Soil&Rock Consultants
Your responsive & cost-effective engineers

PO Box 21 424
Henderson
Auckland 0650

Auckland
09 835 1740

Northland
09 982 8053

info@soilandrock.co.nz
www.soilandrock.co.nz

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Job No: 220086

James Kirkpatrick Group Limited
Attention: Aoife Mac Sharry
aoife@jkgl.co.nz

Site Management Plan / Remediation Action Plan

538 Karangahape Road, Newton

1.0 Introduction

Soil & Rock Consultants (S&RC) were engaged by James Kirkpatrick Group Limited to prepare a Site Management Plan / Remediation Action Plan (SMP/RAP) in association with the proposed redevelopment at 538 Karangahape Road, Newton (the *'site'*).

This SMP/RAP has been prepared to document proposed remediation and control measures to be implemented at the site prior to/during redevelopment. This investigation and reporting have been prepared, reviewed and authorised by Suitably Qualified and Experienced Practitioners (SQEP), as required under the National Environmental Standard (NES).

1.1 Site Information

The site is located at 538 Karangahape Road, Newton. Under the Auckland Unitary Plan (AUP), the site is zoned 'Business – City Centre Zone'. Built development onsite previously comprised a three-storey commercial building. At the time of this report, only the basement slab (66.13mRL) and retaining walls remained. The remainder of the site is covered in gravel or asphalt.

The proposed development will comprise construction of a ten-level building, with two basement levels below. Cuts to a maximum depth of 7.5m are required to form the basement levels. Minimal filling is expected to be required.

1.2 Previous S&RC Environmental Investigations

Preliminary Site Investigation, 2020, GHD Limited

In 2020, GHD Limited completed a Preliminary Site Investigation (PSI) for the site (Ref. 12/54/2917, *Preliminary Site Investigation - 538 Karangahape Road, Auckland*, November 2020). The PSI identified the following potential Hazardous Activities and Industries List (HAIL) activities or former activities at the site:

- Storage of tanks or drums for fuel, chemicals or liquid waste (HAIL Cat. A. 17);
- Asbestos products manufacture or disposal including sites with buildings containing Asbestos products known to be in a deteriorated condition (HAIL Cat. E. 1); and
- Motor vehicle workshops (HAIL Cat. F. 4).

Property Files (i.e. Building Consent plan, dated 1973) and a Council Contamination Enquiry indicated the installation of underground waste oil tanks onsite. No further information was provided in the report regarding the tank removal.

S&RC Environmental Investigations, 2022 and 2023, S&RC

S&RC has completed the following reports for the site:

- **Soil Benchmarking Report (BR)**. Ref. 220086, *Soil Benchmarking Report for 538 Karangahape Road, Auckland City*, Revision A, S&RC, 18 March 2022 – completed for a different development scheme; and
- **Detailed Site Investigation (DSI)**. Ref. 220086, *Environmental Site Assessment: Detailed Site Investigation for 538 Karangahape Road, Auckland City*, Revision A, S&RC, 22 August 2023 – field investigation carried out concurrently with the 2023 Geotechnical Investigation.

In 2022, S&RC completed a Soil Benchmarking Assessment at the site in support of a previous development scheme. Limited sampling was undertaken on a few sections onsite, to assess contaminant concentrations onsite.

In 2023, S&RC completed a Detailed Site Investigation (DSI) concurrently with this report. The DSI included a summary of findings from the 2022 Soil Benchmarking Assessment and findings from additional soil sampling completed in 2023.

A total of 16 soil samples (seven shallow soil samples and nine deeper soil samples) were collected across the 2022 and 2023 investigations and analysed for identified Contaminants of Concern (CoC), including Heavy Metals, Total Petroleum Hydrocarbons (TPH), Polycyclic Aromatic Hydrocarbons (PAH) and/or Asbestos. Laboratory analytical results reported:

- All CoC concentrations complied with Ministry for the Environment (MfE) NES and/or Petroleum Hydrocarbon Guidelines (PHG) Commercial/Industrial Human Health criteria;
- Heavy Metals (Lead) concentrations in three soil samples (SS1, SS4 and SS5)), comprising shallow (less than 0.4m bgl) fill material, exceeded AUP Environmental Discharge criteria;
- Asbestos was detected in two soil samples (SS1 and SS4), but with Fibrous Asbestos/Asbestos Fines (FA/AF) concentrations below Asbestos Human Health Soil Guideline Values (SGV); and
- Heavy Metals concentrations were above Background Levels or TPH and PAH concentrations were above laboratory Method Detection Limits (MDL) in most soil samples.

2.0 General Site Management

2.1 Emergency Contact Information

In the event of an emergency, the following contacts are available:

- Fire / Ambulance / Police – if urgent contact 111;
- Police – if non-urgent contact 105;
- The nearest Accident and Emergency facility to the site is:
    - Ponsonby Doctors, 582 Karangahape Road, Grey Lynn, Auckland – 09 280 2923;
- The nearest Hospital to the site is:
    - Auckland City Hospital, 2 Park Road, Grafton, Auckland City – 09 367 0000;
- WorkSafe – 0800 030 040;
- Auckland Council Pollution Response Hotline – 09 377 3107;
- Auckland Council Call Centre – 09 301 0101; and
- SQEP (S&RC) – 09 835 1740.

2.2 Responsibilities

The Developer/Contractor shall undertake the following general site procedures:

- Appoint a Site Manager who shall be responsible for implementation of this SMP/RAP and for health and safety procedures;
- The Site Manager shall continuously monitor the site for compliance with current regulations and with this SMP/RAP. Monitoring shall be conducted during remediation works (e.g. stockpiling, excavation, hauling, transport and disposal);
- Coordinate with the SQEP in relation to contamination management; and
- Keep regular health and safety inductions for all staff undertaking work at the site.

2.3 Earthworks Procedures

Soil with Heavy Metals concentrations above Auckland Region Background Levels or TPH, PAH concentrations above laboratory MDL should not be regarded as Cleanfill material (for disposal purposes). Soils for off-site disposal must be disposed of at a Managed Fill Facility or a landfill with suitable acceptance criteria. Findings from S&RC's DSI may be presented to the receiving facility for reference (Ref. 220086, *Environmental Site Assessment: Detailed Site Investigation for 538 Karangahape Road, Auckland City*, Revision A, S&RC, 22 August 2023). Landfill manifest dockets shall be retained for proof of disposal.

Where applicable, stabilised vehicular entrances shall be installed and used for the duration of the earthworks/remediation activities. The entry/exit points to the site should be managed such that sediment and/or contaminated soil are not tracked off the site. A wheel wash should be installed to reduce the amount of sediment transported onto paved roads.

2.4 Stockpiling

Temporary stockpiling, if required, should be in designated stockpiling areas, which may require Consent from Auckland Council (AC). Stockpiles shall not be placed near stormwater catchpits, kerbs, channels or in overland flow paths. Temporary stockpiles shall be stabilised or be covered completely with impermeable material (e.g. tarpaulin, polythene sheets).

2.5 Dust Control

Exposed soils and temporary stockpiles shall be dampened by water sprays when necessary to avoid/minimise the generation of fugitive dust, particularly during dry and windy conditions. Care should be taken to avoid generation of runoff from these areas during spraying. Water spraying must be supervised by the Site Manager.

2.6 Sediment and Erosion Control

Sediment control designed in accordance with AC Guidance Document (GD) 2016/005 shall be in place for the entire site for the duration of earthworks. Runoff shall be controlled and retained on-site by the use of silt fences, cut off drains, ponds or similar designed in accordance with AC GD 2016/005. Installation of sandbags/bunding to divert surface water around the work site to prevent runoff from washing through the site and transporting sediment.

2.7 Surface Water and Groundwater

All surface runoff should be prevented from entering excavated areas by cut-off drains or bunds. Earthworks are expected to be above the groundwater table and any major groundwater inflow into excavation is not anticipated.

However, in the event that surface water or groundwater accumulate in excavated areas, the water should be disposed of into a designated silt pond (see AC GD 2016/005) and treated for silt removal.

If accumulated surface water or groundwater is proposed for off-site disposal, it shall be visually assessed for separate phase hydrocarbons (SPH) and sampled for CoC (Heavy Metals, TPH and PAH or additional relevant CoC in the event that unexpected contamination is encountered during earthworks/redevelopment [see Section 4.0]). If water is contaminated, it shall be disposed of via vacuum truck to an approved disposal site. Disposal documentation shall be retained for validation purposes.

2.8 Health and Safety

The Contractor and the Site Manager shall implement a Health and Safety Plan in accordance with the 'Health and Safety at Work (General Risk and Workplace Management) Regulations 2016'. The Plan shall cover measures relating to the presence of the CoC. The following measures should be implemented at the site:

- The Site Manager is responsible for the implementation of all Occupational Health and Safety procedures during excavation and loading on-site;
- The Site Manager shall monitor dust levels on-site during excavation and will decide if face mask respirators are required;
- Entry to the site must be restricted to authorised workers only. All workers will be inducted prior to carrying out any earthworks at the site. The induction shall include all personal safety requirements; and
- Eating, drinking and smoking within the remediation areas or designated stockpiling area shall be prohibited. Handwashing facilities shall be provided at the site.

3.0 Site Remediation

3.1 Remediation Objectives

The remediation objective is to remove (or isolate) impacted materials and soil so that during and following redevelopment of the site, material and soils at the site do not pose an unacceptable risk to Human Health and the Environment.

In order to meet the above objectives, it is proposed that soil with CoC concentrations above applicable Human Health criteria be remediated (excavated and disposed of off-site or otherwise isolated). Due to the proposed cuts associated with the proposed development, it is anticipated that the majority of impacted soils will be excavated and disposed of off-site as part of bulk earthworks. However, undisturbed impacted soils remaining on-site could be encapsulated below the proposed building or paved site surface.

Figure 1 shows S&RC's investigation locations, and the identified areas of concern (areas with elevated levels of contamination).

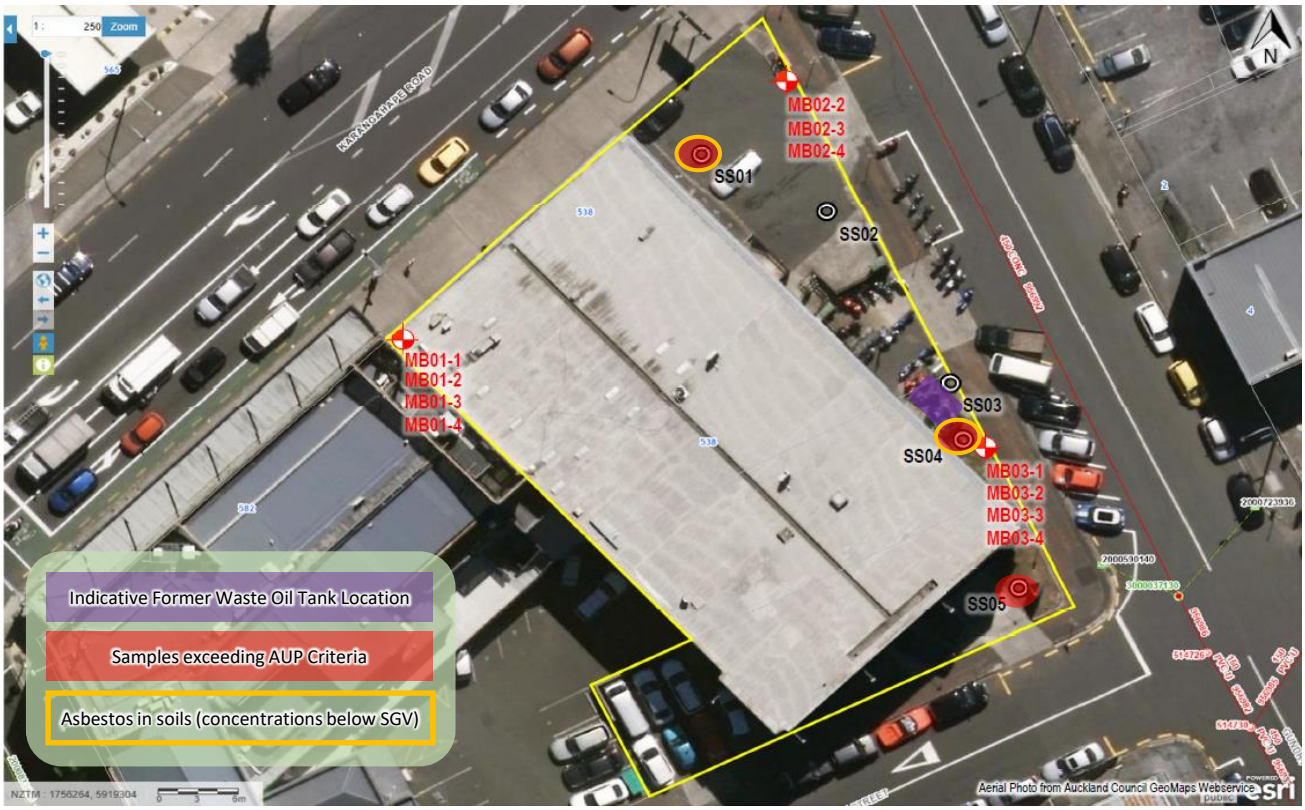


Figure 1. Identified Areas of Concern (Remediation Areas)

3.2 Former Waste Oil Tanks

Figure 1 shows the indicative location of the former 'Waste Oil Tanks' onsite, as referred from the 2020 PSI Building Consent Plan (sourced from the Property files) and Council Contamination enquiry. A copy of the plan is provided at the end of this document.

In 2022 and 2023, S&RC's completed soil investigations and sampling in the vicinity of the former Waste Oil Tanks. Elevated Heavy Metals and low levels of TPH and PAH were reported in the vicinity of the former Waste Oil Tank(s) location. It is anticipated that the bulk materials have been removed; however, is still possible that residual remnants of the former waste oil tanks and content remains onsite. Should earthworks and ground disturbance occur within this area onsite, residual soils, including any potential remains of the former tanks should be removed from the site.

3.3 Asbestos-Related Works

Potential Asbestos in Former Building

Potential Asbestos in former building materials (if present) shall be dealt with by a suitable Asbestos Removalist / Asbestos Assessor, in accordance with the 'Health & Safety at Work (Asbestos) Regulations 2016'.

Where Asbestos/ACM becomes 'friable' during demolition works or works carried out in an uncontrolled manner, areas affected (including Asbestos-impacted soils) will require further remediation works. Rubble and demolition debris containing Asbestos shall be disposed of at a landfill site with suitable acceptance criteria.

Asbestos in Soils

Asbestos-impacted soils at concentrations below Human Health SGV were identified during S&RC's investigation (Ref. 220086, *Environmental Site Assessment: Detailed Site Investigation for 538 Karangahape Road, Auckland City*, Revision A, S&RC, 22 August 2023).

Asbestos concentrations are below Human Health SGV and therefore not considered a risk to Human Health or the Environment if remaining on-site; however, if Asbestos-impacted soils are excavated and disposed of off-site as part of bulk earthworks, they must be disposed of at a facility licenced to accept such materials. Manifest dockets must be retained for proof of disposal.

3.4 Soil Remediation

The following procedures are proposed for soil remediation at the site:

- Site inductions and pre-start meeting shall be carried out prior to remediation works;
- The remediation area shall be identified with appropriate signage and cordoned off in order to restrict access from other contractors or the public;
- Soils with CoC in exceedance of applicable Human Health and/or Environmental Discharge criteria shall be excavated and disposed of off-site or otherwise isolated; and
- Excavated soils shall be mist sprayed for dust suppression when deemed appropriate by the Site Manager and shall be loaded directly into trucks for off-site disposal to a suitable facility.

3.4.1 Remediation Criteria

The following remediation criteria shall be adopted for in situ soil remaining on-site following remediation:

- Heavy Metals concentrations below MfE NES Commercial/Industrial Human Health and AUP Environmental Discharge criteria.

Alternatively, impacted soil that may been encapsulated beneath the proposed building/paved site surface shall be documented in a site-specific Long-Term Management Plan (LTMP).

3.5 PPE and RPE Requirements

Standard Personal Protective Equipment (PPE) and Respiratory Protective Equipment (RPE) for workers/contractors on-site during the removal of Asbestos-impacted soils shall include at a minimum:

- Disposable coveralls (rated Type 5 Category 3), nitrile gloves, steel toe capped boots or safety footwear with disposable overshoes; and
- Disposable P2 dusk mask or equivalent respiratory protection.

All waste generated during the removal of Asbestos-impacted soil (e.g. used disposable PPE/RPE) will be double-bagged or placed in double lined skips/bins prior to off-site transport. An Asbestos warning label/sign will be placed on the bags and/or skips/bins.

3.6 Plant, Equipment and Tools Decontamination

Decontamination of plant, vehicles, equipment and tools used in the remediation shall include:

- Removal of visible Asbestos debris and soil from excavator tracks and buckets and truck wheels; and
- Plant and equipment wash down.

3.7 Tracking

All landfill dockets of any soil/material disposed of off-site shall be signed upon receipt of the receiving/landfill facility. Receipts shall be returned to the Site Manager and kept for recording and validation purposes.

4.0 Contingency Plan

If unexpected potentially contaminated soil, fill, groundwater or hazardous materials are discovered during site remediation, earthworks and/or site redevelopment activities, a site-specific contingency action plan must be implemented. Contamination indicators include (but are not limited to) unusual odours, soil and water staining/discolouration, petroleum hydrocarbon contaminated materials, Separate Phase Hydrocarbons (SPH), and/or unexpected Asbestos/Asbestos Containing Material (ACM). In the event that unexpected contamination is encountered, the project team shall take the following actions:

- Immediately notify the Site Manager;
- Stop work within a 10m radius of the area where the suspected contaminants have been found. Work shall resume as authorised by the SQEP;
- Cordon off the area (where practicable) with a suitable barrier;
- The Site Manager shall contact the SQEP to advise the appropriate action;
- Notify the regulatory authority (AC), that further contamination has been discovered and contingency actions are being implemented;

- Collect samples for laboratory analysis;
- Where appropriate, advise for the excavation of suspected contamination material into a covered bin and allow works to continue;
- Upon receipt of laboratory results, advise the Site Manager as to whether the materials may remain on-site or should be disposed of at a facility licensed to accept such materials; and
- Record all appropriate information (e.g. location, quantity and disposal dockets.

5.0 Site Validation Report / Works Completion Report

Following remediation and earthworks activities, site validation sampling and reporting shall be completed in order to document that activities were implemented in accordance with this SMP/RAP and the site's Resource Consent.

Validation of residual soil following will include the collection of base and sidewall samples within residual soils, representative of soil to remain on-site.

Where further elevated contamination is reported, further remediation (soil excavation and removal) will be necessary and additional soil validation samples will be collected and analysed.

Following completion of all earthworks onsite, a Site Validation Report and/or Works Completion Report (SVR/WCR) will be completed. The SVR/WCR will include:

- Written/photographic documentation of remediation and earthworks activities;
- Soil validation sampling procedures, including a soil validation sampling location plan;
- Soil validation sampling analytical results and comparison to relevant criteria;
- Documentation whether unexpected contamination was encountered during earthworks, and controls, procedures and remediation, if encountered;
- Disposal dockets for all soil removed from and disposed of off-site; and
- Cleanfill/soil manifests/information for any cleanfill imported to the site.

The SVR/WCR shall be submitted to AC within 90 days of completion of earthworks.

Additionally, residual impacted soil that may been encapsulated beneath the proposed building/paved site surface shall be documented in a site-specific Long-Term Management Plan (LTMP), including details of location, contaminant concentrations and long-term controls.

6.0 Limitations

This report has been prepared by Soil & Rock Consultants for the sole benefit of James Kirkpatrick Group Limited in relation to the proposed redevelopment at 538 Karangahape Road, Newton. This report may be used by the Client's subcontractor and/or Auckland Council or their appointed Consultants with reference to works completed for this investigation.

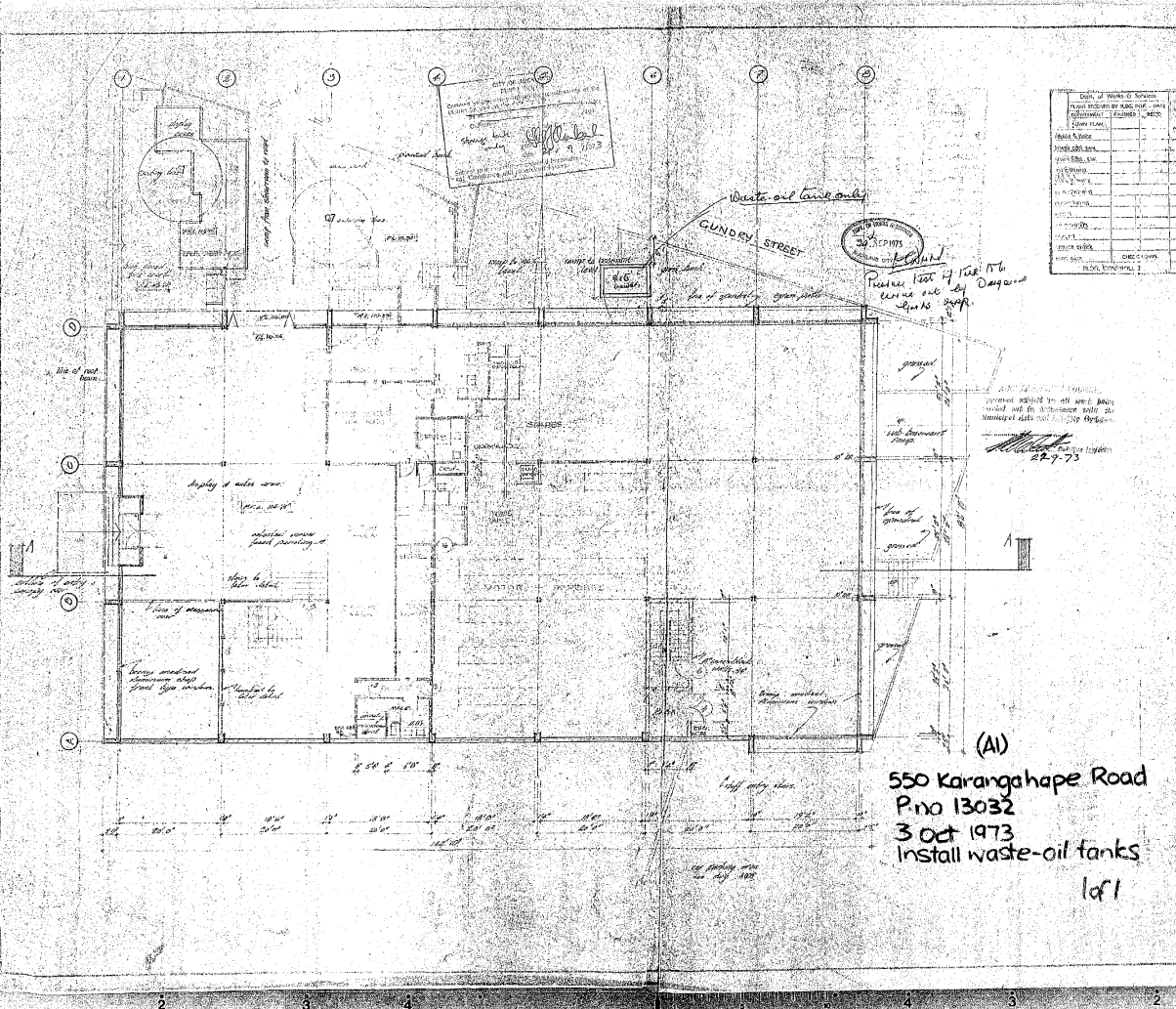
The data and/or opinions contained in this report may not be used in other contexts or for any other purpose without our prior review and agreement. This report may only be read or transmitted in its entirety, including the appendices.

We trust that the information contained in this report meets your current requirements. Should you have any questions or concerns, please do not hesitate to contact the undersigned.

Yours faithfully

SOIL & ROCK CONSULTANTS

Prepared by:	Reviewed / Authorised on behalf of Soil & Rock Consultants by:
	
Garry Cepe, BEng Civil	Jordan Vaughn, MSc Geology, CEnvP
Senior Environmental Engineer	Technical Director – Environmental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