

# Contaminated Site Management Plan – Eldonwood Drive and Station Road, Matamata

## 1.0 Introduction

### 1.1 Purpose of this Management Plan

Matamata Development Limited (MDL) is proposing to develop a mixed land-use area at Eldonwood Drive and Station Road, Matamata. The Site is shown on **Figure 1**.

The proposed development will include two solar farms, an eight-stage residential development, a commercial area, a retirement village, and open green space. Earthwork volumes associated with the proposed development have been provided by the client and will involve large-scale bulk earthworks as detailed in **Table 1**.

**Table 1: Summary of Earthworks Volumes**

Development Area	Area (ha)	Cut Volume (m³)	Fill Volume (m³)	Net Fill (m³)	Topsoil Stripped (m³)
Residential	45.20	238,619	215,675	-1,376	135,591
Retirement Village	21.48	43,500	77,300	+33,800	42,960
Northern Solar Farm	0.90	104.61	2,617.22	+2,512.61	2,693.3
Southern Solar Farm	0.90	31.85	2,795.05	+2,763.20	2,693.7
Total	68.48	282,255.5	298,387.3	+37,131.8	183,938

Maximum expected cut and fill depths are up to 3.52 m and 2.58 m, respectively. These activities represent significant soil disturbance, which may intersect areas of potential or known contamination.

A Detailed Site Investigation (DSI), conducted by SLR in 2024<sup>1</sup>, identified contaminant concentrations above the predicted background soil criteria, but below the adopted human health and environmental criteria. The controls recommended in this Contaminated Site Management Plan (CSMP) are based on information presented in the DSI.

This CSMP provides management practices to control potential health and safety, and environmental issues related to soil disturbance and potential discovery of previously unidentified

contaminated soil during the proposed works at the Site. It serves as a management plan to give regard to the Ministry for the Environment's (MfE's) National Environmental Standard for Assessing and Managing Contaminants in Soil to Protect Human Health (NESC, 2011). It also sets out appropriate controls for offsite soil disposal.

In accordance with the provisions of the Health and Safety at Work Act (HSWA, 2015), it is the responsibility of the supervisor of the place of work to communicate to their workers undertaking work on the site the nature and extent of the contamination and associated hazards and recommended management practices.

The CSMP is intended to support this process and does not relieve the supervisor of the place of work of their responsibility for the health and safety of workers. This SMP is a 'live document' and should be updated based on Site condition or development plan changes.

The persons preparing and certifying this report are suitably qualified and experienced practitioners (SQEPs), as specified in the NESC.

### 1.2 Site History

The following provides a summary of the findings of the DSI undertaken by SLR in 2024:

- The Site has operated for agricultural purposes since the earliest available aerial image (1943), with a residential dwelling and associated farm buildings observed in the western portion of the Site.
- The potential risks of soil contamination were identified from the accumulation of organochlorine pesticides and cadmium from superphosphate and agrichemical use during cropping and pastoral land-use activities, uncontrolled filling of historic surface depressions, and the potential for lead and asbestos in soils from previous structures.
- No visual or olfactory evidence of soil contamination was observed, and groundwater was not encountered during soil sampling.
- Surface soils were relatively uniform across the Site and consisted of dark brown sandy silts underlain by orange-brown sandy silts.
- The analytical results, based on soil samples collected from 52 locations, identified:

- Asbestos and polycyclic aromatic hydrocarbons (PAH) were not detected above the laboratory limit of reporting in any sample analysed.
- Organochlorine pesticides were detected in four samples, however the concentrations were reported below the NESC Soil Contaminant Standards (SCS) and Ecological Soil Guideline Values (Eco-SGVs).
- Concentrations of all heavy metals analysed were reported below the adopted NESC SCS and Eco-SGVs, but above predicted background soil criteria.

#### Why this SMP is Required

Soils at the Site have been shown to contain heavy metal concentrations suitable for a standard single dwelling residential lot, including 10% homegrown produce consumption, but above regional background criteria. This conservatively applied guideline indicates that soils are suitable for proposed land use associated with the currently planned development.

Appropriate procedures for soil handling and disposal are required to support the proposed development.

## 2.0 Contaminated Soil Management

All soils within the Site (identified on **Figure 1**) are suitable to be reused on Site. All soil must be handled, and where required, disposed of in accordance with this CSMP. The controls in this CSMP are considered appropriate to manage potential human health risks.

## 3.0 Environmental Management Procedures

### 3.1 Accidental Discovery and Management of Unexpected Contamination

The presence of discoloured soils, staining, odours, fibrous material (such as presumed asbestos containing material), and general refuse may indicate possible contamination and immediate steps will be undertaken to address the situation as described in **Table 2**.

Any identified contaminated materials, as determined by the SQEP following soil sampling and analysis, will require disposal to a suitably licensed facility.

<sup>1</sup> SLR, July 2024. Preliminary and Detailed Site Investigation – Eldonwood Drive and Station Road. (ref. 880.016550.00001-R01-1.0-20240729).





**Table 2: Proposed contingency plan for unexpected discovery of contamination during construction**

EVENT	POTENTIAL IMPACTS	CONTINGENCY PLAN
Uncovering or disturbance of unexpected contamination – as evidenced by the following: <ul style="list-style-type: none"> <li>Discoloured soils.</li> <li>Staining.</li> <li>Odours.</li> <li>General refuse.</li> <li>Fibrous materials (asbestos).</li> </ul>	Discharges to the environment and risks to health and safety of workers.	<ul style="list-style-type: none"> <li>Stop work in area of discovery.</li> <li>Area to be cordoned off until the material has been identified and decisions made on how to progress.</li> <li>Site Manager to be notified of any contaminated material identified.</li> <li>Site Manager to contact a Suitably Qualified and Experienced Person (SQEP) to assess the nature of the material.</li> <li>Work to re-commence only once advised by a SQEP.</li> </ul>

In addition to the procedures to be followed in the event of unexpected discovery of contamination, the following procedures also apply to all construction works within the Site.

### 3.2 Earthwork Controls - Disposal

Based on the MDL-provided development plans, earthworks are expected to be large-scale as summarised in **Table 1**. While all soils are suitable for reuse on-site from a contaminated land perspective, this volume provides a baseline for tracking, stockpiling, and disposal procedures.

Excavated material, that is not re-used on-site, will be loaded by the contractor directly into haulage trucks for offsite disposal as managed fill, unless further soil analysis indicates otherwise. All soil is deemed suitable for re-use on Site from a contaminated land perspective.

The following general handling procedures will be followed for all earthworks:

- Trucks will be loaded as close to the excavation as possible, where runoff and possible spills during loading can be controlled and contained.
- Each truck will have a tracking document signed on-site and collected at the receiving facility to track each load of material.
- Written approval shall be obtained by the contractor from the disposal destination prior to transportation. The contractor is responsible for obtaining this approval.

- Suitable tracking documentation for all material taken off-site, including weighbridge tonnage, will be provided to the project manager for recording purposes and made available to Council upon request.
- Trucks will have their loads covered during the transport of material to the disposal facility, to avoid dust emissions.
- Good housekeeping of the worksite and excavation area shall be maintained to avoid the spread of potentially contaminated material outside the site, including tracking and spilling on roadways.
- If soils are inadvertently tracked outside the perimeter of the Site, that may pose a potential risk and/or hazard to the general public (i.e., visual impact, dust generation, mud on road) or the environment, a street-sweeper will be engaged to clean the affected area(s).

### 3.3 Stockpiling of Contaminated Soils

Stockpiling of contaminated or potentially contaminated soil, identified during unexpected discoveries, shall be avoided where possible. If immediate disposal is not possible, the material may be stockpiled on-site as follows:

- The stockpiled material shall be placed on impermeable sheeting or hardstand to prevent the potential contamination of underlying soil. If this is not practical, soil underlying stockpiles should also be removed.
- Protective measures (e.g., a bund or silt fence) will be constructed around the stockpile to minimise stormwater run-on and run-off.
- Stockpiles will be kept in an erosion free state (e.g. plastic sheeting, geotextile layer or grassed) when material is not being added or removed to prevent erosion and dust generation.
- Following stockpile removal, the underlying plastic will be properly disposed of at a suitably licensed facility. If the underlying plastic is breached, sampling and analysis or removal and appropriate disposal of underlying soil may be required.

### 3.4 Stormwater and Sediment Control

Erosion and sediment controls shall be put in place to ensure that the generation of potentially contaminated sediment and stormwater is minimised and managed. Erosion and sediment controls will be adequate to ensure that contaminated soil does not travel off-site.

Furthermore, sediment controls will be undertaken in accordance with Waikato Regional Council (2009) Erosion and Sediment Control Guidelines for Soil Disturbing Activities (TR 2009/02).

### 3.5 Dust Control

Dust must be managed during the excavation works to ensure that it generally complies with the Good Practice Guide for Assessing and Managing the Environmental Effects of Dust Emissions (2016). To control the generation of dust, the contractor will ensure that:

- Stockpiled material is covered as outlined in **Section 3.3**.
- Vehicle access onto the works area is limited.
- Working in windy conditions is avoided.

A dust and odour complaints log will be maintained by the site contractor.

If complaints regarding dust are received, the following information will be recorded:

- Time and date of the complaint.
- Name and location of the complainant.
- Weather conditions, description of site activities, and location of site activities.
- Nature of the complaint.
- Mitigation measures undertaken and evaluation of effectiveness.

### 3.6 Groundwater and Dewatering

Should groundwater be encountered, the construction manager will contact the SQEP to determine any further actions that may be required.

## 4.0 Health and Safety Measures

The health and safety procedures described in this section of the CSMP shall be implemented by the contractor, in addition to those covered by their own Health and Safety Plan (HSP) and documents.

Across the entire Site, approximately 183,938 m<sup>3</sup> of topsoil will be stripped and up to 580,643 m<sup>3</sup> of earth moved (cut and fill combined). All excavated material will be handled in accordance with this CSMP to mitigate the risk of adverse environmental effects.

### 4.1 Site Access and Signage

Fencing or other barricades will be put in place prior to the start of works to provide for site access control. Only authorised personnel may be allowed to enter the site. All persons entering the site will sign in and out, and will be briefed on the HSP. Workers are required to be briefed on the applicable requirements of this CSMP.





## 4.2 Identification of Hazards and Management

The following contaminated land related hazards may be encountered during the works if contaminated soil is encountered:

- Dermal skin contact with contaminated soil or groundwater.
- Inhalation of contaminated dust.
- Ingestion of contaminated soil or groundwater.

Further unspecified hazards may be identified during the course of the works. The hazards identified above will be managed through the wearing of appropriate personal protective equipment (PPE) and the procedures set out in **Sections 4.3 and 4.4**.

The primary hazard management method is minimising exposure to contaminated soil during excavations and transportation. Maintenance of earthworks controls (**Section 3.0**) is a key component of contaminated soil hazard management.

## 4.3 Personal Protective Equipment

Based on the DSI results, contaminated soil specific PPE is not required. Should contaminated or potentially contaminated soil, identified during unexpected discoveries, be encountered, PPE requirements will be guided by the SQEP and at a minimum include:

- Clothing that covers the body.
- Safety footwear, safety glasses, hard hat and high-visibility vest.
- Nitrile gloves - if soil is handled.
- P1 Dust masks - if there is a potential for the generation of contaminated dust.

## 4.4 Hazard Minimisation Procedures

The following procedures to minimise hazards related to contaminated soil will be implemented by the contractor:

- Dust controls, according to the procedures set out in **Section 3.5**.
- Contact with potentially contaminated material is expected to be minimal because the excavations are proposed to be undertaken using machinery. However, as a precautionary measure, any worker that is required to manually handle any soil will be required to wear disposable gloves.
- Maintaining good personnel hygiene, including:
  - No eating, drinking or smoking in the works area, whilst potentially contaminated soils are being excavated to prevent contaminated soil contacting food or being ingested directly through soiled hands.

- Avoiding hand to mouth and hand to face contact during work with potentially contaminated soils.
- Washing boots if contaminated soil has been contacted.
- Disposing of gloves that have contacted contaminated material.
- Hands and face will be washed before eating, drinking and smoking, which is only permitted where site personnel are offsite or in designated areas.

## 5.0 Contacts

The main regulatory authorities to be consulted in respect of the site management controls proposed, any unexpected discoveries related to potential contamination, and emergencies are as follows:

**Table 3: Contacts during Construction**

Organisation	Contact	Telephone
Matamata Development Limited	Caleb Pearson	██████████
SLR Consulting New Zealand- SQEP	Nigel Mather	██████████
Waikato Regional Council	General Enquiries	0900 800 401
New Zealand Fire and Ambulance Service		111
National Poisons and Hazardous Chemicals Information Hotline		0800 764 766
WorkSafe New Zealand		0800 030 040

## 6.0 Report Status

This report has been approved by Nigel Mather, a Suitably Qualified and Experienced Practitioner (SQEP) as outlined in the MfE Contaminated Land Management Guidelines No.5 – Site Investigation and Analysis of Soils, 2021 (CLMG No.5) and the Resource Management (NESC) Regulations, 2011.

This report fulfils the requirements of a CSMP as outlined in the MfE CLMG No.1 – Reporting on Contaminated Sites in New Zealand, 2021 (CLMG No.1).

## References

- Ministry for the Environment. 2004 (revised 2011). Contaminated Land Management Guidelines No. 1: Reporting on Contaminated Sites in New Zealand. Ministry for the Environment, Wellington, New Zealand
- Ministry for the Environment. 2004 (revised 2011). Contaminated Land Management Guidelines No. 5: Site Investigation and

Analysis of Soils. Ministry for the Environment, Wellington, New Zealand.

Ministry for the Environment. 2011. Resource Management (National Environmental Standard for Assessing and Managing Contaminants in Soil to Protect Human Health) Regulations 2011. Ministry for the Environment, Wellington, New Zealand.

Ministry for the Environment. 2011. Methodology for Deriving Standards for Contaminants in Soil to Protect Human Health. Wellington: Ministry for the Environment.

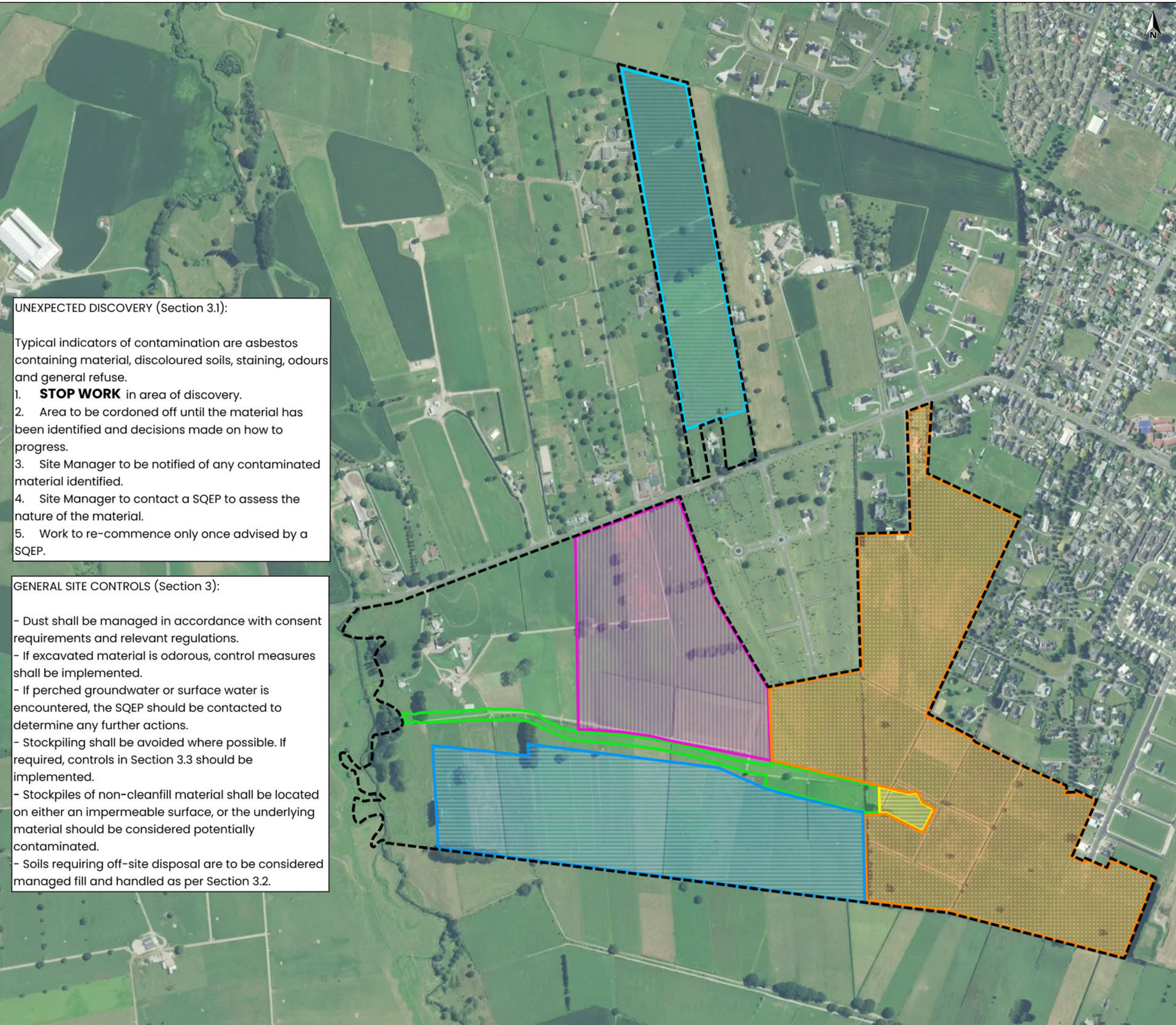
Ministry for the Environment, 2016. Good Practice Guide for Assessing and Managing Dust. Ministry for the Environment, Wellington, New Zealand.

SLR, 2024. Preliminary and Detailed Site Investigation – Eldonwood Drive and Station Road. (ref. 880.016550.00001-R01-1.0-20240729).

Waikato Regional Council, 2009. Erosion and Sediment Control Guidelines for Soil Disturbing Activities (TR 2009/02).







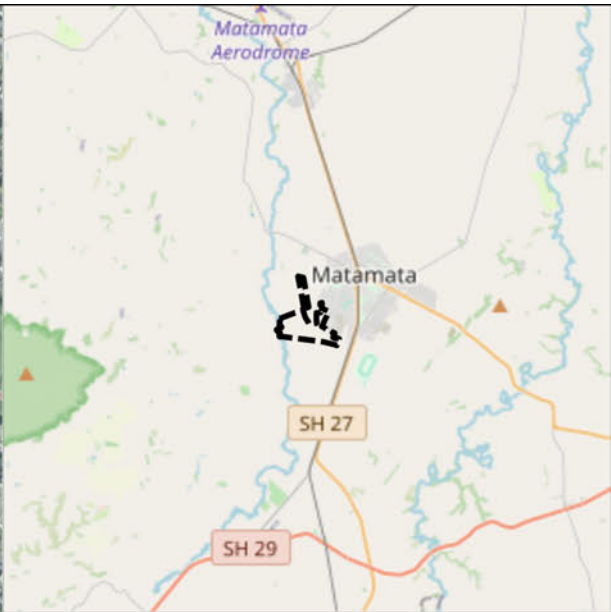
UNEXPECTED DISCOVERY (Section 3.1):

Typical indicators of contamination are asbestos containing material, discoloured soils, staining, odours and general refuse.

1. **STOP WORK** in area of discovery.
2. Area to be cordoned off until the material has been identified and decisions made on how to progress.
3. Site Manager to be notified of any contaminated material identified.
4. Site Manager to contact a SQEP to assess the nature of the material.
5. Work to re-commence only once advised by a SQEP.

GENERAL SITE CONTROLS (Section 3):

- Dust shall be managed in accordance with consent requirements and relevant regulations.
- If excavated material is odorous, control measures shall be implemented.
- If perched groundwater or surface water is encountered, the SQEP should be contacted to determine any further actions.
- Stockpiling shall be avoided where possible. If required, controls in Section 3.3 should be implemented.
- Stockpiles of non-cleanfill material shall be located on either an impermeable surface, or the underlying material should be considered potentially contaminated.
- Soils requiring off-site disposal are to be considered managed fill and handled as per Section 3.2.



**Legend**

- Site Boundary
- Solar Farm (Northern)
- Solar Farm (Southern)
- Residential Development
- Retirement Village
- Commercial Development
- Green Space

For details of the controls, refer to the current site-specific RAP-CSMP prepared by SLR. All site staff and subcontractors are aware of and comply with the procedures and health and safety requirements contained within this document.

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Title: Site Layout and Soil Management Plan

Client: Matamata Development Ltd	Size: A3
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Project: Eldonwood SMP	Drawn: SE	Figure No.: 1
Date: 15-04-2025	Checked: LK	

Proj No: 880.016783.00001	Scale: 1:8400	Version: 1.0
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