Item 1: Materials Recovery Facility (MRF) Procurement

SESSION TYPE: Workshop

PURPOSE/DESIRED OUTCOME:

The purpose of this item is to inform and seek feedback from the Infrastructure Committee on the proposed Materials Recovery Facility (MRF) procurement approach prior to developing and taking an MRF procurement plan to the Full Council for approval and delegation to the CE to execute any subsequent contract.

DATE/START TIME:

Thursday, 5 June 2025 at 11.00am

TIME BREAKDOWN:

Presentation: 10 minutes
Questions and discussion: 20 minutes

Prepared by:

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Title: Strategy Planning Manager Waste Minimisation and Management
19 May 2025

Reviewed and Authorised by:

Name: Tony Avery
Title: Property & Infrastructure General Manager
26 May 2025

ATTACHMENTS:

A	Presentation
B	QLDC Material Recovery Facility (MRF) Draft Procurement Strategy
C	Morrison Low MRF Options Assessment 2024 (Amended May 2025)
D	Q&A MRF Options Assessment

Attachment A: Presentation

QLDC
Material Recovery Facility (MRF) Procurement

Infrastructure Committee Workshop 5 June 2025

QUEENSTOWN LAKES DISTRICT COUNCIL

Purpose

Purpose:

Inform and seek feedback on the procurement strategy prior to taking a procurement plan to Council for approval.

Key features of the procurement:

- Process compliant with procurement policy
- Aligned with strategic plans
- High value, core contract
- Seeking specialist services
- Limited number of suppliers
- Long term contract for certainty of supply
- Opportunity for added features
- Strategic collaborative relationship

Preferred Procurement Approach

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The EOI to RFP approach is best matched to our needs as it provides strong early options screening followed by a robust narrowed selection.

The benefits include:

1. **Efficient Screening**: The EOI stage helps identify and shortlist capable suppliers or vendors early on, saving time and resources by focusing only on qualified candidates during the RFP stage.

2. **Market Insights**: The EOI phase allows organizations to gauge market capabilities and gather valuable input, which can refine the scope and requirements for the RFP.

3. **Enhanced Competition**: By narrowing down the pool of bidders, the RFP stage fosters a more competitive environment among pre-qualified participants, leading to better proposals.

4. **Risk Mitigation**: This approach reduces the risk of engaging with unqualified vendors, ensuring that only those with the necessary expertise and resources proceed to the detailed proposal stage.

5. **Cost-Effectiveness**: The two-stage process minimizes wasted effort and resources by focusing on serious contenders, ultimately leading to more efficient procurement.

Two Stage EOI – RFP process

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Procurement Plan compiled.

Verified and endorsed to proceed with the Tender Process 'Go to Market'

EOI compiled and released to the open market for all contenders to consider.

Core criteria with a broad solution catchment described.

Encourage a wide range of associated solutions to be considered, tested and evaluated into a short list who receive the final RFP.

At this stage, options can be partial as well as full service offering. This allows the RFP stage to encourage consortia and/or allows Council to choose more than one solution

No pricing required at EOI stage as focus on options that could fit user requirements.

RFP compiled and released to the shortlist.

Tightly defined scoring criteria based on the primary User Needs coupled with the EOI results.

Allows for more than one solution to be chosen and encourages consortia to generate solutions that bring as many 'Must-haves' together in a single package

May include interactive tendering, and presentations to verify offerings and solutions.

Appointment of final and best solution.

Process - Critical Success Factors (CSF)

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- Compliant with procurement rules and policies
- Follow Council approval and process for delegation
- Identification of contract model with minimised QLDC risk
- Transparent and defendable procurement process outlined and agreed
- Robust options assessment on the procurement approach used, and endorsement of the approach accordingly
- Ensure clear procurement requirements through RFx templates
- Inclusive of whole of life cost estimates (in submissions) enabling robust benchmarking, assessment and confidence of financial commitment
- Risk ownership clarified
- Procurement process and outcome, strategically aligned with Council strategic planning framework (including WMMP)
- Fairness and equality in appointment process

MoSCow

MoSCoW Method

A prioritisation technique to help categorize requirements/attributes based on their importance and/or urgency.

The acronym stands for:

- **Must-have**: Critical requirements that are non-negotiable for the success of the project.
- **Should-have**: Important but not essential; these can be delayed if necessary.
- **Could-have**: Desirable features that can be included if time and resources allow.
- **Won't-have (this time)**: Agreed-upon items that are not a priority for the current scope but may be revisited later.

CSF - Must Have

Must Have:

- Provide recycling certainty for Queenstown Lakes district for the next 20 years
- Advanced sorting and processing technology
- Health and safety
- Flexibility and resilience
- Compliance

CSF – Should Have

Should Have:

- Provide for recycling certainty for Central Otago district for the next 20 years
- Value for money
- Environmental sustainability
- Policy alignment and advocacy

CSF – Could have/Won’t Have

Could Have:

- Data-Driven Operations
- Unlocks Other Diversion Opportunities
- Education and Awareness
- Circular Economy Leadership and Economic Development
- Education and Awareness
- Resource Conservation and Circularity

Won't Have:

- Emerging, untried and untested technology that is not yet considered best practice

Summary EOI-RFP Benefits

- **Efficient Screening:** The EOI stage helps identify and shortlist capable suppliers or vendors early on, saving time and resources by focusing only on qualified candidates during the RFP stage.
- **Market Insights:** The EOI phase allows organizations to gauge market capabilities and gather valuable input, which can refine the scope and requirements for the RFP.
- **Enhanced Competition:** By narrowing down the pool of bidders, the RFP stage fosters a more competitive environment among pre-qualified participants, leading to better proposals.
- **Risk Mitigation:** This approach reduces the risk of engaging with unqualified vendors, ensuring that only those with the necessary expertise and resources proceed to the detailed proposal stage.
- **Cost-Effectiveness:** The two-stage process minimizes wasted effort and resources by focusing on serious contenders, ultimately leading to more efficient procurement.

Indicative Timeline

Phase	Procurement Strategy	Procurement Plan	Procurement Process (EOI)	Procurement Process (RFP)	Negotiate	Appoint
Indicative Timing	June 2025 Infrastructure Committee workshop 05/06	July 2025 Council approval to go to market	August – Nov 2025	Nov – March 2025	April – June 2026 Negotiate with preffered supplier(s)	July 2026 Council appointment of final and best solution

Discussion

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DRAFT Procurement Strategy

New Material Recovery Facility

QUEENSTOWN LAKES DISTRICT COUNCIL

This project **Procurement Strategy** sets out sourcing options aligned to Council procurement compliance and policy. It outlines how we source opportunities and the processes available to procure the best market solutions.

GENERAL INFORMATION

Project Name	New Regional Materials Recovery Facility		
Description	The purpose of this procurement strategy is to describe the procurement options available to Council for the sourcing of the new Materials Recovery Facility (MRF) and provide a recommendation for a preferred sourcing approach best optimises our ability to source the best market responses to the identified need, whilst ensuring our process aligns to Councils procurement policy.		
Capital Plan (CP) Code	CP0007200 New Waste Facilities (WM)	Project (T1) Code	001248 New Waste Facilities
Project Manager	Sophie Mander	Accountable Manager	Brent Pearce

SUMMARY RECOMMENDATION

This Procurement Strategy for a new Regional Materials Recovery Facility (MRF) aligns the procurement processes with QLDC goals and policies, as well as considering the wider macro market environments. Based on these factors, a two-stage procurement process (EOI-RFP) is recommended to be the most optimal sourcing approach for MRF services, to generate a quality market shortlist, followed by tightly defined final option/solution.

PROJECT BACKGROUND

Queenstown Lakes District Council has a Materials Recovery Facility (MRF) for processing of mixed recyclables collected from residents and businesses throughout the district. The MRF is located at 110 Glenda Drive, Frankton. The facility is at end of life and no longer fit for purpose and as such a new processing solution is required which can accommodate the projected growth in recyclable volumes over a 2o year period, is reliable, flexible, and adaptable to future demands.

The MRF replacement project first commenced in 2018 with the development of a business case driven by the deteriorating condition of the MRF plant and its capacity constraints. The business case recommended that a new facility be developed on land adjacent to the Shotover wastewater treatment plant. This option was further explored, and a concept design was developed for the new facility. The Shotover site was later abandoned when the land was identified as a future requirement of managing the districts wastewater needs.

In 2019, a new contract for solid waste services was awarded to WM New Zealand for an initial term of 7.5 years with option to extend three times by 2.5 years, for up to 15 years. This contract included the ongoing operation of the Glenda Drive MRF until such time as a new MRF could be constructed, which was expected to be operational in two to three years.

Kerbside collection changes adopted in 2019 meant that glass was separated at kerbside from mixed recyclables. This reduced the volume of material received at the MRF and consequent wear and tear on the equipment from the abrasive glass. The reduced material throughput has helped to keep the MRF operational. Until 2019, mixed recyclables from the Central Otago District Council (CODC) were also

processed at the Glenda Drive MRF. However, due to the deteriorating condition of the MRF and prioritisation of QLDC and local commercial recyclables processing, the MRF was no longer able to process CODC recyclables. CODC were required to landfill their recyclables when this occurred. To provide certainty of recyclables processing, CODC established a new contract to take their recyclables to the Timaru District Council's MRF via CODC's contractor EnviroNZ.

Now, more than five years later, the Glenda Drive MRF continues to process mixed recyclables from QLDC's kerbside collection and the commercial sector. However, WM New Zealand's operating costs have risen steeply from $540,000 in 2018/19 to $880,000 in 2023/24 (an increase of 60%). Council have also had to invest $1.3 million in major maintenance and equipment replacements in the last five years, over and above the planned maintenance included in WM New Zealand's operating cost. Despite proactive and reactive maintenance, the MRF remains at significant risk of failure. If a prolonged failure were to occur, recyclables would have to be landfilled (at a current disposal rate of $200 per tonne), until a repair could be affected or new MRF constructed. There are no other MRFs in the lower South Island that currently have the capacity to accept QLDC's recyclables.

Councils long term plans for 2021-31 and 2024-34 signalled that due to population growth and subsequent recyclables and waste material volume increases the district's waste facilities require significant investment. In 2024, Morrison Low completed a detailed options assessment report which considered multiple sites for the new MRF. Consolidating and transporting recyclables out of the district (prior to sorting and processing at an out of District MRF was also considered. The options assessment 'Regional Materials Recovery Facility Options Assessment' (attached) was presented to the Council Infrastructure Committee for discussion and feedback in November 2024. The Committee requested, that due to the lack of a clear preferred way forward, Council undertake a broad procurement process that would allow the market to guide the solution through an open, competitive procurement process.

PROJECT SCOPE & SCALE

Due to ageing plant and increasing demand on the districts waste and recycling facilities $70M is allocated for investment across the district in the QLDC 2024-2034 Long Term Plan. This budget is intended to include significant upgrades at the Wakatipu Refuse Transfer Station (RTS) in addition to providing for improved recyclables processing services.

To ensure reliable, flexible and future fit MRF services are secured for the district, the options assessment considered 12 options using a defined criteria and scoring method. The initial focus of the assessment was to determine the best site for the development of a new MRF to process the recyclables from the QLDC and CODC areas. An out of district option was later introduced as a comparison which would not require significant capital investment.

The options were developed from the actual quantity of recyclables generated in the Queenstown Lakes and Central Otago Districts in 2023/24 and projected to 2044/45 based on anticipated population projections. The volume of material processed through the MRF is expected to double in this period. The options assessment included the following short-listed options (in no order):

- Wanaka - QLDC owned land on Ballantyne Road
- Cromwell - CODC owned land adjacent to the CODC transfer station
- Cromwell - Privately owned land on McNulty Road
- Gibbston Valley - Privately owned land 'The Yards'
- Out of district MRF facility (e.g. Timaru or Dunedin)

The scoring for the identified options was very close. The options evaluation was undertaken based on the information available at the time, noting that additional information and/or subsequent developments associated with any of the options could change the scoring undertaken for the 2024 report.

The options assessment and accompanying recommendation report were taken to the Infrastructure Committee meeting, held 28 November 2024. Due to the close ranking of options, the feedback received was to widen the solution catchment beyond the known options and present the opportunity to the open market to present a solution, thereby giving all parties with a suitable MRF related option a pathway to submit their offering/options for consideration by Council.

Additional information and progress (on the site options) has been presented since undertaking the options assessment in 2024. If the options assessment were undertaken with this information (and other progress updates/additional information), the scoring may change.

The procurement process will provide a more refined process to differentiate options rather than undertaking a revised options assessment. In going to open market, Council will generate comprehensive User Needs requirements and supply relevant background data to assist bidders with supplementary and complementary input. This will help ensure the market understands what Council requires and why.

POLICY AND COMPLIANCE

Council has both a Procurement Policy and Procurement Guideline. Both documents are clear on the requirement to source through a contestable process, goods, works and services above $10,000 unless a unique, defendable rationale can be made that also demonstrates value for money.

Councils default provision to source goods, works and services is through the Government Electronic Tender portal (GETs). Council can also direct message potential parties and encourage then to access the GETs portal if they believe they have a useful offering that addresses our User Needs.

Council also has a well-developed selection of 'Request for Proposal' document collateral that is used to source requirements through GETs, including Procurement Plans, Expression of Interest and Request for Proposal templates etc.

DELEGATED FINANCIAL AUTHORITY

Due to the potential value of contracts resulting from the RFP, full Council approval will be required to run the procurement process and thereby approach the market. At the time of seeking Council approval for the procurement, delegated authority will be sought for the Chief Executive to execute the resulting contract/s.

PROCUREMENT CRITICAL SUCCESS FACTORS

Council is seeking to achieve several critical success factors through this procurement exercise. These span waste minimisation goals, optimised sourcing compliance and best value outcomes. The critical success factors (CSF) provide a base alignment to the preferred MRF solution where the CSF guide our evaluation choices.

At a broad level, these critical success factors comprise:

Process critical success factors

- Compliance and legislation (procurement rules / QLDC policies / MBIE) met.
- Council approvals and Council process for delegation met.
- Identification of contract model with minimised QLDC risk.
- Clear procurement requirements, through RFx templates.
- Whole of life cost estimates are included in submissions enabling robust benchmarking, assessment and confidence of financial commitment.
- Robust options assessment on the procurement approach used and endorsement of the approach accordingly.
- Transparent and defendable procurement process outlined and agreed.
- Fairness and equality as to appointment process.
- Risk ownership clarified through build, operations and ownership.
- Procurement process and outcome, strategically aligned with the Waste Management and Minimisation Plan (WMMP) 2018 objectives and Draft WMMP 2025 guiding principles

Product critical success factors

- These are described in detail in the next section (attributes).

MARKET APPROACH

The potential MRF solutions are wide ranging. Therefore, in approaching the market Council must clarify precisely what is regarded as a minimum viable requirement and expand out from there as to options and features that may or may not warrant investment. The best way to determine the criticality and prioritisation of our user needs is using the MoSCoW method.

The benefit of illustrating our requirements through the MoSCoW lens is that it directs market suppliers / respondents to concentrate on our 'must haves' as well as offering adjunct and related features that fall into the 'should have' and 'could have' arena.

The MoSCoW method is a prioritisation technique often used in project management, business analysis, and software development. It helps teams and stakeholders categorize tasks or requirements based on their importance and urgency. The acronym stands for:

- **Must-have**: Critical requirements that are non-negotiable for the success of the project.
- **Should-have**: Important but not essential; these can be delayed if necessary.
- **Could-have**: Desirable features that can be included if time and resources allow.
- **Won't-have (this time)**: Agreed-upon items that are not a priority for the current scope but may be revisited later.

This method is particularly useful in managing expectations and ensuring that the most critical elements are addressed first. It's also a strong fit for agile frameworks, where flexibility and iterative progress are key.

The way MoSCow works is that points are assigned to each requirement, where a conforming 'Must-have' = 10 / 'Should-have' = 6 / 'Could-have'= 3. The more 'Must-haves' achieved - the better and stronger the bid. Our research to date (pre-market testing) describes these categories as follows in the table below:

MoSCoW	Attributes
Must Have	**Provides for Recycling Certainty for the next 20 years** – Projected volumes of recyclable material in 20 year horizon can be diverted from landfill for the Queenstown Lakes District. – Reliable acceptance for all current product streams at the facility. – Ensuring high quality products that meet or exceed re-processors' acceptance criteria across all commodities (manages risk of product rejection). – Embedded processes that drive reduced contamination levels. – Enables removal of reliance on the existing Glenda Drive facility in the shortest possible timeframe. – If out of District option – provides for consolidation of materials prior to transport. **Advanced sorting and processing technology** – Automated sorting systems: Optical sorters, eddy current separators, air classifiers, and robotics enhance sorting accuracy and efficiency. **Health & Safety** – Operator health and safety follows best practice, with ergonomics and wellbeing prioritised. – Customer points of interaction (if any) ensure that safety while onsite is prioritised. **Flexibility and Resilience:** – Ability to handle complex and diverse materials. – Modular and scalable design: Adaptable to changing waste streams and future expansion. – Ability to incorporate future technologies and best practice as technology evolves. – Offers contingency solutions for material management during natural disasters, asset failure or constrained asset access e.g. stockpiling and storage or access to alternative processing. **Compliance:** – Regulatory compliance and certifications: Adherence to environmental and legislative standards including Waste Minimisation Act 2008 and Waste Minimisation (Information Requirements) Regulations 2023, Resource Management Act 1991 (RMA) and Natural & Built Environments and Spatial Planning Acts, Health and Safety at Work Act 2015.
Should Have	**Provides for Recycling Certainty for the next 20 years** – Projected volumes of recyclable material in 20 year horizon can be diverted from landfill for Central Otago District. – Secured, reliable, and sustainably ethical end markets for all commodities accepted. **Value for Money:** – Solution delivers value for money for consumers across the full recycling journey (from kerbside to market) alongside broader socio-economic and environmental impacts. **Environmental Sustainability:** – Carbon footprint reduction: Solution demonstrates optimized logistics and reduced emissions. – Energy efficiency: Renewable energy sources and energy efficient equipment. **Policy Alignment and Advocacy:** – Enables extended producer responsibility (EPR), making manufacturers accountable for end-of-life product management. – Encourages design for recyclability by setting market demands for recyclable products.

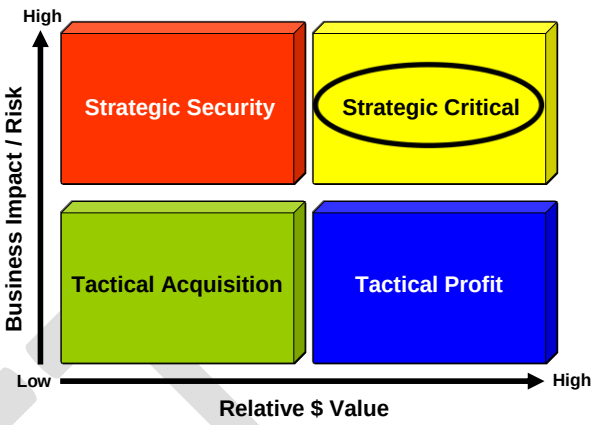
Could Have	**Data-Driven Operations:** – Real-time monitoring and analytics: Optimize operations, maintenance, and material recovery rates. – Smart waste management: Predictive maintenance, AI-driven decision-making, and inventory control. – AI and machine learning: Real-time identification and adaptive sorting based on material composition. **Unlocks Other Diversion Opportunities:** – Collocated processing facility for organic waste (noting QLDC has committed to introducing a kerbside organics service in the coming years) – Collocated processing facility for Construction and Demolition waste – Common consolidation points for recycling and organics **Education and Awareness:** – Community outreach and recycling education programmes that raise awareness and bring about behaviour change. – Hands-on learning opportunities to engage in sustainability practices. – Educational programmes and learning opportunities on waste minimisation, recycling practices and sustainability. **Circular Economy Leadership and Economic Development:** – Skilled green jobs opportunities in sorting, processing, engineering, data analysis, and management. – Promotion of local economies by supporting businesses that utilize recycled materials. – Offers opportunities for small and medium enterprises (SMEs) in reuse, recycling, upcycling, and innovation. – Collaboration with local businesses e.g. partnerships creating demand for recycled products. – Becomes a hub for innovation in recycling technologies and sustainable practices. – Attracts investment and research in circular economy solutions. **Resource Conservation and Circularity:** – Support for upcycling e.g. through repair, refurbishment, reuse, repurpose, or recycle: Facilities for repurposing and transforming materials into higher-value products. – Solution drives onshore re-processing options where possible. – Supports a closed-loop system where products are continuously reused, reducing waste. – Water conservation: Water recycling systems if proposed for cleaning and processing materials. – Material traceability: Digital tracking from collection to final recycling, ensuring transparency.
Won't have	– Emerging, untried and untested technology that is not yet considered industry best practice or lacks track record in New Zealand or Australia.

COUNCIL MARKET POSTIONING

Understanding our **market positioning** influences the degree of sourcing risk we can manage.

The business impact and risk in the delivery of the required goods/services, based on the following supply positioning matrix, is considered **strategic critical.**

Supply position	Value	Impact/risk
Strategic security	Low	High
Strategic critical	**High**	**High**
Tactical acquisition	Low	Low
Tactical profit	High	Low

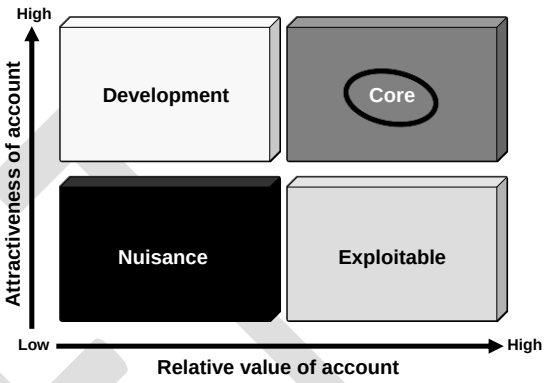


Buyer's priority	Description	Approach	Arrangement
Strategic security (security of supply)	• Low-cost goods/services • Strategically important • Shortage of reliable suppliers	Ensure supply	• Long term contracts • Build reserve of stock • Consider alternative products
Strategic critical (security of supply at a good price)	• **High costs specialist works, goods/services** • **Limited number of suppliers** • **Broad supply chain for all-inclusive supply of works and services.**	**Active manage of suppliers. Strong Relationship Management.**	• **Long term contract for certainty of critical supply** • **Contingency planning**
Tactical acquisition (purchasing efficiency)	• Routine purchases • Low-value/low-risk goods/services • Many potential suppliers	Minimal attention	• One-off contracts/purchase orders • E-purchasing • Procurement cards
Tactical profit (improving profit through costs savings)	• High-cost/low-risk goods/services • Many potential suppliers	Drive savings	• Short term contracts • Ongoing active sourcing for competitive price

Supplier Preferencing

The value of Council as a buyer and the attractiveness of our business to the supplier have been assessed through the supplier preferencing matrix below.
The MRF solution is a long-term investment with opportunity for upstream and downstream added features. This matrix indicates the level of willingness or reluctance of the supplier to meet our needs. Based on the matrix, for the MRF solution Council is seen as **core**. This means this supply requirement is seen as **attractive, core business**. This work is also seen as attractive for its profile, and continuity of (almost) guaranteed supply of processing material (with a potential for revenue stream for valuable by-product).

Supplier's view	Value ($)	Attractiveness
Nuisance	Low	Low
Development	Low	High
Exploitable	High	Low
Core business	**High**	**High**



Quadrant	Description	Action
Nuisance	• Low-value • Little profit	Withdraw
Development	• Low-value • But still attractive	Get further business
Exploitable	• High-value • But not attractive	Maximise profits
Core	• **High-value** • **Highly attractive** • **Supplier's core business**	**Retain and expand**

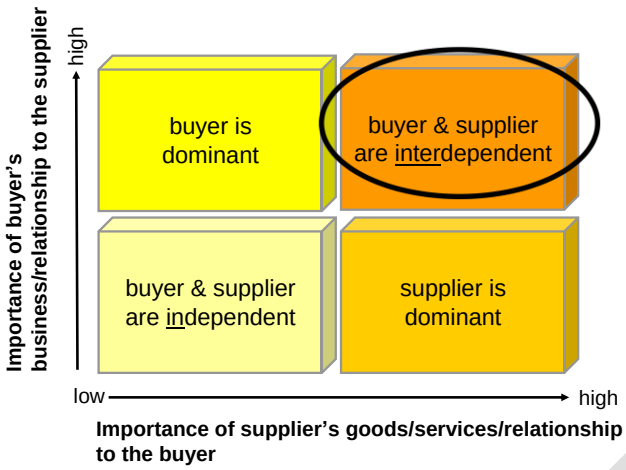
Buyer Supplier Relationship

The matrix below assesses the levels of power and dependency between Council and the supplier. This matrix shows the buyer and supplier **are interdependent.** This means we need to choose the right partner at the sourcing stage so that both parties can enjoy mutual benefit, i.e. value through codependency over the long term. This requires focus on evaluation criteria and communicating expectations through both EOI & RFP stages.

Given the proposed length of the contract (this could be up to 20 years), the level of desired trust and communication with the supplier and the approach to managing risk, Council will seek a long-term relationship with the supplier based on a strategic collaborative relationship.

Our objective is to streamline the supply to minimise transaction costs, reduce administration effort and ensure a transfer of risk equal to each party's skill, expertise and resource base. In the negotiations, this

means that we will set out the desired future state improvements necessary to enter any extension of new term.



SOURCING RISKS

The following represents the current understanding of risk which will be updated in the development of the procurement plan.

Risk: Sourcing to market too narrow and shortcuts wider market offerings.
Reduce risk by:

- Take a wide sourcing option (two stage) to best capture market options.
- Hold communication sessions and open forum once RFx is released.
- Social media and websites utilised to get RFx visibility as wide as possible.
- Direct reach to marginalised end users and interest groups

Note, a project specific Risk Management Template will be compiled once an agreed MRF Solution is agreed.

SWOT

Sourcing our MRF solution

The SWOT table is developed as an initial opportunity to consider high level opportunities to mitigate weaknesses and threats and leverage the strengths and opportunities of this procurement.

STRENGTHS	WEAKNESSES
• Without going to market, we already have several potential attractive options. Opening this solution pool will further strengthen the possibilities of sourcing a model / solution that meets our user needs as well as meeting government procurement rules. • QLDC brand name can lead to better negotiations as suppliers will want to use the relationship as a qualification to other prospective customers • Good internal knowledge of market conditions and options • Momentum already underway. Solid LTP commitment and increased budgets – attractive entry.	• Rapidly declining current state MRF facility that may fail before we secure a new facility (meaning we need an out of district interim solution) • Final solution and user needs are not completely defined ('you don't know what you don't know) • P&I team resources stretched and available 'bandwidth' for the project is limited • Demand analysis immature. Requires greater definitive selection of total MRF package options (market access will help with this) • Variable success with in-district MRF Solutions Agreements in the past
OPPORTUNITIES	**THREATS**
• Comprehensive go to market sourcing plan with well defined, expansive user needs. • Apply more research and industry awareness, education and conference participation. Become smarter buyers. • Suppliers seeking 'intelligent clients' where collaboration and innovation can thrive • Wide codependent 'wrap -around' MRF related services that drive cost efficient recycling as wells reaching the widest possible market • Note, the Project Manager will compile a detailed Risk Management plan once we have a solution for implementation.	• A fewer number of suppliers can decrease the ability to achieve favourable pricing due to their own higher supplier power • Lack of readiness in our user requirements / demand profiles delaying investment and returns • Variable performance even with large suppliers • Internal capacity and capacity to best manage the full sourcing, thru selection to build and operate phases.

OPPORTUNITY ANALYSIS

The following opportunities are identified:

	Opportunity	Description	Pro +	Con -
Strategic Sourcing / Category Management	Define User Needs between Core (Must Have) Desirable (Should Have) Useful (Could Have).	Delineate the criticality between the user needs	Enables the prioritisation and scoring models to arrive at the best weighted model	Requires consensus and agreement to arrive at delineation and is difficult between different stakeholders with different drivers (i.e., social Vs engineering)
	Optimise Procurement and Sourcing approach	Thorough assessment of sourcing models (see below)		
	Improve Contract and Performance Management	Improve compliance through more effective reporting, monitoring (KRA/KPI and dashboard)		
	Leading edge technology	The intent of the processing methodology is to sort recycled kerbside material effectively and efficiently into commodity types at a quality that satisfies market requirements and maximises value of the product. Critical to the success of the sorting operation is control of contamination that degrades the product quality and has the potential to prevent the sale of sorted commodities.	Sequentially Optimised OCC, Glass and Fibre processing enabling best possible end markets attractiveness	Cost to process higher than material value gains. Specialized operations needing skilled labour to optimise the processing.
	Target end markets for higher value by products	Through research and market responses, determine the feasibility of high quality / higher value by product separation.	Revenue streams to offset costs.	Processing costs exceed value.
	Bring together collocated, coordinated wrap-around opportunities, agencies and stakeholders	Collocated waste stream recycling stakeholders able to share and innovate collectively to generate value, lower costs and improve community awareness.	Win-Win for community. improved learning, awareness and understanding.	Ability to recognise trade off costs vs returns and valuing social return as well as hard $ROI

SOURCING APPROACH & OPTIONS

Council has several sourcing methods available. Based on the Market Positioning, Risks, SWOT and Opportunity Analysis, we can narrow down the best applicable sourcing options from the range of sourcing options.

Choosing between **Registration of Interest (ROI)**, **Expression of Interest (EOI)**, and **Request for Proposal (RFP)** depends on the project's objectives, the level of detail we require, and the stage of your procurement process.

1. Registration of Interest (ROI):

- **Purpose**: Acts as a preliminary screening tool to identify suppliers or contractors who meet basic eligibility criteria.
- **When to Use**: Early in the procurement process when you need to create a pool of qualified candidates for a more focused evaluation later.
- **Output**: A shortlist of vendors who meet minimum standards for the project.

2. Expression of Interest (EOI):

- **Purpose**: Explores the market to gauge interest and identify suppliers who can meet your broader project needs.
- **When to Use**: When you're seeking to understand market capabilities or innovative solutions and want to narrow down potential participants.
- **Output**: A list of interested parties who demonstrate their ability and approach to meet the project's requirements.

3. Request for Proposal (RFP):

- **Purpose**: Solicits detailed proposals for specific solutions to clearly defined project requirements.
- **When to Use**: When the project scope is well-defined, and you're ready to evaluate detailed solutions, pricing, and timelines.
- **Output**: Comprehensive proposals from vendors, allowing for in-depth comparison and selection.

Factors to Consider:

- **Stage of the Process**: ROI and EOI are suited for early exploration, while RFP is ideal for more developed, specific projects.
- **Level of Detail Needed**: If you need general market insights, use ROI or EOI. For tailored, detailed solutions, go for RFP.
- **Time and Resources Available**: ROI and EOI are less resource-intensive compared to the effort required to draft, distribute, and evaluate RFPs.
- **Risk and Complexity**: The higher the stakes and complexity, the more you'll benefit from an RFP's detailed proposals.

Based on the project objectives, risk profile, critical success factors, and Souring Options Analysis (Appendix 1) this project best supports a **two stage EOI-RFP process**.

The EOI-RFP option is best matched to our needs as it provides a strong early options screening followed by a robust narrowed selection. The benefits of this approach include:

Efficient Screening: The EOI stage helps identify and shortlist capable suppliers or vendors early on, saving time and resources by focusing only on qualified candidates during the RFP stage.

Market Insights: The EOI phase allows organizations to gauge market capabilities and gather valuable input, which can refine the scope and requirements for the RFP.

Enhanced Competition: By narrowing down the pool of bidders, the RFP stage fosters a more competitive environment among pre-qualified participants, leading to better proposals.

Risk Mitigation: This approach reduces the risk of engaging with unqualified vendors, ensuring that only those with the necessary expertise and resources proceed to the detailed proposal stage.

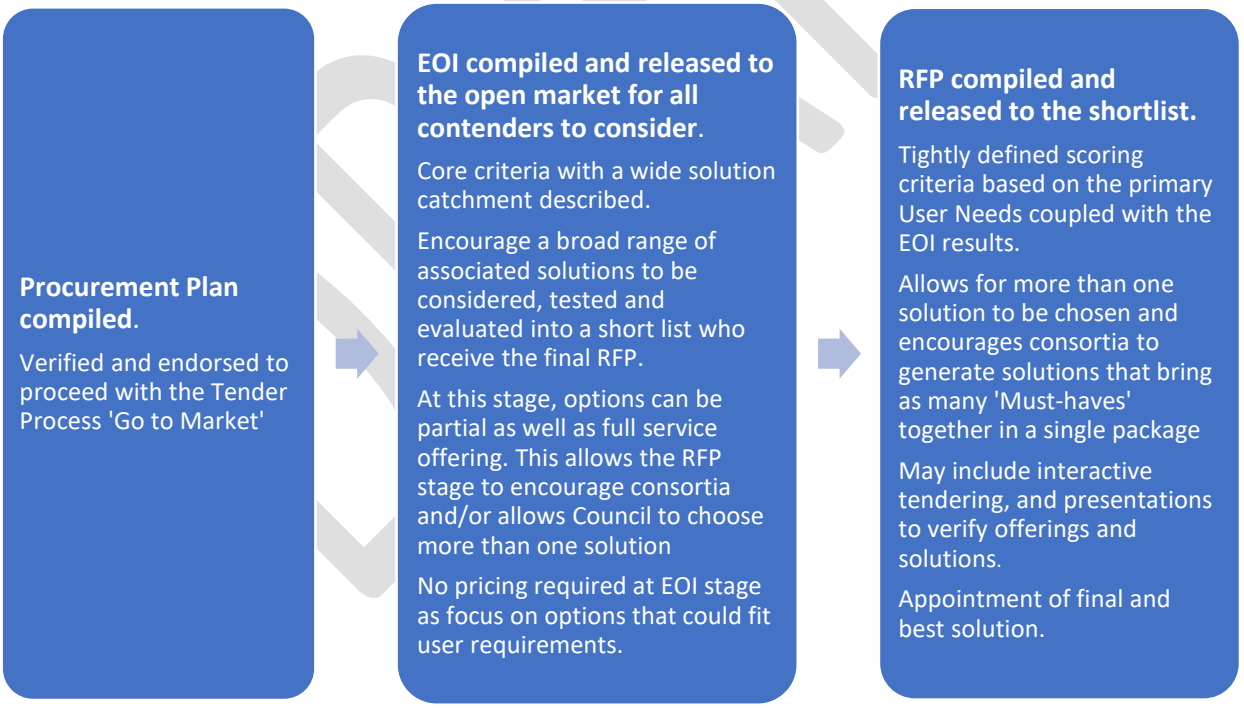
Cost-Effectiveness: The two-stage process minimizes wasted effort and resources by focusing on serious contenders, ultimately leading to more efficient procurement.

The EOI will be deliberately wide reaching to narrow down to the RFP stage with the best possible combination of features. At EOI stage, options received can be partial as well as a full-service offering and evaluated on their own merits i.e. offers that are partial but fit in the Must-have' score high. Bids that offer most/all 'Must-have' score very high.

This allows the RFP stage to encourage consortia and/or allows Council to choose more than one solution. It also encourages consortia to generate solutions that bring as many 'Must-haves' together in a single package.

RFx WORKFLOW: TWO STAGE EOI-RFP

The workflow to enable a two stage EOI – RFP is described below:



Indicative RFx Timeline

Procurement Strategy	Procurement Plan	Procurement Process (EOI)	Procurement Process (RFP)	Negotiation	Appointment
June 2025 Infrastructure Committee workshop	July 2025 Council endorsement to go to market	August – Nov 2025	Nov - March 2025	April - June 2026 Negotiate with preffered supplier(s)	July 2026 Appointment of final and best solution

CONTRACT MODEL

The preferred contract model will follow a two stage EOI-RFP process. Contract models span traditional Design, *then* Build (DB), Design *and* Build (D&B), Design-Build-Own-Operate-Transfer (DBOOT) or just a services model 'MRF as a Service').

The traditional **Design-then-Build (DB)** contract model separates the design and construction phases into distinct processes, usually handled by different parties.
The key features include:

- **Sequential Workflow**: The project starts with a detailed design phase managed by a design team (often architects and engineers). Once finalized, construction begins, based on the completed design.
- **Fixed Scope**: The design is completed and approved before the construction starts, resulting in a clear, fixed scope of work.
- **Tendering Process**: After the design is finalized, the construction contract is tendered, allowing contractors to bid based on detailed specifications.
- **Client Control**: The client retains significant control during the design phase, influencing the project's final specifications and aesthetics.
- **Responsibility Separation**: Design and construction are handled by separate entities, reducing potential conflicts of interest but requiring strong coordination between teams.
- **Predictability**: Because the design is finalized before construction, there is less uncertainty during the build phase, making budgeting and scheduling more predictable.
- While this model can offer clarity and control, it often leads to longer project timelines compared to integrated approaches like Design-Build.

The **Design and Build (D&B)** contract model integrates the design and construction phases into a single process, managed by one entity. This approach streamlines the project delivery and offers some unique advantages.
The key features include:

- **Single Point of Responsibility**: One contractor is accountable for both designing and building the project, reducing potential conflicts and simplifying communication.
- **Time Efficiency**: Overlapping the design and construction phases can accelerate project delivery, making this model particularly suitable for time-sensitive initiatives.
- **Cost Certainty**: Since the design and construction are handled by the same party, there is often a guaranteed maximum price agreed upon early in the project.

- **Integrated Collaboration**: Designers and builders work closely from the outset, ensuring constructability and reducing the risk of design errors.
- **Client Involvement**: While clients have less control over detailed design compared to traditional models, they benefit from a more streamlined process and reduced coordination efforts.
- **Flexibility in Scope**: The contractor has the flexibility to adjust the design within the agreed-upon budget and objectives to address unforeseen challenges efficiently.
- This approach often results in faster delivery and smoother execution but does require clients to relinquish some control over the specifics of the design.

The **Design-Build-Own-Operate-Transfer (DBOOT)** contract model is a type of Public-Private Partnership (PPP) arrangement. It involves several stages where responsibilities are shared between the public and private sectors.
The key options and features include:

- **Design**: The private sector is responsible for designing the infrastructure or facility according to agreed specifications.
- **Build**: The private entity constructs the project, ensuring it meets the required standards and timelines.
- **Own**: Ownership of the asset remains with the private sector during the operational phase, allowing them to manage and generate revenue.
- **Operate**: The private partner operates and maintains the facility for a specified period, ensuring its functionality and efficiency.
- **Transfer**: At the end of the contract term, the ownership and operation of the asset are transferred back to the public sector.

This model is often used for large-scale infrastructure projects including MRFs, where private sector expertise and investment are leveraged to deliver public services. It provides flexibility in financing and operational management while ensuring the public sector ultimately regains control of the asset.

The final contract model to consider is the **MRF as a Service** type offering. This model is often referred to a **Utilities as a Service (UaaS)** contract model being an innovative approach to managing utility needs, particularly for industrial and commercial facilities such as a MRF.
The key features include:

- **End-to-End Management**: A single contractor handles the design, construction, operation, and maintenance of utility infrastructure, providing a comprehensive solution.
- **Cost Efficiency**: By outsourcing utility management, Councils can focus on the rest of their requirements while benefiting from optimized utility production and reduced operational costs.
- **Sustainability Focus**: UaaS providers often incorporate state-of-the-art technologies and best practices to enhance energy efficiency and reduce carbon emissions.
- **Flexibility**: The model allows for tailored solutions to meet specific utility needs, such as cooling, heating, compressed air, or steam, ensuring reliability and efficiency.
- **Regulatory Compliance**: UaaS providers manage compliance with environmental and safety regulations (meeting Consent conditions), alleviating the burden on the client.
- **Long-Term Partnership**: Contracts typically span 20-40+ years, fostering a collaborative relationship between the provider and the client.
- This model is particularly appealing for organizations aiming to achieve sustainability goals while maintaining operational efficiency.

The final contract model will depend entirely on the MRF solution chosen.

SUMMARY & RECOMMENDATION

This Procurement Strategy aligns our procurement processes with organizational goals and policies, as well as considering the wider macro market environments. Based on these factors, a two-stage procurement process (EOI-RFP) is proposed as the optimal sourcing approach to generate a quality market shortlist, followed by tightly defined final option/solution. The two-stage EOI-RFP procurement process benefits, for this complex and high-value project comprises:

1. Enhanced Market Engagement

- Allows early engagement with a broad range of potential market suppliers or partners spanning social-through technical and property options.
- Encourages innovative solutions from the industry before finalizing the scope thereby capturing value elements not presently known.

2. Improved Competitive Tension

- The EOI stage helps shortlist the most suitable bidders, ensuring strong competition in the RFP phase.
- Ensures that only capable and qualified participants proceed to the final stage.

3. Risk Reduction

- Helps identify potential risks early in the procurement cycle. Can capture those risks and reflect in the RFP stage.
- Reduces the likelihood of engaging unqualified or unsuitable vendors first up.

4. Better Scope Definition

- Allows refinements to the project scope and specifications based on industry input before issuing the RFP.
- Helps align expectations and requirements with market capabilities.
- Optimises and concentrates the parameters for the MoSCow attributes for the RFP.

5. Efficient Resource Allocation

- Saves time and effort by filtering non-viable candidates before the detailed proposal stage.
- Enables procurement and business unit team to focus on serious contenders rather than evaluating a large volume of proposals.

6. Stronger Alignment with Strategic Goals

- Provides flexibility to assess bidders against broader organizational objectives.
- Supports alignment with sustainability, innovation, and long-term strategic priorities.

7. Transparent and Fair Process

- Complies with Councils procurement guidelines and policy.
- Ensures clarity in selection MoSCow criteria and expectations across multiple stages.
- Demonstrates due diligence and governance in procurement decisions.

APPENDIX ONE: Sourcing Option Analysis

RFx Options	Looks like	So that	Pro +	Con -	Notes
Request for information **RFI**	Via the market - solicits wide range of information relevant to the MRF solution criteria	Collects options and interest from the market. No promises or guarantees and no shortlisting for any next stage	Very broad open solicitation of interest and ideas.	Time-effort-admin. Can solicit large number of non-contenders and partially related advice / options tenuously related to our needs. Covered better by EOI/RFP options	Useful for informing and gauging general interest, new options and ideas without any commitment. Helps Council to gauge the level of interest in a project, product, or service, providing related data for decision-making.
Registration of Interest **ROI only**	Tighter criteria solicit registrations of interest where a Pass/Fail may qualify a response for any next round of procurement. Narrower range of requirements sought through description of requirements.	Contained group of potential market options that meet a threshold close to matching most of our criteria	High level registrations that can be scored if they meet our broad criteria - for a short list to next stage	Time-effort-admin. RFPs are often complex and costly to develop for a project of this size and scale. As a submitter, you are entering a contest with many others. Covered better by EOI/RFP options	Similar to RFI with scoring but remains very high level and broad.
Request for Proposal **RFP Only**	Would need to include as much other potential (and yet unknown) outline as possible – but Council has yet to test the market to better understand the offerings available.	Leads to an evaluation, shortlisting and negotiated outcome	Quick single stage process	Can be to tight and narrow and eliminates potential fringe options, that if developed more – may be feasible and more attractive. 'We don't know what we don't know'	Single Stage RFP is quicker than 2 Stage EOI-RFP, but diminishes the early divergent channel of offerings and often generates many responses with many on the periphery that won't be suitable.

RFx Options	Looks like	So that	Pro +	Con -	Notes
Expression of Interest **EOI – Shortlist-RFP** **EOI = 8 weeks to market.** **RFP + 8 weeks (to an agreed shortlist)**	Similar to above but even tighter criteria. Use a MoSCow Scoring set or a SCRUM-Agile scoring set*. Might have by default the 'top 4' options already agreed broadly EOI first, would encourage and call out all the known 'related elements' (adding to the 'top 4') Require tight defined scoring criteria so defendable shortlist can be assessed Likley to require broad cost criteria QLDC set out minimum viable criteria and must have CSF	2 Stage approach clears out non - contenders early and allows concentration on 'most favoured' options that best meet project CSF -Top 4 options -Room for new options to be captured (and scored) -Very clear eval criteria required. -Anchored scoring criteria At EOI stage, options can be partial as well as a full-service offering and evaluated on their own merits (i.e., those offers that are partial but fit in the Must-have' score high. Those that offer most/all 'Must-have' score Very High. This then allows the RFP stage to encourage consortia - and/or allows Council to choose more than one solution and encourages consortia to generate solutions that bring as many 'Must-haves' together in a single package.	Benefits: ▪ Streamlined approach. ▪ Enhanced Clarity ▪ Improved Proposal Quality ▪ Focused Evaluation ▪ Encourages Innovation ▪ Minimised Risk ▪ Cost effective	Requires solid User Needs / Principals Requirements broad enough to encourage a wider range than existing 'Top 4 MLow Options' – yet narrow enough to meet our definitive needs.	Criteria for arriving at final preferred must be well supported and designed w/defendable scoring through well prescribed anchored scoring. Use of MoSCoW + Scrum Agile question sets. Enter negotiations with highest scoring options. Consider a wide TET of vested and interested impartial parties

MRF Options Assessment

Queenstown Lakes District Council

August 2024 (revised May 2025)

Document status

Job #	Version	Written	Reviewed	Approved	Report Date
2918	Draft	S. Borowy	A. Grace	A. Grace	16 May 2024
2918	Draft	S. Borowy	A. Grace	A. Grace	12 June 2024
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2918	Final	S. Borowy	A. Grace	A. Grace	28 August 2024
2918	Amended Final	S.Borowy	A. Grace	A. Grace	20 May 2025

Contents

Tables

Figures

Review summary

Queenstown Lakes District Council (QLDC or Council) has a Material Recovery Facility (MRF) for processing of mixed recyclables collected from residents and businesses throughout the district. The MRF is located at 110 Glenda Drive, Frankton. The facility is no longer fit for purpose and a new processing solution is required for the recyclables collected in the district, which is reliable, flexible, and adaptable to future demands.

Council recently purchased land adjacent to the Wanaka transfer station on Ballantyne Road, which offers another site that could be considered for the MRF. However, this opportunity hasn't been tested against other sites previously considered.

Council commissioned Morrison Low to undertake an options assessment and recommend a way forward.

Assessment summary

The MRF options assessment considered 12 options in the first assessment round, phase 1, and five options in the second assessment round, phase 2, using defined criteria and scoring method. The initial focus of the assessment was to determine the best site for a new MRF to process mixed recyclables from the QLDC and CODC areas. An out of district option was introduced as a comparison which would not require significant capital investment. Of the 12 options considered in phase 1, only seven were scored. The options excluded were similar, but inferior to other options put forward, or had significant capital cost risks that could not be mitigated. After scoring the options, two more options were excluded from further assessments, including the exclusion of the existing Glenda Drive MRF.

Whole of life costs were assessed in phase 1, then refined in phase 2. Stakeholder engagement took place at the end of phase 1 to inform options assessment and cost refinement in phase 2. Ownership and operating models were also considered for the sites ahead of phase 2 scoring.

The phase 2 assessment focussed on five key risk areas. The table on the following page shows how each of the five remaining options were assessed in phase 2. The options assessment in phase 2 presented the following ranking based on weighted scores:

- 1st - Option 1, Wanaka, Ballantyne Road (weighted score of 18)
- 2nd - Option 2, Cromwell CODC (weighted score of 17)
- 3rd - Option 6, out of district (weighted score of 16)
- 3rd - Option 5, Gibbston Valley (weighted score of 16)
- 5th - Option 3, Cromwell McNulty Road (weighted score of 12)

The highest scoring option was option 1, Wanaka Ballantyne Road, with 18 points closely followed by option 2 Cromwell CODC on 17 points. Both these options provide the best scores for cost control risk, commercial risk, resilience and sustainability risk and service delivery and strategic alignment. Option 1, Wanaka Ballantyne Road scored slightly better because QLDC already owns the land.

Option 6 out of district, scored the highest for achievability because this option is already in progress and further towards being operational. There are some challenges with this option, such as procuring a transport contract and securing the gate fee.

The analysis has shown that it is difficult to separate the options. Minor changes to any of the scores result in a shift in the options ranking. Only option 3, Cromwell McNulty Road, scores sufficiently lower ruling it out. It is recommended that this option is excluded from future MRF planning processes.

Table 1 Phase 2 assessment scoring

#	Criteria	Weighting	Option 1 Wanaka - Ballantyne Road	Option 2 Cromwell - CODC site next to transfer station	Option 3 Cromwell - 147 McNulty Rd	Option 5 Gibbston Valley - The Yards (Victoria Flats Road)	Option 6 Out of district - Dunedin
1	Achievability	20%	3	3	3	2	4
2	Cost control risk	20%	3	3	2	3	2
3	Commercial risk	20%	3	3	2	3	5
4	Resilience and sustainability risk	20%	5	4	3	4	2
5	Service delivery and strategic alignment risk	20%	4	4	2	4	3
	Total - weighted scores		**18**	**17**	**12**	**16**	**16**
	Rank - weighted scores		1	2	5	3	3

Financial summary

The table on the following page provides the financial summary of the five options considered in phase 2.

While the financial analysis provides a detailed comparison of the operating costs associated with the different options, several potential risks and limitations must be considered to understand the broader implications.

Key variables that introduce uncertainty to the costs, that have been explored include the discount rate, out of district gate fee, fuel costs, residual land values and capital costs for the in-district MRF options. To assess the impacts of these volatile factors, sensitivity analysis was undertaken, which showed all options had a degree of sensitivity to changes in key variables.

Given the close financial outcomes and significant uncertainties in the high-level forecasts, no single option stands out as a clear financial leader. The differences in baseline NPV from the highest and lowest-ranking options are minor, with a spread of only 3.6%, contributing to the variability observed in the sensitivity analysis. Subsequently, the determination of a final option requires significant weight on non-financial factors.

Table 2 Phase 2 Results - Discounted

20-Year results summary ($'000)	Wanaka Ballantyne Road Option 1	CODC site next to landfill Option 2	147 McNulty Road Option 3	Gibbston Valley Option 5	Out of district Option 6
Operational Costs					
Processing Costs	$3,200	$3,200	$3,200	$3,200	$21,900
Disposal Costs	$3,100	$3,100	$3,100	$3,100	$4,700
Transportation Costs	$15,400	$11,500	$11,500	$11,800	$24,300
Total	**$21,700**	**$17,800**	**$17,800**	**$18,100**	**$50,900**
Investment & Facility Costs					
Capital Investment	$38,800	$48,800	$4,800	$44,700	$4,800
Residual Value	($6,900)	($12,000)	($2,000)	($10,100)	($2,000)
Leasing Costs	$0	$0	$32,900	$0	$0
Total	**$31,900**	**$36,800**	**$35,700**	**$34,600**	**$2,800**
Combined Total/NPV	**$53,600**	**$54,600**	**$53,500**	**$52,700**	**$53,700**
Total Tonnes	*180,000*	*180,000*	*180,000*	*180,000*	*180,000*
Cost per Tonne	*$298*	*$303*	*$297*	*$293*	*$298*
Rank	**3**	**5**	**2**	**1**	**4**

Contract options

There are a number of contract options available which could enable the development of a successful MRF. These include separate design, build and operations contracts (also know as design-bid-build or DBB), combined design and build contracts (DB), combined design, build and operate contracts (DBO), design build, own operate and transfer contracts (DBOOT, also known as BOOT) and gate fee contracts (with and without a back-to-back lease).

For option 6, out-of-district, the gate fee contract is the most likely arrangement. For option 3, Cromwell McNaulty Road option, the most likely arrangement is a site lease with either a gate fee contract or DBOOT arrangement.

For an in-district MRF, any of the contract options are achievable with sufficient timeframes for planning, preparation of detailed specifications and the procurement process. The choice of a preferred contract arrangement will depend on which risks council would like to hold and which to transfer to its contractors. These are best explored in a detailed procurement strategy, then further explored with the market. The contract options will be narrowed down over time, but the final model may not be known until it is negotiated with QLDC's selected contractor(s).

Recommended way forward

Out of district

Option 6, out of district has a very different cost structure to the in-district options. It is sensitive to different criteria than the in-district options. It is easy to achieve and has low commercial and financial risk in the short term. However, longer term the ability to control costs and rely on this option being available reduces. For this reason, this option is preferred as a short to medium term solution only.

The out of district MRF options only become available once Dunedin has built its new MRF at Green Island. Either there will be capacity at the Green Island MRF or there will be freed up capacity at the Timaru MRF, which Dunedin (and Central Otago) are using short-term while their MRF is built. The Green Island MRF is expected to be operational by July 2026.

Ballantyne road

The remaining options are the three in-district options. Of these, option 1, Wanaka Ballantyne Road, scores highest. It is the option that is most advanced from a development perspective – QLDC own the land and have commenced geotechnical and planning assessments for the site (because it will also be used for an upgraded Wanaka transfer station). The site has been purchased with the intention of being used for waste and resource recovery activities. Council has already invested in this site through the purchase of the land. Building the MRF on this site, if it can be done cost-effectively, aligns with this purpose. There are no compelling reasons not to pursue this as the preferred in-district MRF option and therefore it is recommended the development of this site continues to be progressed.

There are known challenges with the Ballantyne Road option and the additional costs for the development of this site have been included in the estimate as a contingency. The Ballantyne Road site may be difficult to consent and develop. There are likely to be geotechnical and site contamination challenges to overcome given part of the site was used as a landfill in the past and the site is adjacent to river flats. However, the extent of these challenges and the associated cost to remedy them cannot be estimated without further engineering, environmental and planning investigations. These investigations would be required for any site being considered for a new MRF, and what might be uncovered during investigations remains unknown for any site. Alongside these investigations, stakeholder mapping and early engagement would also need to get underway.

Back-up options

Further investigation may reveal the costs, geotechnical constraints or planning requirements become prohibitive. There is benefit in having back up site options available if this occurs. Option 2, Cromwell CODC has the second highest score and therefore is recommended as the back-up site. Out of district may also become a viable long-term option if the costs of developing an in-district MRF become too high or if QLDC wishes to defer capital investment to future years. On balance, combining both capital and operating costs, the in-district and out of district options have similar cost profiles. It is recommended that long term use of an out of district, while not ideal, remain as a back-up option for QLDC.

Consolidation sites

All options will require some consolidation of material prior to haulage to the MRF – both in-district and out-of-district options. For Ballantyne Road, consolidation would only be required by QLDC in Queenstown, while out-of-district would require consolidation in both Wanaka and Queenstown. Short-term options for consolidation could include:

- Redevelopment of Glenda Drive could be delayed and the MRF used for consolidation in Queenstown.
- Land in the Gibbston Valley could be purchased and used for this purpose.
- There may be parts of Wanaka transfer station site that can be made available.
- There may be commercial land or buildings that can be leased for consolidation.

It is recommended that all these options are explored in the next phases of MRF planning.

Note, CODC currently use their Alexandra transfer station for consolidation of material prior to haulage out of district.

Recommended next steps

Based on the recommendations above, the next steps are listed below. The actions fall within three workstreams.

Progressing in-district MRF (Ballantyne Road and back up)

- Commencing engineering, environmental and planning investigations for a new MRF at Ballantyne Road in Wanaka, to enable risks to be understood and quantified.
- Complete a detailed carbon assessment for in-district versus out of district options including transport.
- Prepare a detailed procurement strategy for the in-district and out of district MRF, as well as wider waste contract renewal. Refine contract options and engage with the market as part of this process. Note, options for design and organisation of enabling works, MRF building and MRF plant and equipment all need to be assessed as well as MRF operation options.

Securing short-medium term out of district solution (transportation and processing)

- Undertake further investigations with Timaru District Council and Dunedin City Council (or EnviroNZ) to understand contractual arrangements for a short-medium term out of district solution.
- Procuring contracts for transportation and processing QLDC's recyclables at an out of district MRF. Noting these are relatively simple services to procure.

Confirming consolidation arrangements (for both Wanaka Ballantyne Road or out of district)

- Exploring consolidation options for both the Wanaka Ballantyne Road, and out of district options to ensure assumptions in the financial model are valid and suitable sites can be secured.
- Confirming short-term recyclables consolidation arrangements, within the Queenstown District or with CODC at Alexandra.

1 Introduction

Queenstown Lakes District Council (QLDC or Council) has a Material Recovery Facility (MRF) for processing of mixed recyclables collected from residents and businesses throughout the district. The MRF is located at 110 Glenda Drive, Frankton. The facility is no longer fit for purpose and a new processing solution is required for the recyclables collected in the district, which is reliable, flexible, and adaptable to future demands.

Council has been exploring options for a replacement for the ageing MRF since at least as early as 2017 and has previously assessed various potential MRF site options, which have focussed primarily on locations in the Whakatipu basin. These sites have also included infrastructure for a broad resource recovery park for the district which could support the wider region. Council recently purchased land adjacent to the Wanaka transfer station on Ballantyne Road, which offers another site that could be considered for the MRF. However, this opportunity hasn't been tested against other sites previously considered.

Council has commissioned Morrison Low to undertake a rigorous options assessment and recommend a way forward that considers:

1. Optimal MRF site location based on where recyclables are generated in the Queenstown Lakes and neighbouring Central Otago districts.
2. MRF ownership and operations structures.
3. MRF plant and equipment required to meet current and future demand and potential changes in feedstock over time.
4. Financial and commercial considerations, including funding and commercial property considerations.

2 Methodology

This options analysis project has been split into two phases:

- Phase 1: Assessment of MRF location options
  - Material flows including material inputs, material outputs and anticipated growth over twenty years based on population and economic growth.
  - MRF site concept plan developed by MRF design subcontractor BJ Scarlett.
  - Identification of site options to be assessed from previously considered sites and new site options using knowledge from Q Property.
  - Assessment approach and development of criteria in workshops online and in person.
  - Options assessment in workshops in person.
  - Draft report delivered and feedback received from the Council team.
- Phase 2: Commercial elements
  - Further assessment of shortlisted sites.
  - Stakeholder engagement and feedback.
  - Site specific concept plan developed by MRF design subcontractor BJ Scarlett.
  - Financial modelling.
  - Ownership and operating model options.
  - Risk assessment.
  - Commercial and financial considerations in workshop in person.
  - Preparation of review summary and review in an online workshop.
  - Preparation of final report and review in an online workshop.
  - Deliver final report.

3 Strategic context

The strategies and plans that provide the strategic drivers for the development of a new Queenstown MRF are outlined in this section.

3.1 Waste Management and Minimisation Plan

Council is required to develop a Waste Management and Minimisation Plan (WMMP) and review this every six years. The current WMMP was prepared in 2018 and will be reviewed over the next twelve months to align with the Te rautaki para Waste Strategy 2023. The current WMMP vision is:

'Towards zero waste and a sustainable district'

The action plan contained in the 2018 WMMP has three activity areas:

1. Waste Reduction – Reducing waste at source.
2. Resource Recovery – Diverting waste from landfill.
3. Waste Disposal – Collecting, transporting and disposing of waste.

The following actions are relevant to this project:

Action 2.1 states that Council will 'Provide resource recovery (and waste disposal) facilities that optimise separation of divertible material in Wanaka and Whakatipu'.

Action 2.10 state that Council will 'Review and provide upgrades to the layout and operation of resource recovery and waste disposal facilities to optimise resource recovery and improve capacity'.

3.2 Climate and Biodiversity Plan 2022 – 2025

The QLDC Climate and Biodiversity Plan has 3 goals:

1. **Biodiversity** – The mauri (life force or essence) of our ecosystems is protected and restored. Indigenous biodiversity is regenerated resulting in a deafening dawn chorus.
2. **Adaptation** – Queenstown Lakes is a place that is ready and prepared to adapt to a changing climate resulting in disaster defying resilience.
3. **Mitigation** – Our district reduces its greenhouse gas emissions by 44% by 2030 and achieves net-zero greenhouse gas emissions by 2050 resulting in zero carbon communities.

To reach these goals Council has the following commitments, which are relevant to this options assessment:

- We are committed to zero waste.
- Our transport network is low-emission.
- We work together to change the way we travel.
- We lead the way with low carbon infrastructure and buildings.

3.3 Asset Management Plan

The current Council waste management and minimisation asset management plan 2021-2031 identifies a number of key issues which are also relevant to this project, which are contained in the table below.

Table 3 QLDC Asset Management key issues and implications

Key issues	Implications	Refer to AMP and Infrastructure Strategy sections
1. Facilities at end of life and not fit for purpose.	The Wanaka and Queenstown Transfer Stations and the Queenstown MRF are operating beyond their intended design life. They are therefore requiring significant ongoing building and grounds maintenance to enable their continued operation ahead of their upgrade (identified in the 2021 Long Term Plan (LTP)). There is a risk of extended service outages should the existing facilities fail in the interim.	Section 5.10 Asset Renewal Programme
2. Ongoing asset equipment issues at both Queenstown and Wanaka Transfer Stations and Queenstown MRF.	This is linked to the above key issue but related to the equipment within the facilities. The equipment in the transfer stations and MRF is worn out and the facilities are processing higher volumes than they were originally designed to take. They are being operated beyond their useful life while Council designs, consents and constructs new facilities. There are regular breakdowns and high maintenance costs (including regular component replacements).	Section 5.6 Capacity and Performance
3. Supply chain issues with commodity market (i.e. glass and mixed recycling contamination rates).	Glass and mixed recycling is extremely sensitive to contamination (less than 1%), so it is necessary to ensure that the district minimises the amount of non-glass material placed in the glass and mixed recycling bins. Continued education is a key focus of the service going forward to ensure the material collected can be recycled.	Section 3.3 Current Demand for Waste Services
4. Development of new Kimiākau Resource Recovery Hub	The development of new recycling, recovery and treatment facilities is to support Council's long-term waste minimisation targets and replace aging transfer station and MRF assets. The facility will be integrated with its surroundings with a proposed future Environmental Learning Park component to connect the community with the facility.	Section 5.11 Asset Development Programme and Section 4.11 Zero Waste Programme in the 2021 Infrastructure Strategy
5. Long term viability of the Victoria Flats Landfill with surrounding residential development.	The Victoria Flats Landfill is located 17km from Frankton and is surrounded by rapid residential development. Future neighbours may be less tolerant to an operational landfill which may risk the ability to re-consent the site when the existing consents expire. This would impact the future viability of this landfill and Council may have to transport waste further away, potentially outside the Otago Region.	Section 3.5 Meeting Future Demand (provision)

3.4 Long Term Plan

The QLDC 2021-2031 long term plan (LTP) signalled that due to population growth and subsequent volume increases the demand on the district's ageing recycling and waste transfer station plant and infrastructure means they are no longer fit for purpose. The LTP stated that minor upgrades of these facilities had been taking place and early design work on a new recycling facility was started in 2021. The LTP allocated $35 million capital expenditure between 2021 and 2026 for new Whakatipu waste facilities including a new MRF, which was based on the concept design from WM New Zealand Ltd.

Council have deferred adoption of its next LTP from June to September 2024. It is anticipated that the next LTP updates the investment requirements for the new MRF, based on this options assessment. A provisional budget of $70M[1] has been allocated for waste facilities across the district in the draft QLDC 2024-2034 Long Term Plan.

[1] QLDC_Long_Term_Plan_Consultation_Document_2024-2034_WEB.pdf (ehq-production-australia.s3.ap-southeast-2.amazonaws.com)

4 Current state

Council's current MRF is located at 110 Glenda Drive, Frankton, next to Council's transfer station. The building was constructed in 2007 and a Build-Own-Operate-Transfer (BOOT) contract was awarded to Smart Environmental Limited to install the MRF equipment inside the building and operate the MRF for a 10-year period. This contract was subsequently extended to align with the expiry of other waste management contracts and when handed back to Council in 2019, the MRF was nearing end of life and had limited capacity.

In 2019, a new contract for solid waste services was awarded to WM New Zealand for an initial term of 7.5 years with the options to extend three times by 2.5 years, for up to 15 years. This contract included the ongoing operation of the MRF until such time as a new MRF could be constructed, which was expected to be operational in 2-3 years, by June 2022. Kerbside collection changes meant that glass was separated from mixed recyclables, reducing the volume of material received at the MRF and wear and tear on the equipment from the abrasive glass. This has helped the MRF to remain operational.

Mixed recyclables from the Central Otago District Council (CODC) were processed at the Glenda Drive MRF up until 2019. However, due to the deteriorating condition of the MRF and prioritisation of Council recyclables processing, the MRF was no longer able to process CODC recyclables at peak times. CODC had to landfill their recyclables when this occurred. CODC now have a contract in place to take their recyclables to Timaru District Council's Redruth MRF (via their contractor EnviroNZ), until a new Queenstown MRF is constructed.

Now, nearly five years later (in May 2024), Council are still processing mixed recyclables from kerbside collection and the commercial sector through the Glenda Drive MRF. WM New Zealand's operating costs have risen steeply from $540,000 in 2018/19 to $880,000 in 2023/24 (an increase of 60%), while tonnes processed have decreased by 11%. Council have had to invest $1.3 million in major maintenance and equipment replacements in the last five years, over and above the planned maintenance included in WM New Zealand's operating cost. However, the MRF remains at imminent risk of catastrophic failure. If that were to occur, recyclables would have to be landfilled at a current disposal rate of $200 per tonne, until a new MRF were constructed. There are no other MRFs in the lower South Island that have the capacity to accept QLDC's recyclables currently.

Table 4 Recyclables processing costs, including Council and commercial mixed recyclables and glass.

Year	2019/20	2023/24
Tonnes processed[1]	5,300	4,700
Rate ($/tonne)	$102	$183
Total	$540,000	$880,000
QLDC additional R&M	$580,000	$259,000

Notes:

1. Includes the processing of Council and commercial glass and mixed recyclables.
2. Total additional repairs and maintenance cost over five years, $1,310,000.

4.1 History of MRF development project

2018 to 2020

Council have been investigating options for upgrading its MRF since at least 2017. Upgrades to the MRF were considered alongside upgrades to Council's other resource recovery facilities, the Queenstown and Wanaka transfer stations.

A business case was prepared in 2018 to look at options for upgrading all three facilities. The assumption at the time was that the Queenstown MRF and transfer station would be co-located at one fully integrated and purpose-built, modern Resource Recovery Hub (RRH, also referred to as the Kimiākau Zero Waste Community Eco Park or CEP). The facility would accommodate expanded resource recovery activities including construction and demolition waste sorting, consolidation for kerbside-collected organics, a reuse shop, education centre and community garden. It was identified that the current Glenda Drive site was too small to accommodate both a new transfer station and a new MRF and therefore alternative sites were considered that were large enough to accommodate the full RRH. As the site would be replacing the Queenstown transfer station, sites were considered within the Whakatipu Basin so that customers would not have to travel significantly further than the Glenda Drive site.

Through the business case, land at QLDC's wastewater treatment plant (WWTP) at the Shotover Delta was selected as the preferred option, with all resource recovery activities relocating to the Shotover Delta and the Glenda Drive land sold. Note, the other option shortlisted at the time was to retain Glenda Drive for the RTS and build non-customer facing facilities (like the MRF and glass handling bunkers) at Victoria Flats landfill. Having resource recovery facilities spread across two sites and not being able to sell Glenda Drive meant that this option had a higher cost than a consolidated approach at the Shotover Delta site alone and was ruled out for this reason.

Following further investigation into the Shotover Delta site and associated development costs, the business case was updated in 2020. Capital costs rose from $18.5 million to $39.3 million as a result of these investigations.

2021 to 2022

Through the solid waste procurement process in 2018, WM New Zealand were appointed to develop a concept design for the Shotover Delta RRH and it was intended that this would be followed by WM New Zealand overseeing construction of the RRH. WM New Zealand completed their concept design in December 2021, accompanied by a further increase in capital costs to $55.6 million (the draft QLDC 2024-2034 Long Term Plan budget for waste facilities has been increased to $70M to account for additional costs for the Shotover ponds reclamation work). This exceeded Council's 2021 LTP budget by $20 million and the project was put on hold, while further value engineering could be undertaken.

Concurrent with the WM New Zealand concept design work, Council appointed Tonkin + Taylor for the consenting of the RRH. This process raised several questions around the Consentability of the Shotover Delta site. Council were also undertaking further analysis of their wastewater treatment needs and identified that the oxidation ponds would continue to be needed and therefore could not be decommissioned to free up land for the RRH. In early 2022, the option of Shotover Delta for the RRH was abandoned.

In April 2022, Tonkin + Taylor undertook further assessment of alternative sites in the Whakatipu Basin. Despite assessing over 10 sites, no suitable alternatives were identified.

Today

QLDC is now broadening the search for a site for its MRF and is considering sites outside the Whakatipu Basin, including sites outside the Queenstown Lakes District. It is also decoupling the MRF development from the Queenstown transfer station upgrade. Glenda Drive will continue to be used as the Queenstown transfer station site and as a customer interface for the public to drop off recyclables, but the MRF will need to be moved to another location because the site is not big enough to accommodate the MRF as well.

Council recently purchased land adjacent to the Wanaka transfer station, which is partly underlain by the Council's closed Wanaka Landfill. There are parts of this land parcel that may be able to be used for a new Queenstown MRF.

Decoupling MRF development from other resource recovery infrastructure also broadens the potential locations for a MRF, including the option of siting the MRF in Cromwell (which is part of the Central Otago District) or accessing an out-of-district MRF in Christchurch, Timaru, Dunedin or Invercargill, noting that there would still need to be a local customer interface in Queenstown and Wanaka for the public to drop off recyclables.

4.2 Broader resource recovery infrastructure needs and co-location

QLDC currently owns the following waste infrastructure:

- Queenstown transfer station, located at 110 Glenda Drive, Frankton
- Queenstown MRF, also located at Glenda Drive
- Wanaka transfer station, located at the corner of Riverbank Road and Ballantyne Road, Wanaka
- Victora Flats landfill, located at Victoria Flats Road, Gibbston

Note, glass consolidation bunkers are located at both the Wanaka and Queenstown transfer stations, with consolidated material transported directly from these bunkers to Christchurch (and on to Visy in Auckland).

There are also facilities provided by the private sector and community enterprise sector that complement Council's facilities. Some of these are co-located on Council sites used for waste management purposes. Wastebusters operate a resource recovery centre on a land parcel leased at the Wanaka transfer station site. Wanaka Greenwaste lease a portion of the land adjacent to Wanaka transfer station, which Council recently purchased. Council's transfer stations are used by WM New Zealand as depots for Council's kerbside collection vehicles and their own commercial vehicles.

In order to reduce waste and improve the circularity of resource use in the Queenstown Lakes District, Council is looking to expand the services provided to the community, either on its existing sites or on sites provided by the private sector or not-for-profit sector. These include:

- Consolidation of kerbside collected organics material, prior to transportation to a future organics processing facility in the Central Otago District.
- Sorting and storage of construction and demolition materials, prior to transportation to end markets.
- Development of enhanced customer recycling drop off, a reuse store, education centre and community gardens in Queenstown.

While there will be the need to accommodate these activities within QLDC's network of waste and resource recovery facilities and there are efficiencies from complementary activities to be co-located, this can be decoupled from the identification of a site for the MRF. The ability to identify a site for the MRF that could also accommodate these activities would be beneficial, but not fundamental to site selection.

4.3 Working with other councils

QLDC have always worked closely with neighbouring CODC on the provision of waste infrastructure servicing the two districts. CODC used Council's MRF up until 2021 and dispose of waste at Victora Flats Landfill, which is owned by Scope Resources Ltd, but on QLDC land. The recent Otago Region Waste Assessment[2] identifies a key issue, being that the inland sub-region (Queenstown/Central Otago) lacks a full facility resource recovery park with large capacity. There has been an informal agreement between the two councils that CODC will develop the organics processing facility for the two districts, while QLDC will develop the next MRF. We have included CODC's mixed recyclables tonnes in the volumes to be processed at the new MRF. One of the options considered throughout this assessment is for a new MRF to be located partly on CODC transfer station land and partly on adjacent land (The Pines) which is due to be released for subdivision over the coming years. CODC have signalled that they are open to discussing all possible land ownership and operating models, should this option be taken further into consideration.

There are other councils that may need access to a MRF in future:

- WasteNet Southland (Invercargill, Southland and Gore) currently use a MRF in Invercargill, but this is nearing end of life and the contract expires in June 2027. There may be benefits from economies of scale in developing a MRF that includes WasteNet Southland tonnes, however transporting recyclables to Queenstown or Central Otago may be inefficient given the ports for exporting sorted recyclables are in Christchurch, Dunedin, Invercargill or Timaru.
- Clutha District and Waitaki District are upgrading their recycling services and will need to access a MRF. It is likely that existing MRFs in Dunedin or Timaru are closer and therefore more cost-effective options for these councils.
- The Westland District neighbours Queenstown Lakes and it may be possible to transport recyclables from this district to Council's new MRF. However, Westland is looking at options to work with the Grey and Buller Districts on the West Coast for their waste services to commence in July 2025, and while a QLDC MRF may be suitable for Westland, it may be too far to transport material from Buller or Grey.

We have not specifically included material from these districts in sizing the MRF.

There are existing council-owned MRFs in the lower South Island that QLDC could send recyclables to instead of building their own local MRF:

- Timaru District Council own and operate a MRF at Redruth Resource Recovery Park, in Timaru. It has limited capacity and is currently being upgraded. It is being used by CODC for interim processing.
- Dunedin City Council (DCC) use a MRF owned and operated by OJI next to DCC's Green Island Landfill. The OJI MRF is nearing end of life and has limited capacity. DCC are in the process of developing a new MRF on the Green Island Resource Recovery Park site, which will be owned by DCC and replace the OJI MRF. Early discussions with DCC have taken place to establish whether the facility would be sized to accommodate material from CODC and QLDC and this is confirmed.
- The WasteNet Southland councils use a MRF owned and operated by Recycle South (formally known as Southland DisAbility Enterprises Ltd). This MRF is also nearing end of life and has capacity restrictions. Future plans are unknown at this stage.

[2] Otago Region Waste Assessment – covering Queenstown Lakes, Central Otago, Clutha and Waitaki Districts and Dunedin City

For the purposes of this assessment, it is considered that the planned new DCC MRF on the Green Island Resource Recovery Park site is the most likely out of district option available. Resource consent applications are currently being processed by Otago Regional Council, which are based on the largest MRF building they can fit on the site and the proposal is to build at least a 5 tonne per hour MRF, which is anticipated to be large enough to process recyclable material from QLDC and CODC now and in the long term. The Timaru MRF will also have capacity to accept additional material once the DCC MRF is operational and DCC materials are directed to the new Dunedin MRF.

4.4 Material flows

The table below provides the volume of recyclables generated in the Queenstown Lakes and Central Otago Districts in 2023/24 and projected out to 2044/45. The volume of material processed through the MRF is expected to double in this period.

Table 5 Recyclables volumes projection

Material	Volume 2023/24[1]	Volume 2044/45[2]
Queenstown Lakes District		
Wanaka (40%)		
Mixed Recyclables	1,122	2,531
Glass	1,034	2,331
Sub-total Wanaka	***2,156***	***4,863***
Whakatipu (60%)		
Mixed Recyclables	1,683	3,797
Glass	1,551	3,497
Commercial OCC	907	2,047
Commercial mixed recyclables	612	1,381
Commercial glass	1,070	2,413
Sub-total Whakatipu	***5,823***	***13,135***
Central Otago District		
Mixed Recyclables	1,654	2,398
Glass	1,169	1,696
Sub-total Wanaka	***2,823***	***4,094***
Total Glass	4,823	9,937
Total OCC	907	2,047
Total Mixed Recyclables	5,072	10,107
Contamination to landfill (17%)	862	1,718
Recyclables to market	4,209	8,389
Throughput (tonnes/hr)	***2.4***	***4.9***

Notes:

1. Based on operation 8hrs per day, 5 days per week, 52 weeks per year
2. Based on 3.9% growth in the Queenstown Lakes District and growth in Central Otago of 2.1% growth in years 1-9 then 1.5% in years 10-20

For Queenstown Lakes, the kerbside tonnes have been split 40% from Wanaka and 60% from Queenstown. While Wanaka is growing at a faster rate than Queenstown, overall the split is expected to be roughly the same within the 20-year operating period for this MRF.

The figure below shows the transport distances between the different collection areas, potential MRF locations and to the export locations (ports). Cromwell is ideally suited at the centre of the collection area and on route to export nodes in Dunedin or Christchurch. However, the Whakatipu Basin area is the largest generator of mixed recyclables; the volume is double that of Wanaka or Central Otago (all mixed recyclables from Central Otago are currently consolidated in Alexandra). Overall, transport movements (and costs) would be lowest for a MRF located in Queenstown.

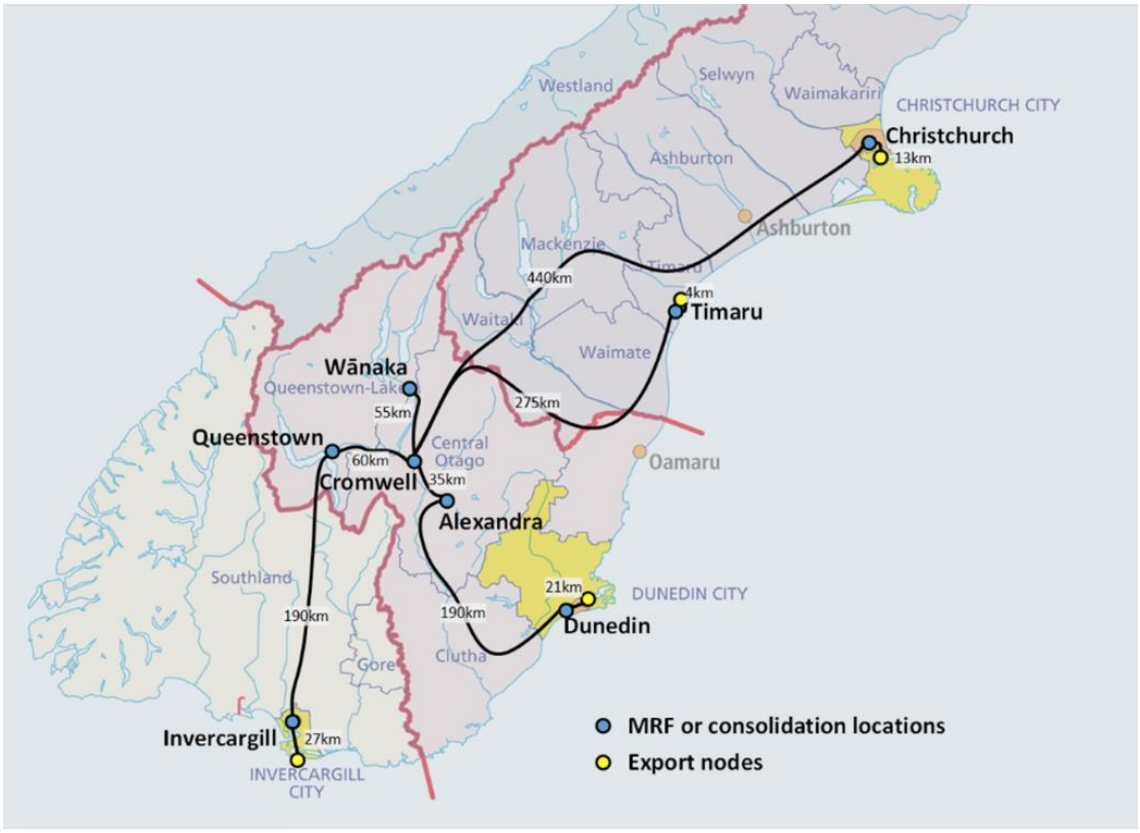


Figure 1 Transport distances between collection areas, potential MRF locations and export locations
(Note, Victoria Flats Landfill is approximately halfway between Queenstown and Cromwell)

4.5 MRF concept plan

Based on the volume information above, BJ Scarlett have produced a concept plan for a MRF that could process 5 tonnes per hour. A concept layout for this MRF is shown in the diagram below.

The layout shows a land area of 9,000m^2, with car parking for staff and visitors, a weighbridge, an enclosed building to house the MRF plant and equipment, a baled material storage shed open on one side and sufficient hard standing to allow incoming vehicles to drop recyclable material off and for large truck and trailers to maneuvre within the site and to be loaded with baled material. Ideally a larger site of 11,000,m^2 and a fully enclosed storage shed would be preferable to reduce windblown litter, for vermin control and to prevent damage to the processed materials.

This MRF in the diagram below would fit into any of the shortlisted options being considered.

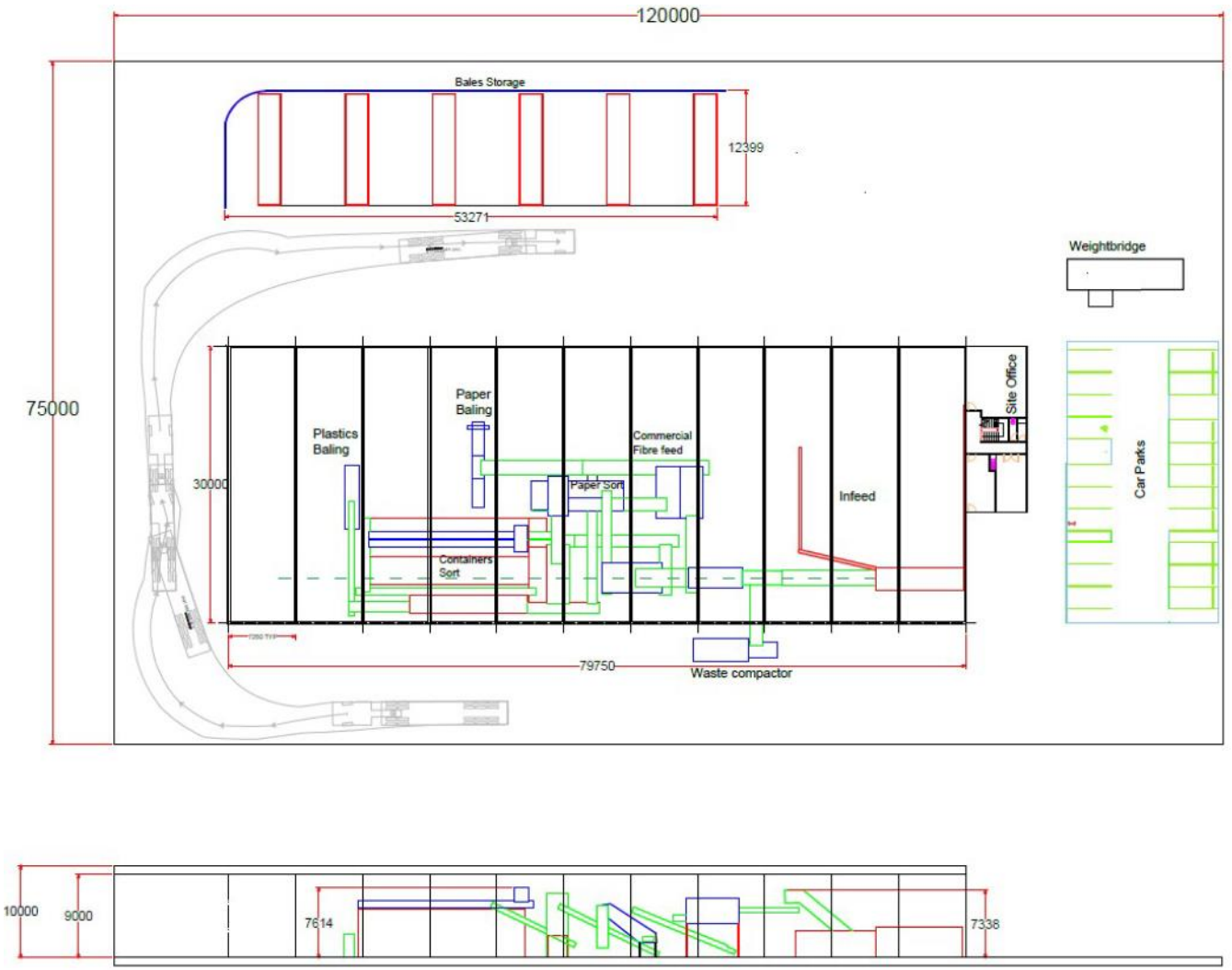


Figure 2 Concept layout for 5 tonne per hour MRF

A MRF of this size would require:

- Minimum land size of 9,000m^2, but ideally 11,000m^2 (for truck movements, storage, parking and loading)
- Minimum building size of 2,400m^2 (30m x 80m)
- Building height of 10 metres at the apex and 9 metres at the eaves
- Access to services: power, water, wastewater, stormwater and communications
- No glass to be accepted at the MRF
- Staff levels: 9 staff if fully automated or 13 staff if semi-automated (a semi-automated MRF would not include an optical sorter)
- Note, further capacity could be added to the MRF by adding an additional 8-hour shift (100% increase) or extending operations to 6 days per week (20% increase).

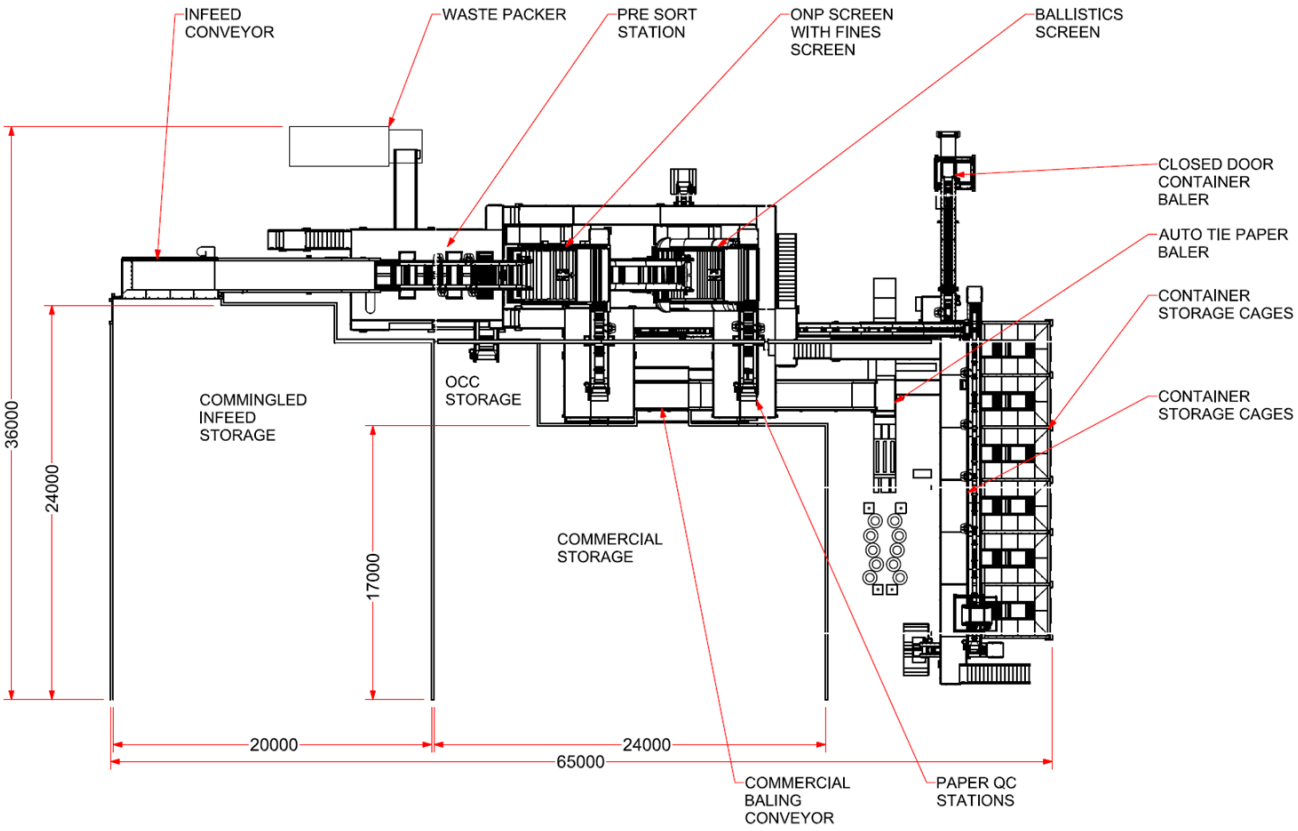


Figure 3 Detailed concept layout for 5 tonne per hour MRF

The diagram below shows the list of equipment required for the 5 tonne per hour MRF. Up to date pricing for the MRF has also been provided and is incorporated into the cost model. (Please note that pricing for the MRF remains confidential at this time).

Project Name	Queenstown MRF		
Document Name	MRF Equipment List - 5 TPH		
Date	26/06/2024		
Revision	A		
Item #	**Width**	**Length (m)**	**Description**
CV Type 1	600	105	Belt Conveyors
CV Type 2	900	95	Belt Conveyors
CV Type 3	1200	90	Belt Conveyors
CV Type 4	1400	40	Belt Conveyors
CV Type 5	1600	20	Belt Conveyors
CV Type 6	2000	7	High Speed Belt
Chain CV Type 1	1800	40	2 Off Chain CV
Chain CV Type 2	1800	18	Fibre cage CV
CV Type 7	1800	8	Bounce CV
LD-01			Leveling Drum
S01			OCC Screen
S02			Fines Screen
S04			Mixed Paper Screen
MG01			Overbelt Magnet
EC01			Eddy Current
OS01			Optical Sorter 1 - Paper
OS03			Optical Sorter 3 - Containers
BP			Paper Baler
BC			Containers Baler
WC01			Waste Compactor
AC01			Air Compressor 01

Figure 4 List of plant and equipment for 5 tonne per hour MRF

A price estimate has been provided by BJ Scarlett which was used in the calculations for the financial assessment. This information has been shared with the Council, but is not being made public in this report as it contains commercially sensitive information.

4.6 Land values

Commercial land is scarce in the Queenstown Lakes and Central Otago districts, and the land values vary significantly. Wanaka land is about two thirds the value of Queenstown land, and Cromwell land is around one third the value of Queenstown land. While the highest volumes of recyclable materials are in Queenstown, the difference in land cost for an 11,000m^2 MRF site would significantly offset the transportation costs associated with moving material from Queenstown to Cromwell, and to a lesser extent, to Wanaka.

Table 6 Comparison of land values in Queenstown, Wanaka and Cromwell

Location	Cost per m^2	Cost for 11,000 m^2 using upper limit
Queenstown	$1,200-$1,900	$20,900,000
Wanaka	$800-$1,100	$12,100,000
Cromwell	$500-$700	$7,700,000
Gibbston Valley	$400	$4,400,000

5 Assumptions

The following assumptions have been made in relation to the MRF options assessment:

1. The existing MRF site at 110 Glenda Drive, Frankton is not suitable for a new MRF due to space constraints and the need for the site to be used for the transfer station expansion.
2. QLDC has an approved capital budget of $70M for the for waste facilities across the district in the draft QLDC 2024-2034 Long Term Plan. The majority of this budget will be allocated to a new MRF.
3. The new MRF will not process glass, which will continue to be handled separately, consolidated at transfer stations and transported to Visy glass furnace in Auckland, via Christchurch.
4. Land and lease values have been provided based on the best available data from Q Property in May 2024 and may be subject to change.
5. For the financial assessment, costs will commence in the 2025/26 financial year and have been projected out for a 20 year period.
6. For the Ballantyne Road, Wanaka site, QLDC will own the land and develop the site and buildings.
7. For the CODC site, all land ownership options are on the table.
8. For the 147 McNulty Road site, the land will continue to be owned by Trojan Holdings Limited. They will develop the site and buildings and lease these to QLDC (or its MRF operator).
9. For the Gibbston Valley Site, QLDC will purchase the land and develop the site and buildings.
10. Transportation costs are calculated based on distances from collection sources to consolidation points, from consolidation points to the MRF and from the MRF to export locations. They also take into account the different compaction levels of materials at each stage.
11. In areas lacking existing recycling consolidation facilities, such as Wanaka, consolidation points would be required.

6 MRF site options considered

Council has carried out previous work to identify alternative MRF sites to the current Glenda Drive location. This work focussed on sites in the Whakatipu basin only and has proved inconclusive due to prohibitive costs and changes in priority for available land. The scope of the MRF options assessment has now been increased to include the whole of the QLDC area including Wanaka and beyond the boundaries of the district into Central Otago. This has come about because Council has recently purchased land next to the Wanaka transfer station which could be available for a new MRF and it also wants to explore the potential for more affordable options.

An initial review of the previous work concluded that there would be some benefit in revisiting some of the options previously considered and to explore whether there are any other locations across the QLDC and Central Otago area, which could be added to the assessment. An initial list of 12 options was presented to QLDC staff at the workshop on 2 May. These sites are listed in the table below. Through this workshop, it was agreed that Options 1-6 would be taken forward, along with Option 0 110 Glenda Drive (status quo).

Table 7 Long list of options (Options 0-6 retained, Options 7-12 discarded)

#	Location
0	110 Glenda Drive (status quo – for comparison).
1	Wanaka Ballantyne Road – QLDC recently purchased land (partly closed landfill) between the existing Wanaka transfer station and the Cardrona River.
2	Cromwell CODC site – A mixture of land (partly on closed landfill) which is part of the Cromwell transfer station and land within Plan Change 18 which is adjacent.
3	Cromwell 147 McNulty Road – Land owned by Trojan Holdings Ltd, which is a large transport and private construction and demolition waste recycling facility.
4	Whakatipu Coneburn Industrial Zone – Land owned by Scope Resources Ltd and Trojan Holdings Ltd.
5	Queenstown Victoria Flats Gibbston Valley – Land owned by Cardrona Cattle Company Ltd with designs and a proposal for a resource recovery centre.
6	Out of district MRFs – Christchurch, Dunedin, Invercargill, Timaru.
7	Arrowtown Bush Creek Road – Land in the Bush Creek industrial area currently for sale.
8	Cromwell SH6/Cemetery Road – Land currently for sale.
9	Cromwell Parkburn Quarry – Land owned and proposed for residential and commercial development.
10	Hawthorne Drive, Queenstown (site 6 from previous assessment).
11	Wanaka other – 60B Church Road in Luggate. Property is currently owned by Upper Clutha Transport and is for sale.
12	Queenstown Victoria Flats Road – Landfill site owned by QLDC.

An initial financial analysis concluded that options 7, 8, 10 and 11 would require a significant capital investment to purchase the land and there were other more suitable land parcels in similar locations that could be considered. Option 10, Hawthorne Drive, Queenstown was discarded because this land is currently undergoing a plan change to allow residential and some commercial development. Option 12, Queenstown, Victoria Flats is considered to be unsuitable in the longer term as this land is required for potential future landfill expansion.

For the purposes of the MRF options assessment, it was considered that the Dunedin site would be the most likely out of district option due to the relatively short transport distance and the likelihood of the facility being able to accept additional recyclable material.

The sections below provide further details on Options 1-6 and the status quo, which were taken forward into the longlist assessment using the MCA tool.

6.1 Option 0 – Glenda Drive (status quo – for comparison)

The current MRF is located at 110 Glenda Drive in Frankton, Queenstown adjacent to the Frankton transfer station. The total area of land is 15,000m^2 shared between the two facilities. It is estimated that the land area covering the MRF building, reuse shop and hardstanding is approximately 5,000m^2. The site is located within the Glenda Drive industrial area with similar activities taking place nearby. The site is designated for waste management purposes and the MRF currently holds water and air discharge consents. The diagram below shows the location of the MRF at the bottom of the shaded area.

Figure 5 QLDC MRF Glenda Drive

6.2 Option 1 – Wanaka Ballantyne Road

The Ballantyne Road site at the corner of Riverbank Road and Ballantyne Road in Wanaka was recently purchased by Council and is available for the relocation of the MRF. The site is located adjacent to the Wanaka transfer station, which is planned to be refurbished and there is the potential to either use the existing land or the newly acquired land for a new MRF. The total area of land is 110,230m^2 ,which includes existing leases to Wanaka Wastebusters and Wanaka Greenwaste and some other commercial contractors. Part of the land is on an existing closed landfill, which has been capped and is monitored for leachate and landfill gas emissions. Part of the site is also designated for waste management purposes and QLDC holds water and air discharge consents for the transfer station. The diagram below shows the extent of the newly acquired land, which is 83,243m^2 in size.

Figure 6 Ballantyne Road

6.3 Option 2 – Cromwell CODC site (part of Cromwell closed landfill and plan change 18 site)

The Cromwell CODC site is located between Venning Crescent and Bannockburn Road partly on the Cromwell closed landfill and partly on land, which has just been re-zoned industrial through plan change 18. The land is owned by CODC and will be subdivided into commercial and industrial lots. Preliminary discussions with CODC suggest that the land could be easily utilised for a MRF as this is considered a strategic purpose. This is endowment land, which is owned by the Cromwell community who would need to approve the use for this purpose. The total area of land available is in excess of 104,000m^2. The site is located adjacent to the Cromwell transfer station, which is planned to be refurbished in the next few years. The site is designated for waste management purposes. The diagram below shows the extent of the available land including a rectangle showing the approximately size and location of the MRF building. It would be anticipated the MRF site would also occupy part of the Cromwell transfer station site and could be accessed from Venning Crescent.

Figure 7 Cromwell CODC site

6.4 Option 3 – McNulty Road, Cromwell (Site owned by Trojan Holdings Ltd)

The Cromwell 147, McNulty Road site owned by Trojan Holdings Ltd is flat land within the McNulty Road industrial area. The total area of land available is 11,000m^2 on the southeastern corner of the site. The site already has similar activities taking place including a transport company, truck workshop and tyre shop, construction and demolition waste recovery and storage yard for waste management plant and equipment. The site has a weighbridge and truck wash already in place. The diagram below shows the extent of the available land including a rectangle showing the approximately size and location of the MRF building.

Figure 8 Cromwell 147 McNulty Road site

6.5 Option 4 – Whakatipu Coneburn industrial zone (338 Kingston Road - sites owned by Trojan Holdings Ltd)

The Whakatipu Coneburn site owned by Trojan Holdings Ltd is land recently rezoned commercial and industrial. Three lots (5, 8 and 12) are available which are over 11,000m^2 in size. The topography of the land is steep in places with very little flat land available. There are building height restrictions in place across all lots which will require deep excavation and earthworks. The diagram below shows the extent of the available land including the proposed lots.

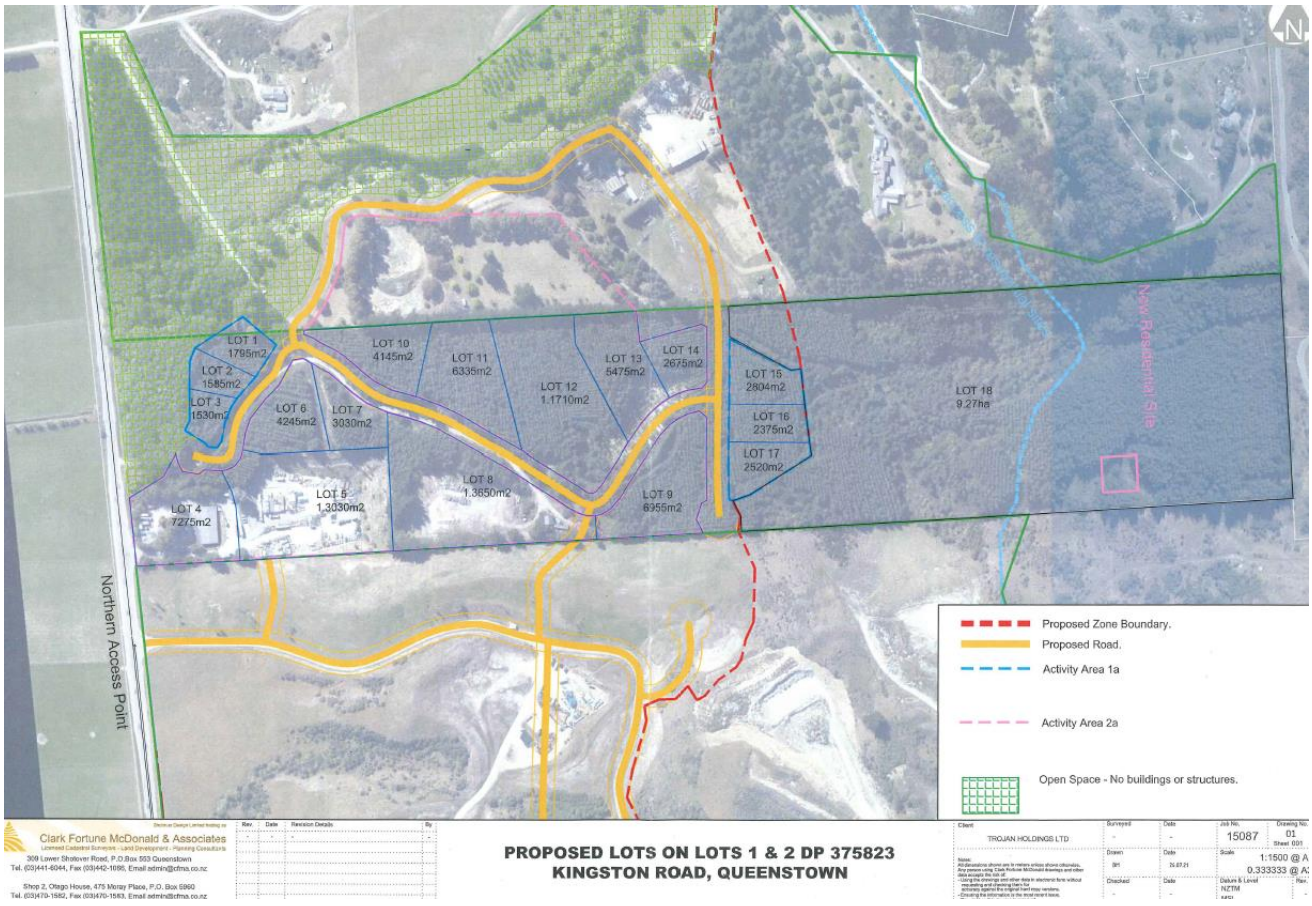


Figure 9 Whakatipu Coneburn site (338 Kingston Road)

6.6 Option 5 – Gibbston Valley, The Yards (Site owned by Cardrona Cattle Company Ltd)

The Queenstown Victoria Flats Gibbston Valley site is owned by Cardrona Cattle Company Ltd who are proposing to develop the site for commercial purposes, which could include a resource recovery park. The total area of land available is in excess of 490,000 m^2 and includes an area in excess of 11,000m^2 in size, which would be available for a MRF. The site is located close to the Victoria Flats landfill and does not have services such as power, water, wastewater or stormwater in place. An application for land use consent to build a resource recovery park has been prepared for the site, but has not yet been formally submitted for consideration. The diagram below shows the extent of the available land.

Figure 10 Queenstown Victora Flats Gibbston Valley

6.7 Option 6 – Out-of-district MRF

The out-of-district option selected is the Dunedin MRF, which is currently under construction. This site is considered the most appropriate out of district option because of the shortest distance to travel and the likelihood of the facility accepting additional recyclable material from QLDC and CODC. Transport distances are as follows:

- From Queenstown, 285km
- From Wanaka, 280km
- From Cromwell, 225km
- From Alexandra, 190km

7 Phase 1 longlist assessment

7.1 Phase 1 assessment considerations

Following a review of background information and discussion with Council staff at a workshop on 2 May 2024, the following list of considerations were developed, which are important for assessing MRF options in phase 1:

- An efficient MRF that can produce high quality bales of recyclables product, at the lowest cost, with the least loss of materials (waste).
- Value for money, including consideration of engineering and site development costs, land costs, etc.
- Shortest possible timeframe to replace ageing MRF.
- Low carbon emissions, including transport-related emissions.
- Resource Management Act – can a consent be obtained.
- Cultural impact, mana whenua values (not assessed this stage).
- Potential to leverage commercial property.
- Desirability of the site as a place to work and ability to show people what happens to their recyclables (education and behaviour change).
- Reliable, long-term solution.

These considerations align well with QLDC's Multi-Criteria Assessment (MCA) tool, which QLDC have used to assess infrastructure investment projects. The key considerations can be mapped to the standard QLDC MCA criteria. There is also benefit in using a tool that is consistent with other infrastructure decision making. For these reasons we recommended QLDC use its MCA tool for the assessment of MRF site options.

7.1.1 Phase 1 assessment criteria

The table below outlines the QLDC MCA criteria and how these have been interpreted for the MRF options assessment in phase 1, taking into account the key considerations that have been identified.

Table 8 QLDC multi criteria, descriptions and MRF specific descriptions

#	Criteria	QLDC MCA description	Description for MRF assessment
1	**Whole of life costs**	The present value of total cash costs of the investment over its life cycle, calculated using the relevant Public Sector Discount Rate.	20-year cashflow (opex, capex, revenue).
2	**Resilience**	Services would continue functioning during adverse events (i.e. disaster and natural hazard) and/or quickly recover to acceptable levels of service after an event.	Ability to re-establish service to whole of district if transport links severed.
3	**Environment**	The option: (a) prevents contaminants from entering the natural environment; and/or (b) reduces impact on global emissions and resource extraction; and/or (c) prioritises opportunities for environmental regeneration.	The solution: (a) Reduces carbon emissions (particularly transport). (b) Increases recovery of recyclable material.
4	**Economic**	The option: (a) represents an optimal balance of customer quality and affordability expectations (b) sustains the affordability of services through efficiency, effectiveness, and/or alternative funding opportunities.	Assurance solution remains affordable over 20- years.
5	**Achievability**	The option could be readily implemented from a legal, regulatory, planning and delivery perspective.	Solution readily implementable (from a legal, procurement, planning and delivery perspective). Time to implement a new MRF is as short as possible.
6	**Risk**	The option reduces residual risk and health and safety risk more than the other options considered.	NOT USED – all options will reduce operating and health and safety risk with a new MRF constructed
7	**Consentability**	The option is more easily consentable, or free of third-party restrictions, than the other options under consideration. For example: opposition, designation or district/regional plan requirements, potential conditions/mitigations on consent, etc.	Solution is easily consentable.
8	**Future proofing/options enabling**	The proposed option could be implemented in a way that would satisfactorily cope with future patterns of demand and enable adaptation to changes in community needs and preferences.	Solution is flexible and can be adapted to changing demands.
9	**Downstream economic effects**	The project enhances economic wellbeing, including factors such as productivity, economic diversification/resilience, employment, and enables opportunities for social enterprise.	Solution has broader economic benefits including employment, training, support for local businesses.

#	Criteria	QLDC MCA description	Description for MRF assessment
10	**Cultural wellbeing**	The project safeguards opportunities for Māori and other cultures and could be implemented in a manner that protects the area's cultural and historic heritage.	The solution safeguards opportunities for Māori and other cultures and could be implemented in a manner that protects the area's cultural and historic heritage. Note, requires feedback from mana whenua to be assessed.
11	**People**	The option: (a) directly and reliably protects people from harm; and/or (b) creates opportunities for people to increase activity, recreation, and social connection.	The location is a desirable place to work and easy to access for education purposes.

7.1.2 Phase 1 scoring and weightings

The options were assessed on a scale of 1 to 5, as follows:

- 1 = Strongly disagree
- 2 = Disagree
- 3 = Neither agree nor disagree
- 4 = Agree
- 5 = Strongly agree

The scoring methodology for whole of life costs in the QLDC MCA tool scores options on the following basis:

- 1 = 80-100% of maximum of options under consideration
- 2 = 60-79.9% of maximum of options under consideration
- 3 = 40-59.9% of maximum of options under consideration
- 4 = 20-39.9% of maximum of options under consideration
- 5 <20% of maximum of options under consideration

The scores were then totalled, and the options ranked. The following weightings were applied to each criterion to represent the elements most important to Council.

- Whole of life costs = 50% weighting
- Achievability = 10% weighting (greater emphasis placed on timely solution)
- Risk = 0% weighting (difficult to reconcile, weighting added to achievability)
- All other criteria = 5% weighting each

7.2 Phase 1 scoring

Following the review of long list options and the discarding of unsuitable options, seven options have been assessed against the agreed criteria including the current Glenda Drive site as a comparison.

Note, the Glenda Drive site is not fit for purpose due to being a constrained site and inadequate plant and equipment to process recyclables in the medium to long term. The site has also been identified for the expansion of the Frankton transfer station.

The table below provides a summary of the assessment of long listed options. Commentary on the scoring is provided in the sections that follow.

Table 9 Summary of options assessment

#	Criteria	Weighting	Option 0	Option 1	Option 2	Option 3	Option 4	Option 5	Option 6
			Status Quo - Glenda Drive MRF	Wanaka - Ballantyne Road	Cromwell - CODC site next to transfer station	Cromwell - McNulty Rd	Whakatipu Coneburn	Gibbston Valley - The Yards (Victoria Flats Road)	Out of district - Dunedin
1	Whole of life costs	50%	3	3	3	3	3	3	3
2	Resilience	5%	3	3	3	3	3	3	2
3	Environment	5%	4	3	3	3	4	4	2
4	Economic	5%	3	3	3	3	3	3	3
5	Achievability	10%	1	4	3	5	1	2	3
6	Risk	0%	3	3	3	3	3	3	3
7	Consentability	5%	5	2	3	4	1	2	4
8	Future proofing /options enabling	5%	1	5	4	4	4	4	2
9	Downstream economic effects	5%	4	4	3	3	4	4	2
10	Cultural wellbeing	5%	3	3	3	3	3	3	3
11	People	5%	1	4	3	3	3	2	2
	Total - unweighted scores	100%	31	37	34	37	32	33	29
	Rank - unweighted scores		6	1	3	1	5	4	7
	Total - non-financial scores only		28	34	31	34	29	30	26
	Rank - non-financial scores only		6	1	3	1	5	4	7
	Total - weighted scores		31	36	34	36	31	32	31
	Rank - weighted scores		7	2	3	1	5	4	6

7.2.1 Whole of life costs

For phase 1 a whole of life cost analysis was completed, which was designed to provide a long-term view of the financial implications of each MRF option over a projected period of 20 years. This period commences in the 2025/26 financial year following completion of all enabling works and MRF construction, which will take place in the year leading up to this date. In phase 2, these financials were further refined (see section 10).

Operational costs are projected to begin in the financial year, 2025/26, for all options. This allows for a standardised starting point across all options.

A key assumption is the exclusion of glass from the tonnage processed by the MRF, which is to reflect industry best practice and the continuation of existing solutions for glass from QLDC and CODC.

The financial model to inform the whole of life costs assessment has the following core components:

- Capital costs
- Lease costs
- Transportation costs
- MRF operating costs

The financial analysis confirms that all options are cost-generating, with no scenarios presenting a positive NPV. Consequently, this analysis focuses on identifying the option for minimising costs. The bottom-line NPV and whole of life cash flows for each option based on QLDC owning the land and MRF assets (i.e. not leasing the assets) are shown in Table 8 below. The NPV for each option has been used to score whole of life costs in the options assessment. Information on the cost components that make up each of the financial models is provided in appendix A.

Option 6, out of district, has the lowest NPV because it has low upfront capital costs. However, over the longer term, it costs more on a cash-flow basis due to the future transportation costs. Option 3, Cromwell McNulty Road, has a lower cost because it has existing infrastructure that can be used for the MRF. The NPVs of the other options are grouped within a narrow range of $56 to $62 million. Minor adjustments in cost inputs could lead to shifts in their internal rankings, indicating a tight financial landscape among the alternatives. For example, additional geotechnical requirements can increase costs by $5-10 million. An increase in the out of district MRF gate fee can increase cost by a similar amount. Therefore, the options are within a similar cost range and cannot be separated on cost. The overall range in NPV scores is $48 to $62 million. Therefore, for the MRF options assessment, each option has been allocated the same score of 3.

Table 10 Whole of life costs for QLDC to own and operate MRF

Results summary ($'000)	Option 0 Status Quo - Glenda Drive	Option 1 Wanaka - Ballantyne Road	Option 2 Cromwell - CODC site	Option 3 Cromwell - McNulty Rd	Option 4 Whakatipu Coneburn	Option 5 Gibbston Valley - The Yards (Victoria Flats Road)	Option 6 Out of district
NPV	n/a	($56,300)	($57,700)	($50,200)	($61,500)	($58,000)	($48,300)
NPV Rank	n/a	3	4	2	6	5	1
Whole of life cash flows	n/a	($87,700)	($76,600)	($78,900)	($60,000)	($77,100)	($115,900)
Whole of life cash flows rank	n/a	5	2	4	1	3	6
Whole of life cost score	n/a	3	3	3	3	3	3

7.2.2 Resilience

Each option scored 3 except for Option 6 out of district, which scored 2. It is likely that options closest to the highest tonnage would provide more resilience and the actual level of resilience of each option is dependent on where the transport links are severed. Consideration must also be given to the resilience of the facility, which may need to operate at reduced capacity even if transport links are not severed in a disaster. In this situation material may need to be landfilled.

7.2.3 Environment

Options 0, (status quo), 4, Whakatipu Coneburn and 5, Gibbston Valley, which are closest to the where the highest tonnage is generated (Queenstown) scored 4 because these options require the least trips.

Option 6, out of district scored 2 because of the need to transport loose material a greater distance for processing resulting in higher estimated carbon emissions. At present there are no viable alternatives to using diesel powered truck and trailers to transport long distances. Technological developments are progressing in hydrogen powered long haul vehicles, but these are some way from being a proven solution in New Zealand and cannot be relied upon in this assessment.

7.2.4 Economic

All options scored 3 as the affordability over 20 years will depend more on the structure of the ownership and operating model, than the location of the MRF.

7.2.5 Achievability

This criterion has been allocated a weighting of 10% to reflect the importance of having a solution in place in a timely manner given the high risk of catastrophic failure of the current MRF with no alterative processing option. It also reflects the assessment of risk considerations under the achievability category in this assessment.

Option 3, Cromwell, McNulty Road scored 5 because of the ease with which the option could be achieved. There are services to the site, the land is flat, the site is within an industrial zone with similar activities taking place on neighbouring land.

Option 1, Wanaka Ballantyne Rd scored 4 because there are fewer obstacles to achievability. The Wanaka site still needs to accommodate other site uses such as the transfer station, closed landfill management and non-Council operations such as Wastebusters and Wanaka Greenwaste.

Option 2, Cromwell CODC and Option 6, out of district scored 3 due to additional complexity such as access to private land, subdivision and agreement from the Cromwell Community Board and potential difficulty in agreeing an appropriate gate fee for out of district recyclables.

Option 5, Gibbston Valley scored 2 because of the potential difficulty in working with a developer who still needs to subdivide land or landowner who will be assessing any long term proposal against other alternatives.

Option 4, Whakatipu Coneburn scored 1 because there are potential problems associated with digging down sufficiently to achieve the consent height restrictions. All these options are likely to take longer to achieve.

Option 0 Glenda Drive (status quo) scored 1 because it will not achieve the desired outcome of being able to process material from the QLDC and CODC areas. The site is too small.

7.2.6 Risk

All options scored three based on comments made at the workshop that this is difficult to score and because the key risk consideration, potential failure of the MRF, was picked up in the achievability criterion. The risk criterion has been allocated a weighting of 0%.

7.2.7 Consentability

Option 0, Glenda Drive scored 5 because the current site is already designated for waste management purposes and the current MRF holds discharge consents.

Options 3, Cromwell McNulty Road and 6, out of district scored 4 because they are considered easier to consent. Option 3, Cromwell McNulty Road is already within an industrial zone and similar activities are already being carried out on the site. Option 6, out of district may require a change to the consent to allow the acceptance of additional recyclable material, but this is expected to be easily obtainable (note, this was assessed prior to stakeholder discussions).

Option 2, Cromwell CODC scored 3 because it is within an industrial zone with similar activities taking place.

Options 1, Wanaka Ballantyne Road, 4, Whakatipu Coneburn and 5, Gibbston Valley scored 2 because there are more hazards such as contaminated land or flooding, which could be more problematic when seeking to obtain resource consents (note, this assessment was made ahead of detailed consent planning work).

7.2.8 Future proofing/options enabling

Option 1, Wanaka Ballantyne Road scored 5 because a new MRF would be constructed to allow flexibility and be adaptable to changing demands.

Options 2-5 (Cromwell – CODC, Cromwell McNulty Road, Whakatipu Coneburn and Gibbston Valley) all scored 4 because there may be restrictions placed on these sites by the landowners, which prevent potential improvements and restrict flexibility in the future.

Option 6, out of district scored 3 because there is limited control over what happens at the out-of-district facility, which may restrict the flexibility of future services.

Option 0, Glenda Drive scored 1 because it is constrained and is already at capacity with no ability to accept additional material from CODC or from growth.

7.2.9 Downstream economic effects

Options 0, status quo, 1, Wanaka Ballantyne Road, 4, Whakatipu Coneburn and 5, Gibbston Valley scored 4 because the sites are located within the district. Sites within the district are likely to result in higher downstream economic effects for communities within the district.

Options 2, Cromwell CODC and 3, Cromwell McNulty Road are located outside the district, but within the region and it is likely that there will be some downstream economic benefits for the district.

Option 6, out of district scored 2 because it is outside the district and region.

7.2.10 Cultural wellbeing

All options scored 3. To assess this criterion further, engagement with mana whenua is required.

7.2.11 People

Option 1, Wanaka Ballantyne Road scored 4 because this site is located in an area currently utilised for waste management purposes, with similar activities taking place on the site, with easy access for workers and for education tours.

Option 2, Cromwell CODC, option 3, Cromwell McNulty Road and option 4, Whakatipu Coneburn scored 3 because they offer good access for workers and for education tours. But are away from similar activities.

Options 5, Gibbston Valley and 6, out of district scored 2 because these are located further from QLDC's population centres, making them less convenient for education tours. In the case of Option 5, Gibbston Valley, the location is more difficult for workers to access as well.

Option 0, Glenda Drive is not a desirable place to work due to the condition of the facility, although it is easy to access for workers and for education purposes.

7.3 Shortlist of options from phase 1

The options assessment presented the following ranking based on weighted scores:

- 1st - Option 3, Cromwell McNulty Road (weighted score of 36)
- 2nd - Option 1, Wanaka, Ballantyne Road (weighted score of 36)
- 3rd - Option 2, Cromwell CODC (weighted score of 34)
- 4th - Option 5, Gibbston Valley (weighted score of 32)
- 5th - Option 4, Whakatipu Coneburn (weighted score of 31)
- 6th – Option 6, out of district (weighted score of 31)
- 7th - Option 0, Glenda Drive (weighted score of 31)

Options 1-5 all involve the development of an in district MRF to replace the MRF in Glenda Drive. While option 3, Cromwell McNulty Road, and option 1 Wanaka Ballantyne Road score highest, they are not clearly ahead of the other options. This makes it difficult to rule out the other in district MRF options at this stage. However, option 4 Whakatipu Coneburn has a critical flaw (height restrictions) and scored 1 for achievability and therefore is excluded from further assessment.

Option 0, Glenda Drive, also has a critical flaw – the site is not big enough for transfer station expansion and a new MRF. It too can be excluded from further consideration.

Option 6, out of district, represents a different MRF solution – transporting recyclables to an existing out of district MRF. It scored lower than the in-district MRF options as a long-term solution, but many be beneficial as a short term solution, while an in district MRF is developed or in the event the Glenda Drive MRF suffers a catastrophic failure. Therefore, it is recommended this option be shortlisted for further assessment in phase 2.

Therefore, it was agreed that five options progress to phase 2 of the assessment, which will involve stakeholder engagement, development of concept plans for each option and further whole of life cost and risk assessment. The five options were:

- Option 1, Wanaka, Ballantyne Road
- Option 2, Cromwell, CODC transfer station
- Option 3, Cromwell, McNulty Road
- Option 5, Gibbston Valley
- Option 6, out of district

7.4 Challenges and risks

All of the options shortlisted require further analysis to understand their challenges and risks and how these could be manged. The table below provides a high-level summary of the challenges and risks associated with the shortlisted options.

Table 11 Challenges and risks of shortlisted options

#	Challenges	Risks
Option 1 – Wanaka Ballantyne Road	Ability to construct a MRF building on land identified as a closed landfill (HAIL site) and nominally identified within a flood plain. Consent process may take longer.	Site constraints mean that consent cannot be obtained.
Option 2 – Cromwell, CODC	Complexity of ownership and development involving another council. Unknown progress on subdividing this land.	Site cannot be developed in reasonable timeframe. Site constraints (geotechnical or contaminated land) unknown.
Option 3 – 147 Cromwell McNulty Road	Land ownership model is unlikely. Lease cost may be prohibitive.	Agreement cannot be reached with the landowner.
Option 5 – The Yards (Gibbston Valley)	Land purchase price unknown. Unknown progress on subdividing this land.	Site cannot be developed in reasonable timeframe. Site constraints (geotechnical or contaminated land) unknown.
Option 6 – Out of district	Fluctuations in future fuel costs. Less flexibility over future processing options. Political desire to keep the MRF within the district. Low resilience in the event of a natural disaster particularly if transport links are severed. Need a site for consolidation ahead of haulage. No local access for the public to visit.	Dunedin facility does not agree to accept material from QLDC or CODC.

8 Stakeholder feedback on shortlisted options

8.1 Stakeholder engagement approach

A stakeholder engagement plan was developed which outlined how the team would engage with potential owners and operators of a future Queenstown MRF solution as part of Council's assessment of MRF options. A number of information gaps that the project team identified were addressed (or at least partially addressed) through discussions with the identified stakeholders. The aim was to assist Council to narrow down its preferred MRF solution.

The stakeholder engagement was not consultation with affected parties for a resource consent application. That would take place once a preferred option has been identified. Further, it was not engagement with decision-makers and the Queenstown community on the Council's proposed solution and associated financial implications for the district, which would be a Special Consultative Procedure and the associated pre-engagement and approval to consult.

The following key messaging were used with stakeholders when undertaking this engagement:

- QLDC is currently assessing its options for its future recyclables processing solution. It wants a long-term, reliable, cost-effective solution that maximises recovery of recyclable material.
- QLDC is looking at a broad range of options from QLDC owning and operating its own MRF through to transporting recyclables to an out of district MRF.
- QLDC is exploring location options, including land within the Queenstown Lakes and Central Otago districts.
- QLDC is narrowing down its options through this options assessment process, but decisions will need to go through Council's usual decision-making processes.
- Once QLDC has narrowed down its options, it will undertake further engagement with stakeholders and impacted parties.

8.2 MRF development stakeholders

The table below provides details of the stakeholders engaged with for the MRF options assessment, the key contacts and area of interest.

Table 12 Stakeholders

Stakeholder	Key contact(s)	Area of interest
QLDC staff and senior management	Property Director, SAP Mgr, O&M Mgr, Finance Mgr, Investment Advisory Mgr	Preferences on ownership and operating model, aligned to other investments
CODC staff and senior management	CODC Environmental Engineering Mgr Quinton Penniall	Owners of Cromwell transfer station and decision-makers for future use of this site and the adjacent CODC land intended for future industrial subdivision. Also interested in future QLDC MRF development and its availability for processing CODC recyclables, and the agreements that will be in place to enable CODC access to the MRF and associated costs (investment and processing fees).
Cromwell Community Board	via Quinton Penniall	Interest in future income from industrial subdivision and how this benefits Cromwell community.
Trojan Holdings Limited	Peter Carnahan	Owners of McNulty Road, Cromwell. Also provide waste services and may have an interest in operating QLDC MRF. Interested in maximising revenue from this land holding.
Cardrona Cattle Company	Q Property	The stakeholder is the owner of 'The Yards', Gibbston Valley. Interested in maximising revenue from this land holding. Q Property was not acting on behalf of the stakeholder, but had information from previous interactions about 'The Yards' site and provided this as part of the stakeholder engagement process.
Dunedin City Council waste management staff	Group Manager Waste and Environmental Solutions Chris Henderson	Owner of the Green Island Resource Recovery Park, where their new MRF will be developed. May have an interest in receiving QLDC recyclables at the site, either as a commercial customer to EnviroNZ or as a DCC customer.
EnviroNZ	Glen Jones	DCC's contractor developing Green Island MRF and will operate the facility once commissioned. Responsible for attracting commercial customers to the future DCC MRF (which could include QLDC). Operator for Timaru District Council's MRF, where EnviroNZ also process commercial recycling (including CODC's recyclables as interim solution). Also CODC's recycling services provider. Interest in attracting commercial customers to Dunedin MRF, once built, and potentially Timaru MRF. Future interest in development and operation of QLDC MRF, with view of optimal ownership and operating model.
WM New Zealand	Greg Slaughter	QLDC's recycling services provider and operator of QLDC's Glenda Drive MRF.

Stakeholder	Key contact(s)	Area of interest
		Future interest in development and operation of QLDC MRF and attracting their own commercial customers to the MRF.
Mana whenua	QLDC Maori Strategy and Partnerships Mgr	Potential co-investor in QLDC's MRF. May have other land parcels that could be made available to QLDC as part of this investment. Also a strategic decision maker alongside QLDC in a future decision-making process (a later stage of the project).
MfE	MfE Senior Investment Mgr Joshua Wilson	Provider of grant funding through the Waste Minimisation Fund, based on investment criteria. These criteria need to be confirmed through engagement with them but generally relate to maximising resource recovery, reducing carbon emissions from waste and regional co-investment between councils.
Glass Packaging Forum	Glass Packaging Forum Programme Manager Dominic Salmon	Ability to co-locate glass bunkers for consolidation of glass ahead of transport to glass furnace in Auckland, and associated funding for required infrastructure.

8.3 Engagement questions and answers

Table 11 below provides a list of the questions asked of the key stakeholders. Online (via Teams) interviews were carried out with each stakeholder and their answers provided in Tables 12-15.

Table 13 Information requested from Stakeholders

#	Relevant Info Request (Y or N)	QLDC	CODC	Trojan Holdings Ltd.	Cardrona Cattle Co.	DCC	ENZ	WM NZ	Iwi	MfE	GPF
1	What would be your preferred land ownership arrangement (sell, lease, JV)? What options are off the table? e.g. sell land or lease land	Y	Y	Y	Y	N	N	N	Y	Y	N
2	Are there other land holdings that you are aware of that might be of interest to QLDC for their MRF?	N	N	Y	Y	N	N	N	Y	N	N
3	Do you have any views on the ownership arrangement for the MRF components such as the building and the MRF plant and equipment? What options are off the table?	Y	Y	Y	Y	N	Y	Y	Y	Y	N
4	How much control does QLDC and CODC want to have over the processing of recyclables, both your own and other parties (commercial or the other council's)?	Y	Y	N	N	N	N	N	Y	N	N
5	Do you have any views on the arrangements for the operation of the MRF? e.g. In-house, out-sourced O&M only, out-sourced with MRF ownership, out-sourced with site development or fully out-sourced i.e. gate fee. What options are off the table?	Y	Y	Y	Y	N	Y	Y	N	N	N
6	When will the new Dunedin MRF be ready?	N	N	N	N	Y	Y	N	N	N	N
7	Will the Dunedin MRF be able to accept recyclables from QLDC and CODC for the next 10-20 years? Would they be a customer of DCC or EnviroNZ? (5,000t now to 10,000t in 20 years)	N	N	N	N	Y	Y	N	N	N	N
8	What would be the acceptance criteria for recyclables from QLDC and CODC?	N	N	N	N	Y	Y	N	N	N	N
9	What would be the likely gate rate?	N	N	N	N	Y	Y	N	N	N	N
10	Is processing at Timaru MRF an option?	N	N	N	N	N	Y	N	N	N	N
11	Does the Glass Packaging Forum have any views on investment in glass consolidation infrastructure tied to the future MRF location?	N	N	N	N	N	N	N	N	N	Y
12	Which of the options aligns with Māori strategic thinking around waste?	N	N	N	N	N	N	N	Y	N	N
13	Are there services to the site?	Y	Y	Y	Y	N	N	N	N	N	N
14	Has title been issued?	Y	Y	Y	Y	N	N	N	N	N	N
15	Have resource consents been issued for the subdivision?	Y	Y	Y	Y	N	N	N	N	N	N
16	Are there any other interests in or users of your land that we should be aware of?	N	Y	Y	Y	N	N	N	Y	N	N

Table 14 Responses to questions 1, 2, 3, 4, 5, 13, 14, 15 & 16

Land, building and MRF equipment ownership arrangements and control of recyclables	
QLDC	• Owning the land and building (Ballantyne Road) enables better control for self-use, less constraint on use and rental control. Given part of the land is already designated for WM purposes and has RC water/air discharge controls makes it attractive. • Leasing the land comes with tenure constraint and landlord controls, which may or may not be manageable through a lease. • Assuming no other use anticipated for the site + colocation factors to one of the 2 largest waste generation areas (Queenstown and Wanaka) – then seems attractive. • Strategic asset, which could source Govt. funding. • Test market for MRF P&E ownership through MRF. • Control can be attained through a third-party contract with good KPIs linked to sustainability targets. • There are services to the site, title has been issued, no consents are required to subdivide and there are no other interests in the land.
CODC	• Open to discuss land ownership arrangements and are happy to have further discussions at any stage. • Design phase will take place from 1 July 2024, civil construction to commence 1 July 2025 and titles expected to be issued in July 2026. Resource consents haven't been issued for the subdivision yet and there are no other interests in the land (other than Cromwell Community Board).
Cromwell Community Board	• The Cromwell Community Board would need to be involved in this discussion, but the CODC team are confident that the board will see the benefits in having such a facility within the district.
Trojan Holdings Ltd	• Trojan Holdings would be landlord and would construct the building and own the building. This would be leased back to the Council preferably over a 20-year arrangement (5-10 years too short). Wouldn't sell the land. • Preference would be for the MRF plant and equipment to be owned by a friendly operator such as Smart Environmental. Long term arrangement would be better e.g. 20 years. • Outsourced to a friendly operator. Trojan Holdings wouldn't want to be involved in commodities and it might be better for Council to take on this risk fully. • 46 McNulty Road is available to purchase (too small)
Cardrona Cattle Co.	• Landowner would prefer to sell a parcel of land 1.4 hectare at approximately $400 per m2. • Services will be provided as part of the subdivision civil works, titles expected March 2025. Good interest in lots within the subdivision.
MfE	• No clear view, as long as the arrangement is transparent and any application for funding would require a robust business case. Spoke to Joshua Wilson at MfE.

Table 15 Responses to questions 6, 7, 8, 9 & 10

Out of district viability	
DCC	• End of 2025 at the earliest. Resource consents are currently being processed by ORC. Procurement of MRF equipment underway. • Yes, it would be sufficiently sized to accept material from QLDC and CODC (>5 tonne per hour MRF) • Acceptance criteria would be processing standard kerbside materials excluding glass. 15% contamination threshold. • Approximate gate fee of $200 per tonne.
ENZ	• Timaru MRF would be available once Dunedin MRF is operational. Similar gate fee of $200 per tonne

Table 16 Responses to question 11

Glass Packaging Forum views	
GPF	• Dominic represent GPF and others including Visy. • Need sufficient space for loading and unloading glass. • Makes sense to have one large site for consolidation to reduce plant and resource requirements.

Table 17 Responses to question 12

Iwi	
Iwi	• QLDC has an extra responsibility because they sit in the headwaters (Rivers and streams are the veins of the land). • Positive that there is a joint approach with CODC. • Shipping it out creates emissions and makes it somebody else's problem. • Check if the sites have any cultural significance. • Ngāi Tahu business arm may have some interest in investing in this opportunity, although the patterns seems be that they want to buy existing things rather than new things. • QLDC Māori Strategy and Partnerships Mgr to provide a heads up at the monthly online Hui with Aukaha and Tami representatives.

9 Financial model for shortlisted options

Financial modelling has been undertaken to compare the costs of the MRF options. Assumptions specific to each option and universal assumptions are detailed in Appendix B. The model was initially set up to assess the whole of life costs for the longlist of options in the phase 1 assessment. For phase 2, the modelling was further refined to reflect stakeholder feedback, provide additional detail and enable sensitivity testing of the costs.

9.1 Phase 2 results

The refinements to the model are discussed in Appendix A . The modelling results are shown in the table below.

Table 18 Phase 2 NPV - Discounted

20-Year results summary ($'000)	Wanaka, Ballantyne Road Option 1	Cromwell CODC Option 2	Cromwell McNulty Road Option 3	Gibbston Valley Option 5	Out of district Option 6
Operational Costs					
Processing Costs	$3,200	$3,200	$3,200	$3,200	$21,900
Disposal Costs	$3,100	$3,100	$3,100	$3,100	$4,700
Transportation Costs	$15,400	$11,500	$11,500	$11,800	$24,300
Total NPV	**$21,700**	**$17,800**	**$17,800**	**$18,100**	**$50,900**
Investment & Facility Costs					
Capital Investment	$38,800	$48,800	$4,800	$44,700	$4,800
Residual Value	($6,900)	($12,000)	($2,000)	($10,100)	($2,000)
Leasing Costs	$0	$0	$32,900	$0	$0
Total NPV	**$31,900**	**$36,800**	**$35,700**	**$34,600**	**$2,800**
Combined Total NPV	**$53,600**	**$54,600**	**$53,500**	**$52,700**	**$53,700**
Total Tonnes	*180,000*	*180,000*	*180,000*	*180,000*	*180,000*
Cost per Tonne	*$298*	*$303*	*$297*	*$293*	*$298*
Rank	**3**	**5**	**2**	**1**	**4**

The reduction in the MRF floor area from 4,000m^2 in Phase 1 to 2,400m^2 reduced the cost of the in-district options, resulting in the out of district option no longer presenting a noticeable financial benefit. Compared with phase 1, the costs of the options are much closer together in phase 2, a spread of only 3.6%

Capital outlay is a material factor in assessing the financial viability of each MRF option. Key variations and findings are as follows:

- Option 3, Cromwell McNulty Road: This option is unique because it assumes the land and facilities are leased from an external party rather than owned. The leasing cost is calculated based on 6% of the estimated upfront cost of the land and facilities.
- Option 1, Wanaka Ballantyne Road: The site at Wanaka is assumed to use land already owned by QLDC, eliminating the need for land purchase costs. Consequently, the residual value does not include the land value, as it is treated separately from the options analysis. Although the potential opportunity cost of QLDC not being able to use this land for other purposes was considered, it was deemed immaterial and beyond the scope of this financial analysis.
- Residual values: Despite the low likelihood of selling the facility or land at the end of the 20-year assessment period, including the residual value of the purchased assets was deemed appropriate to reflect their value to QLDC in year 20. This approach allows for a fair comparison with options requiring only minor capital outlay. However, results excluding residual values are also presented in the sensitivity analysis to illustrate the impact of this factor.

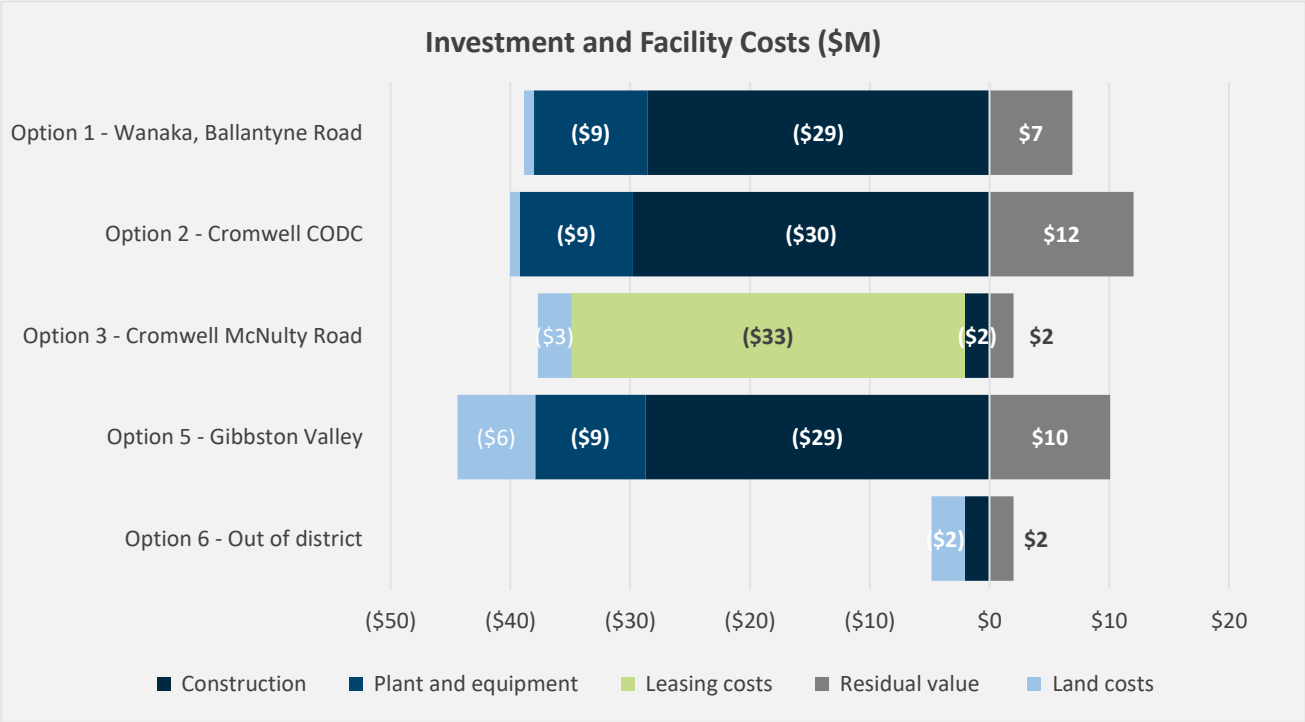


Figure 11 Investment and Facility Costs

Transportation costs are second only to capital costs in their impact on the overall NPV. These costs vary significantly across options due to differences in distances and material handling processes. Key findings include the following.

- Option 1, Wanaka Ballantyne Road: Among the asset-owning options, the facility based in Wanaka incurs the highest transportation costs, driven by the comparatively long-distance materials must travel from consolidation points in the high-volume Queenstown area to the MRF in Wanaka.

- Option 6, out of district: Despite processed materials eventually being shipped to Dunedin across all options, the initial transportation costs to a Dunedin-based MRF are notably higher. This increase is attributed to trailer volumes and compaction, as materials transported to Dunedin are unprocessed and uncompacted, requiring more trailer space per tonne. Note, in option 6 the cost of transporting contaminated material to landfill and transporting commodities from the MRF to port are not included. They are factored into the MRF operating costs charged by the out of district MRF.

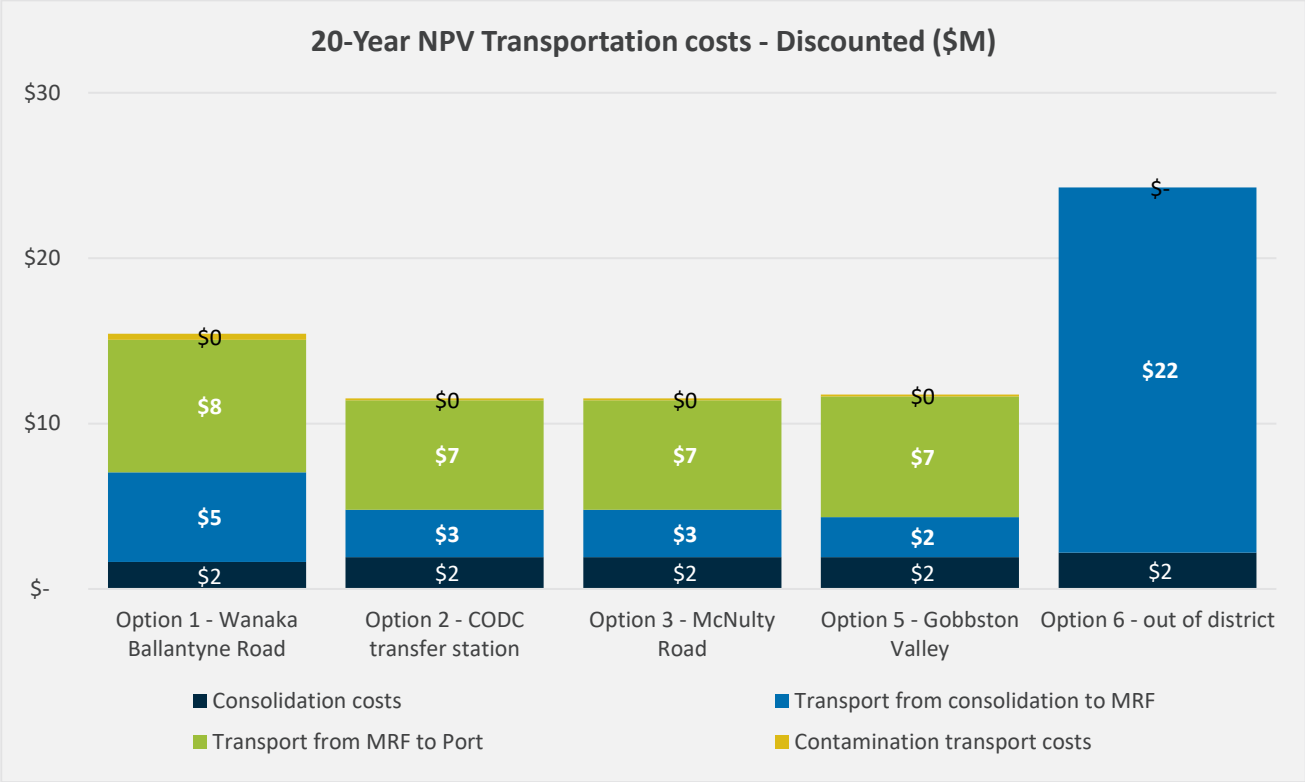


Figure 12 20-year NPV Transportation Costs

9.2 Sensitivity analysis

While the financial analysis provides a detailed comparison of the investment and operating costs associated with the different options, The results are sensitive to key variables.

Key variables that introduce uncertainty to the costs, that have been explored are:

- Discount rate variability: For this cost-benefit analysis, the New Zealand Treasury recommended 5% has been applied, however a lower discount rate could significantly alter this analysis's financial outcomes, favouring options with higher upfront capital outlays such as option 2, CODC transfer station and option 5, Gibbston Valley.
- Fuel cost uncertainty: Transportation costs are material to all scenarios and are directly connected to global fuel prices, which are inherently volatile. Changes in fuel costs would impact all options; however, the out of district option would be most impacted due to the low compaction rate of materials, making this significantly less favourable if fuel prices increase.

- Gate fee volatility: Gate fees represent a significant component of option 6, out of district. These fees are unlikely to remain static and are subject to volatile factors such as market demand and processing capacity, and other councils' financing policies. This means that option 6, out of district becomes significantly less favourable if gate fees increase.
- Capital investment uncertainty: Capital investment is a significant component of the in-district MRF options. These costs remain uncertain until site investigations, stakeholder engagement and consenting can be undertaken. If capital costs rise, option 6, out of district becomes for favourable.
- Residual values (RV): The residual value of assets is unlikely to present a true cash flow to QLDC in year 20, and their values are based on estimated asset appreciation rates exceeding inflation. These unpredictable factors warrant the RV to form part of the sensitivity analysis and result in option 2, CODC transfer station and option 5 becoming less favourable.

The sensitivity of the options to these variables is shown in the table below. The spread of sensitivity is very close and does not provide sufficient information to exclude options except for Option 3, McNulty Road, which has the highest sensitivity range. This makes a compelling case for progressing numerous options at the same time rather than selecting just one option as a recommended way forward.

Table 19 Sensitivity table (average cost per tonne)

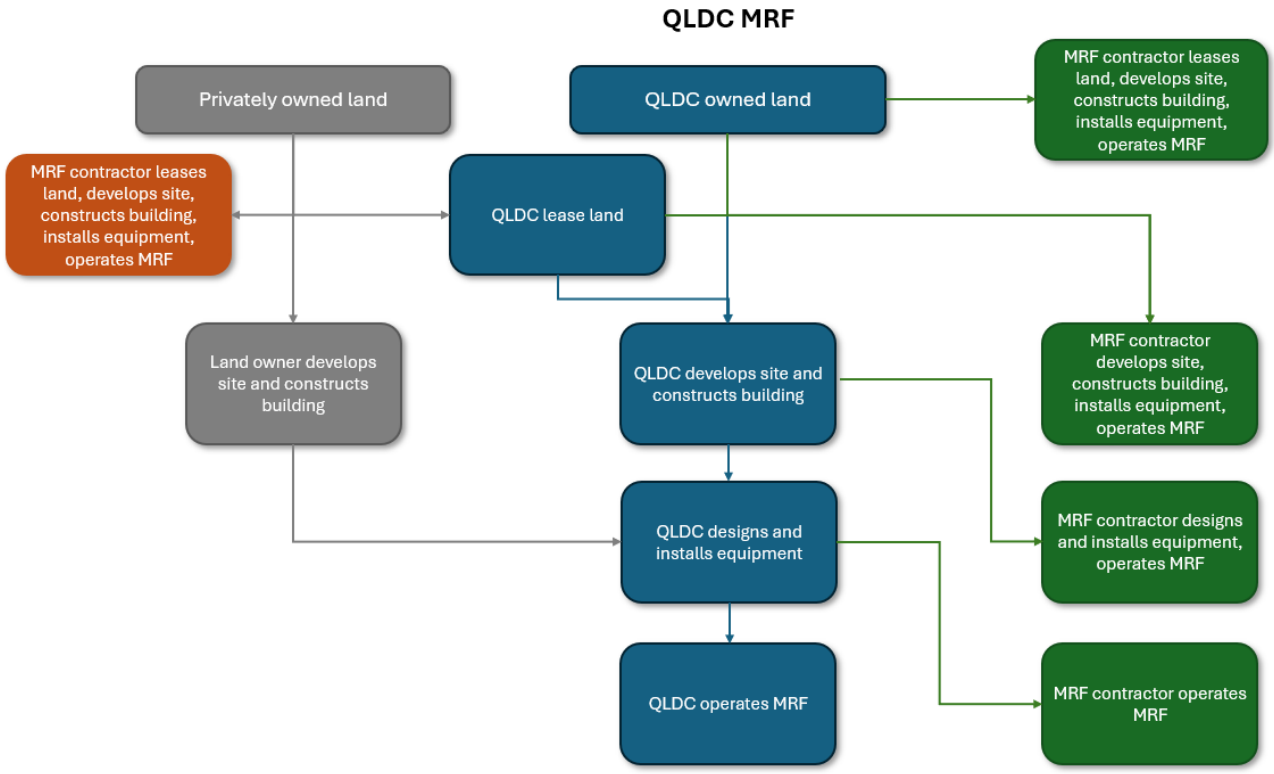
Sensitivity Item	Wanaka, Ballantyne Road Option 1	CODC transfer station Option 2	McNulty Road Option 3	Gibbston Valley Option 5	Out of district Option 6
NPV Baseline	**$298**	**$303**	**$297**	**$293**	**$298**
3% Discount Rate	$306	$293	$349	$288	$355
7% Discount Rate	$291	$308	$257	$294	$254
Fuel Costs +25%	$317	$317	$311	$306	$329
Fuel Costs +50%	$336	$330	$324	$320	$359
Gate Fees +25%	$298	$303	$297	$293	$328
Gate Fees +50%	$298	$303	$297	$293	$359
Capital Investment +25%	$344	$356	$341	$343	$299
Capital Investment +50%	$392	$409	$386	$395	$301
RV Excluded	$336	$370	$308	$349	$309
Sensitivity Range					
Minimum	$291	$293	$257	$288	$254
Maximum	$392	$409	$386	$395	$359
Difference in range	$102	$116	$129	$107	$106

9.3 Phase 2 conclusion

The difference in NPV from the highest to the lowest-ranking options is minor, with a spread of only 3.6%. The options are not able to be separated on a financial basis. The sensitivity analysis shows that changes in key variables can have a significant impact on costs. Option 6, out of district is more sensitive to changes in transportation costs and gate fees than the in-district options. While these costs can be managed in a short to medium term contract, over the long term QLDC could have less ability to control cost increases relative to an in-district options. The in-district options are sensitive to capital cost increase. These impact pay-back periods for capital developments, but once incurred their impact is known i.e. financial uncertainty is lower.

10 Ownership and operating models

There are a wide range of ownership and operating model options for a MRF. The diagram below shows the range of options that are possible for QLDC. The diagram shows options for land ownership, site enabling works, building construction, MRF plant and equipment installation and operation of the MRF. In the following sections commentary is provided on the most likely arrangements for different sites as well as advantages and disadvantages, where appropriate.



10.1 Land, enabling works and building ownership

The site options have different ownership and site access arrangements that are outlined below.

Option 1 – Wanaka Ballantyne Road is owned by QLDC and a new MRF could become part of the broader waste and resource recovery activities undertaken at the site. There are multiple existing lease areas across the site. As the MRF development is part of the broader site development, the most likely future arrangement for the MRF would be for QLDC to continue to own the land and for it to develop the site and construct and own the MRF building, as opposed to leasing an area for development by a MRF contractor. QLDC would procure a consultant for consenting and design of the MRF and then, via that consultant procure, physical works contracts for enabling works and the construction of the building.

While QLDC would lead the consenting, design and construction of the MRF site and building, there would be benefit in having input to the design from the MRF operations contractor as they would be able to advise on matters such as traffic and material flows, building and doorway heights and locations, that ultimately impact the efficiency of their operation. There may also be some benefit in including the MRF operation with the kerbside collection contract.

Option 2 – Cromwell CODC would be developed partly on CODC's current waste transfer station and partly on CODC's newly subdivided land. Access to the site would be via Venning Crescent. The details of a future arrangement for the MRF would need to be worked through with CODC. CODC would continue to own the transfer station portion of the MRF site. QLDC or CODC could then own the land adjacent to the transfer station, with lease agreements in place for the whole MRF site. CODC do not currently have funding in their LTP for a MRF, while QLDC has. It may therefore be preferable for QLDC to develop the MRF, but this would be confirmed through discussions with CODC.

Option 3 – Cromwell McNulty Road is owned by Trojan Holdings Limited and is only available for lease. Trojan Holdings Limited has indicated a preference, as landowners, to develop the part of the site that would be used for the MRF and construct and own the MRF building. QLDC or their MRF operator would then lease the building.

There is the option for QLDC to lease only the ground at McNulty Road, but this is a less common arrangement as it introduces uncertainty regarding building ownership and use at the end of the lease term.

There are risks for QLDC with a lease option. At the end of the lease term, QLDC will have invested in use of the site for its MRF operation, which will be needed for ongoing recycling collection services. QLDC could roll over this lease to avoid having to invest in a new site, but favourable lease terms are more difficult to negotiate at this point with the site owner aware that QLDC has limited alternatives.

Option 5 – Gibbston Valley is available for sale to QLDC. The most likely future arrangement for the MRF would be for QLDC to own the land, develop the site and construct and own the MRF building. Once ownership had been secured, site enabling works and building construction could proceed in the same way as Ballantyne Road or the site leased. There is no clear preference for this site.

Option 6 – out of district MRF is owned by Dunedin City Council and operated by their third-party contractor. This arrangement would continue. Resource consents are currently being processed and their contractor is well advanced in building design and MRF equipment orders.

10.2 MRF plant and equipment and ownership

For the in-district MRF options, the MRF equipment could be designed, installed and owned by the MRF operating contractor or QLDC may also wish to own the equipment. The most common arrangement in New Zealand is for the MRF operating contractor to own the equipment as they are then best placed to balance operating costs, maintenance requirements and reliability. QLDC would have less flexibility to make changes to the equipment once installed, for example in response to changes to kerbside collection material. While there is currently a degree of uncertainty in this area, on balance changes can be made by working with the MRF operating contractor, and therefore, our recommendation would be for the MRF operator to design and install the equipment for a new MRF.

A new MRF is be constructed and the operating risks are unknown. The MRF contractor would be appointed for its skills and experience, and would be best placed to specify, procure and install their preferred MRF plant and equipment based on their operating knowledge. In our view, an O&M only contract would be more suited to an existing MRF.

Under this model we would also recommend the MRF operating contractor be responsible for the revenue from other MRF customers including CODC and the gate fee, including a rebate for the costs associated with the site and building use (lease) would be set by the MRF operating contractor in consultation with QLDC.

QLDC could also take a greater role in managing third-party customers, but MRF contractors tend to have the commercial expertise QLDC could leverage off to maximise revenue, and associated benefits to both QLDC and the contractor.

Under this model, the MRF contractor would be responsible for the revenue from the sale of commodities, although it is likely that there would be some risk sharing arrangement with QLDC for the QLDC recyclable tonnage only. The MRF O&M contractor would be responsible for arranging commodity risk sharing agreements with other MRF customers including CODC. Again, this would leverage the commodity trading expertise that reside with these contractors, maximising revenue for both QLDC and the contractor.

Note for completeness, for option 6, out of district, the plant and equipment are owned by the out of district contractor (EnviroNZ for the Dunedin MRF).

10.3 MRF operation and maintenance contract options

There are two options for MRF operation:

- QLDC operate the MRF in-house with its own staff
- QLDC out-source the operations

In-house operations are highly unusual in New Zealand. Palmerston North operate their MRF with their own staff and Christchurch operate its MRF via its council-controlled organisation, EcoCentral, who in turn employ the staff. Most MRF operations are contracted out to specialists, and this is recommended for QLDC because it aligns with the operating model for other works and services.

10.4 Contract arrangements

There are several O&M contract options available for a MRF, which are outlined in the table below along with the advantages and disadvantages.

Any of the options above are achievable with sufficient timeframes for planning, preparation of detailed specifications and the procurement process. The choice of a preferred contract arrangement will depend on which risks council would like to hold and which to transfer to its contractors. These are best explored in a detailed procurement strategy, then further explored with the market. The options will be narrowed down over time, but the final model may not be known until it is negotiated with QLDC's contractors.

Table 20 Contract arrangement options

Contract Option	Design + Build + Operate	Design, Build + Operate	Design, Build, Operate	Design, Build, Own, Operate, Transfer	Lease + gate fee	Gate fee
Description	Separate design, build and operations contracts (also called design, bid, build (DBB)	Combined design and build contract, separate operations contract	Combined design, build and operate contract	Design, build, own, operate transfer (also called BOOT)	MRF leased by contractor, charge QLDC gate fee	For an existing out of district MRF
Inclusion of: **- site enabling works** **- MRF building** **- MRF plant & equipment** **- MRF operations**	Could be separate or combined Design contracts or Build contracts for enabling works, MRF building, MRF plant and equipment	Could be separate or combined DB contracts for enabling works, MRF building, MRF plant and equipment	DBO could be for all elements or plant and equipment only	DBOOT could be for all elements or for plant and equipment only	All elements included in gate fee contract	All elements included in gate fee contract
Advantages	Provides cost certainty at distinct phases of a project, with clear hold points and clear separation of roles and responsibilities.	Single point of responsibility for capital works	Single point of responsibility for all works results in cost and time efficiency and better performance	No capital investment by council	No capital investment by council	No capital investment by council. Leverages existing capital investment
	Easier to adopt new technology during operating contract term	Easier to adopt new technology during operating contract term	All O&M and commercial risks managed by MRF operator	All O&M and commercial risks managed by MRF operator	All O&M and commercial risks managed by MRF operator	All O&M and commercial risks managed by MRF operator
	Council asset from the start, with ongoing maintenance and renewal programme, beyond initial operating life	Council asset from the start, with ongoing maintenance and renewal programme, beyond initial operating life	Council gains an asset at the end. Recognises the site will continue to be used beyond initial 20-year operating life (reuse some equipment)	Suits equipment expected to be obsolete at end of contract term (some but not all MRF equipment, building and land last longer)		

Contract Option	Design + Build + Operate	Design, Build + Operate	Design, Build, Operate	Design, Build, Own, Operate, Transfer	Lease + gate fee	Gate fee
Disadvantages	Requires capital investment by council.	Requires capital investment by council.	Requires capital investment by council	Less transparency on equipment installed and maintenance standards than the DBO option	Less transparency on equipment installed and maintenance standards than the DBOOT option	Reliant on MRF continuing to grant QLDC access to equipment at end of contract term
	Multiple procurement steps slowing process, adding cost. Potential for conflict between designer and contractor.	Disconnect between construction and operability, with very limited scope to change facility once built.	Reduced transparency on equipment installed and maintenance standards.	Typically results in "sweating the assets" at end of contract period, unless specific standards for equipment at handover	Limited visibility of type of equipment installed (noting all MRFs will need to respond to kerbside material changes)	Limited visibility of type of equipment installed (noting all MRFs will need to respond to kerbside material changes)
	Disconnect between design, constructability and operability, with scope change more difficult to manage.	Council responsible for operating and maintenance risk associated with design and construction		Contractors may not have capital funds to invest	Contractors may not have capital funds to invest	Difficult to direct changes to material processed (noting all MRFs respond to same material changes)
	Council responsible for operating and maintenance risk associated with design and construction				Difficult to direct changes to material processed (noting all MRFs respond to same material changes)	

10.5 Likely options

Not all contract options are possible for all site options. The table below shows a summary of the most likely land contract arrangements for each option. Note, while QLDC would most likely develop most of the site and building in options 1, Wanaka Ballantyne Road, option 2, CODC transfer station and option 5, McNulty Road, input from the MRF operations contractor would be sought for the design. These contracting arrangements have been taken into account in further assessing the site options as of phase 2.

Table 21 Most likely MRF land and contract options

Option	Contract options
Option 1: Wanaka Ballantyne Road Option 2: Cromwell CODC Option 5: Gibbston Valley	All contract options except gate fee
Option 3: Cromwell McNulty Road	Trojan Holdings Ltd develops site and building or its MRF contract, QLDC leases building for MRF. Gate fee contract
Option 6: Out of district	Gate fee contract with MRF O&M contractor

11 Phase 2 shortlist assessment

Having undertaken the stakeholder engagement and updated the financial models, the shortlisted options were then further assessed against non-financial assessment criteria. These criteria were developed to address the risks and constraints identified at the end of phase 1.

11.1 Phase 2 assessment criteria

The following assessment criteria were established for the assessment of shortlisted options:

- Achievability risk
  - Simplicity of establishing ownership and operating arrangements
  - Time required to deliver arrangement & site (title, services, resource consent, geotech investigations, site works, MRF build)
- Cost control risk
  - Cost certainty for Council
  - Access to expertise in MRF operation
  - Access to external capital funding and grants
- Commercial risk
  - Limits exposure to revenue risk from recycling commodity prices
  - Limits exposure to revenue risk associated with gate fees from other users (CODC, commercial)
- Resilience and sustainability risk
  - Certainty of facility availability for QLDC (once built)
  - Providing access to a facility for CODC and commercial users
  - Flexibility to respond to changing demands for recycling services
- Service delivery and strategic alignment risk
  - Supports ongoing review and improvement of service delivery
  - Simplicity of governance and contract
  - Aligns with delivery model used for other aspects of waste services

11.2 Phase 2 scoring

The table below provides the agreed scores following the in-person workshop on 2 July 2024 and subsequent discussions.

Table 22 Assessment scoring phase 2

#	Criteria	Weighting	Option 1 Wanaka - Ballantyne Road	Option 2 Cromwell - CODC site next to transfer station	Option 3 Cromwell - 147 McNulty Rd	Option 5 Gibbston Valley - The Yards (Victoria Flats Road)	Option 6 Out of district
1	Achievability	20%	3	3	3	2	4
2	Cost control risk	20%	3	3	2	3	2
3	Commercial risk	20%	3	3	2	3	5
4	Resilience and sustainability risk	20%	5	4	3	4	2
5	Service delivery and strategic alignment risk	20%	4	4	2	4	3
	Total - weighted scores		18	17	12	16	16
	Rank - weighted scores		1	2	5	3	3

11.2.1 Achievability

The following key points are relevant to the scoring for achievability for:

Option 1, Wanaka Ballantyne Rd:

- QLDC owns the land in Wanaka, but there is flexibility around ownership of building, P&E and operating arrangements.
- It is estimated that this option would take a minimum 18 months to deliver (geotech, resource consents, site works, build, install MRF equipment, procurement of operating agreement) January 2026.
- This is seen as the simplest of the arrangements to put in place.

Option 2, Cromwell CODC:

- Complex due to CODC and Cromwell Community Board decision making, although both consider this to be a great use of the land and a good solution for the mixed recycling from CODC.
- Early indications for CODC suggest that all ownership or operating options could be considered.

- It is estimated to take three years to operation
  - Subdivision design phase starts 1 July 2024
  - Civil construction starts 1 July 2025
  - Titles expected in July 2026. Solution could be in place by July 2027.
- Could be a complex arrangement to put in place.

Option 3, Cromwell McNulty Road:

- Private land and existing building owner.
- Site is available now with services and weighbridge.
- Landowner reserves right to choose which operator would install and operate a MRF.
- Lease/licence to occupy over long period 15-20 years.
- Resource/building consents and procurement required first.
- Estimate solution could be in place 12 months after decision (as early as July 2025).
- More complex arrangement, constrained by the size of land, brings score down.

Option 5, Gibbston Valley:

- Landowner prefers to sell the land.
- Titles expected to be issued March 2025.
- Solution could be in place by March 2026. but a higher degree of uncertainty around timeframes for each step (consent, titles, services), reducing the score.

Option 6, out of district :

- Resource consents are currently being processed by ORC.
- Procurement process for MRF components has commenced.
- Solution expected in early 2026. Could also use Timaru MRF, once the Dunedin facility is operational. Similar gate rate ($200 per tonne + disposal cost for contamination).
- Reasonably simple arrangement to establish for MRF. Require in district consolidation points - which also need to be consented, reducing score.

11.2.2 Cost control risk

The following key points are relevant to the scoring for cost control risk for:

Option 1, Wanaka Ballantyne Rd:

- No land costs.
- Site preparation costs are the biggest uncertainty until geotech is completed.
- Good access to MRF operation through third party.
- Good access to external capital funding - MfE would support application.

Option 2, Cromwell CODC:

- Land purchase or lease price unknown, although CODC and the Cromwell Community Board are keen to explore all options.

- Land and site preparation costs are biggest uncertainty.
- Good access to MRF operation through third party.
- Possible access to external capital funding for MRF equipment - MfE support application.

Option 3, Cromwell McNulty Rd:

- Lease costs and operating model are biggest uncertainty.
- Landowner may not be open to all MRF operators operating on site.
- A price premium may be applied to the land.
- Less likely to get MfE funding, more restricted procurement due to operator's preferences.

Option 5, Gibbston Valley:

- Land costs approx. $400 m2.
- Cost uncertainty with geotech.
- Buying land in addition to Wanaka already being purchased.

Option 6, out of district:

- Reliance on third party for long-haul transport and MRF operating costs.
- Limited cost control long term, even with long term agreements in place.
- Limited capital funding associated with consolidation points, but unknown how capital costs for external MRF will be passed on through gate fee.
- Reduced ability to influence costs and limited alternatives once locked into long term agreement.

11.2.3 Commercial risk

The following key points are relevant to the scoring for commercial risk for:

Options 1, Wanaka Ballantyne Rd 2, Cromwell CODC and 5, Gibbston Valley:

- Reliant on commercial recyclables and CODC recyclables coming to MRF to help fund site.

Option 3, Cromwell McNulty Rd:

- Some restrictions on the financial own and operate model that can be put in place, reducing the score.

Option 6, out of district:

- No commercial risk, council only pays for its own material to be hauled and processed rather than being responsible for third party material.

11.2.4 Resilience and sustainability risk

The following key points are relevant to the scoring for resilience and sustainability risk for:

Option 1, Wanaka, Ballantyne Road:

- Site owned by QLDC, who have control over site's use.

Option 2, Cromwell CODC:

- QLDC might not own the site. Ownership may sit with CODC or public ownership.

Option 3, Cromwell McNulty Rd:

- Owner restrictions on potential suppliers would limit procurement options.
- Also only a lease site, QLDC would not own it.

Option 5, Gibbston Valley:

- Once land purchased for MRF, it is available to QLDC long term.

Option 6, out of district:

- Decision to continue operating the MRF sits with out of district owner.
- QLDC have less long-term control over type of materials to be processed, contamination levels and sustainable and ethical export markets.

11.2.5 Service delivery and strategic alignment risk

The following key points are relevant to the scoring for service delivery and strategic alignment risk for:

Option 1, Wanaka, Ballantyne Road:

- Greatest opportunity to influence service delivery.
- Consistent with other council contractual arrangements.

Option 2, Cromwell CODC:

- More complex governance and contract model.
- Less influence on changes to service delivery, but partner is also public sector with same drivers.

Option 3, McNulty Rd:

- Limited ability to make changes to MRF operation.
- Still simple contract to manage. Consistent with other delivery models.

Option 5, Gibbston Valley:

- Greatest opportunity to influence service delivery.
- Consistent with other council contract arrangements.

Option 6, out of district:

- Limited ability to make changes to out of district MRF.
- Simple contract to manage. Consistent with other council delivery models.
- Consideration to be given to the wider regional opportunities particularly if the region moved towards a regional contract, the operator may decide what MRF the material goes to, e.g. Timaru, Invercargill, Dunedin.

11.3 Phase 2 summary, sensitivity and recommended options

The options assessment in phase 2 presented the following ranking based on weighted scores:

- 1st - Option 1, Wanaka, Ballantyne Road (weighted score of 18)
- 2n - Option 2, Cromwell CODC (weighted score of 17)
- 3rd - Option 6, out of district (weighted score of 16)
- 3rd - Option 5, Gibbston Valley (weighted score of 16)
- 5th - Option 3, Cromwell McNulty Road (weighted score of 12)

Overall, the analysis has shown that it is difficult to separate the options. Minor changes to any of the scores result in a shift in the options ranking. Only option 3, Cromwell McNulty Road, scores sufficiently lower ruling it out. It is the least flexible option due to the site owner's desire to maintain control over site activities. The lease arrangement also introduces long term cost uncertainty with reliance on the site owner for the MRF process, reducing QLDC's bargaining position when renegotiating future site leases. It is recommended that this option is excluded from further analysis.

11.3.1 Ballantyne Road

The highest scoring option is option 1, Wanaka Ballantyne Road, with 18 points closely followed by option 2 Cromwell CODC on 17 points. Both these options provide the best scores for cost control risk, commercial risk, resilience and sustainability risk and service delivery and strategic alignment. Option 1, Wanaka Ballantyne Road scored slightly better because QLDC already owns the land.

Option 1, Wanaka Ballantyne Road is the option that is most advanced from a development perspective – QLDC has already invested in the site, owns the land and have commenced geotechnical and planning assessments for the site (because it will also be used for an upgraded Wanaka transfer station). The site has been purchased with the intention of being used for waste and resource recovery activities and building the MRF on this site, if it can be done cost-effectively, aligns with this purpose.

There are no compelling reasons not to pursue Option 1, Wanaka Ballantyne Road as the preferred in-district MRF option and therefore it is recommended the development of this site continues to be progressed.

There are known challenges with this option and there are likely to be geotechnical and site contamination challenges to overcome given part of the site was used as a landfill in the past and the site is adjacent to river flats. The additional costs for the development of this site have been included in the estimate as a contingency. The extent of these challenges and the associated cost to remedy them cannot be estimated without further engineering, environmental and planning investigations. Stakeholder mapping and early engagement would also need to get underway. These investigations would be required for any site being considered for a new MRF, and what might be uncovered during investigations remains unknown for any site.

11.3.2 In-district back-up option

There is benefit in having back up site options available if the costs associated with developing the Wanaka Ballantyne Road site become prohibitive. Option 2, Cromwell CODC transfer station has the second highest score and therefore is recommended as the back-up site. Out of district may also become a viable long-term option if the costs of developing an in-district MRF become too high or if QLDC wishes to defer capital investment to future years. On balance, combining both capital and operating costs, the in-district and out of

district options have similar cost profiles. It is recommended that long term use of an out of district remain as a backup option for QLDC.

11.3.3 Out of district

Option 6 out of district, scored the highest for achievability because this option is already in progress and further towards being operational. There are some challenges with this option, such as procuring a transport contract and securing the gate fee. Option 6, out of district has a very different cost structure to the in-district options. It is easy to achieve and has low commercial and financial risk in the short term. However, longer term the ability to control costs and rely on this option being available reduces. For this reason, this option is recommended as a short to medium term solution only.

The out of district MRF options only become available once Dunedin has built its new MRF at Green Island. Either there will be capacity at the Green Island MRF or there will be freed up capacity at the Timaru MRF, which Dunedin (and Central Otago) are using short-term while their MRF is built. The Green Island MRF is expected to be operational by July 2026.

11.3.4 Consolidation sites

All options will require some consolidation of material prior to haulage to the MRF – both in-district and out-of-district options. For Ballantyne Road, consolidation would only be required by QLDC in Queenstown, while out-of-district would require consolidation in both Wanaka and Queenstown. Short-term options for consolidation could include:

- Redevelopment of Glenda Drive could be delayed and the MRF used for consolidation in Queenstown.
- Land in the Gibbston Valley could be purchased and used for this purpose.
- There may be parts of Wanaka transfer station site that can be made available.
- There may be commercial land or buildings that can be leased for consolidation.

It is recommended that all these options are explored in the next phases of MRF planning.

Note, CODC currently use their Alexandra transfer station for consolidation of material prior to haulage out of district.

12 Funding options

QLDC have allocated $70 million in the 2024-2034 Draft Long Term Plan for development of waste facilities in Wanaka and Queenstown, with the majority of this investment allocated to the construction of a new in-district MRF.

While Council has capital funding allocated to the MRF, with capital funding currently tight for Council, there may be benefit in delaying the timing of this investment through an extended timeframe for the out of district option.

There is the potential for QLDC to seek funding from the contestable Waste Minimisation Fund for the new in-district MRF. MfE favour applications that provide for facilities where neighbouring districts collaborate on infrastructure development. In this case, QLDC is building the MRF on behalf of CODC and commercial recycling customers, as well as meeting its own needs. It is recommended that QLDC speak with the MfE investment team early to assess what would be required in terms of their application process.

There may be interest in co-investment in the MRF from other funders such as iwi. Their investment would be on the basis that they received a favourable return on investment, which may reduce overall affordability of this funding option.

13 Procurement and implementation approach

The following table provides a suggested timeline of procurement activities for a preferred pathway alongside other solid waste service and procurement timelines. This is consistent with Councils philosophy and desire to retain ownership of core land and buildings for the delivery of its services.

It also shows a possible consenting, design and construction pathway for the Ballantyne Road site, the timing of procurement for the interim out of district contract and MRF operations contract, and how this contractor might input into the Ballantyne Road MRF development.

While this is not the only approach and not a fixed programme of activities, it provides an indication for how these interrelated development and procurement activities could be aligned. This approach would be explored further in the development of a procurement strategy.

Table 23 Implementation timeline and procurement

Timeline	Jul-Dec '24	Jan-Jun '25	Jul-Dec '25	Jan-Jun '26	Jul-Dec '26	Jan-Jun '27	Jul-Dec '27	Jan-Jun '28	Jul-Dec '28	Jan-Jun '29	Jul-Dec' 29	Jan-Jun '30	Jul-Dec '30	Dec-June '31	Notes
Current solid waste services contract															
Solid waste services contract procurement															Expiry initial term, 31 December 2026, under review
Solid waste services contract mobilisation															
New solid waste services contract															
Organics collection procurement															
Organics collection mobilisation															
Organics collection commences															Council decision, start July 2026 earliest
Out of district procurement															Consolidate, haul and process. Procure separately or alongside waste services contract
Out of district MRF arrangement															Early access if Glenda Drive fails, from July 2026
Ballantyne Road investigations															
Ballantyne Road design & consent															
Ballantyne Road enabling works															Could be part of MRF operator's contract, or they provide input
Ballantyne Road building construction															Could be part of MRF operator's contract, or they provide input
MRF O&M, P&E (and building) procurement															Alongside waste services contract, could be different contractor
MRF operator input to design and consenting															Timing of solid waste services procurement allows this
MRF P&E order and installation															
New contractor operates new MRF															

14 Risk assessment

A high-level risks assessment has been carried out for the project. The table below shows the current risks and the appropriate mitigation measures.

Table 24 High level risks and mitigation

#	Risk description	Mitigations (Current and Planned)
1	Cost of geotechnical, contaminated land or environmental mitigation measures for Ballantyne Road MRF are higher than budgeted.	• Reassess in-district MRF option against long-term out of district option • Reassess alternative MRF site (Gibbston Valley) • Regularly review project budgets against LTP allocation
2	Access to out of district MRF delayed due to construction delays for Dunedin MRF.	• Ensure overlap between current Glenda Drive MRF operation and out of district solution
3	Unable to secure consolidation site for transporting recyclables to out of district MRF.	• Early engagement with contractors on consolidation methodology and location for consolidation • Early planning for identified consolidation options
4	Costs of out of district disposal (consolidation, haulage or MRF gate fee) are higher than budgeted.	• Early engagement with contractors to secure pricing
5	Funding priorities change for Council and /or alternative funder resulting in delays in the construction and operation of the new MRF.	• Maintain options such as out of district MRF, which do not require capital funding • Ensure funding agreements are robust and legally tight to prevent alternative funder from pulling out
6	Output quality of the MRF results in no markets purchasing recyclables and material being landfilled.	• Contracts with strong KPIs • Supplier negotiation • Scope change to service
7	Multiple service changeovers with MRF operation and other waste services occurring concurrently.	• Contract implementation plans • Communications advising of change • Contracts and KPIs
8	Private collectors not performing or withdrawing from collections in areas furthest away from new MRF location.	• Early discussions and negotiations with private collectors
9	Difficulty in contractor employing staff for relocated MRF leading to increased costs and potential loss of revenue.	• Contracts with strong KPIs • Supplier negotiation • Scope change to service

#	Risk description	Mitigations (Current and Planned)
10	Uncertainty for customers of private recycling collectors.	• Robust planning and execution of customer plan to support customers • Dedicated project resources for communication and engagement
11	Council unable to meet service level for recyclables processing.	• Current council processes and contracts with KPIs • Confirming budget and resource
12	Negative media coverage of new MRF location resulting in increased customer complaints and queries, and negative impact on council reputation.	• Existing council relationships with media and internal resources • Media training • Communications and media plan • Identify high risk areas (i.e. Multi Unit Developments) and develop solutions
13	Changes in legislation such as a container return scheme or changes to standardised materials, result in redundant MRF or overcapacity in the region.	• Early communications with MfE to plan for this occurrence
14	Delay in commissioning and operating the MRF resulting in recyclables being landfilled.	• Maintain option of out of district processing until the in-district MRF operational • 12 months' notice given to incumbent contractors • Monitoring of contractor mobilisation • Updating the contractors' operational plans to show managing this risk

15 Recommended way forward

The overall preferred option is for QLDC to build a new in-district MRF on the land adjacent to the Wanaka transfer station, on Ballantyne Road in Wanaka. This option has challenges, but it best manages overall risk to Council.

The Ballantyne Road option scored consistently well in the assessment, but other options scored almost as well. Changes to weightings or key assumptions in the financial modelling had a significant impact on the ranking of options. While this has made it difficult to rule out options, at no time has Ballantyne Road been on the list of sites that would be ruled out.

Given there is a risk that Ballantyne Road becomes too expensive to develop or takes longer than anticipated to develop, there is a need for backup options. In order to give QLDC more time for the development of Ballantyne Road it is recommended Council enter a short-medium term out of district processing contract. The reliability and cost uncertainty risks that reside with this option long term can be mitigated in a shorter-term contract.

Given the risk of fluctuations in transportation costs over time and uncertainty of an out of district gate rate in the long term, further back up options that would enable an in-district solution should also be considered. It is recommended that the use of land adjacent to CODC's transfer station is explored for a backup option for an in-district MRF.

Based on the recommendations above, the next steps are listed below. The actions fall within three workstreams.

Progressing in-district MRF (Ballantyne Road and back up)

- Commencing engineering, environmental and planning investigations for a new MRF at Ballantyne Road in Wanaka, to enable risks to be understood and quantified.
- Complete a detailed carbon assessment for in-district versus out of district options including transport.
- Prepare a detailed procurement strategy for the in-district and out of district MRF, as well as wider waste contract renewal. Refine contract options and engage with the market as part of this process. Note, options for design and installation of enabling works, MRF building and MRF plant and equipment all need to be assessed as well as MRF operation options.

Securing short-medium term out of district solution (transportation and processing)

- Undertake further investigations with Timaru District Council and Dunedin City Council (or EnviroNZ) to understand contractual arrangements for a short-medium term out of district solution.
- Procuring contracts for transportation and processing QLDC's recyclables at an out of district MRF. Noting these are relatively simple services to procure.

Confirming consolidation arrangements (for both Ballantyne Road or out of district)

- Exploring consolidation options for both the Wanaka Ballantyne Road, and out of district options to ensure assumptions in the financial model are valid and suitable sites can be secured.
- Confirming short-term recyclables consolidation arrangements, within the Queenstown District or with CODC at Alexandra.

Appendix A Financial model for options

The full financial model has been supplied as a separate document. A summary of the key aspects of the financial model have been provide in this appendix.

Methodology

The methodology underpinning the financial projections is designed to provide a long-term view of the financial implications of each MRF option over a projected period of 20 years. This period commences in the 2024/25 financial year, designated as 'year 0'. This initial year is assumed to reflect when all construction and capital expenditures are expected to be incurred, setting the foundation for the subsequent operational phases of the MRF.

For all options, operational costs are projected to begin in the following financial year, 2025/26, allowing for a standardised starting point. Values within the model reflect consolidated costs for all users and are not exclusive to QLDC (other users include CODC and commercial entities).

A key assumption is the exclusion of glass from the tonnage processed by the MRF. This is to reflect the expectation that the glass from CODC will continue to be processed at Parkburn Quarry in Cromwell and that the glass from QLDC will be consolidated in Queenstown and Wanaka and then transported to Auckland for re-processing back into glass bottles and jars.

The financial model is divided into several core components, each tailored to address specific aspects of the MRF options. These are as follows:

Investment and Facility Costs

- The foundational cost estimates for constructing the MRF and associated plant and equipment derive from the Community Eco Park Concept Design Report prepared by Waste Management in December 2021. These figures are adjusted for inflation to reflect 2024 values based on the construction producer price index. Further judgemental adjustments are made for locations with existing infrastructure that can reduce initial capital costs.
- BJ Scarlett provided equipment cost estimates based on a MRF processing five tonnes of material per hour.
- Cost estimates for all options are tailored to a standard MRF site size of 11,000m^2 and a MRF facility size of 2,4000m^2.
- Core construction costs have been assumed to remain constant across different locations within the QLDC and CODC areas.
- In areas lacking existing recycling consolidation facilities, such as Wanaka, new development is required. It is estimated that constructing a new consolidation point would cost approximately $1,000,000, with a corresponding land purchase of 2,000m^2 where required.
- Where new land acquisition is necessary, costs are calculated based on recent real estate market data provided by Andrew Hyndman of Q Property, expressed in dollars per square meter.
- Lease costs at 6% of the estimated initial cost of land and facilities were provided by Andrew Hyndman of Q Property based on market estimates.

MRF operating costs

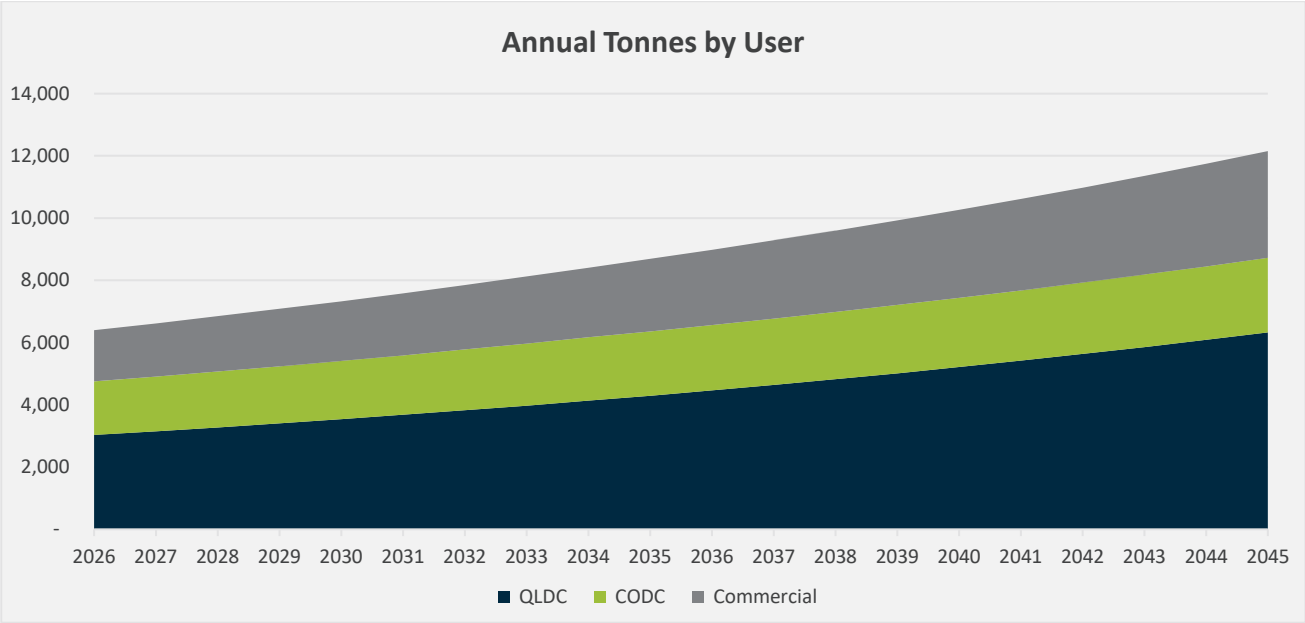
- Operating costs for the MRF are assumed to be consistent across all options located within the district. Costs are estimated based on the current schedule of prices from the Queenstown MRF, which includes fixed and variable expenses per tonne of processed material. We have not accounted for any modifications to allow processing changes due to a CRS or change in standard materials. These would be common for all options.
- For options where the MRF facilities are not owned by QLDC and are located out of district, an operating cost structure based on gate rates per tonne has been applied.
- In scenarios where the MRF is owned by QLDC, revenue is projected based on the amount of recyclables processed, the current market prices for recycled commodities, and the revenue-sharing agreements in place.
- It is assumed that approximately 17% of the mixed recyclables received at the MRF will be contaminated and therefore not processable. These materials will require disposal at the nearest landfill, costing $200 per tonne.

Transportation costs

- Transportation costs are incurred at various stages and are calculated based the following:
  - Transport from collection sources to consolidation points
  - Transport from consolidation points to the MRF
  - Transport of processed materials from the MRF to the port
  - Transport of contaminated material from the MRF to landfill
- The distances for each of these transportation stages are calculated based on the specific locations of the source points, consolidation points, MRF, and final shipment destinations. Each option has its unique set of distances, to which a cost per kilometre for a truck and trailer is applied.
- It is assumed that the level of material compaction varies before and after processing at the MRF. This variation affects the volume of materials that can be loaded into a truck and trailer, impacting transportation efficiency.

Annual tonnes

- Based on most recent actual MRF tonnes.
- Projected increases in recycling tonnage are aligned with the population growth expectations for the regions served by QLDC and CODC, as detailed in Appendix B.



Phasing of assessment

The financial models were prepared in two phases, with Phase 1 designed to develop a shortlist based on higher-level inputs, and Phase 2 designed to offer greater accuracy on the shortlisted options. The key changes between options are detailed below.

Item	Phase 1	Phase 2
Asset owning or leasing delivery model	All options are asset-owning	Tailored to the specific options notably, Option 3, Cromwell McNulty Road transitions from asset owning to leasing
Tonnage projections	Based on actuals to June 2023	Include actuals to March 2024
Transportation distances	Generic based on consolidation point or MRF region	Specific to the exact locations of the consolidation point or MRF
Out-of-district gate fees	Market estimate	Estimate from MRF operator for planning purposes
MRF structure size	Initial estimates based on the Eco Park Concept Design Report and set at 4,000m^2	Updated for project-specific factors by BJ Scarlett and set to 2,400m^2

Appendix B Financial assumptions

Option	Status quo Option 0	Wanaka Ballantyne Road Option 1	Cromwell CODC site Option 2	Cromwell McNulty Road Option 3	338 Kingston Road Option 4	Gibbston Valley Option 5	Out of district Option 6
Locations							
MRF Location	Queenstown	Wanaka	Cromwell	Cromwell	Queenstown	Cromwell	Dunedin
Port Location	Port Otago	Port Otago	Port Otago	Port Otago	Port Otago	Port Otago	Port Otago
Landfill Location	Vic Flats	Vic Flats	Vic Flats	Vic Flats	Vic Flats	Vic Flats	Green Island
Capital investment							
Land purchase	No	No	Yes	Yes	Yes	Yes	No
Earthworks	No	Yes	Yes	Partial – clean and fill not required.	Yes	Yes	No
Civil works	No	Partial – limited water infrastructure required.	Yes	Partial – limited hard surfaces and water infrastructure required.	Yes	Yes	No
MRF construction	No	Yes	Yes	Yes	Yes	Yes	No
Consolidation point construction	No	No	Yes	Yes	Yes	Yes	Yes
Property and equipment purchase	No	Yes	Partial - weighbridge not required	Partial - weighbridge not required	Yes	Yes	No

Component	Input
Inflation	
Annual inflation	3%
Discount rate - Real	5%
Annual population growth	
QLDC	3.9%
CODC	2.1 % (2025-2033), 1.5% (2034-2044)
Debt funding terms	
Interest rate	5.0%
Loan term (years)	20
Land	
Site size m2	11,000
Cost per m2 - Queenstown	$1,550
Cost per m2 - Cromwell	$600
Annual land appreciation – Queenstown	6%
Annual land appreciation – Cromwell	5%
Construction[3]	
Building size	2,400
Cost per m2	$3,038
Annual increase in replacement cost	4%
Useful life (years)	
MRF Facility	50
Property and equipment	20
Other construction margins	
Preliminary & general	10%
Developer margin	8%
Contingency	9%
Consent fees	1%
Revenue Share	
MRF commodity revenue share	50%
Transportation costs	
Consolidation cost per tonne	$20
Truck and trailer cost per kilometre	$6
Uncompacted tonnes per truck	7
Compacted tonnes per truck	20

[3] Other detailed construction costs not listed relate to earthworks and civil works.

Q&A - MRF Options Assessment 2024
(Q's raised at the Infrastructure Committee Meeting 28/11/24)

1. ***20% of the material processed through the MRF is contamination that is landfilled. Has the inefficiency of transporting recyclables to Ballantyne Road and then transporting 20% back to Victoria Flats landfill been considered?***

   Yes, the financial model includes the costs of transporting recyclables to each site and then transporting contamination back to Victoria Flats landfill. The contamination percentage used in the model was 17%, which is current contamination rate for QLDC material processed at Glenda Drive. As an example, the cost of transporting contamination from Ballantyne Road to Victoria Flats Landfill is estimated to be $23,000 per annum, which is three times the cost of any of the other options. Whilst this cost is significant when compared to the other options, it is only 3% of the total transportation costs for this option (which includes transport of material to the MRF, transport of processed recyclables to end markets and transport of contamination to landfill). It is anticipated that contamination in CODC's recyclables would be similar to QLDC.

2. ***For the operating model, has the option of a privately owned and operated local facility been considered?***

   At the time of completing the options assessment (August 2024) there was no indication of a privately owned and operated local facility being available and therefore, this option was not considered in the assessment. Council will structure its future procurement to allow the option of a privately owned and operated local facility to be put forward and evaluated alongside any other options presented.

3. ***What is the procurement approach for the MRF, and will it allow for privately owned and operated options to be presented?***

   It is recommended that Council engage with the resource recovery market early for a procurement of this size and that a two-stage procurement process is followed, which would allow for privately owned and operated options to be considered. The first stage would involve expressions of interest from suitable suppliers, which would inform the next stage of the procurement process. In the second stage, suppliers including those with privately owned and operated options, would be invited to submit proposals based on clear objectives and a set of requirements developed from information gained in stage one. Further details will be outlined in Council's MRF Procurement Strategy and Plan.

4. ***What is the timeline for development of the MRF and when will it be operational? Can the date of operation be brought forward from 2030? Why does the interim out-of-district processing option have to be in place for so long?***

   The timeline for implementation is provided in Table 23 of the options assessment report. The timeline outlines a number of tasks, to progress simultaneously for both a local MRF option and an out-of-district option. It may be possible to bring forward some parts of the proposed timetable such as the design and consenting period, so that a MRF can be operational before 2030 and it is recommended that any agreement for an interim out-of-district option would have the ability for an earlier termination, if a local MRF is operational sooner.

5. ***If Gibbston Valley will be available for development from early 2025, when could the site be operational? What procurement assumptions have been used in developing the timeline?***

For a **local MRF option**, once a decision has been made on the site, we have made the following assumptions when developing the timeline:

- Six months to finalise land access agreements (lease, sale and purchase, etc)
- Six months to complete site investigations specific to use of the site for MRF
- 42 months (3.5 years) to complete site-specific design and consenting
- 12 months for site enabling works
- 12 months for MRF building construction
- 24 months for MRF equipment order and supply (concurrent with site works and building construction)
- 12 months for MRF equipment installation and commissioning

In total, it is assumed that 7.5 years are required from when a decision is made on a particular site to when it will be operational. If Gibbston Valley is available for development from early 2025, then this timeline would start as soon as a decision were made to pursue this option.

It is possible that a local MRF could be operational sooner, however the timeline would depend on the complexity of the land lease or purchase agreement, design of the facility and the resource consents required.
For an **out-of-district option**, once a decision has been made to pursue this option, we have made the following assumptions when developing the timeline:

- 12 months to complete procurement and no mobilisation period (can commence transport to an existing MRF as soon as agreement signed)

As this option can be implemented much faster than the local MRF option (one year instead of 7.5 years), there is an opportunity to use it as an interim solution while the local MRF is constructed.

6. ***The Glenda Drive MRF has been at risk of catastrophic failure for many years but continues to operate. What are the extra over maintenance costs being incurred to keep this facility operational?***

Page 10 of the MRF report provides the following summary:

> *"Now, nearly five years later (in May 2024), Council are still processing mixed recyclables from kerbside collection and the commercial sector through the Glenda Drive MRF. WM New Zealand's operating costs have risen steeply from $540,000 in 2018/19 to $880,000 in 2023/24 (an increase of 60%), while tonnes processed have decreased by 11%. Council have had to invest $1.3 million in major maintenance and equipment replacements in the last five years, over and above the planned maintenance included in WM New Zealand's operating cost. However, the MRF remains at imminent risk of catastrophic failure. If that were to occur, recyclables would have to be landfilled at a current disposal rate of $200 per tonne, until a new MRF were constructed. There are no other MRFs in the lower South Island that have the capacity to accept QLDC's recyclables currently."*

Additional maintenance costs averaged over the last five years is $260,000 per annum. A new MRF is anticipated to cost in the order of $440,000 per annum less than Glenda Drive to operate.

7. ***Why can't Glenda Drive MRF continue to be used?***

   The Glenda Drive site cannot continue to be used for a new MRF because the existing MRF building and machinery is seventeen years old (built and operational in 2008), and the building and machinery are failing. The Queenstown refuse transfer station, next to the MRF, needs to be upgraded to enable it to handle more customers, improve traffic flows, improve health and safety and enable broader resource recovery services to be provided at the site. The existing site is too small to accommodate these upgrades and needs to be expanded onto the area where the MRF is currently located. This expansion would not provide sufficient land on the site for a new MRF as well as an expanded transfer station.

8. ***Are there local interim processing solutions that could be explored? (e.g. Allwaste, Wastebusters).***

   We were not aware of any at the time the business case was developed. At that time, Allwaste did not have the machinery or capability to process recyclables at any of their local sites and the existing Wastebusters facility did not have the capacity to process all the recyclables from QLDC and CODC. However, the upcoming MRF procurement process will allow for local interim options to be presented by the market, which can then be considered with all other options presented.

9. ***Can the relative cost to the ratepayer (capital and operating cost) of the options be presented more clearly?***

   Table 18 in the MRF report includes the financial modelling results from Phase 2 of the assessment. Local MRF options have high capital costs and low operating costs when compared with the out-of-district option. Table 18 provides the overall cost (Net Present Value) and the cost per tonne processed. Waste facilities generally charge their customers a gate fee that captures both capital and operating costs for the facility on a cost per tonne basis. From a ratepayer perspective, this would be the key metric to compare. Of the 180,000 tonnes processed through the facility over a 20-year period, 90,000 tones are from QLDC's kerbside collections that are funded by ratepayers.

   Table 18 in the MRF report looked at the total cost on an NPV basis across all MRF users - QLDC, CODC and commercial users. An estimation of the average annual operating costs for QLDC is presented in the table below, from which the relative change in annual ratepayer cost can be compared. Note, this involves assumptions regarding revenue and cost contributions from other MRF users and does not consider changes in collection costs as a result of a change in MRF location. Consequently, it is difficult to compare these costs to current MRF costs and the current solid waste targeted rate.

   The difference in cost between Options 1, 2 and 4 is less than $100,000, while Options 3 and 5 are $1 million higher. To give a sense of the relative impact of this on rates these differences can be compared to the current waste management targeted rate. The waste management targeted rate for residential properties was $386.00 per property in 2024/25, raising revenue estimated at $10.8 million. Differences of $100,000 are less than 1% of the targeted rate, while $1 million represents 10% of the targeted rate.

Average annual costs ($1000s)	Option 1 Wanaka, Ballantyne Road	Option 2 Cromwell CODC	Option 3 Cromwell McNulty Road	Option 4 Gibbston Valley	Option 5 Out of district
Operational Costs					
Processing Costs (inc. disposal & revenue other users)	$732	$732	$732	$732	$0
Leasing Costs (QLDC 50% contribution)	$0	$0	$1,825	$0	$0
Out-of-district Processing Costs (QLDC only)	$0	$0	$0	$0	$1,667
Transportation Costs (QLDC only)	$834	$740	$740	$742	$1,573
Total annual operating costs	**$1,566**	**$1,472**	**$3,297**	**$1,474**	**$3,240**
Amortised Capital Costs (Total capital averaged over 20 years, excludes residual values, land costs)					
Development Costs (QLDC 50% contribution MRF)	$899	$929	$103	$955	$103
Total annual costs	**$2,465**	**$2,401**	**$3,400**	**$2,428**	**$3,343**

10. What is the backup plan for processing recyclables if there is a significant Alpine Fault rupture?

QLDC has a business continuity plan which provides details of the back up plans in the event of a significant Alpine Fault rupture. If a significant event occurred, it is likely that separate consolidation of recyclables from refuse would cease, and all material would be disposed to landfill for some time after the event. Once the district moved into a recovery phase, the options available would be dependent upon the scale and location of damage to existing infrastructure including roads, MRFs, transfer stations, landfills. As such, all local MRF options were treated equally from a service continuity perspective in the MRF options assessment. The out-of-district option scored lower because it involves longer travel distances, increasing the chance that the transport route is impacted in an Alpine Fault rupture.

11. Given the Gibbston Valley land has now been consented, contracts let for services to the site, and titles for the first stage due to be issued in March/April 2025, does this change the assessment of this option? Would this change the achievability score for the Gibbston valley site?

Officers from QLDC met with the Gibbston Valley landowner in January 2025, on site. The site development works are progressing well and the landowner indicated that roading is anticipated to be completed by winter 2025.

The analysis presented in the MRF report was representative of what was known at that point in time. With the completion of services and roading for the first stage of the development and issuing for the first titles at Gibbston Valley development, the score for the Gibbston Valley option would increase. The achievability score would increase from 2 to 3 and the overall score would be equal to Option 2, the CODC transfer station in Cromwell.

12. ***The valuation of land in Gibbston Valley does not appear accurate. What impact would an increase or decrease in land value have on the assessment of options?***

    Table 6 in the MRF report compares land values for the sites. The Gibbston Valley land was valued at $4.4 million by an independent property valuer. Any change in the valuation of land would result in a change in capital cost and residual value. It would not change the assessment for options where land is already owned by QLDC such as Ballantyne Road or where no land purchase or land lease is required such as the out-of-district option.

13. ***If there are no geotechnical issues at Gibbston Valley, what impact would this have on the cost of this option?***

    The Gibbston Valley land is in an undisturbed, natural state. While no geotechnical issues have been identified to date at the site, until geotechnical investigations can be undertaken specific to the proposed land use for MRF development, unforeseen ground conditions remain a risk for this option. Given the uncertainty with costs to overcome geotechnical unknowns at Gibbston Valley, this cost was not included in this option. If there are no geotechnical issues, then no additional cost would need to be added to this option.

    Geotechnical risks are unknown for all local MRF options and options were treated equitably on this basis. Only McNulty Road, which is already an established site, has a lower earthworks and civil works cost.

14. ***What consideration was given to changing transportation fleet over time, e.g. development of hydrogen trucks?***

    The assessment acknowledged that technological developments are progressing in hydrogen powered long haul vehicles, but these are some ways from being a proven solution in New Zealand and cannot be relied upon in the next twenty years and therefore were not considered in this assessment.

15. ***How are the economics of the MRF impacted by changes in the commodities markets?***

    Improvements in commodity markets will positively affect the economics of the MRF because there will be greater revenue to fund operations. Conversely a fall in commodity markets will affect the economics of the MRF negatively. However, all MRFs in New Zealand are impacted by these commodity risks. All councils in New Zealand that collect recyclables are exposed to these risks as customers of the MRFs, whether they own them or not. The MRF operators are not willing to take on all the commodity risk alone and pass this onto their council customers. Therefore, regardless the MRF owner, QLDC will be exposed to these risks. As this risk is common to all options, it was not modelled in the options.

16. ***How are the economics of the MRF impacted by changes in volumes received at the MRF, customers making different recycling decisions?***

    QLDC will need to source plant and equipment that provides greater capacity than required demand when it starts operating. Installing a smaller MRF now would require different plant technology that requires more manual sorting. Council's preference it for an automated MRF to reduce labour requirements in the tight Queenstown labour market and to reduce health and safety risks associated with manual sorting.

The MRF that has been modelled will allow for an increased quantity of material to be processed over time, allowing for growth. Operating hours can also be increased over time to accommodate this.

A reduction in the volume of material processed (for example if customers made different recycling decisions) would be accommodated by reducing the operating hours of the sort lines. This would reduce utilisation of some, but not all the MRF equipment, however it is anticipated that the building, infeed area and storage areas would still be needed.

While it feels like there is a high degree of change in the recycling industry currently and that this may impact (reduce) the volume of recyclables that will need to be processed at a MRF, we do not think this impact will be material. Looking back over the last twenty years that the current MRF has been operating, the need for it has not changed significantly. The mix of products has continued to vary, but the need for material to be sorted has not and volumes have steadily increased. Therefore, when considering the next 20 years that a new MRF will be operating for, we were comfortable to assume that the need to have a MRF would remain even if the mix of products changed. There may be a change in how recyclables are collected, e.g. a container return scheme, but once collected these materials still need to be sorted, stored, consolidated and transported to end markets, which the MRF will enable.

17. Was co-ownership of the MRF with CODC considered?

Yes, co-ownership with CODC was considered. As the MRF owner, QLDC can pass on cost and risk through a gate fee contract with CODC, in a similar way to co-ownership. The differences in a co-ownership model were not sufficient to warrant this being considered as a standalone option at the options assessment stage. However, as part of negotiating contractual arrangements for CODC to access a QLDC-owned MRF, co-ownership can be further explored. Note: that CODC have indicated they do not have capital available for the MRF and contractual options and ownership, will need to take this into account.

18. Can an amended MRF options assessment report be reissued?

Yes, the MRF options assessment report has been amended with the following changes:

1. Section 11.2.1 Achievability, Option 5, Gibbston Valley – the last bullet point has been removed, which stated *'Complexity of QLDC's relationship with landowner could create further delay in establishing the arrangement'.*

2. Table 12 Stakeholders – The area of interest for the Cardrona Cattle Company has been amended as follows *'The stakeholder is the owner of 'The Yards', Gibbston Valley. Interested in maximising revenue from this land holding. Q Property was not acting on behalf of the stakeholder but had information from previous interactions about 'The Yards' site and provided this as part of the stakeholder engagement process.'*