of 5m and 50m applied
Active fault lines	Constraint score of 50 applied
Parcel size	>5ha no constraints



Land within 25 km radius of WWTP

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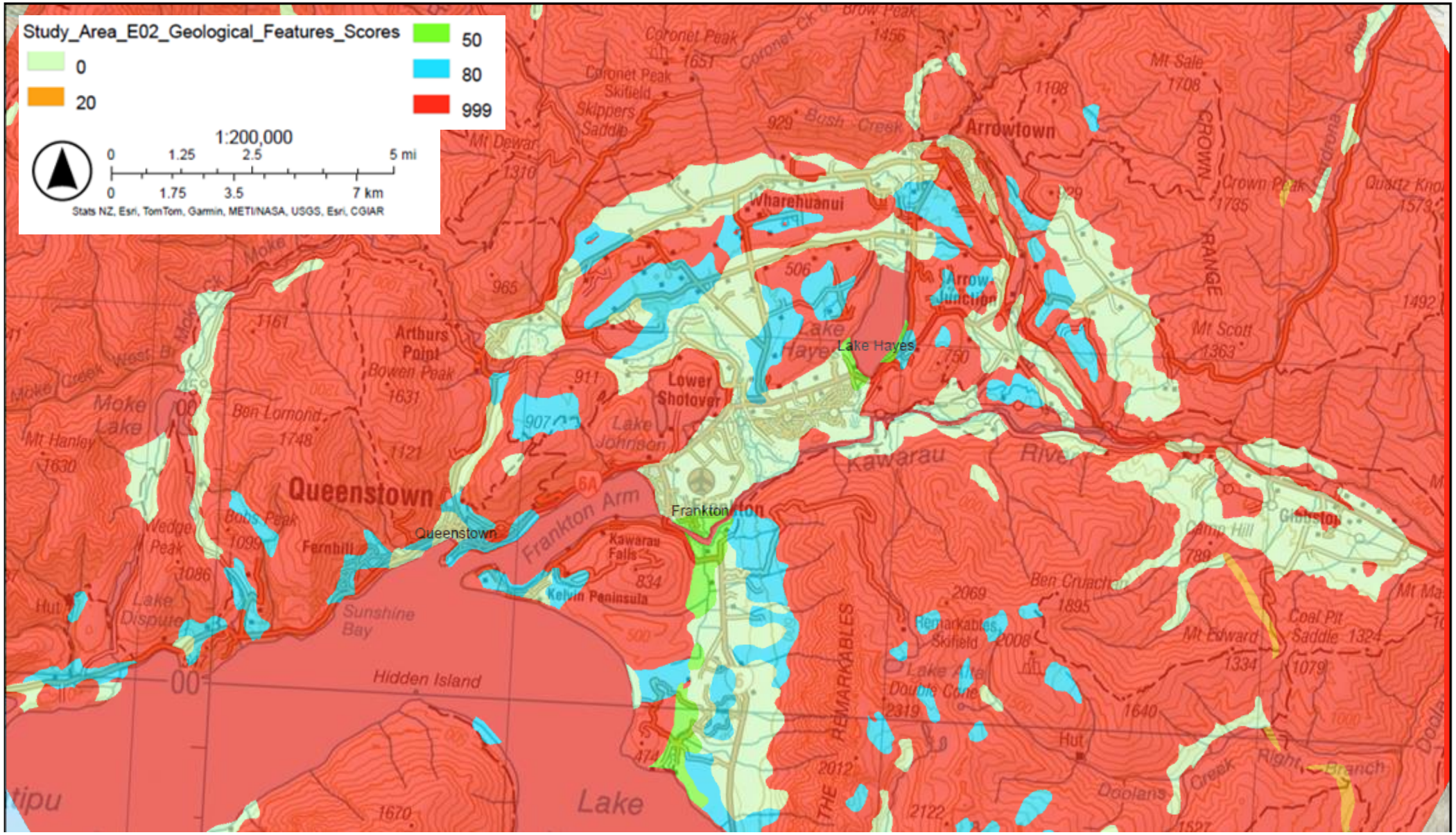
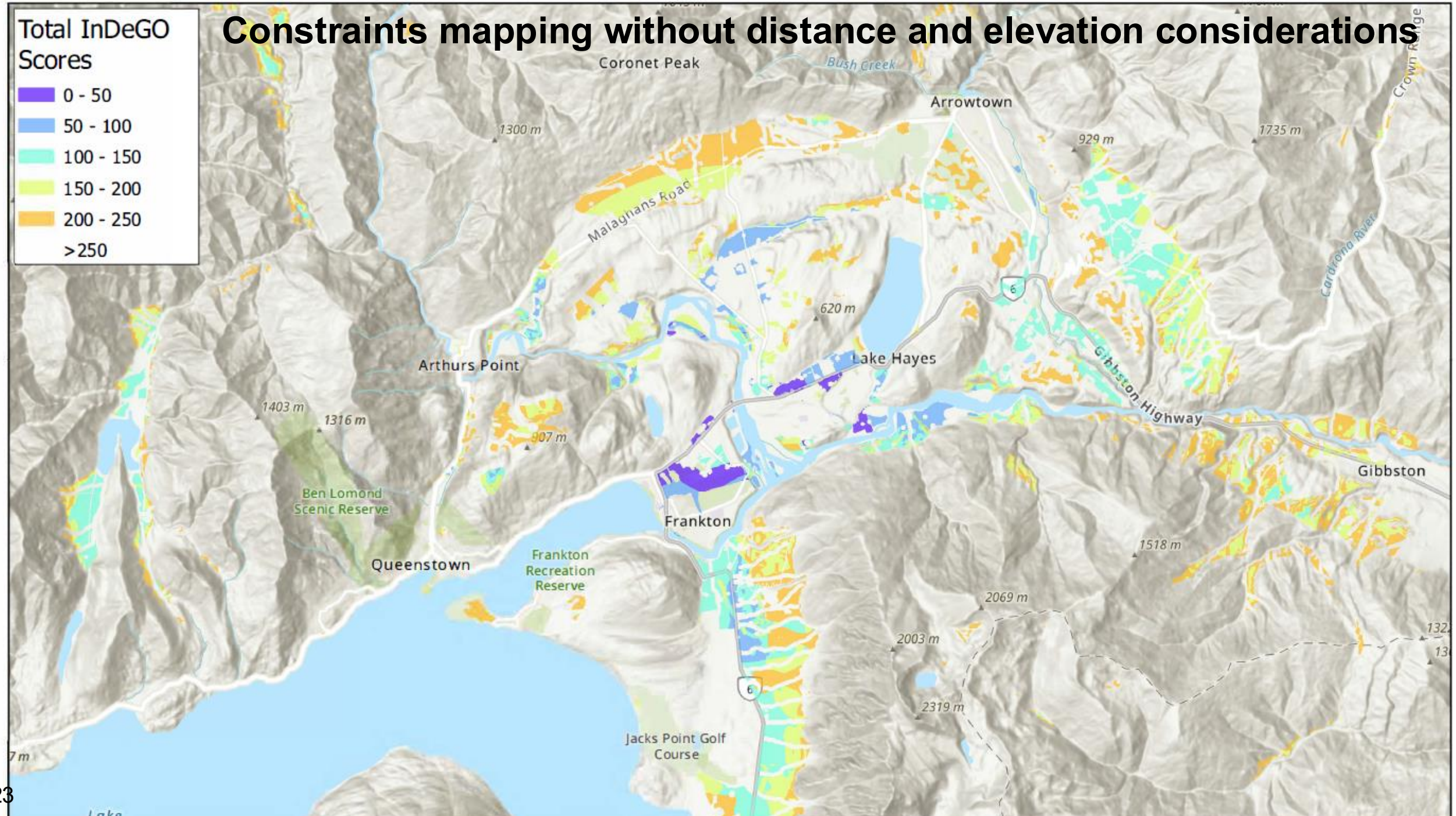
Geological constraints



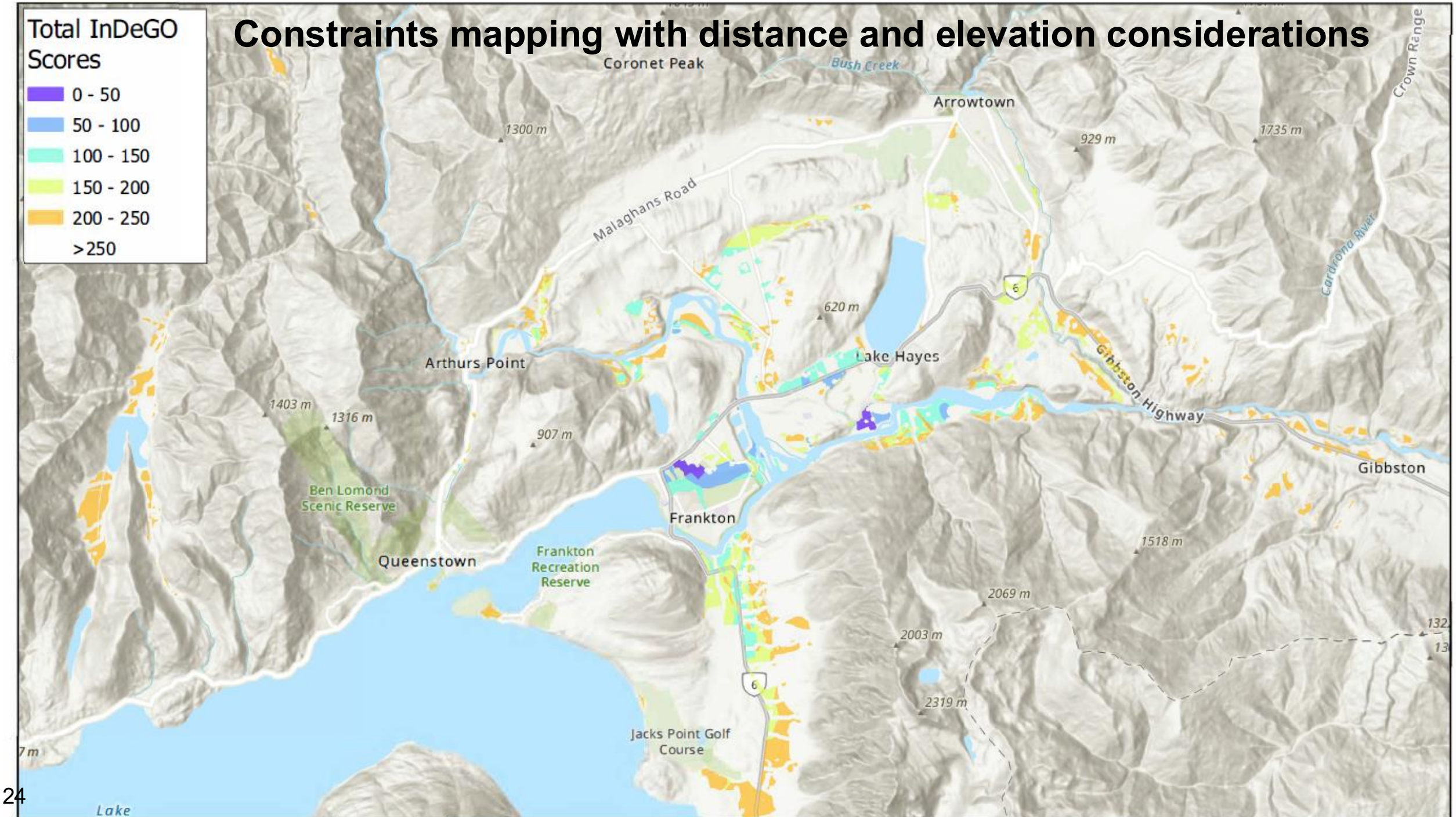
Red = Schist

500ha

Constraints mapping without distance and elevation considerations



Constraints mapping with distance and elevation considerations



Things to consider for discharges to water

≈ Discharges to water

- Mixing and water quality outcomes
- Management of human health effects
- Impacts on access, use, and culture

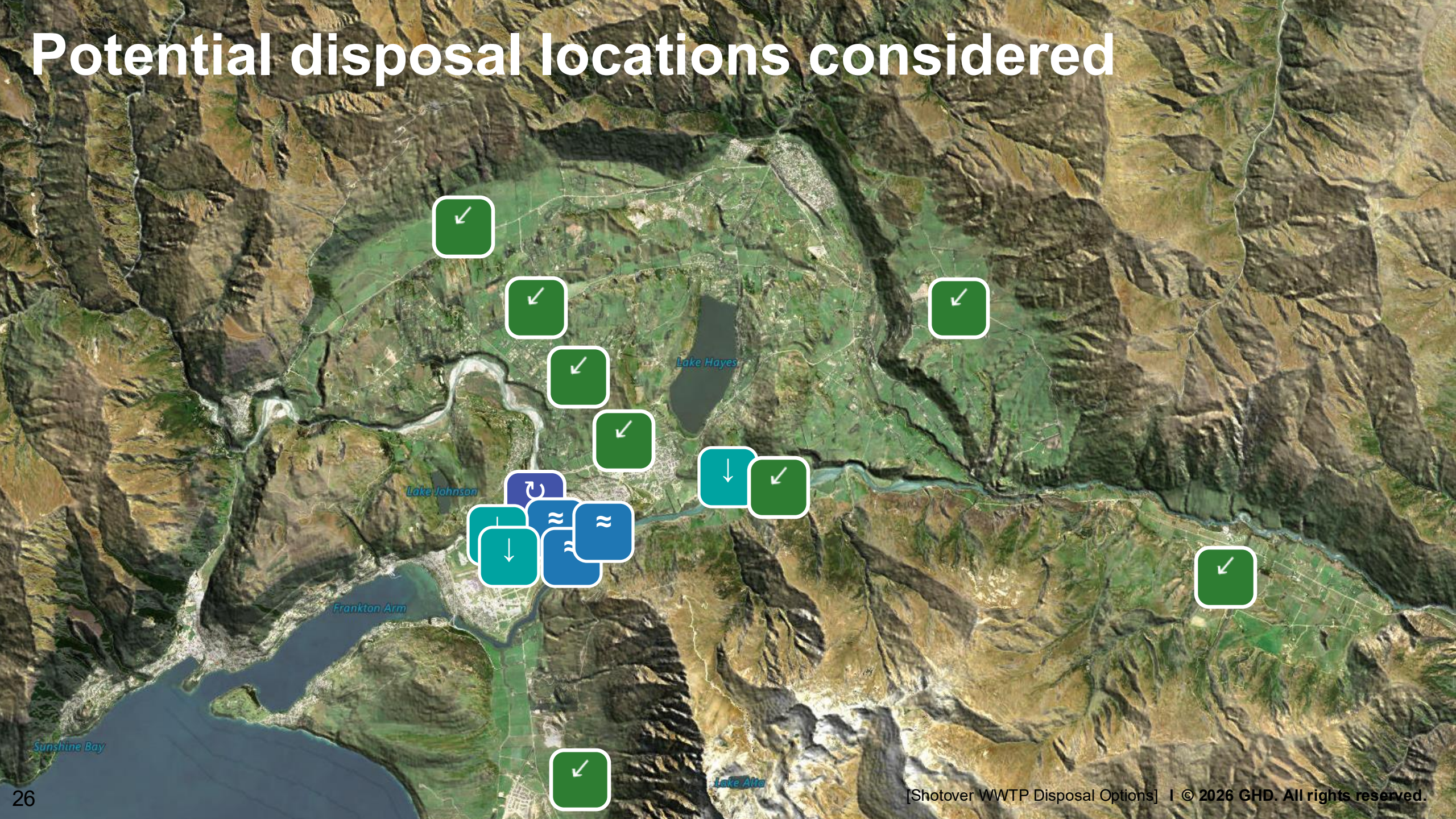
↓ Discharges to ground water

- Capacity of soil and aquifer
- Impacts on ground water levels, flow, and use
- Risks to surface water quality and geotechnical

Each of these methods :

- Possible additional treatment to manage effects and risk
- Ability to meet regulatory effects thresholds for consenting

Potential disposal locations considered



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Long list options assessment summary

	Option	Technical Complexity to build	Complexity of Operation	Land Area Required	Indicative Cost (range $20M to $250M)
	Do nothing, continue using the existing disposal field	**Not considered a viable or acceptable long-term option**			
1a	High-rate land disposal using infiltration basin on the Shotover delta			10 ha	$$$$
1b	High-rate land disposal using trenches on the Shotover delta			25 ha	$$$$$
2a	Moderate rate land disposal at Frankton / Airport			70 – 90 ha	$$$$$
2b	Moderate rate land disposal at the Southern corridor			70 – 90 ha	$$$$$
2c	Moderate rate land disposal on land across the Shotover or Kawarau River			70 – 90 ha	$$$$$
3a	Low-rate disposal to Doc land			400 – 500 ha	$$$$$$
4a	Land flow path to the Shotover River			N/A	$
4b	Land flow path to the Kawarau River			Discreet points across the area	$
5a	Deep well injections at Frankton			Discreet points across the area	$$$
5b	Deep well injections at Bridesdale			Discreet points across the area	$$$$
6	Shallow well injections on the Delta			Discreet points across the area	$$$
7	Subsurface Wetland on the Delta			Up to 10 ha (could be less)	$$$
8	Well Point or Soak holes at Frankton			Discreet points across the area	$$$ Assumes no land purchase

How long list options were evaluated

The process

- Workshop to develop MCA framework with QLDC and iwi reps — 12 December 24
- Presentation of long list options to QLDC and iwi reps — 25 February 25
- Initial scoring assessment by MCA leads — March 25
- MCA scoring workshop with QLDC and iwi reps — 13 March 25
- Peer reviewed — October 25

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MCA Framework

Investment Objectives

1. The health and well-being of the surrounding waterways are maintained, protected and improved where practicable to support water quality
2. The disposal of treated wastewater aligns with tikanga as guided by mana whenua
3. Ability to service the community's and visitor wastewater needs now and into the future up to the equivalent flows projected for 2060

Critical success factors

Environmental & Social Impacts

1. Mō tātou, ā, mō kā uri ā muri ake nei / For us and our children after us.
2. Cultural impacts to sites of significance and access to sites for cultural activities.
3. Impacts to the surrounding environment.
4. Environmental impacts to surrounding catchment land, soil and groundwater.
5. Visual effects
6. Amenity effects

Design, Delivery & Operations

1. Constructability and technical feasibility
2. Sustainability
3. Operational reliability and maintainability
4. Property difficulties and impacts
5. Implementation timeframe
6. Costs and affordability

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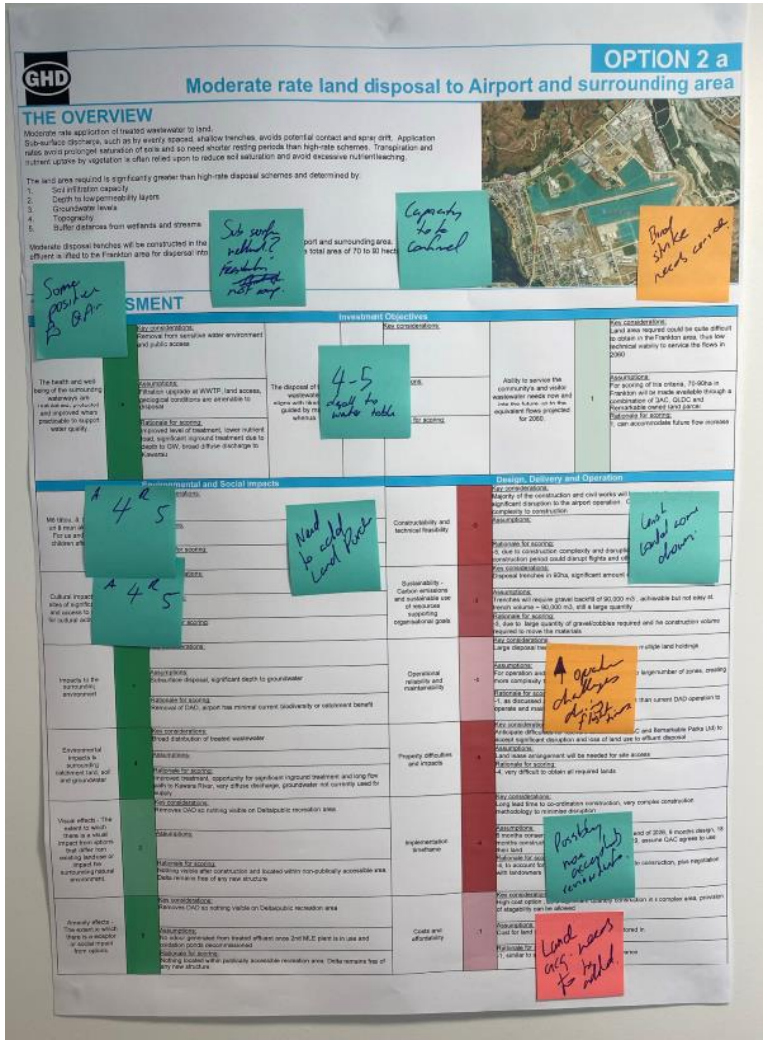
MCA scoring for long list options

An 11-point scoring system used to assess options against the MCA criteria, with input from attendees in an interactive workshop

Score	Scoring Description
5	Substantial benefits and a high degree of confidence of benefits being realised and/or long term / permanent benefits
4	High extent of benefits and confidence of benefit being realised and/or medium - long term benefits
3	Good benefits and/or medium term
2	Low or localised benefits and/or short term
1	Very low benefits and/or very short term
0	**Base case -** The current solution, DaD if it were working as intended and meeting the consent requirements
-1	Few difficulties, very low cost or low impact on some resources/values and/or very short term
-2	Minor difficulties, low cost or minor impacts on resources/values and/or short term
-3	Some difficulties, moderate cost or some impact on resources/values and/or medium term
-4	Clear difficulties, high cost or high impact on resources/values and/or medium - long term
-5	Substantial difficulties, very high cost or substantial impact on resources/values and/or long term / permanent



Long list MCA assessment

Option	Investment Objectives			Social and Environmental Factors						Critical Success Factors							
	IO1	IO2	IO3	S&E1	S&E2	S&E3	S&E4	S&E5	S&E6	CSF1	CSF2	CSF3	CSF4	CSF5	CSF6	Shortlisted	
Base case (as intended under consent conditions)	0	FF	-1	FF	FF	0	0	0	0	0	0	-1	0	0	0	No	
Base case (as disposal field is currently performing)	-4	FF	FF	FF	FF	-3	-3	-3	-3	-3	-2	-3	0	-5	-3	No	
1a – High-rate land disposal on Delta infiltration basins	2	FF	1	FF	FF	-2	2	-2	-2	-3	-3	0	-2	-2	-4	No	
1b – High-rate land disposal Delta trenches	3	FF	1	FF	FF	-2	2	-2	-3	-3	-3	0	-2	-2	-5	No	
2a – Moderate rate land disposal Airport	4	4	1	4	4	4	4	2	3	-4	-2	-2	-4	-2	-5	Yes – supplementary with option C+D	
2b – Moderate rate land disposal Southern corridor	0	-4	1	-4	-3	2	0	-1	-1	-4	-4	-1	-3	-4	-3	No	
2c – Moderate rate land disposal alternate locations	3	-3	0	-4	-3	2	3	-1	-1	-5	-5	-3	-3	-5	-5	No	
3a – Low-rate disposal Coronet Peak	4	-4	-3	-4	-1	0	4	-3	-3	-5	-4	-4	-3	-2	-5	No	
4a– Land flow path to river Shotover	-1	FF	1	FF	FF	0	1	2	2	1	2	2	0	1	2	Yes – only as current case for scoring	
4b – Land flow path to river Kawarau	2	FF	2	FF	FF	2	2	1	1	2	1	1	0	1	2	Yes – do minimum	**A**
5a – Deep well injection Frankton	3	-4	2	-4	-3	3	3	2	3	No score	-1	-2	-1	-2	0	Yes	**C**
5b – Deep well injections Bridesdale	2	-3	2	-3	-2	3	2	2	3	No score	-3	-2	-1	-5	-2	No	
6a – Shallow well injections on Delta	2	FF	2	FF	FF	2	2	1	2	No score	-1	-2	0	-2	1	No	
7a – Subsurface Wetland on Delta	3	FF	2	FF	FF	2	3	2	1	2	-1	1	0	0	0	Yes – supplementary with option A	**B**
8a – Soak holes Frankton	3	5	1	5	5	3	3	2	3	No score	-1	-2	-1	-2	0	Yes	**D**

Summary of short listed options

	Option A	Option B	Option C	Option D
Discharge	Discharge to water	Discharge to water	Discharge to land	Discharge to land
Long list number	4(b)	7(a)	5(a) + 2(a)	8(a) + 2(a)
Method	Land flow path to Kawarau River	Subsurface wetland and land flow path to Kawarau River	Boreholes at Frankton Irrigation to sports fields	Soakholes at Frankton Irrigation to sports fields
Common to all options	**Tertiary filtration** to improve water quality Supplementary disposal using **recycled water reuse** for dust suppression, process water, etc Treated water **calamity pond** (separate project) required Dec 2027 by Enforcement Order **UV treatment upgrades** to existing system to meet future flow. Current system has capacity up to 2040			

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The Short List

- Technical Investigations
- Investigations
- Modelling results
- Options refinement

What we learned about Frankton Flats disposal

Land availability

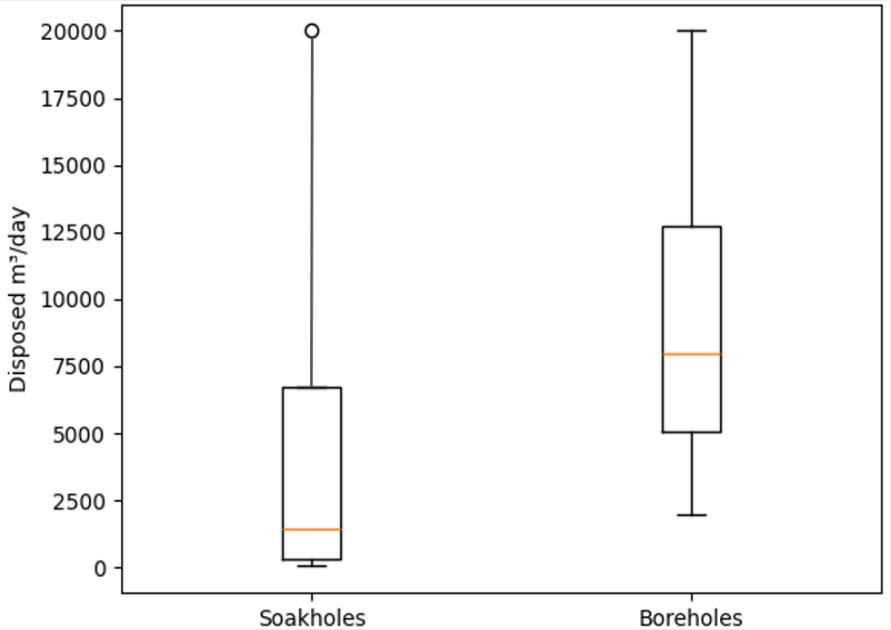
- Highly constrained and limited land available
- QAC and QEC consulted with
- Aviation safety concerns

Investigations

- Need to know ground water flow and impact on lake
- Stability of river bank needs to be understood
- 12 – 18 months of data needed
- Not enough time for bore hole drilling so modelling undertaken
- Staged approach needed to allow for trial

Modelling results

- Modelled a range of scenarios
- Natural groundwater recharge about 1500m^3/day
- Boreholes more likely to be able to have capacity than soakholes



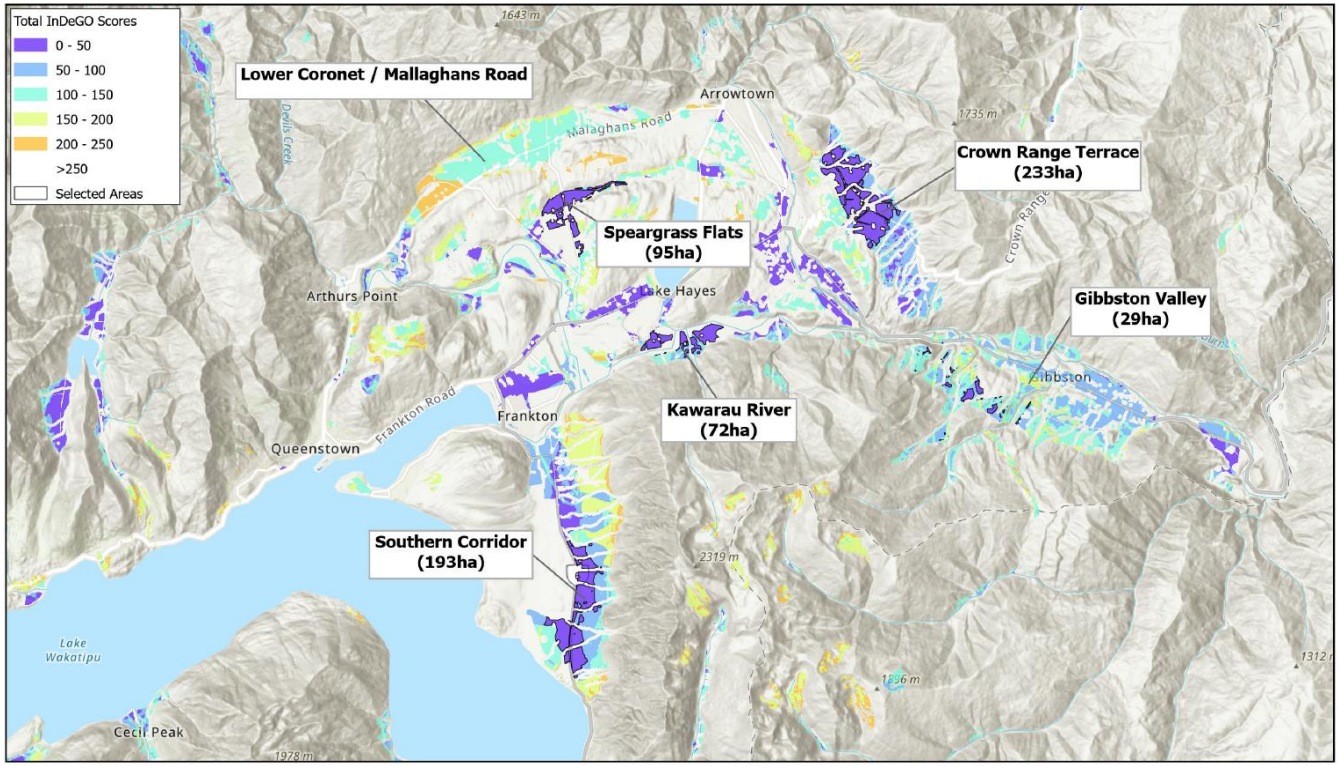
- 25% probability of a disposal rate of 12,500 m^3/day for boreholes
- 13% probability of a disposal rate or 12,500m^3/day for soakholes

What does this mean?

- A staged response in needed
- Unlikely to discharge fully to land

Option E – Land disposal to Crown Terrace

- Added in after peer review of the short list process and following further land disposal assessment
- Areas considered included Gibbston Valley, Speargrass Flats, Southern Corridor, near Kawarau River.
- Crown Range Terraces provide adequate connected land area, at the lowest level of constraint for an exclusively land only disposal option
- Avg application rate 12.5 mm/day with resting
- Land required 288 ha
- 15km pipeline
- 360 m elevation gain



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5 Short List Disposal Options - Overview

Short list options assessment summary

Parameter	Option A	Option B	Option C	Option D	Option E *
Method	Land flow path to Kawarau River	Subsurface wetland and land flow path to Kawarau River	Boreholes at Frankton and irrigation to sports fields	Soakholes at Frankton and iIrrigation to sports fields	Land disposal to the Crown Terrace
Refinements	Outfall design refinement needed for mixing		Cannot dispose full 2060 volume. Staged. Requires river discharge	Cannot dispose full 2060 volume. Staged. Requires river discharge	* Added following peer review after land disposal only options deemed unlikely to be stand alone
Capital Cost	**$38M to $45M**	**$70M to $80M**	**$126M to $145M**	**$150M to $170M**	**$575M to $675M**
Operating Cost per year	**$315k - $455k**	**$430k to $620k**	**$1.3M to $1.9M**	**$1.3M to $1.9M**	**$4.5M to $5.9M**
NPV	**$48M**	**$85M**	**$188M**	**$209M**	**$656M**

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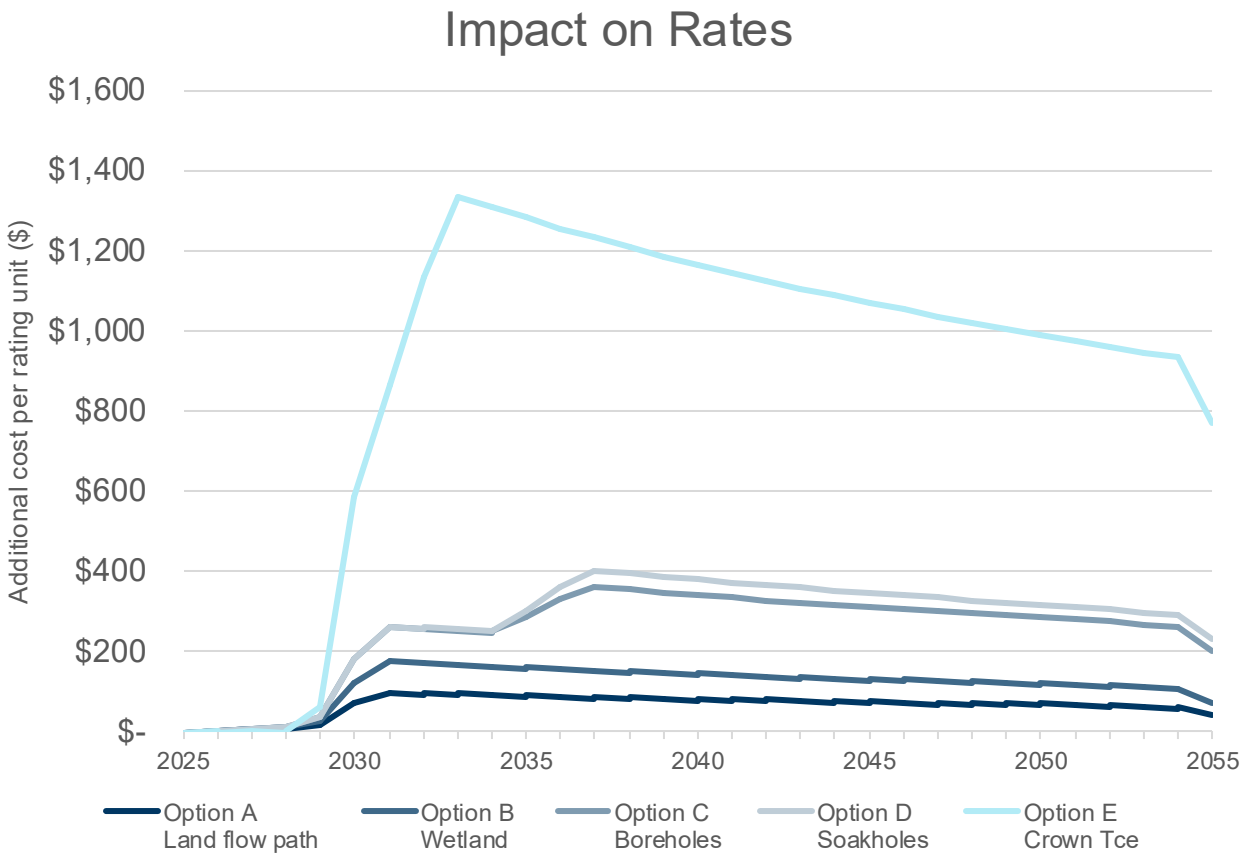
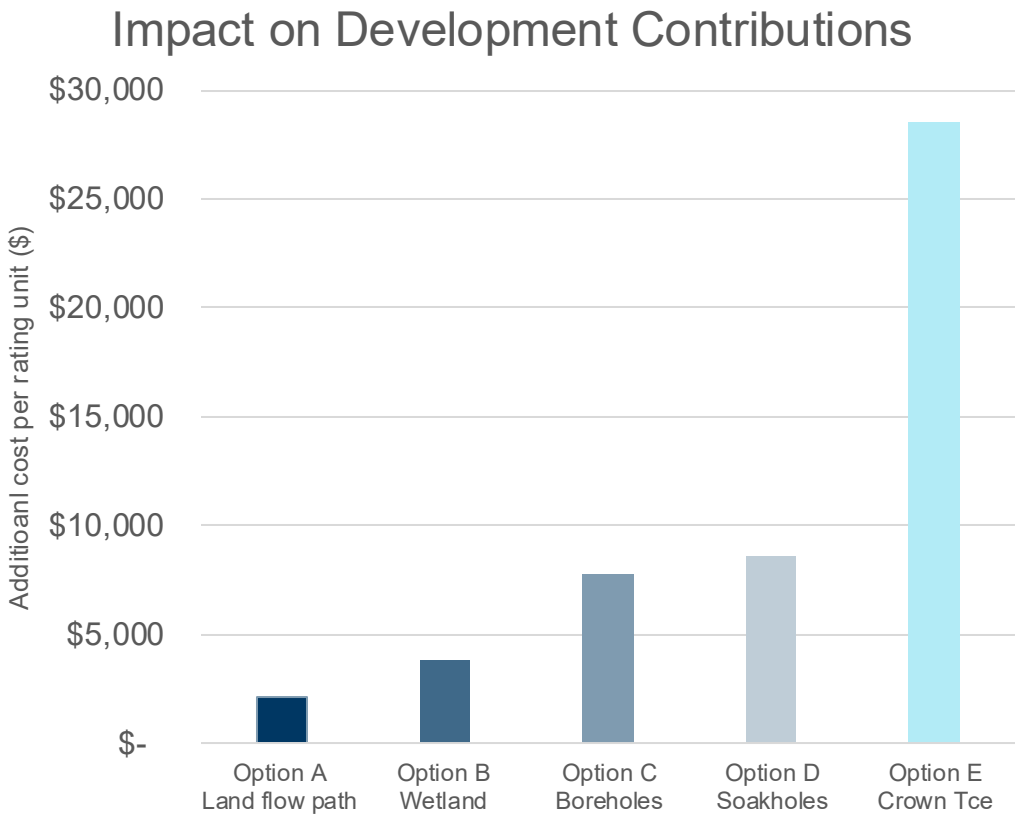
Rates Impact Assessment





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Short list MCA scoring framework

- Updates were made to MCA framework
  - Base case now the short-term discharge
  - Added additional critical success factors for
    - Ability to meet full 2060 flows
    - Consentability and implementation timeframe
- No fatally flawed score
- Scoring workshop held with QLDC staff
- No scoring was provided by Te Ao Marama and Aukaha.
- Iwi position statement provided

Table 17 MCA scoring system

Score	Scoring description – long list phase	Scoring description – short list phase
+ 5	Substantial benefits and a high degree of confidence of benefits being realised and/or long term / permanent benefits	Substantial benefits and a high degree of confidence of benefits being realised and/or long term / permanent benefits
+ 4	High extent of benefits and confidence of benefit being realised and/or medium – long term benefits	High extent of benefits and confidence of benefit being realised and/or medium – long term benefits
+ 3	Good benefits and/or medium term	Good benefits and/or medium term
+ 2	Low or localised benefits and/or short term	Low or localised benefits and/or short term
+ 1	Very low benefits and/or very short term	Very low benefits and/or very short term
0	Base case – the DAD disposal field as if it were working as designed and meeting the consent requirements.	Base Case - the current situation in which treated effluent is discharged to the Kimi-ākau/Shotover River via a discharge channel as emergency works
- 1	Few difficulties, very low cost or low impact on some resources/values and/or very short term	Few difficulties, very low cost or low impact on some resources/values and/or very short term
- 2	Minor difficulties, low cost or minor impacts on resources/values and/or short term	Minor difficulties, low cost or minor impacts on resources/values and/or short term
- 3	Some difficulties, moderate cost or some impact on resources/values and/or medium term	Some difficulties, moderate cost or some impact on resources/values and/or medium term
- 4	Clear difficulties, high cost or high impact on resources/values and/or medium – long term	Clear difficulties, high cost or high impact on resources/values and/or medium – long term
- 5	Substantial difficulties, very high cost or substantial impact on resources/values and/or long term / permanent	Substantial difficulties, very high and extremely high cost or substantial impact on resources/values and/or long term / permanent including effects which cannot be mitigated by reasonable measures and may not be able to be mitigated by extraordinary mitigation
FF	Fatally Flawed. Extreme difficulties, extremely high cost or substantial impact on resources/values and/or long term / permanent which cannot be mitigated by reasonable measures and may not be able to be mitigated by extraordinary mitigation	N/A

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Short list MCA scores

October 2025

Criteria	**Base Case** Current short-term discharge to Shotover River	**Option A** Land flow path to Kawarau	**Option B** Wetland + land flow path to Kawarau	**Option C** Boreholes at Frankton (+ Option B)	**Option D** Soakholes at Frankton (+ Option B)
Investment objectives					
The health and well-being of waterways	0	2	2	3	3
Alignment with tikanga	No score	No score	No score	No score	No score
Ability to service future wastewater needs	0	2	2	2	2
Environmental and social impacts					
For us and our children after us	No score	No score	No score	No score	No score
Cultural impacts	No score	No score	No score	No score	No score
Impacts to the surrounding environment	0	2	2	2	2
Environmental impacts	0	2	2	1	1
Visual effects	0	-1	0	-1	-2
Amenity effects	0	0	1	1	1
Impacts to the surrounding environment					
Constructability and technical feasibility	0	0	0	-2	-3
Sustainability	0	-1	-2	-4	-4
Operational reliability and maintainability	0	1	0	-2	-3
Property difficulties and impacts	0	0	0	-2	-3
Achievability of Indicated outcomes	0	2	2	-3	-4
Consent, design, construction, and implementation timeframe	0	1	-1	-3	-3
Costs and affordability	0	-1	-2	-4	-5

Sensitivity scoring analysis

Scenario	Option A Land flow path to river via Kawarau	Option B Wetland on Delta + Land Flow Path to Kawarau	Option C Boreholes at Frankton (+ Option B)	Option D Soakholes at Frankton (+ Option B)
Scenario 1 Investment Objectives focused	1st	2nd	3rd	4th
Scenario 2 Effects focused	1st	2nd	3rd	4th
Scenario 3 Water quality and environment focused	1st	2nd	3rd	4th
Scenario 4 Iwi outcomes focused*	No scoring provided for criteria relating to Kai Tahu values – Scenario not used			
Scenario 5 Implementability focused	1st	2nd	3rd	4th
Scenario 6 Even weighted	1st	2nd	3rd	4th
Scenario 7 National water standards and cost focused	1st	2nd	3rd	4th

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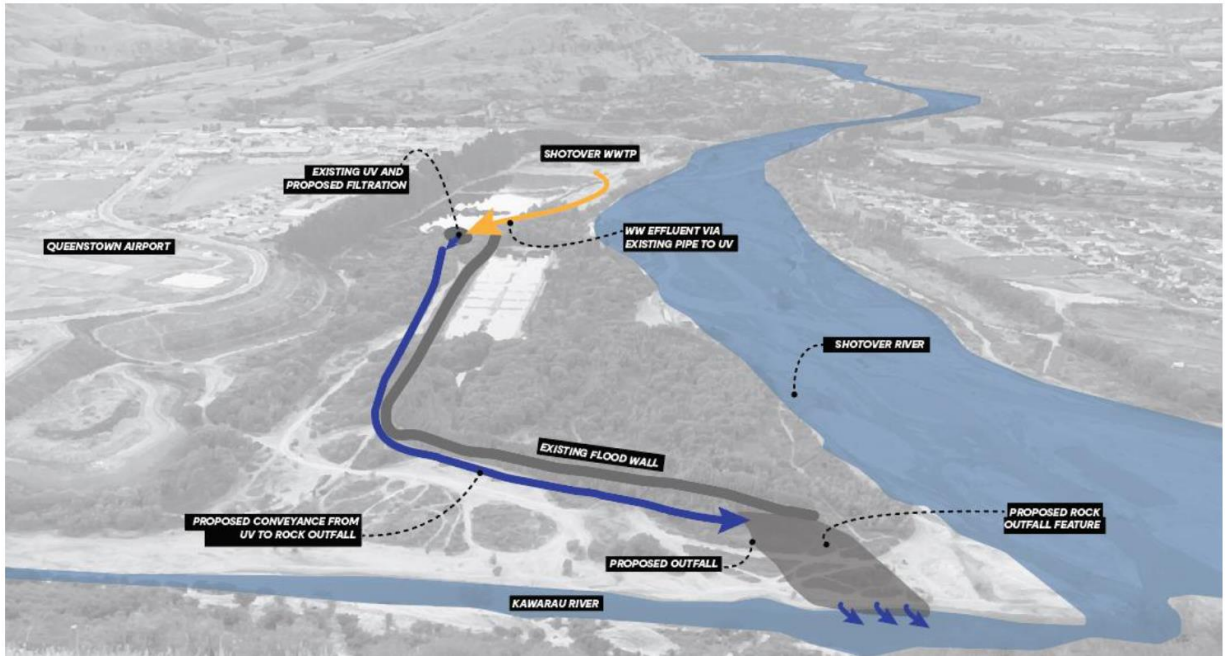
Technically Preferred Option – Option A

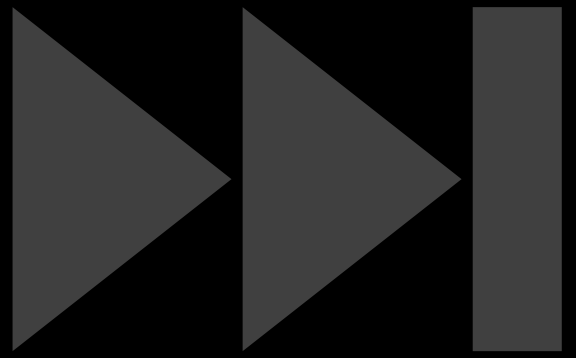
Option A – Discharge to the Kawarau River

- Greater certainty for accommodating future flows
- Lowest risk, simplest design and operation
- Leverages existing QLDC Land and designation
- Lowest capital, operating and WOL Costs
- Achievable within timelines set down in Enforcement Order
- Improved environmental outcomes from current and previous discharges
- Able to accommodate future treatment upgrades



Since the preferred option selection

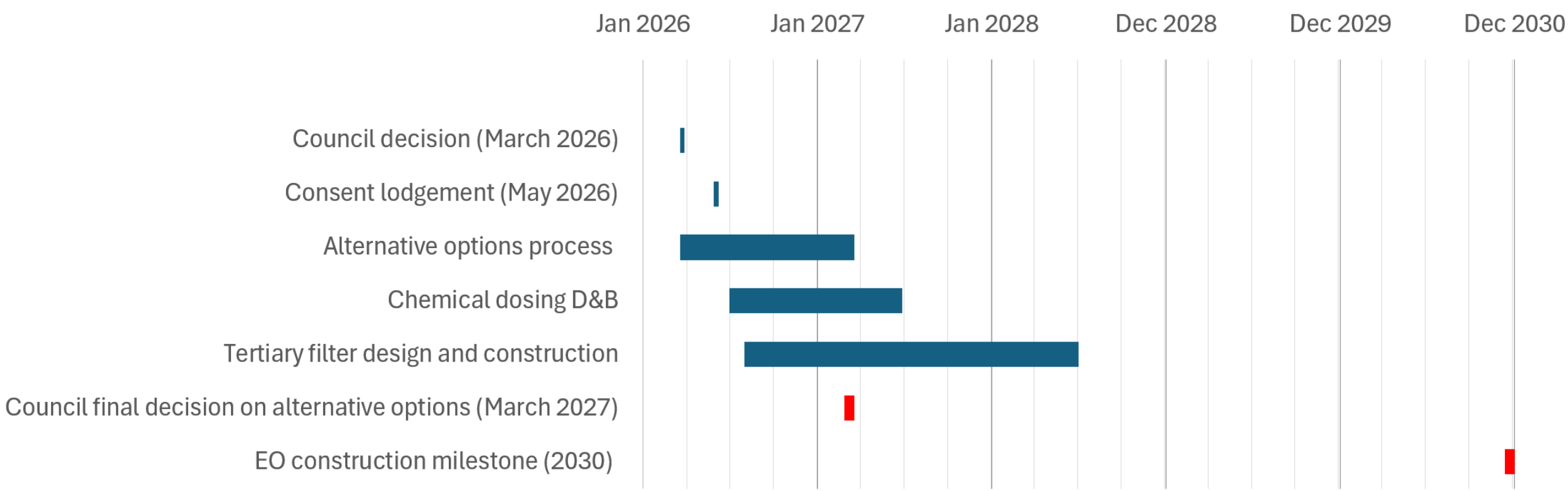
October 2025 to July 2026



Since the preferred option selection

• Peer review of long list process	Oct 25
• Additional Land Disposal Assessment	Nov 25
• DaD disposal assessment	Nov 25
• Full Council Workshop – Short List Briefing	4 Dec 25
• Community drop-in sessions held x3	Dec/Jan 26
• Peer review short list process	Feb 26
• WEPS impact report	Feb 26
• Outfall Options report	Feb 26
• Calamity Pond interfaces report	Feb 26
• Councillors meeting on Short List Options	19 Feb 26
• Council decision meeting	19 Mar 26
Decision to proceed with preferred option with resolution to investigate alternative options and for a final Council decision in March 2027	
• AEE assessment, ecological assessment, river bathymetry modelling	Mar/Apr 26
• Preliminary design for consent application	Mar/Apr 26
• Consent lodged	29 May 26

Next steps – to be operational by 2030



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* Thank you

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