

REMEDIAL ACTION PLAN & CONTAMINATED SITE MANAGEMENT PLAN

122 MORVEN FERRY ROAD

Project Number: 25086

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Prepared by	Max Nightingale-McMahon PhD, CEnvP		
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Reviewed by	Natasha Nightingale-McMahon PMEG, BA(Hons) Geology		
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Approved by	James Jackson MESci, CEnvP		
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Certifying SQEP Statement

The individual(s) undertaking and/or certifying this investigation meet the definition of a Suitably Qualified and Experienced Practitioner (SQEP) under the Resource Management (National Environmental Standard for Assessing and Managing Contaminants in Soil to Protect Human Health) Regulations 2011 (NES-CS), holding the following credentials:

1. A tertiary qualification in environmental science or engineering.
2. A minimum of 10 years of relevant experience.
3. Registration with a recognised professional body that assesses and certifies environmental professionals based on competency, training, experience, professional conduct, and ethical standards.

This report has been prepared in line with New Zealand regulations and guidance documents, including the Ministry for the Environment’s *Contaminated Land Management Guidelines No. 1: Reporting on Contaminated Sites in New Zealand* (2021).

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Appendix A Masterplan Concept

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1 Introduction

Springline Limited (Springline) has been engaged by Gibbons Development Limited (the client) to prepare this Remedial Action Plan & Contaminated Site Management Plan (RAP / CSMP) at 122 Morven Ferry Road, Queenstown (the site).

1.1 Proposed Development

The project is a master-planned development on an approximately 212-hectare site at 122 Morven Ferry Road, between Arrowtown and the Kawarau River in the Queenstown Lakes District.

The Ridgburn development incorporates a mix of uses within a commercial village hub, including retail, shared working space, a daycare, and community facilities. Ridgeburn has been designed to integrate with a network of open space reserves and walking and cycling trails. Each neighbourhood includes access to local amenities and open space. Ridgeburn will be fully supported by on-site three waters infrastructure.

The project is anticipated to be delivered over a six-year timeframe in six development phases and comprises:

- 1,030 residential lots accommodating a total of 1,210 residential units across the site, including 180 affordable units;
- A commercial precinct located at the north-eastern corner of the site, providing approximately 17,420 m² commercial, retail, community and accommodation activities, including a supermarket, daycare, community hall/gym, workspace and retail uses, hospitality (woolshed bar and pizzeria), a pump station, and visitor accommodation/ workers accommodation;
- An estimated 6,554 full-time equivalent (FTE) job-years generated over the development period; and
- Approximately 32 hectares of reserve area, 103 hectares of Morven Hill and Kawarau Escarpment Native Restoration, green links and a mix of active and passive recreation areas.

A copy of the current proposed masterplan is provided in Appendix A.

1.2 Context

A Preliminary Site Investigation¹ (PSI) completed in September 2025 identified several activities listed on the Ministry for the Environment's (MfE's) Hazardous Activities and Industries List (HAIL), triggering assessment under the Resource Management (National Environmental Standard for Assessing and Managing Contaminants in Soil to Protect Human Health) Regulations 2011² (NES-CS).

A subsequent Detailed Site Investigation³ (DSI) completed in November 2025 confirmed elevated concentrations of heavy metals and hydrocarbons in surface soils within these HAIL areas, with exceedances of NES-CS Soil Contaminant Standards (SCSs) for residential and, in some locations, commercial-industrial land use.

Further detail on the PSI and DSI findings is provided in Section 2.2.

¹ Springline Ltd (September 2025). Preliminary Site Investigation: 122 Morven Ferry Road. Revision A, Reference: 25086

² Resource Management (National Environmental Standards for Assessing and Managing Contaminants in Soil to Protect Human Health) Regulations (2012)

³ Springline Ltd (November 2025). Detailed Site Investigation: 122 Morven Ferry Road. Revision A, Reference: 25086

1.3 Purpose

This RAP/CSMP provides the framework for managing identified contamination during the remedial earthworks. It outlines the soil handling procedures, remedial methodologies, and validation requirements necessary to safely manage contaminated soils and to confirm that the remediated areas are suitable for the proposed end-use.

1.4 Scope

This RAP/CSMP is intended to:

- Define the extent and nature of contamination requiring remediation and management
- Describe the remedial methodology, earthworks strategy, and validation process
- Outline the health, safety and environmental controls necessary to minimise risks during remedial earthworks
- Establish contingency procedures for the identification and management of unexpected contamination
- Set out reporting requirements to demonstrate compliance with the NES-CS and the Contaminated Land Management Guidelines⁴ (CLMG)

1.5 Primary Contact Details

A summary of key contacts is provided in Table 1 below.

Table 1: Key Contacts

Role	Name / Company	Contact Details
Applicant	Gibbons Development Limited	cam@gibbonsco.co.nz
Main Contractor	TBC	TBC
Environmental Consultant (SQEP)	James Jackson Springline Limited	+64 21 264 7343 james@springline.co.nz
Consent Authority	Queenstown Lakes District Council	+643 441 0499 (Queenstown Office) services@qldc.govt.nz

1.6 Roles & Responsibilities

The list of roles and responsibilities is outlined in Table 2.

Table 2: Roles & Responsibilities

Role	Responsibilities
Applicant	• Ensure works are undertaken in accordance with this RAP / CSMP and relevant consent requirements • Appoint appropriately qualified contractors and consultants
Main Contractor	• Oversee remedial earthworks and ensure environmental and H&S risks are appropriately managed • Implement and maintain all controls specified in this RAP / CSMP • Report and manage environmental incidents, complaints and regulator communications • Ensure all staff, subcontractors and visitors receive environmental and safety inductions

⁴ Ministry for the Environment (MfE) Contaminated Land Management Guidelines No.1: Reporting on Contaminated Sites in New Zealand (Updated 2021); and No. 5: Site Investigation and Analysis of Soil (Updated 2021)

	• Maintain site access for inspections by Council or other regulatory bodies
Environmental Consultant (SQEP)	• Prepare and maintain this RAP / CSMP in accordance with NES-CS and CLMG • Liaise with the contractor and provide technical direction on contaminated soil management • Undertake inspections and collect validation samples • Assess compliance with remedial controls and recommend corrective actions • Prepare a Site Validation Report (SVR) upon completion of works
Consent Authority	• Review contaminated land management documentation as required under the NES-CS and relevant consent conditions • Provide regulatory oversight and guidance on contaminated land matters • Respond to and investigate any reported environmental incidents, discharges or complaints • Review the SVR upon completion of works

1.7 Applicability

The following should be understood when applying this RAP / CSMP:

- This RAP / CSMP applies only to works that disturb contaminated soils within the defined remedial areas. Earthworks across the wider site must be managed under a site-specific Environmental Management Plan (EMP) to address erosion and sediment control, dust, and general construction environmental risks.
- The provisions of this plan are mandatory for all contractors, subcontractors and personnel involved in any excavation or handling of contaminated soils.
- This plan complements the contractor's site-specific Health and Safety Plan and does not override standard operating procedures or internal environmental controls.
- This document does not exempt any party from obligations under the Health and Safety at Work Act 2015, the Health and Safety at Work (Asbestos) Regulations 2016, or any other applicable legislation.

2 Site Information

2.1 Site Identification

The site comprises a rural landholding approximately 3.5 km south of Arrowtown, historically used for pastoral grazing with several farm structures, fenced paddocks and internal access tracks (refer to Figure 1, Appendix B).

General site information is included below in Table 3. Refer to the PSI¹ and DSI³ for further detail on the site's environmental and historical setting.

Table 3: Site Information

Item	Detail
Address	122 Morven Ferry Road, Queenstown
Legal Description	Lot 2 DP 601937 (24.7 ha) (RT: 1174254) Lot 3 DP 529201 (2.05 ha) (RT: 857180) Lot 5 DP 300661 (9.5 ha), Section 21 Block IX Shotover SD, and Sections 23, 24, 71, 64, Blocks VIII Shotover SD (82.7 ha) (RT: 946021) Section 22 Block IX Shotover SD (23.1 ha) (RT: OT406/118)

	Section 23 Block IX Shotover SD (26.5 ha) (RT: OT7D/1456) Section 1-2 SO 478164, Section 25 Block IX Shotover SD, and Lots 3-4 DP 300661 (45.1 ha) (RT: 946040) Section 1 SO 420327 (8.6 ha) (RT: 492534)
Area	~ 212 ha
District Council	Queenstown Lakes District Council (QLDC)
Regional Council	Otago Regional Council (ORC)

2.2 Site Contamination Summary

The Springline PSI¹ (2025) identified several areas of actual or potential HAIL activities associated with historical farming and fuel storage practices. A DSI³ was subsequently undertaken to assess the extent and significance of soil contamination in each area of concern. A summary of findings is presented in Table 4 below. Refer to the DSI³ for full investigation details, and to Figures 2 and 3 (Appendix B) for the location of each HAIL area.

Table 4: Site Contamination Summary

HAIL / Features	Contamination findings
Sheep Spray race (HAIL A8) and adjacent stock races	- Arsenic exceeded residential SCSs in six locations, and also exceeding commercial SCSs in one location (0.0 – 0.1 m and 0.3 m bgl; maximum 103 mg/kg). Cadmium exceeded residential SCSs at one location (0.0 – 0.1 m bgl). - Zinc exceeded Eco-SGV's across multiple locations but remained below human-health SCSs. - The results confirm sporadic, low-to-moderate metal impacts typical of historical sheep handling facilities, with contamination appearing largely confined to surface soils.
Livestock holding shed and timber clad structures (potential HAIL I)	- Arsenic exceeded residential SCSs in one location at 0.0 – 0.1 m bgl, with the concentration increasing and exceeding commercial SCS in under the underling silts (0.2 m bgl). - The elevated arsenic result is not considered representative of the cladding or the external building fabric and likely reflects a localised hotspot.
Fuel storage barrels and general storage area (HAIL A17, HAIL I)	- Two surficial samples (0.0 – 0.1 m bgl) recorded arsenic concentrations of 28–29 mg/kg, marginally exceeding residential SCS. The broader metals profile suggests these levels may reflect natural geogenic enrichment rather than storage-related impact. - Heavy-chain hydrocarbons (C15–C36) were detected across all six locations but at concentrations below human-health screening criteria. - Overall the results generally indicate low-level, shallow soil impacts.
Aboveground storage tank (AST) (HAIL A17)	- Hydrocarbons (C₁₀–C₁₄) exceeded residential and commercial/industrial screening criteria in surface soils (0.0 – 0.1 m bgl) immediately beneath the AST, with underlying soils at 0.3 m bgl also exceeding residential screening criteria. - Findings indicate a small, discrete hydrocarbon hotspot localised to the visibly stained former AST footprint.
Former firewood storage yard (non-HAIL)	- No exceedances of human health SCS. - Marginally elevated arsenic (18–20 mg/kg) was consistently recorded above the site PBC (12 mg/kg), while all other trace elements were below PBCs.

Clay target shooting area (HAIL C2)	- Eight surficial topsoil samples (0.0 – 0.1 m bgl) exceeded residential SCSs for antimony, arsenic, lead and/or PAHs, with four of these further exceeding commercial/industrial SCSs for lead and PAHs. - Underlying topsoil (0.3 m bgl) and silts (0.5 m bgl) were generally at, or close to, published background concentrations (PBCs), indicating generally shallow soil impacts. - Contamination is heterogeneously distributed but widespread across ~3,300 m², where visible lead pellets and clay fragments are present both on the ground surface and within the upper 100 mm of the soil profile.
Non-Investigated Areas	
Underground storage tank (UST) (HAIL A17)	The UST was not directly investigated during the DSI. Instead, the UST is best assessed during its decommissioning and removal (see Section 3.6), which is required under the NES-CS prior to site redevelopment. SQEP supervision will be required during the removal works, to allow visual inspection, targeted soil sampling, and validation of any impacted material prior to disposal or site reuse.
Offal pit (HAIL G5)	The offal pit was not directly investigated due to access constraints. Assessment of potential contamination is best undertaken during earthworks when the feature can be exposed and directly observed under SQEP supervision.
Historic fly-tipping in steep gully (HAIL G5)	The fly-tipping area was not directly investigated due to safety and access constraints associated with the steep terrain. Given the steep topography and inaccessible terrain, there is no direct exposure pathway to future site users, and the area is unlikely to be disturbed during future development. Additionally, the waste material appears to predominantly comprise inert household waste that is unlikely to represent a risk to human health. As such, this historic fly-tipping is not proposed for specific remediation under this RAP. Instead, the removal of fly-tipping waste within the gully may be undertaken separately for aesthetic and ecological improvement, rather than soil or human health risk. This area is therefore excluded from this RAP.

2.2.1 Conclusion

Key findings from the DSI are summarised as follows:

- Contamination exceeding residential and/or commercial/industrial SCSs was identified across all investigated HAIL areas investigated, confirming the need for targeted remediation and management.
- Two features (the UST and offal pit) were not sampled due to access constraints. These features require assessment during earthworks under SQEP supervision and will be managed through the hotspot discovery protocols (refer to Section 3.6).
- Elevated arsenic was recorded across several HAIL and non-HAIL locations in the northern portion of the site, with concentrations consistently exceeding published background concentrations (PBCs). The distribution suggests the potential influence of naturally elevated geogenic background concentrations, an investigations is recommended for earthwork and confirmation of disposal pathways.

3 Remedial Action Plan

All contamination exceeding applicable human health standards identified within the defined HAIL-footprints during the previous DSI³ can be appropriately managed through this RAP.

Following implementation of this RAP and subsequent soil validation works, the site will be suitable for the intended residential and commercial land use.

3.1 Objective

The objective of the remedial works is to remove all contaminated soil within the identified HAIL areas and validate the remaining soils to demonstrate compliance with the adopted land-use criteria.

Following consultation with the client, bulk excavation and off-site disposal of the impacted soil has been selected as the preferred remediation strategy, as opposed to on-site encapsulation and long-term management.

3.2 Remedial Standards

Although the current masterplan (Appendix A) identifies parts of the northern site for commercial use, residential screening criteria have been adopted as the remedial standard for all HAIL areas. This provides a conservative and future-proofed approach, ensuring protection for potentially sensitive land uses (including the proposed daycare) and allowing greater flexibility should land-use layouts change during detailed design.

The adopted remedial criteria for each remedial area is presented in Table 5.

Table 5: Adopted Remedial Criteria

Area / Location	Contaminant	Remedial Standard
Sheep Spray race (HAIL A8) and adjacent stock races	Arsenic	20 mg/kg ⁽¹⁾
	Cadmium	2 mg/kg ⁽¹⁾
Livestock holding shed and timber clad structures (potential HAIL I)	Arsenic	20 mg/kg ⁽¹⁾
Fuel storage barrels and general storage area (HAIL A17 , HAIL I)	Arsenic	20 mg/kg ⁽¹⁾
AST (HAIL A17)	TPH (C ₁₀ – C ₁₄)	470 mg/kg ⁽²⁾
Clay target shooting area (HAIL C2)	Antimony	36 mg/kg ⁽³⁾
	Arsenic	20 mg/kg ⁽¹⁾
	Lead	210 mg/kg ⁽¹⁾
	BaP Equivalent	10 mg/kg ⁽¹⁾

¹ MfE (2011). National Environmental Standard (NES) for Assessing and Managing Contaminants in Soil to Protect Human Health. Residential (10% Produce) guideline values.

² MfE Petroleum Guidelines: Ministry for the Environment (1999). Guidelines for Assessing and Managing Petroleum Hydrocarbon Contaminated Sites in New Zealand – Module 4 Tier 1 Soil Screening Criteria. Residential, All Pathways, Sand soil type guideline values.

3 Antimony (Sb) Human Health guideline value: World Health Organisation (WHO). N. Bolan et al. (2022) Antimony contamination and its risk management in complex environmental settings: A review.

3.3 Methodology

Remedial works in each area will follow the same general methodology, as outlined in Table 6. Remediation plans for each respective area are provided as Figures 4 – 6, Appendix B.

Remedial footprints have been defined based on the observed extent of soil impact. These footprints encompass soils exceeding human-health criteria as well as soils that do not meet managed-fill acceptance criteria, resulting in a single, bulk excavation area for each HAIL feature.

Additional targeted sampling may be undertaken during pre-start or early works to refine these footprints and reduce excavation volumes; however, for planning purposes the areas shown on the remediation figures represent conservative remedial extents.

Table 6: Remedial Methodology

Item	Description			
Location Refer to the Remedial Plans – Figures 4 – 6 (Appendix B)	HAIL / Location		Area	Target depth
	Sheep spray race and stock races (HAIL A8) <i>Figure 4</i>	North of shed	~200 m ²	~ 0.3 m bgl
		South of shed	~330 m ²	~ 0.2 m bgl
	Livestock holding shed and timber clad structure (HAIL I) <i>Figure 4</i>		~10 m ²	~ 0.4 m bgl
	Fuel storage area (HAIL A17, I) <i>Figure 5</i>		~30 m ²	~ 0.3 m bgl
	AST (HAIL A17) <i>Figure 5</i>		~15 m ²	~ 0.4 m bgl
	Clay target firing range (HAIL C2) <i>Figure 6a & 6b</i>		~3,300 m ²	~ 0.2 m bgl
Validation	Once shallow soils have been excavated to the corresponding target depth in each area in line with Figures 4 – 6 (Appendix B), soil validation testing shall be undertaken along the exposed subgrade and around the side walls of the remedial excavation. Validation testing should be undertaken prior to disposal of adjacent soils surrounding the remedial area, to ensure all contaminated soils have been removed and disposed of accordingly. All validation findings must be documented in the Site Validation Report (SVR), discussed further in Section 3.5.			
Earthwork Controls	Standard Erosion and Sediment Controls (refer Section 4.2)			

3.4 Soil Disposal

All surplus soil must be disposed of to appropriately consented facilities.

Based on the DSI findings, the majority of soils within the identified HAIL areas will require disposal to an appropriately consented landfill facility. Soils from the clay target shooting area and stock race areas may require treatment or stabilisation prior to disposal due to elevated leachate concentrations (refer to the DSI).

Confirmation should be sought with the receiving disposal facility / consent owner, with a copy of this report provided so they can make an informed decision with regards to material acceptance. All soil disposal should be documented by way of a soil waste transfer manifest, detailing the source area, the volume of soil, and receiving disposal facility.

3.5 Soil Validation Report

On completion of bulk excavation and remedial works, the SQEP shall prepare a SVR, including:

- Confirmation that works were completed in accordance with this RAP
- Copies of soil disposal dockets and confirmation of total volumes removed
- Records of any unexpected contamination encountered, and actions taken
- Soil validation results and findings
- A chronological summary of remedial works
- Evidence of imported backfill or cleanfill, including source details and test results (if applicable)

The SVR documents site conditions following remediation and confirms the adequacy of the works. A final copy shall be provided to the consenting authority for review.

3.6 Earthwork Supervision (Non-Investigated Areas)

Two potentially contaminated areas identified in the PSI were not investigated during the DSI due to access constraints: the UST and the offal pit. These areas may contain unidentified contamination and must be assessed during earthworks under SQEP supervision. All works in these locations must follow the discovery protocol outlined in Section 6 of this CSMP.

3.6.1 Underground Storage Tank (UST)

The UST must be decommissioned and removed in accordance with the NES-CS and relevant industry practice (CLMG No. 1). SQEP supervision is required throughout the tank-pull process to allow visual inspection, targeted soil sampling, and validation of any impacted soils prior to disposal or reuse.

3.6.2 Offal Pit

The offal pit should be exposed and assessed under SQEP supervision during earthworks. The material may or may not be contaminated; appropriate sampling and classification will be undertaken once the contents and surrounding soils are accessible.

4 Contaminated Site Management Plan

All remedial earthworks are to be undertaken in accordance with the controls set out in this Contaminated Site Management Plan (CSMP).

Earthworks across the wider site area will require management under a site-specific Environmental Management Plan (EMP), prepared in accordance with:

- Queenstown Lakes District Council's Guidelines for Environmental Management Plans 2019 (QLDC EMP Guideline)
- Auckland Council GD05 Erosion and Sediment Control Guide 2016/005 (GD05).

4.1 Operational Controls

The following operational controls are required for day-to-day site management and apply to all contractors, subcontractors, and visitors involved in remedial works.

Table 7: Operational Controls and Site Set-Up Procedures

Item	Control Measure
Induction and Training	All staff and subcontractors must complete a site-specific induction before starting work, covering contamination risks, environmental controls, emergency response, and reporting lines.
Site Access	Access is via designated entry points only. Temporary fencing and signage will define site boundaries and any contaminated zones; public access is prohibited. Install and maintain a stabilised entrance at the primary access, with provision for wheel-wash if required. Inspect daily and after rain; top up or replace aggregate as needed, and sweep any sediment tracked onto the sealed road.
Plant and Equipment	Daily pre-start checks are required. Defective or leaking equipment must be repaired or removed from service. Refuelling only in designated areas away from drains, with spill kits on hand. All plant to carry fire extinguishers and be operated by competent personnel.
Complaints and Incidents	All complaints or incidents (i.e., spills, dust exceedances, noise issues, etc) must be reported to the Site Manager and logged in the register. Immediate corrective action required. The SQEP and council must be notified where thresholds are exceeded. Follow-up actions documented and closed out.
Record Keeping	The following must be kept onsite and/or available on request: • Induction records • Inspection logs • Complaints register • Incident reports • Weighbridge dockets, and • Validation results. Copies provided to the SQEP for reporting.

4.2 Standard Earthwork Controls

Springline has not been engaged to prepare an Erosion and Sediment Control Plan (ESCP) for this site. An approved ESCP is expected to form part of the site-wide Environmental Management Plan (EMP) and will serve as the primary erosion and sediment control document for general earthworks.

Best-practice controls for managing contaminated or potentially contaminated soils during remedial works are provided in Table 8. These controls have been developed in general accordance with Auckland Council's Guideline Document 2016/005 – Erosion and Sediment Control Guide for Land Disturbing Activities in the Auckland Region (GD05).

Table 8: Standard Earthwork Controls

Item	Control Measure
Site set-up and demarcation	• Install fencing and signage to define site boundary and remediation zones • Establish compound, haul routes, and stockpile pads away from drains or overland flow paths
PPE for standard works	Minimum: • Gloves • Hi-vis • Safety footwear. Nuisance dust masks only per contractor H&S plan.
Staging	• Break works into manageable zones to reduce the area of exposed soil at any given time • Open only areas that can be actively worked and stabilised within the programme window • Complete and stabilise each stage before opening the next • Sequence with access and services to minimise double handling
Stabilisation	• Progressively stabilise exposed areas to limit bare soil • Apply temporary measures (e.g. mulch, geotextile, or polymer) on inactive areas and before forecast rain • Complete permanent stabilisation (e.g. grassing, aggregate, or hard surfacing) as soon as practicable to achieve a stable surface • Prioritise stabilisation of exposed soil and stockpiles
Weather Forecasting	• Check forecasts daily, including short- and long-range forecasts • Adjust work sequencing based on forecasted weather conditions • High risk activities will only proceed during settled weather • Implement pre-rain ESC checks to ensure preparedness • Apply temporary stabilisation before adverse weather • Suspend or modify activities during heavy rain/high winds • Complete post-event inspections and repairs.
Stockpiles	• Keep to a minimum • Place on geotextile/impermeable liner, away from overland flow paths, and >10 m from stormwater inlets/sumps • Provide perimeter bunding / sediment controls to prevent discharge • Cover when inactive (>24 h) and/or during wind/rain • Keep imported certified cleanfill separate from contaminated soils.
Soil handling and re-use	• Minimise double handling • Keep contaminated soils damp during handling
Dewatering	Not anticipated. Confirm with the SQEP if required.
Dust management	• Maintain visible dust at nil-to-low using water / dust suppression • Suspend or modify dust-generating activities during high wind conditions • Stage works to minimise exposed areas • Stabilise disturbed areas as soon as practicable

	• Cover stockpiles or apply polymer where material is to remain undisturbed for extended periods • Reduce drop heights • Limit speeds on unsealed surfaces • Conduct regular site inspections and respond promptly to dust issues • Stop work if dust cannot be controlled.
Transport and tracking	• Cover all truck loads • Use defined haul routes where practicable • Keep the stabilised exit clean • Sweep sealed roads immediately if tracking occurs.

5 Administrative Requirements

5.1 Remediation Record Keeping

The main contractor shall provide the following records to the SQEP upon completion of remedial works:

- Copies of weighbridge dockets or completed soil disposal manifests for all contaminated soil removed from the site, including details of disposal locations and volumes
- Documentation confirming the source and suitability of imported backfill
- Photographic and written records of remedial excavation depths and locations, recorded during works in conjunction with SQEP supervision
- Records detailing the location, extent, and nature of any unexpected contamination encountered during excavation
- A register of any complaints received, and details of site inspections or correspondence with the consenting authority relating to contaminated land management

All records must be compiled and retained to support preparation of the Site Validation Report (SVR) and to demonstrate compliance with NES-CS and council requirements.

5.2 Reviews and Updates

A copy of this RAP / CSMP must be available onsite at all times for reference during site activities. The RAP / CSMP may be reviewed and updated if required. Any amendments shall be:

1. Only for the purpose of improving the efficacy of the mitigation measures and management of the earthworks
2. Consistent with the conditions of consent
3. Submitted in writing to the Council, Attn: Regional Leader – Monitoring and Compliance, for review and certification.

5.3 Complaints Register

The main contractor shall maintain a complaints register throughout the duration of works, recording the following details:

- Complainant's name and contact information
- Date, time, and location of the issue
- Description of the complaint and potential environmental effects
- Observed weather conditions at the time (including wind direction)
- Actions taken to investigate, respond, and resolve the issue.

All complaints must be investigated and actioned within 24 hours. Where a complaint is considered relevant to environmental effects arising from construction activities, the consenting authority shall be notified within the same 24-hour period.

6 Accidental Discovery

6.1 Contaminated Soils

If additional contaminated or potentially contaminated material is encountered during earthworks that differ from the known contamination, all works in the immediate area must cease immediately.

Indicators of potential contamination may include, but are not limited to:

- **Visual:**
 - Discoloured or stained soils (black, grey, green, blue, orange mottling)
 - Sheens or oily films on soil or water
 - Presence of buried waste (glass, metal, plastic, timber, tyres, batteries)
 - Free-phase liquids (fuel, oil, tar) pooling in excavations
 - Buried containers (chemical drums, barrels, tanks)
 - Asbestos-containing material (cement board, pipe lagging, loose fibrous fragments)
- **Olfactory (smell):**
 - Strong or unusual chemical odours (solvent, petrol, diesel, creosote)
 - Offensive organic decay smells not typical of undisturbed soil
- **Physical:**
 - Oily, sticky, or tar-like soil texture
 - Unusual heat, vapour, or gas release from soil.

Any suspected material should be covered and protected from stormwater runoff. If material has already been excavated, it must be placed on an impermeable surface such as concrete hardstand or polythene sheeting to prevent leaching or cross-contamination of underlying soils.

The Site Manager shall engage a Suitably Qualified and Experienced Practitioner (SQEP) to assess the material and determine the appropriate course of action, including classification, management, and disposal requirements.

Unexpected Contamination Discovery Protocol:

1. Cease all excavation and earthworks within a minimum 10-metre radius of the suspected material and secure the area to restrict unauthorised access.
2. Implement immediate measures to prevent contaminated material from entering the stormwater system or migrating off site.
3. Contact Springline (021 264 7343) to arrange for a SQEP to inspect the material, assess its risk, and advise on the appropriate management approach.
4. Document the discovery, including photographs, observations, and any initial actions taken.

All records associated with the discovery shall be retained and provided to Springline and the relevant regulatory authority (e.g., Council) upon request.

6.2 Archaeological Materials

In the event that a suspected archaeological site or item is uncovered during earthworks, all work must cease immediately in accordance with the Heritage New Zealand Pouhere Taonga Act 2014. All contractors and subcontractors are legally obligated to stop works and follow the procedures outlined below. Failure to comply may result in legal action.

The following steps shall be followed:

- Cease all works immediately in the area of the discovery and within a 20-metre radius.
- Shut down all machinery in the vicinity, secure the area, and notify the Site Manager and Project Manager.
- The Site Manager shall promptly notify the Heritage New Zealand Regional Archaeologist for further direction.
- If required, a qualified archaeologist will assess the site to determine the significance and appropriate next steps.

If human remains (Kōiwi Tangata) are discovered:

- The Site Manager must immediately notify Heritage New Zealand, the New Zealand Police, and the relevant iwi authorities or kaitiaki representatives.
- No remains are to be moved or disturbed until iwi and Heritage New Zealand have responded and provided formal direction.
- No further work may proceed in the affected area until written approval is received from Heritage New Zealand. Heritage New Zealand will also determine whether an Archaeological Authority is required before works may resume.

7 Limitations

Springline Ltd (Springline) has prepared this Remedial Action Plan and Contaminated Site Management Plan (RAP / CSMP) report for Gibbons Development Limited in accordance with the National Environmental Standard for Assessing and Managing Contaminants in Soil to Protect Human Health (NES-CS) and the Contaminated Land Management Guidelines (CLMG No.1).

Springline's opinions, conclusions, and recommendations are based on the information provided by the client and third parties. While reasonable efforts have been made to ensure the accuracy of this data, Springline does not warrant its completeness or correctness. Consequently, the findings may not reflect all actual site conditions, and it is possible that contamination or other hazards may exist beyond the scope of this investigation.

This report is intended solely for the use of Gibbons Development Limited for the purpose outlined in the scope of work. Springline accepts no liability for any reliance by third parties on this report. Reproduction or distribution of this report, in whole or in part, is prohibited without Springline's prior written consent, except as required for the intended purpose.

Appendix A Masterplan Concept



Legend

- Ponds and waterways
- Historic water race and 7m setback to edges
- Primary Rooding network
- Pedestrian / Cycle amenity network
- Secondary and tertiary rooding network
- Outstanding Natural Landscape (ONL) boundary
- Site boundary
- Escarpment edge and 30m setback
- 110kV Transmission lines (derived from Transpower GIS - Location TBC)
- Native dry shrubland management
- natural landscape planting areas
- Existing rocky outcrops with tussock planting
- 1 Ridgeburn Entrance
- 2 Retail and hospitality commercial hub
- 3 Affordable living units
- 4 Existing farm buildings
- 5 Lookout
- 6 Water race
- 7 Community node + playground
- 8 Development edge rural landscape buffer
- 9 Development edge Morven Ferry Rd landscape buffer
- 10 Development edge 30 escarpment buffer
- 11 Connection to twin rivers trail
- 12 Wetlands and stormwater management areas
- 13 Wastewater disposal area
- 14 Native dry shrubland areas of ecological restoration
- 15 Relocated farm shed / community node
- 16 Wastewater treatment plant - refer civil engineer

Note: This masterplan is indicative / conceptual only. All elements, including site layout, lot configuration, and house typologies, are subject to further design development, regulatory approvals, and stakeholder consultation.

RIDGEBURN
ARROWTOWN JUNCTION

Ridgeburn - Arrowtown Junction

at 122 Morven Ferry Road for Ridgeburn Ltd



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15 Everton Terrace, PO Box 12 232, Wellington 6144
t 04 472 9729 | e architects@novakmiddleton.co.nz

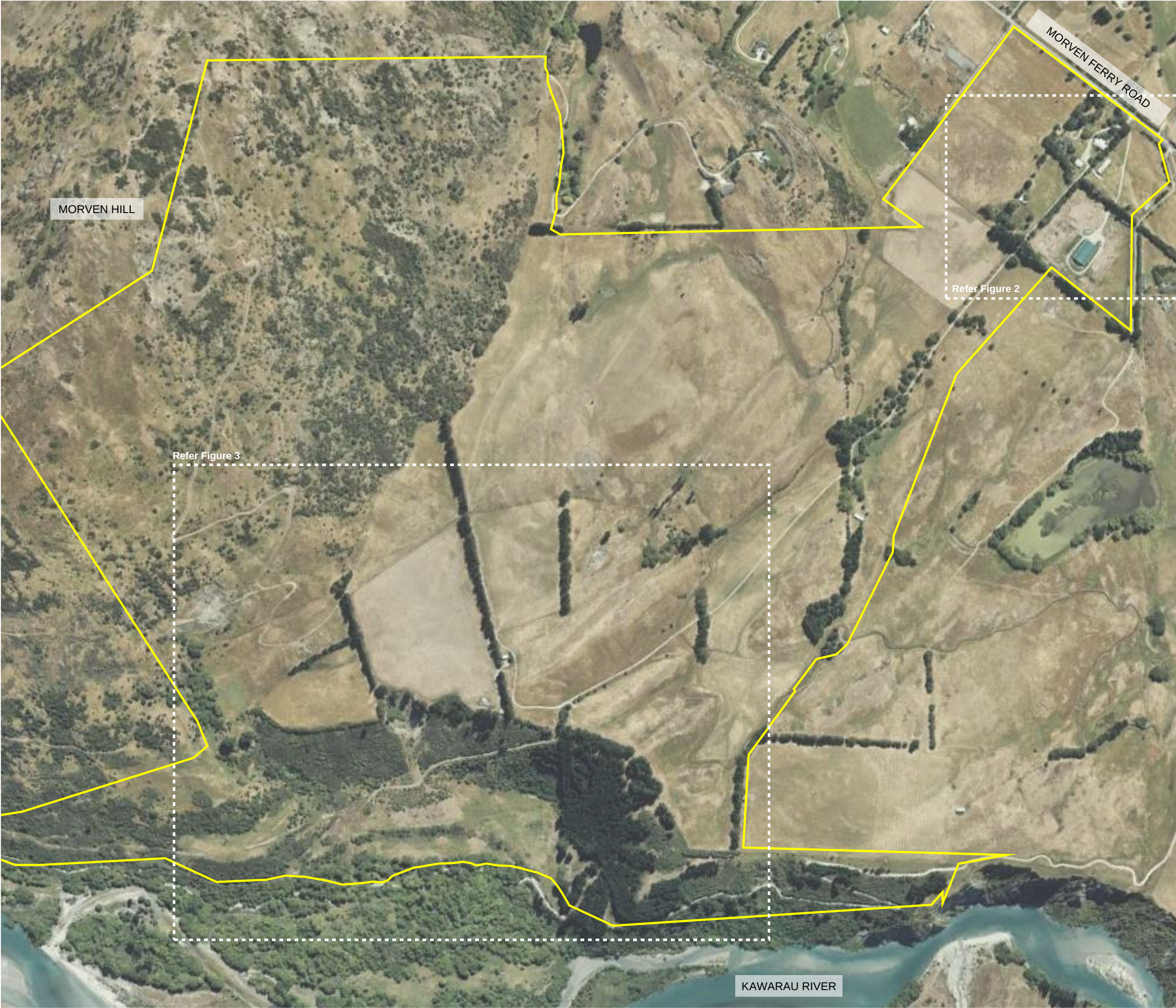
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PRINTED: 20/05/2025

Scale @ A1: Not to Scale NOT FOR CONSTRUCTION

PD102 / Site Master Plan

Appendix B Figures & Remedial Plan



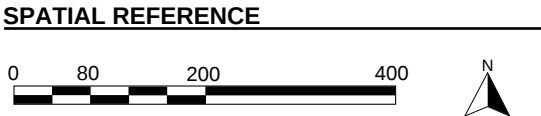
SPRINGLINE

TITLE
Figure 1: Site Plan

PROJECT
122 Morven Ferry Road

CLIENT
Gibbons Development Limited

LEGEND
 Approximate Site Boundary

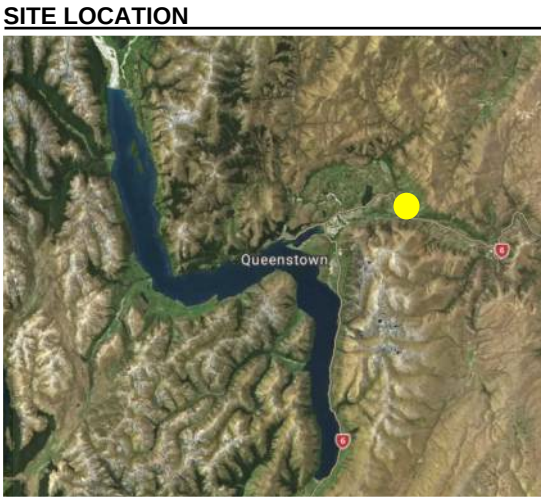


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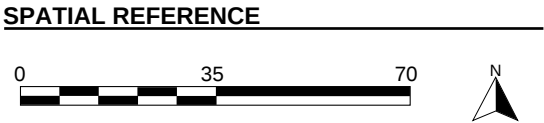
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Figure 2: Site Plan (Area 1)

PROJECT
122 Morven Ferry Road

CLIENT
Gibbons Development Limited

LEGEND

- Approximate Site Boundary
- HAIL / Further Investigation Areas

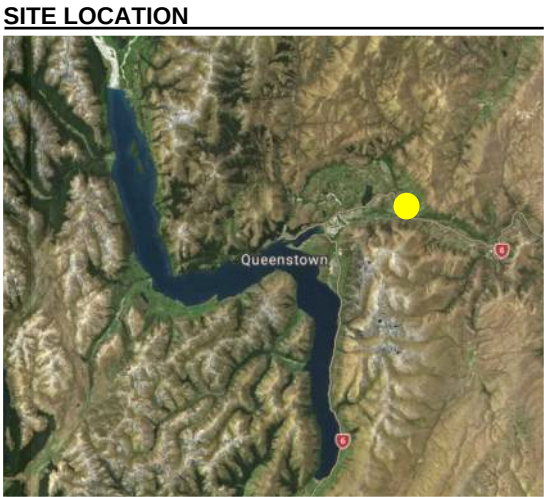


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TITLE

Figure 3: Site Plan (Area 2)

PROJECT

122 Morven Ferry Road

CLIENT

Gibbons Development Limited

LEGEND

- Approximate Site Boundary
- HAIL / Further Investigation Areas

SPATIAL REFERENCE



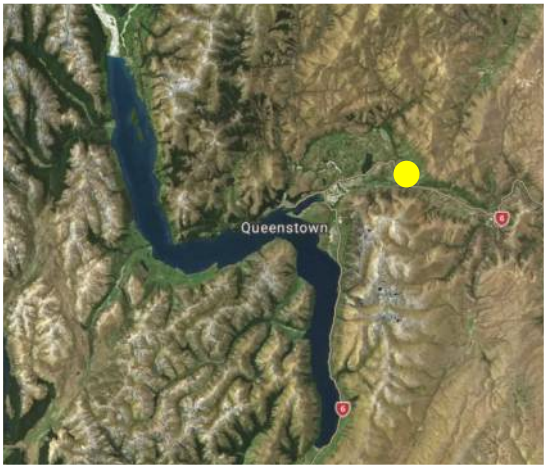
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SITE LOCATION



REMEDIAL METHODOLOGY

ALL WORKS TO BE UNDERTAKEN IN ACCORDANCE WITH THE CSMP (SECTION 4)

- 1. EXCAVATE REMEDIAL AREA (RED) TO TARGET DEPTH OF ~0.3 M BGL TO REMOVE SHALLOW IMPACTED TOPSOIL
- 2. LIVELOAD CUT SOILS DIRECT TO TRUCK FOR OFF-SITE DISPOSAL. DISPOSE TO AN APPROPRIATELY CONSENTED LANDFILL FACILITY.
- 3. INSPECT SUBGRADE FOR ANY VISUAL STAINING OR EVIDENCE OF CONTAMINATION.
- 5. UNDERTAKE SOIL VALIDATION TESTING ALONG THE EXPOSED SUBGRADE AND EXCAVATION SIDEWELLS.
- 6. HOLD FOR SQEP CLEARANCE PRIOR TO BACKFILLING WITH CERTIFIED CLEANFILL

SPRINGLINE

TITLE
Figure 4: Stockyard Remedial Plan

PROJECT
122 Morven Ferry Road

CLIENT
Gibbons Development Limited

LEGEND

Remedial Area

Managed Fill Area

SPATIAL REFERENCE

0510

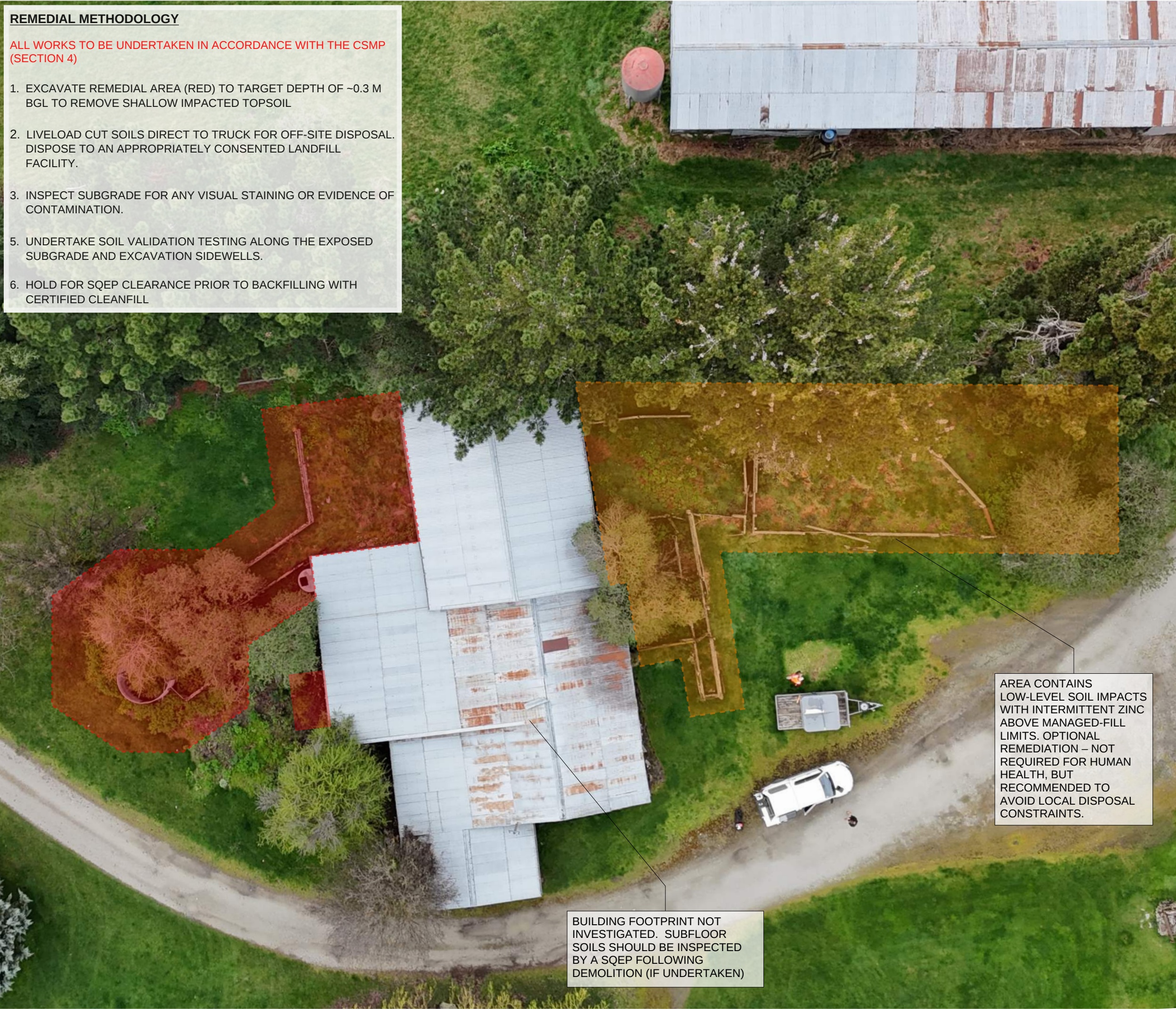
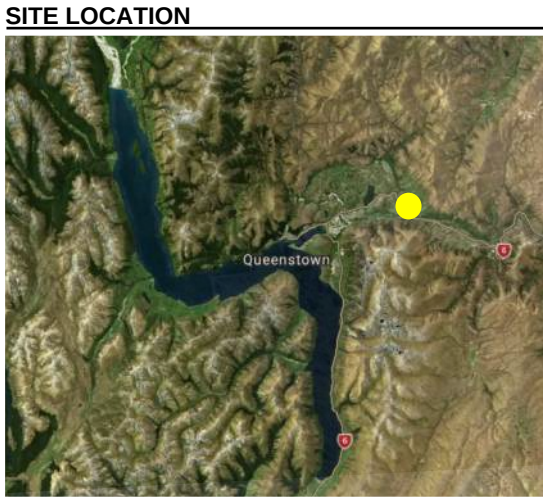
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Fuel & equipment storage area

Aboveground storage tank (AST)

REMEDIAL METHODOLOGY

ALL WORKS TO BE UNDERTAKEN IN ACCORDANCE WITH THE CSMP (SECTION 4)

- 1. EXCAVATE REMEDIAL AREA (RED) TO TARGET DEPTH OF ~0.3 - 0.4 M BGL
- 2. LIVELOAD CUT SOILS DIRECT TO TRUCK FOR OFF-SITE DISPOSAL . DISPOSE TO AN APPROPRIATELY CONSENTED LANDFILL FACILITY.
- 3. INSPECT SUBGRADE FOR ANY VISUAL STAINING OR EVIDENCE OF CONTAMINATION.
- 5. UNDERTAKE SOIL VALIDATION TESTING ALONG THE EXPOSED SUBGRADE AND EXCAVATION SIDEWELLS.
- 6. HOLD FOR SQEP CLEARANCE PRIOR TO BACKFILLING WITH CERTIFIED CLEANFILL

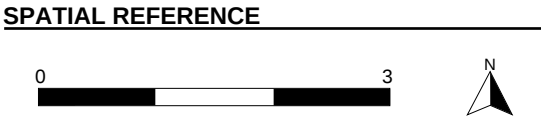
SPRINGLINE

TITLE
Figure 5: Storage Area Remedial Plan

PROJECT
122 Morven Ferry Road

CLIENT
Gibbons Development Limited

LEGEND
 Remedial Area

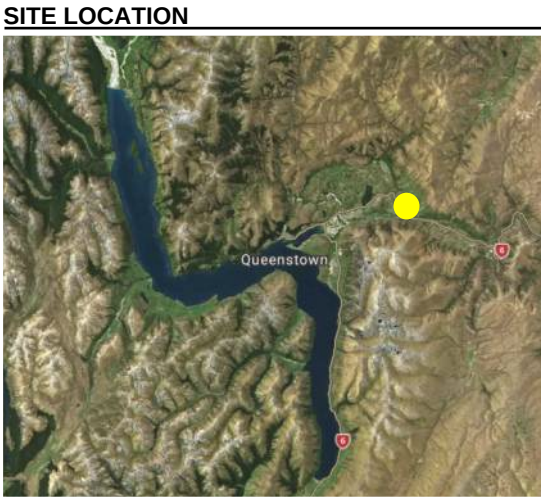


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DIMENSIONS

AREA: ~3,300 m²

DEPTH: ~0.2 m bgl

VOLUME: ~650 - 700 m³

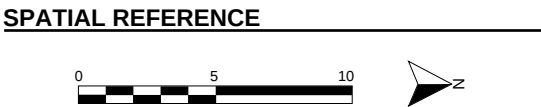
SPRINGLINE

TITLE
Figure 6a: Firing Range Remedial Plan (Dimensions)

PROJECT
122 Morven Ferry Road

CLIENT
Gibbons Development Limited

- LEGEND**
- Approximate Site Boundary
 - Remedial Area
 - Minimal lead pellets / cartridges

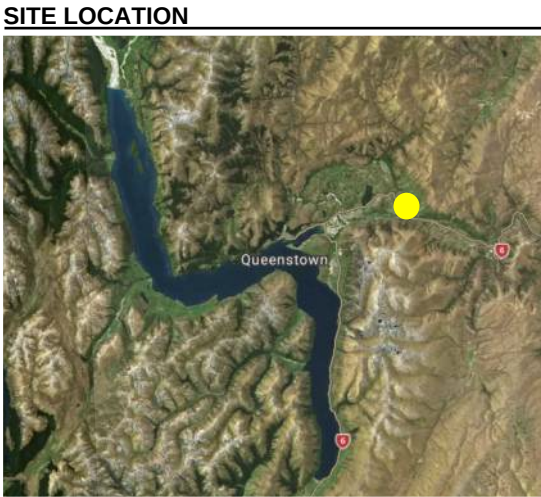


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TITLE
Figure 6b: Firing Range Remedial Plan (Methodology)

PROJECT
122 Morven Ferry Road

CLIENT
Gibbons Development Limited

- LEGEND**
- Approximate Site Boundary
 - Remedial Area (minimum 200mm cut)
 - Shallow scrape / visual check

SPATIAL REFERENCE
Drone photograph facing southeast.
Not to scale

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SITE LOCATION



REMEDIAL METHODOLOGY

- ALL WORKS TO BE UNDERTAKEN IN ACCORDANCE WITH THE CSMP (SECTION 4)
- EXCAVATE REMEDIAL AREA (RED) TO TARGET DEPTH OF ~0.2 M BGL TO REMOVE SHALLOW IMPACTED TOPSOIL
 - UNDERTAKE SHALLOW STRIP TO REMOVE SURFICIAL VEGETATION COVER IN THE 10m BUFFER AREA (GREY)
 - LIVELOAD CUT SOILS DIRECT TO TRUCK FOR OFF-SITE DISPOSAL. DISPOSE TO AN APPROPRIATELY CONSENTED LANDFILL FACILITY.
 - INSPECT SUBGRADE FOR ANY VISUAL EVIDENCE OF LEAD PELLETS OR CLAY FRAGMENTS. LOCALLY EXCAVATE DEEPER AS REQUIRED.
 - UNDERTAKE SOIL VALIDATION TESTING ALONG THE EXPOSED SUBGRADE AND EXCAVATION SIDEWELLS.
 - HOLD FOR SQEP CLEARANCE PRIOR TO BACKFILLING WITH CERTIFIED CLEANFILL