

100 Halsey Street

Preliminary and Detailed Site Investigation

1101937.1000-RPT-CON-101

Prepared for: NZCRE 100 Halsey Limited

Prepared by: Tonkin & Taylor Ltd

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1 Introduction

1.1 General

Tonkin & Taylor Ltd (T+T) has been commissioned by NZCRE 100 Halsey Limited (NZCRE) to undertake a ground contamination investigation for the property at 100 Halsey Street, Auckland Central ("the site"). This resulting report has been prepared to provide technical support for the substantive application under the Fast-track Approvals Act 2024 (FTAA).

The project site located at 100 Halsey Street occupies a prominent central block within the Wynyard Quarter precinct, with key frontages to Amey Daldy Park and the Daldy Street Linear Park. Over the past decade, the surrounding area has undergone a significant transformation, with high-quality developments establishing elevated expectations and performance benchmarks across the precinct.

The proposed development seeks to deliver a high-quality mixed-use commercial precinct of five buildings comprising premium office accommodation, retail and food and beverage uses, integrated amenities and end-of-trip facilities, together with the supporting infrastructure, building services and car parking required to service the development.

Building 2 is proposed as a purpose-built data centre. The building will accommodate the specialist plant, infrastructure and servicing requirements associated with the data centre use, while also incorporating centralised infrastructure to support the wider development.

Basements will be constructed beneath B2, B3, and B4/B5. Figure 1.2.

The investigation comprises a Preliminary Site Investigation (PSI) for the entire site, and a Detailed Site Investigation (DSI) for the proposed buildings 1 and 2 (B1 and B2) development area. The DSI has been focused on B1 and B2 as this area form the initial stage of the proposed development and associated earthworks programme. The location of the site and the proposed B1 and B2 development area are shown in Figure 1.1.

This report has been prepared in general accordance with the requirements for a PSI and DSI, referred to in the National Environmental Standards for Assessing and Managing Contaminants in Soil (NESCS) regulations[1], and as outlined in the Ministry for the Environment's (MfE) Contaminated Land Management Guidelines[2].

The persons undertaking, managing, reviewing and certifying this investigation are suitably qualified and experienced practitioners (SQEP) as defined in the NESCS Users' Guide[3].

This investigation was undertaken in accordance with our proposal dated 19 June 2026[4].

[1] Resource Management (National Environmental Standard for Assessing and Managing Contaminants in Soil to Protect Human Health) Regulations 2011.
[2] Ministry for the Environment, updated 2021, Contaminated land management guidelines No. 1: Reporting on Contaminated Sites in New Zealand.
[3] Ministry for the Environment, 2012. Users' Guide - National Environmental Standard for Assessing and Managing Contaminants in Soil to Protect Human Health.
[4] T+T, 19 June 2026. *"Variation Order -100 Halsey Street – Substantive Application –Civil, Natural Hazards, and Geotechnical, Contaminated Land services"*, Job number 1101937.1000.

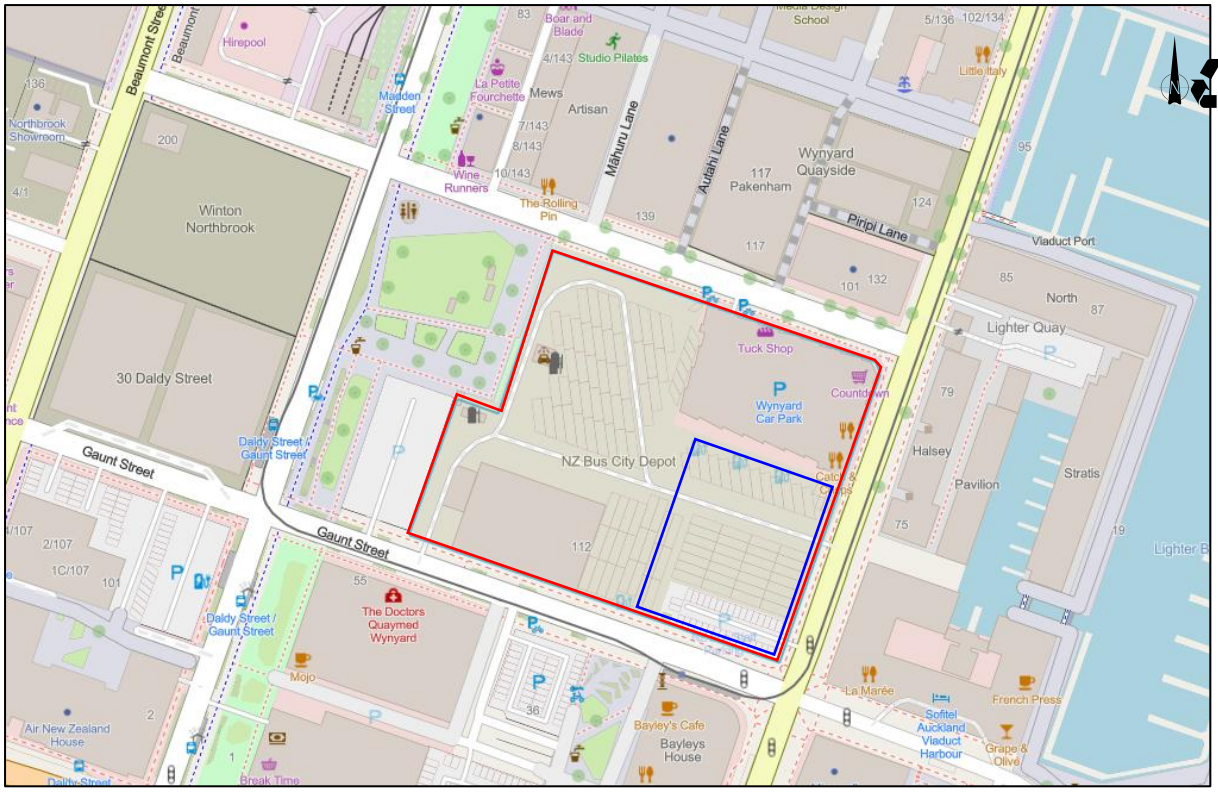


Figure 1.1 Site location. The site boundary is outlined in red. The proposed B1 and B2 development area is outlined in blue (Source: T+T Map Viewer).

1.2 Proposed development

The masterplan comprises five buildings arranged around a central mid-block plaza, bounded by Gaunt Street, Halsey Street, Pakenham Street and Daldy Street / Amey Daldy Park. Refer Figure 1.2 below for the proposed development diagram.

- Building 1 - Commercial Office Building corner Halsey Street and Gaunt Street.
- Building 2 - Data Centre, sited centrally between B1 and existing Travelodge.
- Buildings 3A / 3B - Commercial Office buildings fronting Amey Daldy Park.
- Building 4 - Commercial Office on Gaunt Street.
- Building 5 - Commercial Office on Gaunt Street between Building 4 and VHHL site.



Figure 1.2: proposed development plan.

Construction will be delivered in stages, with Buildings 1 and 2 prioritised to commence as soon as practicable, followed by Building 3 and then Buildings 4 and 5. NZ Bus will progressively vacate the site in line with the construction staging, consolidating its operations into a smaller portion of the site as each stage proceeds.

The past land uses at the site may have included activities which have the potential to cause land contamination. These activities are defined by the MfE in the Hazardous Activities and Industries List (HAIL)[5]. If an activity or industry on the HAIL is, or has occurred on a site, the NESCS applies to proposed development.

1.3 Objectives and scope of work

The purpose of this PSI/DSI is to:

- Ascertain whether potentially contaminating activities defined by the MfE in the HAIL have been undertaken on the site resulting in ground contamination. The NESCS regulations apply to land where an activity on the HAIL has been, or is more likely than not to have been, undertaken on the land.
- Assess whether the NESCS and contaminated land rules in the Auckland Unitary Plan (AUP) apply to the site and the proposed development.
- To provide an assessment of contaminated related soil handling and disposal implications for the proposed development.

The scope of work for this investigation comprised:

- Undertake a desktop site history review (PSI) for the site comprising:
  - Publicly available historical aerial photographs held by Auckland Council (AC), Retrolens, and Google Earth.

[5] Ministry for the Environment. October 2011. Hazardous Activities and Industries List (HAIL). Wellington: Ministry for the Environment

  - Property files from the site from AC.
  - Site Contamination Enquiry (SCE) and Council records of pollution incidents from the AC.
  - Previous ground contamination information and reporting.
- Undertake a site walkover inspection.
- Undertake a DSI for the B1 and B2 development area (as the initial stage of the development and earthworks programme), comprising:
  - Subsurface investigation and collection of soil samples targeting areas of potential contamination identified through the site history assessment and from site observations.
  - Scheduling analysis of selected soil samples for contaminants of concern, based on findings and site observations.
  - Assessment of the sampling results against relevant criteria for human health, environment, and soil disposal options; and
- Preparation of this report summarising our findings from the PSI and DSI and commenting on ground contamination conditions at the site, in the context of the proposed development, including potential resource consent implications.

To support the Substantive application, T+T has also prepared a draft Contamination Site Management Plan (CSMP)[6] for the site. As limited intrusive investigations have been completed across the wider development area (B3, B4 and B5), site investigations are proposed following demolition of the existing structures and site surfaces. The nature of these investigations are set out in the draft CSMP. A DSI report for the wider development area will be prepared once the wider intrusive investigations are complete and provided to NZCRE and Auckland Council alongside an updated CSMP. The DSI may also be completed in stages depending on the staging of the development.

[6] T+T, October 2026, Contamination Site Management Plan – 100 Halsey Street. Report prepared for NZCRE 100 Halsey Limited. Reference 1101937.v2.

2 Site description

2.1 Site setting and history

The site is located at 100 Halsey Street, Auckland Central, within the Wynyard Precinct (formerly known as the Western Reclamation) and is within Quarter 2 where retail, high density residential and commercial/office activities are permitted.

The Wynyard Quarter comprises an area of land progressively reclaimed from the Waitemata Harbour. The southern section of the reclamation (including the site) was reclaimed by the Auckland Harbour Board, between 1905 and 1917, principally using material dredged from the harbour. However, the reclamation is also thought to include sandstone from the cliffs adjoining Beaumont Street and more variable fill, including demolition debris, timbers and gasworks, incinerator and other process related wastes, particularly within the upper 1 m to 2 m.

Wynyard Quarter was initially utilised by the timber trade, and then in the 1930s it started to be used for bulk petro-chemical storage. A number of pollution incidents are reported to have resulted from the petro-chemical storage activities, however, the biggest single event is reported to be the loss, in July 1986, of between 800,000 L and 1,400,000 L of Jet A1 fuel from the base of a tank operated by Shell at the Block III site, which occupied the property at the corner of Pakenham Street West, Beaumont Street and Madden Street, 200 m to the west/northwest of the site. T+T note that the former Shell Block III site is cross/downgradient of groundwater flow from the site.

The site is located to the south of Pakenham Street and the adjacent Mason Brothers Building. The property to the immediate west of the Mason Brothers Building was used by Mobil from 1927 to approximately 2006 mainly for bulk diesel storage (former Mobil Pakenham Street Site) and has since been redeveloped for commercial and high density residential use. Much of the surrounding formerly industrial properties have been redeveloped for commercial use in recent years.

Following its reclamation the site was used by Auckland Regional Holdings as a tram depot and by the Acetone Illuminating and Welding Company. The site is currently utilised as a bus depot by Kinetic Group (Kinetic). In the late 2010s, the northeastern portion of the site was redeveloped as a Travelodge hotel, Wynyard carpark, offices for NZ Bus (now Kinetic) and retail.

Further site identification details are provided in Table 2.1.

Table 2.1: Site description

Street Address	100 Halsey Street, Auckland Central, 1010
Legal description	SECT 2 SO 526051, Lot 2 DP 80054
Zoning	Business – City Centre Zone
Area (m^2)	17,142 m^2, of which the proposed B1 and B2 development area (subject to the DSI) comprises approximately 4,300 m^2
Site owner	Viaduct Harbour Holdings Limited (landowner) NZCRE 100 Halsey Limited (leaseholder)
Current use	Kinetic city bus depot, Wynyard Car Park and retail

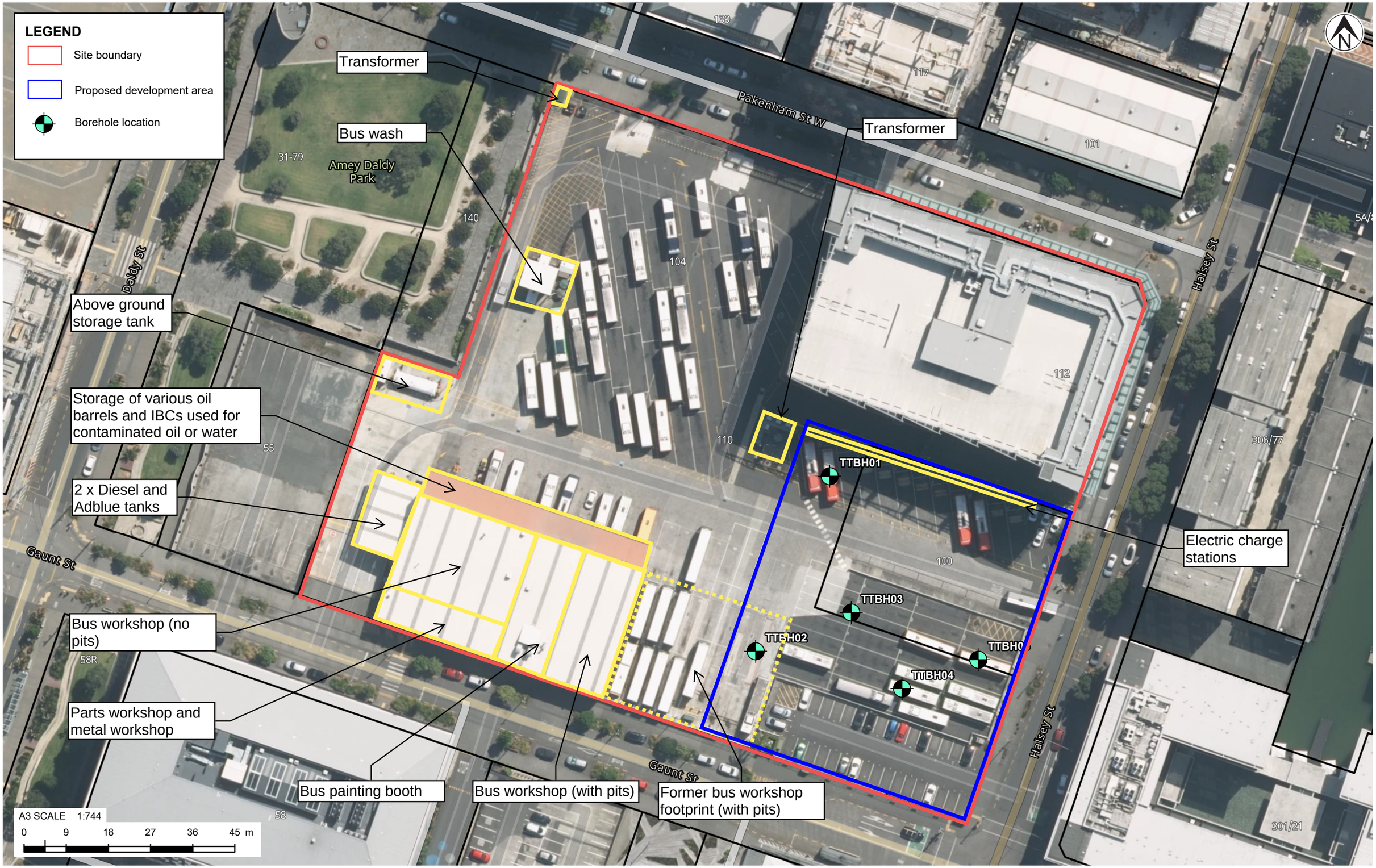
2.2 Site walkover

A site walkover inspection was undertaken on 5 May 2026 by a T+T contaminated land specialist. The purpose of the walkover was to gather general information on topography and land use (both on-site and the surrounding area) as well as making observations for evidence of potential ground contamination at the site. The walkover did not include accessing other operational areas (such as buildings) at the site, but site observations were made during the DSI investigations in the B1 and B2 development area and from around the site boundaries. Relevant observations made at the time of the inspection are summarised below. Key site features are shown on Figure 2.1 and selected photographs are included Appendix B.

The following features were observed:

- The site is largely level with the surrounding roads and pavements.
- The site is bounded to the north by Pakenham Street, to the east by Halsey Street, to the south by Gaunt Street, and to the west by a carpark at 55 Gaunt Street and by Amey Daldy Park. Commercial buildings are located beyond Pakenham Street West to the north and Gaunt Street to the south. The Sofitel Auckland Viaduct Harbour hotel is located across Halsey Street to the east.
- A bus workshop is located fronting Gaunt Street. Internal sections of the workshop from east to west consisted of a workshop area with maintenance, painting booth, parts workshop and metal workshop.
- Various oil barrels and intermediate bulk containers (IBCs) used for the storage of contaminated oil or water was observed beneath the northern canopy of the workshop.
- 2 x diesel and AdBlue diesel exhaust fluid tanks were observed in the refuelling bay.
- A 45,000 L above ground storage tank (AST), located on a slightly raised concrete platform was observed along the western boundary.
- 2 x transformers were visible in the northwestern corner, and in the centre of the site.
- A multistorey car parking and commercial building is in the northeastern corner of the site.
- Several electrical charge stations were visible to the south of the car parking and commercial building.
- The bus depot buildings are predominantly brick and corrugated iron in construction with some cement board cladding. Roofing materials appear to be corrugated iron. No obvious asbestos containing materials (ACM) were observed but buildings appear to be of an age likely to contain asbestos.
- The condition of surfacing (asphalt and concrete) in the bus depot yard varies from poor/cracked and degraded to good. There is no significant evidence of staining.
- A number of previously installed groundwater monitoring wells were observed on-site.

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NOTES:

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LOCATION PLAN

PROJECT No.	1101937.1000		
DESIGNED	CAVE	MAY.26	APPROVED
DRAWN	-WEB-	MAY.26	DATE
CHECKED			

CLIENT **NZ CRE 100 HALSEY LIMITED**

PROJECT **PRELIMINARY AND DETAILED SITE INVESTIGATION**

TITLE KEY SITE FEATURES

SCALE (A3) 1:744 FIG No. FIGURE 2.1 REV 0

2.3 Geology

The geology of the area[7] shows the site is underlain by historical reclamation material placed in the early 1900s. Reclamation at this location typically contains marine dredging (sandy silt), as well as clays and silty clays from excavation of headlands along the former city foreshore (namely Acheron Point ridge), demolition materials (mainly brick and iron castings), incinerator ash, gasworks wastes and basalt boulders. The last one of these were used as seawalls for constructing the reclamation. The published geology is presented in Figure 2.2.

Beneath the reclamation materials lies unconsolidated marine sediments comprising sand and silt below which are siltstone sandstone (flysch) sequences of the East Coast Bays Formation (ECBF). The geomorphology of the wider Wynyard Quarter area indicates the possible present of two (2) paleo channels that lie beneath the reclaimed area. The eastern channel runs through the western edge of the site. Lower Tauranga Group sediments infill these valleys, and recent marine sediments overlie the Lower Tauranga Group.

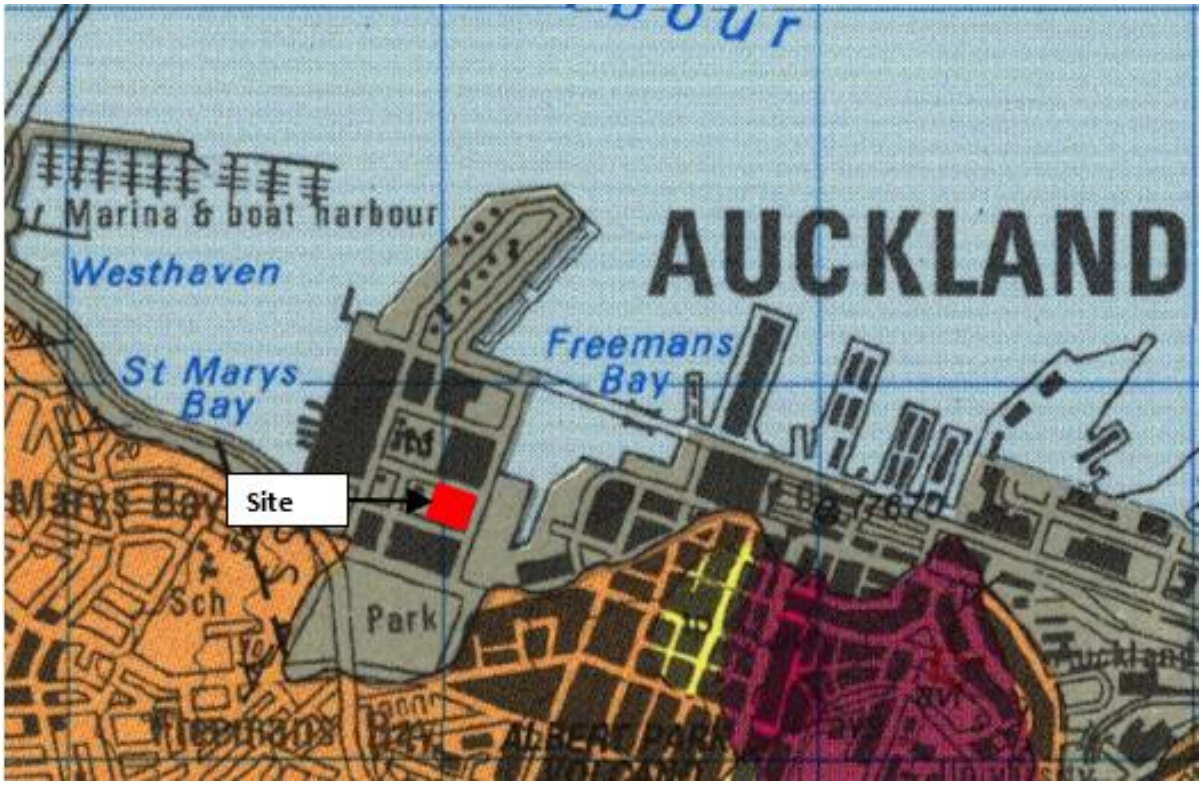


Figure 2.2 Geological setting beneath the site (outlined in red). (Image source: Kermode, as per footnote).

2.3.1 Site specific geological information

A series of geotechnical investigations have been undertaken at the site by others, which has been summarised in the Geotechnical Assessment report prepared by T+T in May 2026[8]. The identified geology is summarised in Table 2.2.

[7] Kermode, L., 1992. Geology of the Auckland Urban Area. Geological and Nuclear Sciences, Geological Map 2
[8] T+T, September 2026, *100 Halsey Street – Geotechnical Desktop Assessment V2*. Report prepared for NZCRE 100 Halsey Limited. T+T ref: 1101803-GEO-RPT-101.

Table 2.2: Summary of geological model

Geological Unit	Soil/rock type	Typical depth to top of unit (below existing ground level)	Typical thickness of layer
Granular fill	Gravelly SILT and assorted fill.	0 m	0.8 – 3 m
Hydraulic fill	SILT/CLAYS (grey to brown) with traces sands, gravels and shell fragments.	0.8 – 3 m	3 – 4 m
Marine sediments	Sandy SILT (grey) with clay layers and shell fragments.	4 – 6 m	2 – 5 m
Pleistocene sediments	Silts and clays (light grey) with sand (green grey) layers, contains organic content and traces of shell fragments.	7 – 9 m	2 – 3 m
East Coast Bays Formation	Extremely weak to very weak sandstone/siltstone.	8 – 11 m	Not proven

2.4 Hydrogeology and hydrology

Groundwater flow direction and depth is highly variable within the Wynyard Precinct, and reasons for this include influence by, former seawalls, the existing seawalls, the variable nature of the reclamation fill, underground services, underground structures such as basements, tanks and foundations, and tides. Regional groundwater contour data from T+T records indicate that the site is located near an elevated groundwater ridge with flow observed to the southwest and south/southeast rather than to the north. Seasonal groundwater level fluctuations in the order of 1.5 m have been measured within the Wynyard Precinct [9].

Groundwater is typically expected in the range of 1.5 to 2.5 m below ground level (RL 1.5 to 0.5 m). Monitoring in nearby sites has reported shallower groundwater levels (up to 0.4 m depth) in responses to heavy rainfall events, this has been shown to dissipate relatively quickly and is likely to be controlled by relatively higher permeability services trenches around the site.

[9] Woodward Clyde (NZ) Ltd (July 1996). Soil and Groundwater Contamination Review , Western Reclamation Area Auckland Viaduct. Ref AA245619/0001

3 Site history

Historical information relating to the site has been collected from a variety of sources including review of historical aerial photographs, property files, SCE, and previous ground contamination information including reports held on the T+T database for the site and surrounding area. This history primarily focuses on on-site activities, except for the aerial photograph review where comments are also provided on readily observable surrounding land use. The information that has been reviewed is summarised in the following sections.

3.1 Historical aerial photographs

Historical aerial photographs were sourced from AC Geomaps[10]. Relevant features of the site and surrounding land are summarised from each aerial photograph in Table 3.1. Copies of the aerial photographs are included in Appendix C.

Table 3.1: Summary of historical aerial photograph review

Year and source	Site observations	Surrounding land use
1940 AC Geomaps	The site approximately 70% covered by industrial buildings including a large L-shaped structure and five (5) small buildings in the eastern portion of the site. Three (3) tennis courts are located along the western site boundary.	The surrounding area consists of commercial industrial buildings to the north and south, Auckland Harbour to the east, and a tank farm to the west. Commercial industrial buildings associated with the timber trade are visible further to the southeast.
1950 AC Geomaps	The tennis courts are no longer present and the area appears to be used for bus parking.	140 Pakenham Street West, adjacent to the northwestern site boundary, appears to be used for bus parking associated with the site. The land to the east of the site has been reclaimed and developed for commercial/industrial land use associated with the timber trade. The land to the south of the site has been further developed for commercial/industrial landuse.
1960 AC Geomaps	No significant changes to the site layout since 1940, although there are large numbers of what appear to be buses parked in the space between the L-shaped building and the western site boundary.	The land to the east has been fully developed.
1970 AC Geomaps	No significant changes visible.	No significant changes visible.
1980 AC Geomaps	The aerial photograph shows changes to the site with demolition occurring. The 5 small structures on the eastern side adjacent to Halsey Street have been removed and the southern and eastern extents to L-shaped building have been demolished. There is evidence of some surface clearance in the northeast and south of the site. A rectangular building is present fronting Gaunt Street.	The tank farm to the west has been demolished, and redevelopment of the site is underway.

[10] Auckland Council Geomaps. Accessed 23 April 2026 from

Year and source	Site observations	Surrounding land use
1990 AC Geomaps	The large building in the northern portion of the site has been removed, and the area sealed for bus parking. An extension has been added to the east of the rectangular building fronting Gaunt Street.	An L-shaped building is visible to the east of the site, in addition to several smaller structures. The tank farm to the northeast of the site has been demolished and is in the process of redevelopment.
2000 AC Geomaps	No significant changes visible.	Demolition of the remaining tank farm to the west of the site is underway.
2017 AC Geomaps	No significant changes visible.	The area of the former tank farms has been developed for commercial/industrial land use. The buildings on the land to the east of the site have been demolished and replaced with several multistorey apartment and retail buildings. Several buildings on the land to the south of the site have been demolished and replaced with three large commercial/industrial buildings housing Datacom Auckland, Bayleys and Fonterra.
2024 AC Geomaps	The eastern and western extents of the rectangular building fronting Gaunt Street have been removed. The diesel AST is visible in the southwest portion of the site. A large rectangular building (the Travelodge) is present fronting Tiramarama Way.	140 Pakenham Street West has been redeveloped as part of Amey Daldy Park.

3.2 Property file documents

The property files from AC were provided by NZCRE. The information provided has been reviewed and relevant files relating to potential/actual soil contamination, listed below in Table 3.2. Copies of the relevant files are included in Appendix D.

Table 3.2: Property file review

Date	Comment
22 April 1921	Drainage plans for a new building for Acetone Illuminating and Weldings Co Ltd, a forerunner of BOC Ltd.
9 March 1937	Drainage plans showing new building, existing oxygen holder, water cisterns and cooling tower for Acetone Welding Co.
19 March 1941	The certificate of title lists the owner of the site as Auckland Harbour Board in 1941. The property was made up of around 23 smaller land parcels at this time. The title also indicates outstanding leases over the site by: • The Acetone Illuminating and Welding Company Ltd dating back to 1920. A lease of a 50 year term was signed in 1920. • Caltex Oil Ltd dated 1928; and • The Auckland Regional Authority (ARA) dated 1928.
1 October 1952	Building plans for alterations to the Gaunt Street building for in-ground servicing pits for Auckland City Tramways Gaunt St Depot.

Date	Comment
24 June 1977	Building permit plan showing the workshop/service area/garage layout at 1-19 Gaunt Street for the installation of 2 x 3,000 L underground storage tanks (UST) and pump on a concrete slab. The permit plans shows 4 x 4,500 L and 1 x 9,000 L USTs exist on-site.
July 1985	Building permit plan of demolition and proposed works at the City Bus Depot Workshop. The plan show the location of underground fuel tanks fronting Gaunt Street, and the location of a soil tab and tyre store to be demolished.
9 November 1987	Building permit plan for the removal and replacement of USTs. The plans show the location of oil containers outside of the refuel office, petrol and diesel bowsers, and oil and silt trap.
2 February 1987	Building permit plan for a new bus wash, refuelling bay, and diesel and petrol tanks in concrete pit. The plans show fibre cement cladding to the walls of the refuelling bay.
12 August 1994	Building permit plan for the proposed head office relocation for the Yellow Bus Company.
10 July 2017	Memo from Rob Burden (Auckland Council) to Jennifer Valentine (4Sight Consulting Ltd) granting consent as a restricted discretionary activity for the proposed 8 level commercial building containing visitor accommodation, entertainment facility and carpark building.
12 July 2017	Technical memo from Andrew Kalbarczyk (Auckland Council) to Jennifer Valentine (4Sight Consulting Ltd) regarding the application to discharge contaminants to land and water from land disturbance, being part of the proposed commercial development of the site.
8 October 2018	Building plans show the location of a dangerous goods store fronting Gaunt Street to be demolished.

A review of the Gaunt Street tram depot photographs available on Digital NZ confirms ARA activities for tram collection/storage and repair at the Site, as shown in Photograph 3.1.



Photograph 3.1: Gaunt Street tram depot (Source: Digital NZ website: Gaunt Street tram depot | Record | DigitalNZ, photograph date unknown).

3.3 Site contamination enquiry

A SCE was received from AC on 18 March 2026, and is provided in Appendix E. Council records indicate that the site has possibly been subject to the following activities that fall within the HAIL:

- HAIL Item A17 – Storage tanks or drums of fuel, chemicals or liquid waste.
- HAIL Item F4 – Motor vehicle workshops.
- HAIL Item G3 – Landfill sites.

The SCE information also states that:

"A Detailed Site Investigation dated May 2017 indicates the site 100 Halsey Street, Auckland Central, has been utilised as a transport depot since at least the 1940s. The site is on reclaimed land, with some of the reclamation fill sourced from the Beaumont Street gasworks. The site operated as a depot for Auckland City Tramway in the 1940s, including on-site servicing of the trams.

Soil sampling identified concentrations of arsenic, chromium, copper, lead, mercury, nickel and BaP in exceedance of the NES:CS SCS commercial / industrial outdoor work and/or the AUP(OP) PA soil acceptance criteria. Cyanide was measured at concentrations above the ANZECC 80% trigger value for marine ecosystems in the groundwater beneath the site.

A Site Validation Report dated July 2019, for the development of an eight-level building, indicates that ACM contamination was discovered during the works. A total of 736 tonnes of cyanide, metal and hydrocarbon impacted soil was excavated and disposed of to landfill during the works. Additionally, 828 tonnes of soil contaminated with asbestos was removed and disposed of offsite.

Residual contamination of metals and PAHs remain in soils at the site however is encapsulated beneath the building."

Records also indicate that there is a bus workshop and refuelling area on-site, as shown in Figure 3.1. Additionally, the workshop and other facilities for the bus depot are reported to hold hazardous substances. T+T note that the 2015 refuelling bay layout was re-developed in the late 2010s.

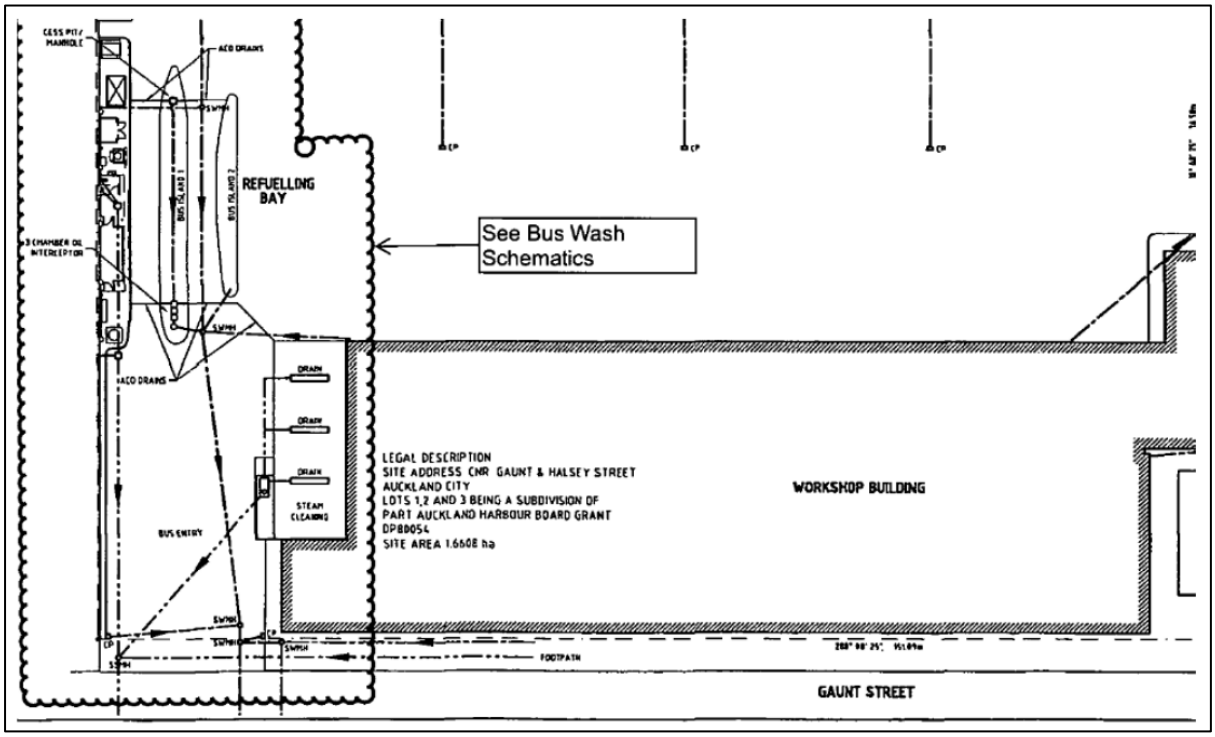


Figure 3.1: Site plan dated 2015 shows refuelling bay and workshop building. Source: SCE, Appendix E.

Council also note that an asbestos survey will be required if buildings that may have asbestos contaminating materials (ACM) are to be demolished, and paints used on external parts of properties until the mid-1970's may contain lead, which may have impacted underlying soils if in old, peeling or flaking conditions.

The Council database was searched for records of consents and incident information within a 200 m radius of the site. The AC database showed a number of existing, superseded and expired consents related to the immediately surrounding sites. A summary of the ground contamination-related consent information is provided in Table 3.3.

Table 3.3: Ground contaminated-related resource consents for the site and nearby properties

Location	Type of consent	Activity description	Status	Date granted (YYYYMMDD)
Beaumont St	Contaminated Site Discharge	Investigation of soil quality carried out only to the extent required for the works. Soil and groundwater below this probably contaminated as well.	Completed	Not provided

Location	Type of consent	Activity description	Status	Date granted (YYYYMMDD)
85 Fanshawe St	Contaminated Site Discharge	Former Hirequip site; 2 UST removed in 2003, and surrounding soil tested for TPH/BTEX/PAH by URS in May 2003; Residual levels within the G/Ls for industrial land use; The area of the site where the underground storage tanks used to be located is cons	Completed	Not provided
31 Daldy St	Contaminated Site Discharge	To discharge contaminants to land and water from the earthworks associated with the establishment of a new pump station.	Issued	20151023
Beaumont Street, Westhaven Drive, Gaunt Streets	Contaminated Site Discharge	To discharge contaminants to land and water from the earthworks associated with the redevelopment of a contaminated site, in specific an interim cycleway in the Wynyard Quarter area.	Issued	20160905
100 Halsey Street	Contaminated Site Discharge	Discharge of contaminants associated with the remediation of contaminated land.	Issued	20160531
109 Fanshawe St	Contaminated Site Discharge	Discharge from disturbance of contaminated land.	Issued	20090406
120 Halsey St	Contaminated Site Discharge	Undertake earthworks on contaminated land within an existing building to lay new foundations.	Issued	20140317
Westhaven Drive	Contaminated Site Discharge	Discharge from disturbance of contaminated land. Applicant to construct an interim shared-path cycleway down Beaumont Street from Jellicoe Street and onto the eastern part of Westhaven Drive, Wynyard Quarter.	Issued	20141003
143 Beaumont St	Contaminated Site Discharge	To authorise the taking of ground water and discharge of contaminated ground water onto or into ground and ground water on an oil industry storage facility in accordance with Section 15 (b) of the Resource Management Act 1991.	Surrendered	20020403
2 Daldy St	Contaminated Site Discharge	To authorise the ongoing diffuse discharge of contaminants to ground and groundwater in accordance with Section 15 of the Resource Management Act.	Superseded	20040903
38 Gaunt St	Contaminated Site Discharge	Discharge from disturbance of contaminated land.	Issued	20150224
185 Fanshawe St	Contaminated Site Discharge	To authorise the ongoing diffuse discharge of contaminant into ground and groundwater beneath the site in accordance with Section 15 of the Resource Management Act 1991.	Superseded	20040204
120 Halsey St	Contaminated Site Discharge	To discharge from disturbance of contaminated land.	Issued	20140526

Location	Type of consent	Activity description	Status	Date granted (YYYYMMDD)
19 Viaduct Harbour Avenue	Contaminated Site Discharge	To authorise the ongoing diffuse discharge of contaminant into ground and groundwater beneath the site in accordance with Section 15 of the Resource Management Act 1991.	Superseded	20040426
22 Viaduct Harbour Avenue	Contaminated Site Discharge	To authorise the discharge of contaminated land and groundwater to ground in accordance with Section 15 of the Resource Management Act 1991.	Issued	20041209
19 Viaduct Harbour Avenue	Contaminated Site Discharge	Removal of contaminated soil, construction of a marina and locks. Construction work to include retention and/or reinstatement of the groundwater collection and pumping system, the installation of groundwater monitoring bores and the sealing of service trench.	Issued	20051202
185 Fanshawe St	Contaminated Site Discharge	To authorise the ongoing diffuse discharge of contaminant into ground and groundwater beneath the site in accordance with Section 15 of the Resource Management Act 1991.	Surrendered	20060208
2 Daldy St	Contaminated Site Discharge	Removal of approximately 3,500 m^3 of contaminated soil and removal of separate phase hydrocarbons from onsite excavations.	Superseded	20060208
141-159 Beaumont St, 8-14 & 28 Madden St, 120-126 & 132 Halsey St, 117-125 & 139 & 141 Pakenham St	Discharge to air	Air discharges from earthworks at a contaminated site.	Issued	20150625
38 Gaunt St	Discharge to air	Discharge of contaminants into air.	Issued	20150224
98 Beaumont St	Discharge to air	To discharge contaminants to air from the excavation of a 530 metre utilities trench along Beaumont Street.	Expired	20120316
132 Halsey St	Contaminated Site Discharge	Discharge from disturbance of contaminated land.	Issued	20150625
141 Pakenham Street West	Contaminated Site Discharge	Controlled Activity to discharge contaminants to land or water during a ground stabilisation trial to be completed within one (1) day.	Issued	20120801
109 Fanshawe St	Contaminated Site Discharge	Authorisation to discharge contaminants to land and/or water for a short term during the construction of 2 levels of below ground level parking.	Expired	20090406

Location	Type of consent	Activity description	Status	Date granted (YYYYMMDD)
98 Beaumont St	Contaminated Site Discharge	To authorise discharge to contaminants to air from the excavation of a 530 metre utilities trench along Beaumont Street, Freemans Bay.	Expired	20120316

3.4 Previous ground contamination information

NZCRE provided T+T with previous contamination reports for the site. We have also undertaken a review of available T+T file information and publicly available reports pertaining to the site and the wider Wynyard Quarter area where information pertains to the site and is relevant to establishing the potential for ground contamination at the site. The findings of the information reviewed are summarised below.

3.4.1 Geotechnical and Environmental Assessment (T+T, June 2002)

A geotechnical and environmental desk study assessment was undertaken by T+T in 2002[11] to evaluate the suitability of the site for a proposed multi-level residential development. The desk study indicated that a number of HAIL activities have occurred on the site including:

- Land reclamation from 1905 to 1917.
- Tram servicing, refuelling and storage from 1923 to 1986.
- Bus storage, maintenance and refuelling from 1986 to present.

The report provided a summary of the contamination investigations undertaken by Babbage in January and March 1994 associated with the present of an underground storage tank (UST). Elevated levels of hydrocarbons and heavy metals were identified in soil and groundwater in the vicinity of the former UST and unidentified UST near the Halsey Street boundary.

In 2002, URS undertook sampling of the 2 UST pits in the southwest of the site following their removal. The tanks were owned a supplied with fuel by BP. Results indicated low level soil contamination remained onsite.

3.4.2 Geotechnical and Environmental Assessment (T+T, November 2014)

A geotechnical and ground contamination assessment undertaken by T+T in 2014[12] for the potential development of a multilevel building with a full (1-level) in-ground basement at 100 Halsey Street. The relevant findings of the desk study are summarised below:

- There is potential for the storage and use of solvents on part of the site that was used by the Acetone Illuminating and Welding Company between 1924 and 1977.
- Former underground fuel storage at the former Auckland Regional Authority tram depot and Yellow Bus Company has potential to have impacted near-surface and deeper soils down to the water table. The presence of hydrocarbon contaminated soil and/or groundwater on the site will require additional construction management and monitoring requirements. The presence of hydrocarbon contamination may also dictate permanent vapour mitigation measures for the buildings if soil and groundwater contamination is not removed by the basement excavation and construction process.

[11] T+T, June 2002, Geotechnical and Environmental Assessment – Proposed multi-level apartment building, Freemans Bay, Auckland. Report prepared for Viaduct Harbour Holdings Ltd. Job No: 19949.
[12] T+T, November 2014, Geotechnical and Contaminated Land Assessment – 100 Halsey Street, Wynyard Quarter. Prepared for Viaduct Harbour Holdings Ltd. Job No: 30579.

T+T concluded that vapour protection may be required for proposed buildings if volatile organic compounds (VOCs) are present in soil or groundwater. Contamination management consents under the Auckland Regional Plans, the Proposed AUP and the NESCS will be required to support development of the site.

3.4.3 Detailed site investigation (Babbage, August 2015 and May 2017)

A Detailed Site Investigation (DSI) was undertaken by Babbage[13] [14] to characterise contamination in shallow soils (1 m) under the development footprint. Investigations occurred on-site in April 2014 and comprised the collection of soil samples from nine (9) boreholes and groundwater samples from 3 wells. Select samples were sent for laboratory analysis of heavy metals including cyanide, BTEX, semi-volatile organic compounds (SVOCs), organochlorine pesticides (OCPs), PAH and TPH. Four (4) samples were also tested for semi-quantitative asbestos (however the location of the samples were not specified in the report).

Additional investigations were undertaken in July 2015 to meet the requirements of a DSI. Soil and groundwater sampling locations are shown in Figure 3.2.

The findings are the investigation are summarised below:

- Underlying soils consisted of fill materials and contained debris including broken porcelain, glass and bricks.
- Heavy metals and PAHs in soils were elevated above the NESCS and AUP criteria. The contamination was widespread, with hotspots for arsenic, copper, lead and benzo(a)pyrene equivalent (BaP equivalent).
- Cyanide was elevated above the 80% trigger values for marine water at 2 locations.
- Asbestos was not detected in the 4 samples analysed, nor was potential ACM encountered during drilling.

[13] Babbage, 21 August 2015, 100 Halsey Street Redevelopment, Detailed Site Investigation, prepared for Infratil Infrastructure Property Limited. Job No: 51987. Report reference: BDOC0014152496.
[14] Babbage, 19 May 2017, 100 Halsey Street Redevelopment, Detailed Site Investigation, prepared for Infratil Infrastructure Property Limited. Job No: 51987. Report reference: BDOC0014152496.

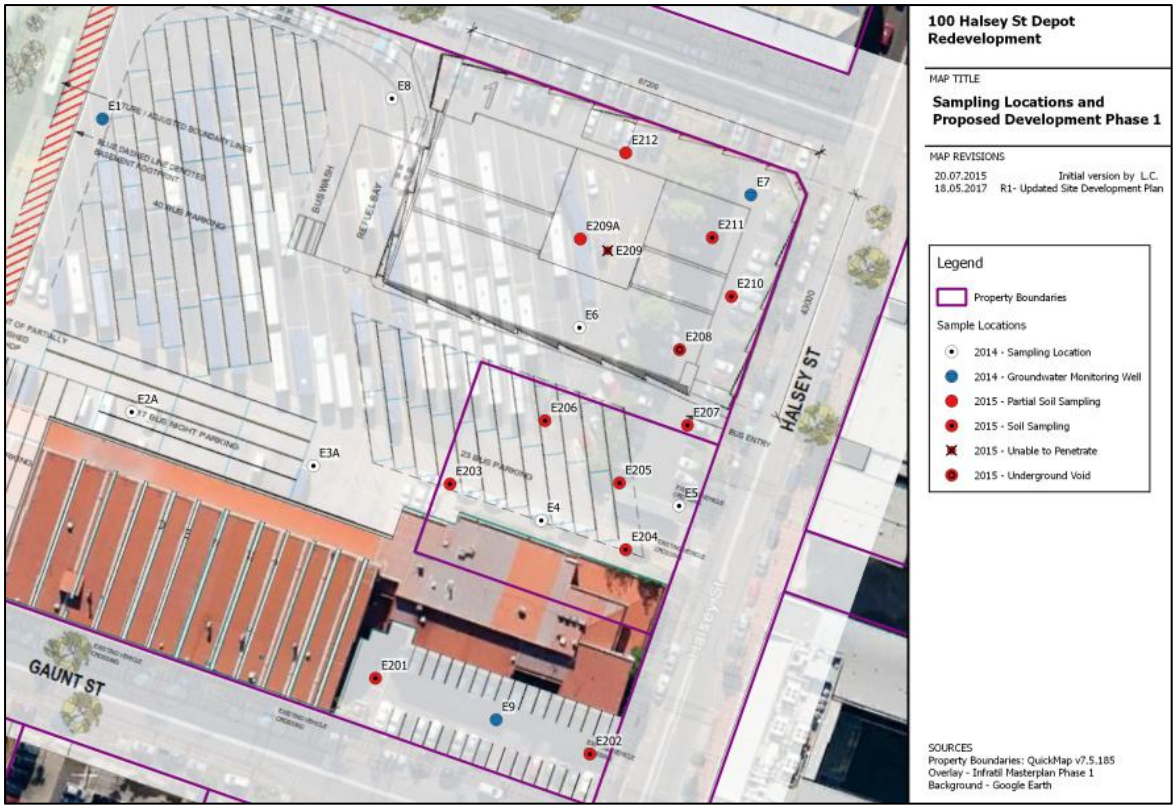


Figure 3.2: Sampling locations and Proposed Development Phase 1. Source: Babbage, May 2017.

Babbage concluded that resource consent and short-term discharge consents would be required to support the proposed development. Remediation of the contamination associated with a hydrocarbon hotspot around location E207 would also be required. For the remainder of the earthworks, a site management plan was considered sufficient.

3.4.4 Remediation action plan (Babbage, May 2017)

A Remediation Action Plan (RAP) was prepared by Babbage in 2017[15] to provide guidance on the remediation of approximately 1,110 m^3 of contaminated material to a depth of 0.3 m as part of the development of the Travelodge at the 100 Halsey Street site. Drilling logs completed as part of the DSI indicated that the underlying material around site E207 had a distinct strong hydrocarbon odour and a "wet" appearance.

The RAP recommended that a validation sampling shall be undertaken following the removal of the contaminated material, and results documented in a Site Validation Report (SVR).

3.4.5 Section 92 (S92) response – vapour barrier (Babbage, June 2017)

A S92 response was prepared by Babbage in 2017[16] in response to AC queries regarding the need to install a vapour barrier. The specific question from AC was:

[15] Babbage, 18 May 2017, 100 Halsey Street Redevelopment, Remedial Action Plan, prepared for Infratil Infrastructure Property Limited. Job No: 51987. Report reference: BDOC0014543818.
[16] Babbage, 22 June 2017, S92 Response – Vapour Barrier, prepared for Paul Arnesen on behalf of Infratil Infrastructure Property Limited. Job No: 51987, eTrack No: 200010214.

"Please provide further information on vapour testing that will be carried out as part of the proposed validation testing and provide sufficient information to demonstrate that a vapour barrier is/is not required for the proposed building. Please note if testing indicates that a vapour barrier is required for the proposed building then please provide details on the vapour barrier and any other applicable engineering mitigation proposed."

In the 2015 RC application process, AC requested the development of vapour monitoring protocols to be included in the RAP as a precautionary measure during the remediation of the hydrocarbon hotspot. As no free-phase product was not encountered during the site investigations or remedial earthworks, the need for a vapour barrier was assessed by Babbage as not necessary.

The response further stated that the proposed development will not have a basement, or hotel rooms on the ground floor, therefore the potential exposure to site users will be limited. In addition, an HDPE liner is to be installed beneath the building slab principally for moisture control. The liner will act as a passive barrier in the unlikely event a plume of free phase ever migrates beneath the building platform.

3.4.6 Fill sampling and analysis – 100 Halsey Street (Babbage, July 2018)

A letter report was prepared by Babbage in July 2018[17] to document the results of analysis of eight (8) fill samples for heavy metals and PAH to determine soil disposal requirements. The material consisted of grey to black volcanic gravel (5 – 500 mm) in a matrix of finer material.

Results of the fill testing indicated that the material was suitable for re-use on-site, or disposal off-site to a clean fill facility.

No sample location plan was included with the letter, thus, T+T cannot ascertain where these samples were collected in relation to the proposed new buildings at the site (B1 to B5).

3.4.7 Fill sampling and analysis – 100 Halsey Street (Babbage, October 2018)

A letter report was prepared by Babbage in July 2018[18] to document the results of analysis of 3 fill samples for cyanide, heavy metals and PAH collected to determine soil disposal requirements. The material consisted of gravelly clay with granular material. Blue billy was identified at 1 location (SS-01).

Results of the fill testing indicated that the fill sample (SS-10) returned concentrations of cyanide and metals above the AUP. Background concentrations were also exceeded for cyanide, copper, lead and PAH.

No sample location plan was included with the letter, however, T+T note that these samples are also discussed in the Site Validation Report (SVR) for the Travelodge with accompanying sample location plan.

The blue billy material was determined as not suitable for re-use on-site and would require disposal off-site. Remaining material was determined suitable for re-use on-site, or disposal off-site to a clean fill facility.

[17] Babbage, 19 September 2018, Fill Sampling and Analysis – 100 Halsey Street, prepared for Infratil Infrastructure Property Limited. Job No: 62028, eTrack No: 200022085.
[18] Babbage, 8 October 2018, Fill Sampling and Analysis – 100 Halsey Street, prepared for Infratil Infrastructure Property Limited. Job No: 62028#EN, eTrack No: 20022504.

3.4.8 Site validation report (Babbage, July 2019)

A Site Validation Report (SVR) was prepared by Babbage in 2019[19] to document the removal of contaminated materials from the excavation area for the redevelopment of the Travelodge and a hydrocarbon hotspot in the vicinity of location E207. Remediation works at the site were completed between 2 October 2018 and 8 February 2019 and comprised:

- Removal of 736 tonnes of soil contaminated with gasworks waste and hydrocarbons to Hampton Downs and Redvale.
- Removal of 828 tonnes of soil contaminated with asbestos to Redvale.
- Collection of 47 soil samples to assist in delineation of areas of contamination and for validation purposes.

There were two unexpected discovery finds of asbestos contamination encountered during earthworks:

- Asbestos discovery 1 comprised ACM fragments at surface and within underlying soils in the form of ACM debris and loose fibres in the vicinity of the former underground tank in the eastern area of the site.
- Asbestos discovery 2 comprised ACM contamination in the presence of asbestos fibres and debris during foundation construction works in an area identified as A2.

Asbestos removal areas and additional sample locations are shown on Figure 3.3.

Following the completion of excavation works, 3,619 tonnes of imported aggregate material was placed and compacted across the site.

A total of 41 validation samples were collected:

- 22 validation samples were collected (SS105-SS126) from the base and sides of the excavation related to gasworks / hydrocarbon contamination.
- 19 validation samples (SS127 to SS146) were collected from the base and sides of the excavation where ACM had been removed.

Validation sampling indicated that residual contamination of metals (copper, lead, mercury, nickel and zinc) and BaP equivalent remained within soils at the site, however at levels that are not considered to pose an unacceptable risk to human health or the environment as they are encapsulated beneath the building. Asbestos validation indicated that asbestos contaminated soils and ACM were removed from the site.

[19] Babbage, 1 July 2019, 100 Halsey Street Redevelopment, Site Validation Report, prepared for Infratil Infrastructure Property Limited. Job No: 51987. Report reference: BDOC0014543818.

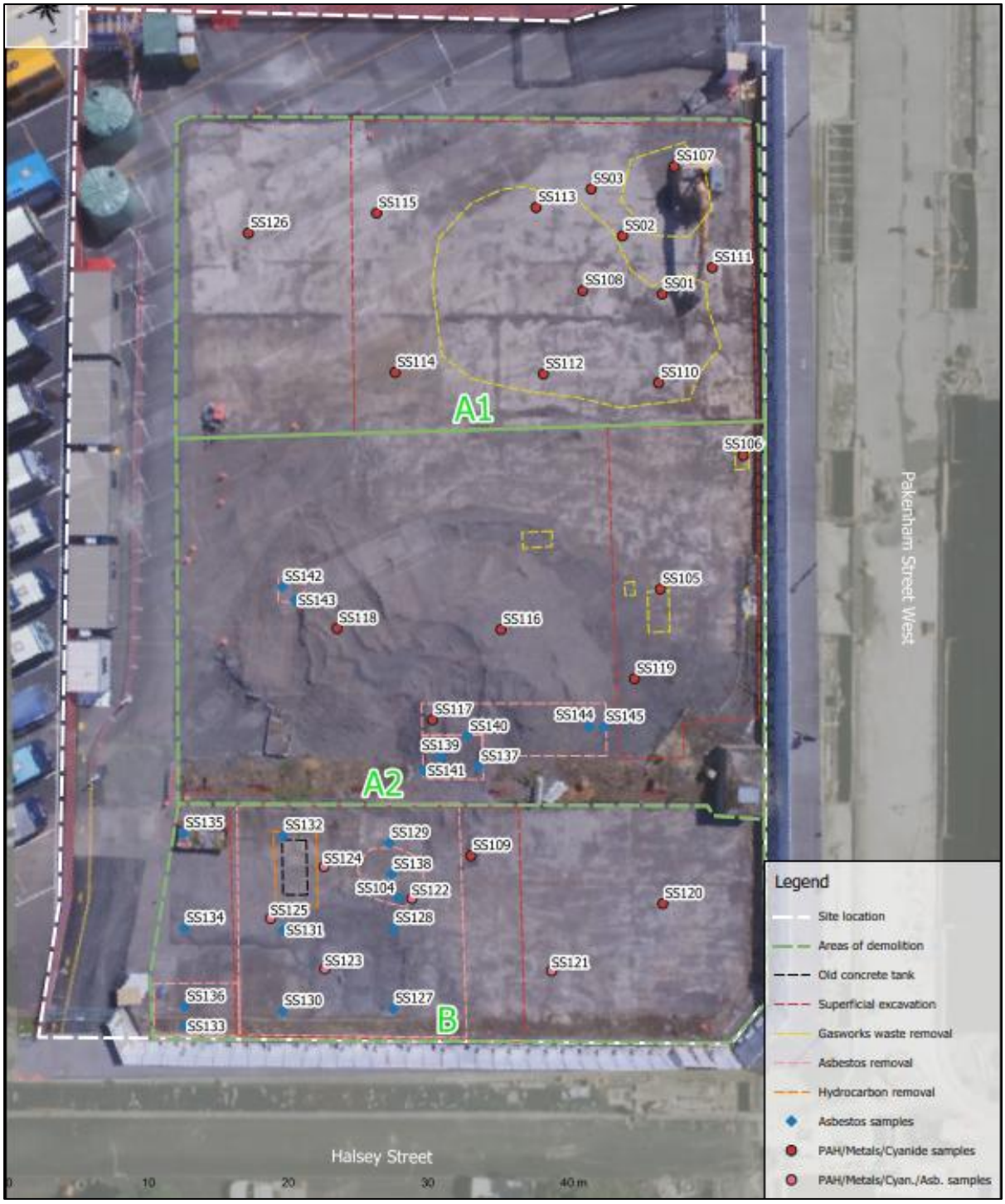


Figure 3.3: Areas of remediation works and sampling at the Travelodge site. Source: Babbage, July 2019.

4 Potential for ground contamination

The MfE's HAIL is a compilation of activities and industries that are considered to have the potential to cause land contamination. If a HAIL activity is being, or has been, undertaken on a site, there may be implications for future development of a site.

This section seeks to identify the types and locations of potential HAIL activities that may have been carried out on the site based on historical land use information, and to infer potential implications for the proposed remedial works on the site.

Based on a review of readily available site history information, **potential** HAIL activities have been identified at the site. The activities, potential contaminants, and an assessment of the likelihood, potential magnitude and possible extent of contamination are presented in Table 4.1 below. Site investigation locations from the 2017 Babbage DSI within the proposed B1 and B2 development area, and the 2026 T+T investigation, are noted where relevant to the HAIL activities.

Historical and current potential contamination areas are presented in Table 4.1 and Figure 4.2.

Table 4.1: Potential for contamination

Land use/activity	Potential contaminants	Position of activity relative to B1 and B2	Likelihood, magnitude and possible extent of contamination	HAIL reference	Site investigation locations (refer Section 5)
Construction, maintenance, weathering and/or removal of site buildings/ infrastructure.	Asbestos fibres and heavy metals (primarily lead).	Intersecting	The buildings on-site were principally developed between the 1980s and 2000s when lead based paint, lead flashing, and ACM may have been used. Degradation, maintenance, and demolition of structures could have caused heavy metal or asbestos contamination of near-surface soil in the vicinity of buildings. Contamination from buildings cannot be confirmed until soil around and underneath buildings is observed or tested.	Activity I - *Only if the land was subject to intentional or accidental release of a hazardous substance in sufficient quantity to be a risk to human health or the environment.*	TTBH01 – TTBH05

Land use/activity	Potential contaminants	Position of activity relative to B1 and B2	Likelihood, magnitude and possible extent of contamination	HAIL reference	Site investigation locations (refer Section 5)
Placement of reclamation fillfrom industrial sources.	Metals (arsenic, cadmium, chromium copper, nickel, lead, tin and zinc), cyanide, and a full range of organic compounds including petroleum hydrocarbons, polyaromatic hydrocarbons (PAHs), solvents and pesticides.	Intersecting	Possibly through the full depth of the reclamation fill, across the entire site, where industrial waste materials occur. Reworked ECBF soils and marine dredgings generally reflect the characteristics of the source soils from which they are derived. May also affect the quality of groundwater.	Activity I - *Only if the land was subject to intentional or accidental release of a hazardous substance in sufficient quantity to be a risk to human health or the environment.*	TTBH01 – TTBH05, E201 – E207, E4, E5 and E9
UST and AST fuel storage on the site.	Petroleum hydrocarbons and monocyclic aromatic hydrocarbons (MAH) including benzene, toluene, ethylbenzene and xylene (BTEX), lead.	Adjacent. Approximately 45 m southwest, and 70 m northwest	There were historical USTs on the site and currently there is AST storage. If there were leaks during operation of the tanks, contamination may be present in near surface soils and deeper soils, typically to the invert of former underground tanks (usually up to 3 m depth below ground). Spills (if significant or frequent) may have migrated to the groundwater table. Council property file information indicates soil testing was undertaken during removal of underground tanks and soil was within guidelines for a commercial industrial use. These contaminant levels may not be appropriate in a basement situation if they occur within soils surrounding or below the basement.	Activity A13 - *Petroleum or petrochemical industries including a petroleum depot, terminal, blending plant or refinery, or facilities for recovery.*	Not within the B1 and B2 development area.
Dangerous goods (DG) storage.	Solvents, metals, petroleum hydrocarbons, PAHs.	Intersecting	DGs are likely to have been stored at the site since at least as early as 1928 when the Acetone Illuminating Company commenced operation. Building plans from 8 October 2018, provided in the property files, showed the location of a DG store fronting Guant Street to be demolished. Spills from DGs stored on unpaved surfaces could have migrated into the underlying soil or possibly been discharged to the harbour via stormwater.	Activity A17 - *Chemical manufacture, formulation or bulk storage.*	TTBH02 (within former workshop extent and near former DG store) E201 (near former DG store).

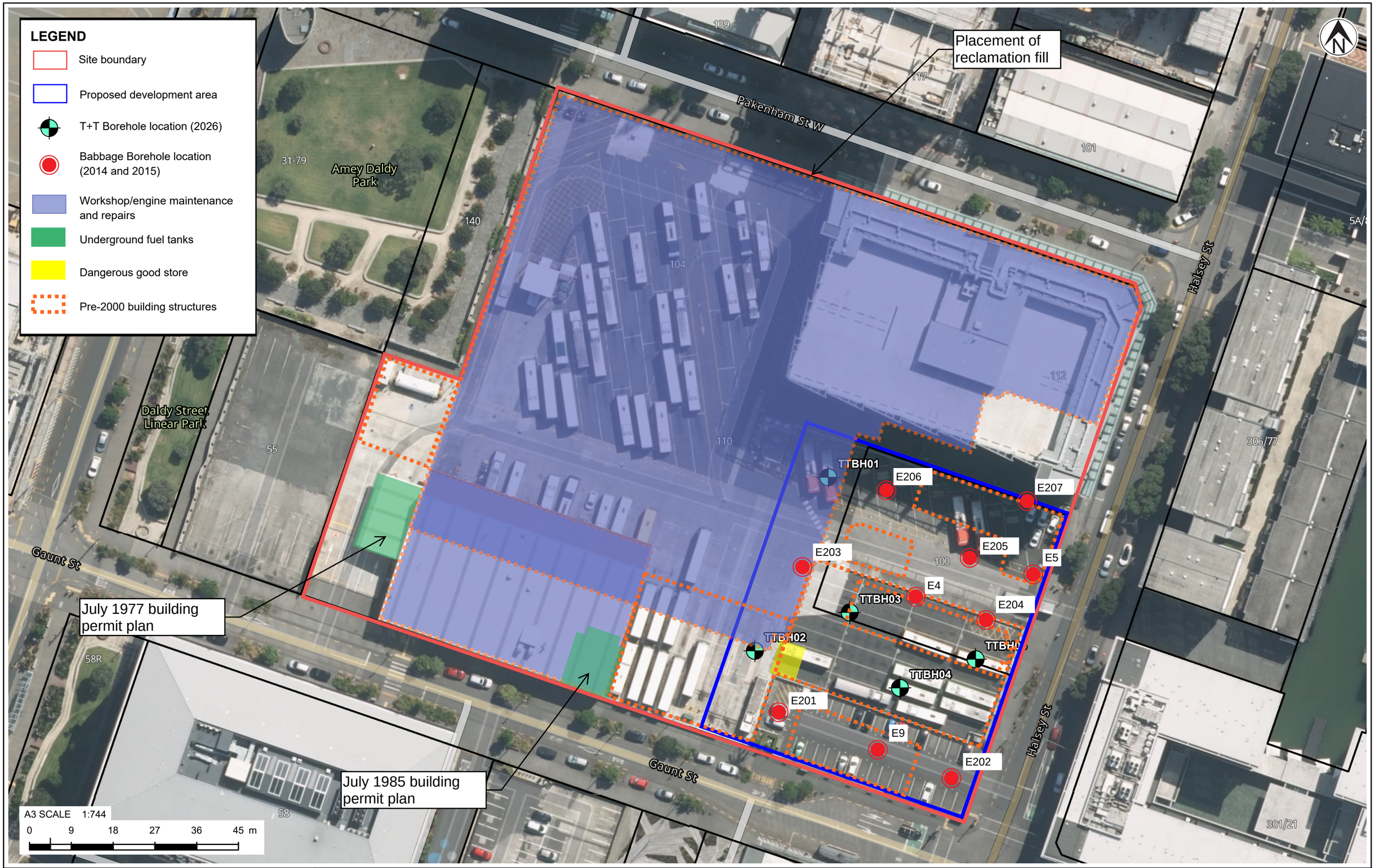
Land use/activity	Potential contaminants	Position of activity relative to B1 and B2	Likelihood, magnitude and possible extent of contamination	HAIL reference	Site investigation locations (refer Section 5)
			Modern DG practices such as would be anticipated at the existing bus depot would have more stringent controls around containment and documentation of DGs thus the potential for effects on soil and stormwater is lower.		
Workshop/engine maintenance and repairs.	Petroleum hydrocarbons, PAHs, metals, solvents.	Historical workshop – Intersecting Current workshop – adjacent, approximately 45 m southwest	Petroleum hydrocarbons and PAHs associated with waste oil, solvents related to cleaning the electric tram components and bus engines and metals may have migrated into near surface soils in these areas. Any oil spills, if significant or frequent, may have migrated to the groundwater table.	Activity F4 - *Motor vehicle workshops*	TTBH02 (within former workshop extent) E201 (near former workshop)
Bus parking.	Petroleum hydrocarbons, metals.	Intersecting	Currently the site is fully paved and bus parking prevalent across the site. Discharges may be treated if the site has an operational consent. There is a potential for localised low level near surface soil contamination from any parking related spills.	Activity I - *Only if the land was subject to intentional or accidental release of a hazardous substance in sufficient quantity to be a risk to human health or the environment*	TTBH01 – TTBH05, E201 – E207, E4, E5 and E9

Land use/activity	Potential contaminants	Position of activity relative to B1 and B2	Likelihood, magnitude and possible extent of contamination	HAIL reference	Site investigation locations (refer Section 5)
Bulk fuel storage offsite to the north (former Mobil Pakenham and Shell Block IV).	Petroleum hydrocarbons and MAH, and lead.	Adjacent, approximately 45 m northwest	Contamination most likely to have migrated to site is contamination that has mobilised via groundwater. The site is indicated to be cross gradient or upgradient of these sites. Groundwater is typically expected in the range of 1.5 to 2.5 m below ground level (RL 1.5 to 0.5 m). An assessment of groundwater in the Babbage 2017 investigation found that TPH and BTEX concentrations at the site were below the laboratory limits of reporting, indicating that the site is not affected by offsite petroleum hydrocarbon plumes. Babbage 2017 found that with, the exception of cyanide, the leaching of contaminations from site soil to groundwater is not a significant process as the site is largely impervious and that the water table is > 1 m below the site, therefore there is no evidence that groundwater interacts with the shallow fill beneath the site.	Activity A17 – *Storage tanks or drums for fuel, chemicals or liquid waste.*	Not within the B1 and B2 development area
Electrical transformers.	Depending on the year of installation, contaminants may include polychlorinated biphenyls (PCBs), hydrocarbons, and metals.	Adjacent. Approximately 5 m and 90 m to the northwest	If spills have occurred in the past contamination is most likely to be limited to the surface soils in the immediate vicinity of the transformers. The transformer approximately 5 m to the northwest was visible in aerial photographs by 2020, and the transformer 90 m to the northwest was visible by 2022.	Activity B2: *Electrical transformers.*	TTBH01

In summary:

- Soil contamination is likely to occur at the site as a result of the former reclamation of the land and the long history of industrial use. It is possible localised areas of solvent or petroleum hydrocarbon could also occur as a result of dangerous goods storage above and below ground. It can be assumed that at least the upper 1 m of the soil profile is likely to contain contamination, therefore any excavated material is likely to need to be disposed of to a licensed landfill.
- Extensive petroleum hydrocarbon contamination is known to occur in groundwater to the north of the site and there is known to be regional contamination of groundwater by cyanide in Wynyard Quarter as a result of the presence gasworks wastes in the reclamation. The Babbage 2017 investigation found that groundwater at the site was not contaminated with petroleum hydrocarbons, however, cyanide concentrations were indicative of regional contamination due to gasworks waste in the reclamation fill.

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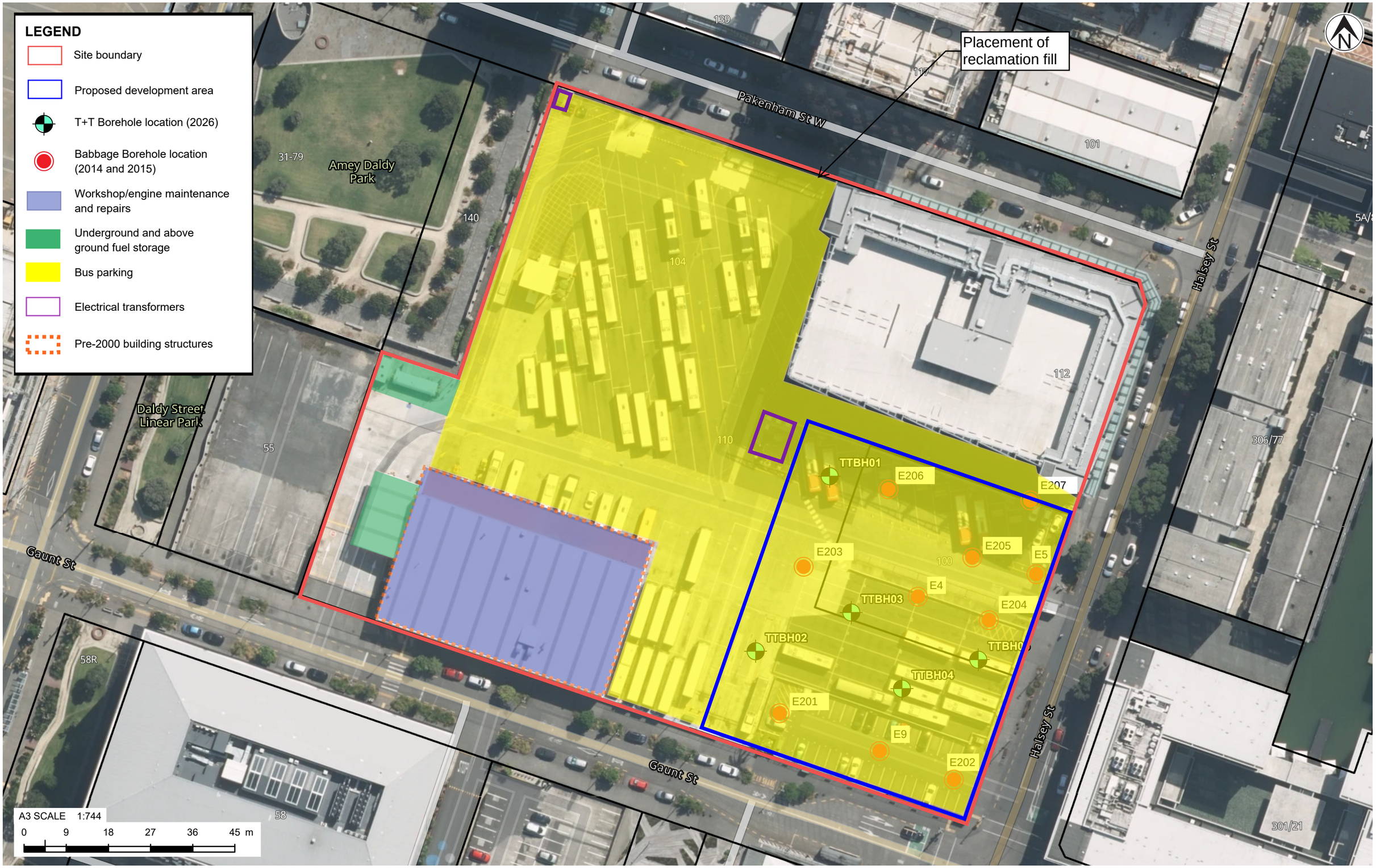


LOCATION PLAN

PROJECT No.	1101937.1000		
DESIGNED	CAVE	MAY.26	APPROVED
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CLIENT	NZ CRE 100 HALSEY LIMITED
PROJECT	PRELIMINARY AND DETAILED SITE INVESTIGATION
TITLE	HISTORICAL POTENTIAL CONTAMINATION AREAS
SCALE (A3)	1:744
FIG No.	FIGURE 4.1
REV	0

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LOCATION PLAN

			APPROVED	DATE
PROJECT No.	1101937.1000			
DESIGNED	CAVE	MAY.26		
DRAWN	-WEB-	MAY.26		
CHECKED				

CLIENT **NZ CRE 100 HALSEY LIMITED**

PROJECT **PRELIMINARY AND DETAILED SITE INVESTIGATION**

TITLE CURRENT POTENTIAL CONTAMINATION AREAS

SCALE (A3) 1:744 FIG No. FIGURE 4.2 REV 0

5 Field investigations (B1 and B2)

5.1 Sampling rationale

The ground contamination site investigations were carried out on 5 and 6 May 2026. The objective of the soil sampling was to undertake an assessment of potential contaminant concentrations in soils that may be disturbed as part of the development to supplement the 2017 DSI information collected by Babbage.

Samples were collected from 5 boreholes at surface soils and at depth intervals within fill and natural materials. Select samples were submitted for laboratory analysis of key contaminants of concern, including heavy metals, cyanide, TPH, VOC, SVOCs and semi-quantitative asbestos.

Investigation locations are shown on Figure 5.1. Considering both the 2017 DSI and 2026 investigation, a total of 15 locations have been sampled within the approximately 4,300 m^2 B1 and B2 development area:

- Babbage locations (2017 DSI): E4, E5, E9, E201 to E207; and
- T+T locations (2026 supplementary DSI): TTBH01 to TTBH05.

5.2 Methodology

5.2.1 Drilling

Prior to drilling, all proposed locations were checked against underground service plans. On site location of underground services using ground penetration radar was carried out by Subsurface Detection.

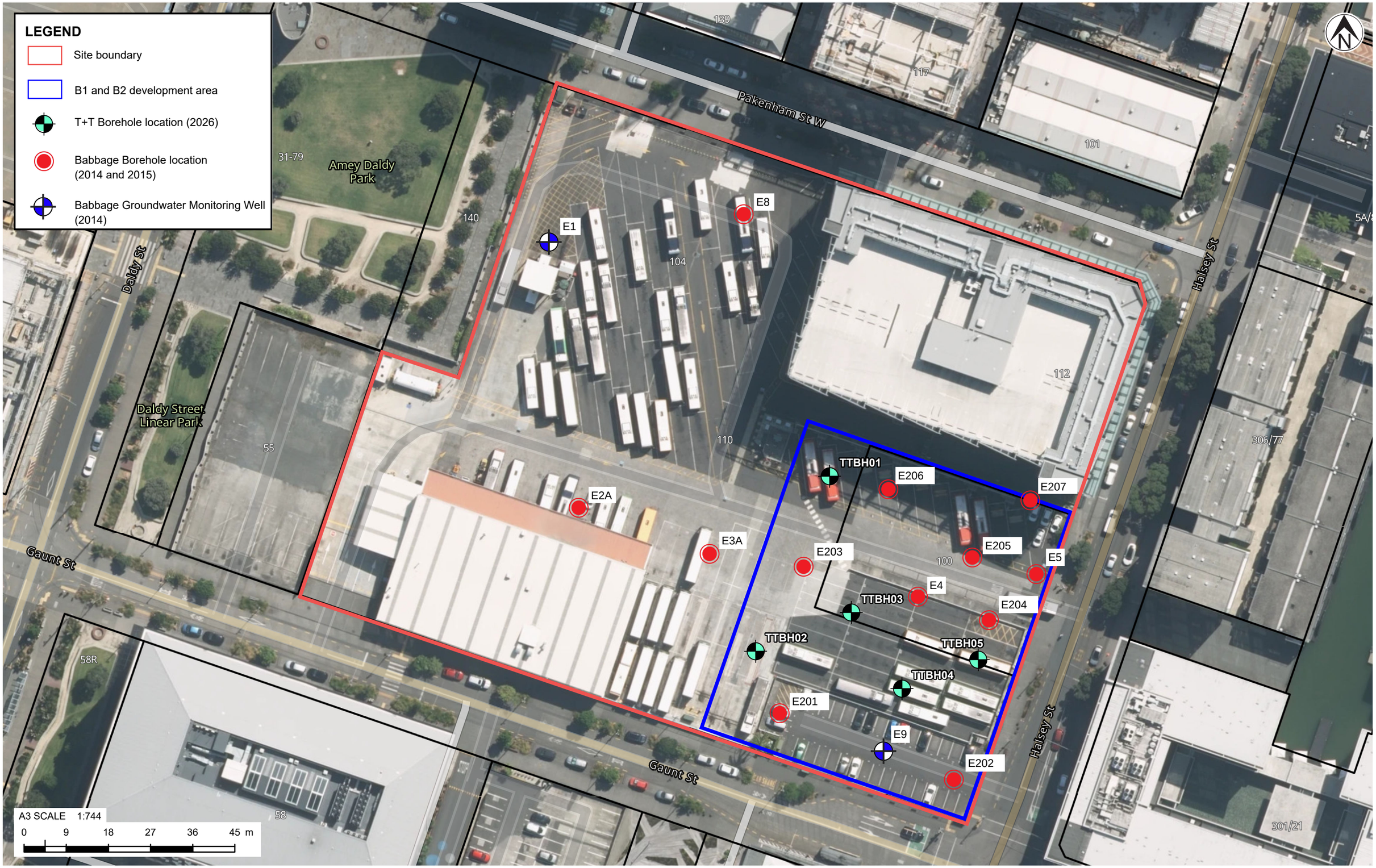
Drilling was undertaken by Geotechnics using a Terrier direct push drilling rig. A coring attachment was used to drill through the hardstand. Hand clearing by use of hand auger or hydro vac non-destructive drilling was implemented to a depth of 1.5 m bgl at locations BH01, BH02 and BH04 due to the proximity of unknown subsurface features.

Once hand clearing was complete the drill rig was used to drill to the target depth of 3 m. The depths of boreholes varied at TTBH03 (1.8 m) due to core loss as a result of saturation. The diameter of the boreholes was 110 mm. All boreholes were backfilled with soil cuttings in the order that they were removed, then backfilled with gravel and finished at the surface with cold mix asphalt or concrete.

Solid wastes (i.e. soil cuttings) generated during the drilling works that were not returned to the boreholes were collected and disposed of by Geotechnics. Between drilling locations all drilling equipment was decontaminated using a high-pressure water blaster. Wash water was collected in a plastic drum, and subsequently disposed of by Geotechnics.

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LOCATION PLAN

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	APPROVED	DATE	

CLIENT **NZ CRE 100 HALSEY LIMITED**

PROJECT **PRELIMINARY AND DETAILED SITE INVESTIGATION**

TITLE INVESTIGATION LOCATIONS

SCALE (A3) 1:744 FIG No. FIGURE 5.1 REV 0

5.2.2 Soil sampling

Soil sampling was conducted by T+T in general accordance with the requirements of the NESCS and MfE CLMG No 5[20], and the Asbestos in Soil Guidelines[21], using the following procedure:

- Soil samples were collected directly via hand trowel or from the recovered core. Decontamination procedures were in place to avoid cross-contamination.
- Recovered material was visually inspected for the presence of suspected ACM fragments or visual indications of contamination e.g. staining, odour.
- Soil samples were screened using a photoionisation detector (PID) to measure concentrations of VOCs.
- The materials encountered were logged in general accordance with the NZ Geotechnical Society "*Guidelines for the classification and field description of soils and rocks for engineering purposes".*
- Samples were collected using fresh gloves and placed into laboratory approved containers – 300 mL glass jars for chemical analyses, and 500 mL plastic sample containers for asbestos testing.
- Equipment used to collect the samples was decontaminated between sample locations using a scrubbing brush with clean water and Decon 90 (a phosphate-free detergent).
- The samples were stored under chilled conditions prior to being sent via courier under chain of custody (CoC) documentation to Hill Laboratories, an IANZ-accredited laboratory.
- Samples were selected for analysis based on field observation, with additional samples held in cold storage at the laboratory for future analysis, if required.

5.3 Field observations

The following field observations were recorded as part of these investigations. Further descriptions of the observed geological conditions, and the soil profiles relating to other borehole investigations within the site boundary is contained within the Geotechnical Desktop Assessment[22]. Borehole logs are included in Appendix F.

- Concrete and/or asphalt was observed from 0.0 to 0.25 m bgl across the site. A buried asphalt layer was also encountered at TTBH03 between 0.6 and 0.7 m bgl.
- Fill materials were encountered at all five borehole locations, extending from approximately 0.1 to 3 m bgl. The fill composition varied between boreholes but generally comprised gravelly sand and clayey silt.
- Hydrocarbon odours and wood fragments were noted at TTBH04 between 1.15 and 3 m bgl.
- Groundwater was encountered at depths ranging from 1.8 to 2.35 m bgl during the investigation.
- PID readings ranged from 0 to 68.3 ppm (TTBH05 at 0.65-0.85 m bgl).

[20] MfE, 2011. Contaminated land management guidelines No 5: Site investigation and analysis of soils (Revised 2021). Wellington: Ministry for the Environment.
[21] BRANZ Ltd, October 2024. *New Zealand Guidelines for Assessing and Managing Asbestos in Soil.*
[22] T+T, September 2026, *100 Halsey Street – Buildings B1 and B2 – Geotechnical Desktop Assessment*. Report prepared for NZCRE 100 Halsey Limited. Report reference: 1101803-GEO-RPT-101.

5.4 Data quality

5.4.1 Field procedures

A quality assurance and quality control (QA/QC) programme was implemented as part of field procedures to confirm data was fit for purpose and included:

- Decontamination of sampling equipment between sampling locations.
- Preservation of samples with ice during transport from the field to the laboratory.
- Transportation of samples with accompanying CoC documentation.
- Compliance with sample holding times.

The laboratory testing was undertaken by Hill Laboratories, which is accredited for the analysis undertaken and audited annually by International Accreditation New Zealand (IANZ). The laboratory's quality control measures include testing of blanks with all batches of samples and frequent replicates and spikes, along with peer review of worksheets. Standard laboratory QA/QC reports are available on request.

5.4.2 Duplicate sample

A quantitative measure of the variability in the results was undertaken independently of the laboratory by calculating the Relative Percentage Difference (RPD) values for contaminants in a sample collected from topsoil at 2 locations: TTBH01 and duplicate DUP02, and TTBH05 and DUP01. The RPD value (%) was calculated as follows:

$$RPD := \frac{(Co - Cs)}{\left(\frac{Co + Cs}{2}\right)} \cdot x100$$

Where Co = concentration of the original sample

Cs = concentration of the duplicate sample

RPD values were not calculated where analytes were below the laboratory limit of reporting (LoR).

RPDs of up to 50% are considered acceptable for duplicate samples (refer to MfE Guideline No. 5). As shown in Table 5.1 the RPDs ranged from approximately 0 to 193%. RPDs over 50% were calculated for several PAH analytes for TTBH05 1.0 / DUP 01, which were collected from gravel fill at 1.0 m depth. The level of variability is interpreted to reflect the practical limitations in collecting representative duplicate soil samples from heterogeneous and non-cohesive soils and is not considered to compromise the data quality for the purposes of this investigation.

Table 5.1: QA/QC analytical results

Sample ID/Guidelines	**TTBH01**	**DUP02**	**RPD**	**TTBH05**	**DUP01**	**RPD**
Depth (m)	**1.0**			**1.0**		
Soil type	**CLAY**			**FILL, gravel**		
Sampled by	**T+T**			**T+T**		
Date	**6/05/2026**			**6/05/2026**		
Cyanide						
Total Cyanide	< 15	< 15	0	74.0	103.0	33
Metals						

Sample ID/Guidelines	TTBH01	DUP02	RPD	TTBH05	DUP01	RPD
Depth (m)	1.0			1.0		
Soil type	CLAY			FILL, gravel		
Sampled by	T+T			T+T		
Date	6/05/2026			6/05/2026		
Arsenic	36	9	120	16	26	48
Cadmium	0.38	< 0.10	117	2.1	2.1	0
Chromium	35	26	30	64	89	33
Copper	660	13	192	260	400	42
Lead	1,260	22	193	1,950	2,800	36
Mercury	0.21	0.19	10	0.61	0.37	49
Nickel	128	15	158	117	166	35
Zinc	800	70	168	1000	1550	43
PAH						
Acenaphthene	< 0.5	< 0.5	0	0.8	< 0.5	46
Acenaphthylene	< 0.5	< 0.5	0	0.6	< 0.5	18
Anthracene	< 0.5	< 0.5	0	3	0.9	108
Benzo[a]anthracene	< 0.5	< 0.5	0	14.1	5.2	92
Benzo[a]pyrene (BAP)	< 0.5	< 0.5	0	19.3	7.6	87
Benzo[b]fluoranthene + Benzo[j]fluoranthene	< 0.5	< 0.5	0	16.3	7.4	75
Benzo[g,h,i]perylene	< 0.5	< 0.5	0	15.8	6.4	85
Benzo[k]fluoranthene	< 0.5	< 0.5	0	7.2	< 0.5	174
Chrysene	< 0.5	< 0.5	0	13.9	5.9	81
Dibenzo[a,h]anthracene	< 0.5	< 0.5	0	2.5	1.3	63
Fluoranthene	< 0.5	< 0.5	0	29	10.8	91
Fluorene	< 0.5	< 0.5	0	< 0.5	< 0.5	0
Indeno(1,2,3-c,d)pyrene	< 0.5	< 0.5	0	16.5	6.7	84
Naphthalene	< 0.5	< 0.5	0	< 0.5	< 0.5	0
Phenanthrene	< 0.5	< 0.5	0	9.5	2.5	117
Pyrene	< 0.5	< 0.5	0	32	12.2	90
BaP equivalent	< 1.21	< 1.21	0	27.64	20.32	31
TPH						
C7 - C9	< 20	< 30	0	< 20	< 20	0
C10 - C14	< 20	< 30	0	< 20	< 20	0
C15 - C36	1260	< 50	185	1540	550	95
Total hydrocarbons (C7-C36)	1260	< 100	171	1560	560	94
SVOC						
Tetrachloroethene (tetrachloroethylene)	0.3	0.5	50	4	5.6	33

Notes:

All values in mg/kg unless otherwise indicated.

Where both results were below the LoR the RPD has been reported as 0.

5.5 Assessment criteria

Soil and groundwater sample results were compared against criteria for the assessment of regulatory requirements (detailed in Appendix G) and the proposed re-development land use to meet the objectives of the investigation.

The adopted assessment acceptance criteria included:

- For human health:
  - The NESCS Soil contaminant standards (SCS) for commercial/industrial land use.
  - Human health soil guideline values presented in the Asbestos in Soil Guidelines.
- For discharged to the environment:
  - AUP – Standard E30.6.1.4 permitted activity (PA) soil acceptance criteria.
  - Background Concentrations of Inorganic Elements in Soils in the Auckland Region Technical Publication No. 153 (Non -volcanic Background Concentrations)[23].
- For soil disposal:
  - The AUP PA criteria have been used as a proxy for typical managed fill acceptance criteria to account for variability in acceptance criteria between managed fill facilities. T+T note that there is no AUP PA criterion for asbestos in soil, and asbestos in soil acceptance also varies between managed fill facilities.
- For groundwater:
  - ANZG 2018 Guidelines: Australian and New Zealand Guidelines for Fresh and Marine Water Quality. Marine water quality guidelines for 80% protection level as per the controlled activity rules in the AUP. (the ANZG are the updated version of the ANZECC 2000 Guidelines [24] to which the AUP refers).

5.6 Soil analytical results

A summary table of the results for the site compared against the assessment criteria is presented in Table 5.2. The full laboratory transcripts are provided in Appendix H. The results for sampling locations from the 2017 Babbage DSI that are within the development area are also presented in Table 5.2 and discussed below.

In summary the soil data indicates the following:

- Human health standards:
  - Lead exceeded the NESCS commercial/industrial land use criteria at 3 locations (TTBH03 at 1.0 m bgl, E204 at 0.3 – 1.5 m bgl, and E4 0.5 – 0.6 m bgl) ranging in concentrations from 4,200 mg/kg to 6,800 mg/kg.
  - All metal and cyanide results comply with the NESCS commercial/industrial land use criteria.
  - Of the 19 samples tested for asbestos, 3 indicated positive results of which only 1 sample was above the NZ Asbestos in Soil Guidelines. Testing of the sample TTBH05 at 1.0 m bgl indicated asbestos fines and friable asbestos (AF and FA) at 0.150% above the soil guideline value for all land uses of 0.001% w/w for AF and FA.

[23] Auckland Regional Council, 2001, Background Concentrations of Inorganic Elements in Soils in the Auckland Region Technical Publication No. 153.
[24] Australian & New Zealand Guidelines for Fresh and Marine Water Quality (2000).

  - Testing of the sample TTBH04 at 3.0 m bgl indicated asbestos at < 0.001% w/w AF+FA below the soil guideline values of 0.001% w/w for AF and FA.
  - All other SVOC were reported to be below the LoR.
- Environmental protection standards:
  - Metal concentrations for copper, lead, mercury, nickel and zinc from 16 borehole locations at various depths exceeded the AUP PA criteria.
  - The total cyanide concentration in the sample TTBH05 at 1.0 m bgl and E205 at 0.3 – 1.5 m bgl exceeded the adopted AUP discharge criteria. In the absence of an AUP criterion for total cyanide in Table E30.6.1.4.1 of the AUP, the CCME soil quality environmental guideline[25] value of 8 mg/kg for free cyanide (based on soil contact for plants and invertebrates in a commercial setting) has been adopted, which is consistent with the Babbage 2017 DSI. Analysis for free cyanide has not been undertaken, thus T+T note that it is conservative to compare to the total cyanide concentration (which includes all cyanide species) to the guideline value for free cyanide which is for the bioavailable free ions with the greatest risk of toxicity. T+T note that the LoR attained by the laboratory for cyanide in the 2026 investigation was 15 mg/kg, indicating that there may be other exceedances of the adopted criterion.
  - BaP equivalent concentrations reported in sample TTBH03 at 1.0 m bgl and E207 at 0.5 – 0.9 m bgl exceeded the AUP PA criteria.
  - All other contaminants tested including BTEX and TPH reported concentrations below AUP PA criteria.
- Disposal:
  - Metal concentrations in fill materials (up to approximately 2.0 m bgl) exceeds the AUP PA criteria indicating disposal to licensed landfill is likely to be required. The presence of asbestos within this material will require the materials to be disposed of as asbestos contaminated.
  - Results of the investigation indicate that soils below 2.0 m bgl could be disposed of as managed fill subject to the ability to appropriately segregate the material.

5.7 Groundwater analytical results

A summary table of the groundwater results for the development area (Well E9) from the 2017 Babbage DSI alongside other sampled wells on the site is provided below and presented in Table 5.3.

- Of the range of parameters, only total cyanide was presented above the ANZECC 80% trigger value for the protection of marine ecosystems (14 mg/m^3) with concentrations of 36 mg/m^3(2015) and 76 mg/m^3 (2014).
- TPH and BTEX parameters were not reported above the LoR and therefore have been excluded from the summary results table.

[25] Canadian Council of Ministers of the Environment, Canadian Soil Quality Guidelines for the Protection of Environmental and Human Health, 1997. Cyanide (Free).

Table 5.1: Summary of analytical results

Sample ID/Guidelines	Human Health	Discharge / Environmental	Disposal *		TTBH01			TTBH02			TTBH03		TTBH04			TTBH05			
Depth (m)					1.0	2.0	3.0	0.5	2.0	3.0	1.0	1.5	0.5	2.0	3.0	0.5	1.0	2.0	3.0
Soil type	NES Soil (Commercial/ Industrial) [1]	AUP Permitted Activity Criteria (Discharge) [8]	Background Auckland non-volcanic soils [11]	Maximum	CLAY			FILL, gravel	CLAY		Fill, gravel	CLAY	FILL, gravel			FILL, gravel	FILL, gravel	Fill, clay	Fill, clay
Sampled by					Tonkin + Taylor														
Date					6/05/2026			6/05/2026			6/05/2026		5/05/2026			6/05/2026			
Location					B1 and B2 Development Area														
Asbestos																			
Asbestos type	-	-	<LoR		Asbestos NOT detected	Asbestos NOT detected	Asbestos NOT detected	Asbestos NOT detected	Asbestos NOT detected	Asbestos NOT detected	Asbestos NOT detected	-	Asbestos NOT detected	Asbestos NOT detected	Chrysotile	Chrysotile	Chrysotile	Asbestos NOT detected	Asbestos NOT detected
Asbestos form	-	-	<LoR												Loose fibres	Loose fibres	ACM debris and Loose fibres		
Asbestos as ACM (w/w%)	0.05% [2]	-	<LoR												< 0.001	< 0.001	< 0.001		
Asbestos Fibres/Fine (w/w %)	0.001% [2]	-	<LoR												< 0.001	< 0.001	0.150		
Cyanide																			
Total Cyanide	>10,000 [3]	8.0 [9]	<LoR	74.0	< 15	< 15	< 15	< 15	< 15	< 15	< 15	< 15	< 15	< 15	< 15	< 15	74	< 15	-
Metals																			
Arsenic	70	100	12	66	36	6	9	< 2	2	10	34	8	2	7	6	< 2	16	4	-
Cadmium	1,300	7.5	0.65	21	0.38	< 0.10	< 0.10	< 0.10	0.12	< 0.10	1.39	0.41	0.16	0.5	0.13	< 0.10	2.1	< 0.10	-
Chromium	6,300	400	125	1,300	35	12	23	6	34	32	96	18	16	6	43	46	64	9	-
Copper	NL	325	45	2,600	660	9	10	29	42	13	890	133	44	79	60	64	260	17	-
Lead	3,300	250	65	6,800	1,260	17.4	17.5	< 0.4	5.8	22	5,100	760	27	650	159	13.6	1,950	11.7	-
Mercury	4,200	0.75	0.45	1	0.21	0.14	0.15	< 0.10	< 0.10	0.19	0.37	0.76	< 0.10	0.16	0.23	< 0.10	0.61	< 0.10	-
Nickel	6,000 [4]	105	35	200	128	9	11	47	122	13	100	19	81	19	74	200	117	3	-
Zinc	NL [4]	400	180	5,100	800	43	54	21	60	72	2,600	1,320	49	340	150	61	1,000	32	-
Polycyclic Aromatic Hydrocarbons																			
Acenaphthene	-	-	<LoR	1	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	0.8	< 0.5	-
Acenaphthylene	-	-	<LoR	1	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	0.6	< 0.5	-
Anthracene	-	-	<LoR	3	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	3	< 0.5	-
Benzo[a]anthracene	-	-	<LoR	14	< 0.5	< 0.5	< 0.5	< 0.5	0.6	< 0.5	< 0.5	< 0.5	< 0.5	0.5	1.3	< 0.5	14.1	< 0.5	-
Benzo[a]pyrene (BAP)	-	-	<LoR	19	< 0.5	< 0.6	< 0.6	< 0.5	< 0.5	< 0.6	< 0.5	< 0.5	< 0.5	0.5	1.5	< 0.5	19.3	< 0.5	-
Benzo[b]fluoranthene + Benzo[j]fluoranthene	-	-	<LoR	16	< 0.5	< 0.6	< 0.6	< 0.5	0.5	< 0.6	< 0.5	< 0.5	< 0.5	< 0.5	1.4	< 0.5	16.3	< 0.5	-
Benzo[g,h,i]perylene	-	-	<LoR	16	< 0.5	< 0.6	< 0.6	< 0.5	< 0.5	< 0.6	< 0.5	< 0.5	< 0.5	< 0.5	1	< 0.5	15.8	< 0.5	-
Benzo[k]fluoranthene	-	-	<LoR	7	< 0.5	< 0.6	< 0.6	< 0.5	< 0.5	< 0.6	< 0.5	< 0.5	< 0.5	< 0.5	0.7	< 0.5	7.2	< 0.5	-
Chrysene	-	-	<LoR	14	< 0.5	< 0.5	< 0.5	< 0.5	0.6	< 0.5	< 0.5	< 0.5	< 0.5	0.5	1.3	< 0.5	13.9	< 0.5	-
Dibenzo[a,h]anthracene	-	-	<LoR	3	< 0.5	< 0.6	< 0.6	< 0.5	< 0.5	< 0.6	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	2.5	< 0.5	-
Fluoranthene	-	-	<LoR	29	< 0.5	< 0.5	< 0.5	< 0.5	1.9	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	3.3	< 0.5	29	< 0.5	-
Fluorene	-	-	<LoR	0	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	-
Indeno(1,2,3-c,d)pyrene	-	-	<LoR	17	< 0.5	< 0.6	< 0.6	< 0.5	< 0.5	< 0.6	< 0.5	< 0.5	< 0.5	< 0.5	1.2	< 0.5	16.5	< 0.5	-
Naphthalene	210 [5]	0.28 [10]	<LoR	0	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	-
Phenanthrene	-	-	<LoR	10	< 0.5	< 0.5	< 0.5	< 0.5	0.8	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	1.2	< 0.5	9.5	< 0.5	-
Pyrene	NL [5]	7.9 [10]	<LoR	32	< 0.5	< 0.5	< 0.5	< 0.5	1.6	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	3.5	< 0.5	32	< 0.5	-
BaP equivelant	35	20	<LoR	28	< 1.21	< 1.44	< 1.44	< 1.21	1.24	< 1.44	< 1.21	< 1.21	< 1.21	1.21	2.51	< 1.21	27.64	< 1.21	-
Total Petroleum Hydrocarbons																			
C7 - C9	5,200 [6]	5,200 [10]	<LoR	0	< 20	< 30	< 30	< 20	< 20	< 30	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	-
C10 - C14	7,800 [6]	9,200 [10]	<LoR	0	< 20	< 30	< 30	< 20	< 20	< 30	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	-
C15 - C36	NL [6]	NL [10]	<LoR	1,540	1,260	< 50	< 50	< 40	< 40	87	< 40	< 40	400	360	340	81	1,540	< 40	-
Total hydrocarbons (C7-C36)	-	-	<LoR	1,560	1,260	< 100	< 90	< 80	< 80	101	< 80	< 80	410	370	350	86	1,560	< 80	-
VOC																			
Tetrachloroethene (tetrachloroethylene)	390 [12]	34 [13]	-	10	0.3	< 0.4	< 0.4	< 0.3	< 0.3	0.6	0.7	< 0.3	< 0.3	0.7	0.4	10.4	4	< 0.3	-
Toluene	-	6	<LoR	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
All other VOCs reported as less than laboratory detection [7]																			
Semi Volatile Organic Compounds (SVOC)																			
All SVOCs reported as less than laboratory detection [7]																			

Notes:

Red values indicate that results exceed NESCS criteria: Commercial/industrial

Underlined values indicate that results exceed AUP criteria

Bold values indicate that results exceed non-volcanic background levels for Auckland (default cleanfill disposal criteria)

All values are reported in mg/kg (ppm) unless otherwise stated.

<LoR = Below laboratory detection level

NL = Not limiting (i.e. >10,000 mg/kg)

ND = not detected

Grey values indicate the result is below the laboratory detection level

*Acceptance of material at the disposal location remains at the discretion of the receiving site.

1 - Ministry for the Environment (MfE), April 2012. Users Guide: National Environmental Standard for assessing and managing contaminants in soil to protect Human Health: Commercial/industrial (adopted as a conservative preliminary screening standard for construction works).

2 - BRANZ Ltd, October 2024. New Zealand Guidelines for Assessing and Managing Asbestos in Soil. Soil guideline values based on the weight of asbestos as either non-friable asbestos-containing material (ACM) or combined asbestos fines and/or fibres recovered from a given volume of soil (weight by weight [w/w] as a %).

3 - MfE, August 1997. Guidelines for Assessing and Managing Contaminated Gasworks Sites in New Zealand: Commercial/industrial, Cyanide (free).

4 - NEPM 2013. Guideline on the Investigation Levels for Soil and Groundwater: Commercial/industrial D.

5 - MfE, June 1999. Guidelines for Assessing and Managing Petroleum Hydrocarbon Contaminated Sites in New Zealand. Tier 1 Soil acceptance criteria: residential use, sandy silt, <1 m.

6 - MfE, June 1999. Guidelines for Assessing and Managing Petroleum Hydrocarbon Contaminated Sites in New Zealand. Tier 1 Soil acceptance criteria: Commercial/ industrial use, sandy silt, <1 m, inhalation pathway.

7 - All VOCs and SVOCs apart from those detailed in the the above table were reported as less than detection

8 - Auckland Unitary Plan: Operative in Part Version (AUP). Permitted Activity Soil Criteria Table E30.6.1.4.1 (unless otherwise stated).

9 - Canadian Council of Ministers of the Environment (CCME), March 1997. Canadian Soil Quality Guidelines for the Protection of Environmental and Human Health: Commercial

10 - MfE, June 1999. Guidelines for Assessing and Managing Petroleum Hydrocarbon Contaminated Sites in New Zealand - Groundwater Protection, sandy silt, contamination at <1 m, groundwater at 2 m depth.

11 - Auckland Regional Council (ARC), Technical Publication 153 - Background concentrations of Inorganic Elements in Soils from the Auckland Region. Non-volcanic.

12 - USEPA Regional Screening Level - Commercial/industrial soil.

13 - Canadian Council of Ministers of the Environment (CCME), March 1997. Recommened Canadian soil quality guideline for commercial or industrial land use

Table 5.1: Summary of analytical results

Sample ID/Guidelines	Human Health	Discharge / Environmental	Disposal *		E4			E5				E9			E1 J2		E2A		E3A J1			E8A J1	
Depth (m)					0.5-0.6	1.0-1.1	3.0-3.1	0.7-0.8	1.0-1.1	1.8-1.9	2.7-2.8	0.2-0.3	1.0-1.1	2.6-2.7	0.7-0.8	1.9-2.0	1.6-1.7	2.1-2.2	0.7-0.8	1.4-1.5	2.1-2.2	0.7-0.8	1.6-1.7
Soil type	NES Soil (Commercial/ Industrial) [1]	AUP Permitted Activity Criteria (Discharge) [8]	Background Auckland non-volcanic soils [11]	Maximum	Fill, gravel	Fill, clay, silt	Fill, sand	Fill, gravel				Fill, gravel			Fill, sand		Fill, gravel	Fill, clay	Fill, clay	SAND	CLAY	Fill, clay	Fill, sand
Sampled by					Babbage										Babbage								
Date					17/04/2014										17/04/2014								
Location					B1 and B2 Development Area										Wider Development Area								
Asbestos																							
Asbestos type	-	-	<LoR		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Asbestos form	-	-	<LoR																				
Asbestos as ACM (w/w%)	0.05%[2]	-	<LoR																				
Asbestos Fibres/Fine (w/w %)	0.001%[2]	-	<LoR																				
Cyanide																							
Total Cyanide	>10,000[3]	8.0[9]	<LoR	74.0	0.41	< 0.10	< 0.10	0.5	0.35	0.39	0.11	< 0.10	< 0.10	0.82	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	12	< 0.10
Metals																							
Arsenic	70	100	12	66	66	9	6	21	9	4	3	< 2	13	23	6	5	4	8	5	11	8	9	5
Cadmium	1,300	7.5	0.65	21	21	0.45	0.19	0.68	0.31	0.15	< 0.10	< 0.10	< 0.10	0.29	< 0.10	< 0.10	< 0.10	< 0.10	0.1	0.1	0.12	0.17	< 0.10
Chromium	6,300	400	125	1,300	1,300	420	27	940	122	37	14	55	7	24	18	8	11	23	12	12	26	23	8
Copper	NL	325	45	2,600	2,600	51	24	1,610	780	250	22	55	19	39	48	10	31	13	38	15	13	40	8
Lead	3,300	250	65	6,800	6,800	57	48	520	300	133	9.4	4.2	13.3	55	66	21	57	23	49	45	25	166	15.7
Mercury	4,200	0.75	0.45	1	0.23	0.16	0.22	1.21	0.35	0.64	< 0.10	< 0.10	0.12	0.48	0.25	0.25	0.95	0.25	0.19	0.44	0.22	0.2	0.46
Nickel	6,000[4]	105	35	200	139	18	21	41	99	13	3	196	20	93	20	6	7	11	25	8	13	32	7
Zinc	NL[4]	400	180	5,100	5,100	350	165	800	280	192	21	44	95	1,070	162	47	96	69	129	72	78	134	36
Polycyclic Aromatic Hydrocarbons																							
Acenaphthene	-	-	<LoR	1	< 0.10	< 0.10	0.11	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.11	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Acenaphthylene	-	-	<LoR	1	< 0.10	< 0.10	< 0.10	< 0.10	0.19	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.11	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Anthracene	-	-	<LoR	3	< 0.10	< 0.10	< 0.10	0.21	0.22	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.11	< 0.10	0.13	< 0.10	< 0.10	< 0.10
Benzo[a]anthracene	-	-	<LoR	14	0.19	0.11	0.21	1.23	1.11	0.22	< 0.10	< 0.10	< 0.10	< 0.10	0.11	0.16	0.35	0.23	0.28	0.64	0.26	0.44	0.25
Benzo[a]pyrene (BAP)	-	-	<LoR	19	0.23	< 0.2	0.18	0.93	1.13	0.19	< 0.16	< 0.12	< 0.14	< 0.16	< 0.14	0.17	0.43	0.3	0.31	0.62	0.3	0.47	0.27
Benzo[b]fluoranthene + Benzo[j]fluoranthene	-	-	<LoR	16	0.23	< 0.2	0.19	1.05	1.22	0.19	< 0.16	< 0.12	< 0.14	< 0.16	< 0.14	0.16	0.44	0.3	0.32	0.62	0.3	0.54	0.26
Benzo[g,h,i]perylene	-	-	<LoR	16	0.21	< 0.2	< 0.2	0.73	0.75	< 0.15	< 0.16	< 0.12	< 0.14	< 0.16	< 0.14	< 0.15	0.33	0.2	0.26	0.38	0.2	0.45	0.18
Benzo[k]fluoranthene	-	-	<LoR	7	< 0.2	< 0.2	< 0.2	0.37	0.45	< 0.15	< 0.16	< 0.12	< 0.14	< 0.16	< 0.14	< 0.15	0.16	< 0.3	< 0.15	0.24	< 0.2	0.2	< 0.14
Chrysene	-	-	<LoR	14	0.15	< 0.2	0.16	0.84	0.87	0.18	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	0.12	0.27	0.19	0.25	0.44	0.22	0.38	0.2
Dibenzo[a,h]anthracene	-	-	<LoR	3	< 0.10	< 0.10	< 0.10	0.21	0.17	< 0.15	< 0.16	< 0.12	< 0.14	< 0.16	< 0.14	< 0.15	< 0.16	< 0.3	< 0.15	< 0.16	< 0.2	< 0.18	< 0.14
Fluoranthene	-	-	<LoR	29	0.24	0.18	0.39	1.62	2.1	0.36	0.11	< 0.10	< 0.10	0.18	0.15	0.21	0.5	0.43	0.43	1.11	0.52	0.87	0.39
Fluorene	-	-	<LoR	0	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.11	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Indeno(1,2,3-c,d)pyrene	-	-	<LoR	17	0.16	< 0.2	< 0.2	0.49	0.55	< 0.15	< 0.16	< 0.12	< 0.14	< 0.16	< 0.14	< 0.15	0.24	< 0.3	0.19	0.29	< 0.2	0.38	0.15
Naphthalene	210[5]	0.28[10]	<LoR	0	< 0.2	< 0.10	0.26	< 0.10	0.21	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.11	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Phenanthrene	-	-	<LoR	10	< 0.2	< 0.10	0.13	0.73	0.56	0.17	0.14	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	0.16	0.12	< 0.10	0.31	0.15	0.37	< 0.10
Pyrene	NL[5]	7.9[10]	<LoR	32	0.25	0.23	0.41	1.38	1.84	0.37	< 0.10	< 0.10	< 0.10	0.18	0.15	0.22	0.52	0.49	0.46	1.32	0.54	0.89	0.4
BaP equivelant	35	20	<LoR	28	0.55	0.44	0.65	2.88	3.57	0.62	0.32	< 0.26	< 0.26	0.39	0.34	0.44	1.05	0.82	0.84	1.91	0.91	1.49	0.74
Total Petroleum Hydrocarbons																							
C7 - C9	5,200[6]	5,200[10]	<LoR	0	< 8	< 12	< 10	< 8	< 9	< 9	< 10	< 8	< 9	< 9	< 9	< 10	< 9	< 14	< 9	< 10	< 13	< 11	< 9
C10 - C14	7,800[6]	9,200[10]	<LoR	0	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 30	< 20	< 20	< 30	< 30	< 20
C15 - C36	NL[6]	NL[10]	<LoR	1,540	< 40	< 50	< 40	240	170	< 40	< 40	< 40	290	< 40	< 40	< 40	< 40	< 60	< 40	< 40	< 50	< 50	105
Total hydrocarbons (C7-C36)	-	-	<LoR	1,560	< 70	< 90	< 70	240	170	< 70	< 70	< 70	290	< 70	< 70	< 70	< 70	< 100	< 70	< 70	< 90	< 80	105
VOC																							
Tetrachloroethene (tetrachloroethylene)	390[12]	34[13]	-	10	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Toluene	-	6	<LoR	0	-	-	-	-	-	-	-	-	-	-	-	-	< 0.07	< 0.11	< 0.06	< 0.07	< 0.09	< 0.08	< 0.10
All other VOCs reported as less than laboratory detection [7]																							
Semi Volatile Organic Compounds (SVOC)																							
All SVOCs reported as less than laboratory detection [7]																							

Notes:

Red values indicate that results exceed NESCS criteria: Commercial/industrial

Underlined values indicate that results exceed AUP criteria

Bold values indicate that results exceed non-volcanic background levels for Auckland (default cleanfill disposal criteria)

All values are reported in mg/kg (ppm) unless otherwise stated.

<LoR = Below laboratory detection level

NL = Not limiting (i.e. >10,000 mg/kg)

ND = not detected

Grey values indicate the result is below the laboratory detection level

*Acceptance of material at the disposal location remains at the discretion of the receiving site.

Table 5.1: Summary of analytical results

Sample ID/Guidelines	Human Health	Discharge / Environmental	Disposal *		E201	E202	E203	E204	E205	E206	E207
Depth (m)	NES Soil (Commercial/ Industrial) [1]	AUP Permitted Activity Criteria (Discharge) [8]	Background Auckland non-volcanic soils [11]	Maximum	0.3-1.5	0.3-1.5	0.3-1.5	0.3-1.5	0.3-1.5	0.4-1.5	0.5-0.9
Soil type					FILL, gravel						
Sampled by					Babbage						
Date					14/07/2015						
Location					B1 and B2 Development Area						
Asbestos											
Asbestos type	-	-	<LoR		-	-	-	-	-	-	-
Asbestos form	-	-	<LoR								
Asbestos as ACM (w/w%)	0.05% [2]	-	<LoR								
Asbestos Fibres/Fine (w/w %)	0.001% [2]	-	<LoR								
Cyanide											
Total Cyanide	>10,000 [3]	8.0 [9]	<LoR	74.0	0.22	0.69	0.36	0.28	106	0.12	1.01
Metals											
Arsenic	70	100	12	66	17	43	11	60	5	8	13
Cadmium	1,300	7.5	0.65	21	0.48	4.1	0.41	0.65	0.12	0.36	0.52
Chromium	6,300	400	125	1,300	51	31	220	50	92	37	58
Copper	NL	325	45	2,600	870	14,700	220	760	60	410	310
Lead	3,300	250	65	6,800	970	2,600	570	4,200	103	800	630
Mercury	4,200	0.75	0.45	1	0.11	0.46	0.36	1.32	1.26	0.39	2.4
Nickel	6,000 [4]	105	35	200	134	93	37	71	81	66	118
Zinc	NL [4]	400	180	5,100	740	6,900	410	1,010	117	460	440
Polycyclic Aromatic Hydrocarbons											
Acenaphthene	-	-	<LoR	1	< 0.03	< 0.03	< 0.04	< 0.04	0.13	< 0.03	0.5
Acenaphthylene	-	-	<LoR	1	0.07	0.07	0.1	0.06	0.33	0.06	2.5
Anthracene	-	-	<LoR	3	0.1	0.12	0.15	0.07	1.07	0.19	1.9
Benzo[a]anthracene	-	-	<LoR	14	0.79	0.6	0.83	0.32	2.1	0.48	14.9
Benzo[a]pyrene (BAP)	-	-	<LoR	19	1.44	0.85	1.18	0.51	1.69	0.62	33
Benzo[b]fluoranthene + Benzo[j]fluoranthene	-	-	<LoR	16	1.48	0.95	1.42	0.69	3.1	0.73	34
Benzo[g,h,i]perylene	-	-	<LoR	16	1.14	0.7	0.96	0.42	1.97	0.45	24
Benzo[k]fluoranthene	-	-	<LoR	7	0.78	0.39	0.54	0.25	1.3	0.28	13.8
Chrysene	-	-	<LoR	14	0.86	0.61	0.82	0.35	2.2	0.44	12.5
Dibenzo[a,h]anthracene	-	-	<LoR	3	0.2	0.09	0.13	0.06	0.32	0.06	3.9
Fluoranthene	-	-	<LoR	29	1.54	1.22	1.57	0.63	6	1.01	18.6
Fluorene	-	-	<LoR	0	< 0.03	< 0.03	0.04	< 0.04	0.65	0.04	0.4
Indeno(1,2,3-c,d)pyrene	-	-	<LoR	17	1.1	0.88	1.29	0.57	2.6	0.62	28
Naphthalene	210 [5]	0.28 [10]	<LoR	0	< 0.13	< 0.15	< 0.16	< 0.16	1.88	< 0.14	< 1.3
Phenanthrene	-	-	<LoR	10	0.37	0.46	0.41	0.23	3.2	0.29	6.2
Pyrene	NL [5]	7.9 [10]	<LoR	32	1.84	1.36	1.78	0.72	6.2	1.07	25
BaP equivelant	35	20	<LoR	28	2.08	1.24	1.74	0.76	3	0.91	46.28
Total Petroleum Hydrocarbons											
C7 - C9	5,200 [6]	5,200 [10]	<LoR	0	< 8	< 9	< 10	< 10	10	< 9	< 8
C10 - C14	7,800 [6]	9,200 [10]	<LoR	0	< 20	67	< 20	< 20	49	< 20	< 20
C15 - C36	NL [6]	NL [10]	<LoR	1,540	420	199	95	154	240	230	1,720
Total hydrocarbons (C7-C36)	-	-	<LoR	1,560	420	270	95	154	300	230	1,720
VOC											
Tetrachloroethene (tetrachloroethylene)	390 [12]	34 [13]	-	10	-	-	-	-	-	-	-
Toluene	-	6	<LoR	0	0.06	1	0.11	0.54	0.29	< 0.06	0.08
All other VOCs reported as less than laboratory detection [7]											
Semi Volatile Organic Compounds (SVOC)											
All SVOCs reported as less than laboratory detection [7]											

Notes:

Red values indicate that results exceed NESCS criteria: Commercial/industrial

Underlined values indicate that results exceed AUP criteria

Bold values indicate that results exceed non-volcanic background levels for Auckland (default cleanfill disposal criteria)

All values are reported in mg/kg (ppm) unless otherwise stated.

<LoR = Below laboratory detection level

NL = Not limiting (i.e. >10,000 mg/kg)

ND = not detected

Grey values indicate the result is below the laboratory detection level

*Acceptance of material at the disposal location remains at the discretion of the receiving site.

Table 5.3: Results of groundwater sampling (Babbage 2017)

Parameter	Unit	Well E1 (n=1)	Well E7 (n=2)	Well E9 (n=1)	Guideline
Water type	-	Na-Cl	Na-Cl	Na-Cl	NA
pH	-	8.1	7.6-7.7	7.3	NA
Electrical conductivity	mS/cm	223	202-272	160	NA
Hardness	g/m³ $CaCO_3$	220	350-410	540	NA
Arsenic	mg/m³	<2	<2	2.6	-
Boron	g/m³	1.0	2.9-3.1	3.3	>4.5*
Cadmium	mg/m³	<0.1	<0.1	<0.05	36
Chromium	mg/m³	<1	<1	<0.5	85
Copper	mg/m³	<1	<1	<0.5	8.0
Lead	mg/m³	<0.2	<0.2	<0.1	12
Mercury	mg/m³		<0.08		1.4
Nickel	mg/m³	<1 (13 in 2014)	<1	0.6	560
Silver	mg/m³	<0.2	<0.2	<0.1	2.6
Zinc	mg/m³	<2	<2	2.0	43
Total cyanide	mg/m³	1.6	**23-26 (32 in 2014)**	**36 (76 in 2014)**	14
Acenaphthene	mg/m³	<0.008	3.8	0.085	-
Acenaphthylene	mg/m³	<0.008	0.064-0.066	<0.008	-
Anthracene	mg/m³	<0.008	0.12-0.13	<0.008	-
Fluoranthene	mg/m³	<0.008	0.064	0.044	-
Fluorene	mg/m³	<0.008	0.69-0.80	<0.008	-
Naphthalene	mg/m³	<0.04	0.11-0.13	<0.04	120
Phenanthrene	mg/m³	<0.008	0.68-0.83	0.010	-
Pyrene	mg/m³	0.021	0.057	0.044	-

Notes: All other PAH compounds below laboratory limit of reporting in all samples. *Ambient seawater concentration. Results in red are elevated above the relevant ANZECC 80 % trigger value for the protection of marine ecosystems

6 Conceptual site model

A Conceptual Site Model (CSM) as defined by the MfE in the Contaminated Land Management Guidelines, sets out known and potential sources of contamination, potential exposure pathways, and potential receptors. For there to be an effect from the proposed activity there has to be a contamination source and a mechanism (pathway) for contamination to affect human health or the environment (receptor). Table 6.1 summarises the source -pathway-receptor analysis completed to assess possible human health and environmental risks associated with the conditions from the 2026 investigation of the proposed B1 and B2 development area. The CSM is based on a Tier 1 assessment and proposed land use as a commercial/industrial development.

In summary, the CSM analysis presented below indicates that there is potential for on-site human health and environmental risks to site users if they are exposed to fill materials (up to approximately 2.0 m bgl). The CSM also shows that excavated soils requiring off-site disposal may also pose an environmental effect to the receiving facility if the material is not disposed in an appropriate and controlled manner. The proposed development plans show that the site will be sealed therefore if contaminated soil remains onsite there will not be a complete exposure pathway to site users post-development.

Table 6.1: Conceptual site model and effects assessment (B1 and B2 development area)

Source	Pathway	Receptors	Pathway assessment
Fill materials (up to approximately 2.0 m bgl) with contaminant concentrations above criteria for the protection of human health and/or the environment.	Disturbed materials becoming dry and creating dust that could be inhaled.	On-site – maintenance/excavation and other onsite workers during soil disturbance works. Off-site – General public in the vicinity of the site during development works.	**Complete** based on a Tier 1 assessment.
	Dermal contact and ingestion of contaminated soil.		
	Leaching of contaminants / mobilisation during rainfall events or via dust during land disturbance work.	On site – Underlying groundwater. Off-site – Flora and fauna in nearby receiving environments.	**Potentially complete** Complete if runoff and dewatering effluent not managed appropriately. Water (surface or ground) will be best managed by disposal to tradewaste via a permit obtained from Watercare Services, or a licensed liquid waste disposal facility.
	Excavated materials disposed off-site.	Off-site – receiving environments in vicinity of the disposal site.	**Potentially complete** Negligible if materials are disposed to an appropriate receiving facility (i.e. licensed landfill subject to approval from the facility operator).

Source	Pathway	Receptors	Pathway assessment
Groundwater with cyanide above the ANZECC 80% trigger value for the protection of marine ecosystems.	Dewatering of contaminated groundwater and discharge to stormwater or surface water.	Offsite - Flora and fauna in nearby receiving environments.	**Potentially complete** Concentrations for cyanide in the groundwater samples collected to date were above the ANZECC 80% trigger value for the protection of marine ecosystems and therefore require management during construction. The pathway will be incomplete if discharged as a trade waste or carted away for disposal.

The conditions summarised in the CSM above also apply to the remainder of the site. In addition, the PSI has identified potentially contaminating activities in the remainder of the site, including, but not limited to, fuel storage and the current workshop. There is potential for these activities to have contaminated soil and potentially also groundwater. Further soil investigation will be required to assess the presence and extent of contamination before site re-development. In addition, the basements for the proposed development are anticipated to intersect groundwater, which is indicated by historical investigations to be impacted with cyanide.

In addition to potential onsite sources of groundwater contamination, as noted in Section 4 there are known sources of petroleum hydrocarbon groundwater contamination offsite to the northwest. T+T note that the historical groundwater investigations did not detect TPH or VOCs in groundwater, therefore T+T consider that it is unlikely that a vapour barrier would be required for the development. However, given the age of the data and potential sources of groundwater contamination on-site, additional groundwater sampling will be undertaken as part of pre-works testing to assess potential risks from groundwater, including vapour intrusion risk from volatile contaminants (if found to be present).

7 Development implications

The following section summarises the regulatory and construction-phase implications associated with the contamination conditions identified at the site.

7.1 Regulatory implications

The rules and associated assessment criteria relating to the control of contaminated sites in the Auckland region are presented in Appendix G. The need, or otherwise, for contamination-related resource consents for potential earthworks at the site has been evaluated against these regulatory requirements.

The following sections summarise the regulatory implications associated with the contamination conditions identified at the site.

7.1.1 NESCS

7.1.1.1 Proposed B1 and B2 development area

As discussed in Appendix G, the NESCS applies to specific activities on land where a HAIL activity has or is more likely than not to have occurred. This report confirms the site has been subjected to HAIL activities (refer to Table 4.1) thus the site **is a "piece of land"** as defined in Regulation 5(7) of the NESCS and the NESCS therefore **applies to the B1 and B2 development area**.

While a single development consent is proposed for the overall redevelopment of the site, the construction programme is proposed to proceed in stages, with B1 and B2 forming the initial earthworks and construction stage. Accordingly, the DSI assessment presented in this report has been undertaken for the B1 and B2 development area.

Based on the proposed development, it is expected that the disturbance/removal volumes, and likely duration of earthworks would exceed the PA conditions for land disturbance (Regulation 8(3)) (refer to Appendix G Table 1).

In addition, contaminant concentrations within the B1 and B2 development area (as described in Section 5.6) exceed SCS for commercial/industrial land use and therefore, consent under the NESCS would be required on a Restricted Discretionary basis under Regulation 10. However, on the basis that a DSI has not been undertaken for the remainder of the development area (B3 to B5), the overall activity status is **discretionary** (as discussed further in Section 7.1.1.2 below).

A draft CSMP has been prepared to set out procedures for land disturbance works and soil disposal for implementation by the Contractor. We have assumed that the intent will not be to remediate the site and that the existing CSMP will be implemented to manage earthworks and associated contamination risks.

7.1.1.2 Remainder of the development area

The broader redevelopment is proposed under a single development consent; however, Buildings 3, 4 and 5 are intended to be constructed in later stages as the operational bus depot footprint progressively reduces across the site.

Based on the current development plans, and the presence of HAIL activities across the wider development area, resource consent under the NESCS is required on a **discretionary** basis under Regulation 11, as a DSI for the remainder of the development area has not been undertaken. A DSI is expected to be required as a consent condition. Current plans indicate the basements excavation will extend below the groundwater table and therefore groundwater will require management during construction. To support the DSI, additional soil and groundwater investigations can be undertaken as part of the pre-works sampling programme as outlined in the CSMP.

7.1.2 Auckland Unitary Plan

7.1.2.1 B1 and B2 development area

The concentration of metals, cyanide, and BaP equivalent, were reported to exceed the PA criteria (defined under Section E30.6.1.4 of the AUP), therefore the **B1 and B2 development area is** classified as **"land containing elevated levels of contaminants"**. Therefore, Section E30 of the AUP **applies** to the **B1 and B2 development area** and consent on a Controlled activity basis under Rule E30.4.1 (A6) would be required. However, on the basis that a DSI has not been undertaken for the remainder of the development area (B3 to B5), the overall activity status is **discretionary** (as discussed further in Section 7.1.2.2 below).

7.1.2.2 Remainder of the development area

Limited soil data from the Babbage investigations indicate widespread heavy metal and PAH contamination within fill materials, with concentrations exceeding the NESCS and AUP PA criteria, including localised hotspots of arsenic, copper, lead and BaP equivalent.

Based on the current development plans it is likely that the development wouldn't meet the PA rules of Chapter E30, and a consent under the AUP will likely be required**.** As a DSI has not been undertaken for the remainder of the development area, consent would be a **discretionary** activity. A DSI for the remainder of the development area is anticipated to be required as a condition of the consent.

7.1.3 Asbestos Regulations

7.1.3.1 B1 and B2 development area

Asbestos in soil was tested for in samples from all 5 locations from the development area or the 2026 investigation. Asbestos in soil was also tested for in four samples from the 2017 Babbage DSI, however, the location of that testing in relation to the development area is unclear as the locations were not specified in the Babbage report.

The 2026 investigation indicated 3 positive results of which 1 sample was above the NZ Asbestos in Soil Guidelines (asbestos as AF+FA at 0.150% in the sample TTBH05 at 1.0 m bgl). Under the Asbestos in Soil Guidelines, the concentration of 0.15% AF+FA is above the Class B contamination threshold (0.01% AF+FA).

Earthworks development plans for B1 and B2 were not available at the time of writing this report, however a basement is proposed beneath building B2. Noting the detections of asbestos to date, and that the site has a well-documented history of demolition, further sampling will be required to meet the sample density as prescribed in the Asbestos in Soil Guidelines and to confirm health and safety controls for soil disturbance works. Under the Asbestos in Soil Guidelines, for a site area of 4,000 m^2, a minimum of 11 grid-based sampling locations would be recommended. The CSMP can set out additional sampling requirements for asbestos in soil (to be undertaken prior to the commencement of construction works) as well as unexpected discovery procedures.

7.1.3.2 Remainder of the development area

Given the age of the buildings, an asbestos survey will be required prior to the removal of the structures. Depending on the results of the survey, removal or disturbance of ACM may need to be undertaken by a licensed removalist prior to demolition.

The Asbestos Regulations will apply to future excavation works or redevelopment associated with the proposed basements beneath buildings B3 and B4/5 if asbestos is present in soils at the site at the time of construction. Soil testing therefore needs to be undertaken to determine the application of these regulations to the proposed development. Additional soil investigations can be undertaken as part of the pre-works sampling programme as outlined in the CSMP.

7.2 Construction implications

7.2.1 Soil reuse and offsite disposal

Based on the current development concept, reuse of in-situ materials on-site is not anticipated and excavated soils are expected to require disposal off-site. However, the foundation and earthworks design remains at an early stage and this approach may change as the design develops. Available data indicates that soil can be re-used onsite with a hard cap (asphalt or concrete) or 0.2 m thick soft cap.

Based on current testing for the B1 and B2 development area, it is anticipated that:

- Fill materials up to approximately 2.0 m bgl will require disposal to a licensed landfill facility.
- Fill materials from below 2.0 m bgl will require disposal to a managed fill facility.
- Natural soil (marine sediments) was not encountered in the DSI investigations and has not been tested for off-site disposal acceptance. If natural soil is encountered, it is likely to be suitable for disposal at a cleanfill facility, however, testing may be required by the receiving facility.

These considerations are also likely to apply to the remainder of the development area but a DSI is to be undertaken for the remainder of the development area as outlined in the CSMP.

Confirmation of acceptance of the material should be sought from the receiving facilities before commencement of earthworks.

The disposal recommendations should be reviewed when a cut/fill earthworks plan is available in case further testing could refine the disposal requirements.

7.2.2 Earthworks management

Standard earthworks controls in accordance with the AC Erosion and Sediment Control Guide[26] should be sufficient to minimise the discharge of contaminants to the environment during earthworks. Dust control, stormwater controls and erosion and sediment controls should be put in place. Should unexpected contamination be encountered, the area should be covered, isolated and advice should be sought from a contaminated land specialist.

The CSMP will inform controls and processes for handling spoil should unexpected contamination being identified in the event the grounds conditions vary from the assumed model (based on the testing data presented in this report).

[26] Auckland Council, 2016, *Erosion and Sediment Control Guide for Land Disturbing Activities in the Auckland Region.*

7.2.3 Water management

Groundwater beneath the development area is indicated to be contaminated with cyanide. Current development plans indicate the basements excavation will extend below the groundwater table and therefore groundwater will require management during construction.

To manage environmental effects, it is considered that water (surface or ground) will be best managed by disposal to tradewaste via a permit obtained from Watercare Services, or a licensed liquid waste disposal facility. Water will require treatment prior to discharge to tradewaste if this is the selected option, including removal of sediment, and potentially pH control. There are flow limits of 1 – 2 L/sec and these are restricted by tidal variation. Suitable storage will also need to be allowed for during the works.

7.2.4 Vapour risk and management

Based on the available soil and groundwater investigation results, the risk of vapour intrusion across the site is considered low. Historical groundwater monitoring did not identify petroleum hydrocarbons or VOCs above laboratory reporting limits, and no free-phase hydrocarbons have been encountered during previous investigations. Although the proposed basements will extend below the groundwater table, the available information does not indicate a volatile contaminant source capable of presenting an unacceptable vapour intrusion risk. Accordingly, a vapour barrier is not considered necessary for the proposed development, including the basements beneath B2, B3 and B4/B5. This conclusion should be confirmed through the additional soil and groundwater testing required for the remainder of the development area, with the need for vapour mitigation reconsidered only if previously unidentified volatile contamination or free-phase hydrocarbons are encountered.

The CSMP sets out requirements for air monitoring of volatile chemicals during soil disturbance.

8 Summary and conclusions

T+T was commissioned by NZCRE to undertake ground contamination investigation at 100 Halsey Street, Auckland Central. The investigation was undertaken to identify potential contamination sources through the Site's history, and to assess the implications for soil disturbance and land development activities within the site with regard to ground contamination as required under the NESCS and AUP.

The main findings of the assessment are:

- The site has been used as a transport depot since at least the 1940s and is located on reclaimed land.
- Potential HAIL activities are likely to have been undertaken at the site over its history, including the demolition of buildings that may have contained ACM building products and/or lead based paints, placement of potentially contaminated fill, workshop maintenance activities, UST and AST fuel and dangerous good storage.
- Contamination and geotechnical investigations have been undertaken across the site since December 2002 including borehole drilling, soil sampling and water quality measurements.
- Soil and groundwater sampling was undertaken across the site by Babbage in April 2014 and July 2017. Additional sampling was undertaken by T+T within the proposed B1 and B2 development area in May 2026 as part of a supplementary DSI to increase the sampling density within the proposed development area. Results from the testing within the proposed B1 and B2 development area showed:
  - Soil samples returned concentrations of metals and BaP equivalent results above the human health and AUP PA criteria.
  - Concentrations of metals and petroleum hydrocarbons were also reported above the non-volcanic background concentrations of soils in the Auckland region.
  - Of the 19 samples tested for asbestos, 3 indicated positive results of which 1 sample was above the human health guideline value from the NZ Asbestos in Soil Guidelines.
  - In historical testing by Babbage, cyanide at Well E9 (in the southeast portion of the site) was elevated above the 80% trigger values for marine water.

A summary of the resource consenting implications for the proposed development are summarised as follows:

- Resource consent under the NESCS is assessed to be **required** as HAIL activities have been found to be undertaken on the site, and on the basis a DSI has not been undertaken for the wider site (i.e. including B3 to B5), **consent under the NESCS is required on a Discretionary basis under Regulation 11**.
- Resource consent under the contaminated land rules of the AUP (Chapter E30) is assessed to be **required** as soil disturbance volumes are expected to exceed 200 m^3. **Consent on a Discretionary activity basis will be required**.
- A draft CSMP has been prepared for the site to support the consent applications.
- A DSI for the remainder of the development area (B3 to B5) will be required as a condition of consent. Additional soil and groundwater investigations for the DSI can be undertaken as part of the pre-works sampling programme as outlined in the CSMP. This testing will also assess whether the Asbestos in Soil Guidelines apply to the remainder of the development area.

- Additional sampling for asbestos will be required in the proposed B1 and B2 development area to meet the sample density as prescribed in the Asbestos in Soil Guidelines and to confirm health and safety controls for soil disturbance work. The additional sampling for asbestos investigations can be undertaken as part of the pre-works sampling programme as outlined in the CSMP.
- We have assumed that the intent will not be to remediate the site and that the existing CSMP will be implemented to manage earthworks and associated contamination risks.
- Given the age of the buildings at the site, an asbestos survey will be required prior to the removal of the structures. Depending on the results of the survey, removal or disturbance of ACM may need to be undertaken by a licensed removalist prior to demolition.

A summary of the construction implications for the site is provided as follows:

- Implementation of standard earthworks controls in accordance with the AC Erosion and Sediment Control Guide, including dust control, stormwater controls, and erosion and sediment controls, should be sufficient to minimise the discharge of contaminants to the environment during earthworks.
- Accidental discovery protocols should be put in place to identify and manage unexpected contamination in soil during the works. The CSMP will inform controls and processes for handling spoil should unexpected contamination be encountered.
- Based on the current development concept, reuse of in-situ materials on-site is not anticipated and excavated soils are expected to require disposal off-site. However, the foundation and earthworks design remains at an early stage and this approach may change as the design develops. Available data indicates that soil can be re-used onsite with a hard cap (asphalt or concrete) or 0.2 m thick soft cap. If surplus soil is taken off-site for disposal, it must go to a facility licensed to receive the level of contamination. The testing from the 2026 investigation for the proposed B1 and B2 development area indicates that:
  - Fill material to a depth of approximately 2.0 m bgl will need to be taken to a landfill facility.
  - Fill material from below 2.0 m bgl will need to be taken to a managed fill facility.
  - Natural soil (marine sediments) was not encountered = and has not been tested for off-site disposal acceptance. If natural soil is encountered, it is likely to be suitable for disposal at a cleanfill facility, however, testing may be required by the receiving facility.
  - Confirmation should be sought from the receiving facilities before commencement of earthworks.
- Groundwater beneath the site is indicated to be contaminated with cyanide. Current development plans indicate the basement excavations for B2, B3, and B4/B5 will extend below the groundwater table and therefore groundwater will require management during construction. To manage environmental effects, it is considered that water (surface or ground) will be best managed by disposal to tradewaste via a permit obtained from Watercare Services, or disposal to a licensed liquid waste disposal facility.
- Based on the available soil and groundwater investigation results, the risk of vapour intrusion is considered low and a vapour barrier is not indicated to be required for the proposed development, including the proposed basements. This conclusion should be confirmed through the additional soil and groundwater testing required for the remainder of the development area as outlined in the CSMP.

9 Applicability

This report has been prepared for the exclusive use of our client NZCRE 100 Halsey Limited, with respect to the particular brief given to us and it may not be relied upon in other contexts or for any other purpose, or by any person other than our client, without our prior written agreement.

We understand and agree that our client will submit this report as part of an application under the Fast-Track Approvals Act 2024 and that the Expert Panel as the consenting authority will use this report for the purpose of assessing that application.

Recommendations and opinions contained in this report are based on our visual observations and sampling of material within the proposed works area. The nature and continuity of the subsoil away from the test and sample locations is inferred but it must be appreciated that actual conditions may vary from the assumed model.

Tonkin & Taylor Ltd
Environmental and Engineering Consultants

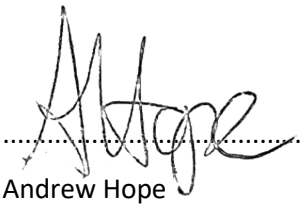
Report prepared by:



.....

Carmen Thornton
Contaminated Land Consultant

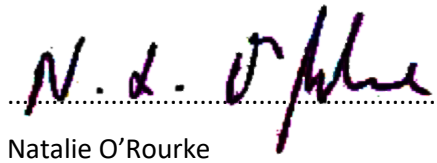
Authorised for Tonkin & Taylor Ltd by:



.....

Andrew Hope
Project Director

Report certified by a suitably qualified and experienced practitioner as prescribed under the NESCS Users Guide (April 2012).



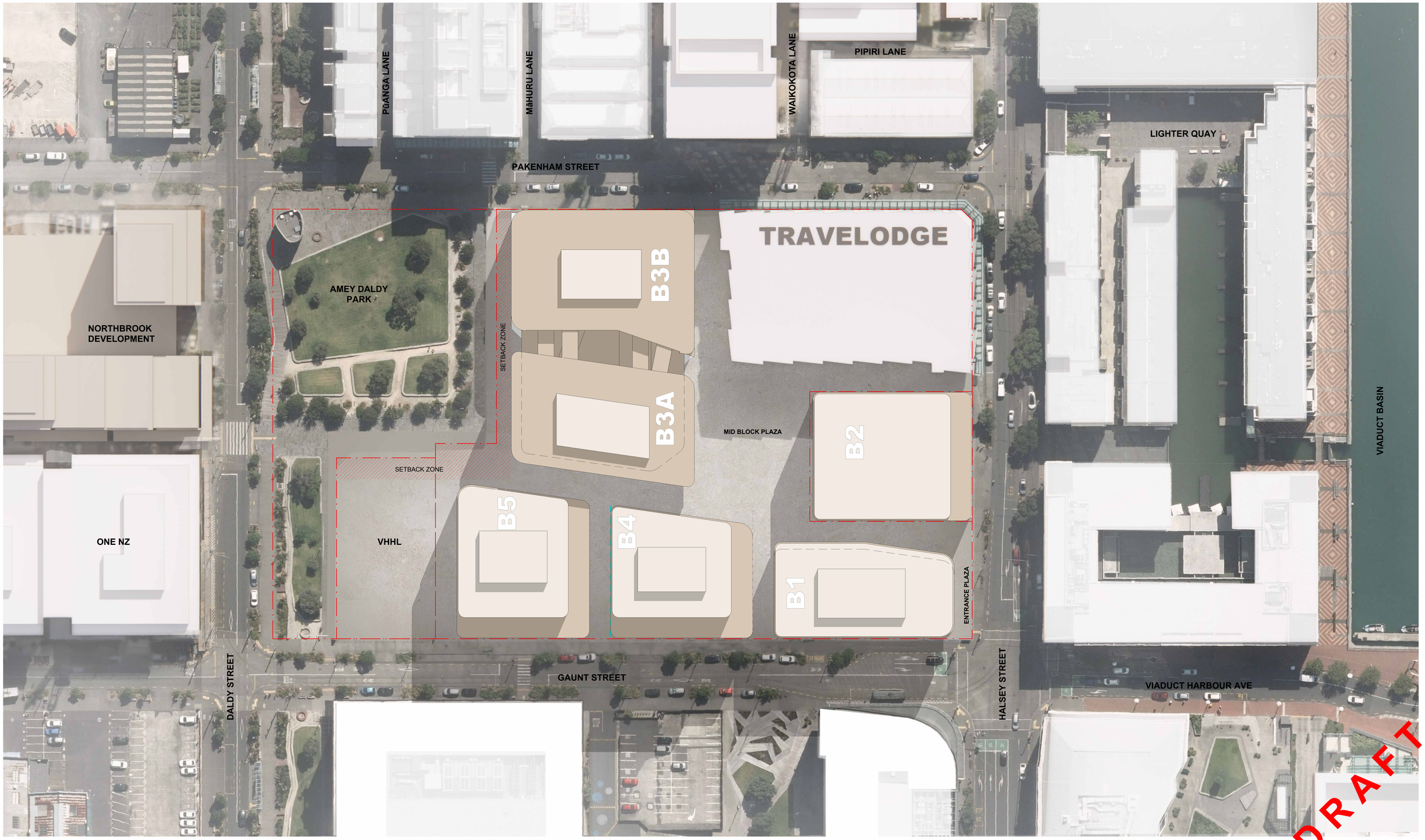
.....

Natalie O'Rourke
Senior Contaminated Land Consultant, CEnvP SC

CAVE

t:\auckland\projects\1101937\1101937.1000\issueddocuments\1101937.1000-rpt-con-101-psi dsi_final_v3.0.docx

Appendix A Proposed development



DRAFT

1 PROPOSED SITE PLAN
SCALE 1 : 500

0 25 50 m

Author Checker

north

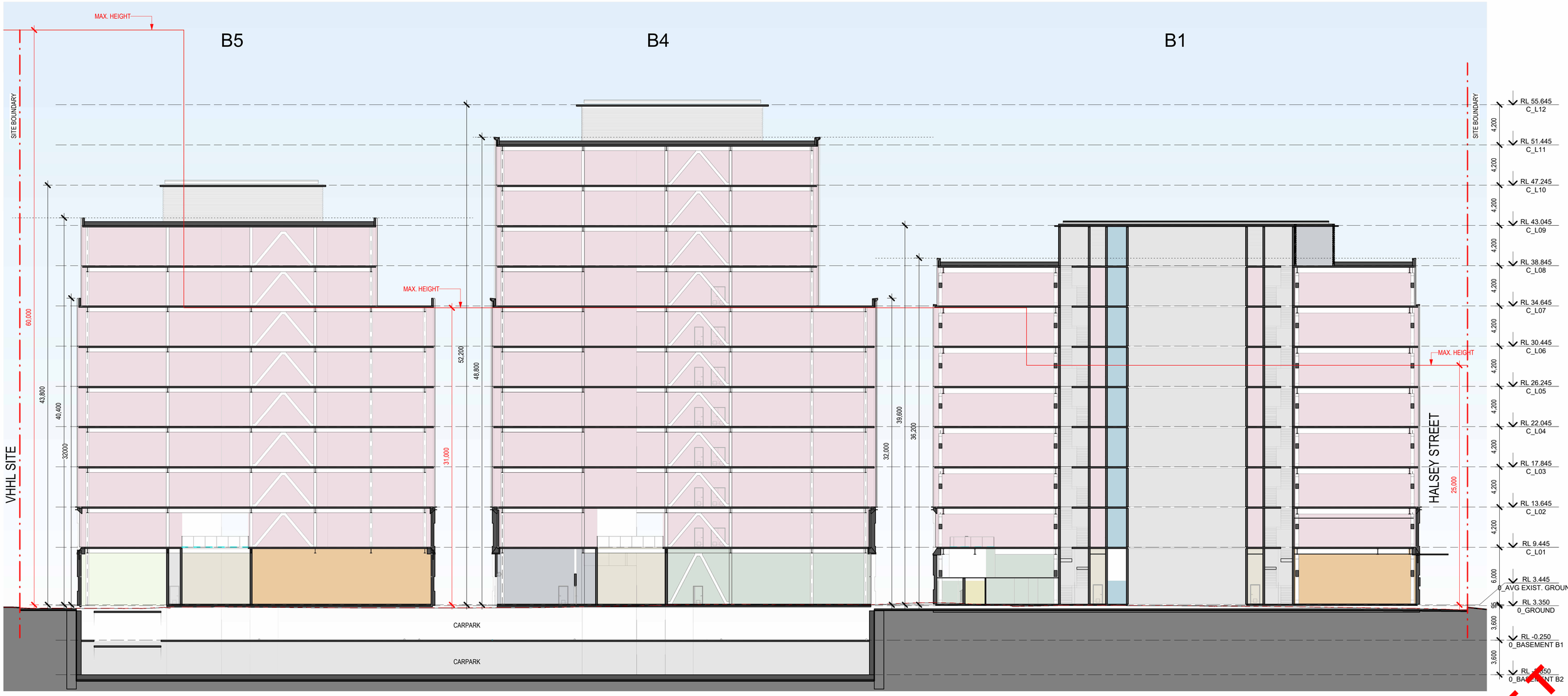
peddlethorp

PROPOSED SITE PLAN
100 HALSEY ST

SHEET NUMBER: 2153 - 1-100
REV:

Peddle Thorp Aitken Ltd
TĀMAKI-MAKAURAU
ŌTAUTAHI
+64 9 379 9405
peddlethorp.co.nz

ORIGINAL PRINT SIZE A1. DO NOT SCALE. CONTRACTOR MUST VERIFY DIMENSIONS ON SITE BEFORE COMMENCING ANY WORK. THIS DRAWING IS DERIVED FROM A BUILDING MODEL CREATED BY MULTIPLE AUTHORS AND IS PREPARED FOR AND ON BEHALF OF peddlethorp



1
1-101 SITE E-W SECTION
SCALE 1 : 200

RAISED FLOORS
RETAIL
LOBBY
OFFICE
TOILETS
END OF TRIP / BICYCLE
RISERS
CIRCULATION
SERVICES / REFUSE
LOADING DOCK

DRAFT

Author Checker

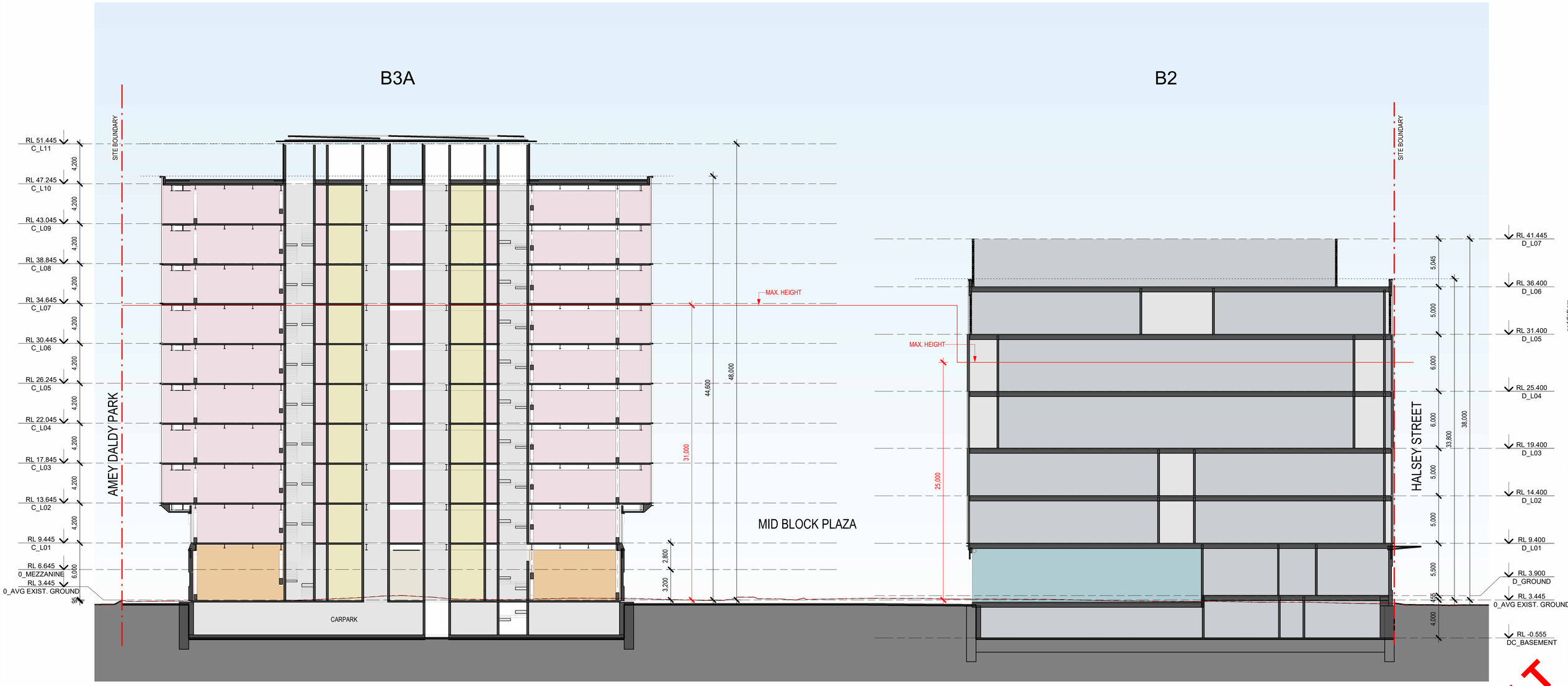
peddlethorp

SITE SECTIONS
100 HALSEY ST

SHEET NUMBER: 2153 - 1-320
REV:

Peddle Thorp Aitken Ltd
TĀMAKI-MAKAURAU
ŌTAUTAHI
+64 9 379 9405
peddlethorp.co.nz

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1 / 1-101 SITE E-W SECTION
SCALE 1 : 200

DRAFT

- RAISED FLOORS
- RETAIL
- LOBBY
- OFFICE
- TOILETS
- END OF TRIP / BICYCLE
- RISERS
- CIRCULATION
- SERVICES / REFUSE
- LOADING DOCK

Author Checker

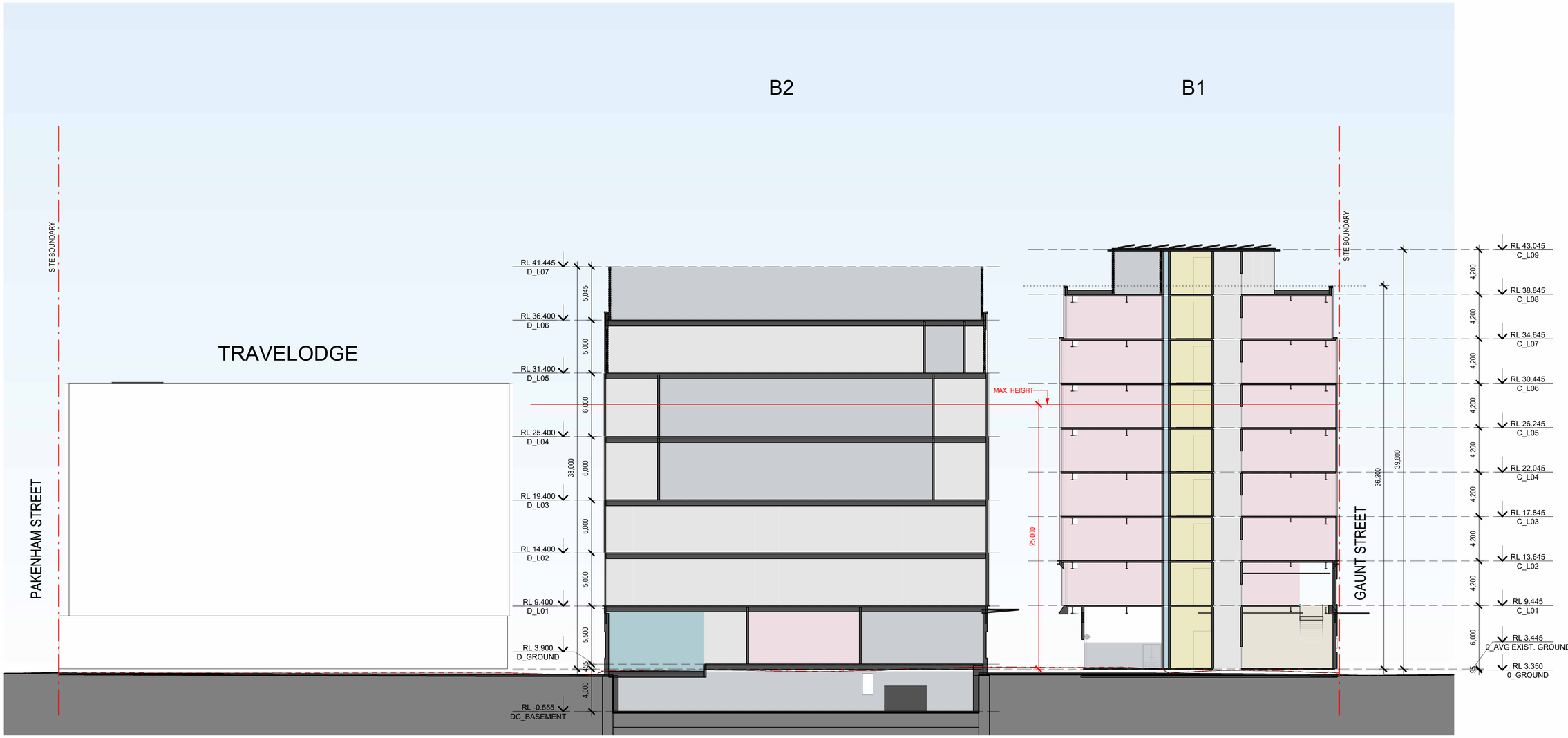
peddlethorp

SITE SECTIONS
100 HALSEY ST

SHEET NUMBER: 2153 - 1-321
REV:

Peddle Thorp Aitken Ltd
TĀMAKI-MAKAURAU
ŌTAUTAHI
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1 / 1-101 SITE N-S SECTION
SCALE 1 : 200

DRAFT

- RAISED FLOORS
- RETAIL
- LOBBY
- OFFICE
- TOILETS
- END OF TRIP / BICYCLE
- RISERS
- CIRCULATION
- SERVICES / REFUSE
- LOADING DOCK

Author Checker

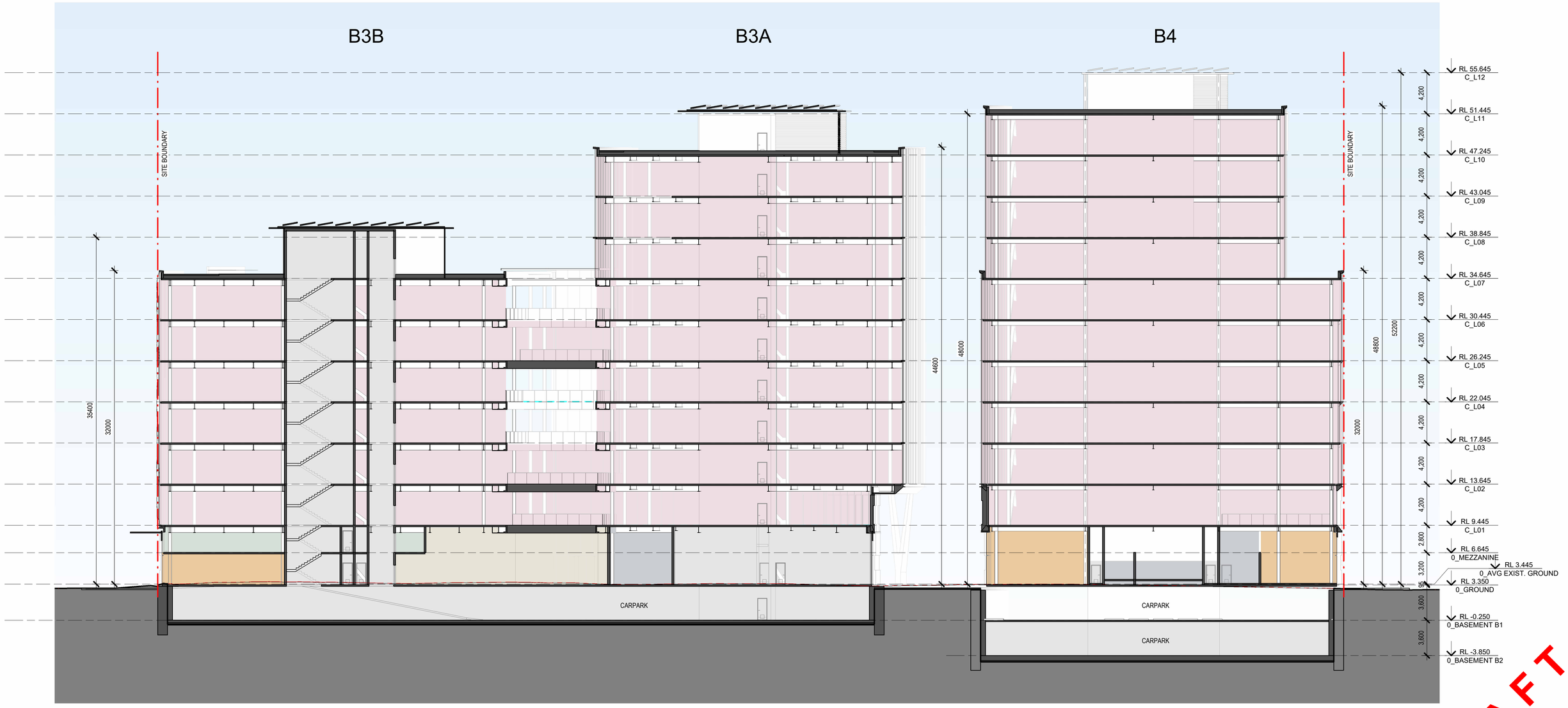
peddlethorp

SITE SECTIONS
100 HALSEY ST

SHEET NUMBER: 2153 - 1-322
REV:

Peddle Thorp Aitken Ltd
TĀMAKI-MAKAURAU
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1
1-101
SITE N-W SECTION
SCALE 1 : 200

RAISED FLOORS
RETAIL
LOBBY
OFFICE
TOILETS
END OF TRIP / BICYCLE
RISERS
CIRCULATION
SERVICES / REFUSE
LOADING DOCK

DRAFT

Author Checker

peddlethorp

SITE SECTIONS
100 HALSEY ST

SHEET NUMBER: 2153 - 1-323
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Appendix B Site photographs



Photograph Appendix B.1: Looking south from the B1 and B2 development area towards Gaunt Street.



Photograph Appendix B.2: Looking northwest from the B1 and B2 development area towards Pakenham Street West.



Photograph Appendix B.3: Looking southwest from the B1 and B2 development area towards the workshop fronting Gaunt Street. An elecrtical transformer is present in the right hand side of the photograph.



Photograph Appendix B.4: Electrical charge stations present along the northern boundary of the B1 and B2 development area.

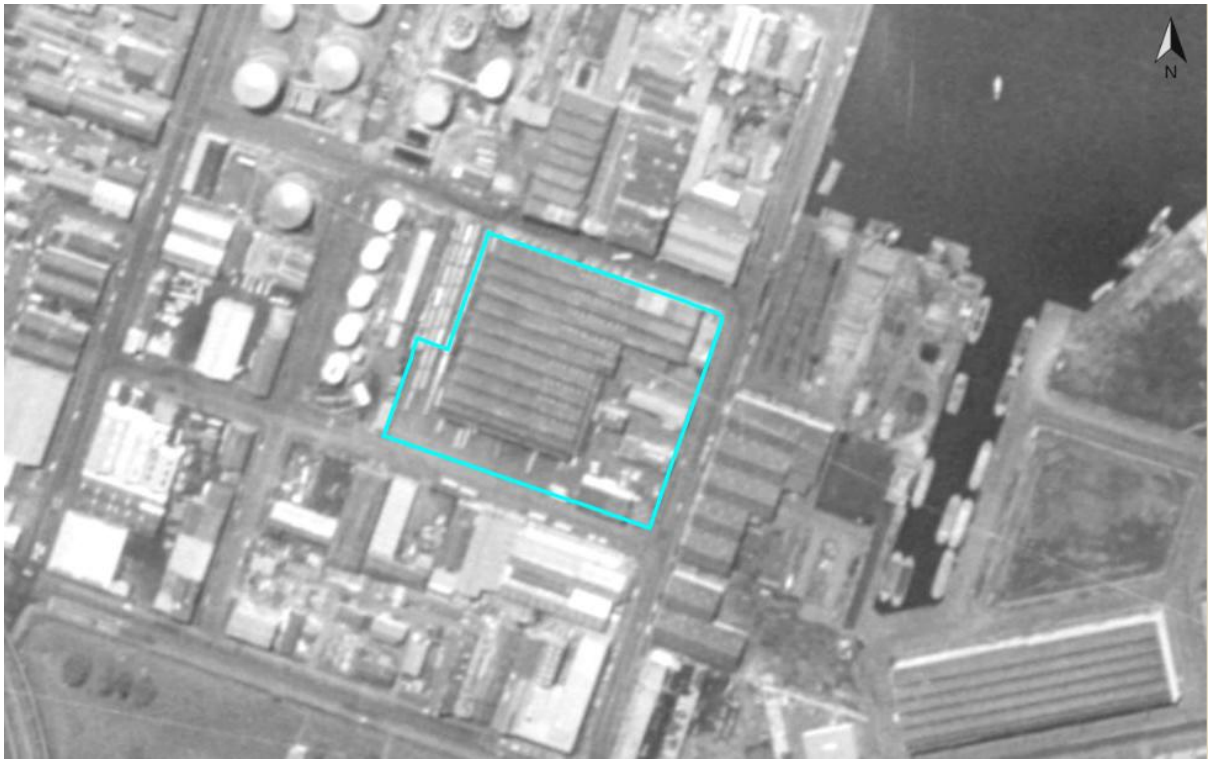
Appendix C Historical aerial photographs



Photograph Appendix C.1: 1940 aerial photograph, source: AC Geomaps.



Photograph Appendix C.2: 1950 aerial photograph, source: AC Geomaps.



Photograph Appendix C.3: 1960 aerial photograph, source: AC Geomaps.



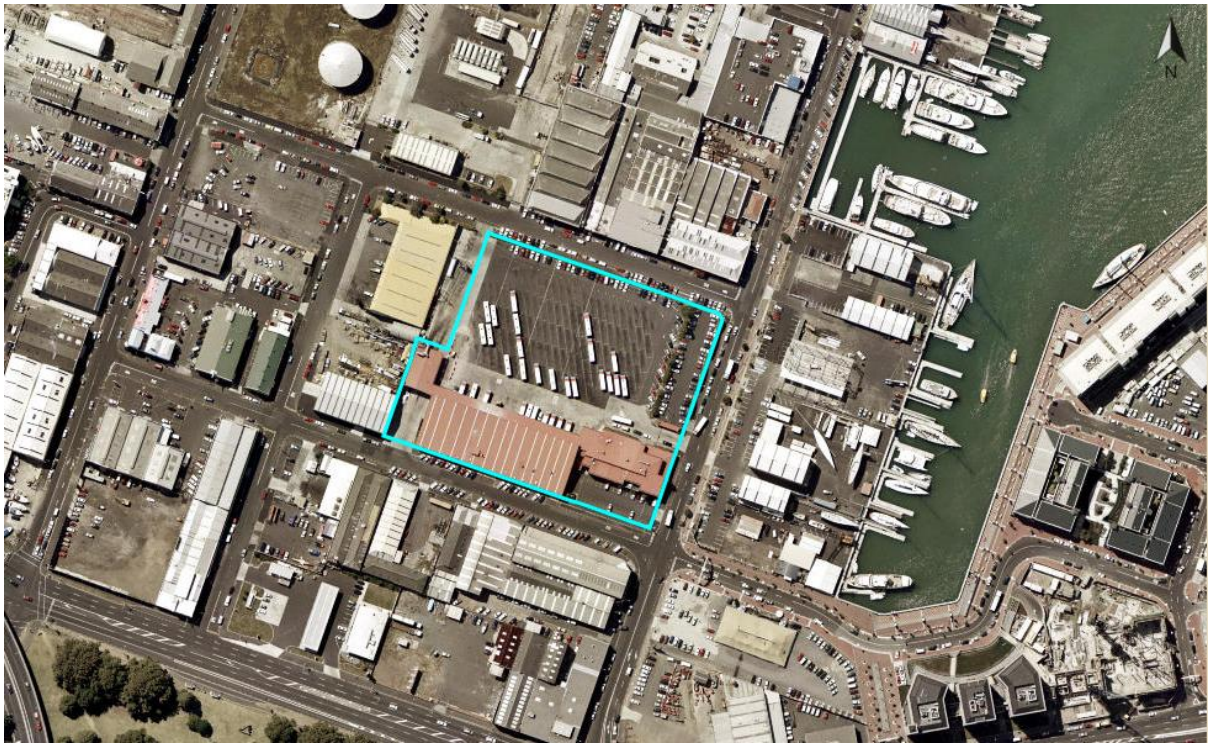
Photograph Appendix C.4: 1970 aerial photograph, source: AC Geomaps.



Photograph Appendix C.5: 1980 aerial photograph, source: AC Geomaps.



Photograph Appendix C.6: 1990 aerial photograph, source: AC Geomaps.



Photograph Appendix C.7: 2000 aerial photograp, source: AC Geomaps.



Photograph Appendix C.8: 2017 aerial photography, source: AC Geomaps.



Photograph Appendix C.9: 2024 aerial photography, source: AC Geomaps.

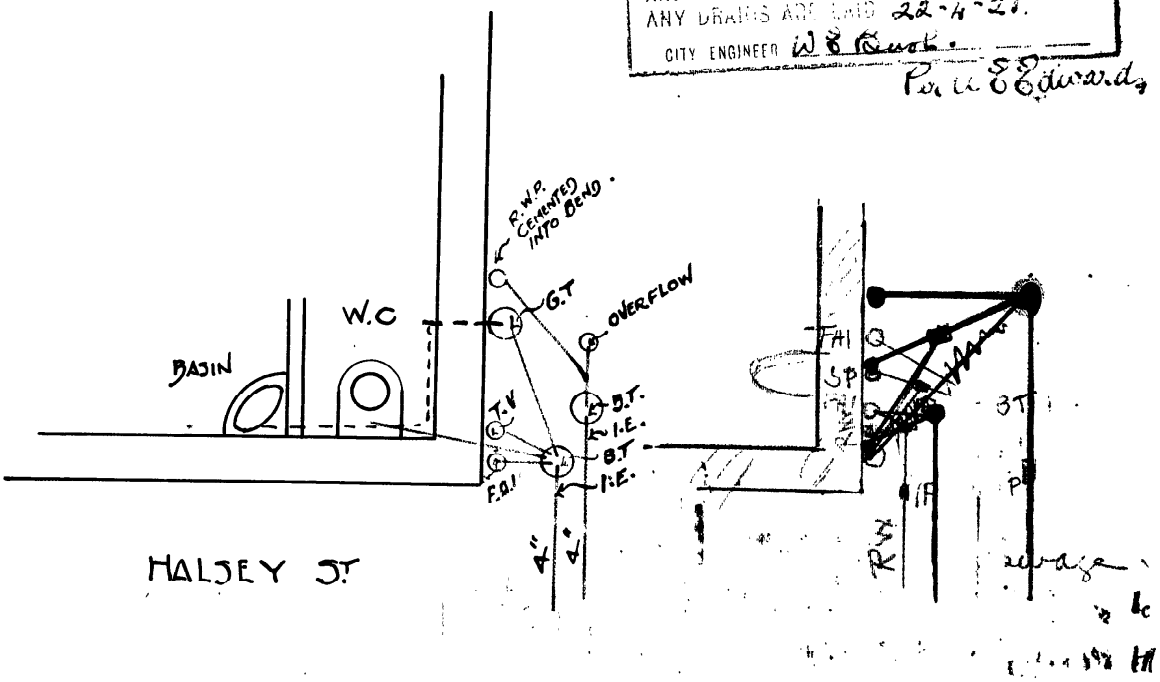
Appendix D Property files

ACETONE WELDING Co,
NEW BUILDING, HALSEY ST,
AUCKLAND.

NORMAN WADE & A.M. BARTLEY.
ARCHITECTS, AUCKLAND

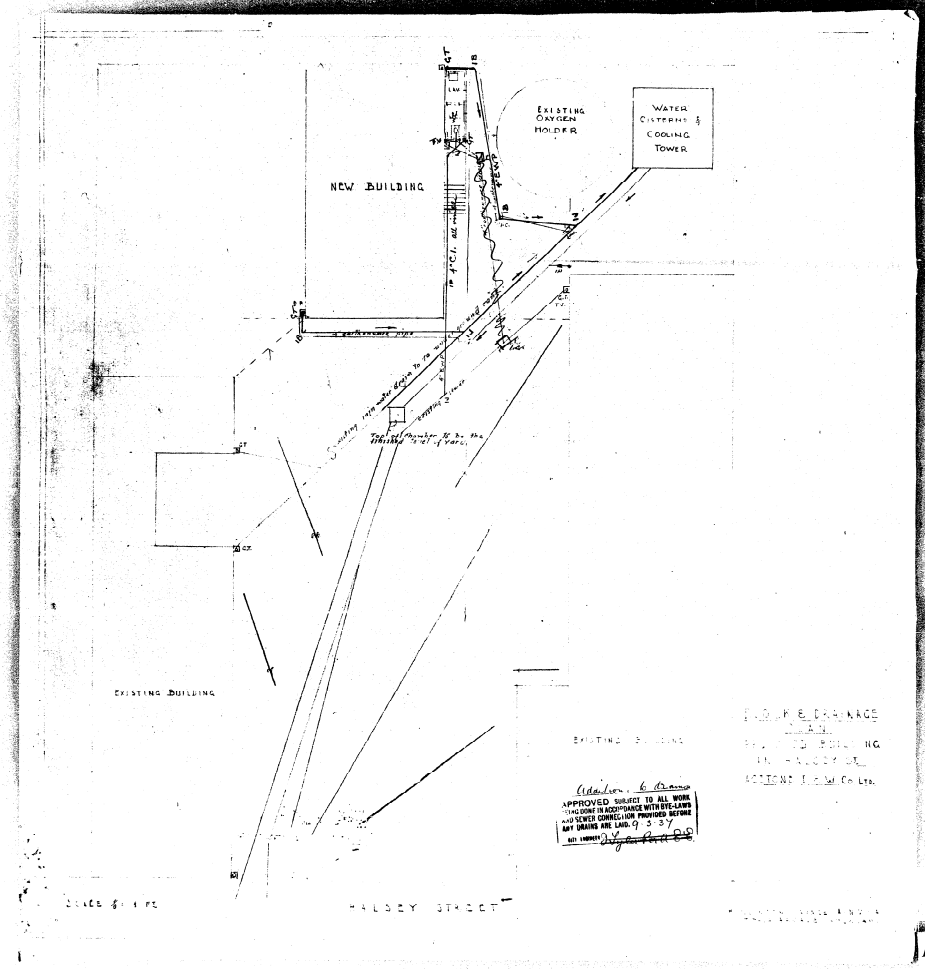
Amended Plan

APPROVED SUBJECT TO ALL WORK BEING DONE IN ACCORDANCE WITH BYE-LAWS AND SEWER CONNECTION PROVIDED BEFORE ANY DRAINS ARE LAID 22-4-21.
CITY ENGINEER W S Rook.
Per W E Edwards

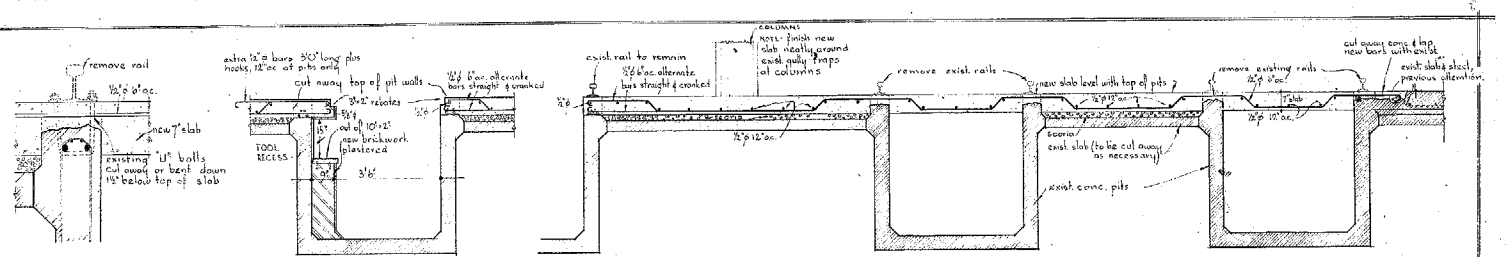


DRAINAGE PLAN
SCALE 4 FEET = 1 INCH

A3


NEW BUILDING
EXISTING OXYGEN HOLDER
WATER CISTERNS & COOLING TOWER
EXISTING BUILDING
HALSEY STREET
APPROVED SUBJECT TO ALL WORK
BEING DONE IN ACCORDANCE WITH BYE-LAWS
AND SEWER CONNECTION PROVIDED BEFORE
ANY DRAINS ARE LAID. 9-3-54

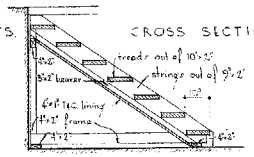
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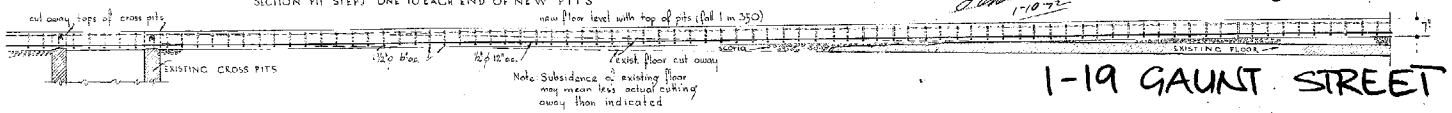
1/8th F.S DETAIL AT TOP OF EXIST PITS.

CROSS SECTION AT NEW PITS

TYPICAL CROSS SECTION SHOWING SLAB REINFORCEMENT



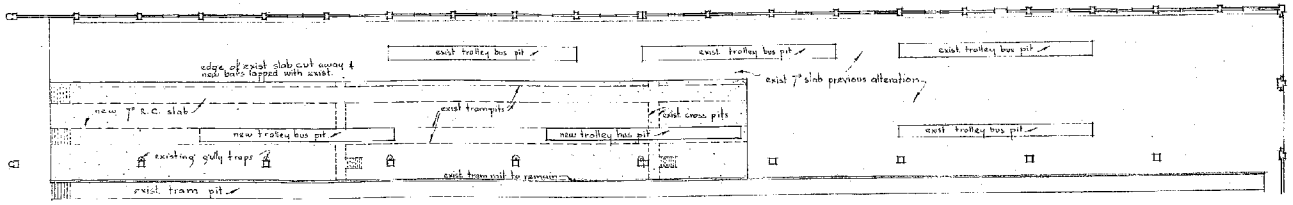
SECTION PIT STEPS ONE TO EACH END OF NEW PITS



TYPICAL LONGITUDINAL SECTION (½ SECTION BETWEEN CROSS PITS)

(A1)

1-19 GAUNT STREET
P. No 11234
BUILD TROLLEY BUS PIT-STRENGTHEN FLOOR



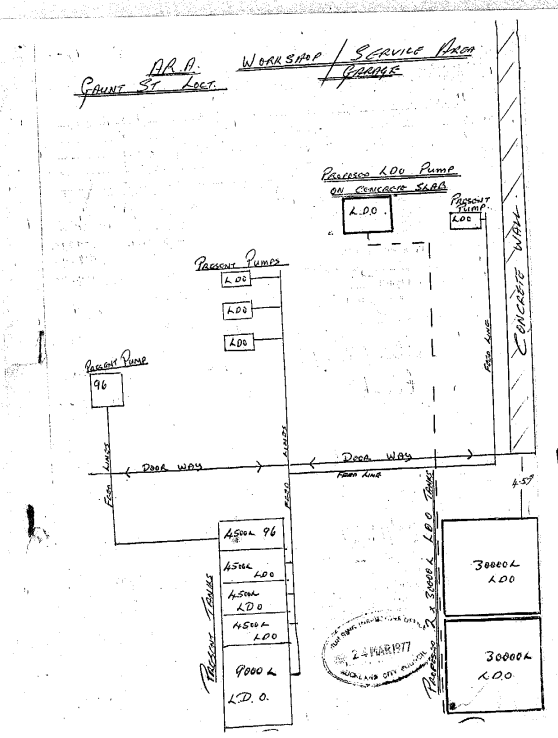
PLAN SCALE: 1/8"=1'0"

N

1 OCT 1952

1 of 1

AUCKLAND TRANSPORT BOARD..... ALTERATIONS TO BUILDING GAUNT ST. NEW FLOOR & TROLLEY BUS PITS	M.K. & R.F. DRAFFIN ARCHITECTS AUCKLAND	SCALES: 1/8" & ½"=1'0" & 1/8th FS.	Sheet No 1



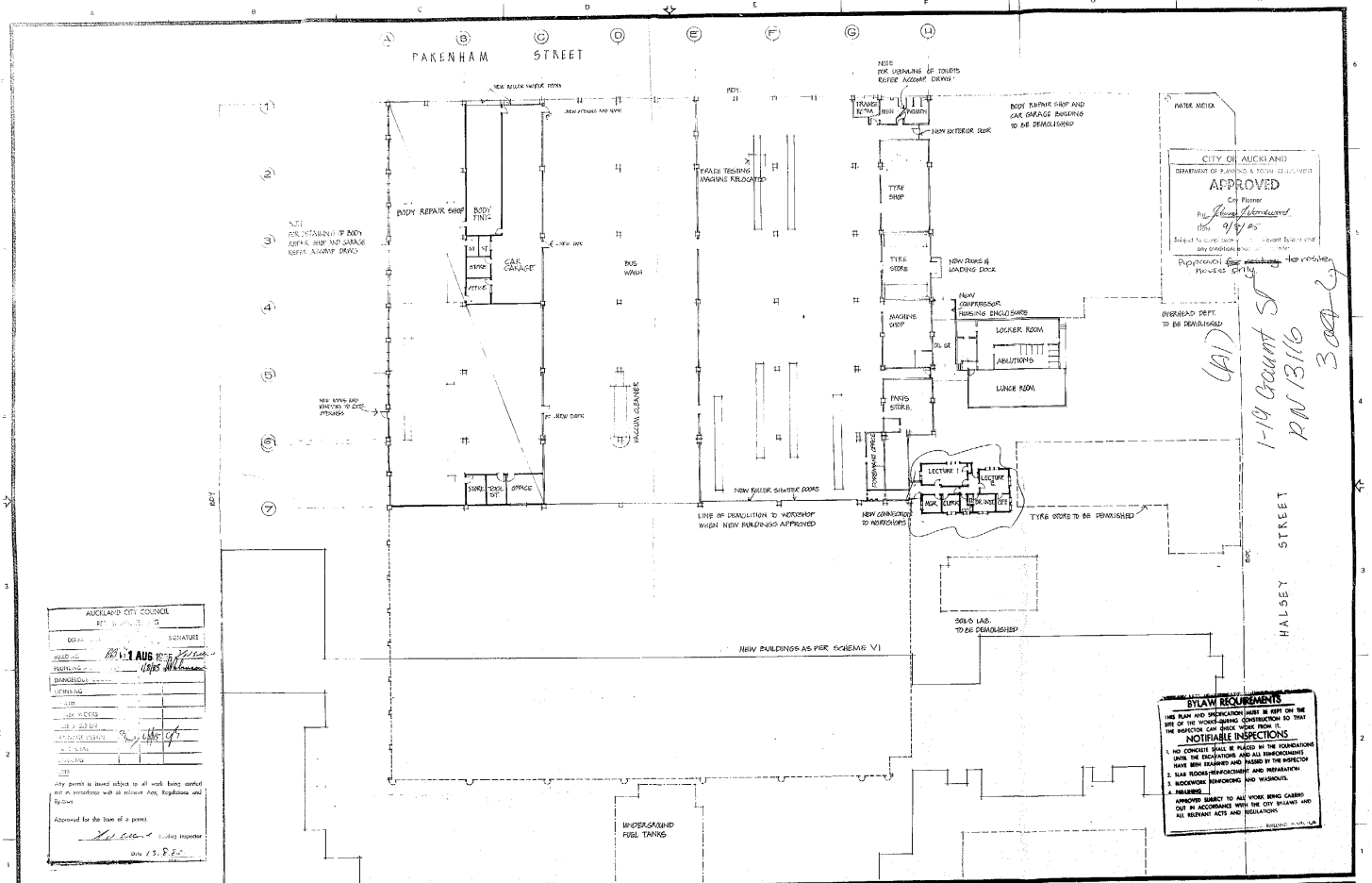
(A3)

1-19 GAUNT STREET

P.No. 23320

24 JUNE 1977

INSTALL 2 STORAGE TANKS 1of3



ISSUE	DATE	AMENDMENT	BY	CHKD	APPD

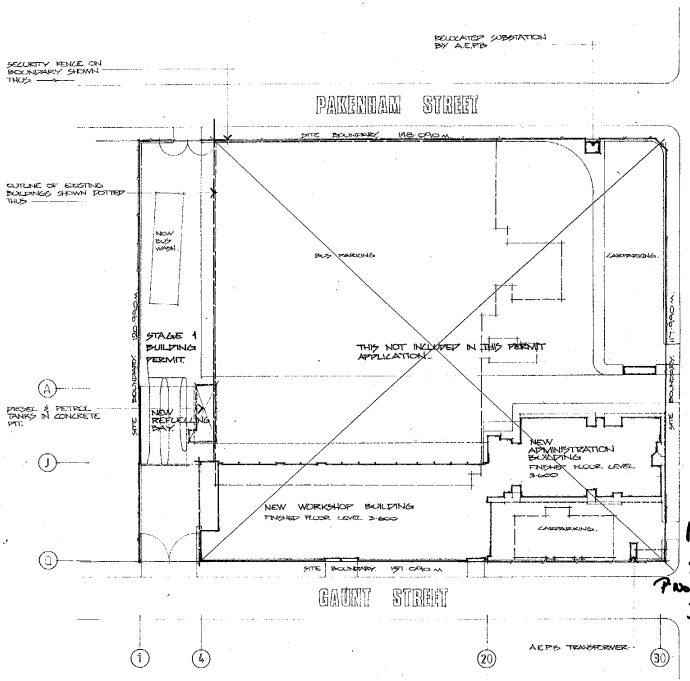
DESIGNED			
DES. CHECKED			
DRAWN	H.KANAPIA		
TRACED			
DAG. CHECKED			
	BY	DATE	

AUCKLAND REGIONAL AUTHORITY - BOARD OF WORKS

MANAGER

CITY BUS DEPOT WORKSHOPS
DEMOLITION AND INTERIM REINSTATEMENT - 1985
PLAN OF DEMOLITION AND PROPOSED WORKS
JULY '85

ORIGINAL SCALE A1	CONTRACT No.
1:250	
DRAWING No. 5.11365 - 24	ISSUE



Note — This Building Permit Application will not include the installation of the fuel pumps and the underground tanks. Such pumps and the underground tanks will be subject to a separate permit.

M. R. Thompson
Thompson Brooks Limited
10/1/87

FOUNDATION PRESSURES	
FLOOR LOADINGS	
CONCRETE GRADE	
MASONRY GRADE	
SUBDIVISION REQUIREMENT	
CONCRETE	
MASONRY	
EXCAVATION	
STEEL REQUIREMENTS	

NOTES
CONFIRMATION OF THIS DRAWING IS VESTED IN ARCHITECTS MILLER HOUSTON
FIGURED DIMENSIONS ARE TO BE TAKEN IN PREFERENCE TO SCALE — IF IN DOUBT REFER WITH ARCHITECTS
ALL TENDERERS TO BE ENGAGED ON SITE TO CHECK THE LOCATION OF ANY SURVEYORS

HAWKINS CONSTRUCTION LIMITED

THORBURN DAVIDSON

LEGAL DESCRIPTION

PT 80594
LOTS 1 & 2.

LOT 1 CT 36 P335 (1.4460 ha)
LOT 2 CT 40 C218 (1.1672 ha).

NOTE: THIS DRAWING IS ONLY A GUIDE FOR DETAILED STRUCTURAL INFORMATION REFER CIVIL ENGINEERS DRAWINGS.

NOTES RE INSPECTIONS

1. NO CONCRETE SHALL BE PLACED IN THE FOUNDATIONS UNTIL THE EXCAVATION HAS BEEN PROPERLY CHECKED, THIN HAVE BEEN REINFORCED AND PASSED BY THE INSPECTOR.
2. SLAB BLINDING SHALL BE CLEAN AND PREPARATION.
3. RECONCRETE REINFORCED AND WATERTIGHT.
4. [illegible]

CONSTRUCTION INSPECTOR

No.	Description	Date
	CHECKING THAT DRAWING IS THE LATEST REVISION HAVING CONSTRUCTION OR SHOP DRAWINGS ISSUED TO SUBCONTRACTORS	

AUCKLAND CITY COUNCIL
PERMIT PROCESSING

DEPARTMENT	YES	NO	SIGNATURE
BUILDING B.I.87			3287
PLUMBING & DRAINAGE			
NOXIOUS GOODS			
ZONING N.D.			
TCH			
CIVIL WORKS			
TRAFFIC DESIGN			
DRAINAGE DESIGN			
STRUCTURAL			4.2.87
PLANNING			
OTHER			

This permit is issued subject to all work being carried out in accordance with all relevant Acts, Regulations and Bylaws.

Approved for the issue of a permit.
Building Inspector
Date 4.2.87

CITY OF AUCKLAND
DEPARTMENT OF PLANNING & ENVIRONMENTAL DEVELOPMENT
APPROVED
City Planner
Per
Date 2-4-87
Subject to compliance with all relevant Acts and Regulations and Auckland Regional Authority

ARCHITECTS
MILLER · HOUSTON

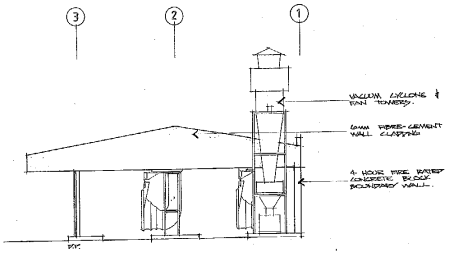
PROJECT
A.R.A CITY BUS DEPOT
GAUNT STREET, BAILEY STREET & PAKENHAM STREET.

DRAWN SCALE 1:200 @ A1 SIZE
DATE NOV 86

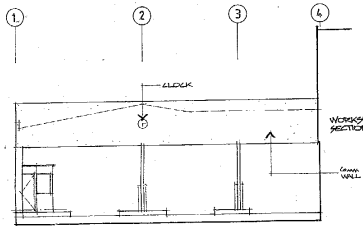
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PROPOSED SITE PLAN.

JOB NO. 1987
DRAWING NO. 2

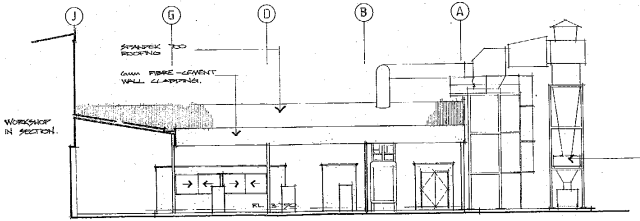
1-19 Gaunt Street Pwb. 13884
3 of 11.



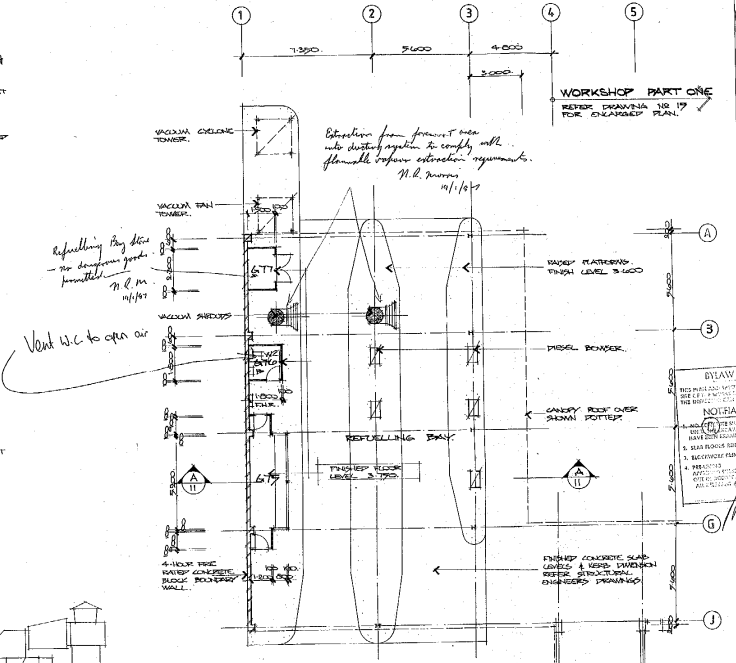
ELEVATION (1) VIEWED FROM NORTH



ELEVATION (2) VIEWED FROM SOUTH



ELEVATION (6) VIEWED FROM EAST.



BYLAW REQUIREMENTS

NOTIFIABLE INSPECTIONS

1. ...
2. ...
3. SEAL BLOCK JOINTS
4. ...
5. ...

(A1)

1-19 Gaunt Street

P. No. 12484

4 of 11

CITY OF AUCKLAND
DEPARTMENT OF PLANNING & ROOM DEVELOPMENT
APPROVED
City Planner
For
Date
Subject to compliance with all relevant Bylaws and any conditions endorsed hereunder.

AUCKLAND REGIONAL AUTHORITY - BOARD OF WORKS

NOTICE
COPYRIGHT OF THIS DRAWING IS VESTED IN ARCHITECTS MILLER HOUSTON

FIGURED DIMENSIONS ARE TO BE TAKEN IN PREFERENCE TO SCALE. IF IN DOUBT, CHECK WITH ARCHITECTS.

ALL DIMENSIONS TO BE CHECKED ON SITE BEFORE FABRICATION OF ANY COMPONENTS.

KEY PLAN.

HAWKINS CONSTRUCTION LIMITED

THORBURN DAVIDSON
CONSULTING FIRE & STRUCTURAL ENGINEERS

ARCHITECTS
MILLER · HOUSTON
4/6 DOMINION ROAD, AUCKLAND 3. PO BOX 68201 TELEPHONE 605 189, 605 190

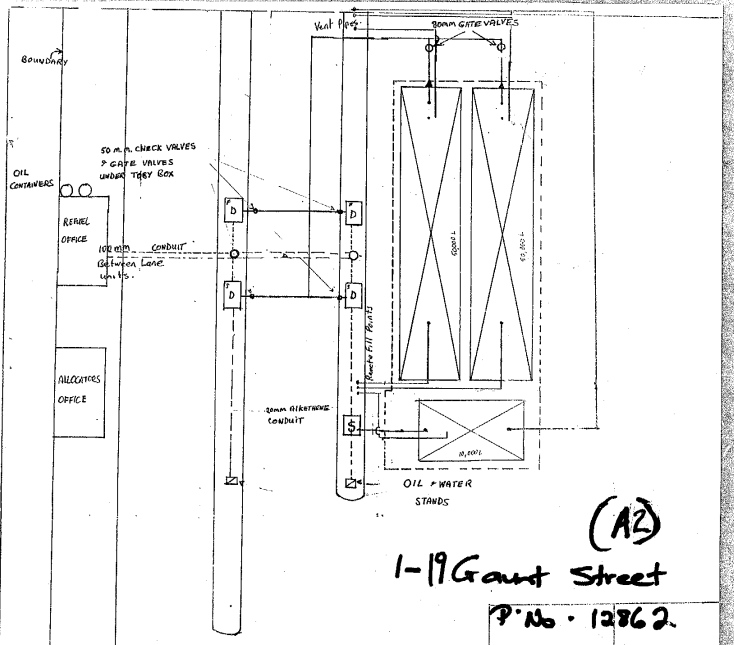
PROJECT
A.R.A. CITY BUS DEPOT
GAUNT STREET, HALSEY STREET & PANMURE STREET.

DESIGNED
DRAWN NIGEL PEARSEMORE
TRACED

SHEET TITLE
REFUELLING BAY PLAN & ELEVATIONS.

SCALE 1:100
DATE DEC. 86

DRAWING No. 597
REVISION 10



NOTES

1. 20mm conduit to terminate under each diesel pump
   - each lane unit
   - each oil and water stand
   - Oil container centres
2. 100 mm Conduit to run from Lane unit conduit to office.

BYLAW REQUIREMENTS

THIS PLAN AND SPECIFICATION MUST BE KEPT ON THE SITE OF THE WORKS DURING CONSTRUCTION SO THAT NOTIFIABLE INSPECTIONS CAN CHECK WORK FROM IT.

CONCRETE SHALL BE PLACED IN THE FOLLOWING ORDER UNTIL THE EXCAVATIONS AND ALL REINFORCEMENT HAVE BEEN EXAMINED AND PASSED BY THE RESPONSIBLE AUTHORITY

2. SLAB FLOORS REINFORCEMENT AND PREPARATION.
3. BLOCKWORK REINFORCING AND WASHOUTS.
4. PRE-LINING

APPROVED SUBJECT TO ALL WORK BEING CARRIED OUT IN ACCORDANCE WITH THE BUILDING BYLAWS AND ALL RELEVANT ACTS

ARA GAUNT ST
SCALE 1:100
P.R. YOUNG
9-11 86

(A2)

1-19 Gaunt Street

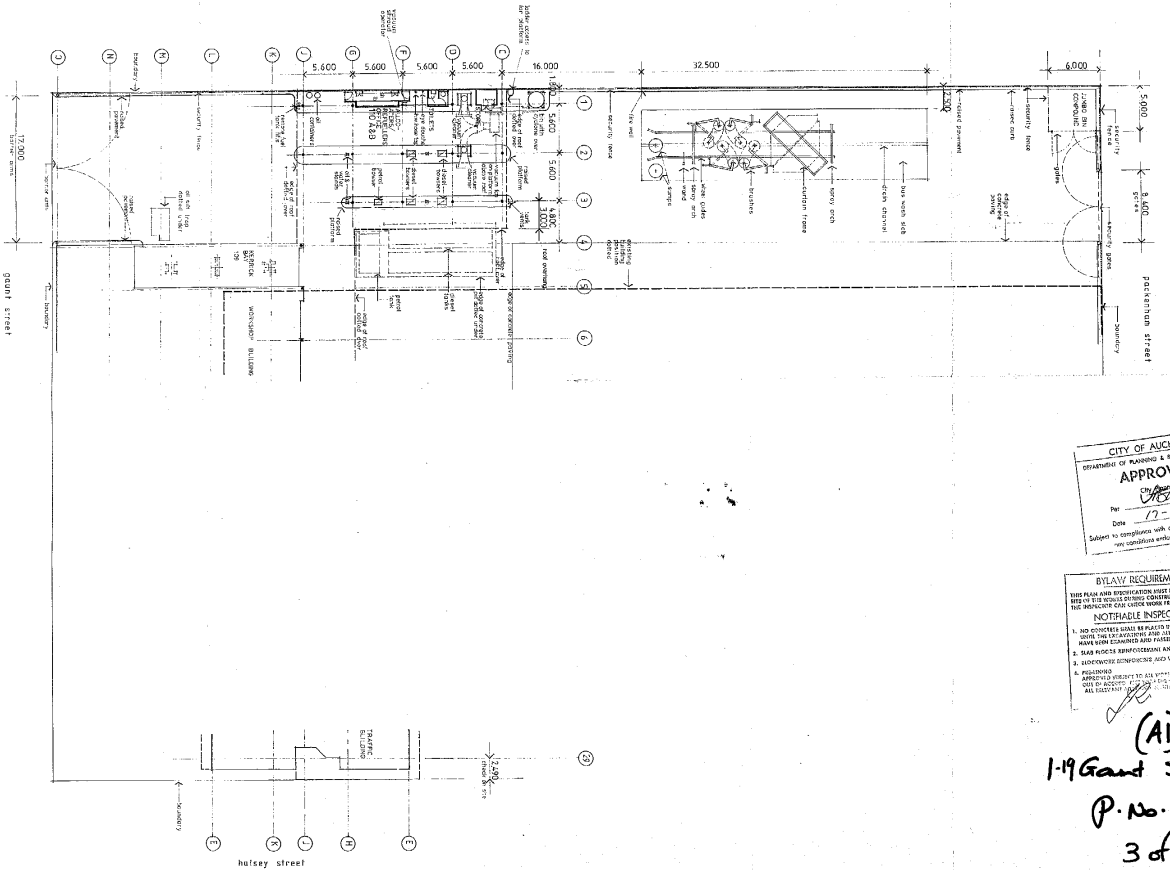
P. No. 12862.

NEW BUILDING

Remove and replace Tanks

4 MAR 1987

1 of 3

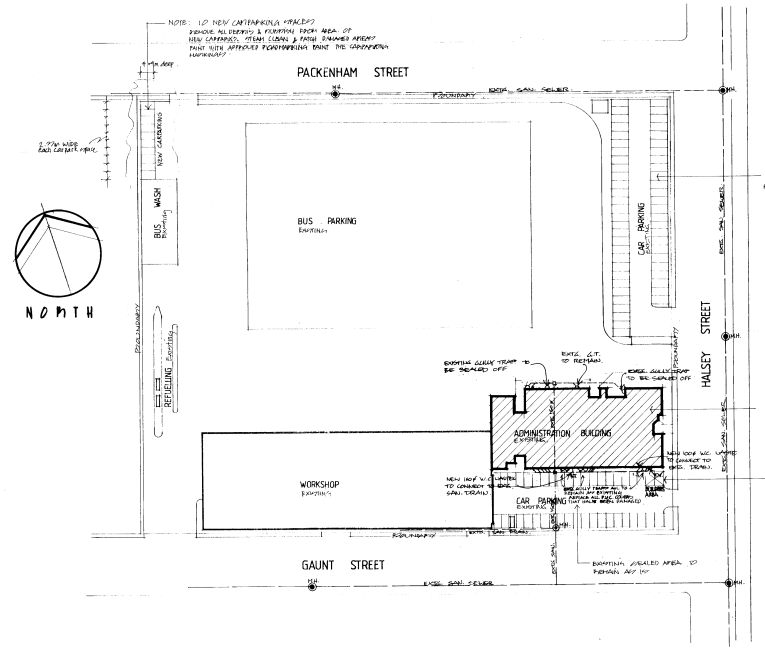


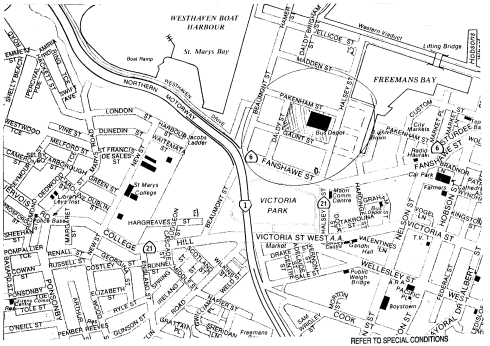
CITY OF AUCKLAND
DEPARTMENT OF PLANNING & SOCIAL DEVELOPMENT
APPROVED
City Planner
Per
Date 17-2-87
Subject to compliance with all relevant bylaws and any conditions endorsed hereunder

BYLAW REQUIREMENTS
THIS PLAN AND SPECIFICATION MUST BE KEPT ON THE SITE OR BUILDING CONSTRUCTION SO THAT THE INSPECTOR CAN CHECK WORK FROM IT.
NOTIFIABLE INSPECTIONS
1. NO CONCRETE SHALL BE PLACED IN ITS FOUNDATIONS BEFORE THE EXCAVATIONS AND ALL TIMBERWORK HAVE BEEN EXAMINED AND PASSED BY THE INSPECTOR
2. SLAB PLOCES REINFORCEMENT AND FORMATION.
3. PLUMBWORK BONDHOUSE AND DRAINAGE.
4. PLUMBING APPROVED SUBJECT TO ALL WORK BEING CARRIED OUT IN ACCORDANCE WITH THE ...

(A1)
1-19 Gaunt Street
P. No. 12862
3 of 3

A1





LOCATION PLAN NTS

CITY ENVIRONMENTS
- 1 DEC 1994
PROCESSED

HOBSON EASTERN BAYS BUILDING CONSENT NO. 94 6419 AUCKLAND CITY COUNCIL

HOBSON EASTERN BAYS
7 NOV 1994
AREA OFFICE

1

	DATE	AMENDMENT
A	12/8/94	Existing drainage & notes added.

PROPOSED HEAD OFFICE RELOCATION
TO THE HALSEY STREET DEPOT
FOR THE YELLOW BUS COMPANY

SITE PLAN

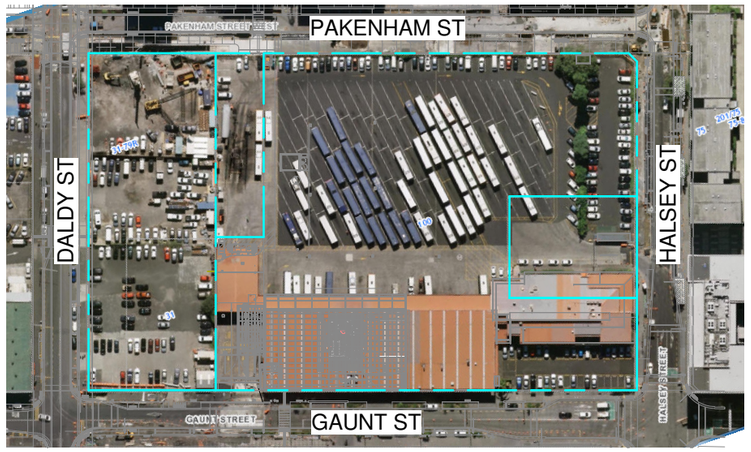
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JUNE 94

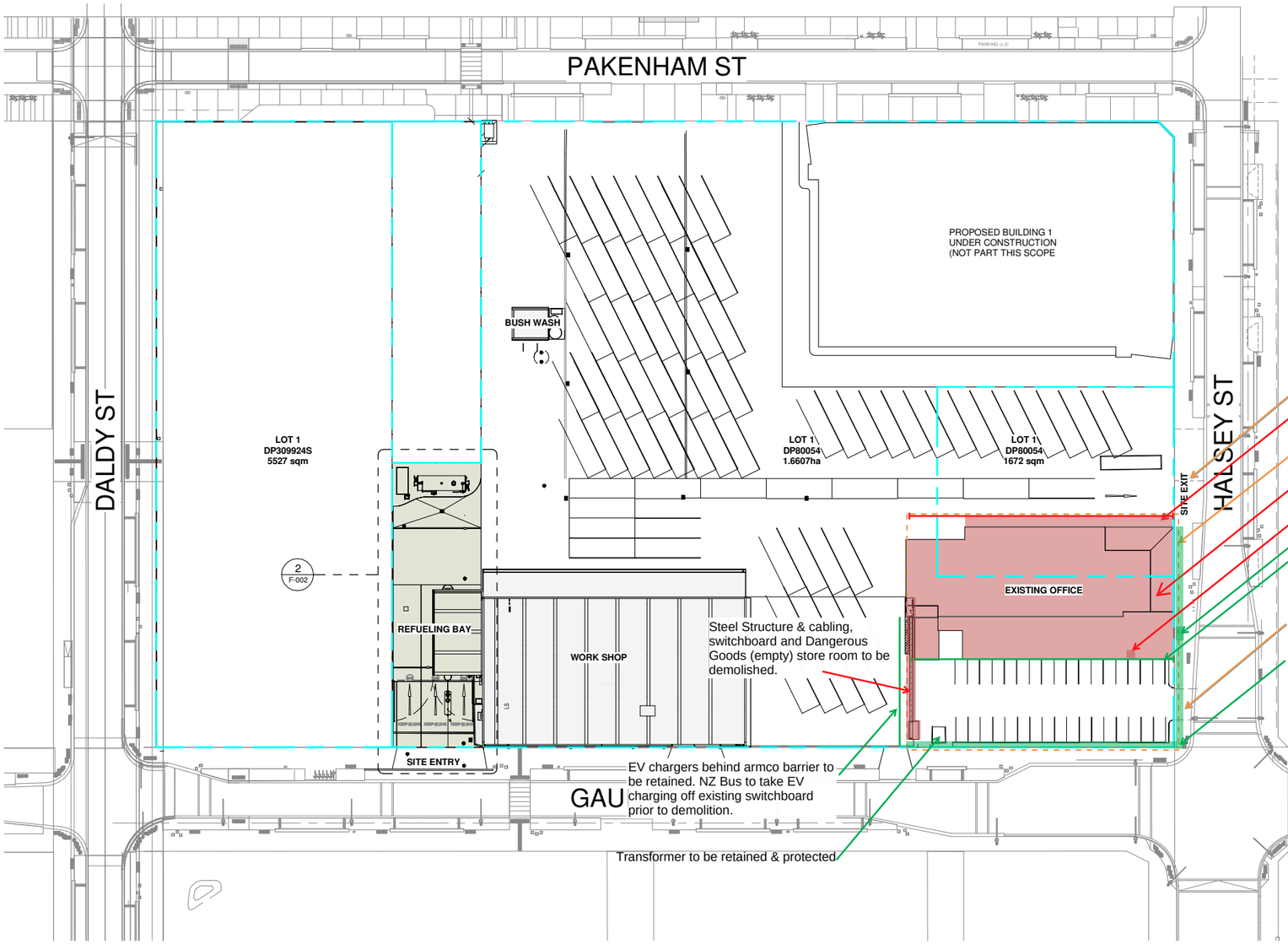
REF NUMBER: 94020
DWG N.O. A01 A

10 - DRAWING LIST

DRAWING NUMBER	DRAWING TITLE	CURRENT REVISION	SHEET ISSUE DATE
F-001	EXISTING SITE & PROPOSED REFUELING BAY LOCALITY PLAN	5	14/06/19
F-002	REFUELING BAY LAYOUT	5	14/06/19
F-003	SITE SETOUT AND FUELS PLAN	5	14/06/19
F-004	PROPOSED STORMWATER CATCHMENT PLAN	5	14/06/19
F-005	SEPARATION DISTANCE PLAN	5	14/06/19
F-006	PROPOSED FUELS SCHEMATIC LAYOUT PLAN	5	14/06/19
F-100	REFUELING BAY CROSS SECTION	5	14/06/19
F-102	TANK SECTION	5	14/06/19
F-103	SUPERVAULT 45kL DIESEL TANK DETAILS	5	14/06/19
F-200	TYPICAL SUMP DETAILS	5	14/06/19
F-201	ASSEMBLY POINT & SUMP 3D	5	14/06/19
F-203	DISPENSER DETAILS	5	14/06/19



1 F-001 SITE LOCATION PLAN
1 : 1000



2 F-001 SITE EXISTING & PROPOSED REFUELING BAY PLAN
1 : 500

PROJECT ADDRESS: 100 HALSEY STREET, AUCKLAND
LEGAL DESCRIPTION: LOT 1 DP 80054

ZONING CATEGORIES	
TOTAL SITE AREA	1.6607 ha
EARTHQUAKE ZONE	ZONE 1
WIND ZONE REGION	A
CORROSION ZONE	ZONE D
LAND USE ZONE	COMMERCIAL 8A

NORTH

RECEIVED
10/06/2021
Auckland Council

DISCLAIMER
THE LOCATION OF STRUCTURES AND UNDERGROUND SERVICES HAVE BEEN DIGITISED FROM EXISTING RECORDS PROVIDED BY LOCAL AUTHORITIES AND SERVICES PROVIDERS. ECL GROUP LTD ACCEPTS NO RESPONSIBILITY FOR THE ACCURACY OR COMPLETENESS OF THIS INFORMATION. THE LOCATION OF ALL STRUCTURES, UNDERGROUND SERVICES, AND DIMENSIONS MUST BE VERIFIED ON SITE PRIOR TO THE COMMENCEMENT OF ANY WORKS.

GENERAL NOTES
1. DO NOT SCALE OFF DRAWINGS.
2. CONTRACTOR SHALL VERIFY AND BE RESPONSIBLE FOR ALL DIMENSIONS ON SITE.
3. ECL GROUP LTD. TO BE NOTIFIED OF ANY VARIATION BETWEEN SITE DIMENSIONS AND THOSE ON PLANS.
4. THIS DRAWING IS THE PROPERTY OF ECL GROUP LTD AND MUST NOT BE USED, COPIED OR REPRODUCED IN WHOLE OR PART WITHOUT PRIOR WRITTEN PERMISSION.
5. THIS DRAWING IS TO BE READ IN CONJUNCTION WITH ALL CONSULTANTS DRAWINGS AND SPECIFICATIONS.
6. ALL DIMENSIONS ARE SHOWN IN MM (MILLIMETERS)

CONSTRUCTION ISSUE

LEGEND

LEGAL BOUNDARY LINE

AREA OF PROPOSED REFUELING BAY

REVISION SCHEDULE

REV	DESCRIPTION	DATE
2	BUILDING CONSENT	30-10-18
3	REVISED BUILDING CONSENT	21-02-19
4	REVISED BUILDING CONSENT MAY	22-05-19
5	CONSTRUCTION ISSUE	14-06-19

ECL GROUP
Critical Technical Services
ECL GROUP LTD
232 - 240 GRACEFIELD ROAD, SEAVIEW
PO BOX 5046
WELLINGTON
NEW ZEALAND
TELEPHONE: (64) 04 802 8400 FAX: (64) 09 525 0867

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CLIENT: NZBUS

PROJECT NAME:
WYNYARD 100 / NZBus Workshop Alterations

PROJECT ADDRESS:
100 Halsey St
Auckland 1010

DRAWING TITLE:
EXISTING SITE & PROPOSED REFUELING BAY LOCALITY PLAN

DRAWN:	CHECKED:	APPROVED:
K.R	K.N	S.E
DATE ISSUED: 08-10-2018	SCALE: As indicated @ A1	
ECL - PROJECT NUMBER: 4081-DI-180191	DRAWING NUMBER: F-001	REVISION: 5

DRAWING REFERENCE
Drawings are prepared based on DWG drawings provided by PEDDLETHORP Ref: ***DWG - 1-052, DRAWING NAME : SITE PLAN - PROPOSED , DRAWING NO : 1682 - 1-052, REV:0 (06/05/2019).***

Duplicate Destroyed

[Land and Deeds—104.

NEW ZEALAND.

Reference: *Land Transfer (Compulsory Registration of Titles) Act, 1924.*
Deeds Index. 31A. 534, 32A. 317, 33A. 180, 186, 208, 294.
Application No. 33812C.

Register-book, *Vol.* 764 *,folio* 212.

764/212

REGISTER

CERTIFICATE OF TITLE UNDER LAND TRANSFER ACT.

LIMITED AS TO [illegible]

LIMITED AS TO PARCELS ~~AND TITLE~~

This Certificate, dated the nineteenth day of March, one thousand nine hundred and forty-one under the hand and seal of the District Land Registrar of the Land Registration District of AUCKLAND Witnesseth that

THE AUCKLAND HARBOUR BOARD

is seised of an estate in fee-simple (subject to such reservations, restrictions, encumbrances, liens, and interests as are notified by memorial under written or endorsed hereon; subject also to any existing right of the Crown to take and lay off roads under the provisions of any Act of the General Assembly of New Zealand) in the land hereinafter described, as the same is delineated by the plan hereon bordered green, be the several admeasurements a little more or less, that is to say: All that parcel of land containing five acres three roods twenty-one and four tenths perches more or less situated in the City of Auckland and being ~~Section~~ Lots 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31 and 32 of Block VIII on a plan lodged in the Deeds Register Office at Auckland as No. 226 and being part of that part of land reclaimed from the sea called Freemans Bay Reclamation.

Corrected to A&K 9.7.72

METRIC AREA IS 2·3810ha
2·3810ha

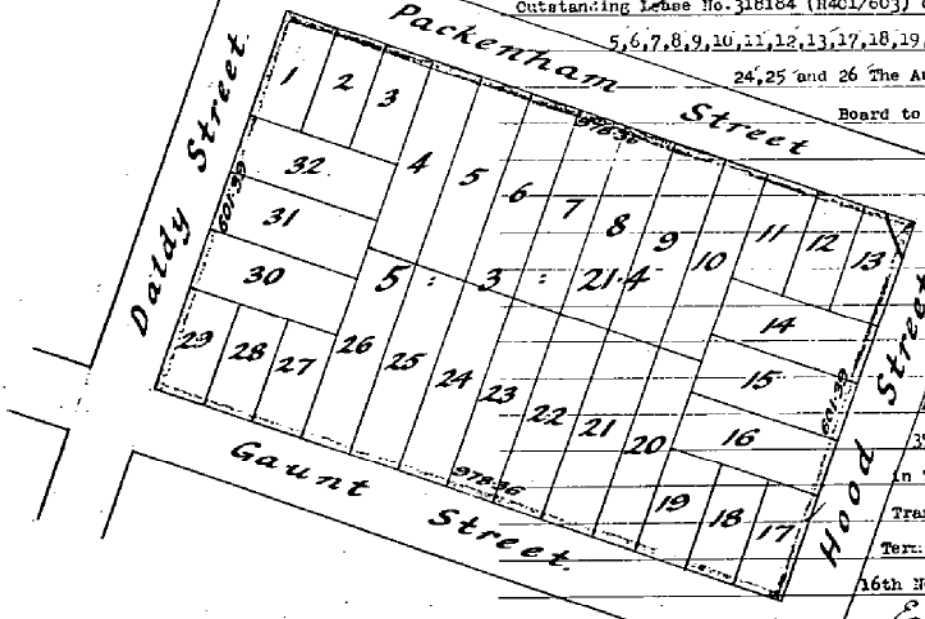
Conversion Factors:
1 Acre = 40 [illegible] m²
1 Perch = 25 [illegible] m²
1 Link = 2012 metres

AUCKLAND DISTRICT LAND REGISTRY

E R Adams
Assistant District Land Registrar.

Outstanding Lease No. 308248 (B379/662) of Section 16 The Auckland Harbour Board to The Acetone Illuminating and Welding Company Limited. Term 50 years from 1st April 1920. 624793 Leasehold No 1 issued for portion issued E R Adams Vol 911 Folio 60 ✓ Asst. L.R.

Outstanding Lease No. 318184 (B401/603) of Sections 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 17, 18, 19, 20, 21, 22, 23, 24, 25 and 26 The Auckland Harbour Board to The Mayor Councillors and Citizens of the City of Auckland and now vested by Assignment No. 391617 (B549/358) in The Auckland Transport Board. Term 50 years from 16th November 1922. ~~21~~ 50 expunded E R Adams Asst. L.R.



Delt. AFB. 25.

OVER

OVER.

764/212

Outstanding Lease No.339452 (R442/635) of Section 15 The Auckland Harbour Board to The Acetone Illuminating and Welding Company Limited. Term 50 years from 23rd July 1924. 6.2.1923 (Issued for leases in 911 Fol. 61) 31.5.1946 E K Adams Asst. L.R.

Outstanding Lease No.361430 (R487/468) of Section 14 The Auckland Harbour Board to The Mayor Councillors and Citizens of the City of Auckland and now vested by Assignment No.391616 (R547/614) in The Auckland Transport Board. Term from 1st December 1925 to 15th November 1972. E K Adams Asst. L.R.

Outstanding Mortgage No.366[illegible] (R489/81) of Leases Nos. 308248 and 339452 Acetone Illuminating and Welding Company Limited to The Bank of New Zealand. DISCHARGE [illegible] E.K. Adams Asst. L.R.

Outstanding Lease No.385625 (R540/36) of Sections 1,2, 3,28,29,30,31 and 32 The Auckland Harbour Board to The Texas Company (Australasia) Limited now Caltex Limited vide Certificate No.418702 (R602/447) Term 50 years from 1st September 1928. E K Adams Asst. L.R.

Outstanding Lease No.386439 (R537/636) of Section 27 The Auckland Harbour Board to John Findlay and now vested by Assignment No.386440 (R537/638) and Certificate No.418702 (R602/447) in Caltex Limited. Term 50 years from 18th February 1925. E K Adams Asst. L.R.

Transfer 389476 of Leases 385625 and 386439 Caltex Limited to Caltex Oil (N.Z.) Limited at Wellington. Produced 6-8-45 at 10.55 a.m. A.L.R.

Leases 308248 and 339452 have been damaged on the fire following the Hawke's Bay earthquake. Provisional Leases have been issued in lieu thereof pursuant to the Land Transfer (Hawke's Bay) Act 1931 see K 32/[illegible] Gen. Wellington 10.0?

A.76803 Transmission of outstanding leases 318184 and 361430 to Auckland Regional Authority entered 8.5.1965 at 12.29 p.m. A.L.R.

This certificate of title does not include [illegible] Entered 15/11/19 67 Assistant Land Registrar

709910.1 (Cancelled as to Lot 1 ONCT 23.8.1977) (& 2 Plan 80054 and new C/T issued. 36D/335 & 40C/278

709910.1 (Cancelled as to the ONCT 23.8.1977) (residue and new CT issued. 358/121

CANCELLED

Duplicate Destroyed

THIS REPRODUCTION (ON A REDUCED SCALE) ~~CERTIFIED TO BE A TRUE COPY OF THE ORIGINAL REGISTER FOR THE PURPOSES OF SECTION 215A LAND TRANSFER ACT 1952.~~

L.G. Stanman D.I.R.

Appendix E Site Contamination Enquiry

ACConsentID	SAPApplicationID	SAPConsentID	ConsentReference	ConsentDescription	TransactionType	TransactionTypeDescription	FormType	FormTypeDescription
ACC0002632083	8360082341	8380126870	DIS60082341	Stormwater discharge	YRCC	Resource Management Consent	YDIS	Discharge Consent
ACC0002562838	8360083060	8380127038	DIS60083060	Bledisloe B2 wharf extension - PAUP	YRCC	Resource Management Consent	YDIS	Discharge Consent
ACC0002592808	8360083432	8380126774	DIS60083432	Works associated with the extension of the existing Bledisloe "B3" wharf.	YRCC	Resource Management Consent	YDIS	Discharge Consent
ACC0002571991	8360083122	8380126692	DIS60083122	Bledisloe B2 wharf extension - Operative Plan	YRCC	Resource Management Consent	YDIS	Discharge Consent
ACC0002592801	8360083410	8380126758	DIS60083410	Bledisloe B3 wharf extension - PAUP	YRCC	Resource Management Consent	YDIS	Discharge Consent
		8380300976	DIS80300976	Application for the remediation and removal of up to 150m2 of contaminated soil from the site as part of site preparation works for the consruction of a warehouse and container laydown area.	YRCC	Resource Management Consent	YDIS	Discharge Consent
ACC0002769709	8360084058	8380127141	DIS60084058	Discharge of contaminants associated with the construction of a new wastewater rising main	YRCC	Resource Management Consent	YDIS	Discharge Consent
ACC0002765834	8360084152	8380127142	DIS60084152	Discharge of contaminants associated with industrial or trade activity.	YRCC	Resource Management Consent	YDIS	Discharge Consent
ACC0002562827	8360083037	8380126415	DIS60083037	Bledisloe B2 wharf extension - PAUP	YRCC	Resource Management Consent	YDIS	Discharge Consent
ACC0002520925	8360083069	8380126439	DIS60083069	Disturbance of land containing elevated levels of heavy metals that do not meet permitted standards of the ACRP. Demolition of existing building and earthworks	YRCC	Resource Management Consent	YDIS	Discharge Consent
		8380305043	DIS80305043	Manufacturing facility for grease and for blending oil. Block bounded by Beaumont, Jellicoe, Daldy and Madden streets.	YRCC	Resource Management Consent	YDIS	Discharge Consent
ACC0002384144	8360083241	8380126340	DIS60083241	Certificate of Compliance - Discharge of contaminants to air from ship to shore transfer of coal by POAL.	YRCC	Resource Management Consent	YDIS	Discharge Consent
ACC0002635401	8360083486	8380126885	DIS60083486	Stormwater discharge in relation to a temporary retail activity that will last 24 months	YRCC	Resource Management Consent	YDIS	Discharge Consent
ACC0002631948	8360083494	8380126854	DIS60083494	Earthworks and contamination consents for basement excavation	YRCC	Resource Management Consent	YDIS	Discharge Consent
ACC0002592797	8360082372	8380126739	DIS60082372	To authorise the discharge of contaminants from a wharf extension of approximately 2900m2 (being B3).	YRCC	Resource Management Consent	YDIS	Discharge Consent
		8380298288	DIS80298288	Manufacturing facility for grease and for blending oil. Block bounded by Beaumont, Jellicoe, Daldy and Madden streets.	YRCC	Resource Management Consent	YDIS	Discharge Consent
XXX0000027955	8360264831	8380299230	DIS60264831	To discharge contaminants to ground and groundwater from reclamation fill.	YRCC	Resource Management Consent	YDIS	Discharge Consent
		8380300455	DIS80300455	To authorise the on-going diffuse discharge of contaminant from reclamation fill into ground and groundwater beneath the site	YRCC	Resource Management Consent	YDIS	Discharge Consent
		8380299462	DIS80299462	Intallation of an API separator to treat fuelling area runoff at a proposed truckstop	YRCC	Resource Management Consent	YDIS	Discharge Consent
ACC0002942264	8360084221	8380127264	DIS60084221	RCPM - World Masters Games - Relates to LUC60067064 (NSC) - (THIS APPLICATION IS FOR THE COASTAL PERMIT AS IS TO BE USED AS PRINCIP LE) Relates to sites at 921 Beach Rd and 17 Sylvan Park Ave.	YRCC	Resource Management Consent	YDIS	Discharge Consent
	8360324576	8380387125	DIS60324576	Resource consent is required for the earthworks and to discharge contaminants from the soil disturbance associated with the repair and maintain the existing access, carpark and stormwater infrastructu	YRCC	Resource Management Consent	YDIS	Discharge Consent
	8360320011	8380416658	DIS60320011	Contaminant discharge permit associated with Westhaven Marina Development.	YRCC	Resource Management Consent	YDIS	Discharge Consent
		8380299297	DIS80299297	Application to change the wording of condition 5 of consent number 32071.	YRCC	Resource Management Consent	YDIS	Discharge Consent
XXX0000051637	8360268941	8380304478	DIS60268941	File Ref: 5-42-3782. Remediation & redevelopment of playground area within Victoria Park.	YRCC	Resource Management Consent	YDIS	Discharge Consent
	8360323992	8380387402	DIS60323992	Auckland Transport ('the applicant') proposes the excavation of 45 trenches along Quay Street (all within the road zone) to expose u ndergground services and utilities. The length of these trenches wil	YRCC	Resource Management Consent	YDIS	Discharge Consent
		8380299406	DIS80299406	Manufacturing facility for grease and for blending oil. Block bounded by Beaumont, Jellicoe, Daldy and Madden streets.	YRCC	Resource Management Consent	YDIS	Discharge Consent
	8360317829	8380382676	DIS60317829	Proposed investigation works are required to identify the location and scope of services in Quay Street to assist the construction of the new seawall. There are 16 test trenches proposed, each will be	YRCC	Resource Management Consent	YDIS	Discharge Consent
ACC0002602472	8360083487	8380126753	DIS60083487	Potential discharges of contaminants into air from the disturbance of contaminated soils as part of road upgrades.	YRCC	Resource Management Consent	YDIS	Discharge Consent
	8360318166	8380391435	DIS60318166	Marina development	YRCC	Resource Management Consent	YDIS	Discharge Consent
	8360320291	8380394625	DIS60320291	Discharge of contaminants to land and water from the earthworks associated with the Proposal for the Queens Wharf to Marsden Wharf s ection of the Quay Street seawall upgrade project.	YRCC	Resource Management Consent	YDIS	Discharge Consent
	8360334360	8380396748	DIS60334360	Consents for the Princes Wharf section of the Quay Street seawall upgrade project. Discharge Other (E4.4.1(A11) at an undefined rate of water or contaminants into land and groundwater.	YRCC	Resource Management Consent	YDIS	Discharge Consent
	8360334349	8380396790	DIS60334349	Discharge to air associated with the Ferry Basin section of the Quay Street seawall upgrade project.	YRCC	Resource Management Consent	YDIS	Discharge Consent
	8360334362	8380396749	DIS60334362	Discharge to air associated with the Princes Wharf section of the Quay Street seawall upgrade project.	YRCC	Resource Management Consent	YDIS	Discharge Consent
	8360327717	8380398025	DIS60327717	Granted in Error - Not mentioned in decision report. Construction of six new ferry berths adjacent to the western side of Queens Wharf in a 'reverse sawtooth' layout, including includes piles, guide p	YRCC	Resource Management Consent	YDIS	Discharge Consent
	8360338602	8380404931	DIS60338602	The DPS will proved an enhanced public space in the area between Princes Wharf, Pier 2 and Ferry Building. The new public space is p roposed to be undertaken in two main stages: Stage 1 (this applicat	YRCC	Resource Management Consent	YDIS	Discharge Consent
	8360329047	8380391095	DIS60329047	Discharge of contamination to land associated with the works to relocate utilities associated with the Downtown Infrastructure Development Programme.	YRCC	Resource Management Consent	YDIS	Discharge Consent
ACC0002917814	8360083926	8380127271	DIS60083926	Discharge of contaminants to land or water from land undergoing disturbance associated with the development of a new rising main between the rising main at the Fanshawe Street/Halsey Street intersecti	YRCC	Resource Management Consent	YDIS	Discharge Consent
ACC0002436792	8360082925	8380126163	DIS60082925	Rehabilition works to Fanshawe Street.	YRCC	Resource Management Consent	YDIS	Discharge Consent
		8380299633	DIS80299633	To authorise the on-going diffuse discharge of contaminants to ground and groundwater. Removal of approximately 3,500m3 of contaminated soil and removal of separate phase hydrocarbons from onsite. (L	YRCC	Resource Management Consent	YDIS	Discharge Consent
	8360336343	8380398856	DIS60336343	Discharges of contaminants from an industrial trade activity, being boat or ship construction repair or maintenance on Site 18.	YRCC	Resource Management Consent	YDIS	Discharge Consent
ACC0002379142	8360083283	8380126351	DIS60083283	Transfer Investigation - Groundworks and basement for new building. Discharge from disturbance of contaminated land.	YRCC	Resource Management Consent	YDIS	Discharge Consent
ACC0002668986	8360083997	8380126884	DIS60083997	Comprehensive development of Quarter Area 7 to establish a hotel development and public open space (contamination discharge)	YRCC	Resource Management Consent	YDIS	Discharge Consent
XXX0000038996	8360266466	8380301573	DIS60266466	To divert and discharge stormwater from an existing service station development	YRCC	Resource Management Consent	YDIS	Discharge Consent
	8360410748	8380467532	DIS60410748	Ongoing discharge of contaminants (metals, petroleum hydrocarbonsm PFAS) to land and water. For a site for integrated residential development for a full service retirement village. Apartment building	YRCC	Resource Management Consent	YDIS	Discharge Consent
	8360320291	8380394625	DIS60320291	Discharge of contaminants to land and water from the earthworks associated with the Proposal for the Queens Wharf to Marsden Wharf s ection of the Quay Street seawall upgrade project.	YRCC	Resource Management Consent	YDIS	Discharge Consent
ACC0002636422	8360083388	8380126837	DIS60083388	Road and civil infrastructure upgrade	YRCC	Resource Management Consent	YDIS	Discharge Consent
ACC0002493700	8360083595	8380126504	DIS60083595	Construction of Lysaght Lane	YRCC	Resource Management Consent	YDIS	Discharge Consent
XXX0000025179	8360264283	8380297338	DIS60264283	To discharge contaminants into the coastal marine environment from an industrial trade activity; namely the activities associated with the commercial port operations at the Port of Auckland. (Note the	YRCC	Resource Management Consent	YDIS	Discharge Consent
	8360445249	8380502422	DIS60445249	Fast Track Approval Act - to authorise the construction and operation of a new 330m long and 27.5m wide wharf to the northern end of the existing Bledisloe Terminal and a 45m x 34 wide extension to th	YRCC	Resource Management Consent	YDIS	Discharge Consent
	8360389122	8380444537	DIS60389122	Stage 1 site preparatory works, including demolition of existing buildings and structures, earthworks and laying of foundation and b asement slab.	YRCC	Resource Management Consent	YDIS	Discharge Consent
	8360336343	8380398856	DIS60336343	Discharges of contaminants from an industrial trade activity, being boat or ship construction repair or maintenance on Site 18.	YRCC	Resource Management Consent	YDIS	Discharge Consent
ACC0002830238	8360084384	8380127451	DIS60084384	Transfer investigate* Stormwater discharge associated with the bus stop extension redesign at Daldy and Fanshawe Streets, installation of a located bus shelter, and development of a gateway and pathwa	YRCC	Resource Management Consent	YDIS	Discharge Consent
ACC0002506609	8360083117	8380126472	DIS60083117	Construct and operate a tug boat facility between Bledisloe and Jellicoe wharfs. ITA aspects of operation.	YRCC	Resource Management Consent	YDIS	Discharge Consent
	8360335785	8380398445	DIS60335785	Short term discharge of contaminants to land associated with streetscape upgrades to Quay Street as part of Auckland Transport's Downtown Infrastructure Development Programme (DIDP). Quay Street, betw	YRCC	Resource Management Consent	YDIS	Discharge Consent
	8360335785	8380398445	DIS60335785	Short term discharge of contaminants to land associated with streetscape upgrades to Quay Street as part of Auckland Transport's Downtown Infrastructure Development Programme (DIDP). Quay Street, betw	YRCC	Resource Management Consent	YDIS	Discharge Consent

ACConsentID	SAPApplicationID	SAPConsentID	ConsentReference	ConsentDescription	TransactionType	TransactionTypeDescription	FormType	FormTypeDescription
XXX0000025179	8360264283	8380297338	DIS60264283	To discharge contaminants into the coastal marine environment from an industrial trade activity; namely the activities associated with the commercial port operations at the Port of Auckland. (Note the	YRCC	Resource Management Consent	YDIS	Discharge Consent
	8360445270	8380502423	DIS60445270	To discharge contaminants into the coastal marine environment from an industrial trade activity associated with construction and operation of wharf to the northern end of the existing Bledisloe Termin	YRCC	Resource Management Consent	YDIS	Discharge Consent
	8360389122	8380444537	DIS60389122	Stage 1 site preparatory works, including demolition of existing buildings and structures, earthworks and laying of foundation and b asement slab.	YRCC	Resource Management Consent	YDIS	Discharge Consent
	8360445201	8380502421	DIS60445201	Fast Track Approval Act - to authorise the construction and operation of a new 330m long and 27.5m wide wharf to the northern end of the existing Bledisloe Terminal and a 45m x 34 wide extension to th	YRCC	Resource Management Consent	YDIS	Discharge Consent
	8360339725	8380409756	DIS60339725	Contaminated Site discharge consent associated with the construction of an in-ground palisade wall landward of the existing 'seawall' on the northern side of Quay Street for a length of approximately	YRCC	Resource Management Consent	YDIS	Discharge Consent
ACC0002634819	8360083463	8380126863	DIS60083463	Road and civil infrastructure upgrades	YRCC	Resource Management Consent	YDIS	Discharge Consent
	8360334360	8380396748	DIS60334360	Consents for the Princes Wharf section of the Quay Street seawall upgrade project. Discharge Other (E4.4.1(A11) at an undefined rate of water or contaminants into land and groundwater.	YRCC	Resource Management Consent	YDIS	Discharge Consent
XXX0000040680	8360267059	8380301911	DIS60267059	To discharge contaminants to air associated with the upgrade of Halsey St. This included the construction of piled viewing platform within CMA, upgrade existing network utility service infrastructure	YRCC	Resource Management Consent	YDIS	Discharge Consent
XXX0000040682	8360267077	8380301936	DIS60267077	To discharge contaminants to land and water associated with the upgrade of Halsey St which included the construction of piled viewing platform within CMA, upgrade existing network utility service infr	YRCC	Resource Management Consent	YDIS	Discharge Consent
XXX0000040686	8360267123	8380301958	DIS60267123	To discharge contaminants to air associated with undertaking public realm & network utility service works (including the construction of a new section of Dadly street).	YRCC	Resource Management Consent	YDIS	Discharge Consent
	8360329705	8380396747	DIS60329705	Discharge of contaminants due to the disturbance of potentially contaminated soils	YRCC	Resource Management Consent	YDIS	Discharge Consent
ACC0002483105	8360082958	8380126428	DIS60082958	Discharge of contaminants from an industrial or trade activity (tug boat facility)..	YRCC	Resource Management Consent	YDIS	Discharge Consent
	8360320903	8380389458	DIS60320903	To authorise the use of land for and the discharge of contaminants from and industrial or trade activity (boat repair and maintenance facilities) associated with the America's Cup.	YRCC	Resource Management Consent	YDIS	Discharge Consent
	8360410748	8380467532	DIS60410748	Ongoing discharge of contaminants (metals, petroleum hydrocarbonsm PFAS) to land and water. For a site for integrated residential development for a full service retirement village. Apartment building	YRCC	Resource Management Consent	YDIS	Discharge Consent
XXX0000040687	8360267140	8380301976	DIS60267140	To undertake public realm & network utility service works (including the construction of a new section of Dadly street)	YRCC	Resource Management Consent	YDIS	Discharge Consent
ACC0002682561	8360083663	8380126559	DIS60083663	Wastewater pump station and storage tank on Wynyard common, rising main on Halsey Street (contamination)	YRCC	Resource Management Consent	YDIS	Discharge Consent
ACC0002638910	8360083460	8380126886	DIS60083460	Air discharges from earthworks at a contaminated site (Wynyard Quarter Block 4).	YRCC	Resource Management Consent	YDIS	Discharge Consent
	8360318376	8380389450	DIS60318376	Discharge of contaminants into land and water associated with dredged material for the America's Cup.	YRCC	Resource Management Consent	YDIS	Discharge Consent
	8360336344	8380398857	DIS60336344	Discharge of contaminants into land from contaminated land	YRCC	Resource Management Consent	YDIS	Discharge Consent
	8360330076	8380439550	DIS60330076	Discharge of contaminants from the disturbance of contaminated land Ports of Auckland Stormwater Outfall - to construct and operate a new stormwater outfall into Mechanics Bay, to enable the efficient	YRCC	Resource Management Consent	YDIS	Discharge Consent
ACC0002465073	8360083626	8380126456	DIS60083626	Discharge of contaminants.	YRCC	Resource Management Consent	YDIS	Discharge Consent
	8360318378	8380389452	DIS60318378	Diversion and discharge of stormwater runoff.	YRCC	Resource Management Consent	YDIS	Discharge Consent
	8360334348	8380396779	DIS60334348	Proposal for the Ferry Basin section of the Quay Street seawall upgrade project. Specifically Jet Grouting - discharge of water or contaminants into land and groundwater.	YRCC	Resource Management Consent	YDIS	Discharge Consent
ACC0002601819	8360082332	8380126777	DIS60082332	Discharge to air associated with the upgrading of the existing roads along Madden Street and Pakenham Street West.	YRCC	Resource Management Consent	YDIS	Discharge Consent
ACC0002830207	8360083772	8380127436	DIS60083772	Surrender form sent to Paul Arnesen to complete- Discharge of contamination to land associated with a IDP including 2 buildings for hotel, entertainment, offices and carparking	YRCC	Resource Management Consent	YDIS	Discharge Consent
ACC0002554501	8360083124	8380127081	DIS60083124	Interim cycleway	YRCC	Resource Management Consent	YDIS	Discharge Consent
ACC0002974614	8360084203	8380127276	DIS60084203	Discharge of Contamination to land associated with the demolition and construction of a 7 level commercial building and associated basement parking.	YRCC	Resource Management Consent	YDIS	Discharge Consent
	8360320271	8380396776	DIS60320271	Discharge of contaminants into the CMA associated with the construction activity - Proposal for the Ferry Basin section of the Quay Street seawall upgrade project.	YRCC	Resource Management Consent	YDIS	Discharge Consent
	8360319096	8380389459	DIS60319096	To discharge contaminants into air associated with the construction of facilities to support the America's Cup, and the event itself.	YRCC	Resource Management Consent	YDIS	Discharge Consent
	8360303392	8380369548	DIS60303392	To construct an eight level commercial building for hotel, entertainment and car parking activities and discharge of contaminants during earthworks.	YRCC	Resource Management Consent	YDIS	Discharge Consent
	8360330467	8380398627	DIS60330467	Diversion and discharge of stormwater in relation to the redevelopment and ongoing operation of Orams Marine facility (BUN60330464)	YRCC	Resource Management Consent	YDIS	Discharge Consent
	8360428287	8380487142	DIS60428287	Discharge of contaminants into air, water or land from the disturbance of contaminated land during the installation of an underground stormwater pipe and the removal of five protected street trees,	YRCC	Resource Management Consent	YDIS	Discharge Consent
	8360390246	8380456171	DIS60390246	Discharge of contaminants to air associated with drying activities within Shed 1 for a Low Carbon Cement Import and Distribution Facility.	YRCC	Resource Management Consent	YDIS	Discharge Consent
	8360322296	8380417425	DIS60322296	Discharge of contaminants into air, or into water, or onto or into land associated with the demolition and extensive development of site.	YRCC	Resource Management Consent	YDIS	Discharge Consent

ACConsentID	ConsentStatus	ApplicationSubType	LodgedDate	DecisionDate	IssuedDate	ConsentDecision	GISRecordStatus	ConsentGISClassification	XCoord	YCoord
ACC0002632083	New	Comprehensive Stormwater	1900-01-01 0:00		2015-02-27 0:00		Current	RMA Consent	1756447.41	5921159.1
ACC0002562838	Complete	Stormwater		2020-04-15 0:00	2014-10-31 0:00	Surrendered	Current	RMA Consent	1758208.02	5921074.47
ACC0002592808	Complete	Industrial or Trade Activity	1900-01-01 0:00	2015-06-19 0:00	2014-12-19 0:00	Surrendered	Current	RMA Consent	1758208.02	5921074.47
ACC0002571991	Complete	Stormwater	1900-01-01 0:00	2015-06-19 0:00	2014-10-31 0:00	Surrendered	Current	RMA Consent	1758208.02	5921074.47
ACC0002592801	Complete	Stormwater		2020-04-15 0:00	2014-12-19 0:00	Surrendered	Current	RMA Consent	1758208.02	5921074.47
	Complete	Contaminated Site			2010-07-22 0:00		Current	RMA Consent	1758208.02	5921074.47
ACC0002769709	New	Contaminated Site	1900-01-01 0:00		2016-01-07 0:00		Current	RMA Consent	1756370.89	5920701.24
ACC0002765834	Construction Monitoring	Industrial or Trade Activity	1900-01-01 0:00		2017-05-25 0:00		Current	RMA Consent	1756579.95	5920988.57
ACC0002562827	Complete	Stormwater		2020-04-15 0:00	2014-10-31 0:00	Surrendered	Current	RMA Consent	1758208.02	5921074.47
ACC0002520925	New	Contaminated Site	1900-01-01 0:00		2014-08-06 0:00		Current	RMA Consent	1756716.5	5921218.92
	Complete	To Air			1991-07-25 0:00	Superseded	Current	RMA Consent	1756504.95	5921323.81
ACC0002384144	Complete	To Air	1900-01-01 0:00		2013-11-15 0:00		Current	RMA Consent	1758208.02	5921074.47
ACC0002635401	New	Stormwater	1900-01-01 0:00		2015-02-27 0:00		Current	RMA Consent	1756447.41	5921159.1
ACC0002631948	Construction Monitoring	Contaminated Site	1900-01-01 0:00		2015-06-25 0:00		Current	RMA Consent	1756551.74	5921135.42
ACC0002592797	Complete	Industrial or Trade Activity		2020-04-15 0:00	2014-12-19 0:00	Surrendered	Current	RMA Consent	1758208.02	5921074.47
	Complete	To Air			1994-04-19 0:00	Superseded	Current	RMA Consent	1756504.95	5921323.81
XXX0000027955	Ongoing Monitoring	Contaminated Site	1900-01-01 0:00		2004-12-13 0:00		Current	RMA Consent	1756667.47	5920826.44
	Ongoing Monitoring	Contaminated Site			2004-04-26 0:00		Current	RMA Consent	1756731.92	5920968.89
	Complete	Stormwater			2004-04-13 0:00	Surrendered	Current	RMA Consent	1758208.02	5921074.47
ACC0002942264	Ongoing Monitoring	Contaminated Site	1900-01-01 0:00		2017-03-23 0:00		Current	RMA Consent	1758208.02	5921074.47
	Complete	Contaminated Site		2021-08-27 0:00	2018-09-24 0:00	Monitoring Complete	Current	RMA Consent	1756370.89	5920701.24
	Under Appeal	Contaminated Site			2020-05-25 0:00		Current	RMA Consent	1755839.76	5921287.9
	Complete	Contaminated Site			2004-02-04 0:00	Superseded	Current	RMA Consent	1756349.65	5920905.95
XXX0000051637	Complete	Contaminated Site	1900-01-01 0:00		2007-02-16 0:00		Current	RMA Consent	1756446.24	5920701.24
	New	Contaminated Site			2018-09-28 0:00		Current	RMA Consent	1758208.02	5921074.47
	Complete	To Air			2004-12-13 0:00	Surrendered	Current	RMA Consent	1756504.95	5921323.81
	Closed	Contaminated Site		2018-06-14 0:00	2018-06-14 0:00	Error	Current	RMA Consent	1758208.02	5921074.47
ACC0002602472	Complete	To Air		2023-01-11 0:00	2015-02-25 0:00	Monitoring Complete	Current	RMA Consent	1756744.56	5920929.42
	New	Stormwater			2019-01-08 0:00		Current	RMA Consent	1755839.76	5921287.9
	Complete	Contaminated Site		2024-07-05 0:00	2019-01-31 0:00	Monitoring Complete	Current	RMA Consent	1758208.02	5921074.47
	Complete	Other		2024-07-05 0:00	2019-05-03 0:00	Monitoring Complete	Current	RMA Consent	1758208.02	5921074.47
	Construction Monitoring	To Air			2019-05-03 0:00		Current	RMA Consent	1758208.02	5921074.47
	Construction Monitoring	To Air			2019-05-03 0:00		Current	RMA Consent	1758208.02	5921074.47
	Created in Error			2019-07-10 0:00	2019-05-30 0:00	Error	Current	RMA Consent	1758208.02	5921074.47
	Construction Monitoring	Stormwater			2019-10-14 0:00		Current	RMA Consent	1758208.02	5921074.47
	Construction Monitoring	Contaminated Site			2018-12-19 0:00		Current	RMA Consent	1758208.02	5921074.47
ACC0002917814	Ongoing Monitoring	Contaminated Site			2016-12-20 0:00		Current	RMA Consent	1756836.17	5920929.42
ACC0002436792	Complete	Contaminated Site		2015-12-22 0:00	2014-03-04 0:00	Surrendered	Current	RMA Consent	1756836.17	5920825.67
	Ongoing Monitoring	Contaminated Site			2004-09-03 0:00		Current	RMA Consent	1756386.27	5920892.09
	Ongoing Monitoring	Industrial or Trade Activity	1900-01-01 0:00		2019-06-06 0:00		Current	RMA Consent	1756351.57	5921280.19
ACC0002379142	Ongoing Monitoring	Contaminated Site			2013-11-12 0:00		Current	RMA Consent	1756564.26	5920850.25
ACC0002668986	Complete	Contaminated Site	1900-01-01 0:00	2023-01-23 0:00	2015-09-03 0:00	Monitoring Complete	Current	RMA Consent	1756793.87	5921223.08
XXX0000038996	Surrendered	Stormwater	1900-01-01 0:00	2017-09-28 0:00	2011-05-31 0:00	Surrendered	Current	RMA Consent	1756451.63	5920861.08
	Construction Monitoring	Stormwater	1900-01-01 0:00		2023-03-15 0:00		Current	RMA Consent	1756418.43	5921076.23
	Complete	Contaminated Site	1900-01-01 0:00	2024-07-05 0:00	2019-01-31 0:00	Monitoring Complete	Current	RMA Consent	1758208.02	5921074.47
ACC0002636422	Construction Monitoring	Contaminated Site			2015-03-03 0:00		Current	RMA Consent	1756534.35	5921077.87
ACC0002493700	Complete	Contaminated Site		2023-01-16 0:00	2014-05-26 0:00	Monitoring Complete	Current	RMA Consent	1756668.22	5921080.43
XXX0000025179	Ongoing Monitoring	Industrial or Trade Activity	1900-01-01 0:00		2010-02-22 0:00		Current	RMA Consent	1758208.02	5921074.47
	Created in Error	Contaminated Site		2025-09-22 0:00	2025-08-21 0:00	Error	Current	RMA Consent	1758208.02	5921074.47
	Construction Monitoring		1900-01-01 0:00		2021-12-22 0:00		Current	RMA Consent	1756401.11	5921020.14
	Ongoing Monitoring	Industrial or Trade Activity			2019-06-06 0:00		Current	RMA Consent	1756351.57	5921280.19
ACC0002830238	Construction Monitoring	Stormwater			2016-04-19 0:00		Current	RMA Consent	1756836.17	5920825.67
ACC0002506609	Ongoing Monitoring	Stormwater			2014-09-11 0:00		Current	RMA Consent	1758208.02	5921074.47
	Complete	Contaminated Site	1900-01-01 0:00	2024-07-05 0:00	2019-06-10 0:00	Monitoring Complete	Current	RMA Consent	1758208.02	5921074.47
	Complete	Contaminated Site		2024-07-05 0:00	2019-06-10 0:00	Monitoring Complete	Current	RMA Consent	1758208.02	5921074.47

ACConsentID	ConsentStatus	ApplicationSubType	LodgedDate	DecisionDate	IssuedDate	ConsentDecision	GISRecordStatus	ConsentGISClassification	XCoord	YCoord
XXX0000025179	Ongoing Monitoring	Industrial or Trade Activity			2010-02-22 0:00		Current	RMA Consent	1758208.02	5921074.47
	Construction Monitoring	Industrial or Trade Activity	1900-01-01 0:00		2025-08-21 0:00		Current	RMA Consent	1758208.02	5921074.47
	Construction Monitoring				2021-12-22 0:00		Current	RMA Consent	1756401.11	5921020.14
	Created in Error	Contaminated Site		2025-09-22 0:00	2025-08-21 0:00	Error	Current	RMA Consent	1758208.02	5921074.47
	Complete	Contaminated Site	1900-01-01 0:00	2024-07-05 0:00	2019-12-06 0:00	Monitoring Complete	Current	RMA Consent	1758208.02	5921074.47
ACC0002634819	Complete	Contaminated Site		2023-01-11 0:00	2015-02-25 0:00	Monitoring Complete	Current	RMA Consent	1756744.56	5920929.42
	Complete	Other	1900-01-01 0:00	2024-07-05 0:00	2019-05-03 0:00	Monitoring Complete	Current	RMA Consent	1758208.02	5921074.47
XXX0000040680	Complete	To Air		2023-01-11 0:00	2013-01-21 0:00	Monitoring Complete	Current	RMA Consent	1756752.31	5921106.19
XXX0000040682	Complete	Contaminated Site	1900-01-01 0:00	2023-01-11 0:00	2013-01-21 0:00	Monitoring Complete	Current	RMA Consent	1756752.31	5921106.19
XXX0000040686	Complete	To Air	1900-01-01 0:00	2023-01-11 0:00	2013-01-21 0:00	Monitoring Complete	Current	RMA Consent	1756504.95	5921323.81
	Complete	Contaminated Site	1900-01-01 0:00	2024-07-05 0:00	2019-05-03 0:00	Monitoring Complete	Current	RMA Consent	1758208.02	5921074.47
ACC0002483105	Ongoing Monitoring	Industrial or Trade Activity			2014-09-11 0:00		Current	RMA Consent	1758208.02	5921074.47
	Ongoing Monitoring	Industrial or Trade Activity			2018-11-14 0:00		Current	RMA Consent	1758099.87	5921074.47
	Construction Monitoring	Stormwater			2023-03-15 0:00		Current	RMA Consent	1756418.43	5921076.23
XXX0000040687	Complete	Contaminated Site		2023-01-11 0:00	2013-01-21 0:00	Monitoring Complete	Current	RMA Consent	1756504.95	5921323.81
ACC0002682561	Complete	Contaminated Site		2023-01-23 0:00	2015-10-27 0:00	Monitoring Complete	Current	RMA Consent	1756531.56	5921102.32
ACC0002638910	Complete	To Air	1900-01-01 0:00	2025-09-10 0:00	2015-06-25 0:00	Expired	Current	RMA Consent	1756549.28	5921135.42
	Ongoing Monitoring	Contaminated Site			2018-11-14 0:00		Current	RMA Consent	1758099.87	5921074.47
	Ongoing Monitoring	Contaminated Site	1900-01-01 0:00		2019-06-06 0:00		Current	RMA Consent	1756331.66	5921187.6
	Construction Monitoring	Contaminated Site	1900-01-01 0:00		2021-04-14 0:00		Current	RMA Consent	1758208.02	5921074.47
ACC0002465073	Complete	Contaminated Site		2023-01-16 0:00	2014-03-17 0:00	Monitoring Complete	Current	RMA Consent	1756668.22	5921080.43
	Ongoing Monitoring	Stormwater	1900-01-01 0:00		2018-11-14 0:00		Current	RMA Consent	1758099.87	5921074.47
	Complete	Other		2024-07-05 0:00	2019-05-03 0:00	Monitoring Complete	Current	RMA Consent	1758208.02	5921074.47
ACC0002601819	Complete	To Air		2021-12-02 0:00	2015-03-03 0:00	Monitoring Complete	Current	RMA Consent	1756534.35	5921077.87
ACC0002830207	Complete	Contaminated Site	1900-01-01 0:00	2021-12-01 0:00	2016-05-31 0:00	Lapsed	Current	RMA Consent	1756483.21	5920987.47
ACC0002554501	Complete	Contaminated Site		2023-01-16 0:00	2014-10-03 0:00	Monitoring Complete	Current	RMA Consent	1755839.76	5921287.9
ACC0002974614	Surrendered	Contaminated Site	1900-01-01 0:00	2020-04-28 0:00	2017-05-31 0:00	Surrendered	Current	RMA Consent	1756451.63	5920861.08
	Complete	Contaminated Site	1900-01-01 0:00	2024-07-05 0:00	2019-05-03 0:00	Monitoring Complete	Current	RMA Consent	1758208.02	5921074.47
	Ongoing Monitoring	To Air			2018-11-14 0:00		Current	RMA Consent	1758099.87	5921074.47
	Surrendered	Contaminated Site	1900-01-01 0:00	2020-12-14 0:00	2017-08-08 0:00	Surrendered	Current	RMA Consent	1756579.95	5920988.57
	Ongoing Monitoring	Stormwater	1900-01-01 0:00		2019-06-06 0:00		Current	RMA Consent	1756331.66	5921187.6
	Construction Monitoring	Contaminated Site	1900-01-01 0:00		2024-08-12 0:00		Current	RMA Consent	1756638	5920699.22
	Ongoing Monitoring	To Air	1900-01-01 0:00		2022-03-18 0:00		Current	RMA Consent	1758208.02	5921074.47
	Complete	Contaminated Site	1900-01-01 0:00	2022-12-20 0:00	2020-07-13 0:00	Surrendered	Current	RMA Consent	1756401.11	5921020.14

ACConsentID	SAPApplicationID	SAPConsentID	ConsentReference	ConsentDescription	TransactionType
ACC0002605595	8360151171	8380198201	WAT60151171	Groundwater take and diversion for the construction of a basement servicing a residential and commercial development on the site known as East 2.	YRCC
ACC0002591114	8360152150	8380200178	WAT60152150	Take and diversion of groundwater for Building A	YRCC
ACC0002669003	8360152392	8380198218	WAT60152392	Comprehensive development of Quarter Area 7 to establish a hotel development and public open space (water take, etc)	YRCC
ACC0002960481	8360152258	8380198957	WAT60152258	To take groundwater for dewatering during the construction of a single basement for a seven storey mixed- use (commercial / retail) building. Construction of Building 5B (Groundwater Permit associated	YRCC
ACC0002405007	8360152143	8380200162	WAT60152143	Groundwater take and diversion for Building C.	YRCC
	8360403326		WAT60403326	Comprehensive development of the land for a retirement village and apartment building with ground floor retail and services associat ed with the retirement village including parking. A water take and	YRCA
	8360403431		WAT60403431	Comprehensive development of the land for a retirement village and apartment building with ground floor retail and services associated with the retirement village including parking. A water take and	YRCA
ACC0002399847	8360152114		WAT60152114	Construction of diaphragm wall.	YRCA
	8390118871		WAT60410749-C	To vary conditions 1 (General Conditions), 8, 9, 10, 12, 15, 17, 18, 21, 36, 37, 54, 61, 62, 63, 64, 65 (Land Use Conditions), 69 Discharge Conditions), 73 & 79 (Ground Dewatering (take) and Groundwat	YRCD
	8360341640	8380415857	WAT60341640	To construct three commercial buildings and repurpose an existing building together with basement carparking and associated take and diversion of groundwater.	YRCC
ACC0002682571	8360151178	8380198187	WAT60151178	To take and divert groundwater to allow construction of a new wastewater pumping station and storage tank.	YRCC

ACConsentID	TransactionTypeDescription	FormType	FormTypeDescription	ConsentStatus	ApplicationSubType	LodgedDate	DecisionDate	IssuedDate	ConsentDecision	Notified	GISRecordStatus	ConsentGISClas	XCoord	YCoord
ACC0002605595	Resource Management Consent	YWAT	Water Consent	Construction Monitoring	Divert - Groundwater	1900-01-01 0:00		2015-03-11 0:00			Current	RMA Consent	1756558.33	5921155.79
ACC0002591114	Resource Management Consent	YWAT	Water Consent	New	Divert - Groundwater	1900-01-01 0:00		2014-12-23 0:00			Current	RMA Consent	1756482.48	5920908.82
ACC0002669003	Resource Management Consent	YWAT	Water Consent	New	Divert - Groundwater	1900-01-01 0:00		2015-09-03 0:00			Current	RMA Consent	1756793.87	5921223.08
ACC0002960481	Resource Management Consent	YWAT	Water Consent	Ongoing Monitoring	Divert - Groundwater			2017-05-05 0:00			Current	RMA Consent	1756650.78	5921168.63
ACC0002405007	Resource Management Consent	YWAT	Water Consent	New	Divert - Groundwater	1900-01-01 0:00		2013-12-13 0:00			Current	RMA Consent	1756572.15	5920850.25
	Resource Management Application	YWAT	Water Consent application	Complete	Take	2022-06-01 0:00	2022-10-27 0:00		Withdrawn	PNTF	Current	RMA Consent	1756416.06	5921076.15
	Resource Management Application	YWAT	Water Consent application	Complete	Divert - Groundwater	2022-06-01 0:00	2022-10-27 0:00		Withdrawn	PNTF	Current	RMA Consent	1756416.06	5921076.15
ACC0002399847	Resource Management Application	YWAT	Water Consent application	Complete	Take	2013-10-24 0:00	2013-12-18 0:00		Withdrawn	NNTF	Current	RMA Consent	1756564.26	5920850.25
	Resource Management Follow-up Appl	YFVC	Change of Condition (s127)	Completed	Divert - Groundwater	2024-08-27 0:00	2024-12-09 0:00	2024-12-09 0:00	Granted	NNTF	Current	RMA Consent	1756418.43	5921076.23
	Resource Management Consent	YWAT	Water Consent	Ongoing Monitoring	Divert - Groundwater	1900-01-01 0:00		2019-10-31 0:00			Current	RMA Consent	1756672.3	5921092.14
ACC0002682571	Resource Management Consent	YWAT	Water Consent	Construction Monitoring	Divert - Groundwater	1900-01-01 0:00		2015-10-27 0:00			Current	RMA Consent	1756531.56	5921102.32

SAPSiteID	PropertyAddress	HAILCode	HAILDescription	ValidFrom	ValidTo	HAILFormStatus	FormType	IncidentStatus	FormTypeDescription	TransactionDecision	LodgedDate
11204151	37-55 Madden Street Auckland Central Auckland 1010			1900-01-01 0:00		Active	YCST	Current	Contaminated Sites		2003-10-09 0:00
11212441	120 Beaumont Street Auckland Central 1010			1900-01-01 0:00		Active	YCST	Current	Contaminated Sites		2003-10-20 0:00
11273270-0001	75-81 Halsey Street Auckland Central Auckland 1010			1900-01-01 0:00		Active	YCST	Current	Contaminated Sites		2010-03-25 0:00
11279301-0001	85-89 Halsey Street Auckland Central Auckland 1010			1900-01-01 0:00		Active	YCST	Current	Contaminated Sites		2004-08-02 0:00
11218625	136-142 Fanshawe Street Auckland Central Auckland 1010			1900-01-01 0:00		Active	YCST	Current	Contaminated Sites	Conditions Updated	2012-06-19 0:00
11270404	152 Fanshawe Street Auckland Central Auckland 1010			1900-01-01 0:00		Active	YCST	Current	Contaminated Sites		2010-09-07 0:00
11494971	142-160 Beaumont Street AUCKLAND CENTRAL 1010			1900-01-01 0:00		Active	YCST	Current	Contaminated Sites		2010-03-16 0:00
30021736	15 Westhaven Drive Auckland Central Auckland 1010			1900-01-01 0:00		Active	YCST	Current	Contaminated Sites		2003-10-09 0:00
11273270	75-81 Halsey Street Auckland Central Auckland 1010			1900-01-01 0:00		Active	YCST	Current	Contaminated Sites		2010-03-25 0:00
11279301	85-89 Halsey Street Auckland Central Auckland 1010			1900-01-01 0:00		Active	YCST	Current	Contaminated Sites		2004-08-02 0:00
11296266	161-173 Quay Street Auckland Central Auckland 1010			2026-03-16 0:00		Active	YCST	Current	Contaminated Sites		2003-10-09 0:00
11517360	200 Pakenham Street West AUCKLAND CENTRAL 1010			1900-01-01 0:00		Active	YCST	Current	Contaminated Sites		2010-03-29 0:00
11266718	185 Fanshawe Street Auckland Central Auckland 1010			1900-01-01 0:00		Active	YCST	Current	Contaminated Sites		2011-06-15 0:00
11286719	3 Solent Street Auckland Central Auckland 1010			1900-01-01 0:00		Active	YCST	Current	Contaminated Sites		2003-10-09 0:00
11259475	101-107 Beaumont Street Auckland Central Auckland 1010	A13	Petroleum or petrochemical industries including a petroleum depot, terminal, blending plant or refinery, or facilities f	2024-07-09 0:00		Active	YCST	Current	Contaminated Sites	Conditions Updated	2024-07-09 0:00
11313077	139 Pakenham Street West Auckland Central Auckland 1010	B2	Electrical transformers including the manufacturing, repairing or disposing of electrical transformers or other heavy el	2023-10-19 0:00		Active	YCST	Current	Contaminated Sites	Conditions Updated	2023-10-19 0:00
11313077	139 Pakenham Street West Auckland Central Auckland 1010	H	Any land that has been subject to the migration of hazardous substances from adjacent land in sufficient quantity that i	2023-10-19 0:00		Active	YCST	Current	Contaminated Sites	Conditions Updated	2023-10-19 0:00
11259475	101-107 Beaumont Street Auckland Central Auckland 1010	D5	Engineering workshops with metal fabrication	2024-07-09 0:00		Active	YCST	Current	Contaminated Sites	Conditions Updated	2024-07-09 0:00
11313077	139 Pakenham Street West Auckland Central Auckland 1010	D5	Engineering workshops with metal fabrication	2023-10-19 0:00		Active	YCST	Current	Contaminated Sites	Conditions Updated	2023-10-19 0:00
11469802	8 Madden Street AUCKLAND CENTRAL 1010	A13	Petroleum or petrochemical industries including a petroleum depot, terminal, blending plant or refinery, or facilities f	2021-11-29 0:00		Active	YCST	Current	Contaminated Sites	Conditions Updated	2003-10-09 0:00
11313077	139 Pakenham Street West Auckland Central Auckland 1010	A17	Storage tanks or drums for fuel, chemicals or liquid waste	2023-10-19 0:00		Active	YCST	Current	Contaminated Sites	Conditions Updated	2023-10-19 0:00
11313077	139 Pakenham Street West Auckland Central Auckland 1010	A7	Gasworks including the manufacture of gas from coal or oil feedstocks	2023-10-19 0:00		Active	YCST	Current	Contaminated Sites	Conditions Updated	2023-10-19 0:00
11502414	100 Halsey Street AUCKLAND CENTRAL 1010	F8	Transport depots or yards including areas used for refuelling or the bulk storage of hazardous substances	2021-12-20 0:00		Active	YCST	Current	Contaminated Sites	Conditions Updated	2021-12-20 0:00
11469801	10 Madden Street AUCKLAND CENTRAL 1010	A13	Petroleum or petrochemical industries including a petroleum depot, terminal, blending plant or refinery, or facilities f	2021-11-29 0:00		Active	YCST	Current	Contaminated Sites	Conditions Updated	2003-10-09 0:00
11313077	139 Pakenham Street West Auckland Central Auckland 1010	G3	Landfill sites	2023-10-19 0:00		Active	YCST	Current	Contaminated Sites	Conditions Updated	2023-10-19 0:00
11259475	101-107 Beaumont Street Auckland Central Auckland 1010	A17	Storage tanks or drums for fuel, chemicals or liquid waste	2024-07-09 0:00		Active	YCST	Current	Contaminated Sites	Conditions Updated	2024-07-09 0:00
11259475	101-107 Beaumont Street Auckland Central Auckland 1010	G3	Landfill sites	2024-07-09 0:00		Active	YCST	Current	Contaminated Sites	Conditions Updated	2024-07-09 0:00
11310401	14 Madden Street Auckland Central Auckland 1010			1900-01-01 0:00		Active	YCST	Closed	Contaminated Sites		2021-07-15 0:00
11259475	101-107 Beaumont Street Auckland Central Auckland 1010	A7	Gasworks including the manufacture of gas from coal or oil feedstocks	2024-07-09 0:00		Active	YCST	Current	Contaminated Sites	Conditions Updated	2024-07-09 0:00
11296266	161-173 Quay Street Auckland Central Auckland 1010	A17	Storage tanks or drums for fuel, chemicals or liquid waste	2026-03-16 0:00		Active	YCST	Current	Contaminated Sites		2003-10-09 0:00

SAPSiteID	DecisionDate	PropertyStatus	LegacyPropertyID	PropertyType	GeometrySource	GISRecordStatus	XCoord	YCoord
11204151		Current	ACC0000342889	Standard	Property Boundary	Current	1756504.95	5921323.81
11212441		Current	ACC0000305894	Standard	Property Boundary	Current	1756302.47	5920984.1
11273270-0001		Current		Standard	Property Boundary	Current	1756699.26	5920985.42
11279301-0001		Current		Standard	Property Boundary	Current	1756743.7	5921044.78
11218625	2020-06-12 0:00	Current	ACC0000321506	Standard	Property Boundary	Current	1756706.64	5920698.21
11270404		Current	ACC0000548965	Standard	Property Boundary	Current	1756638	5920699.22
11494971		Current		Standard	Property Boundary	Current	1756341.51	5921215.64
30021736		Current	ACC0000498515	Occupancy	Property Boundary	Current	1756284.03	5921088.09
11273270		Current	ACC0000552471	Standard	Property Boundary	Current	1756699.26	5920985.42
11279301		Current	ACC0000422571	Standard	Property Boundary	Current	1756743.7	5921044.78
11296266		Current	ACC0000491825	Standard	Property Boundary	Current	1758208.02	5921074.47
11517360		Current		Standard	Property Boundary	Current	1756418.43	5921076.23
11266718		Current	ACC0000392410	Standard	Property Boundary	Current	1756349.65	5920905.95
11286719		Current	ACC0000538654	Standard	Property Boundary	Current	1758208.02	5921074.47
11259475	2024-07-09 0:00	Current	ACC0000555331	Standard	Property Boundary	Current	1756374.62	5920950.97
11313077	2023-10-19 0:00	Current	ACC0000646464	Standard	Property Boundary	Current	1756588.74	5921108.11
11313077	2023-10-19 0:00	Current	ACC0000646464	Standard	Property Boundary	Current	1756588.74	5921108.11
11259475	2024-07-09 0:00	Current	ACC0000555331	Standard	Property Boundary	Current	1756374.62	5920950.97
11313077	2023-10-19 0:00	Current	ACC0000646464	Standard	Property Boundary	Current	1756588.74	5921108.11
11469802	2021-11-29 0:00	Current		Standard	Property Boundary	Current	1756671.52	5921181.78
11313077	2023-10-19 0:00	Current	ACC0000646464	Standard	Property Boundary	Current	1756588.74	5921108.11
11313077	2023-10-19 0:00	Current	ACC0000646464	Standard	Property Boundary	Current	1756588.74	5921108.11
11502414	2021-12-20 0:00	Current		Standard	Property Boundary	Current	1756579.95	5920985.72
11469801	2021-11-29 0:00	Current		Standard	Property Boundary	Current	1756650.78	5921168.63
11313077	2023-10-19 0:00	Current	ACC0000646464	Standard	Property Boundary	Current	1756588.74	5921108.11
11259475	2024-07-09 0:00	Current	ACC0000555331	Standard	Property Boundary	Current	1756374.62	5920950.97
11259475	2024-07-09 0:00	Current	ACC0000555331	Standard	Property Boundary	Current	1756374.62	5920950.97
11310401		Current	ACC0000648644	Standard	Property Boundary	Current	1756652.07	5921189.13
11259475	2024-07-09 0:00	Current	ACC0000555331	Standard	Property Boundary	Current	1756374.62	5920950.97
11296266		Current	ACC0000491825	Standard	Property Boundary	Current	1758208.02	5921074.47

APPLICATION_NUMBER	FILE_REFERENCE	APPLICATION_STATUS	LODGED_DATE	PURPOSE	WORKS_DESCRIPTION	EASTING	NORTHING	BORE_ID	ACTIVITY_STATUS	BORE_USE	TLA	CONSULTANT	DATE_CREATED	PROPERTY_ADDRESS	LOC_TYP
37875	C512-12-4620	Withdrawn	20100330	To authorise the construction of 3 groundwater monitoring wells in the road reserve of Pakenham Street West and Halsey Street. The bores are to be constructed for monitoring of groundwater	The construction of three 50mm diameter bores to an approximate depth of 6m with casing depth of 6m. Installation of grade PNIZ PVC casing material to depth to top of screen 1.5m and depth to bottom of screen 6m.	1756621	5921059	23596	Proposed	Other	Auckland Central	Coffey Geotechnics (NZ) Limited & Coffey Environments NZ Limited	01-JUN-17	139 Pakenham Street West Auckland Central Auckland Central	Point

APPLICATION_NUMBER	FILE_REFERENCE	APPLICATION_STATUS	LODGED_DATE	PURPOSE	EASTING	NORTHING	DISC_AIR_ID	ACTIVITY_STATUS	DATE_CREATED	PROPERTY_ADDRESS	LOC_TYP	DISC_CON_ID	ENVIRONMENT	ITP_ID	DISC_IND_ID	TREATMENT_TYPE	DISC_STO_ID
30577	18153	No Longer Required			1756500	5920900		Occurring	2017-06-01 17:21	109 Fanshawe St Auckland Central Auckland Central	Point	20250	Unknown				
36879	16594	Not Accepted For Processing	20090414	To authorise the ongoing diffuse discharge of contaminant into ground and groundwater beneath the site in accordance with Section 15 of the Resource Management Act 1991.	1756337	5920893		Occurring	2017-06-01 17:21	185 Fanshawe St Auckland Central Auckland Central	Point	20076	Into ground - full year				
36238	15872	Withdrawn	20080901		1756500	5921200		Occurring	2017-06-01 17:21	143 Beaumont St Auckland Central Auckland Central	Point	20053	Into ground - full year				
28890	17370	Not Accepted For Processing	20040519		1756337	5920893		Occurring	2017-06-01 17:21	2 Daldy St Auckland Central Auckland Central	Point	20110	Into ground - full year				
35949	20696	No Longer Required			1756540	5921150			2017-06-01 17:21	141 Pakenham Street West Auckland Central Auckland	Point	20944	Into ground - full year				
36285	20855	Withdrawn	20080912		1756500	5921200			2017-06-01 17:21	143 Beaumont St Auckland Central Auckland Central	Point	20973	Into ground - full year				
45019	26018	Withdrawn	20150420		1756622.62	5920960.13		Occurring	2017-06-01 17:21	100 Halsey Street Wynyard Quarter Auckland	Point	21705	Into ground - full year				
45594	26400	Processing	20160112		1756441	5920983.2		Occurring	2017-06-01 17:21	31 Daldy St Auckland Central Auckland Central	Point	21770	Into ground - full year				
45593	26399	Processing	20160112		1756441	5920983.2	20645	Proposed	2017-06-01 17:21	31 Daldy St Auckland	Point						
40679	23259	Not Accepted For Processing	20120727		1756734	5921139		Proposed	2017-06-01 17:21	95 Halsey St Auckland Central Auckland Central	Point		Unknown		20302		
40685	23264	Not Accepted For Processing	20120727		1756518	5921201		Proposed	2017-06-01 17:21	Madden Street Auckland Central Auckland City	Point		River/lake - full year		20303		
45371	26251	Processing	20151106		1756567.21	5920986.16		Proposed	2017-06-01 17:21	100 Halsey St Auckland Central Auckland Central	Point		Unknown	331			
21491	12626	Withdrawn	19980528	Discharge stormwater from service station	1756430	5920870		NeverOccurred	2016-07-13 19:25		Area					OilSeparators	20124
46213	26885	Granted (Not yet issued)	20160404		1756409.51	5920805.37		Proposed	2016-07-13 19:25		Point					None	23152

APPLICATION_NUMBER	DEVELOPMENT_ADDRESS	AREA_OF_DEVELOPMENT	DEVELOPMENT_TYPE	TOTAL_CATCHMENT_AREA	LAND_USE_CATCHMENT	NUMBER_OF_OUTFALLS	RECEIVING_ENVIRONMENT	DISCHARGE_POINT	LOCATION_DESCRIPTION	OUTLET_TYPE	EROSION_PROTECTION_DEVICE	DISCHARGE_POINT_EASTING	DISCHARGE_POINT_NORTHING	DISCHARGE_TYPE
30577														MASTER.CONTAMINATED_SITE
36879														MASTER.CONTAMINATED_SITE
36238														MASTER.CONTAMINATED_SITE
28890														MASTER.CONTAMINATED_SITE
35949														MASTER.CONTAMINATED_SITE
36285														MASTER.CONTAMINATED_SITE
45019														MASTER.CONTAMINATED_SITE
45594														MASTER.CONTAMINATED_SITE
45593														MASTER.AIR
40679														MASTER.OTHER
40685														MASTER.OTHER
45371														MASTER.INDUSTRIAL_TRADE
21491	125-167 Fanshawe Street Auckland Central City							1				1756430	5920870	MASTER.STORMWATER
46213	ROAD, Fanshawe Street, Auckland Central	8.88	Other-SeeDescription	0.08	Mixed	1	Into ground	Discharge from foot path	Diffuse dishcrage from footopath	OtherSeeDescription	Other	1756375.49	5920797.66	MASTER.STORMWATER

APPLICATION_NUMBER	APPLICATION_STATUS	LODGED_DATE	PURPOSE	EASTING	NORTHING	TAKE_ID	ACTIVITY_STATUS	MONITORING_PRIORITY	TLA	USE_TYPE	DATE_CREATED	PROPERTY_ADDRESS	LOC_TYP
30858	Not Accepted For Processing	20050505	To take 18 cubic metres of groundwater during construction of a basement carpark.	1756720	5920970	20548	Proposed	Not known	Auckland Central	Monitoring	2017-06-01 17:22	83 81 Halsey St Auckland Central Auckland Central	Point

CONSENT_NUMBER	FILE_REFERENCE	CONSENT_STATUS	GRANTED_DATE	EXPIRY_DATE	PURPOSE	WORKS_DESCRIPTION	EASTING	NORTHING	BORE_ID	ACTIVITY_STATUS	BORE_USE	MAIN_AQUIFER	AQUIFER	ENVIRONMENT_REPORTING_AREA
15241	C512-12-1788*	Expired	19960617	19970617	Authorize the construction of two (2) piezometers for groundwater level and/or Chemistry investigations	Construction of two (2) 50mm dia. piezometers to approx 6m depth. Installation of PVC casing to approx 6m and PVC screen from approx. 1m to 6m if required.	1756720	5920970	5281	Drilled	Observation / Piezo	Other		Auckland Central
25652	C512-12-2779*	Expired	20010813	20020813	Authorise the construction of thirteen (13) bores for groundwater monitoring purposes.	Construction of thirteen (13) 50mm diameter bores to a depth of approximately 5m to 10m. Installation of class D UPVC casing to a depth of approximately 5m to 10m.	1756400	5921030	21517	Proposed	Observation / Piezo	Other		Auckland Central
35134	C512-12-4123*	Expired	20071119	20081114	To authorise the construction of nine bores for groundwater quality monitoring.	The construction of nine 50mm diameter bores to an approximate depth of 6m. Installation of Grade D uPVC casing material to an approximate depth of 6m. Proposed grouting to 0.5m.	1756600	5921211	23035	Proposed	Observation / Piezo			
23092	C512-12-2463*	Expired	19990924	20000925	Authorise the construction of bores for groundwater level and/or chemistry monitoring.	Construction of up to 34 100mm diameter bores to a depth of 4.5m. Installation of PVC casing to 1m depth and PVC screen from 1-4.5m depth.	1756530	5921140	21024	Drilled	Observation / Piezo	Other		Auckland Central
28022	C512-12-3133*	Expired	20030619	20040620	Authorise the construction of up to four (4) monitoring groundwater & groundwater elevation bores.	Construction of up to four (4) 50mm diameter bores to a depth of approximately 8m. Installation of UPVC 18 casing to a depth of approximately 8m.	1756668	5920846	21929	Proposed	Observation / Piezo	Other		Auckland Central
25126	C512-12-2717*	Expired	20010406	20020408	Authorise the construction of eight (8) bores for monitoring purposes.	Construction of eight (8) 50mm diameter bores to a depth of approximately 5m. Installation of UPVC casing to a depth of approximately 5m.	1756588	5921150	21387	Proposed	Observation / Piezo	Other		Auckland Central
24573	C512-12-2651	Expired	20001113	20011113	Authorise the construction of three bores for environmental monitoring.	Construction of three 50mm diameter bores to a depth of approximately 4.5m. Installation of PVC casing to a depth of approximately 4.5m.	1756530	5921140	21305	Drilled	Observation / Piezo	Other		Auckland Central
12344	14/17/1166	Expired	19940225	19950225	Authorize the construction of up to fifteen (15) piezometers for groundwater level and/or Chemistry investigations	Construction up to fiftenn (15) piezometers of 100mm dia. to approx. 6m depth and installation of PVC casing and screen to 6m.	1756500	5921200	1207	Proposed	Observation / Piezo	Other		Auckland Central
26321	C512-12-2841*	Expired	20020121	20030121	Authorise the construction of up to twenty four (24) bores for site remediation purposes.	Construction of up to twenty four (24) 50mm diameter bores to a depth of approximately 4.5m. Installation of UPVC casing to a depth of approximately 1.5m.	1756500	5921200	21602	Proposed		Other		Auckland Central
20656	C512-12-2086*	Expired	19971202	19981203	Authorise the construction of bores for groundwater level and/or chemistry monitoring.	Construction of four (4) 100mm diameter bores to a depth of approximately 4m. Installation of PVC casing to 4m depth and PVC screen from 1.5-4m or as required. Permit modified 20-Aug-1998 to allow the drilling of a futher seven monitoring bores.	1756500	5921200	20063	Drilled	Observation / Piezo	Sand		Auckland Central
12345	14/17/1167	Expired	19940225	19950225	Authorize the construction of up to ten (10) piezometers for groundwater level and/or Chemistry investigations	Construction of up to ten (10) piezometers of up to 100mm dia. to approx. 6m depth and installation of PVC casing and screen to approx. 6m.	1756400	5921030	1206	Proposed	Observation / Piezo	Other		Auckland Central
29097	C512-12-3284*	Expired	20040405	20050406	To authorise the construction of eight bores for groundwater monitoring purposes.	Construction of up to 8 bores to a depth of approximately 5m. Installation of Class 18 UPVC casing to an approximate depth of 2m.	1756388	5920900	22087	Proposed	Observation / Piezo	Other		Auckland Central
15272	C512-12-1795*	Expired	19960701	19970701	Authorize the construction of four (4) piezometers for groundwater level and/or Chemistry investigations	Construction of four (4) 100 mm dia. piezometers to approx 6m depth. Installation of PVC casing to approx 6m and PVC screen from approx. 5m to 6m if required.	1756720	5920970	5292	Proposed	Observation / Piezo	Other		Auckland Central
29810	C512-12-3384*	Expired	20040921	20050920	To authorise the constrution of Eight bores for Groundwater monitoring purposes.	Construction of Eight 50mm diameter bores to an approximate depth of 7.5m. Installation of uPVC casing to an approximate depth of 1.5m. Screen depth of 1.5m with a depth of 7.5m to the bottom of the screen. Grouting length to 1m.	1756720	5920970	22192	Proposed	Observation / Piezo	Other		Auckland Central
27100	C512-12-2967*	Expired	20020830	20030829	Authorise the construction of up to six (6) groundwater monitoring bores.	Construction of up to six (6) 50mm diameter bores to a depth of approixmately 6m. Installation of PVC casing to a depth of approximately 3m to 5m.	1756720	5920970	21748	Proposed	Observation / Piezo	Other		Auckland Central
27100	C512-12-2967*	Expired	20020830	20030829	Authorise the construction of up to six (6) groundwater monitoring bores.	Construction of up to six (6) 50mm diameter bores to a depth of approixmately 6m. Installation of PVC casing to a depth of approximately 3m to 5m.	1756720	5920970	21748	Proposed	Observation / Piezo	Other		Auckland Central
27753	c512-12-3075*	Expired	20030319	20040320	Authorise the construction of three investigation bores.	Construction of three (3) 100mm diameter bores to a depth of 5m. Installation of PVC casing to a depth of approximately 5m.	1756650	5920800	21860	Proposed	Observation / Piezo	Alluvium		Auckland Central

CONSENT_NUMBER	FILE_REFERENCE	CONSENT_STATUS	GRANTED_DATE	EXPIRY_DATE	PURPOSE	WORKS_DESCRIPTION	EASTING	NORTHING	BORE_ID	ACTIVITY_STATUS	BORE_USE	MAIN_AQUIFER	AQUIFER	ENVIRONMENT_REPORTING_AREA
31132	C512-12-3552*	Expired	20050720	20060721	To authorise the construction of eight bores for environmental sampling supply.		1756520	5920840	22388	Drilled		Waitemata	Auckland Isthmus Waitemata	
16159	C512-12-1986*	Expired	19970507	19980507	Authorize the construction of a bore for groundwater level and/or Chemistry investigations	Construction of three 50mm dia. bores to approx 5m depth. Installation of PVC casing to approx 2m and PVC screen from approx. 2m to 5m if required.	1756430	5920870	5738	Proposed	Observation / Piezo			
12405	14/17/1188	Expired	19940317	19950317	Authorize the construction of a bore for groundwater level and/or Chemistry investigations	Construction of 12 200mm dia. bores to approx 4m depth. Installation of PVC casing to approx 2m and PVC screen from approx. 2m to 4m if required.	1756340	5920900	4766	Proposed		Other		Auckland Central
12402	14/17/1188*	Expired	19940316	19950324	Authorize the construction of twelve (12) piezometers for groundwater level and/or Chemistry investigations BC 1229 on GTGS. Other associated BC 4756-4766 not entered as all very similar.	Construction of twelve (12) 200mm dia. piezometers to approx 4m depth. Installation of PVC casing to approx 4m and PVC screen from approx. 2m to 4m if required.	1756340	5920900	1229	Drilled	Observation / Piezo	Alluvium		Auckland Central
27943	C512-12-3122*	Expired	20030519	20040520	To authorise the construction of up to four groundwater monitoring bores.	Construction of up to 4 50mm diameter bores to a depth of approximately 5m. Installation of PVC casing to 2m.	1756340	5920900	21910	Proposed	Observation / Piezo	Alluvium		Auckland Central
35567	C512-12-4203*	Expired	20080314	20090316	To authorise construction of 9 bores for geotechnical investigation.	The construction of a 100mm diameter bore to an approximate depth of 15m. Installation of PVC casing material to an approximate depth of 15m. Proposed grouting to 12m.	1756538	5920811	23124	Drilled	Geotechnical	Waitemata	Auckland Isthmus Waitemata	

CONSENT_NUMBER	TLA	DATE_DRILLED	TOTAL_DEPTH	STATIC_WATER_LEVEL	STATIC_WATER_DATE	BORE_LOG	DIAMETER_FROM	DIAMETER_TO	DIAMETER	CASING_FROM	CASING_TO	CASING_TYPE	CASING_DIAMETER	SCREEN_FROM	SCREEN_TO	SCREEN_TYPE	CONSULTANT	DATE_CREATED	PROPERTY_ADDRESS	LOC_TYP
15241	Auckland Central	19960620	6.2	2	19960621	Y	0	6.2	50	0	3	PVC/ABS	50	3	6	PVC/ABS	AECOM Consulting Services (NZ) Ltd	20170601		Point
25652	Auckland Central																AECOM Consulting Services (NZ) Ltd	20170601	Corner of Beaumont St, Packenham St & Daldy St Auckland Auckland City	Point
35134	Auckland Central																AECOM Consulting Services (NZ) Ltd	20170601	141 Pakenham Street West Auckland Central Auckland Central	Point
23092	Auckland Central	19991011	4.5	2.5	19991011		0	4.5	50	0	1.5	PVC/ABS	50	1.5	4.5	PVC/ABS		20170601	0000 * PAKENHAM ST * *	Point
28022	Auckland Central		8				0	8	50	0	8	PVC/ABS	50	1	8	PVC/ABS	Tonkin & Taylor Limited	20170601	51 47 Halsey St Auckland Central Auckland Central	Point
25126	Auckland Central	20010508	4.5	2.5	20010508	Y				0	1.3	PVC/ABS		1.3	4.5	PVC/ABS		20170601	0000 * PAKENHAM ST * * Auckland	Point
24573	Auckland Central	20001109	4.5			Y	0	4.5	100	0	1	PVC/ABS	100	1	4.5	PVC/ABS	Pattle Delamore Partners Limited	20170601	141-171 Pakenham St West St Marys Bay Auckland City	Point
12344	Auckland Central									0								20170601		Point
26321	Auckland Central																Burton Planning Consultants Limited	20170601	143 Beaumont St Auckland Central Auckland Central	Point
20656	Auckland Central	19980402	4.2	2.8	19980402	Y	0	4.2	50	0	0.6	PVC/ABS	50	0.6	4.2	PVC/ABS		20170601	143 Beaumont St Auckland Central Auckland Central	Point
12345	Auckland Central									0								20170601		Point
29097	Auckland Central		5				0	5	50	0	2		50				Tonkin & Taylor Limited	20170601	185 Fanshawe St Auckland Central Auckland Central	Point
15272	Auckland Central									0								20170601		Point
29810	Auckland Central																Tonkin & Taylor Limited	20170601	89 85 Halsey St Auckland Central Auckland Central	Point
27100	Auckland Central																Tonkin & Taylor Limited	20170601	81-91 Halsey Street Viaduct Basin Auckland City	Area
27100	Auckland Central																Pro-Drill Limited	20170601	81-91 Halsey Street Viaduct Basin Auckland City	Area
27753	Auckland Central																Tonkin & Taylor Limited	20170601	81-91 Fanshaw St Viaduct Harbour Auckland City	Point

CONSENT_NUMBER	TLA	DATE_DRILLED	TOTAL_DEPTH	STATIC_WATER_LEVEL	STATIC_WATER_DATE	BORE_LOG	DIAMETER_FROM	DIAMETER_TO	DIAMETER	CASING_FROM	CASING_TO	CASING_TYPE	CASING_DIAMETER	SCREEN_FROM	SCREEN_TO	SCREEN_TYPE	CONSULTANT	DATE_CREATED	PROPERTY_ADDRESS	LOC_TYP
31132	Auckland Central	20050701	17.2	1.84													Tonkin & Taylor Limited	20170601	109 Fanshawe St Auckland Central Auckland Central	Point
16159	Auckland Central									0							Tonkin & Taylor Limited	20170601		Point
12405	Auckland Central	19940316	3				0	3	100	0	0.4	PVC/ABS	100	0.4	3			20170601		Point
12402	Auckland Central	19940316	3	1.2	19940316	Y	0	3	200	0	1	PVC/ABS	200	1	3	PVC/ABS	Pattle Delamore Partners Limited	20170601		Point
27943	Auckland Central																	20170601	95-99 Beaumont Street Freemans Bay Auckland City	Point
35567	Auckland Central	20050704	18.3			Y											Tonkin & Taylor Limited	20170601	109 Fanshawe St Auckland Central Auckland Central	Point

CONSENT_NUMBER	FILE_REFERENCE	CONSENT_STATUS	GRANTED_DATE	REVIEW_DATE	EXPIRY_DATE	PURPOSE	WORKS_DESCRIPTION	EASTING	NORTHING	DISC_SEW_ID	ACTIVITY_STATUS	MAX_DAILY_FLOW	SOURCE_TYPE	WASTE_TYPE	TREATMENT_TYPE	ENVIRONMENT	DATE_CREATED
44278	25509	Issued	20150625		20250625	Air discharges from earthworks at a contaminated site.		1756609.67	5921141.13		Proposed						2017-06-01 17:22
43957	25279	Issued	20150302		20200303	The upgrade of the Madden Street and Pakenham Street West public realm between Halsey Street in the east and Beaumont Street in the west. This includes the road and all associated above and below ground infrastructure, street furniture, tree removals, wor		1756564	5921068		Proposed						2017-06-01 17:22
43965	25284	Issued	20150224		20200225	Discharge of contaminants into air.		1756564	5921068		Proposed						2017-06-01 17:22
40686	23265	Issued	20130118		20180121	To upgrade the Daldy Street public realm between Jellicoe Street and Pakenham Street West including the construction of a new portion of Daldy Street, between Madden Street and Pakenham Street West and including its intersection with Madden Street. This u		1756518	5921201		Proposed						2017-06-01 17:22
41438	23677	Issued	20130313	20140313	20270313	Installation of telecommunications infrastructure within the road reserve of various streets in the Wynyard Quarter Precinct, Auckland Central		1756522	5921088		Proposed						2017-06-01 17:22
39994	22913	Expired	20120316		20170315	To discharge contaminants to air from the excavation of a 530 metre utilities trench along Beaumont Street.		1756341.85	5920979.39		Proposed						2017-06-01 17:22
40680	23260	Issued	20121220		20180121	To upgrade the Halsey Street public realm between Pakenham Street West and Jellicoe Street, including its intersection with Madden Street, including the road and all associated above and below ground infrastructure, street furniture and vegetation and the		1756734	5921139		Proposed						2017-06-01 17:22
38996	22359	Issued	20110531		20460531	To divert and discharge stormwater from an existing service station development.		1756446	5920862		Proposed				Up-flow		2017-06-01 17:22
27965	16762	Lapsed	20030729		20380701	To authorise the diversion and discharge of stormwater from 0.26 ha of impervious surface in accordance with Sections 14 and 15 of the Resource Management Act 1991.	31-79 Daldy Street Freemans Bay	1756490	5921040		Proposed				Sandfilter		2017-06-01 17:22
46213	26885	Issued	20160419		20510430	To authorise the diversion and discharge of stormwater from a footpath.		1756409.51	5920805.37		Proposed				None		2017-06-01 17:22
46213	26885	Issued	20160419		20510430	To authorise the diversion and discharge of stormwater from a footpath.		1756409.51	5920805.37		Proposed				None		2017-06-01 17:22
44201	25451	Issued	20150227	20150227	20500227	To divert and discharge stormwater from 2002m3 of new impervious area associated with temporary relocation of machinery depot.	It is expected that Hirepool will only operate on this site for approximately 24 months	1756457.05	5921185.79		Proposed				None		2017-06-01 17:22
39585	22707	Expired	20111013		20111031	To discharge and divert Stormwater a from a proposed temporary private car parking area for a period of 61 days.		1756457	5921185		Proposed				None		2017-06-01 17:22
44560	25710	Issued	20150625	20160331	20250625	Discharge from disturbance of contaminated land.		1756609.67	5921141.13		Occurring					Into ground - full year	2017-06-01 17:22
44583	25725	Issued	20151023		20201027	To discharge contaminants to land and water from the earthworks associated with the establishment of a new pump station.		1756487.95	5921081.87		Occurring					Into ground - full year	2017-06-01 17:22
46454	27060	Issued	20160905		20210630	To discharge contaminants to land and water from the earthworks associated with the redevelopment of a contaminated site, in specific an interim cycleway in the Wynyard Quarter area.		1756402.55	5921196.31		Occurring					Into ground - full year	2017-06-01 17:22
46474	26018	Issued	20160531		20210331	Discharge of contaminants associated with the remediation of contaminated land		1756622.62	5920960.13		Occurring					Into ground - full year	2017-06-01 17:22
41273	23606	Issued	20130313		20280313	To install telecommunication infrastructure along various streets within Wynyard Quarter, Auckland Central.		1756522	5921088		Occurring					Into ground - full year	2017-06-01 17:22
39833	22844	Issued	20120801		20170802	Controlled Activity to discharge contaminants to land or water during a ground stabilisation trial to be completed within one day		1756556	5921226		Occurring					Into ground - full year	2017-06-01 17:22
40682	23262	Issued	20121220		20180121	To upgrade the Halsey Street public realm between Pakenham Street West and Jellicoe Street, including its intersection with Madden Street, including the road and all associated above and below ground infrastructure, street furniture and vegetation and the		1756734	5921139		Occurring					Into ground - full year	2017-06-01 17:22
40687	23266	Issued	20130118		20180121	To upgrade the Daldy Street public realm between Jellicoe Street and Pakenham Street West including the construction of a new portion of Daldy Street, between Madden Street and Pakenham Street West and including its intersection with Madden Street. This u		1756518	5921201		Occurring					Into ground - full year	2017-06-01 17:22

CONSENT_NUMBER	FILE_REFERENCE	CONSENT_STATUS	GRANTED_DATE	REVIEW_DATE	EXPIRY_DATE	PURPOSE	WORKS_DESCRIPTION	EASTING	NORTHING	DISC_SEW_ID	ACTIVITY_STATUS	MAX_DAILY_FLOW	SOURCE_TYPE	WASTE_TYPE	TREATMENT_TYPE	ENVIRONMENT	DATE_CREATED
36880	17370	Issued	20090501	20100228	20391231	Variation to groundwater monitoring (condition 5 of Consent 32072) to authorise the ongoing diffuse discharge of contaminants to ground and groundwater, and include the area of 95-99 Beaumont Street (Lot 2 DP 360738).		1756337	5920893		Occurring					Into ground - full year	2017-06-01 17:22
35508	20511	Expired	20090406		20140430	Authorisation to discharge contaminants to land and/or water for a short term during the construction of two levels of below groundlevel parking.		1756520	5920840							Into ground - full year	2017-06-01 17:22
40105	22913	Expired	20120316		20170315	To authorise discharge to contaminants to air from the excavation of a 530 metre utilities trench along Beaumont Street, Freemans Bay.		1756341.85	5920979.39		Occurring					Into ground - full year	2017-06-01 17:22
42155	24018	Issued	20131112	20141112	20481031	Discharge from disturbance of contaminated land.		1756537	5920870							Into ground - full year	2017-06-01 17:22
42792	24448	Issued	20140317		20190331	Undertake earthworks on contaminated land within an existing building to lay new foundations.		1756662.41	5921062.86		Occurring					Into ground - full year	2017-06-01 17:22
43518	24955	Issued	20141003		20191003	Discharge from disturbance of contaminated land. Applicant to construct an interim shared-path cycleway down Beaumont Street from Jellicoe Street and onto the eastern part of Westhaven Drive, Wynyard Quarter.		1756347.13	5921070.6		Occurring					Into ground - full year	2017-06-01 17:22
25850	15872	Surrendered	20020403	20040930	20090501	To authorise the taking of ground water and discharge of contaminated ground water onto or into ground and ground water on an oil industry storage facility in accordance with Section 15 (b) of the Resource Management Act 1991.		1756500	5921200		Occurring					Into ground - full year	2017-06-01 17:22
29356	17370	Superseded	20040903		20391231	To authorise the ongoing diffuse discharge of contaminants to ground and groundwater in accordance with Section 15 of the Resource Management Act.	Removal of approximately 3,500m3 of contaminated soil and removal of separate phase hydrocarbons from onsite excavations.	1756337	5920893		Occurring					Into ground - full year	2017-06-01 17:22
44138	25414	Issued	20150302		20200303	The upgrade of the Madden Street and Pakenham Street West public realm between Halsey Street in the east and Beaumont Street in the west. This includes the road and all associated above and below ground infrastructure, street furniture, tree removals, wor		1756550	5921116							Into ground - full year	2017-06-01 17:22
44139	25415	Issued	20150224		20200225	Discharge from disturbance of contaminated land.		1756577	5921227							Into ground - full year	2017-06-01 17:22
27595	16594	Superseded	20040204	20050131	20391201	To authorise the ongoing diffuse discharge of contaminant into ground and groundwater beneath the site in accordance with Section 15 of the Resource Management Act 1991.		1756337	5920893		Occurring					Into ground - full year	2017-06-01 17:22
43016	24597	Issued	20140526		20190526	To discharge from disturbance of contaminaetd land.		1756669.38	5921086.46		Occurring					Into ground - full year	2017-06-01 17:22
27928	16744	Superseded	20040426	20050331	20381231	To authorise the ongoing diffuse discharge of contaminant into ground and groundwater beneath the site in accordance with Section 15 of the Resource Management Act 1991.	Removal of contaminated soil, construction of a marina and locks. Construction work to include retention and/or reinstatement of the groundwater collection and pumping system, the installation of groundwater monitoring bores and the sealing of service tr	1756720	5920970							Into ground - full year	2017-06-01 17:22
27955	16755	Issued	20041209	20050330	20391231	To authorise the discharge of contaminated land and groundwater to ground in accordance with Section 15 of the Resource Management Act 1991.		1756668	5920846		Occurring					Into ground - full year	2017-06-01 17:22
30732	16744	Issued	20051202	20060331	20381231	To authorise the ongoing diffuse discharge of contaminant into ground and groundwater beneath the site.	Removal of contaminated soil, construction of a marina and locks. Construction work to include retention and/or reinstatement of the groundwater collection and pumping system, the installation of groundwater monitoring bores and the sealing of service tr	1756720	5920970							Into ground - full year	2017-06-01 17:22
32071	16594	Surrendered	20060208	20080228	20391201	To authorise the ongoing diffuse discharge of contaminant into ground and groundwater beneath the site in accordance with Section 15 of the Resource Management Act 1991.		1756337	5920893		Occurring					Into ground - full year	2017-06-01 17:22
32072	17370	Superseded	20060208	20080228	20391231	To authorise the ongoing diffuse discharge of contaminants to ground and groundwater in accordance with Section 15 of the Resource Management Act 1991.		1756337	5920893		Occurring					Into ground - full year	2017-06-01 17:22

CONSENT_NUMBER	FILE_REFERENCE	CONSENT_STATUS	GRANTED_DATE	REVIEW_DATE	EXPIRY_DATE	PURPOSE	WORKS_DESCRIPTION	EASTING	NORTHING	DISC_SEW_ID	ACTIVITY_STATUS	MAX_DAILY_FLOW	SOURCE_TYPE	WASTE_TYPE	TREATMENT_TYPE	ENVIRONMENT	DATE_CREATED
42185	22638	Issued	20140617	20190618	20490618	This consent authorises the discharge of wastewater from the Consent Holder's existing and identified future public wastewater networks to land, freshwater and coastal receiving environments in accordance with section 15(1)(a) and (b) of the Resource Mana	22.The Wastewater Network Improvement Works Programme set out in the Wastewater Network Strategy shall be determined using the Best Practicable Option (BPO) Methodology set out in Chapter 2 of Attachment 3.	1756740	5920740	21461	Proposed	100	Network	Sewage		Into ground - full year	2017-06-01 17:22
42186	24039	Issued	20140831	20150831	20490618	Wastewater Network overflow discharges from the Central Interceptor catchment.		1756740	5920740	21462	Proposed	0	Network	Sewage		CMA	2017-06-01 17:22
42187	24039	Issued	20140831	20150831	20490618	Wastewater Network overflow discharges to the CMA from the Central Interceptor catchment.		1756740	5920740	21463	Proposed	0	Network	Sewage		CMA	2017-06-01 17:22
39478	22638	Issued	20140617	20190618	20490618	This consent authorises the discharge of wastewater from the Consent Holder's existing and identified future public wastewater networks to land, freshwater and coastal receiving environments in accordance with section 15(1)(a) and (b) of the Resource Mana	22.The Wastewater Network Improvement Works Programme set out in the Wastewater Network Strategy shall be determined using the Best Practicable Option (BPO) Methodology set out in Chapter 2 of Attachment 3.	1756740	5920740	21307	Proposed	100	Network	Sewage		Into ground - full year	2017-06-01 17:22
31873	15581	Surrendered	20051220	20061231	20391231	To authorise the discharge of wastewater to land or water (outside the Coastal Marine Area), together with any consequential discharges to air, in accordance with Section 15 of the Resource Management Act 1991 as a result of:·Overflows during times of We		1756740	5920740	20709	Proposed	0	Network	Sewage		Into ground - full year	2017-06-01 17:22

CONSENT_NUMBER	PROPERTY_ADDRESS	LOC_TYP	DISC_CON_ID	DISC_STO_ID	DEVELOPMENT_ADDRESS	AREA_OF_DEVELOPMENT	DEVELOPMENT_TYPE	AVERAGE_LOT_SIZE	TOTAL_CATCHMENT_AREA	LAND_USE_CATCHMENT	NUMBER_OF_OUTFALLS	RECEIVING_ENVIRONMENT	DISCHARGE_POINT	AREA_CONTRIBUTION	LOCATION_DESCRIPTION
44278	141-159 Beaumont St, 8-14 & 28 Madden St, 120-126 & 132 Halsey St, 117-125 & 139 & 141 Pakenham St Auckland Central	Point													
43957	141 Pakenham Street West Auckland Central Auckland Central	Point													
43965	38 Gaunt St Auckland Central Auckland Central	Point													
40686	Madden Street Auckland Central Auckland City	Point													
41438	Road Reserve within Wynyard Quarter Auckland City	Point													
39994	98 Beaumont St Auckland Central Auckland Central	Point													
40680	95 Halsey St Auckland Central Auckland Central	Point													
38996		Point		22277	155 Fanshawe St Auckland Central Auckland Central	0.3879	Other-SeeDescription			Commercial/Industrial			to existing reticulated system	0.3879	
27965		Point		20818	31 Daldy St Auckland Central Auckland Central	0.26	Redevelopment-Commercial		0.26	Commercial/Industrial	1	Into ground	1		
46213		Point		23152	203 Victoria Street West Auckland Central Auckland Central	8.8811	Other-SeeDescription		0.08	Mixed	1	Into ground	Discharge from foot path		Diffuse dishcrage from footopath
46213		Point		23152	Fanshawe Street Road Reserve, Auckland Central	8.8811	Other-SeeDescription		0.08	Mixed	1	Into ground	Discharge from foot path		Diffuse dishcrage from footopath
44201		Point		22963	143 Beaumont St Auckland Central Auckland Central	0.2002	Redevelopment-Commercial			Commercial/Industrial			1		north western bounry, to reticulated system
39585		Point		22374	143 Beaumont St Auckland Central Auckland Central	0.25	Carparking	2500	0.25	Commercial/Industrial		CMA	into ground on site.	0.25	Into ground on site.
44560	132 Halsey St Auckland Central Auckland Central	Point	21652												
44583	31 Daldy St Auckland Central Auckland Central	Point	21654												
46454	Beaumont Street, Westhaven Drive, Gaunt Streets Auckland Auckland Central	Point	21859												
46474	100 Halsey Street Wynyard Quarter Auckland	Point	21864												
41273	Pakenham Street East Auckland Central Auckland City	Point	21348												
39833	141 Pakenham Street West Auckland Central Auckland Central	Point	21262												
40682	95 Halsey St Auckland Central Auckland Central	Point	21310												
40687	Madden Street Auckland Central Auckland City	Point	21311												

CONSENT_NUMBER	PROPERTY_ADDRESS	LOC_TYP	DISC_CON_ID	DISC_STO_ID	DEVELOPMENT_ADDRESS	AREA_OF_DEVELOPMENT	DEVELOPMENT_TYPE	AVERAGE_LOT_SIZE	TOTAL_CATCHMENT_AREA	LAND_USE_CATCHMENT	NUMBER_OF_OUTFALLS	RECEIVING_ENVIRONMENT	DISCHARGE_POINT	AREA_CONTRIBUTION	LOCATION_DESCRIPTION
36880	2 Daldy St Auckland Central Auckland Central	Point	20110												
35508	109 Fanshawe St Auckland Central Auckland Central	Point	20902												
40105	98 Beaumont St Auckland Central Auckland Central	Point	21281												
42155	109 Fanshawe St Auckland Central Auckland Central	Point	21428												
42792	120 Halsey St Auckland Central Auckland Central	Point	21471												
43518	Westhaven Drive Auckland Central Auckland Central	Point	21534												
25850	143 Beaumont St Auckland Central Auckland Central	Point	20053												
29356	2 Daldy St Auckland Central Auckland Central	Point	20110												
44138	141 Pakenham Street West Auckland Central Auckland Central	Point	21595												
44139	38 Gaunt St Auckland Central Auckland Central	Point	21596												
27595	185 Fanshawe St Auckland Central Auckland Central	Point	20076												
43016	120 Halsey St Auckland Central Auckland Central	Point	21493												
27928	19 Viaduct Harbour Avenue Auckland Central Auckland Central	Point	20083												
27955	22 Viaduct Harbour Avenue Auckland Central Auckland Central	Point	20084												
30732	19 Viaduct Harbour Avenue Auckland Central Auckland Central	Point	20083												
32071	185 Fanshawe St Auckland Central Auckland Central	Point	20076												
32072	2 Daldy St Auckland Central Auckland Central	Point	20110												

CONSENT_NUMBER	PROPERTY_ADDRESS	LOC_TYP	DISC_CON_ID	DISC_STO_ID	DEVELOPMENT_ADDRESS	AREA_OF_DEVELOPMENT	DEVELOPMENT_TYPE	AVERAGE_LOT_SIZE	TOTAL_CATCHMENT_AREA	LAND_USE_CATCHMENT	NUMBER_OF_OUTFALLS	RECEIVING_ENVIRONMENT	DISCHARGE_POINT	AREA_CONTRIBUTION	LOCATION_DESCRIPTION
42185	Wastewater Network Overflows Various sites in the Auckland Region. Auckland Region Wide	Point													
42186	Various sites in the Auckland Central area Auckland City	Point													
42187	Various sites in the Auckland Central area Auckland City	Point													
39478	Various sites in Auckland Auckland Region Wide	Point													
31873	35 Graham St Auckland Central Auckland Central	Point													

CONSENT_NUMBER	OUTLET_TYPE	SIZE_DIMENSION	EROSION_PROTECTION_DEVICE	EFFICIENCY	DISCHARGE_POINT_EASTING	DISCHARGE_POINT_NORTHING	DISC_AIR_ID	DISCHARGE_TYPE
44278							20632	MASTER.OAS_CONS_D_AIR
43957							20625	MASTER.OAS_CONS_D_AIR
43965							20626	MASTER.OAS_CONS_D_AIR
40686							20534	MASTER.OAS_CONS_D_AIR
41438							20568	MASTER.OAS_CONS_D_AIR
39994							20516	MASTER.OAS_CONS_D_AIR
40680							20533	MASTER.OAS_CONS_D_AIR
38996	OtherSeeDescription	0		75	1756423	5920887		MASTER.OAS_CONS_D_STORMWATER
27965		0			1756490	5921040		MASTER.OAS_CONS_D_STORMWATER
46213	OtherSeeDescription	0	Other		1756375.49	5920797.66		MASTER.OAS_CONS_D_STORMWATER
46213	OtherSeeDescription	0	Other		1756375.49	5920797.66		MASTER.OAS_CONS_D_STORMWATER
44201	OtherSeeDescription	0			1756406.39	5921160.25		MASTER.OAS_CONS_D_STORMWATER
39585	OtherSeeDescription	0			1756470	5921235		MASTER.OAS_CONS_D_STORMWATER
44560								MASTER.OAS_CONS_D_CONTAMINATED_SITE
44583								MASTER.OAS_CONS_D_CONTAMINATED_SITE
46454								MASTER.OAS_CONS_D_CONTAMINATED_SITE
46474								MASTER.OAS_CONS_D_CONTAMINATED_SITE
41273								MASTER.OAS_CONS_D_CONTAMINATED_SITE
39833								MASTER.OAS_CONS_D_CONTAMINATED_SITE
40682								MASTER.OAS_CONS_D_CONTAMINATED_SITE
40687								MASTER.OAS_CONS_D_CONTAMINATED_SITE

CONSENT_NUMBER	OUTLET_TYPE	SIZE_DIMENSION	EROSION_PROTECTION_DEVICE	EFFICIENCY	DISCHARGE_POINT_EASTING	DISCHARGE_POINT_NORTHING	DISC_AIR_ID	DISCHARGE_TYPE
36880								MASTER.OAS_CONS_D_CONTAMINATED_SITE
35508								MASTER.OAS_CONS_D_CONTAMINATED_SITE
40105								MASTER.OAS_CONS_D_CONTAMINATED_SITE
42155								MASTER.OAS_CONS_D_CONTAMINATED_SITE
42792								MASTER.OAS_CONS_D_CONTAMINATED_SITE
43518								MASTER.OAS_CONS_D_CONTAMINATED_SITE
25850								MASTER.OAS_CONS_D_CONTAMINATED_SITE
29356								MASTER.OAS_CONS_D_CONTAMINATED_SITE
44138								MASTER.OAS_CONS_D_CONTAMINATED_SITE
44139								MASTER.OAS_CONS_D_CONTAMINATED_SITE
27595								MASTER.OAS_CONS_D_CONTAMINATED_SITE
43016								MASTER.OAS_CONS_D_CONTAMINATED_SITE
27928								MASTER.OAS_CONS_D_CONTAMINATED_SITE
27955								MASTER.OAS_CONS_D_CONTAMINATED_SITE
30732								MASTER.OAS_CONS_D_CONTAMINATED_SITE
32071								MASTER.OAS_CONS_D_CONTAMINATED_SITE
32072								MASTER.OAS_CONS_D_CONTAMINATED_SITE

CONSENT_NUMBER	OUTLET_TYPE	SIZE_DIMENSION	EROSION_PROTECTION_DEVICE	EFFICIENCY	DISCHARGE_POINT_EASTING	DISCHARGE_POINT_NORTHING	DISC_AIR_ID	DISCHARGE_TYPE
42185								MASTER.OAS_CONS_D_SEWAGE
42186								MASTER.OAS_CONS_D_SEWAGE
42187								MASTER.OAS_CONS_D_SEWAGE
39478								MASTER.OAS_CONS_D_SEWAGE
31873								MASTER.OAS_CONS_D_SEWAGE

CONSENT_NUMBER	FILE_REFERENCE	CONSENT_STATUS	GRANTED_DATE	EXPIRY_DATE	PURPOSE	WORKS_DESCRIPTION	PROJECT_TITLE	EASTING	NORTHING	ANNUAL_ALLOCATION	DAILY_ALLOCATION	TAKE_ID	ACTIVITY_STATUS	MONITORING_PRIORITY	AQUIFER	MANAGEMENT_AREA	TLA	SOURCE	HYDSYS_NUMBER
35505	20509	Expired	20090406	20140430	To authorise the taking of an average of 10 m3/day of groundwater in order to dewater a 1.5Ha construction site to enable the construction of a sub-commercial building sub-structure.			1756520	5920840		10	20728	Proposed	Not known	Alluvium	Auckland - Manukau Groundwater	Auckland Central	Bore	
35505	20509	Expired	20090406	20140430	To authorise the taking of an average of 10 m3/day of groundwater in order to dewater a 1.5Ha construction site to enable the construction of a sub-commercial building sub-structure.			1756580	5920870		10	20728	Proposed	Not known	Alluvium	Auckland - Manukau Groundwater	Auckland Central	Bore	
27647	16000	Expired (Not Replaced)	20030620	20080531	To authorise the taking and diversion of groundwater to dewater an excavation during the construction of a underground building basement in accordance with Section 14 of the Resource Management Act 1991.	An excavation approximately 2.3 metres deep, 83 metres long and up to 27 metres wide.	Melview Developments Ltd - Log Farm	1756720	5920970	0	8	20414	Proposed	Not known	Fill	Auckland - Manukau Groundwater	Auckland Central	Bore	W16000A

CONSENT_NUMBER	USE_TYPE	RIVER_LAKE_ID	DATE_CREATED	PROPERTY_ADDRESS	LOC_TYP
35505	Industrial Use	3244	2017-06-01 17:22	109 Fanshawe St Auckland Central Auckland Central	Point
35505	Industrial Use	3244	2017-06-01 17:22	109 Fanshawe St Auckland Central Auckland Central	Point
27647	Other	902	2017-06-01 17:22	87 Halsey Street Viaduct Harbour Auckland City	Point

PERMITTED_ACTIVITY_ID	FILE_REFERENCE	PERMITTED_ACTIVITY_TYPE	ACTIVITY	CONSENT_STATUS	PURPOSE	WORKS_DESCRIPTION	EASTING	NORTHING	ACTIVITY_ID	ACTIVITY_STATUS	DATE_CREATED	PROPERTY_ADDRESS	LOC_TYP
51509	5-42-3662	Contaminated Site Discharge	Contaminated Site Discharge	Assessment Completed	To authorise remediation works to allow for the resurfacing and refurbishment of	Investigation of soil quality carried out only to the extent required for the works. Soil and	1756375	5921109	20612	Completed	2017-06-01 17:23	Beaumont St Auckland Central Auckland City	Point
51431	5-42-3612	Contaminated Site Discharge	Contaminated Site Discharge	Assessment Completed	file ref 5-42-3612	po peter kavanagh	1756635	5920713	20542	Occurring	2017-06-01 17:23	152 150 Fanshawe St Auckland Central Auckland Central	Point
51360	W224-42-0255	Contaminated Site Discharge	Contaminated Site Discharge	Assessment Completed	Decommissioning of the site formerly housing two USTs;	Former Hirequip site; two UST removed in 2003, and surrounding soil tested for TPH/BTEX/PAH by URS	1756657	5920793	20487	Completed	2017-06-01 17:23	85 Fanshawe St Auckland Central Auckland Central	Point

Site Contamination Enquiry Report



Legend

- Area of Interest
- Legacy Consent - Bore
- Legacy Consent - Take
- Legacy Consent - Discharge
- Legacy Application - Bore
- Legacy Application - Take
- Legacy Application - Discharge
- Legacy Permitted Activity - Bore
- Legacy Permitted Activity - Take
- Legacy Permitted Activity - Discharge
- Legacy Consent - Other Bore
- SIIED Pollution Incident
- Auckland Council Consent - Bore
- Auckland Council Consent - Take
- Auckland Council Consent - Discharge
- SAP Property Characteristic
- HAIL - Contaminated Sites

28 April 2026

Tonkin & Taylor Group Limited
PO Box 2093
WELLINGTON

Attention: Carmen Thornton

Dear Carmen,

Site Contamination Enquiry – *100 Halsey Street, Auckland Central*

This letter is in response to your enquiry requesting available site contamination information within Auckland Council records for the above site. Please note this report does not constitute a site investigation report; such reports are required to be prepared by a (third-party) Suitably Qualified and Experienced Practitioner.

The following details are based on information available to the Contamination, Air & Noise Team in the Planning & Resource Consent Department. The details provided may be from former regional council information, as well as property information held by the former district/city councils. For completeness the relevant property file should also be requested to obtain all historical records and reports via 09 3010101 or online at:

https://www.aucklandcouncil.govt.nz/buying-property/order-property-report/Pages/order-property-file.aspx.

1. Hazardous Activities and Industries List (HAIL) Information

This list published by the Ministry for the Environment (MfE) comprises activities and industries that are considered likely to cause land contamination as a result of hazardous substance use, storage, and/or disposal.

Council's records indicate this site has possibly been subject to the following activities that fall within the HAIL:

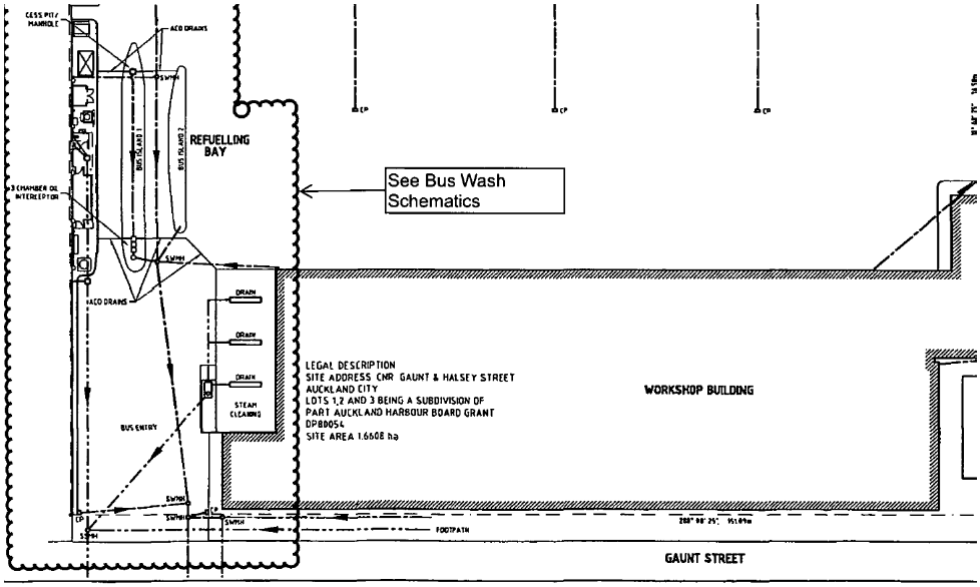
- HAIL Item (A17) - Storage tanks or drums for fuel, chemicals or liquid waste
- HAIL Item (F4) - Motor vehicle workshops
- HAIL Item (G3) - Landfill sites

A Detailed Site Investigation dated May 2017 indicates the site 100 Halsey Street, Auckland Central, has been utilised as a transport depot since at least the 1940s. The site is on reclaimed land, with some of the reclamation fill sourced from the Beaumont Street gasworks. The site operated as a depot for Auckland City Tramway in the 1940s, including on-site servicing of the trams.

Soil sampling identified concentrations of arsenic, chromium, copper, lead, mercury, nickel and BaP in exceedance of the NES:CS SCS commercial / industrial outdoor work and/or the AUP(OP) PA soil acceptance criteria. Cyanide was measured at concentrations above the ANZECC 80% trigger value for marine ecosystems in the groundwater beneath the site.

A Site Validation Report dated July 2019, for the development of an eight-level building, indicates that ACM contamination was discovered during the works. A total of 736 tonnes of cyanide, metal and hydrocarbon impacted soil was excavated and disposed of to landfill during the works. Additionally, 828 tonnes of soil contaminated with asbestos was removed and disposed of offsite. Residual contamination of metals and PAHs remain in soils at the site however is encapsulated beneath the building.

Records indicate that the site hosts a bus workshop and a refuelling area. Additionally, the workshop and other facilities for the bus depot are reported to hold hazardous substances.



Above: Site plan dated 2015 shows refuelling bay and workshop building

Please note:

- *If you are demolishing any building that may have asbestos containing materials (ACM) in it, you have obligations under the Health and Safety at Work (Asbestos) Regulations 2016 for the management and removal of asbestos, including the need to engage a Competent Asbestos Surveyor to confirm the presence or absence of any ACM.*
- *Paints used on external parts of properties up until the mid-1970's routinely contained lead, a poison and a persistent environmental pollutant. You are advised to ensure that soils affected by old, peeling or flaking paint are assessed in relation to the proposed use of the property, including high risk use by young children.*

2. Consents and Incidents Information (200m radius of the selected site)

The Council database was searched for records of the following activities within approximately 200 metres of the site:

- Pollution Incidents (including air discharges, oil or diesel spills)
- Bores
- Contaminated site and air discharges, and industrial trade process consents
- Closed Landfills
- Air quality permitted activities
- Identified HAIL activities

A map of relevant records can be found appended to this letter as Attachment B.

Relevant details of any pollution incidents, consents and HAIL activities are appended to this letter (Attachment A). Please refer to the column titled 'Property Address' on the spreadsheet to aid in identifying corresponding data on the map.

For any identified HAIL sites, please refer to the tab "HAIL Contaminated Sites" for more information (Column C and D include HAIL activity details where these are available).

Please note:

The HAIL activity hatching in Attachment B only reflects whether a site has been identified as a HAIL site (both verified and non-verified) by the Council and the type of HAIL associated with the site. This does not confirm whether the site has been formally investigated or the contamination status of the property (e.g. contaminated, remediated etc.). Additionally, due to limitations within Council's records, the specific HAIL activity is not included in the data for all properties. For further information on any of these known HAIL sites, a subsequent site contamination enquiry can be lodged for the specific property (up to 5 adjacent properties can be covered in one request).

While the Auckland Council has carried out the above search using its best practical endeavours, it does not warrant its completeness or accuracy and disclaims any responsibility or liability in respect of the information. If you or any other person wishes to act or to rely on this information, or make any financial commitment based upon it, it is recommended that you seek appropriate technical and/or professional advice.

If you wish to clarify anything in this letter that relates to this site, please contact contaminatedsites@aucklandcouncil.govt.nz. Any follow up requests for information on other sites must go through the online order process.

Should you wish to request any of the files referenced above and/or listed in the attached spreadsheet for viewing, please contact the Auckland Council Call Centre on 301 0101 and note you are requesting former Auckland Regional Council records (the records department requires three working days' notice to ensure the files will be available).

Please note Auckland Council cost recovers officer's time for all site enquiries. As such an invoice for the time involved in this enquiry will follow shortly.

Yours Sincerely,

Contamination, Air and Noise Team
Specialist Unit | Planning & Resource Consents
Auckland Council

Appendix F Soil logs

Appendix F Table 1: Soil logs

Borehole	Depth		PID	Description
TTBH01	0	0.1		ASPHALT, plastic liner at 0.1 m.
	0.1	0.85	0.3	FILL, coarse gravel, fine sand, silt, dark brown, subrounded, moderately graded, loose, moist, no odour, no staining, no ash, no separate phase liquids, geotextile at 0.83 m.
	0.85	1.25	8.1	FILL, clay, fine sand, coarse gravel, light brown orange, yellow mottle, subrounded, moderately graded, firm, moist, no odour, no staining, no ash, no separate phase liquids.
	1.25	1.55		CLAY, silt, fine sand, grey green, white mottle, firm, wet, no odour, no staining, no ash, no separate phase liquids, shell fragments.
	1.55	2	43.1	some fibrous material and shell fragments.
	2.1	3	1.5	CLAY, silt, fine sand, high plasticity, grey green, soft, wet, no odour, no staining, no fill, no ash, no separate phase liquids.
TTBH02	0	0.3		CONCRETE, plastic liner at 0.3 m bgl.
	0.3	1.25	4.5	FILL, coarse gravel, fine grave, fine sand, dark brown-red, subrounded, well graded, loose, moist, no odour, no staining, no ash, no separate phase liquids.
	1.25	1.55		FILL, medium gravel, fine gravel, fine sand, dark brown, brown mottle, subrounded, moderately graded, loose, moist, no odour, no staining, no ash, no separate phase liquids.
	1.55	2	21.5	FILL, coarse gravel, fine gravel, silt, brown, subrounded, moderately graded, medium dense, wet, no odour, no staining, no ash, no separate phase liquids.
	2	3	1.5	CLAY, silt, fine sand, high plasticity, grey green, soft, moist, no odour, no staining, no ash, no separate phase liquids, sand lens @ 2.35 m bgl and 2.75 m bgl.
	2	3	13.1	CLAY, silt, high plasticity, grey green, soft, wet, no odour, no staining, no ash, no separate phase liquids.
TTBH03	0	0.18		ASPHALT, plastic liner at 0.18 m bgl.
	0.18	0.33	6.7	FILL, fine sand, silt, dark brown, black mottle, poorly graded, loose, moist, no odour, no staining, no ash, no separate phase liquids.
	0.33	0.6	1.5	FILL, coarse gravel, fine sand, silt, dark red brown, subangular, well graded, loose, moist, no odour, no staining, no ash, no separate phase liquids.
	0.6	0.7		ASPHALT.
	0.7	0.9	-	FILL, coarse gravel, fine sand, silt, black streaks, grey mottle, subangular, well graded, loose, moist, no odour, no staining, no ash, no separate phase liquids.
	0.9	1.4	1.5	FILL, coarse gravel, silt, fine sand, dark brown, black streaks, white and light brown mottle, subangular, well graded, loose, moist, no staining, no ash, no separate phase liquids, hydrocarbon odour.

Borehole	Depth		PID	Description
	1.4	1.5	1.9	CLAY, fine sand, silt, high plasticity, green-grey, yellow streaks, white mottle, firm, moist, no odour, no staining, no ash, no separate phase liquids.
	1.5	1.8	-	core loss due to saturation.
TTBH04	0	0.25		ASPHALT, plastic liner at 0.25 m bgl.
	0.25	1	0.3	FILL, fine gravel, medium sand, silt, dark brown-red, subangular, well graded, loose, moist, no odour, no staining, no ash, no separate phase liquids.
	1	1.15	0.3	SILT, clay, fine sand, medium plasticity, dark grey, firm, moist, no odour, no staining, no fill, no ash, no separate phase liquids.
	1.15	1.45	-	FILL, fine gravel, fine sand, black, white mottle, subangular, moderately graded, loose, moist, no staining, no ash, no separate phase liquids, hydrocarbon odour.
	1.45	1.55	-	FILL, clay, medium gravel, silt, yellow, black streaks, subangular, well graded, medium dense, moist, no staining, no ash, no separate phase liquids, hydrocarbon odour.
	1.55	2	3.8	FILL, fine gravel, fine sand, black, subangular, moderately graded, loose, moist, yes staining, no ash, no separate phase liquids, hydrocarbon odour. Wood pieces.
	2	2.15	2.8	FILL, clay, silt, fine sand, high plasticity, yellow, black streaks, firm, moist, no odour, yes staining, no ash, no separate phase liquids.
	2.15	2.75	-	FILL, coarse gravel, fine sand, silt, black, white mottle, subangular, well graded, loose, moist, yes odour, yes staining, yes fill, no ash, no separate phase liquids, hydrocarbon odour. wood pieces.
	2.75	2.85	-	FILL, clay, silt, high plasticity, dark grey, green mottle, black mottle, firm, moist, no staining, yes fill, no ash, no separate phase liquids, hydrocarbon odour. wood pieces.
	2.85	3	24.8	FILL, coarse gravel, fine sand, silt, black, loose, wet, yes staining, no ash, no separate phase liquids, hydrocarbon odour. wood pieces.
TTBH05	0	0.15		ASPHALT, plastic liner at 0.15 m bgl.
	0.15	0.25		CONCRETE, plastic liner at 0.25 m bgl.
	0.25	0.45	0.3	FILL, medium sand, silt, dark grey, yellow mottle, poorly graded, loose, moist, no odour, no staining, no ash, no separate phase liquids.
	0.45	0.55	-	FILL, fine gravel, fine sand, silt, red, black mottle, subangular, moderately graded, loose, moist, no odour, no staining, no ash, no separate phase liquids.
	0.45	0.65	-	FILL, clay, silt, medium plasticity, firm, moist, no odour, no staining, no ash, no separate phase liquids.
	0.65	0.85	68.3	FILL, coarse gravel, black, white mottle, subangular, well graded, loose, moist, no staining, no ash, no separate phase liquids, hydrocarbon odour.
	0.85	1	2.2	FILL, medium gravel, fine gravel, fine sand, dark brown, white mottle, subangular, well graded, loose, moist, no odour, no staining, no ash, no separate phase liquids, ceramic and plastic pieces.
	1	1.1	-	FILL, fine gravel, fine sand, brown-orange-white mottle, subrounded moderately graded, loose, moist, no odour, no staining, no ash, no separate phase liquids, glass, ceramic and plastic pieces.

Borehole	Depth		PID	Description
	1.1	1.3	9.7	FILL, fine grave, black, white mottle, brown mottle, subrounded, moderately graded, loose, moist, no staining, no ash, no separate phase liquids, hydrocarbon odour.
	1.3	1.45	-	FILL, medium gravel, fine gravel, dark brown, white mottle, orange mottle, well graded, loose, moist, no odour, no staining, no ash, no separate phase liquids, glass, ceramic and plastic pieces.
	1.45	1.5	-	medium gravel, black, moderately graded, loose, moist, no odour, no staining, yes fill, no ash, no separate phase liquids.
	1.5	2	0.6	FILL, clay, silt, fine sand, high plasticity, yellow, grey mottle, black mottle, white mottle, firm, moist, no staining, no ash, no separate phase liquids, bitumen odour.
	2	2.2	-	FILL, clay, silt, medium plasticity, yellow, black mottle, firm, moist, no odour, no staining, no ash, no separate phase liquids, glass, ceramic and plastic pieces.
	2.2	3	0	FILL, clay, silt, high plasticity, yellow, grey mottle, orange mottle, firm, moist, no odour, no staining, no ash, no separate phase liquids, scoria and basalt in clay.

Appendix G Regulatory framework

G1.1 Introduction

The rules and associated assessment criteria relating to the control of contaminated sites in the Northland region are specified in the following documents:

- The National Environmental Standards for Assessing and Managing Contaminants in Soil to Protect Human Health (NESCS).
- The Auckland Unitary Plan – Operative in part (AUP).
- Health and Safety at Work (Asbestos) Regulation 2016 (Asbestos Regulations).

The NESCS considers issues relating to land use and the protection of human health while the AUP has regard to issues relating to the protection of the general environment. The management of asbestos in soils is regulated under Asbestos Regulations. As asbestos is principally considered to be a human health contaminant the Asbestos Regulations (like the NESCS) currently only considers issues relating to the protection of human health.

In order to help achieve compliance with the Asbestos Regulations, WorkSafe New Zealand has prepared an Approved Code of Practice (ACoP): Management and Removal of Asbestos (September 2016). The ACoP refers readers to the Asbestos-in-Soil Guidelines.

The requirement under each regulatory system (the NESCS, AUP and Asbestos Regulations) for contaminated sites are described in this appendix.

G1.2 NESCS

The NESCS came into effect on 1 January 2012. The legislation sets out nationally consistent planning controls applicable to all district and city councils for investigating and assessing contaminants in soil with regards to human health. Therefore, the NESCS now prevails over the human health-related contaminated land rules set out in district plans.

The NESCS regulations apply to five specific development activities on the piece of land where a HAIL activity has, or is more likely than not to have, occurred and contaminants are present above published background levels for the region. The development activities covered under the NESCS are:

- soil disturbance.
- soil sampling.
- fuel systems removal.
- subdivision.
- land use change.

If all the conditions of a Permitted Activity (PA) for the above activities can be met, then resource consent is not required. If PA provisions cannot be met, then consent will be required as either a Controlled Activity or Restricted Discretionary Activity determinant on the degree of ground contamination present. If investigations to quantify contamination are not carried out, then a discretionary consent will be required.

The following table (Appendix G Table 1), as provided in the NESCS Users Guide (April 2012), confirms the NESCS applies to the site.

Appendix G Table 1: PSI checklist

NES Soil Requirement	Applicable to site?
Is an activity described on the HAIL currently being undertaken on the piece of land to which this application applies?	Yes
Has an activity described on the HAIL ever been undertaken on the piece of land to which this application applies?	Yes
Is it more likely than not that an activity described on HAIL is being or has been undertaken on the piece of land to which this application applies?	Yes
If 'Yes' to any of the above, then the NESCS may apply. **The five activities to which the NES applies are:**	
Is the activity you propose to undertake removing or replacing a fuel storage system or parts of it?	No
Is the activity you propose to undertake sampling soil?	No
Is the activity you propose to undertake disturbing soil?	Yes (B1 and B2 development area)
Is the activity you propose to undertake subdividing land?	No
Is the activity you propose to undertake changing the use of the land?	No
Conclusion: The NESCS <u>applies</u> to the site	

An assessment against the relevant permitted activity standards of the NESCS for the B1 and B2 development area is provided in Appendix G Table 2.

Appendix G Table 2: NESCS Permitted Activity assessment for soil disturbance

NES Soil – Soil disturbance permitted activity conditions (Regulation 8(3)		Assessment
a	Implementation of controls to minimise exposure of humans to mobilised contaminants.	CAN COMPLY- Controls will be in place to prevent mobilisation of contamination.
b	The soil must be reinstated to an erosion free state within one month of completing the land disturbance.	CAN COMPLY - The area of land disturbance will be reinstated to an erosion free state on completion of the works.
c	The volume of the disturbance of the piece of land must be no more than 25 m^3 per 500 m^2.	**UNLIKELY TO COMPLY** - If less than 215 m^3 is disturbed as part of the development (based on the development area of 4,300 m^2, the volume will comply with the permitted activity threshold. Bulk earthworks plans are not yet available, however, based on the proposed size of the development, we anticipate that the proposed activity will not comply.

NES Soil – Soil disturbance permitted activity conditions (Regulation 8(3)		Assessment
d	Soil must not be taken away unless it is for laboratory testing or, for all other purposes combined, a maximum of 5 m^3 per 500 m^2 of soil may be taken away per year.	**UNLIKELY TO COMPLY** – If less than 43 m^3 of excavated soil is removed from site, the volume will comply with the permitted activity threshold for the site assuming the works span two arbitrary years[27]. It is expected that more than 43 m^3 excavated soil for the proposed development will be removed from site, therefore the proposed activity is unlikely to comply with this threshold.
e	Soil taken away must be disposed of at an appropriately licensed facility.	CAN COMPLY - Soil removed from site will be disposed to an approved facility.
f	The duration of land disturbance must be no longer than two months.	**UNLIKELY TO COMPLY -** The duration of the earthworks are unknown at this stage, but based on the size of the development we consider that the proposed activity is unlikely to be shorter than two months duration.
g	The integrity of a structure designed to contain contaminated soil or other contaminated materials must not be compromised.	NOT APPLICABLE - as there are no structures designed to contain contamination within the area subject to land disturbance.

Based on our understanding of the proposed activity, the proposed works do not meet the provisions of a Permitted Activity under the NESCS Regulation 8(3)(4) and a resource consent will be required.

G1.3 The Auckland Unitary Plan (AUP)

The Auckland Unitary Plan – Operative in part (AUP) was released on 15 November 2016. This version supersedes the Decisions Version, the Independent Hearings Panel Recommended Version, and the original proposed version.

The contaminated land rules, set out in Chapter E Environmental Risk Section E30, are not subject to any appeal, hence, the rules can now be 'treated as operative' under section 86F of the Resource Management Act 1991.

Rule E30.6.1.4 states that if soil concentrations or the 95% upper confidence limit (UCL) of soil concentrations are below the specified permitted activity criteria detailed in Table E30.6.1.4.1, then a resource consent is not required for the site. If soil contaminant concentrations exceed these relevant guidelines or separate phase is present, then a controlled activity consent for the ongoing discharge of contaminants is required. Key activity PA thresholds are:

- Soil disturbance – 200 m^3.
- Appropriate controls to minimise discharges of contaminants to the environment must be in place; and
- The works must be completed within two months.

[27] A year is not defined in the NESCS, so this volume can be disturbed or disposed of on two consecutive days, with each day considered as occurring in consecutive years, enabling thresholds to effectively be doubled.

G1.4 Health and Safety at Work (Asbestos) Regulations 2016

The management of asbestos in soils is regulated under the Health and Safety at Work (asbestos) Regulations 2016 (Asbestos Regulations). In order to help achieve compliance with the Asbestos Regulations, Worksafe New Zealand has prepared an Approved Code of Practice (ACoP): Management and Removal of Asbestos (September 2016). The ACoP refers readers to the Asbestos in Soil Guidelines.

The Asbestos in Soil Guidelines define the level of oversight and controls (including personal protective equipment, decontamination etc.) that are required to be implemented dependent on the concentration of asbestos fibres/fines or fragments that are present in the soils.

Appendix F Soil logs

Appendix F Table 1: Soil logs

Borehole	Depth		PID	Description
TTBH01	0	0.1		ASPHALT, plastic liner at 0.1 m.
	0.1	0.85	0.3	FILL, coarse gravel, fine sand, silt, dark brown, subrounded, moderately graded, loose, moist, no odour, no staining, no ash, no separate phase liquids, geotextile at 0.83 m.
	0.85	1.25	8.1	FILL, clay, fine sand, coarse gravel, light brown orange, yellow mottle, subrounded, moderately graded, firm, moist, no odour, no staining, no ash, no separate phase liquids.
	1.25	1.55		CLAY, silt, fine sand, grey green, white mottle, firm, wet, no odour, no staining, no ash, no separate phase liquids, shell fragments.
	1.55	2	43.1	some fibrous material and shell fragments.
	2.1	3	1.5	CLAY, silt, fine sand, high plasticity, grey green, soft, wet, no odour, no staining, no fill, no ash, no separate phase liquids.
TTBH02	0	0.3		CONCRETE, plastic liner at 0.3 m bgl.
	0.3	1.25	4.5	FILL, coarse gravel, fine grave, fine sand, dark brown-red, subrounded, well graded, loose, moist, no odour, no staining, no ash, no separate phase liquids.
	1.25	1.55		FILL, medium gravel, fine gravel, fine sand, dark brown, brown mottle, subrounded, moderately graded, loose, moist, no odour, no staining, no ash, no separate phase liquids.
	1.55	2	21.5	FILL, coarse gravel, fine gravel, silt, brown, subrounded, moderately graded, medium dense, wet, no odour, no staining, no ash, no separate phase liquids.
	2	3	1.5	CLAY, silt, fine sand, high plasticity, grey green, soft, moist, no odour, no staining, no ash, no separate phase liquids, sand lens @ 2.35 m bgl and 2.75 m bgl.
	2	3	13.1	CLAY, silt, high plasticity, grey green, soft, wet, no odour, no staining, no ash, no separate phase liquids.
TTBH03	0	0.18		ASPHALT, plastic liner at 0.18 m bgl.
	0.18	0.33	6.7	FILL, fine sand, silt, dark brown, black mottle, poorly graded, loose, moist, no odour, no staining, no ash, no separate phase liquids.
	0.33	0.6	1.5	FILL, coarse gravel, fine sand, silt, dark red brown, subangular, well graded, loose, moist, no odour, no staining, no ash, no separate phase liquids.
	0.6	0.7		ASPHALT.
	0.7	0.9	-	FILL, coarse gravel, fine sand, silt, black streaks, grey mottle, subangular, well graded, loose, moist, no odour, no staining, no ash, no separate phase liquids.
	0.9	1.4	1.5	FILL, coarse gravel, silt, fine sand, dark brown, black streaks, white and light brown mottle, subangular, well graded, loose, moist, no staining, no ash, no separate phase liquids, hydrocarbon odour.

Borehole	Depth		PID	Description
	1.4	1.5	1.9	CLAY, fine sand, silt, high plasticity, green-grey, yellow streaks, white mottle, firm, moist, no odour, no staining, no ash, no separate phase liquids.
	1.5	1.8	-	core loss due to saturation.
TTBH04	0	0.25		ASPHALT, plastic liner at 0.25 m bgl.
	0.25	1	0.3	FILL, fine gravel, medium sand, silt, dark brown-red, subangular, well graded, loose, moist, no odour, no staining, no ash, no separate phase liquids.
	1	1.15	0.3	SILT, clay, fine sand, medium plasticity, dark grey, firm, moist, no odour, no staining, no fill, no ash, no separate phase liquids.
	1.15	1.45	-	FILL, fine gravel, fine sand, black, white mottle, subangular, moderately graded, loose, moist, no staining, no ash, no separate phase liquids, hydrocarbon odour.
	1.45	1.55	-	FILL, clay, medium gravel, silt, yellow, black streaks, subangular, well graded, medium dense, moist, no staining, no ash, no separate phase liquids, hydrocarbon odour.
	1.55	2	3.8	FILL, fine gravel, fine sand, black, subangular, moderately graded, loose, moist, yes staining, no ash, no separate phase liquids, hydrocarbon odour. Wood pieces.
	2	2.15	2.8	FILL, clay, silt, fine sand, high plasticity, yellow, black streaks, firm, moist, no odour, yes staining, no ash, no separate phase liquids.
	2.15	2.75	-	FILL, coarse gravel, fine sand, silt, black, white mottle, subangular, well graded, loose, moist, yes odour, yes staining, yes fill, no ash, no separate phase liquids, hydrocarbon odour. wood pieces.
	2.75	2.85	-	FILL, clay, silt, high plasticity, dark grey, green mottle, black mottle, firm, moist, no staining, yes fill, no ash, no separate phase liquids, hydrocarbon odour. wood pieces.
	2.85	3	24.8	FILL, coarse gravel, fine sand, silt, black, loose, wet, yes staining, no ash, no separate phase liquids, hydrocarbon odour. wood pieces.
TTBH05	0	0.15		ASPHALT, plastic liner at 0.15 m bgl.
	0.15	0.25		CONCRETE, plastic liner at 0.25 m bgl.
	0.25	0.45	0.3	FILL, medium sand, silt, dark grey, yellow mottle, poorly graded, loose, moist, no odour, no staining, no ash, no separate phase liquids.
	0.45	0.55	-	FILL, fine gravel, fine sand, silt, red, black mottle, subangular, moderately graded, loose, moist, no odour, no staining, no ash, no separate phase liquids.
	0.45	0.65	-	FILL, clay, silt, medium plasticity, firm, moist, no odour, no staining, no ash, no separate phase liquids.
	0.65	0.85	68.3	FILL, coarse gravel, black, white mottle, subangular, well graded, loose, moist, no staining, no ash, no separate phase liquids, hydrocarbon odour.
	0.85	1	2.2	FILL, medium gravel, fine gravel, fine sand, dark brown, white mottle, subangular, well graded, loose, moist, no odour, no staining, no ash, no separate phase liquids, ceramic and plastic pieces.
	1	1.1	-	FILL, fine gravel, fine sand, brown-orange-white mottle, subrounded moderately graded, loose, moist, no odour, no staining, no ash, no separate phase liquids, glass, ceramic and plastic pieces.

Borehole	Depth		PID	Description
	1.1	1.3	9.7	FILL, fine grave, black, white mottle, brown mottle, subrounded, moderately graded, loose, moist, no staining, no ash, no separate phase liquids, hydrocarbon odour.
	1.3	1.45	-	FILL, medium gravel, fine gravel, dark brown, white mottle, orange mottle, well graded, loose, moist, no odour, no staining, no ash, no separate phase liquids, glass, ceramic and plastic pieces.
	1.45	1.5	-	medium gravel, black, moderately graded, loose, moist, no odour, no staining, yes fill, no ash, no separate phase liquids.
	1.5	2	0.6	FILL, clay, silt, fine sand, high plasticity, yellow, grey mottle, black mottle, white mottle, firm, moist, no staining, no ash, no separate phase liquids, bitumen odour.
	2	2.2	-	FILL, clay, silt, medium plasticity, yellow, black mottle, firm, moist, no odour, no staining, no ash, no separate phase liquids, glass, ceramic and plastic pieces.
	2.2	3	0	FILL, clay, silt, high plasticity, yellow, grey mottle, orange mottle, firm, moist, no odour, no staining, no ash, no separate phase liquids, scoria and basalt in clay.

Appendix G Regulatory framework

G1.1 Introduction

The rules and associated assessment criteria relating to the control of contaminated sites in the Northland region are specified in the following documents:

- The National Environmental Standards for Assessing and Managing Contaminants in Soil to Protect Human Health (NESCS).
- The Auckland Unitary Plan – Operative in part (AUP).
- Health and Safety at Work (Asbestos) Regulation 2016 (Asbestos Regulations).

The NESCS considers issues relating to land use and the protection of human health while the AUP has regard to issues relating to the protection of the general environment. The management of asbestos in soils is regulated under Asbestos Regulations. As asbestos is principally considered to be a human health contaminant the Asbestos Regulations (like the NESCS) currently only considers issues relating to the protection of human health.

In order to help achieve compliance with the Asbestos Regulations, WorkSafe New Zealand has prepared an Approved Code of Practice (ACoP): Management and Removal of Asbestos (September 2016). The ACoP refers readers to the Asbestos-in-Soil Guidelines.

The requirement under each regulatory system (the NESCS, AUP and Asbestos Regulations) for contaminated sites are described in this appendix.

G1.2 NESCS

The NESCS came into effect on 1 January 2012. The legislation sets out nationally consistent planning controls applicable to all district and city councils for investigating and assessing contaminants in soil with regards to human health. Therefore, the NESCS now prevails over the human health-related contaminated land rules set out in district plans.

The NESCS regulations apply to five specific development activities on the piece of land where a HAIL activity has, or is more likely than not to have, occurred and contaminants are present above published background levels for the region. The development activities covered under the NESCS are:

- soil disturbance.
- soil sampling.
- fuel systems removal.
- subdivision.
- land use change.

If all the conditions of a Permitted Activity (PA) for the above activities can be met, then resource consent is not required. If PA provisions cannot be met, then consent will be required as either a Controlled Activity or Restricted Discretionary Activity determinant on the degree of ground contamination present. If investigations to quantify contamination are not carried out, then a discretionary consent will be required.

The following table (Appendix G Table 1), as provided in the NESCS Users Guide (April 2012), confirms the NESCS applies to the site.

Appendix G Table 1: PSI checklist

NES Soil Requirement	Applicable to site?
Is an activity described on the HAIL currently being undertaken on the piece of land to which this application applies?	Yes
Has an activity described on the HAIL ever been undertaken on the piece of land to which this application applies?	Yes
Is it more likely than not that an activity described on HAIL is being or has been undertaken on the piece of land to which this application applies?	Yes
If 'Yes' to any of the above, then the NESCS may apply. **The five activities to which the NES applies are:**	
Is the activity you propose to undertake removing or replacing a fuel storage system or parts of it?	No
Is the activity you propose to undertake sampling soil?	No
Is the activity you propose to undertake disturbing soil?	Yes (B1 and B2 development area)
Is the activity you propose to undertake subdividing land?	No
Is the activity you propose to undertake changing the use of the land?	No
Conclusion: The NESCS <u>applies</u> to the site	

An assessment against the relevant permitted activity standards of the NESCS for the B1 and B2 development area is provided in Appendix G Table 2.

Appendix G Table 2: NESCS Permitted Activity assessment for soil disturbance

NES Soil – Soil disturbance permitted activity conditions (Regulation 8(3)		Assessment
a	Implementation of controls to minimise exposure of humans to mobilised contaminants.	CAN COMPLY- Controls will be in place to prevent mobilisation of contamination.
b	The soil must be reinstated to an erosion free state within one month of completing the land disturbance.	CAN COMPLY - The area of land disturbance will be reinstated to an erosion free state on completion of the works.
c	The volume of the disturbance of the piece of land must be no more than 25 m^3 per 500 m^2.	**UNLIKELY TO COMPLY** - If less than 215 m^3 is disturbed as part of the development (based on the development area of 4,300 m^2, the volume will comply with the permitted activity threshold. Bulk earthworks plans are not yet available, however, based on the proposed size of the development, we anticipate that the proposed activity will not comply.

NES Soil – Soil disturbance permitted activity conditions (Regulation 8(3)		Assessment
d	Soil must not be taken away unless it is for laboratory testing or, for all other purposes combined, a maximum of 5 m^3 per 500 m^2 of soil may be taken away per year.	**UNLIKELY TO COMPLY** – If less than 43 m^3 of excavated soil is removed from site, the volume will comply with the permitted activity threshold for the site assuming the works span two arbitrary years[27]. It is expected that more than 43 m^3 excavated soil for the proposed development will be removed from site, therefore the proposed activity is unlikely to comply with this threshold.
e	Soil taken away must be disposed of at an appropriately licensed facility.	CAN COMPLY - Soil removed from site will be disposed to an approved facility.
f	The duration of land disturbance must be no longer than two months.	**UNLIKELY TO COMPLY -** The duration of the earthworks are unknown at this stage, but based on the size of the development we consider that the proposed activity is unlikely to be shorter than two months duration.
g	The integrity of a structure designed to contain contaminated soil or other contaminated materials must not be compromised.	NOT APPLICABLE - as there are no structures designed to contain contamination within the area subject to land disturbance.

Based on our understanding of the proposed activity, the proposed works do not meet the provisions of a Permitted Activity under the NESCS Regulation 8(3)(4) and a resource consent will be required.

G1.3 The Auckland Unitary Plan (AUP)

The Auckland Unitary Plan – Operative in part (AUP) was released on 15 November 2016. This version supersedes the Decisions Version, the Independent Hearings Panel Recommended Version, and the original proposed version.

The contaminated land rules, set out in Chapter E Environmental Risk Section E30, are not subject to any appeal, hence, the rules can now be 'treated as operative' under section 86F of the Resource Management Act 1991.

Rule E30.6.1.4 states that if soil concentrations or the 95% upper confidence limit (UCL) of soil concentrations are below the specified permitted activity criteria detailed in Table E30.6.1.4.1, then a resource consent is not required for the site. If soil contaminant concentrations exceed these relevant guidelines or separate phase is present, then a controlled activity consent for the ongoing discharge of contaminants is required. Key activity PA thresholds are:

- Soil disturbance – 200 m^3.
- Appropriate controls to minimise discharges of contaminants to the environment must be in place; and
- The works must be completed within two months.

[27] A year is not defined in the NESCS, so this volume can be disturbed or disposed of on two consecutive days, with each day considered as occurring in consecutive years, enabling thresholds to effectively be doubled.

G1.4 Health and Safety at Work (Asbestos) Regulations 2016

The management of asbestos in soils is regulated under the Health and Safety at Work (asbestos) Regulations 2016 (Asbestos Regulations). In order to help achieve compliance with the Asbestos Regulations, Worksafe New Zealand has prepared an Approved Code of Practice (ACoP): Management and Removal of Asbestos (September 2016). The ACoP refers readers to the Asbestos in Soil Guidelines.

The Asbestos in Soil Guidelines define the level of oversight and controls (including personal protective equipment, decontamination etc.) that are required to be implemented dependent on the concentration of asbestos fibres/fines or fragments that are present in the soils.

Appendix H Laboratory reports

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Certificate of Analysis

Client:	Tonkin & Taylor	**Lab No:**	4205924	SPv2
Contact:	Natalie O'Rourke C/- Tonkin & Taylor PO Box 5271 Auckland 1141	**Date Received:**	06-May-2026	
		Date Reported:	26-May-2026	
		Quote No:	144917	
		Order No:	1101803	
		Client Reference:	1101803	
		Submitted By:	Natalie O'Rourke	

Sample Type: Soil

Sample Name:		TTBH01 1.0 06-May-2026	TTBH01 2.0 06-May-2026	TTBH01 3.0 06-May-2026	TTBH02 0.5 06-May-2026	TTBH02 2.0 06-May-2026
Lab Number:		4205924.2	4205924.3	4205924.4	4205924.5	4205924.7
Individual Tests						
Dry Matter	g/100g as rcvd	79	54	55	89	78
Total Cyanide*	mg/kg dry wt	< 15	< 15	< 15	< 15	< 15
Heavy Metals with Mercury, Screen Level						
Total Recoverable Arsenic	mg/kg dry wt	36	6	9	< 2	2
Total Recoverable Cadmium	mg/kg dry wt	0.38	< 0.10	< 0.10	< 0.10	0.12
Total Recoverable Chromium	mg/kg dry wt	35	12	23	6	34
Total Recoverable Copper	mg/kg dry wt	660	9	10	29	42
Total Recoverable Lead	mg/kg dry wt	1,260	17.4	17.5	< 0.4	5.8
Total Recoverable Mercury	mg/kg dry wt	0.21	0.14	0.15	< 0.10	< 0.10
Total Recoverable Nickel	mg/kg dry wt	128	9	11	47	122
Total Recoverable Zinc	mg/kg dry wt	800	43	54	21	60
Haloethers in SVOC Soil Samples by GC-MS/MS						
Bis(2-chloroethoxy) methane	mg/kg dry wt	< 0.5	< 0.6	< 0.6	< 0.5	< 0.5
Bis(2-chloroethyl)ether	mg/kg dry wt	< 0.5	< 0.6	< 0.6	< 0.5	< 0.5
Bis(2-chloro-1-methylethyl)ether	mg/kg dry wt	< 0.5	< 0.6	< 0.6	< 0.5	< 0.5
4-Bromophenyl phenyl ether	mg/kg dry wt	< 0.4	< 0.6	< 0.6	< 0.4	< 0.4
4-Chlorophenyl phenyl ether	mg/kg dry wt	< 0.5	< 0.6	< 0.6	< 0.5	< 0.5
Nitrogen containing compounds in SVOC Soil Samples by GC-MS/MS						
2,4-Dinitrotoluene	mg/kg dry wt	< 0.5	< 0.6	< 0.6	< 0.5	< 0.5
2,6-Dinitrotoluene	mg/kg dry wt	< 0.5	< 0.6	< 0.6	< 0.5	< 0.5
Nitrobenzene	mg/kg dry wt	< 0.5	< 0.6	< 0.6	< 0.5	< 0.5
N-Nitrosodi-n-propylamine	mg/kg dry wt	< 0.5	< 0.6	< 0.6	< 0.5	< 0.5
N-Nitrosodiphenylamine + Diphenylamine	mg/kg dry wt	< 0.8	< 1.1	< 1.1	< 0.7	< 0.8
Organochlorine Pesticides in SVOC Soil Samples by GC-MS/MS						
Aldrin	mg/kg dry wt	< 0.5	< 0.6	< 0.6	< 0.5	< 0.5
alpha-BHC	mg/kg dry wt	< 0.5	< 0.6	< 0.6	< 0.5	< 0.5
beta-BHC	mg/kg dry wt	< 0.5	< 0.6	< 0.6	< 0.5	< 0.5
delta-BHC	mg/kg dry wt	< 0.5	< 0.6	< 0.6	< 0.5	< 0.5
gamma-BHC (Lindane)	mg/kg dry wt	< 0.5	< 0.6	< 0.6	< 0.5	< 0.5
4,4'-DDD	mg/kg dry wt	< 0.5	< 0.6	< 0.6	< 0.5	< 0.5
4,4'-DDE	mg/kg dry wt	< 0.5	< 0.6	< 0.6	< 0.5	< 0.5
4,4'-DDT	mg/kg dry wt	< 0.5	< 0.6	< 0.6	< 0.5	< 0.5
Dieldrin	mg/kg dry wt	< 0.5	< 0.6	< 0.6	< 0.5	< 0.5
Endosulfan I	mg/kg dry wt	< 0.5	< 0.6	< 0.6	< 0.5	< 0.5
Endosulfan II	mg/kg dry wt	< 0.5	< 0.6	< 0.6	< 0.5	< 0.5
Endosulfan sulphate	mg/kg dry wt	< 0.5	< 0.6	< 0.6	< 0.5	< 0.5
Endrin	mg/kg dry wt	< 0.5	< 0.6	< 0.6	< 0.5	< 0.5

This Laboratory is accredited by International Accreditation New Zealand (IANZ), which represents New Zealand in the International Laboratory Accreditation Cooperation (ILAC). Through the ILAC Mutual Recognition Arrangement (ILAC-MRA) this accreditation is internationally recognised.
The tests reported herein have been performed in accordance with the terms of accreditation, with the exception of tests marked * or any comments and interpretations, which are not accredited.

Sample Type: Soil						
Sample Name:		TTBH01 1.0 06-May-2026	TTBH01 2.0 06-May-2026	TTBH01 3.0 06-May-2026	TTBH02 0.5 06-May-2026	TTBH02 2.0 06-May-2026
Lab Number:		4205924.2	4205924.3	4205924.4	4205924.5	4205924.7
Organochlorine Pesticides in SVOC Soil Samples by GC-MS/MS						
Endrin ketone	mg/kg dry wt	< 0.5	< 0.6	< 0.6	< 0.5	< 0.5
Heptachlor	mg/kg dry wt	< 0.5	< 0.6	< 0.6	< 0.5	< 0.5
Heptachlor epoxide	mg/kg dry wt	< 0.5	< 0.6	< 0.6	< 0.5	< 0.5
Hexachlorobenzene	mg/kg dry wt	< 0.5	< 0.6	< 0.6	< 0.5	< 0.5
Polycyclic Aromatic Hydrocarbons in SVOC Soil Samples by GC-MS/MS*						
Acenaphthene	mg/kg dry wt	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Acenaphthylene	mg/kg dry wt	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Anthracene	mg/kg dry wt	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Benzo[a]anthracene	mg/kg dry wt	< 0.5	< 0.5	< 0.5	< 0.5	0.6
Benzo[a]pyrene (BAP)	mg/kg dry wt	< 0.5	< 0.6	< 0.6	< 0.5	< 0.5
Benzo[b]fluoranthene + Benzo[j] fluoranthene	mg/kg dry wt	< 0.5	< 0.6	< 0.6	< 0.5	0.5
Benzo[g,h,i]perylene	mg/kg dry wt	< 0.5	< 0.6	< 0.6	< 0.5	< 0.5
Benzo[k]fluoranthene	mg/kg dry wt	< 0.5	< 0.6	< 0.6	< 0.5	< 0.5
1&2-Chloronaphthalene	mg/kg dry wt	< 0.5	< 0.6	< 0.6	< 0.5	< 0.5
Chrysene	mg/kg dry wt	< 0.5	< 0.5	< 0.5	< 0.5	0.6
Dibenzo[a,h]anthracene	mg/kg dry wt	< 0.5	< 0.6	< 0.6	< 0.5	< 0.5
Fluoranthene	mg/kg dry wt	< 0.5	< 0.5	< 0.5	< 0.5	1.9
Fluorene	mg/kg dry wt	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Indeno(1,2,3-c,d)pyrene	mg/kg dry wt	< 0.5	< 0.6	< 0.6	< 0.5	< 0.5
2-Methylnaphthalene	mg/kg dry wt	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Naphthalene	mg/kg dry wt	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Phenanthrene	mg/kg dry wt	< 0.5	< 0.5	< 0.5	< 0.5	0.8
Pyrene	mg/kg dry wt	< 0.5	< 0.5	< 0.5	< 0.5	1.6
Benzo[a]pyrene Potency Equivalency Factor (PEF) NES*	mg/kg dry wt	< 1.3	< 1.3	< 1.4	< 1.3	< 1.3
Benzo[a]pyrene Toxic Equivalence (TEF)*	mg/kg dry wt	< 1.3	< 1.3	< 1.4	< 1.3	< 1.3
Phenols in SVOC Soil Samples by GC-MS/MS						
4-Chloro-3-methylphenol	mg/kg dry wt	< 0.5	< 0.6	< 0.6	< 0.5	< 0.5
2-Chlorophenol	mg/kg dry wt	< 0.5	< 0.6	< 0.6	< 0.5	< 0.5
2,4-Dichlorophenol	mg/kg dry wt	< 0.5	< 0.6	< 0.6	< 0.5	< 0.5
2,4-Dimethylphenol	mg/kg dry wt	< 0.5	< 0.6	< 0.6	< 0.5	< 0.5
3 & 4-Methylphenol (m- + p-cresol)	mg/kg dry wt	< 0.5	< 0.6	< 0.6	< 0.5	< 0.5
2-Methylphenol (o-cresol)	mg/kg dry wt	< 0.5	< 0.6	< 0.6	< 0.5	< 0.5
2-Nitrophenol	mg/kg dry wt	< 0.5	< 0.6	< 0.6	< 0.5	< 0.5
Pentachlorophenol (PCP)	mg/kg dry wt	< 0.5	< 0.6	< 0.6	< 0.5	< 0.5
Phenol	mg/kg dry wt	< 0.5	< 0.6	< 0.6	< 0.5	< 0.5
2,4,5-Trichlorophenol	mg/kg dry wt	< 0.5	< 0.6	< 0.6	< 0.5	< 0.5
2,4,6-Trichlorophenol	mg/kg dry wt	< 0.5	< 0.6	< 0.6	< 0.5	< 0.5
Plasticisers in SVOC Soil Samples by GC-MS/MS						
Bis(2-ethylhexyl)phthalate	mg/kg dry wt	< 0.5	< 0.6	< 0.6	< 0.5	< 0.5
Butylbenzylphthalate	mg/kg dry wt	< 0.5	< 0.6	< 0.6	< 0.5	< 0.5
Di(2-ethylhexyl)adipate	mg/kg dry wt	< 0.5	< 0.6	< 0.6	< 0.5	< 0.5
Diethylphthalate	mg/kg dry wt	< 0.5	< 0.6	< 0.6	< 0.5	< 0.5
Dimethylphthalate	mg/kg dry wt	< 0.5	< 0.6	< 0.6	< 0.5	< 0.5
Di-n-butylphthalate	mg/kg dry wt	< 0.5	< 0.6	< 0.6	< 0.5	< 0.5
Di-n-octylphthalate	mg/kg dry wt	< 0.5	< 0.6	< 0.6	< 0.5	< 0.5
Other Halogenated compounds in SVOC Soil Samples by GC-MS/MS						
1,2-Dichlorobenzene	mg/kg dry wt	< 0.5	< 0.6	< 0.6	< 0.5	< 0.5
1,3-Dichlorobenzene	mg/kg dry wt	< 0.5	< 0.6	< 0.6	< 0.5	< 0.5
1,4-Dichlorobenzene	mg/kg dry wt	< 0.5	< 0.6	< 0.6	< 0.5	< 0.5
Hexachlorobutadiene	mg/kg dry wt	< 0.5	< 0.6	< 0.6	< 0.5	< 0.5
Hexachloroethane	mg/kg dry wt	< 0.5	< 0.6	< 0.6	< 0.5	< 0.5
1,2,4-Trichlorobenzene	mg/kg dry wt	< 0.5	< 0.6	< 0.6	< 0.5	< 0.5

Sample Type: Soil						
Sample Name:		TTBH01 1.0 06-May-2026	TTBH01 2.0 06-May-2026	TTBH01 3.0 06-May-2026	TTBH02 0.5 06-May-2026	TTBH02 2.0 06-May-2026
Lab Number:		4205924.2	4205924.3	4205924.4	4205924.5	4205924.7
Other compounds in SVOC Soil Samples by GC-MS/MS						
Benzyl alcohol	mg/kg dry wt	< 0.5	< 0.6	< 0.6	< 0.5	< 0.5
Carbazole	mg/kg dry wt	< 0.5	< 0.6	< 0.6	< 0.5	< 0.5
Dibenzofuran	mg/kg dry wt	< 0.5	< 0.6	< 0.6	< 0.5	< 0.5
Isophorone	mg/kg dry wt	< 0.5	< 0.6	< 0.6	< 0.5	< 0.5
Total Petroleum Hydrocarbons in Soil						
C7 - C9	mg/kg dry wt	< 20	< 30	< 30	< 20	< 20
C10 - C14	mg/kg dry wt	< 20	< 30	< 30	< 20	< 20
C15 - C36	mg/kg dry wt	1,260	< 50	< 50	< 40	< 40
Total hydrocarbons (C7 - C36)	mg/kg dry wt	1,260	< 100	< 90	< 80	< 80
BTEX in VOC Soils by Headspace GC-MS						
Benzene	mg/kg dry wt	< 0.2	< 0.4	< 0.4	< 0.16	< 0.2
Ethylbenzene	mg/kg dry wt	< 0.3	< 0.4	< 0.4	< 0.3	< 0.3
Toluene	mg/kg dry wt	< 0.3	< 0.4	< 0.4	< 0.3	< 0.3
m&p-Xylene	mg/kg dry wt	< 0.4	< 0.7	< 0.7	< 0.4	< 0.4
o-Xylene	mg/kg dry wt	< 0.3	< 0.4	< 0.4	< 0.3	< 0.3
Halogenated Aliphatics in VOC Soils by Headspace GC-MS						
Bromomethane (Methyl Bromide)	mg/kg dry wt	< 0.3	< 0.4	< 0.4	< 0.3	< 0.3
Carbon tetrachloride	mg/kg dry wt	< 0.3	< 0.4	< 0.4	< 0.3	< 0.3
Chloroethane	mg/kg dry wt	< 0.3	< 0.4	< 0.4	< 0.3	< 0.3
Chloromethane	mg/kg dry wt	< 0.3	< 0.4	< 0.4	< 0.3	< 0.3
1,2-Dibromo-3-chloropropane	mg/kg dry wt	< 0.5	< 0.7	< 0.7	< 0.5	< 0.5
1,2-Dibromoethane (ethylene dibromide, EDB)	mg/kg dry wt	< 0.3	< 0.4	< 0.4	< 0.3	< 0.3
Dibromomethane	mg/kg dry wt	< 0.3	< 0.4	< 0.4	< 0.3	< 0.3
1,3-Dichloropropane	mg/kg dry wt	< 0.3	< 0.4	< 0.4	< 0.3	< 0.3
Dichlorodifluoromethane	mg/kg dry wt	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
1,1-Dichloroethane	mg/kg dry wt	< 0.3	< 0.4	< 0.4	< 0.3	< 0.3
1,2-Dichloroethane	mg/kg dry wt	< 0.3	< 0.4	< 0.4	< 0.3	< 0.3
1,1-Dichloroethene	mg/kg dry wt	< 0.3	< 0.4	< 0.4	< 0.3	< 0.3
cis-1,2-Dichloroethene	mg/kg dry wt	< 0.3	< 0.4	< 0.4	< 0.3	< 0.3
trans-1,2-Dichloroethene	mg/kg dry wt	< 0.3	< 0.4	< 0.4	< 0.3	< 0.3
Dichloromethane (methylene chloride)	mg/kg dry wt	< 4	< 7	< 7	< 4	< 4
1,2-Dichloropropane	mg/kg dry wt	< 0.3	< 0.4	< 0.4	< 0.3	< 0.3
1,1-Dichloropropene	mg/kg dry wt	< 0.3	< 0.4	< 0.4	< 0.3	< 0.3
cis-1,3-Dichloropropene	mg/kg dry wt	< 0.3	< 0.4	< 0.4	< 0.3	< 0.3
trans-1,3-Dichloropropene	mg/kg dry wt	< 0.3	< 0.4	< 0.4	< 0.3	< 0.3
Hexachlorobutadiene	mg/kg dry wt	< 0.3	< 0.4	< 0.4	< 0.3	< 0.3
1,1,1,2-Tetrachloroethane	mg/kg dry wt	< 0.3	< 0.4	< 0.4	< 0.3	< 0.3
1,1,2,2-Tetrachloroethane	mg/kg dry wt	< 0.3	< 0.4	< 0.4	< 0.3	< 0.3
Tetrachloroethene (tetrachloroethylene)	mg/kg dry wt	0.3	< 0.4	< 0.4	< 0.3	< 0.3
1,1,1-Trichloroethane	mg/kg dry wt	< 0.3	< 0.4	< 0.4	< 0.3	< 0.3
1,1,2-Trichloroethane	mg/kg dry wt	< 0.3	< 0.4	< 0.4	< 0.3	< 0.3
Trichloroethene (trichloroethylene)	mg/kg dry wt	< 0.3	< 0.4	< 0.4	< 0.3	< 0.3
Trichlorofluoromethane	mg/kg dry wt	< 0.3	< 0.4	< 0.4	< 0.3	< 0.3
1,2,3-Trichloropropane	mg/kg dry wt	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
1,1,2-Trichlorotrifluoroethane (Freon 113)	mg/kg dry wt	< 0.3	< 0.4	< 0.4	< 0.3	< 0.3
Vinyl chloride	mg/kg dry wt	< 0.3	< 0.4	< 0.4	< 0.3	< 0.3
Haloaromatics in VOC Soils by Headspace GC-MS						
Bromobenzene	mg/kg dry wt	< 0.3	< 0.4	< 0.4	< 0.3	< 0.3
1,3-Dichlorobenzene	mg/kg dry wt	< 0.3	< 0.4	< 0.4	< 0.3	< 0.3
4-Chlorotoluene	mg/kg dry wt	< 0.3	< 0.4	< 0.4	< 0.3	< 0.3

Sample Type: Soil						
Sample Name:		TTBH01 1.0 06-May-2026	TTBH01 2.0 06-May-2026	TTBH01 3.0 06-May-2026	TTBH02 0.5 06-May-2026	TTBH02 2.0 06-May-2026
Lab Number:		4205924.2	4205924.3	4205924.4	4205924.5	4205924.7
Haloaromatics in VOC Soils by Headspace GC-MS						
Chlorobenzene (monochlorobenzene)	mg/kg dry wt	< 0.3	< 0.4	< 0.4	< 0.3	< 0.3
1,2-Dichlorobenzene	mg/kg dry wt	< 0.3	< 0.4	< 0.4	< 0.3	< 0.3
1,4-Dichlorobenzene	mg/kg dry wt	< 0.3	< 0.4	< 0.4	< 0.3	< 0.3
2-Chlorotoluene	mg/kg dry wt	< 0.3	< 0.4	< 0.4	< 0.3	< 0.3
1,2,3-Trichlorobenzene	mg/kg dry wt	< 0.3	< 0.4	< 0.4	< 0.3	< 0.3
1,2,4-Trichlorobenzene	mg/kg dry wt	< 0.3	< 0.4	< 0.4	< 0.3	< 0.3
1,3,5-Trichlorobenzene	mg/kg dry wt	< 0.3	< 0.4	< 0.4	< 0.3	< 0.3
Monoaromatic Hydrocarbons in VOC Soils by Headspace GC-MS						
n-Butylbenzene	mg/kg dry wt	< 0.3	< 0.4	< 0.4	< 0.3	< 0.3
tert-Butylbenzene	mg/kg dry wt	< 0.3	< 0.4	< 0.4	< 0.3	< 0.3
Isopropylbenzene (Cumene)	mg/kg dry wt	< 0.3	< 0.4	< 0.4	< 0.3	< 0.3
4-Isopropyltoluene (p-Cymene)	mg/kg dry wt	< 0.3	< 0.4	< 0.4	< 0.3	< 0.3
n-Propylbenzene	mg/kg dry wt	< 0.3	< 0.4	< 0.4	< 0.3	< 0.3
sec-Butylbenzene	mg/kg dry wt	< 0.3	< 0.4	< 0.4	< 0.3	< 0.3
Styrene	mg/kg dry wt	< 0.3	< 0.4	< 0.4	< 0.3	< 0.3
1,2,4-Trimethylbenzene	mg/kg dry wt	< 0.3	< 0.4	< 0.4	< 0.3	< 0.3
1,3,5-Trimethylbenzene	mg/kg dry wt	< 0.3	< 0.4	< 0.4	< 0.3	< 0.3
Ketones in VOC Soils by Headspace GC-MS						
2-Butanone (MEK)	mg/kg dry wt	< 40	< 70	< 70	< 40	< 40
4-Methylpentan-2-one (MIBK)	mg/kg dry wt	< 8	< 14	< 14	< 7	< 8
Acetone	mg/kg dry wt	< 40	< 70	< 70	< 40	< 40
Methyl tert-butylether (MTBE)	mg/kg dry wt	< 0.3	< 0.4	< 0.4	< 0.3	< 0.3
Trihalomethanes in VOC Soils by Headspace GC-MS						
Bromodichloromethane	mg/kg dry wt	< 0.3	< 0.4	< 0.4	< 0.3	< 0.3
Bromoform (tribromomethane)	mg/kg dry wt	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Chloroform (Trichloromethane)	mg/kg dry wt	< 0.3	< 0.4	< 0.4	< 0.3	< 0.3
Dibromochloromethane	mg/kg dry wt	< 0.3	< 0.4	< 0.4	< 0.3	< 0.3
Other VOC in Soils by Headspace GC-MS						
Carbon disulphide	mg/kg dry wt	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3
Naphthalene	mg/kg dry wt	< 0.3	< 0.4	< 0.4	< 0.3	< 0.3

Sample Name:		TTBH02 3.0 06-May-2026	TTBH03 1.0 06-May-2026	TTBH03 1.5 06-May-2026	TTBH04 0.5 06-May-2026	TTBH04 2.0 06-May-2026
Lab Number:		4205924.8	4205924.11	4205924.12	4205924.14	4205924.16
Individual Tests						
Dry Matter	g/100g as rcvd	50	76	70	89	76
Total Cyanide*	mg/kg dry wt	< 15	< 15	< 15	< 15	< 15
Heavy Metals with Mercury, Screen Level						
Total Recoverable Arsenic	mg/kg dry wt	10	34	8	2	7
Total Recoverable Cadmium	mg/kg dry wt	< 0.10	1.39	0.41	0.16	0.50
Total Recoverable Chromium	mg/kg dry wt	32	96	18	16	6
Total Recoverable Copper	mg/kg dry wt	13	890	133	44	79
Total Recoverable Lead	mg/kg dry wt	22	5,100	760	27	650
Total Recoverable Mercury	mg/kg dry wt	0.19	0.37	0.76	< 0.10	0.16
Total Recoverable Nickel	mg/kg dry wt	13	100	19	81	19
Total Recoverable Zinc	mg/kg dry wt	72	2,600	1,320	49	340
Haloethers in SVOC Soil Samples by GC-MS/MS						
Bis(2-chloroethoxy) methane	mg/kg dry wt	< 0.6	< 0.5	< 0.5	< 0.5	< 0.5
Bis(2-chloroethyl)ether	mg/kg dry wt	< 0.6	< 0.5	< 0.5	< 0.5	< 0.5
Bis(2-chloro-1-methylethyl)ether	mg/kg dry wt	< 0.6	< 0.5	< 0.5	< 0.5	< 0.5
4-Bromophenyl phenyl ether	mg/kg dry wt	< 0.6	< 0.4	< 0.5	< 0.4	< 0.4
4-Chlorophenyl phenyl ether	mg/kg dry wt	< 0.6	< 0.5	< 0.5	< 0.5	< 0.5

Sample Type: Soil						
Sample Name:		TTBH02 3.0 06-May-2026	TTBH03 1.0 06-May-2026	TTBH03 1.5 06-May-2026	TTBH04 0.5 06-May-2026	TTBH04 2.0 06-May-2026
Lab Number:		4205924.8	4205924.11	4205924.12	4205924.14	4205924.16
Nitrogen containing compounds in SVOC Soil Samples by GC-MS/MS						
2,4-Dinitrotoluene	mg/kg dry wt	< 0.6	< 0.5	< 0.5	< 0.5	< 0.5
2,6-Dinitrotoluene	mg/kg dry wt	< 0.6	< 0.5	< 0.5	< 0.5	< 0.5
Nitrobenzene	mg/kg dry wt	< 0.6	< 0.5	< 0.5	< 0.5	< 0.5
N-Nitrosodi-n-propylamine	mg/kg dry wt	< 0.6	< 0.5	< 0.5	< 0.5	< 0.5
N-Nitrosodiphenylamine + Diphenylamine	mg/kg dry wt	< 1.2	< 0.8	< 0.9	< 0.7	< 0.8
Organochlorine Pesticides in SVOC Soil Samples by GC-MS/MS						
Aldrin	mg/kg dry wt	< 0.6	< 0.5	< 0.5	< 0.5	< 0.5
alpha-BHC	mg/kg dry wt	< 0.6	< 0.5	< 0.5	< 0.5	< 0.5
beta-BHC	mg/kg dry wt	< 0.6	< 0.5	< 0.5	< 0.5	< 0.5
delta-BHC	mg/kg dry wt	< 0.6	< 0.5	< 0.5	< 0.5	< 0.5
gamma-BHC (Lindane)	mg/kg dry wt	< 0.6	< 0.5	< 0.5	< 0.5	< 0.5
4,4'-DDD	mg/kg dry wt	< 0.6	< 0.5	< 0.5	< 0.5	< 0.5
4,4'-DDE	mg/kg dry wt	< 0.6	< 0.5	< 0.5	< 0.5	< 0.5
4,4'-DDT	mg/kg dry wt	< 0.6	< 0.5	< 0.5	< 0.5	< 0.5
Dieldrin	mg/kg dry wt	< 0.6	< 0.5	< 0.5	< 0.5	< 0.5
Endosulfan I	mg/kg dry wt	< 0.6	< 0.5	< 0.5	< 0.5	< 0.5
Endosulfan II	mg/kg dry wt	< 0.6	< 0.5	< 0.5	< 0.5	< 0.5
Endosulfan sulphate	mg/kg dry wt	< 0.6	< 0.5	< 0.5	< 0.5	< 0.5
Endrin	mg/kg dry wt	< 0.6	< 0.5	< 0.5	< 0.5	< 0.5
Endrin ketone	mg/kg dry wt	< 0.6	< 0.5	< 0.5	< 0.5	< 0.5
Heptachlor	mg/kg dry wt	< 0.6	< 0.5	< 0.5	< 0.5	< 0.5
Heptachlor epoxide	mg/kg dry wt	< 0.6	< 0.5	< 0.5	< 0.5	< 0.5
Hexachlorobenzene	mg/kg dry wt	< 0.6	< 0.5	< 0.5	< 0.5	< 0.5
Polycyclic Aromatic Hydrocarbons in SVOC Soil Samples by GC-MS/MS*						
Acenaphthene	mg/kg dry wt	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Acenaphthylene	mg/kg dry wt	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Anthracene	mg/kg dry wt	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Benzo[a]anthracene	mg/kg dry wt	< 0.5	< 0.5	< 0.5	< 0.5	0.5
Benzo[a]pyrene (BAP)	mg/kg dry wt	< 0.6	< 0.5	< 0.5	< 0.5	0.5
Benzo[b]fluoranthene + Benzo[j] fluoranthene	mg/kg dry wt	< 0.6	< 0.5	< 0.5	< 0.5	< 0.5
Benzo[g,h,i]perylene	mg/kg dry wt	< 0.6	< 0.5	< 0.5	< 0.5	< 0.5
Benzo[k]fluoranthene	mg/kg dry wt	< 0.6	< 0.5	< 0.5	< 0.5	< 0.5
1&2-Chloronaphthalene	mg/kg dry wt	< 0.6	< 0.5	< 0.5	< 0.5	< 0.5
Chrysene	mg/kg dry wt	< 0.5	< 0.5	< 0.5	< 0.5	0.5
Dibenzo[a,h]anthracene	mg/kg dry wt	< 0.6	< 0.5	< 0.5	< 0.5	< 0.5
Fluoranthene	mg/kg dry wt	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Fluorene	mg/kg dry wt	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Indeno(1,2,3-c,d)pyrene	mg/kg dry wt	< 0.6	< 0.5	< 0.5	< 0.5	< 0.5
2-Methylnaphthalene	mg/kg dry wt	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Naphthalene	mg/kg dry wt	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Phenanthrene	mg/kg dry wt	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Pyrene	mg/kg dry wt	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Benzo[a]pyrene Potency Equivalency Factor (PEF) NES*	mg/kg dry wt	< 1.5	< 1.3	< 1.3	< 1.3	< 1.3
Benzo[a]pyrene Toxic Equivalence (TEF)*	mg/kg dry wt	< 1.5	< 1.3	< 1.3	< 1.3	< 1.3
Phenols in SVOC Soil Samples by GC-MS/MS						
4-Chloro-3-methylphenol	mg/kg dry wt	< 0.6	< 0.5	< 0.5	< 0.5	< 0.5
2-Chlorophenol	mg/kg dry wt	< 0.6	< 0.5	< 0.5	< 0.5	< 0.5
2,4-Dichlorophenol	mg/kg dry wt	< 0.6	< 0.5	< 0.5	< 0.5	< 0.5
2,4-Dimethylphenol	mg/kg dry wt	< 0.6	< 0.5	< 0.5	< 0.5	< 0.5
3 & 4-Methylphenol (m- + p-cresol)	mg/kg dry wt	< 0.6	< 0.5	< 0.5	< 0.5	< 0.5
2-Methylphenol (o-cresol)	mg/kg dry wt	< 0.6	< 0.5	< 0.5	< 0.5	< 0.5

Sample Type: Soil						
Sample Name:		TTBH02 3.0 06-May-2026	TTBH03 1.0 06-May-2026	TTBH03 1.5 06-May-2026	TTBH04 0.5 06-May-2026	TTBH04 2.0 06-May-2026
Lab Number:		4205924.8	4205924.11	4205924.12	4205924.14	4205924.16
Phenols in SVOC Soil Samples by GC-MS/MS						
2-Nitrophenol	mg/kg dry wt	< 0.6	< 0.5	< 0.5	< 0.5	< 0.5
Pentachlorophenol (PCP)	mg/kg dry wt	< 0.6	< 0.5	< 0.5	< 0.5	< 0.5
Phenol	mg/kg dry wt	< 0.6	< 0.5	< 0.5	< 0.5	< 0.5
2,4,5-Trichlorophenol	mg/kg dry wt	< 0.6	< 0.5	< 0.5	< 0.5	< 0.5
2,4,6-Trichlorophenol	mg/kg dry wt	< 0.6	< 0.5	< 0.5	< 0.5	< 0.5
Plasticisers in SVOC Soil Samples by GC-MS/MS						
Bis(2-ethylhexyl)phthalate	mg/kg dry wt	< 0.6	< 0.5	< 0.5	< 0.5	< 0.5
Butylbenzylphthalate	mg/kg dry wt	< 0.6	< 0.5	< 0.5	< 0.5	< 0.5
Di(2-ethylhexyl)adipate	mg/kg dry wt	< 0.6	< 0.5	< 0.5	< 0.5	< 0.5
Diethylphthalate	mg/kg dry wt	< 0.6	< 0.5	< 0.5	< 0.5	< 0.5
Dimethylphthalate	mg/kg dry wt	< 0.6	< 0.5	< 0.5	< 0.5	< 0.5
Di-n-butylphthalate	mg/kg dry wt	< 0.6	< 0.5	< 0.5	< 0.5	< 0.5
Di-n-octylphthalate	mg/kg dry wt	< 0.6	< 0.5	< 0.5	< 0.5	< 0.5
Other Halogenated compounds in SVOC Soil Samples by GC-MS/MS						
1,2-Dichlorobenzene	mg/kg dry wt	< 0.6	< 0.5	< 0.5	< 0.5	< 0.5
1,3-Dichlorobenzene	mg/kg dry wt	< 0.6	< 0.5	< 0.5	< 0.5	< 0.5
1,4-Dichlorobenzene	mg/kg dry wt	< 0.6	< 0.5	< 0.5	< 0.5	< 0.5
Hexachlorobutadiene	mg/kg dry wt	< 0.6	< 0.5	< 0.5	< 0.5	< 0.5
Hexachloroethane	mg/kg dry wt	< 0.6	< 0.5	< 0.5	< 0.5	< 0.5
1,2,4-Trichlorobenzene	mg/kg dry wt	< 0.6	< 0.5	< 0.5	< 0.5	< 0.5
Other compounds in SVOC Soil Samples by GC-MS/MS						
Benzyl alcohol	mg/kg dry wt	< 0.6	< 0.5	< 0.5	< 0.5	< 0.5
Carbazole	mg/kg dry wt	< 0.6	< 0.5	< 0.5	< 0.5	< 0.5
Dibenzofuran	mg/kg dry wt	< 0.6	< 0.5	< 0.5	< 0.5	< 0.5
Isophorone	mg/kg dry wt	< 0.6	< 0.5	< 0.5	< 0.5	< 0.5
Total Petroleum Hydrocarbons in Soil						
C7 - C9	mg/kg dry wt	< 30	< 20	< 20	< 20	< 20
C10 - C14	mg/kg dry wt	< 30	< 20	< 20	< 20	< 20
C15 - C36	mg/kg dry wt	87	< 40	< 40	400	360
Total hydrocarbons (C7 - C36)	mg/kg dry wt	101	< 80	< 80	410	370
BTEX in VOC Soils by Headspace GC-MS						
Benzene	mg/kg dry wt	< 0.4	< 0.3	< 0.3	< 0.17	< 0.4
Ethylbenzene	mg/kg dry wt	< 0.4	< 0.3	< 0.3	< 0.3	< 0.4
Toluene	mg/kg dry wt	< 0.4	< 0.3	< 0.3	< 0.3	< 0.4
m&p-Xylene	mg/kg dry wt	< 0.8	< 0.5	< 0.5	< 0.4	< 0.8
o-Xylene	mg/kg dry wt	< 0.4	< 0.3	< 0.3	< 0.3	< 0.4
Halogenated Aliphatics in VOC Soils by Headspace GC-MS						
Bromomethane (Methyl Bromide)	mg/kg dry wt	< 0.4	< 0.3	< 0.3	< 0.3	< 0.4
Carbon tetrachloride	mg/kg dry wt	< 0.4	< 0.3	< 0.3	< 0.3	< 0.4
Chloroethane	mg/kg dry wt	< 0.4	< 0.3	< 0.3	< 0.3	< 0.4
Chloromethane	mg/kg dry wt	< 0.4	< 0.3	< 0.3	< 0.3	< 0.4
1,2-Dibromo-3-chloropropane	mg/kg dry wt	< 0.8	< 0.5	< 0.5	< 0.5	< 0.8
1,2-Dibromoethane (ethylene dibromide, EDB)	mg/kg dry wt	< 0.4	< 0.3	< 0.3	< 0.3	< 0.4
Dibromomethane	mg/kg dry wt	< 0.4	< 0.3	< 0.3	< 0.3	< 0.4
1,3-Dichloropropane	mg/kg dry wt	< 0.4	< 0.3	< 0.3	< 0.3	< 0.4
Dichlorodifluoromethane	mg/kg dry wt	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
1,1-Dichloroethane	mg/kg dry wt	< 0.4	< 0.3	< 0.3	< 0.3	< 0.4
1,2-Dichloroethane	mg/kg dry wt	< 0.4	< 0.3	< 0.3	< 0.3	< 0.4
1,1-Dichloroethene	mg/kg dry wt	< 0.4	< 0.3	< 0.3	< 0.3	< 0.4
cis-1,2-Dichloroethene	mg/kg dry wt	< 0.4	< 0.3	< 0.3	< 0.3	< 0.4
trans-1,2-Dichloroethene	mg/kg dry wt	< 0.4	< 0.3	< 0.3	< 0.3	< 0.4
Dichloromethane (methylene chloride)	mg/kg dry wt	< 8	< 5	< 5	< 4	< 8
1,2-Dichloropropane	mg/kg dry wt	< 0.4	< 0.3	< 0.3	< 0.3	< 0.4

Sample Type: Soil						
Sample Name:		TTBH02 3.0 06-May-2026	TTBH03 1.0 06-May-2026	TTBH03 1.5 06-May-2026	TTBH04 0.5 06-May-2026	TTBH04 2.0 06-May-2026
Lab Number:		4205924.8	4205924.11	4205924.12	4205924.14	4205924.16
Halogenated Aliphatics in VOC Soils by Headspace GC-MS						
1,1-Dichloropropene	mg/kg dry wt	< 0.4	< 0.3	< 0.3	< 0.3	< 0.4
cis-1,3-Dichloropropene	mg/kg dry wt	< 0.4	< 0.3	< 0.3	< 0.3	< 0.4
trans-1,3-Dichloropropene	mg/kg dry wt	< 0.4	< 0.3	< 0.3	< 0.3	< 0.4
Hexachlorobutadiene	mg/kg dry wt	< 0.4	< 0.3	< 0.3	< 0.3	< 0.4
1,1,1,2-Tetrachloroethane	mg/kg dry wt	< 0.4	< 0.3	< 0.3	< 0.3	< 0.4
1,1,2,2-Tetrachloroethane	mg/kg dry wt	< 0.4	< 0.3	< 0.3	< 0.3	< 0.4
Tetrachloroethene (tetrachloroethylene)	mg/kg dry wt	0.6	0.7	< 0.3	< 0.3	0.7
1,1,1-Trichloroethane	mg/kg dry wt	< 0.4	< 0.3	< 0.3	< 0.3	< 0.4
1,1,2-Trichloroethane	mg/kg dry wt	< 0.4	< 0.3	< 0.3	< 0.3	< 0.4
Trichloroethene (trichloroethylene)	mg/kg dry wt	< 0.4	< 0.3	< 0.3	< 0.3	< 0.4
Trichlorofluoromethane	mg/kg dry wt	< 0.4	< 0.3	< 0.3	< 0.3	< 0.4
1,2,3-Trichloropropane	mg/kg dry wt	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
1,1,2-Trichlorotrifluoroethane (Freon 113)	mg/kg dry wt	< 0.4	< 0.3	< 0.3	< 0.3	< 0.4
Vinyl chloride	mg/kg dry wt	< 0.4	< 0.3	< 0.3	< 0.3	< 0.4
Haloaromatics in VOC Soils by Headspace GC-MS						
Bromobenzene	mg/kg dry wt	< 0.4	< 0.3	< 0.3	< 0.3	< 0.4
1,3-Dichlorobenzene	mg/kg dry wt	< 0.4	< 0.3	< 0.3	< 0.3	< 0.4
4-Chlorotoluene	mg/kg dry wt	< 0.4	< 0.3	< 0.3	< 0.3	< 0.4
Chlorobenzene (monochlorobenzene)	mg/kg dry wt	< 0.4	< 0.3	< 0.3	< 0.3	< 0.4
1,2-Dichlorobenzene	mg/kg dry wt	< 0.4	< 0.3	< 0.3	< 0.3	< 0.4
1,4-Dichlorobenzene	mg/kg dry wt	< 0.4	< 0.3	< 0.3	< 0.3	< 0.4
2-Chlorotoluene	mg/kg dry wt	< 0.4	< 0.3	< 0.3	< 0.3	< 0.4
1,2,3-Trichlorobenzene	mg/kg dry wt	< 0.4	< 0.3	< 0.3	< 0.3	< 0.4
1,2,4-Trichlorobenzene	mg/kg dry wt	< 0.4	< 0.3	< 0.3	< 0.3	< 0.4
1,3,5-Trichlorobenzene	mg/kg dry wt	< 0.4	< 0.3	< 0.3	< 0.3	< 0.4
Monoaromatic Hydrocarbons in VOC Soils by Headspace GC-MS						
n-Butylbenzene	mg/kg dry wt	< 0.4	< 0.3	< 0.3	< 0.3	< 0.4
tert-Butylbenzene	mg/kg dry wt	< 0.4	< 0.3	< 0.3	< 0.3	< 0.4
Isopropylbenzene (Cumene)	mg/kg dry wt	< 0.4	< 0.3	< 0.3	< 0.3	< 0.4
4-Isopropyltoluene (p-Cymene)	mg/kg dry wt	< 0.4	< 0.3	< 0.3	< 0.3	< 0.4
n-Propylbenzene	mg/kg dry wt	< 0.4	< 0.3	< 0.3	< 0.3	< 0.4
sec-Butylbenzene	mg/kg dry wt	< 0.4	< 0.3	< 0.3	< 0.3	< 0.4
Styrene	mg/kg dry wt	< 0.4	< 0.3	< 0.3	< 0.3	< 0.4
1,2,4-Trimethylbenzene	mg/kg dry wt	< 0.4	< 0.3	< 0.3	< 0.3	< 0.4
1,3,5-Trimethylbenzene	mg/kg dry wt	< 0.4	< 0.3	< 0.3	< 0.3	< 0.4
Ketones in VOC Soils by Headspace GC-MS						
2-Butanone (MEK)	mg/kg dry wt	< 80	< 50	< 50	< 40	< 80
4-Methylpentan-2-one (MIBK)	mg/kg dry wt	< 16	< 9	< 10	< 7	< 15
Acetone	mg/kg dry wt	< 80	< 50	< 50	< 40	< 80
Methyl tert-butylether (MTBE)	mg/kg dry wt	< 0.4	< 0.3	< 0.3	< 0.3	< 0.4
Trihalomethanes in VOC Soils by Headspace GC-MS						
Bromodichloromethane	mg/kg dry wt	< 0.4	< 0.3	< 0.3	< 0.3	< 0.4
Bromoform (tribromomethane)	mg/kg dry wt	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Chloroform (Trichloromethane)	mg/kg dry wt	< 0.4	< 0.3	< 0.3	< 0.3	< 0.4
Dibromochloromethane	mg/kg dry wt	< 0.4	< 0.3	< 0.3	< 0.3	< 0.4
Other VOC in Soils by Headspace GC-MS						
Carbon disulphide	mg/kg dry wt	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3
Naphthalene	mg/kg dry wt	< 0.4	< 0.3	< 0.3	< 0.3	< 0.4

Sample Type: Soil						
Sample Name:		TTBH04 3.0 06-May-2026	TTBH05 0.5 06-May-2026	TTBH05 1.0 06-May-2026	TTBH05 2.0 06-May-2026	DUP01
Lab Number:		4205924.17	4205924.19	4205924.20	4205924.21	4205924.23
Individual Tests						
Dry Matter	g/100g as rcvd	74	95	81	75	84
Total Cyanide*	mg/kg dry wt	< 15	< 15	74	< 15	103
Heavy Metals with Mercury, Screen Level						
Total Recoverable Arsenic	mg/kg dry wt	6	< 2	16	4	26
Total Recoverable Cadmium	mg/kg dry wt	0.13	< 0.10	2.1	< 0.10	2.1
Total Recoverable Chromium	mg/kg dry wt	43	46	64	9	89
Total Recoverable Copper	mg/kg dry wt	60	64	260	17	400
Total Recoverable Lead	mg/kg dry wt	159	13.6	1,950	11.7	2,800
Total Recoverable Mercury	mg/kg dry wt	0.23	< 0.10	0.61	< 0.10	0.37
Total Recoverable Nickel	mg/kg dry wt	74	200	117	3	166
Total Recoverable Zinc	mg/kg dry wt	150	61	1,000	32	1,550
Haloethers in SVOC Soil Samples by GC-MS/MS						
Bis(2-chloroethoxy) methane	mg/kg dry wt	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Bis(2-chloroethyl)ether	mg/kg dry wt	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Bis(2-chloro-1-methylethyl)ether	mg/kg dry wt	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
4-Bromophenyl phenyl ether	mg/kg dry wt	< 0.4	< 0.4	< 0.4	< 0.4	< 0.4
4-Chlorophenyl phenyl ether	mg/kg dry wt	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Nitrogen containing compounds in SVOC Soil Samples by GC-MS/MS						
2,4-Dinitrotoluene	mg/kg dry wt	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
2,6-Dinitrotoluene	mg/kg dry wt	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Nitrobenzene	mg/kg dry wt	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
N-Nitrosodi-n-propylamine	mg/kg dry wt	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
N-Nitrosodiphenylamine + Diphenylamine	mg/kg dry wt	< 0.8	< 0.7	< 0.8	< 0.8	< 0.7
Organochlorine Pesticides in SVOC Soil Samples by GC-MS/MS						
Aldrin	mg/kg dry wt	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
alpha-BHC	mg/kg dry wt	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
beta-BHC	mg/kg dry wt	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
delta-BHC	mg/kg dry wt	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
gamma-BHC (Lindane)	mg/kg dry wt	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
4,4'-DDD	mg/kg dry wt	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
4,4'-DDE	mg/kg dry wt	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
4,4'-DDT	mg/kg dry wt	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Dieldrin	mg/kg dry wt	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Endosulfan I	mg/kg dry wt	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Endosulfan II	mg/kg dry wt	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Endosulfan sulphate	mg/kg dry wt	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Endrin	mg/kg dry wt	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Endrin ketone	mg/kg dry wt	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Heptachlor	mg/kg dry wt	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Heptachlor epoxide	mg/kg dry wt	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Hexachlorobenzene	mg/kg dry wt	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Polycyclic Aromatic Hydrocarbons in SVOC Soil Samples by GC-MS/MS*						
Acenaphthene	mg/kg dry wt	< 0.5	< 0.5	0.8	< 0.5	< 0.5
Acenaphthylene	mg/kg dry wt	< 0.5	< 0.5	0.6	< 0.5	< 0.5
Anthracene	mg/kg dry wt	< 0.5	< 0.5	3.0	< 0.5	0.9
Benzo[a]anthracene	mg/kg dry wt	1.3	< 0.5	14.1	< 0.5	5.2
Benzo[a]pyrene (BAP)	mg/kg dry wt	1.5	< 0.5	19.3	< 0.5	7.6
Benzo[b]fluoranthene + Benzo[j] fluoranthene	mg/kg dry wt	1.4	< 0.5	16.3	< 0.5	7.4
Benzo[g,h,i]perylene	mg/kg dry wt	1.0	< 0.5	15.8	< 0.5	6.4
Benzo[k]fluoranthene	mg/kg dry wt	0.7	< 0.5	7.2	< 0.5	< 0.5
1&2-Chloronaphthalene	mg/kg dry wt	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Chrysene	mg/kg dry wt	1.3	< 0.5	13.9	< 0.5	5.9
Dibenzo[a,h]anthracene	mg/kg dry wt	< 0.5	< 0.5	2.5	< 0.5	1.3

Sample Type: Soil						
Sample Name:		TTBH04 3.0 06-May-2026	TTBH05 0.5 06-May-2026	TTBH05 1.0 06-May-2026	TTBH05 2.0 06-May-2026	DUP01
Lab Number:		4205924.17	4205924.19	4205924.20	4205924.21	4205924.23
Polycyclic Aromatic Hydrocarbons in SVOC Soil Samples by GC-MS/MS*						
Fluoranthene	mg/kg dry wt	3.3	< 0.5	29	< 0.5	10.8
Fluorene	mg/kg dry wt	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Indeno(1,2,3-c,d)pyrene	mg/kg dry wt	1.2	< 0.5	16.5	< 0.5	6.7
2-Methylnaphthalene	mg/kg dry wt	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Naphthalene	mg/kg dry wt	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Phenanthrene	mg/kg dry wt	1.2	< 0.5	9.5	< 0.5	2.5
Pyrene	mg/kg dry wt	3.5	< 0.5	32	< 0.5	12.2
Benzo[a]pyrene Potency Equivalency Factor (PEF) NES*	mg/kg dry wt	2.3	< 1.3	28	< 1.3	11.0
Benzo[a]pyrene Toxic Equivalence (TEF)*	mg/kg dry wt	2.2	< 1.3	27	< 1.3	10.9
Phenols in SVOC Soil Samples by GC-MS/MS						
4-Chloro-3-methylphenol	mg/kg dry wt	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
2-Chlorophenol	mg/kg dry wt	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
2,4-Dichlorophenol	mg/kg dry wt	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
2,4-Dimethylphenol	mg/kg dry wt	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
3 & 4-Methylphenol (m- + p-cresol)	mg/kg dry wt	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
2-Methylphenol (o-cresol)	mg/kg dry wt	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
2-Nitrophenol	mg/kg dry wt	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Pentachlorophenol (PCP)	mg/kg dry wt	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Phenol	mg/kg dry wt	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
2,4,5-Trichlorophenol	mg/kg dry wt	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
2,4,6-Trichlorophenol	mg/kg dry wt	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Plasticisers in SVOC Soil Samples by GC-MS/MS						
Bis(2-ethylhexyl)phthalate	mg/kg dry wt	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Butylbenzylphthalate	mg/kg dry wt	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Di(2-ethylhexyl)adipate	mg/kg dry wt	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Diethylphthalate	mg/kg dry wt	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Dimethylphthalate	mg/kg dry wt	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Di-n-butylphthalate	mg/kg dry wt	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Di-n-octylphthalate	mg/kg dry wt	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Other Halogenated compounds in SVOC Soil Samples by GC-MS/MS						
1,2-Dichlorobenzene	mg/kg dry wt	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
1,3-Dichlorobenzene	mg/kg dry wt	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
1,4-Dichlorobenzene	mg/kg dry wt	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Hexachlorobutadiene	mg/kg dry wt	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Hexachloroethane	mg/kg dry wt	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
1,2,4-Trichlorobenzene	mg/kg dry wt	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Other compounds in SVOC Soil Samples by GC-MS/MS						
Benzyl alcohol	mg/kg dry wt	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Carbazole	mg/kg dry wt	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Dibenzofuran	mg/kg dry wt	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Isophorone	mg/kg dry wt	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Total Petroleum Hydrocarbons in Soil						
C7 - C9	mg/kg dry wt	< 20	< 20	< 20	< 20	< 20
C10 - C14	mg/kg dry wt	< 20	< 20	< 20	< 20	< 20
C15 - C36	mg/kg dry wt	340	81	1,540	< 40	550
Total hydrocarbons (C7 - C36)	mg/kg dry wt	350	86	1,560	< 80	560
BTEX in VOC Soils by Headspace GC-MS						
Benzene	mg/kg dry wt	< 0.3	< 0.14	< 0.19	< 0.3	< 0.18
Ethylbenzene	mg/kg dry wt	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3
Toluene	mg/kg dry wt	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3
m&p-Xylene	mg/kg dry wt	< 0.5	< 0.3	< 0.4	< 0.5	< 0.4
o-Xylene	mg/kg dry wt	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3

Sample Type: Soil						
Sample Name:		TTBH04 3.0 06-May-2026	TTBH05 0.5 06-May-2026	TTBH05 1.0 06-May-2026	TTBH05 2.0 06-May-2026	DUP01
Lab Number:		4205924.17	4205924.19	4205924.20	4205924.21	4205924.23
Halogenated Aliphatics in VOC Soils by Headspace GC-MS						
Bromomethane (Methyl Bromide)	mg/kg dry wt	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3
Carbon tetrachloride	mg/kg dry wt	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3
Chloroethane	mg/kg dry wt	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3
Chloromethane	mg/kg dry wt	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3
1,2-Dibromo-3-chloropropane	mg/kg dry wt	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
1,2-Dibromoethane (ethylene dibromide, EDB)	mg/kg dry wt	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3
Dibromomethane	mg/kg dry wt	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3
1,3-Dichloropropane	mg/kg dry wt	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3
Dichlorodifluoromethane	mg/kg dry wt	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
1,1-Dichloroethane	mg/kg dry wt	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3
1,2-Dichloroethane	mg/kg dry wt	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3
1,1-Dichloroethene	mg/kg dry wt	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3
cis-1,2-Dichloroethene	mg/kg dry wt	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3
trans-1,2-Dichloroethene	mg/kg dry wt	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3
Dichloromethane (methylene chloride)	mg/kg dry wt	< 5	< 3	< 4	< 5	< 4
1,2-Dichloropropane	mg/kg dry wt	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3
1,1-Dichloropropene	mg/kg dry wt	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3
cis-1,3-Dichloropropene	mg/kg dry wt	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3
trans-1,3-Dichloropropene	mg/kg dry wt	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3
Hexachlorobutadiene	mg/kg dry wt	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3
1,1,1,2-Tetrachloroethane	mg/kg dry wt	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3
1,1,2,2-Tetrachloroethane	mg/kg dry wt	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3
Tetrachloroethene (tetrachloroethylene)	mg/kg dry wt	0.4	10.4	4.0	< 0.3	5.6
1,1,1-Trichloroethane	mg/kg dry wt	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3
1,1,2-Trichloroethane	mg/kg dry wt	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3
Trichloroethene (trichloroethylene)	mg/kg dry wt	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3
Trichlorofluoromethane	mg/kg dry wt	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3
1,2,3-Trichloropropane	mg/kg dry wt	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
1,1,2-Trichlorotrifluoroethane (Freon 113)	mg/kg dry wt	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3
Vinyl chloride	mg/kg dry wt	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3
Haloaromatics in VOC Soils by Headspace GC-MS						
Bromobenzene	mg/kg dry wt	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3
1,3-Dichlorobenzene	mg/kg dry wt	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3
4-Chlorotoluene	mg/kg dry wt	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3
Chlorobenzene (monochlorobenzene)	mg/kg dry wt	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3
1,2-Dichlorobenzene	mg/kg dry wt	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3
1,4-Dichlorobenzene	mg/kg dry wt	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3
2-Chlorotoluene	mg/kg dry wt	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3
1,2,3-Trichlorobenzene	mg/kg dry wt	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3
1,2,4-Trichlorobenzene	mg/kg dry wt	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3
1,3,5-Trichlorobenzene	mg/kg dry wt	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3
Monoaromatic Hydrocarbons in VOC Soils by Headspace GC-MS						
n-Butylbenzene	mg/kg dry wt	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3
tert-Butylbenzene	mg/kg dry wt	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3
Isopropylbenzene (Cumene)	mg/kg dry wt	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3
4-Isopropyltoluene (p-Cymene)	mg/kg dry wt	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3
n-Propylbenzene	mg/kg dry wt	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3
sec-Butylbenzene	mg/kg dry wt	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3
Styrene	mg/kg dry wt	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3
1,2,4-Trimethylbenzene	mg/kg dry wt	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3

Sample Type: Soil						
Sample Name:		TTBH04 3.0 06-May-2026	TTBH05 0.5 06-May-2026	TTBH05 1.0 06-May-2026	TTBH05 2.0 06-May-2026	DUP01
Lab Number:		4205924.17	4205924.19	4205924.20	4205924.21	4205924.23
Monoaromatic Hydrocarbons in VOC Soils by Headspace GC-MS						
1,3,5-Trimethylbenzene	mg/kg dry wt	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3
Ketones in VOC Soils by Headspace GC-MS						
2-Butanone (MEK)	mg/kg dry wt	< 50	< 30	< 40	< 50	< 40
4-Methylpentan-2-one (MIBK)	mg/kg dry wt	< 9	< 6	< 8	< 9	< 7
Acetone	mg/kg dry wt	< 50	< 30	< 40	< 50	< 40
Methyl tert-butylether (MTBE)	mg/kg dry wt	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3
Trihalomethanes in VOC Soils by Headspace GC-MS						
Bromodichloromethane	mg/kg dry wt	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3
Bromoform (tribromomethane)	mg/kg dry wt	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Chloroform (Trichloromethane)	mg/kg dry wt	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3
Dibromochloromethane	mg/kg dry wt	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3
Other VOC in Soils by Headspace GC-MS						
Carbon disulphide	mg/kg dry wt	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3
Naphthalene	mg/kg dry wt	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3

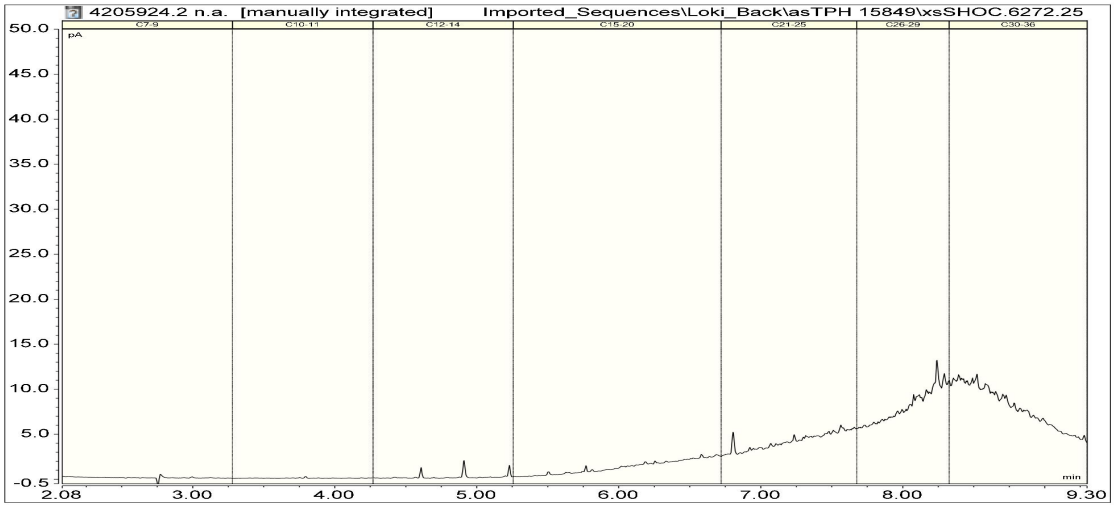
Sample Name:		DUP02
Lab Number:		4205924.24
Individual Tests		
Dry Matter	g/100g as rcvd	52
Total Cyanide*	mg/kg dry wt	< 15
Heavy Metals with Mercury, Screen Level		
Total Recoverable Arsenic	mg/kg dry wt	9
Total Recoverable Cadmium	mg/kg dry wt	< 0.10
Total Recoverable Chromium	mg/kg dry wt	26
Total Recoverable Copper	mg/kg dry wt	13
Total Recoverable Lead	mg/kg dry wt	22
Total Recoverable Mercury	mg/kg dry wt	0.19
Total Recoverable Nickel	mg/kg dry wt	15
Total Recoverable Zinc	mg/kg dry wt	70
Haloethers in SVOC Soil Samples by GC-MS/MS		
Bis(2-chloroethoxy) methane	mg/kg dry wt	< 0.6
Bis(2-chloroethyl)ether	mg/kg dry wt	< 0.6
Bis(2-chloro-1-methylethyl)ether	mg/kg dry wt	< 0.6
4-Bromophenyl phenyl ether	mg/kg dry wt	< 0.6
4-Chlorophenyl phenyl ether	mg/kg dry wt	< 0.6
Nitrogen containing compounds in SVOC Soil Samples by GC-MS/MS		
2,4-Dinitrotoluene	mg/kg dry wt	< 0.6
2,6-Dinitrotoluene	mg/kg dry wt	< 0.6
Nitrobenzene	mg/kg dry wt	< 0.6
N-Nitrosodi-n-propylamine	mg/kg dry wt	< 0.6
N-Nitrosodiphenylamine + Diphenylamine	mg/kg dry wt	< 1.2
Organochlorine Pesticides in SVOC Soil Samples by GC-MS/MS		
Aldrin	mg/kg dry wt	< 0.6
alpha-BHC	mg/kg dry wt	< 0.6
beta-BHC	mg/kg dry wt	< 0.6
delta-BHC	mg/kg dry wt	< 0.6
gamma-BHC (Lindane)	mg/kg dry wt	< 0.6
4,4'-DDD	mg/kg dry wt	< 0.6
4,4'-DDE	mg/kg dry wt	< 0.6
4,4'-DDT	mg/kg dry wt	< 0.6
Dieldrin	mg/kg dry wt	< 0.6
Endosulfan I	mg/kg dry wt	< 0.6
Endosulfan II	mg/kg dry wt	< 0.6
Endosulfan sulphate	mg/kg dry wt	< 0.6

Sample Type: Soil		
Sample Name:		DUP02
Lab Number:		4205924.24
Organochlorine Pesticides in SVOC Soil Samples by GC-MS/MS		
Endrin	mg/kg dry wt	< 0.6
Endrin ketone	mg/kg dry wt	< 0.6
Heptachlor	mg/kg dry wt	< 0.6
Heptachlor epoxide	mg/kg dry wt	< 0.6
Hexachlorobenzene	mg/kg dry wt	< 0.6
Polycyclic Aromatic Hydrocarbons in SVOC Soil Samples by GC-MS/MS*		
Acenaphthene	mg/kg dry wt	< 0.5
Acenaphthylene	mg/kg dry wt	< 0.5
Anthracene	mg/kg dry wt	< 0.5
Benzo[a]anthracene	mg/kg dry wt	< 0.5
Benzo[a]pyrene (BAP)	mg/kg dry wt	< 0.6
Benzo[b]fluoranthene + Benzo[j] fluoranthene	mg/kg dry wt	< 0.6
Benzo[g,h,i]perylene	mg/kg dry wt	< 0.6
Benzo[k]fluoranthene	mg/kg dry wt	< 0.6
1&2-Chloronaphthalene	mg/kg dry wt	< 0.6
Chrysene	mg/kg dry wt	< 0.5
Dibenzo[a,h]anthracene	mg/kg dry wt	< 0.6
Fluoranthene	mg/kg dry wt	< 0.5
Fluorene	mg/kg dry wt	< 0.5
Indeno(1,2,3-c,d)pyrene	mg/kg dry wt	< 0.6
2-Methylnaphthalene	mg/kg dry wt	< 0.5
Naphthalene	mg/kg dry wt	< 0.5
Phenanthrene	mg/kg dry wt	< 0.5
Pyrene	mg/kg dry wt	< 0.5
Benzo[a]pyrene Potency Equivalency Factor (PEF) NES*	mg/kg dry wt	< 1.4
Benzo[a]pyrene Toxic Equivalence (TEF)*	mg/kg dry wt	< 1.4
Phenols in SVOC Soil Samples by GC-MS/MS		
4-Chloro-3-methylphenol	mg/kg dry wt	< 0.6
2-Chlorophenol	mg/kg dry wt	< 0.6
2,4-Dichlorophenol	mg/kg dry wt	< 0.6
2,4-Dimethylphenol	mg/kg dry wt	< 0.6
3 & 4-Methylphenol (m- + p-cresol)	mg/kg dry wt	< 0.6
2-Methylphenol (o-cresol)	mg/kg dry wt	< 0.6
2-Nitrophenol	mg/kg dry wt	< 0.6
Pentachlorophenol (PCP)	mg/kg dry wt	< 0.6
Phenol	mg/kg dry wt	< 0.6
2,4,5-Trichlorophenol	mg/kg dry wt	< 0.6
2,4,6-Trichlorophenol	mg/kg dry wt	< 0.6
Plasticisers in SVOC Soil Samples by GC-MS/MS		
Bis(2-ethylhexyl)phthalate	mg/kg dry wt	< 0.6
Butylbenzylphthalate	mg/kg dry wt	< 0.6
Di(2-ethylhexyl)adipate	mg/kg dry wt	< 0.6
Diethylphthalate	mg/kg dry wt	< 0.6
Dimethylphthalate	mg/kg dry wt	< 0.6
Di-n-butylphthalate	mg/kg dry wt	< 0.6
Di-n-octylphthalate	mg/kg dry wt	< 0.6
Other Halogenated compounds in SVOC Soil Samples by GC-MS/MS		
1,2-Dichlorobenzene	mg/kg dry wt	< 0.6
1,3-Dichlorobenzene	mg/kg dry wt	< 0.6
1,4-Dichlorobenzene	mg/kg dry wt	< 0.6
Hexachlorobutadiene	mg/kg dry wt	< 0.6
Hexachloroethane	mg/kg dry wt	< 0.6

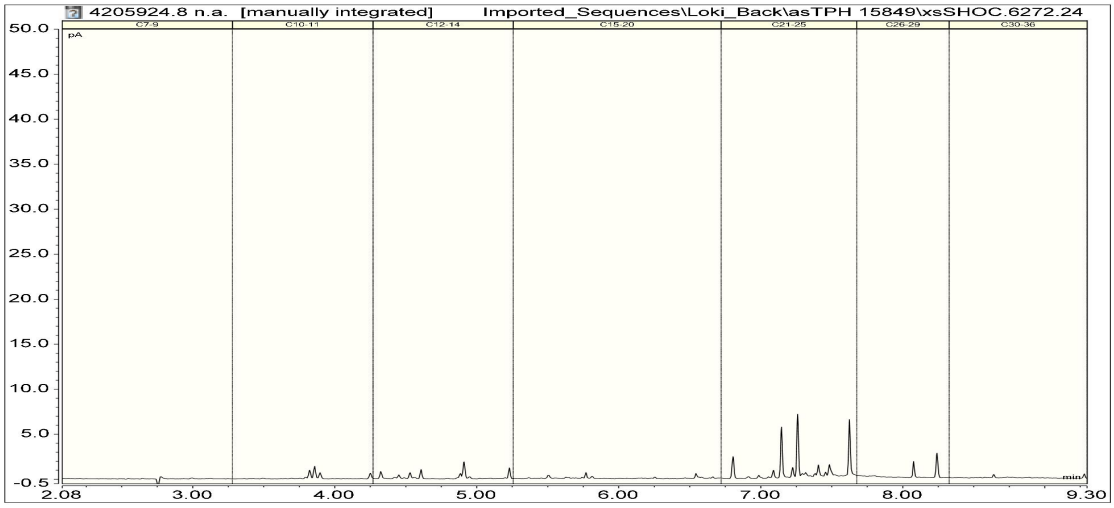
Sample Type: Soil		
Sample Name:		DUP02
Lab Number:		4205924.24
Other Halogenated compounds in SVOC Soil Samples by GC-MS/MS		
1,2,4-Trichlorobenzene	mg/kg dry wt	< 0.6
Other compounds in SVOC Soil Samples by GC-MS/MS		
Benzyl alcohol	mg/kg dry wt	< 0.6
Carbazole	mg/kg dry wt	< 0.6
Dibenzofuran	mg/kg dry wt	< 0.6
Isophorone	mg/kg dry wt	< 0.6
Total Petroleum Hydrocarbons in Soil		
C7 - C9	mg/kg dry wt	< 30
C10 - C14	mg/kg dry wt	< 30
C15 - C36	mg/kg dry wt	< 50
Total hydrocarbons (C7 - C36)	mg/kg dry wt	< 100
BTEX in VOC Soils by Headspace GC-MS		
Benzene	mg/kg dry wt	< 0.4
Ethylbenzene	mg/kg dry wt	< 0.4
Toluene	mg/kg dry wt	< 0.4
m&p-Xylene	mg/kg dry wt	< 0.8
o-Xylene	mg/kg dry wt	< 0.4
Halogenated Aliphatics in VOC Soils by Headspace GC-MS		
Bromomethane (Methyl Bromide)	mg/kg dry wt	< 0.4
Carbon tetrachloride	mg/kg dry wt	< 0.4
Chloroethane	mg/kg dry wt	< 0.4
Chloromethane	mg/kg dry wt	< 0.4
1,2-Dibromo-3-chloropropane	mg/kg dry wt	< 0.8
1,2-Dibromoethane (ethylene dibromide, EDB)	mg/kg dry wt	< 0.4
Dibromomethane	mg/kg dry wt	< 0.4
1,3-Dichloropropane	mg/kg dry wt	< 0.4
Dichlorodifluoromethane	mg/kg dry wt	< 0.5
1,1-Dichloroethane	mg/kg dry wt	< 0.4
1,2-Dichloroethane	mg/kg dry wt	< 0.4
1,1-Dichloroethene	mg/kg dry wt	< 0.4
cis-1,2-Dichloroethene	mg/kg dry wt	< 0.4
trans-1,2-Dichloroethene	mg/kg dry wt	< 0.4
Dichloromethane (methylene chloride)	mg/kg dry wt	< 8
1,2-Dichloropropane	mg/kg dry wt	< 0.4
1,1-Dichloropropene	mg/kg dry wt	< 0.4
cis-1,3-Dichloropropene	mg/kg dry wt	< 0.4
trans-1,3-Dichloropropene	mg/kg dry wt	< 0.4
Hexachlorobutadiene	mg/kg dry wt	< 0.4
1,1,1,2-Tetrachloroethane	mg/kg dry wt	< 0.4
1,1,2,2-Tetrachloroethane	mg/kg dry wt	< 0.4
Tetrachloroethene (tetrachloroethylene)	mg/kg dry wt	0.5
1,1,1-Trichloroethane	mg/kg dry wt	< 0.4
1,1,2-Trichloroethane	mg/kg dry wt	< 0.4
Trichloroethene (trichloroethylene)	mg/kg dry wt	< 0.4
Trichlorofluoromethane	mg/kg dry wt	< 0.4
1,2,3-Trichloropropane	mg/kg dry wt	< 0.5
1,1,2-Trichlorotrifluoroethane (Freon 113)	mg/kg dry wt	< 0.4
Vinyl chloride	mg/kg dry wt	< 0.4
Haloaromatics in VOC Soils by Headspace GC-MS		
Bromobenzene	mg/kg dry wt	< 0.4
1,3-Dichlorobenzene	mg/kg dry wt	< 0.4

Sample Type: Soil		
Sample Name:		DUP02
Lab Number:		4205924.24
Haloaromatics in VOC Soils by Headspace GC-MS		
4-Chlorotoluene	mg/kg dry wt	< 0.4
Chlorobenzene (monochlorobenzene)	mg/kg dry wt	< 0.4
1,2-Dichlorobenzene	mg/kg dry wt	< 0.4
1,4-Dichlorobenzene	mg/kg dry wt	< 0.4
2-Chlorotoluene	mg/kg dry wt	< 0.4
1,2,3-Trichlorobenzene	mg/kg dry wt	< 0.4
1,2,4-Trichlorobenzene	mg/kg dry wt	< 0.4
1,3,5-Trichlorobenzene	mg/kg dry wt	< 0.4
Monoaromatic Hydrocarbons in VOC Soils by Headspace GC-MS		
n-Butylbenzene	mg/kg dry wt	< 0.4
tert-Butylbenzene	mg/kg dry wt	< 0.4
Isopropylbenzene (Cumene)	mg/kg dry wt	< 0.4
4-Isopropyltoluene (p-Cymene)	mg/kg dry wt	< 0.4
n-Propylbenzene	mg/kg dry wt	< 0.4
sec-Butylbenzene	mg/kg dry wt	< 0.4
Styrene	mg/kg dry wt	< 0.4
1,2,4-Trimethylbenzene	mg/kg dry wt	< 0.4
1,3,5-Trimethylbenzene	mg/kg dry wt	< 0.4
Ketones in VOC Soils by Headspace GC-MS		
2-Butanone (MEK)	mg/kg dry wt	< 80
4-Methylpentan-2-one (MIBK)	mg/kg dry wt	< 15
Acetone	mg/kg dry wt	< 80
Methyl tert-butylether (MTBE)	mg/kg dry wt	< 0.4
Trihalomethanes in VOC Soils by Headspace GC-MS		
Bromodichloromethane	mg/kg dry wt	< 0.4
Bromoform (tribromomethane)	mg/kg dry wt	< 0.5
Chloroform (Trichloromethane)	mg/kg dry wt	< 0.4
Dibromochloromethane	mg/kg dry wt	< 0.4
Other VOC in Soils by Headspace GC-MS		
Carbon disulphide	mg/kg dry wt	< 0.3
Naphthalene	mg/kg dry wt	< 0.4

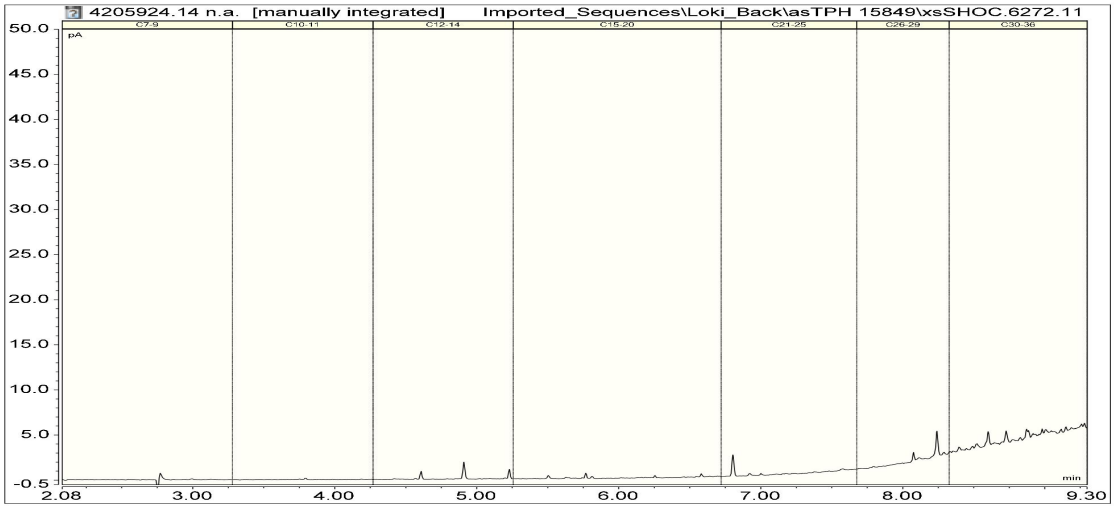
4205924.2
TTBH01 1.0 06-May-2026
Client Chromatogram for TPH by FID



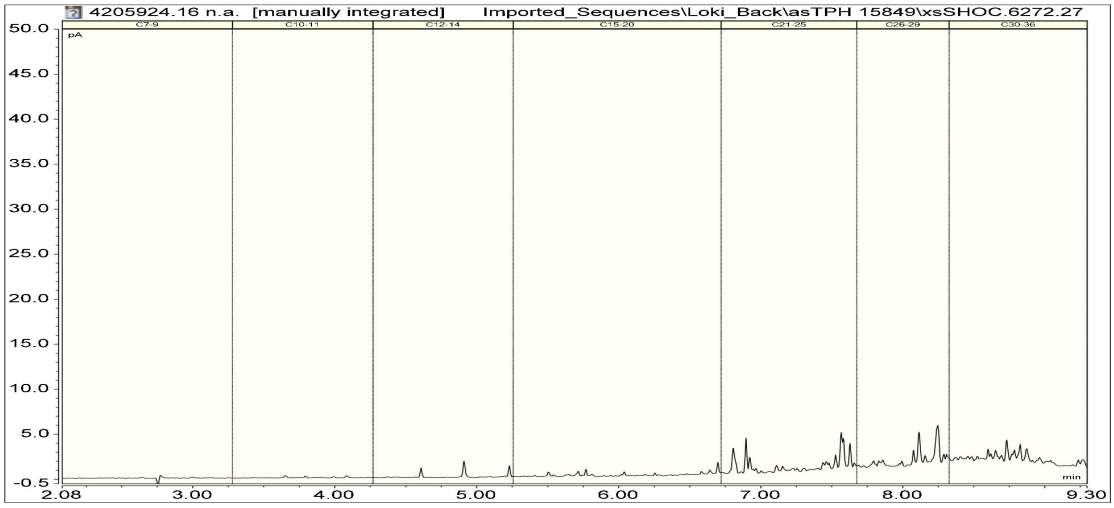
4205924.8
TTBH02 3.0 06-May-2026
Client Chromatogram for TPH by FID



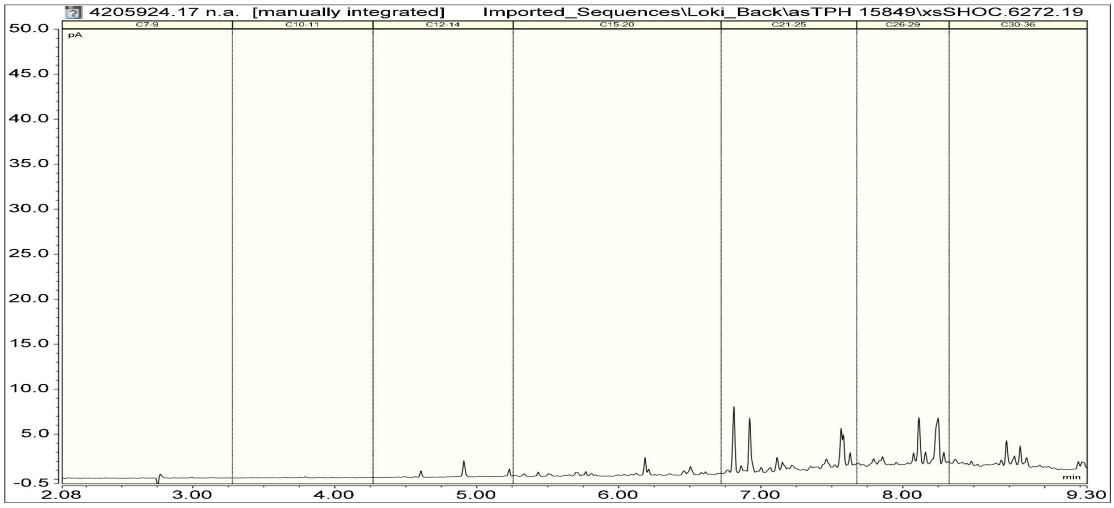
4205924.14
TTBH04 0.5 06-May-2026
Client Chromatogram for TPH by FID



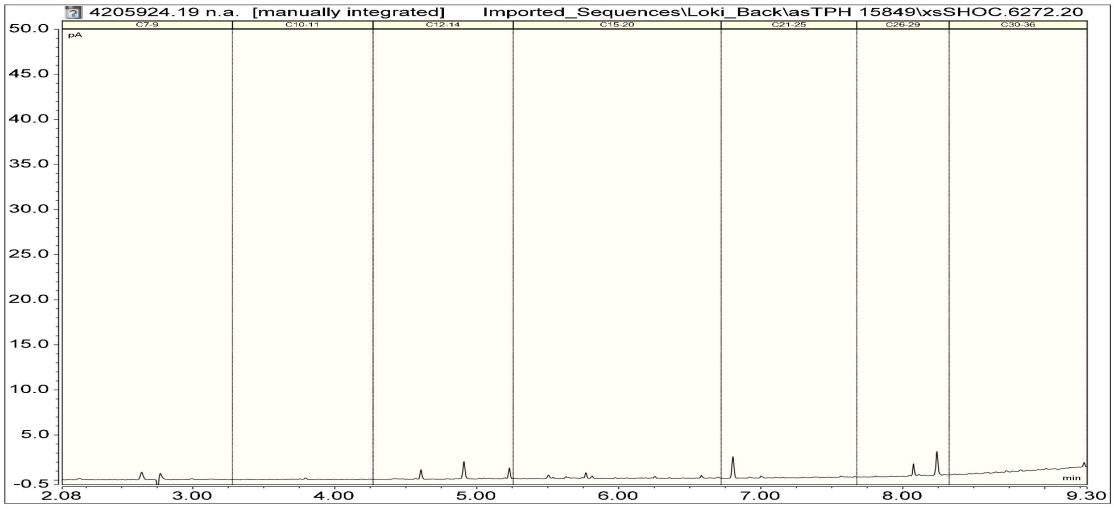
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TTBH04 2.0 06-May-2026
Client Chromatogram for TPH by FID



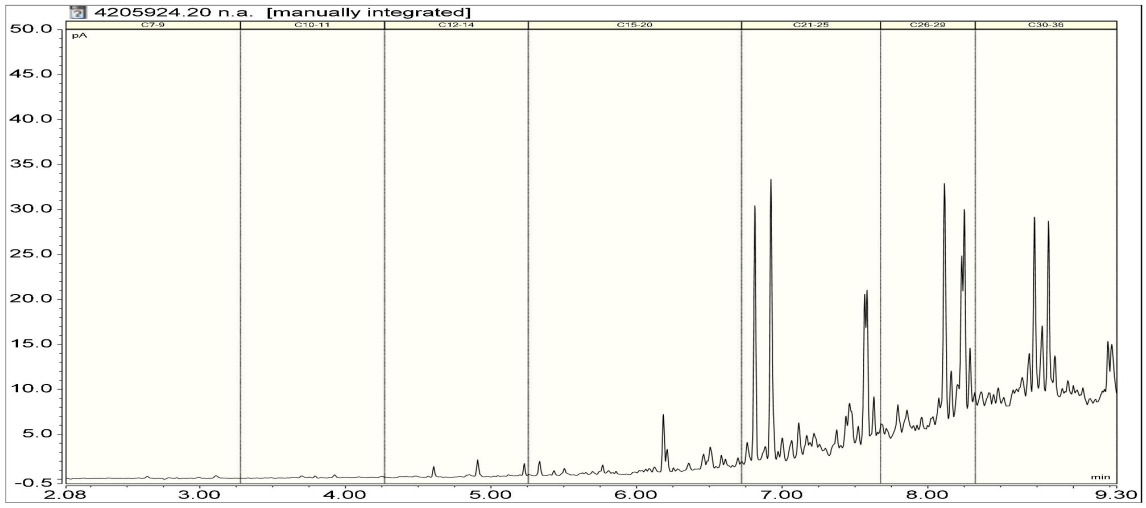
4205924.17
TTBH04 3.0 06-May-2026
Client Chromatogram for TPH by FID



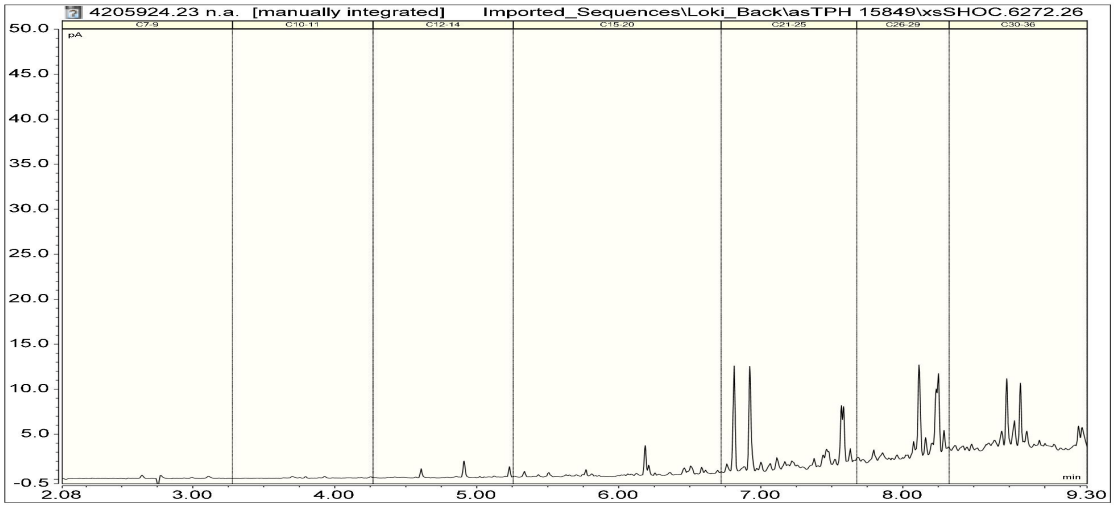
4205924.19
TTBH05 0.5 06-May-2026
Client Chromatogram for TPH by FID



4205924.20
TTBH05 1.0 06-May-2026
Client Chromatogram for TPH by FID



4205924.23
DUP01
Client Chromatogram for TPH by FID



Analyst's Comments

It was observed that the containers for samples {4205924.2, 3, 5, 7, 11, 12, 14,16, 19, 20, 23} were not completely filled. Volatile loss may have occurred due to the headspace created in the containers.

Summary of Methods

The following table(s) gives a brief description of the methods used to conduct the analyses for this job. The detection limits given below are those attainable in a relatively simple matrix. Detection limits may be higher for individual samples should insufficient sample be available, or if the matrix requires that dilutions be performed during analysis. A detection limit range indicates the lowest and highest detection limits in the associated suite of analytes. A full listing of compounds and detection limits are available from the laboratory upon request.
Unless otherwise indicated, analyses were performed at Hill Labs, 28 Duke Street, Frankton, Hamilton 3204.

Sample Type: Soil

Test	Method Description	Default Detection Limit	Sample No
Individual Tests			
Environmental Solids Sample Drying*	Air dried at 35°C Used for sample preparation. May contain a residual moisture content of 2-5%. (Free water removed before analysis, non-soil objects such as sticks, leaves, grass and stones also removed).	-	2-5, 7-8, 11-12, 14, 16-17, 19-21, 23-24
Dry Matter	Dried at 103°C for 4-22hr (removes 3-5% more water than air dry) , gravimetry. (Free water removed before analysis, non-soil objects such as sticks, leaves, grass and stones also removed). US EPA 3550.	0.10 g/100g as rcvd	2-5, 7-8, 11-12, 14, 16-17, 19-21, 23-24
Total Cyanide Extraction*	Distillation of sample as received. APHA 4500-CN^- C (modified) : Online Edition.	-	2-5, 7-8, 11-12, 14, 16-17, 19-21, 23-24
Total Cyanide*	Alkaline extraction, on-line distillation, colorimetry. APHA 4500-CN-A (modified) APHA 4500-CN-C (modified) : Online Edition & Skalar Method I295-004(+P14). ISO 14403:2012(E).	15 mg/kg dry wt	2-5, 7-8, 11-12, 14, 16-17, 19-21, 23-24
Heavy Metals with Mercury, Screen Level	Dried sample, < 2mm fraction. Nitric/Hydrochloric acid digestion. Complies with NES Regulations. ICP-MS screen level, interference removal by Kinetic Energy Discrimination if required. US EPA 200.2 (modified), APHA 3125 B: Online Edition.	0.10 - 4 mg/kg dry wt	2-5, 7-8, 11-12, 14, 16-17, 19-21, 23-24
Semivolatile Organic Compounds Screening in Soil by GC-MS/MS	Sonication extraction, GC-MS/MS analysis. Tested on as received sample. In-house based on US EPA 8270.	0.3 - 1.2 mg/kg dry wt	2-5, 7-8, 11-12, 14, 16-17, 19-21, 23-24
Volatile Organic Compounds Screening in Soil by Headspace GC-MS	Sonication extraction, Headspace GC-MS analysis. Tested on as received sample. In-house based on US EPA 8260 and 5021.	0.13 - 30 mg/kg dry wt	2-5, 7-8, 11-12, 14, 16-17, 19-21, 23-24
Total Petroleum Hydrocarbons in Soil			

Sample Type: Soil			
Test	**Method Description**	**Default Detection Limit**	**Sample No**
Client Chromatogram for TPH by FID	Small peaks associated with QC compounds may be visible in chromatograms with low TPH concentrations. QC peaks are as follows: one peak in the C12 - 14 band, the C21 - 25 band and the C30 - 36 band. All QC peaks are corrected for in the reported TPH concentrations.	-	2, 8, 14, 16-17, 19-20, 23
C7 - C9	Solvent extraction, GC-FID analysis. Tested on as received sample. In-house based on US EPA 8015.	20 mg/kg dry wt	2-5, 7-8, 11-12, 14, 16-17, 19-21, 23-24
C10 - C14	Solvent extraction, GC-FID analysis. Tested on as received sample. In-house based on US EPA 8015.	20 mg/kg dry wt	2-5, 7-8, 11-12, 14, 16-17, 19-21, 23-24
C15 - C36	Solvent extraction, GC-FID analysis. Tested on as received sample. In-house based on US EPA 8015.	40 mg/kg dry wt	2-5, 7-8, 11-12, 14, 16-17, 19-21, 23-24
Total hydrocarbons (C7 - C36)	Calculation: Sum of carbon bands from C7 to C36. In-house based on US EPA 8015.	70 mg/kg dry wt	2-5, 7-8, 11-12, 14, 16-17, 19-21, 23-24

These samples were collected by yourselves (or your agent) and analysed as received at the laboratory.

Testing was completed between 12-May-2026 and 26-May-2026. For completion dates of individual analyses please contact the laboratory.

Samples are held at the laboratory after reporting for a length of time based on the stability of the samples and analytes being tested (considering any preservation used), and the storage space available. Once the storage period is completed, the samples are discarded unless otherwise agreed with the customer. Extended storage times may incur additional charges.

This certificate of analysis must not be reproduced, except in full, without the written consent of the signatory.



Ara Heron BSc (Tech)
Client Services Manager - Environmental

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Certificate of Analysis

Client:	Tonkin & Taylor	**Lab No:**	4206687 A2Pv1
Contact:	Natalie O'Rourke C/- Tonkin & Taylor PO Box 5271 Auckland 1141	**Date Received:**	07-May-2026
		Date Reported:	12-May-2026
		Quote No:	144917
		Order No:	1101803
		Client Reference:	1101803
		Submitted By:	Natalie O'Rourke

Sample Type: Soil

Sample Name:		TTBH03 1.0 05-May-2026	TTBH04 0.5 05-May-2026	TTBH04 2.0 05-May-2026	TTBH04 3.0 05-May-2026	TTBH05 0.5 05-May-2026
Lab Number:		4206687.3	4206687.5	4206687.7	4206687.8	4206687.10
Asbestos Presence / Absence		Asbestos NOT detected.	Asbestos NOT detected.	Asbestos NOT detected.	Chrysotile (White Asbestos) detected.	Chrysotile (White Asbestos) detected.
Description of Asbestos Form		-	-	-	Loose fibres	Loose fibres
Asbestos in ACM as % of Total Sample*	% w/w	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Combined Fibrous Asbestos + Asbestos Fines as % of Total Sample*	% w/w	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Asbestos as Fibrous Asbestos as % of Total Sample*	% w/w	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Asbestos as Asbestos Fines as % of Total Sample*	% w/w	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
As Received Weight	g	763.7	813.0	539.1	673.3	1,154.8
Dry Weight	g	611.2	728.2	415.4	487.8	1,115.3
Moisture*	%	20	10	23	28	3
Sample Fraction >10mm	g dry wt	230.9	434.3	75.4	145.4	677.5
Sample Fraction <10mm to >2mm	g dry wt	224.7	186.8	151.3	149.3	283.2
Sample Fraction <2mm	g dry wt	154.2	105.9	187.8	192.2	150.6
<2mm Subsample Weight	g dry wt	51.2	54.3	51.6	52.8	50.1
Weight of Asbestos in ACM (Non-Friable)	g dry wt	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001
Weight of Asbestos as Fibrous Asbestos (Friable)	g dry wt	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001
Weight of Asbestos as Asbestos Fines (Friable)*	g dry wt	< 0.00001	< 0.00001	< 0.00001	0.00054	0.00004

Sample Name:		TTBH05 1.0 05-May-2026	TTBH05 2.0 05-May-2026	TTBH05 3.0 05-May-2026	TTBH01 1.0 06-May-2026	TTBH01 2.0 06-May-2026
Lab Number:		4206687.11	4206687.12	4206687.13	4206687.16	4206687.17
Asbestos Presence / Absence		Chrysotile (White Asbestos) detected.	Asbestos NOT detected.	Asbestos NOT detected.	Asbestos NOT detected.	Asbestos NOT detected.
Description of Asbestos Form		ACM debris and Loose fibres	-	-	-	-
Asbestos in ACM as % of Total Sample*	% w/w	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Combined Fibrous Asbestos + Asbestos Fines as % of Total Sample*	% w/w	0.150	< 0.001	< 0.001	< 0.001	< 0.001
Asbestos as Fibrous Asbestos as % of Total Sample*	% w/w	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Asbestos as Asbestos Fines as % of Total Sample*	% w/w	0.150	< 0.001	< 0.001	< 0.001	< 0.001
As Received Weight	g	722.4	869.3	951.1	881.6	1,033.4
Dry Weight	g	569.4	651.7	682.7	720.9	706.8

This Laboratory is accredited by International Accreditation New Zealand (IANZ), which represents New Zealand in the International Laboratory Accreditation Cooperation (ILAC). Through the ILAC Mutual Recognition Arrangement (ILAC-MRA) this accreditation is internationally recognised.
The tests reported herein have been performed in accordance with the terms of accreditation, with the exception of tests marked * or any comments and interpretations, which are not accredited.

Sample Type: Soil						
Sample Name:		TTBH05 1.0 05-May-2026	TTBH05 2.0 05-May-2026	TTBH05 3.0 05-May-2026	TTBH01 1.0 06-May-2026	TTBH01 2.0 06-May-2026
Lab Number:		4206687.11	4206687.12	4206687.13	4206687.16	4206687.17
Moisture*	%	21	25	28	18	32
Sample Fraction >10mm	g dry wt	154.6	< 0.1	12.9	157.0	< 0.1
Sample Fraction <10mm to >2mm	g dry wt	171.2	12.9	75.9	237.0	14.2
Sample Fraction <2mm	g dry wt	243.0	638.5	592.9	325.9	691.3
<2mm Subsample Weight	g dry wt	51.8	52.9	50.2	53.3	55.9
Weight of Asbestos in ACM (Non-Friable)	g dry wt	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001
Weight of Asbestos as Fibrous Asbestos (Friable)	g dry wt	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001
Weight of Asbestos as Asbestos Fines (Friable)*	g dry wt	0.8536	< 0.00001	< 0.00001	< 0.00001	< 0.00001

Sample Name:		TTBH01 3.0 06-May-2026	TTBH02 0.5 06-May-2026	TTBH02 2.0 06-May-2026	TTBH02 3.0 06-May-2026
Lab Number:		4206687.18	4206687.19	4206687.21	4206687.22
Asbestos Presence / Absence		Asbestos NOT detected.	Asbestos NOT detected.	Asbestos NOT detected.	Asbestos NOT detected.
Description of Asbestos Form		-	-	-	-
Asbestos in ACM as % of Total Sample*	% w/w	< 0.001	< 0.001	< 0.001	< 0.001
Combined Fibrous Asbestos + Asbestos Fines as % of Total Sample*	% w/w	< 0.001	< 0.001	< 0.001	< 0.001
Asbestos as Fibrous Asbestos as % of Total Sample*	% w/w	< 0.001	< 0.001	< 0.001	< 0.001
Asbestos as Asbestos Fines as % of Total Sample*	% w/w	< 0.001	< 0.001	< 0.001	< 0.001
As Received Weight	g	914.9	936.7	949.0	866.4
Dry Weight	g	515.6	844.1	744.5	500.1
Moisture*	%	44	10	22	42
Sample Fraction >10mm	g dry wt	165.4	186.8	305.0	202.6
Sample Fraction <10mm to >2mm	g dry wt	180.1	286.0	186.5	180.3
Sample Fraction <2mm	g dry wt	167.9	369.7	251.8	114.4
<2mm Subsample Weight	g dry wt	50.3	52.2	53.8	51.7
Weight of Asbestos in ACM (Non-Friable)	g dry wt	< 0.00001	< 0.00001	< 0.00001	< 0.00001
Weight of Asbestos as Fibrous Asbestos (Friable)	g dry wt	< 0.00001	< 0.00001	< 0.00001	< 0.00001
Weight of Asbestos as Asbestos Fines (Friable)*	g dry wt	< 0.00001	< 0.00001	< 0.00001	< 0.00001

Glossary of Terms

• Loose fibres (Minor) - One or two fibres/fibre bundles identified during analysis by stereo microscope/PLM.
• Loose fibres (Major) - Three or more fibres/fibre bundles identified during analysis by stereo microscope/PLM.
• ACM Debris (Minor) - One or two small (<2mm) pieces of material attached to fibres identified during analysis by stereo microscope/PLM.
• ACM Debris (Major) - Large (>2mm) piece, or more than three small (<2mm) pieces of material attached to fibres identified during analysis by stereo microscope/PLM.
• Unknown Mineral Fibres - Mineral fibres of unknown type detected by polarised light microscopy including dispersion staining. The fibres detected may or may not be asbestos fibres. To confirm the identities, another independent analytical technique may be required.
• Trace - Trace levels of asbestos, as defined by AS4964-2004.
For further details, please contact the Asbestos Team.

Please refer to the BRANZ New Zealand Guidelines for Assessing and Managing Asbestos in Soil.
https://www.branz.co.nz/asbestos

The following assumptions have been made:

1. Asbestos Fines in the <2mm fraction, after homogenisation, is evenly distributed throughout the fraction
2. The weight of asbestos in the sample is unaffected by the ashing process.

Results are representative of the sample provided to Hill Laboratories only.

Summary of Methods

The following table(s) gives a brief description of the methods used to conduct the analyses for this job. The detection limits given below are those attainable in a relatively simple matrix. Detection limits may be higher for individual samples should insufficient sample be available, or if the matrix requires that dilutions be performed during analysis. A detection limit range indicates the lowest and highest detection limits in the associated suite of analytes. A full listing of compounds and detection limits are available from the laboratory upon request. Unless otherwise indicated, analyses were performed at Hill Labs, 28 Duke Street, Frankton, Hamilton 3204.

Sample Type: Soil

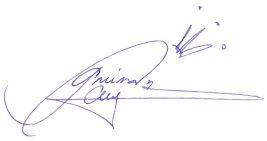
Test	Method Description	Default Detection Limit	Sample No
New Zealand Guidelines Semi Quantitative Asbestos in Soil			
As Received Weight	Measurement on analytical balance. Analysed at Hill Laboratories - Asbestos; Unit 1, 17 Print Place, Middleton, Christchurch.	0.1 g	3, 5, 7-8, 10-13, 16-19, 21-22
Dry Weight	Sample dried at 100 to 105°C, measurement on balance. Analysed at Hill Laboratories - Asbestos; Unit 1, 17 Print Place, Middleton, Christchurch.	0.1 g	3, 5, 7-8, 10-13, 16-19, 21-22
Moisture*	Sample dried at 100 to 105°C. Calculation = (As received weight - Dry weight) / as received weight x 100.	1 %	3, 5, 7-8, 10-13, 16-19, 21-22
Sample Fraction >10mm	Sample dried at 100 to 105°C, 10mm sieve, measurement on analytical balance. Analysed at Hill Laboratories - Asbestos; Unit 1, 17 Print Place, Middleton, Christchurch.	0.1 g dry wt	3, 5, 7-8, 10-13, 16-19, 21-22
Sample Fraction <10mm to >2mm	Sample dried at 100 to 105°C, 10mm and 2mm sieve, measurement on analytical balance. Analysed at Hill Laboratories - Asbestos; Unit 1, 17 Print Place, Middleton, Christchurch.	0.1 g dry wt	3, 5, 7-8, 10-13, 16-19, 21-22
Sample Fraction <2mm	Sample dried at 100 to 105°C, 2mm sieve, measurement on analytical balance. Analysed at Hill Laboratories - Asbestos; Unit 1, 17 Print Place, Middleton, Christchurch.	0.1 g dry wt	3, 5, 7-8, 10-13, 16-19, 21-22
Asbestos Presence / Absence	Examination using Low Powered Stereomicroscopy followed by 'Polarised Light Microscopy' including 'Dispersion Staining Techniques'. Analysed at Hill Laboratories - Asbestos; Unit 1, 17 Print Place, Middleton, Christchurch. AS 4964 (2004) - Method for the Qualitative Identification of Asbestos in Bulk Samples.	0.01%	3, 5, 7-8, 10-13, 16-19, 21-22
Description of Asbestos Form	Description of asbestos form and/or shape if present.	-	3, 5, 7-8, 10-13, 16-19, 21-22
Weight of Asbestos in ACM (Non-Friable)	Measurement on analytical balance, from the >10mm Fraction. Weight of asbestos based on assessment of ACM form. Analysed at Hill Laboratories - Asbestos; Unit 1, 17 Print Place, Middleton, Christchurch. New Zealand Guidelines for Assessing and Managing Asbestos in Soil, November 2017.	0.00001 g dry wt	3, 5, 7-8, 10-13, 16-19, 21-22
Asbestos in ACM as % of Total Sample*	Calculated from weight of asbestos in ACM and sample dry weight. New Zealand Guidelines for Assessing and Managing Asbestos in Soil, November 2017.	0.001 % w/w	3, 5, 7-8, 10-13, 16-19, 21-22
Weight of Asbestos as Fibrous Asbestos (Friable)	Measurement on analytical balance, from the >10mm Fraction. Analysed at Hill Laboratories - Asbestos; Unit 1, 17 Print Place, Middleton, Christchurch. New Zealand Guidelines for Assessing and Managing Asbestos in Soil, November 2017.	0.00001 g dry wt	3, 5, 7-8, 10-13, 16-19, 21-22
Asbestos as Fibrous Asbestos as % of Total Sample*	Calculated from weight of fibrous asbestos and sample dry weight. New Zealand Guidelines for Assessing and Managing Asbestos in Soil, November 2017.	0.001 % w/w	3, 5, 7-8, 10-13, 16-19, 21-22
Weight of Asbestos as Asbestos Fines (Friable)*	Measurement on analytical balance, from the <10mm Fractions. Analysed at Hill Laboratories - Asbestos; Unit 1, 17 Print Place, Middleton, Christchurch. New Zealand Guidelines for Assessing and Managing Asbestos in Soil, November 2017.	0.00001 g dry wt	3, 5, 7-8, 10-13, 16-19, 21-22
Asbestos as Asbestos Fines as % of Total Sample*	Calculated from weight of asbestos fines and sample dry weight. New Zealand Guidelines for Assessing and Managing Asbestos in Soil, November 2017.	0.001 % w/w	3, 5, 7-8, 10-13, 16-19, 21-22
Combined Fibrous Asbestos + Asbestos Fines as % of Total Sample*	Calculated from weight of fibrous asbestos plus asbestos fines and sample dry weight. New Zealand Guidelines for Assessing and Managing Asbestos in Soil, November 2017.	0.001 % w/w	3, 5, 7-8, 10-13, 16-19, 21-22

These samples were collected by yourselves (or your agent) and analysed as received at the laboratory.

Testing was completed on 12-May-2026. For completion dates of individual analyses please contact the laboratory.

Samples are held at the laboratory after reporting for a length of time based on the stability of the samples and analytes being tested (considering any preservation used), and the storage space available. Once the storage period is completed, the samples are discarded unless otherwise agreed with the customer. Extended storage times may incur additional charges.

This certificate of analysis must not be reproduced, except in full, without the written consent of the signatory.



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Together we create + sustain a better world