

Item 2: Aquatic Pools LPG Conversion Projects

SESSION TYPE: Briefing

PURPOSE/DESIRED OUTCOME:

Briefing to provide Community & Environment Committee members with an overview of the LPG boilers Energy Conversion for the three aquatic centres:

- Arrowtown Memorial Pool
- Alpine Aqualand (Queenstown Events Centre)
- Wānaka Recreation Centre

The session is intended to support Committee members' understanding and enable questions and discussion. No direction is sought at this stage.

DATE/START TIME:

Thursday, 23 April 2026 at 11:30AM

TIME BREAKDOWN:

Presentation: 15 minutes


Questions: 15 minutes

PRESENTERS:

Ken Bailey – Community Services General Manager, QLDC

Greg Rozen – Programme Director, QLDC

Prepared by:



Name: Greg Rozen

Title: Programme Director

16 April 2026

Reviewed and Authorised by:



Name: Ken Bailey

Title: GM - Community Services

15 April 2026

ATTACHMENTS:

A	Workshop Presentation Slides
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Community & Environment Committee Workshop

Project: QLDC Aquatic Centres Decarbonisation (LPG Conversion)
Date: 23rd April 2026
Presented By: Kenneth Bailey, Greg Rozen

Council direction to date

2018

- Initial investigations into pool energy systems
- LPG identified as high cost / high emissions

30 June 2022

- Climate & Biodiversity Plan adopted
- Direction to decarbonise aquatic facilities

Jun-Sep 2024

- LTP 2024–34 adopted
- Funding approved for energy upgrades programme

2025 - 2026

- Programme mobilised and moving into delivery

“Council has set the direction and funded delivery — this programme implements that direction”



What we've done to deliver on that direction

Progress

- Developed programme and investment case
- Assessed energy options across all sites
- Confirmed preferred approach per facility
- Advanced Arrowtown as first delivery project

How we are delivering it

- Specialist aquatic engineering input
- Site-specific solutions (not one-size-fits-all)
- Design–Bid–Build to control quality
- Procurement and delivery now underway



Alpine Aqualand (QEC Pools)

Largest site – biggest financial and carbon impact

Option Selected

Electrification – air source heat-pump

Why this option?

- Delivers majority of programme benefits
- Proven, stable year-round performance
- Aligns with electrification strategy

Other Considerations

- Electrical upgrades required
- Integration with existing systems
- Short shutdown during changeover

Options

Considered

- Biomass boiler
- Wastewater heat recovery
- Electrification
- Retain LPG boilers

~\$4.4M
investment

~\$620k/year
savings

~80% emissions
reduction

High complexity site – strong emissions reduction

Option Selected

Electrification – air source heat-pump

Why this option?

- Significant carbon reduction
- Lower operational issues than biomass
- Future-aligned with electrification

Other Considerations

- Winter performance factored
- Electrical capacity upgrades
- Longer shutdown planning in train

Options

Considered

- Biomass boiler
- Electrification
- Retain LPG boilers

~\$4.4M
investment

~\$110k/year
savings

~67% emissions
reduction

Quick win – low cost, fast delivery

Option Selected

Electrification – air source heat-pump

Why this option?

- Simple, proven solution
- Fastest to deliver
- Immediate emissions reduction

Other Considerations

- Visual / noise considerations
- Electrical upgrades required
- Smaller financial return (small site)

Options

Considered

- Electrification
- Reinstall LPG boilers

~\$400K
investment

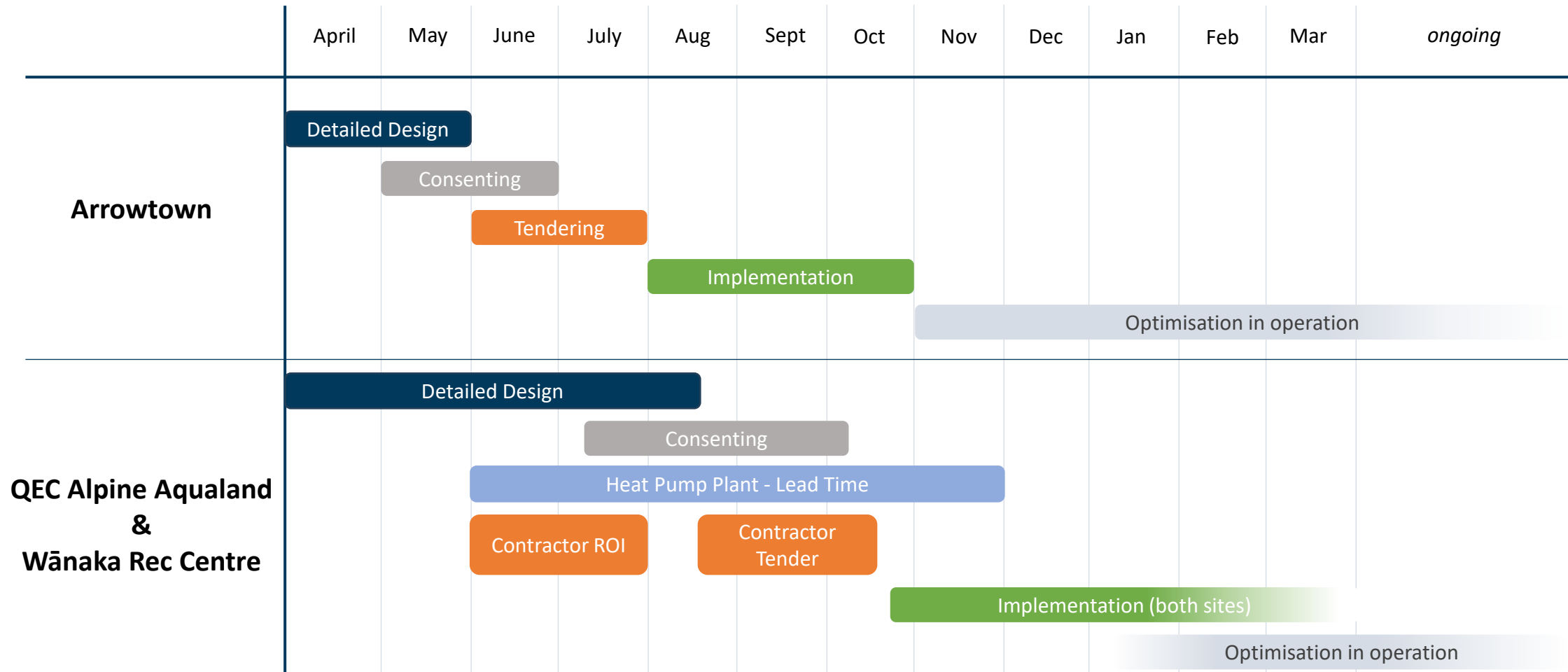
~\$15k/year
savings

~83% emissions
reduction

Summary

	Alpine Aqualand (QEC)	Wānaka Recreation Centre	Arrowtown Memorial Pool	Combined
Current LPG Systems				
Current Annual Emissions	1050tCO ₂ -e	360tCO ₂ -e	~20tCO ₂ -e	~1,430 tCO ₂ -e
Current Annual Energy Bill	\$1.02M	\$465k	~\$20k	~\$1.50M
Electrified Heat Pump Systems				
Annual Emissions	~210tCO ₂ -e	~120tCO ₂ -e	~4tCO ₂ -e	~334 tCO ₂ -e
Annual Energy Bill	~\$400k	~\$355k	~\$5k	~\$760k
Savings				
Proposed Annual Emissions Savings	~80%	~67%	~83%	75% (~1096 tCO₂-e)
Proposed Annual Energy Bill Savings	~\$620k	~\$110k	~\$15k	~\$745k

Project Programme



Next Steps



Detailed Design



Heat Pump plant
procurement for
WRC & QEC



Procurement of
Contractors

Arrowtown – Single-
stage tender
WRC & QEC – Open
market ROI followed by
selected tender



Changeover
sequencing and
shutdown
planning



Stakeholder
communications



Implementation
of new heating
solutions



**First-season
commissioning
and performance
optimisation**