

# Item 5: Aquatic Centre Decarbonisation (LPG Conversion)

**SESSION TYPE:** Workshop

**PURPOSE/DESIRED OUTCOME:**

The purpose of the workshop is to provide Councillors with an update on the LPG boilers Energy Conversion for the three aquatic centres:

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

The workshop will provide an update on the proposed heating systems and wider electrification planning progressed for Alpine Aqualand and the Wānaka pools. Direction will be sought around progressing into detailed design, and construction of either both, one, or none, given the funding gaps (from that allocated in the LTP), of the following two projects:

- Alpine Aqualand project
- Wānaka Recreation Centre project

**DATE/START TIME:**

Tuesday, 8 September 2026 at 12.00pm

**TIME BREAKDOWN:**

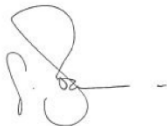
Presentation: 15 minutes

Questions: 15 minutes

**PRESENTERS:**

Simon Battrick – Strategic Projects Manager, Community Services, QLDC  
Greg Rozen – Programme Director, QLDC

**Prepared by:**



**Name:** Greg Rozen  
**Title:** Programme Director  
26 August 2026

**Reviewed and Authorised by:**



**Name:** Ken Bailey  
**Title:** GM- Community Services  
27 August 2026

ATTACHMENTS:

|   |                                                                       |
|---|-----------------------------------------------------------------------|
| A | Presentation Slides – Aquatic Centre Decarbonisation (LPG Conversion) |
|---|-----------------------------------------------------------------------|

# C & E Committee Workshop

**Project:** QLDC Aquatic Centres Decarbonisation (LPG Conversion)  
**Date:** 8 September 2026  
**Presented By:** Simon Battrick, Greg Rozen

# Purpose

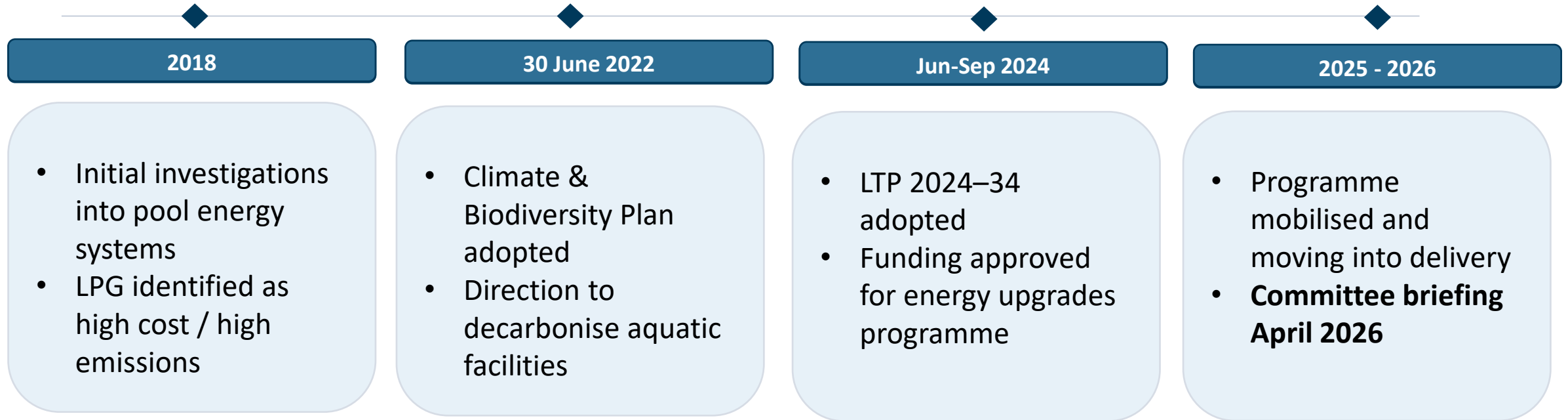
## Purpose

Provide an update to the committee on:

- **An Update on Arrowtown Pool**
- **Provide responses to previously asked questions**
- **Provide a progress update on the Wanaka and Alpine Aqualand projects**
- **Direction around funding and delivery timing**



# Council direction to date



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



# Progress - Arrowtown Pool

AUGUST 2026

## Current State: In Construction

- ✓ Consent granted in July 2026
- ✓ Contract awarded in July 2026
  - Contractor Hanlon's Plumbing and Pipe Services
- 🎯 Scheduled to be completed to meet season opening date on **1<sup>st</sup> December 2026**
- 🎯 Community communications – plans in place



# Updated investment and outcomes



## Alpine Aqualand (QEC)

| UPDATED ESTIMATE | CURRENT BUDGET | FUNDING GAP                       |
|------------------|----------------|-----------------------------------|
| <b>\$8.48m</b>   | <b>\$5.08m</b> | <b>\$3.40m (~\$1.7m enabling)</b> |



ANNUAL ENERGY-BILL SAVING  
**~\$620k p.a.**

EMISSIONS REDUCTION  
**~80%**

*Largest site — strongest financial and carbon benefit*



## Wānaka Recreation Centre

| UPDATED ESTIMATE | CURRENT BUDGET | FUNDING GAP    |
|------------------|----------------|----------------|
| <b>\$4.56m</b>   | <b>\$0.72m</b> | <b>\$3.84m</b> |



ANNUAL ENERGY-BILL SAVING  
**~\$110k p.a.**

EMISSIONS REDUCTION  
**~67%**

*Strong emissions benefit — lower financial return than QEC*

|                        |                |                 |                      |                                 |
|------------------------|----------------|-----------------|----------------------|---------------------------------|
| <b>\$13.04m</b>        | <b>\$5.80m</b> | <b>~\$7.24m</b> | <b>~\$730k</b>       | <b>~1,080 tCO<sub>2</sub>-e</b> |
| TOTAL UPDATED ESTIMATE | CURRENT BUDGET | FUNDING GAP     | ANNUAL ENERGY SAVING | EMISSIONS SAVING                |

Transformer capital excluded from project estimates on the current assumption that Aurora funds the network asset upgrade.

# Responses to previous questions

The alternatives raised in April have been assessed; the selected systems are future-ready and designed for alpine conditions.

## PREFERRED SYSTEM

### Why heat pumps

#### QEC / Alpine Aqualand

- Exhaust-air heat recovery provides the base load; air-source units top up.
- Existing plant suits heat pumps
- Lower electricity charges create a much faster payback.

#### Wānaka Recreation Centre

- Biomass was a close second.
- Higher electricity charges and pipework upgrades reduce the return.
- Future Solar Photovoltaic + Battery Energy integration and the electrification preference tipped the balance.

## OPTIONS TESTED

### What else was assessed

- **Ground-source** — ruled out at both sites because of capital cost and major sports-field disruption.
- **Wastewater heat recovery** — second-ranked at QEC, but higher capex, lower ROI and delivery risk.
- **Lake-water heating** — ruled out early because of the infrastructure cost to bring lake water to the sites.
- **Solar Photovoltaic + Battery Energy** — allowed for at both sites and recommended with heat pumps, but not included in current estimates.

## DESIGN OUTCOME

### How it will operate

- **Temperatures** — existing setpoints at QEC/Wānaka; Arrowtown maximum 29°C (Dec–Mar).
- **Cold climate** — low supply-water temperatures, redundancy and planned de-icing management.
- **Closures** — QEC: two under-one-week shutdowns. Wānaka: one under-one-week shutdown plus limited changing-room disruption. Arrowtown: winter closure only.
- **Maintenance** — routine work without pool closure; preventive maintenance is budgeted. Local expertise exists but is limited.

The preferred heat-pump systems remain robust, future-ready and deliverable with limited pool disruption.

# Responses to previous questions

Electrical infrastructure and future proofing — what is confirmed, and what remains under assessment.

## QUESTIONS ADDRESSED

Eight questions across two related areas.

### Electrical infrastructure

- Need for transformer upgrades
- Ownership and capital funding
- Ongoing network charges
- Enabling works versus energy conversion

### Future proofing

- Capacity for EV charging and solar
- Batteries and demand management
- Partnership and external funding

## CONFIRMED

### What Council can rely on

- **Demand:** Heat-pump conversion materially increases peak electrical demand and requires transformer upgrades at both sites.
- **Ownership:** Aurora will own and maintain the upgraded transformers as network assets.
- **Capital funding:** The current position is that Aurora will fund the transformer capital upgrade.
- **Future capacity:** The design allows future load growth using staged capacity thresholds, avoiding unnecessary capacity costs before they are needed.
- **Solar and batteries:** Remain viable future opportunities but are not required for the current heat-pump conversion.

## IN PROGRESS

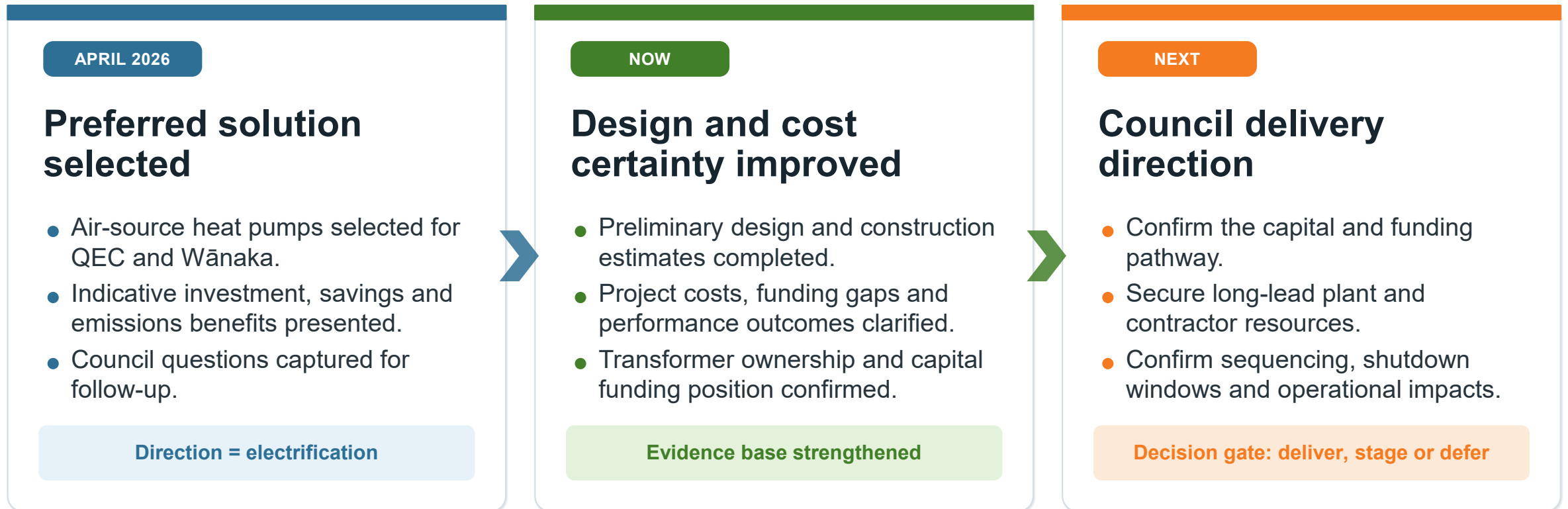
### Still being worked through

- Network charges and tariffs
- Demand flexibility
- Decarbonisation / enabling cost split
- Battery and solar business cases
- Electricity-retailer, Aurora, EECA and other funding options

Transformer capital is not expected to be a Council project cost; however, the final ongoing network-charge impact is still being assessed.

# Preferred solution confirmed — now moving to delivery

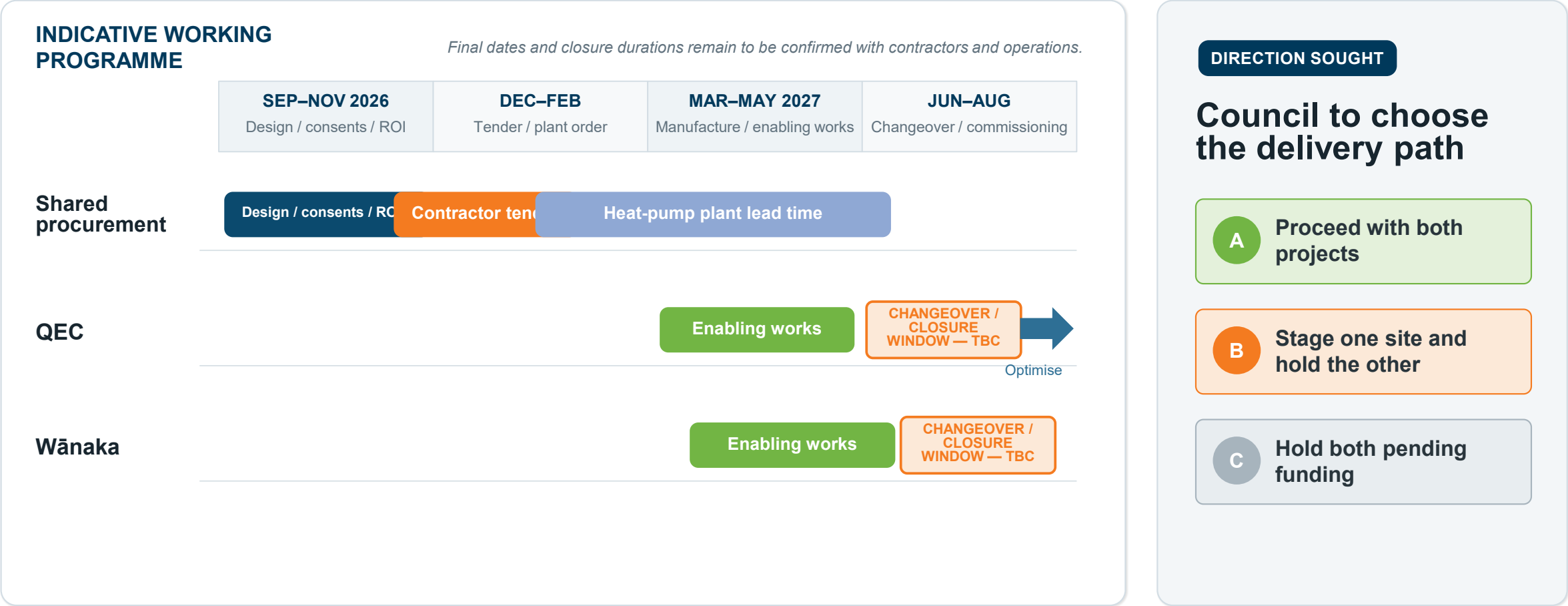
The technology choice has been made; the remaining decisions are how Council funds, procures and delivers the programme.



**Council is not being asked to reconsider the technology choice. Direction is required on funding, procurement and delivery.**

# Indicative programme, operational impacts and direction

The delivery window is achievable only after funding, procurement and site-shutdown decisions are aligned.



# Next steps and Council direction

Council is asked to note Arrowtown progress and provide direction for the delivery path for QEC and Wānaka.

## 1 NOTE

### Arrowtown Pool

IN CONSTRUCTION

Scheduled for the 1 December 2026 season opening.

## 2 DIRECTION

### QEC and Wānaka delivery path

A

#### Proceed with both

Detailed design, procurement and construction.

B

#### Proceed with one

Hold the other pending funding availability.

C

#### Hold both

Pending funding availability.

## FOLLOWING DIRECTION

The delivery programme then moves forward in four coordinated phases.

1

#### Detailed design

Complete design and consents.

2

#### Procure plant & contractor

Heat-pump order; ROI then selected tender.

3

#### Prepare changeover

Shutdown sequencing and communications.

4

#### Deliver & optimise

Implement, commission and optimise.

Council direction on scope and funding enables the next procurement and programme commitments.