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PRELIMINARY (ENVIRONMENTAL) SITE INVESTIGATION

PROPOSED SERVICE STATION

For: BROWN COMMERCIAL BUILDING P/L

71 TURTON STREET METFORD, NSW, 2323

Lots 418 & 419, DP 41113

17/03/2025

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EXECUTIVE SUMMARY

We are pleased to provide this Preliminary Environmental Site Investigation (formerly known as a Stage 1 Environmental Site Assessment) at the above-mentioned site to assess the possible extent of contamination on the site prior to re-development of the site for the purposed use as a retail service station.

The aim of this assessment is to provide an environmental assessment characterising potential contamination of the site from previous occupiers and to provide current contamination status of the site, drawing conclusions on the suitability of the site for its proposed redevelopment and making recommendation to enable such conclusions.

Data obtained in this assessment indicates that based on the site history review, site inspection and analytical results, the site is considered to present a low risk of contamination in its current and proposed configuration and that further assessment of the site is not required and the site is suitable for the proposed development with remediation or construction / long-term environmental management **not** required as per the recommendations in this report.

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Assessment Objectives:

The project objectives of a Preliminary (Environmental) Site Investigation (PSI) are to satisfy the general requirements of State Environmental Planning Policy No.55 (SEPP 55) in accordance with the NSW EPA Guidelines for Consultants Reporting on Contaminated Land – Contaminated Land Guidelines (2020).

Specifically, this PSI will consider the potential for historical activities to have caused contamination at the Site and determine the suitability of the land for future land use consistent with Commercial / Industrial 'D' in the National Environment Protection (Assessment of Site Contamination) Amendment Measure 2013 (No.1) ('NEPM', NEPC, 2013).

As extracted from the NSW EPA Guidelines for Consultants Reporting on Contaminated Land – Contaminated Land Guidelines (2020), the following assessment is required for a Preliminary Site Investigation:

The objective of the preliminary site investigation and associated report is to assess whether contamination has the potential to exist on the site and whether further investigation is needed.

Key factors include:

- *the purpose of the investigation*
- *the site history*
- *past and present potentially contaminating activities (on- and off-site sources)*
- *potentially contaminated media*
- *the condition of the site and surrounding environment*
- *the geological and hydrogeological setting*
- *a preliminary assessment of site contamination and contaminants of potential concern*
- *a conceptual site model*
- *identification of data gaps in the assessment of site contamination*
- *recommendations for further investigation.*

An appraisal of the site history is fundamental to the preliminary investigation and may be used to assess the likelihood of site contamination. It is important to review and assess all relevant information about the site, including information available from planning authorities and the EPA and information obtained during site inspections.

A preliminary site investigation report must adequately identify potential human and ecological receptors (on and off-site) and identify potentially affected media (soil, sediment, groundwater, surface water, soil vapour and indoor and outdoor air). The report must also indicate all contaminants of potential concern including emerging contaminants that have been identified during the preliminary site investigation.

Where a complete site history clearly shows that activities have been non-contaminating, there are no impacts from off-site contamination sources, and observations do not indicate any potential for contamination, there may be no need for further investigation or site sampling.

However, where contaminating activities are suspected or known to have occurred, or if the site history is incomplete, it may be necessary to undertake a preliminary sampling and analysis program to assess the need for a detailed investigation (as undertaken in this assessment).

Scope of Works:

The following assessment has been undertaken on the site:

- Identification of potentially contaminating activities and Contaminants of Concern (CoC's) that are currently being performed on the site and that may have been performed on the site in the past;

- Completion of a Site Walkover Inspection

- A desktop study including the following:

  - a review of published information and information held in file related to soils, geology and hydrogeology;

  - review of previous assessments undertaken on the site;

  - a review of historical aerial photography;

  - interviews with the people familiar with the history and operations of the site (if available);

  - a review of NSW Office of Environment and Heritage (OEH) notices under the Contaminated Land Management Act (1997);

  - a search of the NSW EPA database;

  - a review and collation of the above information and identification of potential Areas of Environmental Concern (AECs) and potential Chemicals of Concern (CoCs);

- **Development and implementation of a Preliminary Sampling and Analysis Program as per the NSW EPA Contaminated Land Guidelines (2020) and the Desktop Study data;**

- Completion of a field investigation in to collect soil samples to be tested for CoC's identified by known information and the data collected from the desktop study;

- Data has been reviewed and reported against the relevant NEPM Health Investigation Levels (HIL's) and determination has been made to if further assessment, management and/or a Remedial Action Plan (RAP) or Environmental Management Plan (EMP) is required, in accordance with the relevant sections of the *National Environmental Protection Measures 1999 (Contaminated Sites) (Amended 2013),* the *NSW EPA Guidelines for Consultants Reporting on Contaminated Land – Contaminated Land Guidelines 2020* and the *NSW EPA Contaminated Sites – Sample Design Guidelines 1995.*

- Reporting assessment is based on historical information, the proposed field investigation data and the National Environmental Protection Measure 1999 (NEPM) (Amended 2013).

- A Preliminary Site Investigation report has been prepared describing the work undertaken on the site and making an assessment on the following:

  - If the site is suitable for proposed use;

  - Or if further investigation, a Remedial Action Plan (RAP) or Environmental Management Plan (EMP) is required is required.

The PSI was conducted in accordance with:

• ASC NEPM 2013.

• Australian Standard ('AS') 4482.1-2005: Guide to the investigation and sampling of sites with potentially contaminated soil, Part 1: Non-volatile and semi-volatile compounds.

• AS 4482.2-1999: Guide to the investigation and sampling of sites with potentially contaminated soil, Part 2: Volatile substances.

• Australia New Zealand Environmental and Conservation Council ('ANZECC') and Agriculture and Resource Management Council of Australia and New Zealand ('ARMCANZ') (2000) Australian and New Zealand Guidelines for Fresh and Marine Water Quality, Volume 1, The Guidelines ('ANZECC 2000').

• ANZECC and ARMCANZ (2018) Australian and New Zealand Guidelines for Fresh and Marine Water Quality ('ANZECC 2018').

• Department of Urban Affairs and Planning and Environment Protection Authority ('EPA') (1998) Managing Land Contamination, Planning Guidelines, SEPP 55 – Remediation of Land.

• Friebel, E & Nadebaum, P 2011, Health Screening Levels for Petroleum Hydrocarbons in soil and Groundwater. Part 1: Technical development document, CRC CARE Technical Report no. 10, CRC for Contamination Assessment and Remediation of the Environment ('CRC CARE'), Adelaide, Australia.

• National Health and Medical Research Council ('NHMRC') (2008) Guidelines for Managing Risk in Recreational Waters.

• NHMRC and National Resource Management Ministerial Council ('NRMMC') (2011) National Water Quality Management Strategy, Australian Drinking Water Guidelines 6, 2011 (version 3.5 updated August 2018) ('ADWG 2011').

• NSW Department of Environment and Conservation ('DEC') Guidelines for the Assessment and Management of Groundwater Contamination ('NSW DEC Groundwater Guidelines').

• NSW Environment Protection Authority ('EPA') (1995) Sampling Design Guidelines.

• NSW EPA (2014) Technical Note: Investigation of Service Station Sites.

• NSW EPA (2017) Guidelines for the NSW Auditor Scheme (3rd Edition) ('NSW Auditor Guidelines').

• NSW OEH (2011) Contaminated Sites Guidelines for Consultants reporting on Contaminated Sites.

• United State Environment Protection Agency ('USEPA') (2006) Guidance on Systematic Planning Using the Data Quality Objectives Process, ref: EPA QA/G-4.

• NSW EPA Excavated Natural Material Order (2014).

• Acid Sulfate Soil Manual (1998), NSW Acid Sulfate Soils Management Advisory Committee ('NSW ASS Manual').

• National Acid Sulfate Soils Guidance (2018) National Acid Sulfate Soils Sampling and Identification Methods Manual), Water Quality Australia ('National ASS Guidance').

1 INTRODUCTION

The purpose of this PSI investigation is to obtain past and current information about possible contamination levels and distribution on the site and to review all data on the site.

It has been indicated by Maitland City Council that a Preliminary Site Investigation is required to be undertaken on the site to assess the proposed development.

Based on the current and former site use, namely a vehicle repair and servicing workshop, a Preliminary Environmental Site Investigation that includes a Preliminary Sampling and Analysis Program has been completed to provide the required data to assess the current possible contamination status of the site and to determine if the site is suitable for the proposed commercial use or if further assessment, remediation or management of the site is required prior to the proposed development.

1.1 Existing, Former and Proposed Development Details

1.1.1 Site Details, Existing Development and Former Developments

The site is located on the northern corner of the intersection of Turton Street and Chelmsford Road about 250m east of The New England Highway in the location as shown on the attached Figure 1

The site contained the following features at the time of assessment:

- Mechanics service and repair workshop in the centre portion of the site comprising an office area in the southern portion of the building, workshop area in the centre portion and wash bays at the rear western portion of the building;

- The majority of the site was sealed with hardstand material in the form of concrete building foundations and internal pavements with asphalt external pavements. The areas upslope and adjacent to the southern and eastern boundaries are the only areas not sealed as seen on the attached photographs. Stormwater exited the site via roof gutters and a system of pits and pipes;

- It was indicated that underground waste oil storage tanks are NOT located on the site and that all waste oil is stored in above ground tanks as shown in the attached site photographs;

- Waste oil and used battery storage areas are located in the bunded sheds attached to the northern side of the building:

- Evidence of any existing or former Underground Petroleum Storage System (UPSS) was NOT observed on the site at the time of assessment. It should be noted that evidence of former systems may not be visible at the time of assessment as they may have been covered over in the years prior to the assessment;

- Customer vehicle parking was located on the asphalt area on the eastern portion of the site and vehicles being repaired were stored on the northern boundary and in the rear western portion of the site.

- General rubbish and used vehicle parts were located along the rear western portion of the northern boundary of the site.

Fill encountered onsite was limited to pavement material to a depth of up to 200mm..

Vegetation comprised grasses on the surface of the site in areas where there was no hardstand, namely along the eastern and southern boundaries with some semi mature gum trees also in these areas.

1.1.2 Proposed Development Details

The proposed development on the site comprises the demolition of the exiting onsite developments and the construction of a service station as shown on the attached proposed development drawings.

The Health Investigation Limits for the proposed development is categorised as HIL 'D' – Commercial / Industrial.

1.2 Summary of Previous Site Assessments

Previous site assessment have not been made available to us or have not been undertaken on the site to the best of our knowledge.

2 SITE IDENTIFICATION DETAILS

Table 1 below contains a summary of the site details.

TABLE 1 – SUMMARY OF SITE DETAILS

SITE ADDRESS:	71 Turton Street, Metford, NSW, 2323
SITE AREA:	Total Area – 5,000m^2 Perimeter of 285m.
SITE IDENTIFICATION	Lot 418 and 419 DP 41113 Lat 32°45'41"S Long 151°35'54"E
CURRENT AND PREVIOUS LANDUSE:	Currently the site comprises and mechanics workshop that has been on the site since the early 1980's with the site being vacant vegetated land prior to this back to at least 1943.
PROPOSED LANDUSE:	The proposed land use involves using the construction of a commercial retail service station.
ADJOINING SITE USES:	The immediate area surrounding the site comprises other commercial and industrial buildings with residential areas further east, north and west with a vacant parcel of bushland to the south of the site.

3 SITE TOPOGRAPHY, GEOLOGY AND HYDROLOGY

3.1 Site Topography

Topographically the site is located on the western side of moderately undulating residual hillsides.

Locally the site is relatively flat with the front eastern portion of the site being slightly cut into the natural hillside to create the current level site as shown on the attached site photographs.

3.2 Site Geology

Reference to the 1:250K Newcastle Regional Geology Map S1 56-2 indicates that the site is underlain by Permian aged Tomago Coal Measures comprising namely shale, mudstone, sandstone, tuff and coal as shown on the attached Figure 4.

3.3 Acid Sulfate Soil Risk

Reference to eSpade indicates that the site is NOT located in an area of known occurrence of acid sulfate as shown on the attached Figure 5.

3.3 Soil Landscape

The eSpade Soil landscape map indicates that the site is located in Beresfield (be) residual soils with the following properties:

Landscape—undulating low hills and rises on Permian sediments in the East Maitland Hills region. Slope gradients 3–15%, local relief to 50 m, elevation is 20–50 m. Partially cleared tall open-forest.

Landscape Variant—bea—steeper upper slopes (15–<25%).

Soils—moderately deep (<120 cm), moderately well to imperfectly drained Yellow Podzolic Soils (Dy2.21), Brown Podzolic Soils (Db1.21) and brown Soloths (Db2.41) occur on crests with moderately deep (<120 cm), well-drained Red Podzolic Soils (Dr2.21) and red Soloths (Dr2.41) on upper slopes, moderately well to imperfectly drained brown Soloths (Db2.41, Db1.41) and yellow Soloths (Dy3.41) on sideslopes and deep (>200 cm), imperfectly to poorly drained Yellow Podzolic Soils (Dy2.21), yellow Soloths (Dy2.41, Dy3.41) and Gleyed Podzolic Soils (Dg2.41) on lower slopes.

Qualities and Limitations—high foundation hazard, water erosion hazard, Mine Subsidence District, seasonal waterlogging and high run-on on localised lower slopes, highly acid soils of low fertility.

LOCATION

Undulating low hills and rises on Permian sediments in the East Maitland Hills region in the centre-west of the area, including Beresfield and East Maitland. Type location is south-west of Beresfield (Area reference 3 **71*****E, 63 **66*****N).

LANDSCAPE

Geology and Regolith

Permian Tomago Coal Measures—shale, mudstone, sandstone, coal, tuff and clay.

Permian Mulbring Siltstone—siltstone, claystone, thin sandstone, and limestone.

Small areas of Permian Waratah Subgroup also occur—cross-laminated grey brown sandstone.

Topography

Undulating low hills and rises. Local relief is 10–50 m. Elevation is 20–50 m. Slopes are 3–15%. Crests are broad (250–400 m). Sideslopes are long and gently inclined (350–750 m), with some very long footslopes up to 2 000 m long. Occasional short, steep sideslopes occur, with common terracetting. Drainage lines are deeply incised and narrow (2–3 m). Rock outcrop is generally absent.

Vegetation

Partially cleared tall open-forest comprising *Eucalyptus maculata* (spotted gum), *E. fibrosa* (broad-leaved ironbark), *E. punctata* (grey gum), *E. oblonga* (narrow-leaved stringybark), *E. eugenioides* (thin-leaved stringybark) and *E. paniculata* (grey ironbark). Understorey vegetation contains *Bursaria spinosa* (blackthorn), paperbarks including *Melaleuca nodosa*, and wattles, including *Acacia falcata*.

Eucalyptus tereticornis (forest red gum) occurs on some lower slopes.

In drainage lines, *Melaleuca styphelioides*, *Backhousia myrtifolia* (grey myrtle), *Alphitonia excelsa* (red ash) and *Lantana camera* (lantana) are common.

Land Use

Urban centres occur at East Maitland, Beresfield and some northern suburbs of Newcastle. Small areas have been cleared for grazing or poultry farming.

Existing Land Degradation

Disturbed areas suffer considerable erosion. Unsealed tracks which are poorly maintained exhibit minor gully erosion. Moderate to severe rill erosion may occur on exposed batters, occasionally batter collapse may occur due to tunnel erosion of subsoils. Moderate sheet erosion occurs where vegetative cover has been removed.

3.4 Geotechnical Parameters

Site geotechnical parameters are detailed in the following Table 2;

TABLE 2 – SUMMARY OF SOIL TYPES ENCOUNTERED AT BOREHOLE LOCATIONS

SOIL UNIT	MATERIAL TYPE	DESCRIPTION
UNIT 1	FILL	ASPHALT overlying PAVEMENT GRAVELS
UNIT 2A	TOPSOIL	Sandy CLAY; low plasticity, dark brown, fine to medium grained gravel, fine to coarse sand, M>Wp
UNIT 2B	RESIDUAL	CLAY; medium to high plasticity, brown, M>Wp, soft

Table 3 provides a summary of the distributions of the above soil units at each borehole location and the depth to encountered groundwater.

TABLE 3 – SUMMARY OF DISTRIBUTION OF GEOTECHNICAL UNITS AT BOREHOLE LOCATIONS

BH	DEPTH ENCOUNTERED BELOW EXISTING GROUND LEVEL (m)		
	UNIT 1 Pavement GRAVELS	UNIT 2 Topsoil Sandy CLAY	UNIT 3 Residual CLAY
BH1	NE	0.0 – 0.3	0.3 – 1.5 +
BH2	NE	0.0 – 0.2	0.2 – 1.5 +
BH3	0.0 – 0.2	NE	0.2 – 1.5 +
BH4	NE	0.0 – 0.1	0.1 – 1.5 +
NOTE: + denotes material continues for unknown depth.			

Groundwater seepage was NOT encountered at the above depths as shown above in Table 3 in the boreholes on the day of investigation. It should be noted that fluctuations in the groundwater levels can occur because of seasonal variations, temperature, rainfall and other similar factors, the influence of which may not have been apparent at the time of investigation.

4 SUMMARY OF HISTORICAL INFORMATION AND CONTAMINANTS / AREAS OF CONCERN

4.1 Site Uses

Currently the site comprises an operating mechanics workshop that has been on the since at least 1983. Prior to this the site was vacant bushland with dense vegetation back to at least 1943.

4.2 Review of Aerial Photographs:

Photographs of the site have been attached for the following years with features noted below in Table 4:

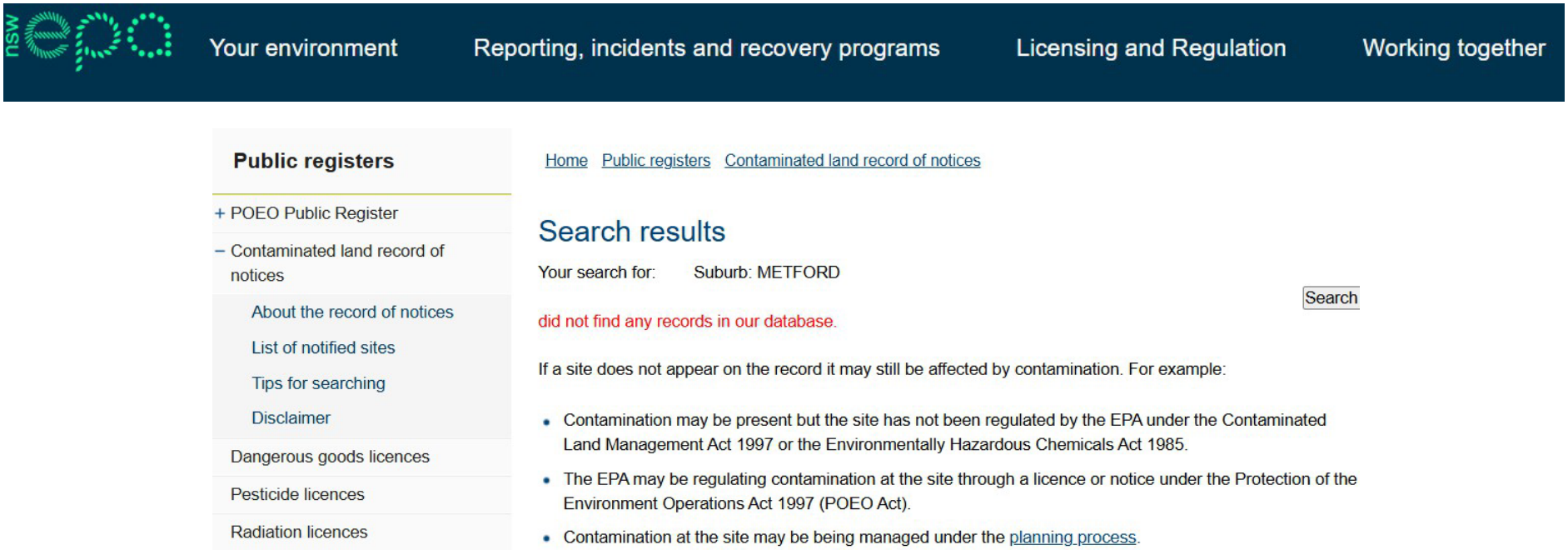
TABLE 4 – HISTORICAL AERIAL PHOTOGRAPHS

YEAR	SITE	SURROUNDING AREA
1943 Black and White	The site comprises dense bushland with no development.	Bushland is located to the south with partially cleared vacant land in all other directions
1953 Black and White	The site comprises dense bushland with no development.	Similar to the previous image
1966 Black and White	The site comprises dense bushland with no development.	Metford Road can be seen to the east as a gravel track and the New England Highway can be seen as a small road to the south west, Some development can be seen to the north of the site
1976 Colour	The site comprises dense bushland with no development.	Residential dwellings can be seen to the east and north west of the site and Chelmsford Drive can be seen under construction to the immediate south. The New England Highway can be seen to the South West as a large road now and Metford Road is now a bitumen road. The land to the north of the site has now been cleared.

YEAR	SITE	SURROUNDING AREA
1983 Black and White	The building and surrounding hardstand material can be seen on the site.	Larger commercial buildings can now be seen to the north and west of the site with Chelmsford Road now constructed to the south of the site.
1993 Colour	Similar to the previous image.	Similar to the previous image
2005 Colour	Similar to the previous image.	More commercial buildings are now located to the west of the site and the roundabout is now constructed on the corner of Chelmsford and Metford Road.
2015 Colour	Similar to the previous image with the wash bays and oil storage area now evident on the building.	Similar to the previous image with the building to the west now replaced with an electrical substation.
2025 Colour	The current site configuration and similar to the previous image.	Commercial buildings have expanded to the north west of the site.

4.3 Search of the NSW EPA Contaminated Sites Register:

A search of the NSW EPA Contaminated Sites Register indicates that there are no sites that have Contaminated Land Record Notices in the suburb of METFORD:



There are NO sites in Metford that are designated as NSW EPA Notified Sites.

The following site in Metford have POEO Licences at the time of assessment.

Number	Name	Location	Type	Status	Issued date
1587332		Metford Rd, METFORD, NSW 2323	s.80 Surrender of a Licence	Issued	13 Dec 2019
10012	CSR LIMITED	METFORD ROAD, METFORD, NSW 2323	POEO licence	Surrendered	26 May 2000
1020194	CSR LIMITED	METFORD ROAD, METFORD, NSW 2323	s.80 Surrender of a Licence	Issued	27 Aug 2002
21199	MULTIPLEX CONSTRUCTIONS PTY LTD	Metford Rd, METFORD, NSW 2323	POEO licence	Surrendered	06 Feb 2019
1575993	MULTIPLEX CONSTRUCTIONS PTY LTD	Metford Rd, METFORD, NSW 2323	s.58 Licence Variation	Issued	04 Mar 2019
1577383	MULTIPLEX CONSTRUCTIONS PTY LTD	Metford Rd, METFORD, NSW 2323	s.58 Licence Variation	Issued	13 Jun 2019

4.4 Summary of Areas of Concern (AoC's) and Chemicals of Concern (CoC's)

A summary of the AoC's and CoC's is contained in Table 5 below:

TABLE 5 – POTENTIAL AECS AND COCS

AoC	POTENTIAL CONTAMINATING ACTIVITY	POTENTIAL COCS	LIKELIHOOD OF CONTAMINATION*	COMMENT
1 Imported Fill over the site	Importation of historical fill material	Heavy Metals, TRH, BTEX, PAH, OCP, OPP, Asbestos, Foreign Material	Low	Importation of fill material may have occurred around the 1980'a when the current building was constructed. Based on the site topography it is unlikely that bulk filling was used to achieve the current site levels, with the site cut and battered into the eastern boundary of the site. Fill on the site is likely limited to pavement gravels used to create the hardstand surfaces.
2 Former and Current Site Use of the lot	Storage of material or agriculture during the 1940's	Heavy Metals, TRH, BTEX, PAH, OCP, OPP,	Low	The site has been used as a mechanical workshop since around the early 1980's with the site being densely vegetated vacant land prior to this. Contaminants of Concern not detected above Health Investigation Level or Management Level Threshold Concentrations in any of the samples tested.
3 Adjacent commercial and industrial activities	Commercial and Industrial operations surrounding the site	Heavy Metals, TRH, BTEX, PAH,	Low - Med	The area surrounding developments are light commercial with heavy industry not located adjacent to the site at the time of assessment or previously. The electrical substation to the west is hydraulically downstream of the site and does not pose a significant risk to the site with residual clays in the area limiting contaminant transportation. Notified contaminated sites are lot located within suburb of the subject site, namely Metford

NOTES:

** = It is important to note that this is not an assessment of the financial risk associated with the AEC in the event contamination is detected, but a qualitative assessment of the probability of contamination being detected at the potential AEC. Metals – Arsenic, Cadmium, Chromium, Copper, Lead, Mercury, Nickel and Zinc; TPH – Total Petroleum Hydrocarbons; PAH – Polycyclic Aromatic Hydrocarbons; OCP – Organochlorine Pesticides; OPP – Organophosphorus Pesticides, UPSS denoted Underground Petroleum Storage Systems*

4.5 Assessment of Information Integrity

It is assessed that the integrity of the assessment of information is correct as supplied by the relevant regulatory sources and attached documents.

5 VISUAL ASSESSMENT

A site investigation, comprising a detailed site walkover and a preliminary intrusive soil investigation was undertaken on 20/01/2025 that involved undertaking a detailed site observation assessment and excavation of 4 boreholes.

Visual assessment of the site indicated the following visual sources of *possible* contamination;

- Fill material used to construct the hardstand layer over the majority of the site;
- Historical and current use of the site, namely a vehicle repair and service centre;
- General rubbish and used vehicle parts including stored engines on the rear northern boundary of the site;
- Possible Historical Fill located on the rear western portion of the site, however this is unlikely based on site topography.

Trees were located on the southern and eastern boundaries with all vegetation appearing to be very healthy with no die back or dead areas.

The majority of chemical waste material was stored in dedicated bunded areas including waste oil, batteries and electrical wiring harnesses at the time of assessment. Odours were not noted over the site at the time of assessment.

6 SOIL ASSESSMENT

The *NSW EPA Contaminated Land Guidelines – Sampling Design Part 1 – Application (2022)* indicates that a Judgmental Sampling Pattern is required for this Preliminary Site Investigation.

Based on the site layout and the known site usage it was assessed that for a preliminary assessment four (4) test locations were required with six (6) primary samples and one (1) duplicate sample taken at depths where contamination is likely to be expected.

6.1 Sampling Methodology

Borehole locations were selected prior to commencement of excavation based on a grid pattern and onsite features such as locations of existing development ensuring an appropriate spread of the site was sampled including up gradient and down gradient areas. All borehole locations are shown on the attached Figure 3 and used a combination of machine and hand augured techniques.

Soil samples were taken from various depths from BH1 to BH4. The depth at which the soil samples were taken and tested was dictated by changes in soil characteristics and other such factors as odour and colour. Out of these collected samples, the selected samples were forwarded to Envirolabs NATA Laboratory for analytical testing.

All sampling was undertaken in accordance with all relevant Australian Standards, including *AS 1726 – 1993 – Geotechnical Site Investigations*, *NSW EPA Sample Design Guidelines* with reference to the CLM Act, NEPM (2013) Schedules and associated guidelines as detailed in the reference list. All laboratories used were NATA Certified.

6.2 QA/QC

New neoprene gloves were worn during sampling and replaced prior to collection of each sample directly from the auger. All collected samples were placed in laboratory supplied glass with Teflon coated lids. Decontamination of sampling equipment was carried out with Decon 90 and clean water. Samples were then placed on ice and transported to a fridge at our premises prior to dispatch to the laboratory.

Field screening involved visual observation to determine if the material was uncontrolled fill or natural topsoils or residual material. A Chain of Custody form was prepared and accompanied samples to the laboratory. Laboratory QA/QC procedures are detailed in the attached laboratory testing results.

All QA/QC documentation supplied by the laboratory is contained in Envirolabs document referenced in this report and a duplicate sample was collected, with results detailed in the attached Results table with Duplicate samples described there.

6.3 Soil Test Results

The attached laboratory testing results of the collected soil samples compared to the relevant NEPM Health Based Investigation Levels (HBIL's) for Commercial / Industrial "D" and Ecological Screening Level (ESL) - Commercial and Industrial Guideline Thresholds are detailed in the Attached Soil Test Results Table and summarised as follows:

Hydrocarbons

Laboratory testing results for soil samples tested indicate that **TRH, PAH's and BTEX levels detected are below** laboratory detection limits or relevant guideline thresholds at ALL test locations

Pesticides

Laboratory testing results for soil samples tested indicate that **OC/OP levels detected are below** laboratory detection limits at ALL test locations.

Metals

Laboratory testing results for soil samples tested indicate that **metal levels detected are below** the relevant guideline threshold concentrations at ALL test locations.

6.4 Laboratory Test Results Summary

6.4.1 Threshold Guideline Exceedances

Health Investigation Level (HIL) Thresholds, Management Limits of Non Sensitive Site (NS ML) or Ecological Screening Level (ESL) Thresholds were NOT exceeded in any samples tested in this PSI.

In summary, all laboratory test results for Contaminants of Concern of collected soil samples were below guideline thresholds in ALL samples tested and it is assessed that further intrusive soil investigation of the site is **NOT** required as discussed further below in Sections 7 and 14.

7 RECOMMENDATIONS

It is assessed that former and adjacent site uses have not resulted in significant contamination from CoC's on the site and it is recommended that the site is suitable for the proposed use on the following conditions;

1. Prior to demolition of existing onsite structures a Hazardous Building Materials Survey should be undertaken on the site to aid in the safe demolition and offsite disposal of the onsite structures. All receipts for material removed offsite during the demolition process should be retained for record keeping requirements;

2. Any general rubbish material should be removed offsite to the appropriately licenced landfill with all receipts for material disposed offsite also being retained;

3. Any bitumen and asphalt material that required offsite removal should be stockpiled separately and can be removed offsite after material classification as per the NSW EPA The Recovered Aggregate Exemption 2014;

4. An Unexpected Contaminated Material Finds Protocol (UCMFP) should be prepared prior to redevelopment of the site and implemented if required;

5. Any excavation spoil generated during the proposed development of the site that require offsite removal should be removed offsite after Waste Classification Assessment as per the referenced NSW EPA Waste Classification Guidelines with all receipts and reports for material disposed offsite being retained;

6. Any material imported onto the site during the proposed development is either quarry sourced material with receipts, recycled aggregate accompanied by the relevant receipts and classification certificates OR Virgin / Excavated Natural Material also accompanied by material classification certificates.

8 CONTAMINATION SOURCES

The following sources of possible contaminated areas and possible contamination were identified;

Possible Onsite Contaminated Areas

- Fill material used to construct the hardstand layer;
- Historical and current use of the site as a vehicle repair and service centre;
- The rear northern boundary of the site where general rubbish and used vehicle parts including stored engines were located on the site;
- Possible Historical Fill located on the rear western portion of the site, however this is unlikely based on site topography.

Possible Offsite Contaminated Areas

- Commercial and light industrial buildings to the north and west of the site:

Contaminants of Concern (CoC's)

The following contaminants of concern were tested for in soil samples collected:

- TRH (Total Recoverable Hydrocarbons);
- Total PAH's (Polycyclic Aromatic Hydrocarbons);
- BTEX (Benzene, Toluene, Ethyl Benzene and Xylene);
- Naphthalene;
- Organochlorine Pesticides / Organophosphorous Pesticides (OC/OP);
- Lead and select heavy metals including cadmium, chromium, zinc, copper, mercury, arsenic and nickel.

9 CONCEPTUAL SITE MODEL

This Conceptual Site Model (CSM) is specific to this site and is based on a review of all available information, including site inspections / investigations, available data and historical searches.

The following sensitive receptors have been identified on the site;

- Nearby residents and businesses in both the short and long term;
- Site personnel working on any re-development of the site;
- Long term residents and businesses after construction of the development;
- Any nearby waterways;
- Groundwater.

All potential contamination sources are noted in Section 8 – Contamination Sources. At the time of assessment, fill was detected on the site in the form of pavement gravels. The majority of the surface water exited the site by either stormwater pits and pipes send to offsite gutters and swales with some limited surface water runoff in a westerly direction. At the time of assessment, groundwater seepage was not detected above 1.5m depth as shown on the attached borehole logs. The site layout and possible contamination sources can be seen on the attached Figures.

See Section 3 – Site Geology and Hydrology above for detailed site geology and groundwater information. In summary, soil material encountered comprised of Sandy Gravelly CLAY FILL overlying Sandy CLAY alluvial material as shown on the attached borehole engineering logs.

It is assessed that the following potential contamination migration pathways are present on the site;

- Contaminated material being removed offsite during re-development;

- Migration of contaminants into and through the groundwater during rain events.

The nature and extent of contamination considered likely to be found on the site is summarised above, with Remediation or Environmental Management of the site NOT required for the site.

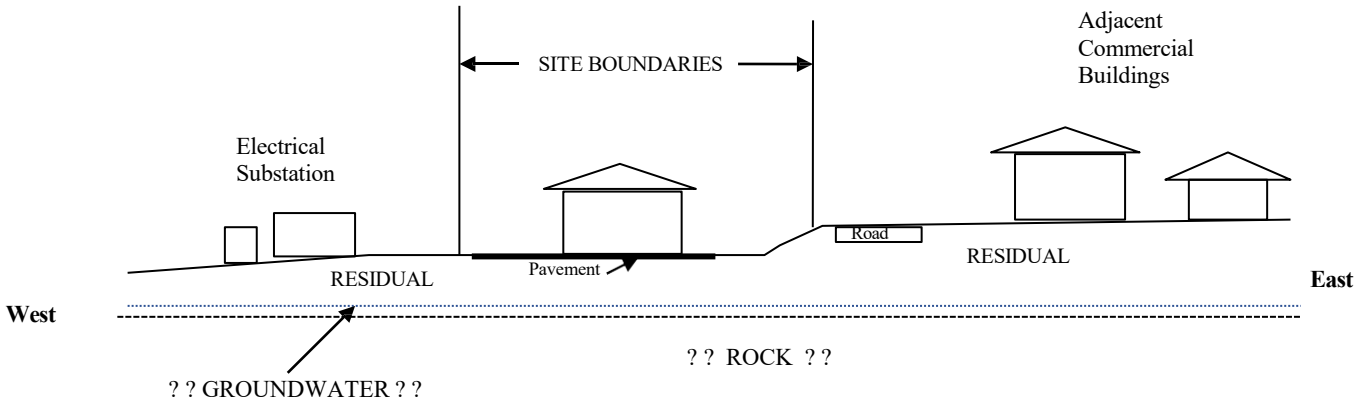


FIGURE A – CONCEPTUAL SITE MODEL DIAGRAM – 71 TURTON STREET, METFORD, NSW

10 DATA QUALITY OBJECTIVITIES (DQO's)

The objective of this investigation is to determine the extent of possible onsite contamination and provide baseline contamination data for the site. Further soil and groundwater assessment may be required if further development of the site is proposed or if unexpected contamination is discovered.

The first stage of the process is to provide data to indicate that the site is suitable for the proposed continuing land use activity.

A conceptual Site Model has been detailed in Section 9 above.

Site boundaries are indicated on the attached Figures.

Decisions to be made and the criteria to be used is listed as follows;

- Assessment of the contamination type and distribution on the site will be made using all previous investigations carried out onsite with reference to the NSW EPA Guidelines for the NSW Site Auditor Scheme and the NEPM (2013);

- Assessment of the groundwater contamination using criteria described in the NEPM (2013);

To minimise the potential of decisions errors all data will be assessed against the NSW EPA Guidelines for the NSW Site Auditor Scheme – Appendix V – Quality Assurance and Quality Control.

It is assumed that some errors may be contained within the assembled data and information. If it is found during material excavation that conditions encountered onsite differ significantly from those suggested by the collected data, an environmental consultant should be contacted and made aware of the situation.

11 GUIDELINES TO BE USED

The following guidelines from the NEPM (2013) were followed during the assessment process;

Schedule B—General guidelines for the assessment of site contamination

The following general guidelines provide guidance on the possible ways of achieving the desired environmental outcome (PART 3 of the Measure) for the assessment of site contamination and should only be considered in relation to the assessment of site contamination.

Index of guidelines
Schedule B1—Guideline on Investigation Levels for Soil and Groundwater
Schedule B2—Guideline on Site Characterisation
Appendix A Possible analytes for soil contamination
Appendix B Data quality objective (DQO) process
Appendix C Assessment of data quality
Appendix D Example data presentation on scale drawings and borehole logs
Appendix E Dioxins and dioxin-like compounds
Schedule B3—Guideline on Laboratory Analysis of Potentially Contaminated Soils
Appendix A Determination of total recoverable hydrocarbons (TRH) in soil
Schedule B4—Guideline on Site-Specific Health Risk Assessment Methodology
Appendix A Structure of a risk assessment report
Schedule B5a—Guideline on Ecological Risk Assessment
Appendix A Summary of the EILs for fresh and aged contaminants in soil with various land uses
Appendix B Mixtures of chemicals
Schedule B5b—Guideline on Methodology to Derive Ecological Investigation Levels in Contaminated Soils
Appendix A Review and comparison of frameworks for deriving soil quality guidelines in other countries
Appendix B Method for deriving EILs that protect aquatic ecosystems
Schedule B5c—Guideline on Ecological Investigation Levels for Arsenic, Chromium (III), Copper, DDT, Lead, Naphthalene, Nickel and Zinc
Appendix A Raw toxicity for arsenic
Appendix B Raw toxicity for chromium (III)
Appendix C Raw toxicity for copper
Appendix D Explanation of the selection of the soil properties that control the added contaminant limits for copper
Appendix E Raw toxicity for DDT
Appendix F Raw toxicity for lead
Appendix G Raw toxicity for naphthalene
Appendix H Raw toxicity for nickel
Appendix I Raw toxicity for zinc
Schedule B6—Guideline on the Framework for Risk-Based Assessment of Groundwater Contamination
Schedule B7—Guideline on derivation of health-based investigation levels
Appendix A1 Derivation of HILs for Metals and Inorganics
Appendix A2 Derivation of HILs for PAHs and Phenols
Appendix A3 Derivation of HILs for Organochlorine Pesticides
Appendix A4 Derivation of HILs for Herbicides and Other Pesticides
Appendix A5 Derivation of HILs for PCBs and PBDEs
Appendix A6 Derivation of HILs for Volatile Organic Carbon Compounds
Appendix B Equations for derivation of HILs and Interim HILs
Appendix C Derivation of HILs for Generic Land Uses
Appendix D Blood lead model assumptions
Schedule B8—Guideline on Community Engagement and Risk Communication
Schedule B9—Guideline on Competencies and Acceptance of Environmental Auditors and Related Professionals

12 REMEDIAL ACTION PLAN (RAP)

A Remedial Action Plan is **NOT** required for the development proposed for the site unless an Unexpected Contaminated Material Finds Protocol is required to be implemented for the site.

13 LONG TERM SITE MANAGEMENT

Long term environmental management is **NOT** required for the development proposed for the site**.**

14 CONCLUSIONS

This report presents the findings of a PSI undertaken for the proposed development at 71 Turton Street, Metford NSW and was required to satisfy an requirements from Maitland City Council as part of the DA process in accordance with SEPP 55.

The site history indicates that the site has vacant bushland prior to the early 1980's when the current development was constructed on the site, and has been used for that purpose since then.

Fieldwork investigations comprised of a site walkover and excavation of five (4) boreholes and the collection of sis (6) primary samples and one (1) duplicate sample submitted to Envirolabs NATA Accredited Laboratory for testing of identified CoC's.

The following sources of possible types of environmental contamination were identified onsite:

- Fill material used to construct hardstand layers;
- Historical and current use of the site as a vehicle repair and service centre;
- The rear northern boundary of the site including general rubbish and used vehicle parts located on the site;
- Unlikely possible Historical Fill located on the rear western portion of the site.

The geotechnical conditions on the site are generally either pavements or topsoil overlying residual CLAY's to at least 1.5m depth with groundwater not detected above termination depth.

Based on the analytical testing the following exceedances of the adopted criteria were not reported in any of the samples collected:

It is assessed that further assessment, remediation or construction / long-term environmental management is **not** required for the proposed development

Summary of Findings and Conclusion

The assessment and reporting on the site has been completed in accordance with the Maitland City Council requirements and the general requirements of the State Environmental Planning Policy No. 55 (SEPP55). All reporting has been undertaken in accordance with the *Consultants Reporting on Contaminated Land – Contaminated Land Guidelines (NSW EPA 2020)* and the *Guidelines for the NSW State Auditor Scheme (NSW EPA 3nd Ed 2017).*

Data assembled on the site indicate that there is a low chance of potential risk of exposure of CoC's to human receptors at the time of assessment.

This Environmental Site Assessment concludes that the site is considered suitable for the intended land use as per the recommendations that are listed above in Section 7 and is consistent with the *National Environmental Protection Council (NEPC) National Environmental Protection (Assessment of Site Contamination) Measure (NEPM 2013) – Schedule B1, Table 1A(1), Column D – Commercial / Industrial* and that the site assessment objectives of this report have been achieved with Remediation or Environmental Management of the site not required for the proposed development.

15 ASSUMPTIONS AND LIMITATIONS

It is the nature of contaminated site investigations that the degree of variability in site conditions cannot be known completely and no sampling and analysis program can eliminate all uncertainty concerning the condition of the site. Professional judgement must be exercised in the collection and interpretation of the data.

In preparing this assessment, current guidelines for assessment and management of contaminated land were followed. This work has been conducted in good faith in accordance with Sanko's understanding of the client's brief and general accepted practice for environmental consulting.

This assessment was prepared with the objective of providing guidance on the remediation and validation activities to be undertaken. No warranty, expressed or implied, is made as to the information and professional advice included in this report. Anyone using this document does so at their own risk and should satisfy themselves concerning the applicability of its application and where necessary should seek expert advice in relation to the particular situation.

If you have any further questions about this report, please contact the undersigned.

For and on behalf of
Sanko Excavation Environmental and Civil Services P/L

Damien Sankowsky *BE(Env)*
Principal Environmental Engineer
Australian Geomechanics Society (AGS) Member – EA ID 5879317

Attachments:

- *References*
- *Report Limitations*
- *Site Photographs*
- *Historical Aerial Photographs*
- *Figure 1 – Site Location*
- *Figure 2 – Proposed Development*
- *Figure 3 – Borehole Locations*
- *Figure 4 – Geology Map*
- *Figure 5 – Acid Sulfate Soil Map*
- *Log Explanation Sheets*
- *Engineering Borehole Logs (4X BH's)*
- *Laboratory Testing Summary Table*
- *Laboratory Test Results*
- *Architectural Drawings*

References:

- *NEPC National Environmental Protection Measures NEPM (2013)*
- *Guidelines for Consultants Reporting on Contaminated Land (NSW EPA 2020)*
- *NSW EPA Contaminated Land Guidelines – Sampling Design Part 1 – Application (2022)*
- *NSW EPA Waste Classification Guideline, Part 1: Classifying Waste*
- *NSW EPA Guidelines for the NSW Site Auditor Scheme (3nd edition)*
- *Guidelines for the Assessment and Management of Groundwater Contamination (DECC 2007)*
- *Guidelines on the Duty to Report Contamination under the Contaminated Land Management Act 1997 (DECC 2009)*
- *Site Validation Reporting (DECCW 2010b)*
- *Decommissioning, Abandonment and Removal of UPSS Infrastructure (DECWW 2010)*
- *SHADE Design Drawings Project Number 2253 Rev D dated 22/11/2024*

REPORT LIMITATIONS

Sanko Excavation Environmental and Civil Service Pty Ltd have undertaken a site assessment in accordance with current industry and professional standards. The scope of works were limited to that as set out in the proposal as refered to in this investigation. This report is based upon limited site investigation and subsurface sampling and laboratory testing of samples as set out in the forementioned proposal. Report findings are based upon site conditions at the time of investigation and as such can not be relied upon for unqualified warranties or assume liablity for site conditions not observed and/or accessable during or at the time of investigation. The works are restricted to the site detailed in the report with no offsite investigations conducted. Despite all resaonable care and dilligance taken ground conditions encountered and contaminant concentrations may not represent conditions between sample locations. Site characteristics may also change subsequent to this investigation due to natural processes, chemical reactions, spilling or leaking of contaminants, change in water levels or dumping of fill. All observations and interpretation is made from a limited number of observation points assuming geological and chemical conditions are representative across the site. No other warranties are made or intended. Third parties should seek their own independent advice regarding report contents. This report has been prepared exclusively for the client as detailed on the report and remains the property of this company and the client and can not be reproduced without the written consent of the client as detailed on the report and can then only be reproduced in its entirety.

Eastern customer vehicle parking area

Rear western area used for vehicle storage

Site Photographs

PSI **71 TURTON STREET, METFORD, NSW** **MARCH 2025**

Eastern parking area with office on left

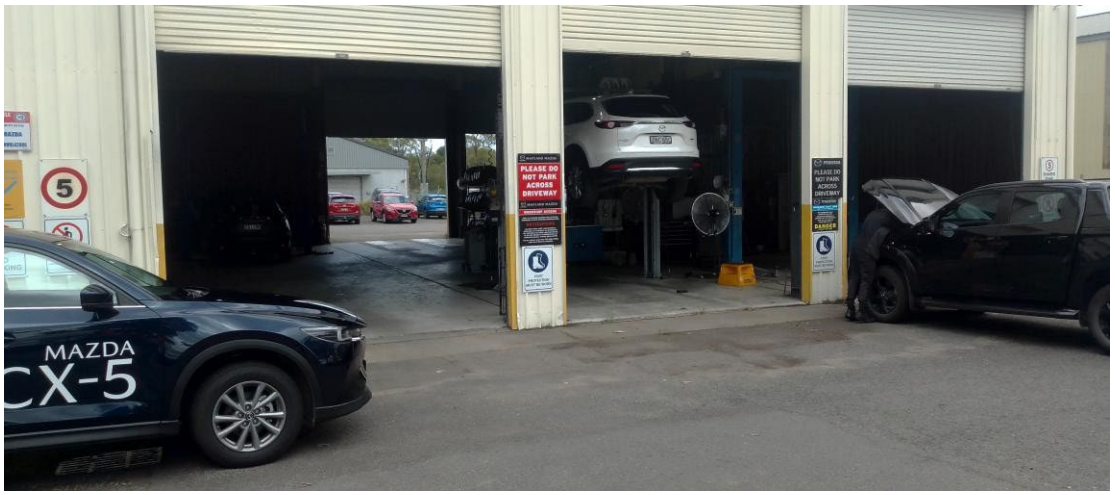
Area adjacent to southern boundary

Site Photographs

Vehicle workshop and wash bay areas

Site Photographs

PSI **71 TURTON STREET, METFORD, NSW** **MARCH 2025**



Vehicle workshop and wash bay areas

Site Photographs

PSI **71 TURTON STREET, METFORD, NSW** **MARCH 2025**

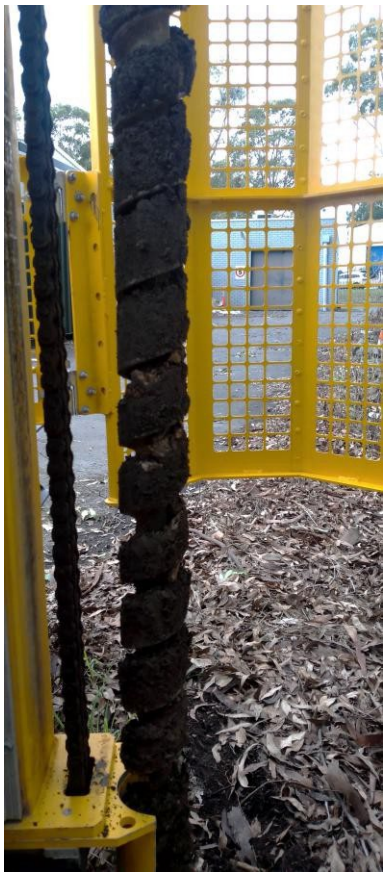
Waste Oil and Battery storage areas

Site Photographs

PSI **71 TURTON STREET, METFORD, NSW** **MARCH 2025**

General rubbish and used vehicle parts

Site Photographs



Examples of site drilling

Site Photographs

1943

1953

Historical Photographs

1966

1976

Historical Photographs

1983

1993

Historical Photographs

2005

1993

Historical Photographs

2025

Historical Photographs

FIGURE 1 – SITE LOCATION

PRELIMINARY ENVIRONMENTAL SITE INVESTIGATION

71 TURTON STREET, METFORD, NSW MARCH 2025

FIGURE 2 – PROPOSED DEVELPMENT

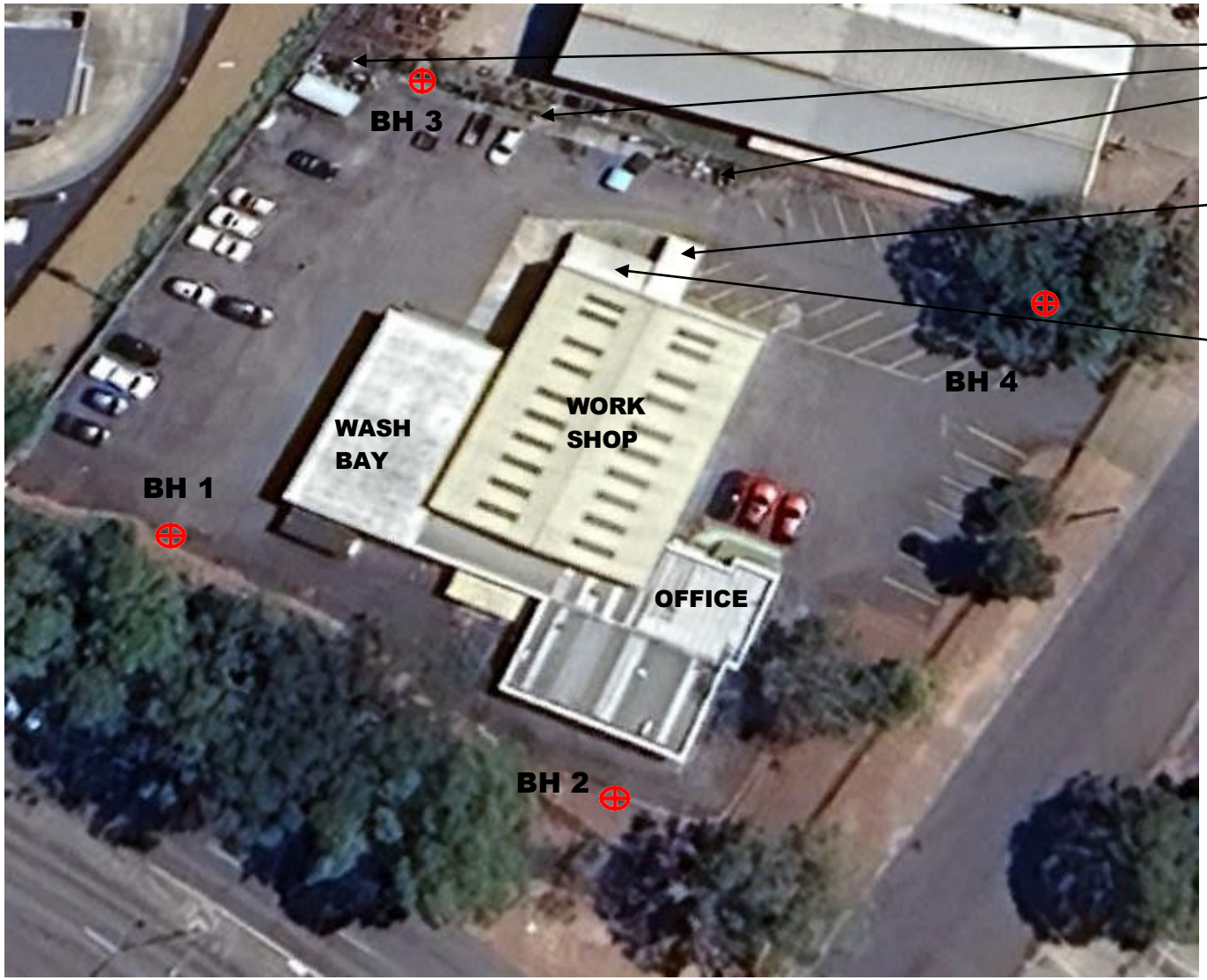


FIGURE 3 – SITE FEATURES AND BOREHOLE LOCATIONS

PSI **71 TURTON STREET, METFORD, NSW** **MARCH 2025**

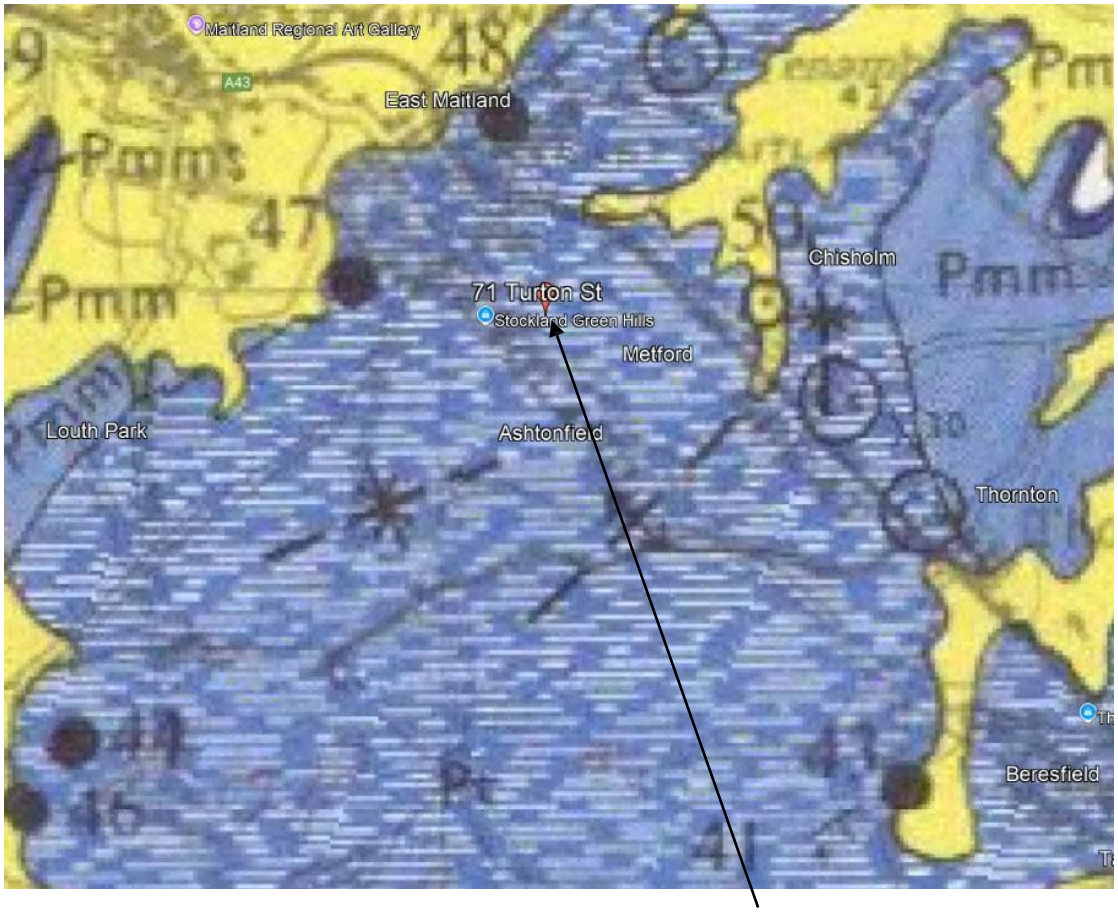
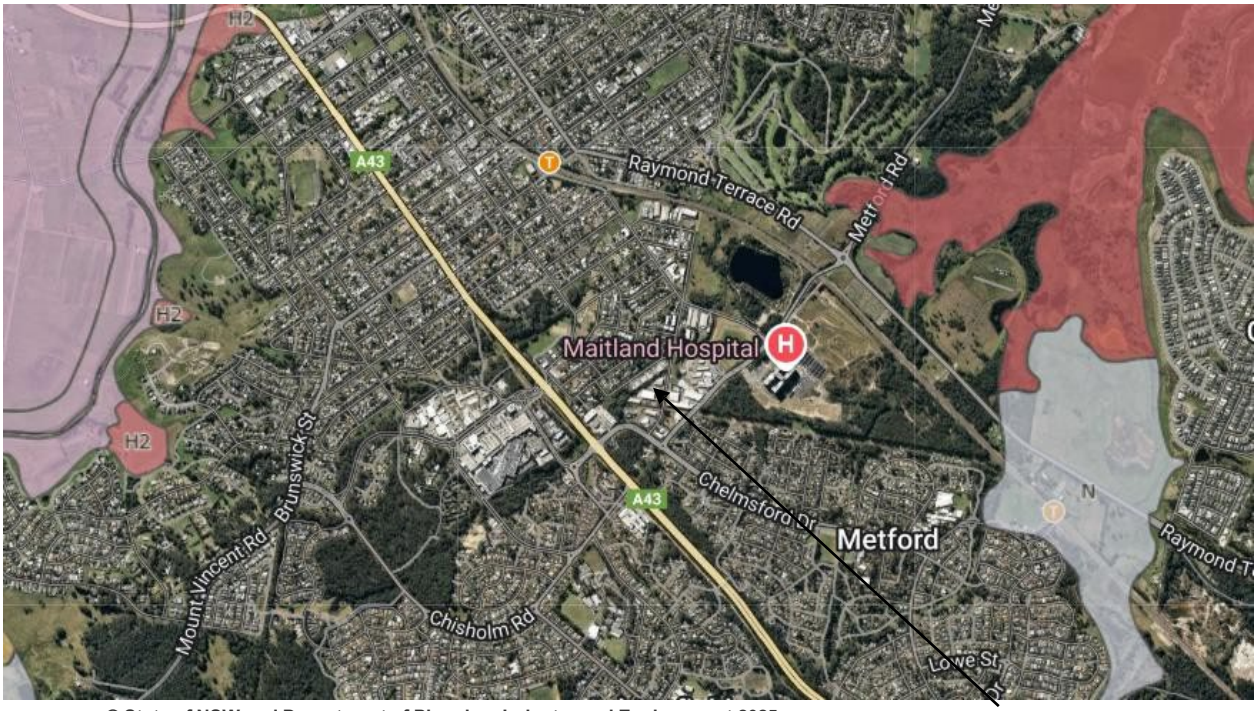


FIGURE 4 - GEOLOGY MAP OF SITE



Site Location

FIGURE 5 – ASS RISK MAP OF SITE

DEFINITION:

In engineering terms soil includes every type of uncemented or partially cemented inorganic or organic material found in the ground. In practice, if the material can be remoulded or disintegrated by hand in its field condition or in water it is described as a soil. Other materials are described using rock description terms.

CLASSIFICATION SYMBOL & SOIL NAME

Soils are described in accordance with the Unified Soil Classification (UCS) as shown in the table on Sheet 2.

PARTICLE SIZE DESCRIPTIVE TERMS

NAME	SUBDIVISION	SIZE
Boulders		>200 mm
Cobbles		63 mm to 200 mm
Gravel	coarse	20 mm to 63 mm
	medium	6 mm to 20 mm
	fine	2.36 mm to 6 mm
Sand	coarse	600 µm to 2.36 mm
	medium	200 µm to 600 µm
	fine	75 µm to 200 µm

MOISTURE CONDITION

Dry Looks and feels dry. Cohesive and cemented soils are hard, friable or powdery. Uncemented granular soils run freely through hands.

Moist Soil feels cool and darkened in colour. Cohesive soils can be moulded. Granular soils tend to cohere.

Wet As for moist but with free water forming on hands when handled.

CONSISTENCY OF COHESIVE SOILS

TERM	UNDRAINED STRENGTH s_u (kPa)	FIELD GUIDE
Very Soft	<12	A finger can be pushed well into the soil with little effort.
Soft	12 - 25	A finger can be pushed into the soil to about 25mm depth.
Firm	25 - 50	The soil can be indented about 5mm with the thumb, but not penetrated.
Stiff	50 - 100	The surface of the soil can be indented with the thumb, but not penetrated.
Very Stiff	100 - 200	The surface of the soil can be marked, but not indented with thumb pressure.
Hard	>200	The surface of the soil can be marked only with the thumbnail.
Friable	–	Crumbles or powders when scraped by thumbnail.

DENSITY OF GRANULAR SOILS

TERM	DENSITY INDEX (%)
Very loose	Less than 15
Loose	15 - 35
Medium Dense	35 - 65
Dense	65 - 85
Very Dense	Greater than 85

MINOR COMPONENTS

TERM	ASSESSMENT GUIDE	PROPORTION OF MINOR COMPONENT IN:
Trace of	Presence just detectable by feel or eye, but soil properties little or no different to general properties of primary component.	Coarse grained soils: <5% Fine grained soils: <15%
With some	Presence easily detected by feel or eye, soil properties little different to general properties of primary component.	Coarse grained soils: 5 - 12% Fine grained soils: 15 - 30%

SOIL STRUCTURE

ZONING		CEMENTING	
Layers	Continuous across exposure or sample.	Weakly cemented	Easily broken up by hand in air or water.
Lenses	Discontinuous layers of lenticular shape.	Moderately cemented	Effort is required to break up the soil by hand in air or water.
Pockets	Irregular inclusions of different material.		

GEOLOGICAL ORIGIN

WEATHERED IN PLACE SOILS

Extremely weathered material	Structure and fabric of parent rock visible.
Residual soil	Structure and fabric of parent rock not visible.

TRANSPORTED SOILS

Aeolian soil	Deposited by wind.
Alluvial soil	Deposited by streams and rivers.
Colluvial soil	Deposited on slopes (transported downslope by gravity).
Fill	Man made deposit. Fill may be significantly more variable between tested locations than naturally occurring soils.
Lacustrine soil	Deposited by lakes.
Marine soil	Deposited in ocean basins, bays, beaches and estuaries.

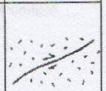
SOIL DESCRIPTION EXPLANATION SHEET 1/2

SOIL CLASSIFICATION INCLUDING IDENTIFICATION AND DESCRIPTION

FIELD IDENTIFICATION PROCEDURES (Excluding particles larger than 60 mm and basing fractions on estimated mass)							USC	PRIMARY NAME
COARSE GRAINED SOILS More than 50% of materials less than 63 mm is larger than 0.075 mm	(About the smallest particle visible to the naked eye)	GRAVELS More than half of coarse fraction is larger than 2.0 mm	CLEAN GRAVELS (Little or no fines)	Wide range in grain size and substantial amounts of all intermediate particle sizes.			GW	GRAVEL
				Predominantly one size or a range of sizes with more intermediate sizes missing.			GP	GRAVEL
			GRAVELS WITH FINES (Appreciable amount of fines)	Non-plastic fines (for identification procedures see ML below)			GM	SILTY GRAVEL
				Plastic fines (for identification procedures see CL below)			GC	CLAYEY GRAVEL
		SANDS More than half of coarse fraction is smaller than 2.0 mm	CLEAN SANDS (Little or no fines)	Wide range in grain sizes and substantial amounts of all intermediate sizes missing			SW	SAND
				Predominantly one size or a range of sizes with some intermediate sizes missing.			SP	SAND
			SANDS WITH FINES (Appreciable amount of fines)	Non-plastic fines (for identification procedures see ML below).			SM	SILTY SAND
				Plastic fines (for identification procedures see CL below).			SC	CLAYEY SAND
FINE GRAINED SOILS More than 50% of material less than 63 mm is smaller than 0.075 mm			IDENTIFICATION PROCEDURES ON FRACTIONS <0.2 mm.					
				DRY STRENGTH	DILATANCY	TOUGHNESS		
			SILTS & CLAYS Liquid limit less than 50	None to Low	Quick to slow	None	ML	SILT
				Medium to High	None	Medium	CL	CLAY
				Low to medium	Slow to very slow	Low	OL	ORGANIC SILT
			SILTS & CLAYS Liquid limit greater than 50	Low to medium	Slow to very slow	Low to medium	MH	SILT
				High	None	High	CH	CLAY
				Medium to High	None	Low to medium	OH	ORGANIC CLAY
HIGHLY ORGANIC SOILS			Readily identified by colour, odour, spongy feel and frequently by fibrous texture.				Pt	PEAT

• Low plasticity – Liquid Limit W_L less than 35%. • Medium plasticity – W_L between 35% and 50%.

COMMON DEFECTS IN SOIL

TERM	DEFINITION	DIAGRAM
PARTING	A surface or crack across which the soil has little or no tensile strength. Parallel or sub parallel to layering (eg bedding). May be open or closed.	
JOINT	A surface or crack across which the soil has little or no tensile strength but which is not parallel or sub parallel to layering. May be open or closed. The term 'fissure' may be used for irregular joints <0.2 m in length.	
SHEARED ZONE	Zone in clayey soil with roughly parallel near planar, curved or undulating boundaries containing closely spaced, smooth or slickensided, curved intersecting joints which divide the mass into lenticular or wedge shaped blocks.	
SHEARED SURFACE	A near planar curved or undulating, smooth, polished or slickensided surface in clayey soil. The polished or slickensided surface indicates that movement (in many cases very little) has occurred along the defect.	

TERM	DEFINITION	DIAGRAM
SOFTENED ZONE	A zone in clayey soil, usually adjacent to a defect in which the soil has a higher moisture content than elsewhere.	
TUBE	Tubular cavity. May occur singly or as one of a large number of separate or inter-connected tubes. Walls often coated with clay or strengthened by denser packing of grains. May contain organic matter	
TUBE CAST	Roughly cylindrical elongated body of soil different from the soil mass in which it occurs. In some cases the soil which makes up the tube cast is cemented.	
INFILLED SEAM	Sheet or wall like body of soil substance or mass with roughly planar to irregular near parallel boundaries which cuts through a soil mass. Formed by infilling of open joints.	

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SOIL DESCRIPTION EXPLANATION SHEET 2/2

LOCATION:	**71 TURTON STREET, METFORD, NSW**
JOB NUMBER:	**E24 078**
DATE:	**20/01/2025**
MACHINE / LOGGED BY:	**TRAILER RIG / DS**

BH - 1

DEPTH (m BGL)	MATERIAL PROPERTIES	STRUCTURE AND ADDITIONAL OBSERVATIONS
0.0 – 0.3	Sandy CLAY; low plasticity, dark brown, fine to medium grained gravel, fine to coarse sand, M>Wp	TOPSOIL
0.3 – 1.5+	CLAY; medium to high plasticity, brown, M>Wp, soft	RESIDUAL

BOREHOLE TERMINATED AT 1.5m (Limit Of Investigation)

SEEPAGE OR GROUNDWATER NOT ENCOUNTERED

LOCATION:	**71 TURTON STREET, METFORD, NSW**
JOB NUMBER:	**E24 078**
DATE:	**20/01/2025**
MACHINE / LOGGED BY:	**HAND AUGER / DS**

BH - 2

DEPTH (m BGL)	MATERIAL PROPERTIES	STRUCTURE AND ADDITIONAL OBSERVATIONS
0.0 – 0.2	Sandy CLAY; low plasticity, dark brown, fine to medium grained gravel, fine to coarse sand, M>Wp	TOPSOIL
0.2 – 1.5+	CLAY; medium to high plasticity, brown, M>Wp, soft	RESIDUAL

BOREHOLE TERMINATED AT 1.5m (Limit Of Investigation)

SEEPAGE OR GROUNDWATER NOT ENCOUNTERED

LOCATION:	**71 TURTON STREET, METFORD, NSW**
JOB NUMBER:	**E24 078**
DATE:	**20/01/2025**
MACHINE / LOGGED BY:	**TRAILER RIG / DS**

BH - 3

DEPTH (m BGL)	MATERIAL PROPERTIES	STRUCTURE AND ADDITIONAL OBSERVATIONS
0.0 – 0.2	Clayey Sandy GRAVEL; fine to medium grained, grey / brown, fine to coarse sand, low plasticity fines, dry, very dense	PAVEMENT GRAVELS
0.3 – 1.5+	CLAY; medium to high plasticity, brown, M>Wp, soft	RESIDUAL

BOREHOLE TERMINATED AT 1.5m (Limit Of Investigation)

SEEPAGE OR GROUNDWATER NOT ENCOUNTERED

LOCATION:	**71 TURTON STREET, METFORD, NSW**
JOB NUMBER:	**E24 078**
DATE:	**20/01/2025**
MACHINE / LOGGED BY:	**TRAILER RIG / DS**

BH - 4

DEPTH (m BGL)	MATERIAL PROPERTIES	STRUCTURE AND ADDITIONAL OBSERVATIONS
0.1 – 0.1	Sandy CLAY; low plasticity, dark brown, fine to medium grained gravel, fine to coarse sand, M>Wp	TOPSOIL
0.1 – 1.5+	CLAY; medium to high plasticity, brown, M>Wp, soft	RESIDUAL

BOREHOLE TERMINATED AT 1.5m (Limit Of Investigation)

SEEPAGE OR GROUNDWATER NOT ENCOUNTERED

RESULTS TABLE - SOIL

Sample	PQL	GUIDELINES*										BH1	BH1	BH2	BH3	BH3	BH4	dup			
Depth		HSL D[a]					ESL C&I[b]		NS ML[c]		DC D^	0.5	1.5	1.0	0.1	0.8	0.7	4/0.7			
Date		Sand 0<1	**Silt 0<1**	**Silt 1-2**	**Silt 2-4**	**Silt >4**	Coarse	**Fine**	Coarse	**Fine**		20/01	20/01	20/01	20/01	20/01	20/01	20/01			
Material Profile												C	C	C	C	C	C	C			
Strata												Silt	Silt	Silt	Silt	Silt	Silt	Silt			
BTEX																					
Benzene	0.2	3	**4**	**4**	**6**	**10**	75	**95**			430	BDL	BDL	BDL	BDL	BDL	BDL	BDL			
Toluene	0.5	NL	**NL**	**NL**	**NL**	**NL**	135	**135**			99K	BDL	BDL	BDL	BDL	BDL	BDL	BDL			
Ethylbenzene	0.5	NL	**NL**	**NL**	**NL**	**NL**	165	**185**			27K	BDL	BDL	BDL	BDL	BDL	BDL	BDL			
m&p Xylene	0.5											BDL	BDL	BDL	BDL	BDL	BDL	BDL			
Ortho-xylene	0.5											BDL	BDL	BDL	BDL	BDL	BDL	BDL			
Total Xylene	3	230	**NL**	**NL**	**NL**	**NL**	180	**95**			61K	BDL	BDL	BDL	BDL	BDL	BDL	BDL			
PAH																					
Naphlhlalne	1	NL	**NL**	**NL**	**NL**	NL	370	**370**			11K	BDL	BDL	BDL	BDL	BDL	BDL	BDL			
TRH																					
C6-10	10								700	**800**	26K	BDL	BDL	BDL	BDL	BDL	BDL	BDL			
C>10-16	50						170	**170**	1000	**1000**	20K	BDL	BDL	BDL	110	120	BDL	BDL			
C>16-34	100						1700	**2500**	3500	**5000**	27K	BDL	BDL	BDL	1300	830	BDL	BDL			
C>34-40	100						3300	**6600**	10000	**10000**	30K	BDL	BDL	BDL	1000	380	BDL	BDL			
F1	10	260	**250**	**360**	**590**	**NL**	215	**215**				BDL	BDL	BDL	BDL	BDL	BDL	BDL			
F2	50	NL	**NL**	**NL**	**NL**	**NL**						BDL	BDL	BDL	110	120	BDL	BDL			

BDL Denotes Below Detection Limits All units in mg/kg **NL** Denotes Not Limited as vapour considered not a risk for this compound

* Guidelines from NEMP 1999 (Amended 2013) ^ DC D from CRC Care TR10 2011 – Direct Contact (DC) 'D' (Commercial/Industrial)

[a] Vapour Based Health Screening Levels (HSL's) 'D' - Commercial and Industrial - **Bold RED** exceedes guidelines

[b] ESL C&I from Ecological Screening Levels - Commercial and Industrial (C&I) - RED exceedes guidelines

[c] NS ML Management Limits of Non Sensitive Sites – Commercial and Industrial – *Italic RED* exceedes guidelines

RESULTS TABLE - SOIL

Sample	PQL	Guidelines *		BH1	BH1	BH2	BH3	BH3	BH4	dup			
Depth		HIL 'D'[e]	ESL	0.5	1.5	1.0	0.1	0.8	0.7	4/0.7			
Date			C&I[f]	20/01	20/01	20/01	20/01	20/01	20/01	20/01			
			Profile	C	C	C	C	C	C	C			
PAH													
Naphthalene	0.5		370	BDL	BDL	BDL	BDL	BDL	BDL	BDL			
Acenaphthylene	0.5			BDL	BDL	BDL	BDL	BDL	BDL	BDL			
Acenaphthene	0.5			BDL	BDL	BDL	BDL	BDL	BDL	BDL			
Fluorene	0.5			BDL	BDL	BDL	BDL	BDL	BDL	BDL			
Phenanthrene	0.5			0.3	BDL	BDL	0.2	0.4	BDL	BDL			
Anthracene	0.5			BDL	BDL	BDL	BDL	BDL	BDL	BDL			
Fluoranthene	0.5			1.1	BDL	BDL	0.5	1.3	BDL	BDL			
Pyrene	0.5			1	BDL	BDL	0.5	1.1	BDL	BDL			
Benzo(a)anthracene	0.5			0.6	BDL	BDL	0.4	0.6	BDL	BDL			
Chrysene	0.5			0.5	BDL	BDL	0.5	0.7	BDL	BDL			
Benzo(b,j+k)fluoranthene	1			0.8	BDL	BDL	0.7	1	BDL	BDL			
Benzo(a)pyrene	0.5	40	0.7	0.4	BDL	BDL	0.4	0.56	BDL	BDL			
Indeno(1,2,3-c,d)pyrene	0.5			0.3	BDL	BDL	0.2	0.5	BDL	BDL			
Dibenzo(a,h) anthracene	0.5			BDL	BDL	BDL		0.1	BDL	BDL			
Benzo(g,h,i)perylene	0.5			0.4	BDL	BDL	0.4	0.6	BDL	BDL			
Total +PAH	0.5	4000		5.4	BDL	BDL	3.6	7.2	BDL	BDL			
METALS													
Arsenic	5	3000	160	8	9	8	9	18	5	6			
Cadmium	1	900		<0.4	<0.4	<0.4	6.7	0.8	<0.4	<0.4			
Chromium	2	3600	310	15	9	9	54	27	8	9			
Copper	5	240K	400	18	2	4	56	81	3	2			
Lead	5	1500	1800	18	15	9	55	74	12	9			
Mercury	0.1	730		<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1			
Nickel	2	6000	55	18	1	4	17	21	2	1			
Zink	5	400K	360	74	7	14	220	270	20	6			

* Guidelines from NEMP 1999 (Amended 2013) Results in **Red BOLD** exceed HIL Guideline Levels and Results in Red exceed HIL Guideline Levels

[e] HIL - Health Investigation Levels 'D' Commercial and Industrial [f] ESL C&I from Ecological Screening Levels - Commercial and Industrial (C&I)

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CERTIFICATE OF ANALYSIS 371771

Client Details

Client	Sanko excavation Environmental & Civil Services
Attention	Damien Sankowsky
Address	76 Wollombi Rd, Millfield, NSW, 2325

Sample Details

Your Reference	**E24 078- 71 Turton Road Metford**
Number of Samples	7 Soil
Date samples received	31/01/2025
Date completed instructions received	31/01/2025

Analysis Details

Please refer to the following pages for results, methodology summary and quality control data.

Samples were analysed as received from the client. Results relate specifically to the samples as received.

Results are reported on a dry weight basis for solids and on an as received basis for other matrices.

Please refer to the last page of this report for any comments relating to the results.

Report Details

Date results requested by	07/02/2025
Date of Issue	05/03/2025

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Results Approved By
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Giovanni Agosti, Group Technical Manager
Liam Timmins, Organics Supervisor
Timothy Toll, Senior Chemist

Authorised By
Nancy Zhang, Laboratory Manager

vTRH(C6-C10)/BTEXN in Soil						
Our Reference		371771-1	371771-2	371771-3	371771-4	371771-5
Your Reference	UNITS	BH1	BH1	BH2	BH3	BH3
Depth		0.5	1.5	1.0	0.1	0.8
Date Sampled		20/01/2025	20/01/2025	20/01/2025	20/01/2025	20/01/2025
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	03/02/2025	03/02/2025	03/02/2025	03/02/2025	03/02/2025
Date analysed	-	04/02/2025	04/02/2025	04/02/2025	04/02/2025	04/02/2025
TRH C_6 - C_9	mg/kg	<25	<25	<25	<25	<25
TRH C_6 - C_{10}	mg/kg	<25	<25	<25	<25	<25
vTRH C_6 - C_{10} less BTEX (F1)	mg/kg	<25	<25	<25	<25	<25
Benzene	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Toluene	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Ethylbenzene	mg/kg	<1	<1	<1	<1	<1
m+p-xylene	mg/kg	<2	<2	<2	<2	<2
o-Xylene	mg/kg	<1	<1	<1	<1	<1
Naphthalene	mg/kg	<1	<1	<1	<1	<1
Total +ve Xylenes	mg/kg	<1	<1	<1	<1	<1
Surrogate aaa-Trifluorotoluene	%	108	104	105	100	102

vTRH(C6-C10)/BTEXN in Soil			
Our Reference		371771-6	371771-7
Your Reference	UNITS	BH4	DUP
Depth		0.7	-
Date Sampled		20/01/2025	20/01/2025
Type of sample		Soil	Soil
Date extracted	-	03/02/2025	03/02/2025
Date analysed	-	04/02/2025	04/02/2025
TRH C_6 - C_9	mg/kg	<25	<25
TRH C_6 - C_{10}	mg/kg	<25	<25
vTRH C_6 - C_{10} less BTEX (F1)	mg/kg	<25	<25
Benzene	mg/kg	<0.2	<0.2
Toluene	mg/kg	<0.5	<0.5
Ethylbenzene	mg/kg	<1	<1
m+p-xylene	mg/kg	<2	<2
o-Xylene	mg/kg	<1	<1
Naphthalene	mg/kg	<1	<1
Total +ve Xylenes	mg/kg	<1	<1
Surrogate aaa-Trifluorotoluene	%	109	106

svTRH (C10-C40) in Soil						
Our Reference		371771-1	371771-2	371771-3	371771-4	371771-5
Your Reference	UNITS	BH1	BH1	BH2	BH3	BH3
Depth		0.5	1.5	1.0	0.1	0.8
Date Sampled		20/01/2025	20/01/2025	20/01/2025	20/01/2025	20/01/2025
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	03/02/2025	03/02/2025	03/02/2025	03/02/2025	03/02/2025
Date analysed	-	04/02/2025	04/02/2025	04/02/2025	04/02/2025	04/02/2025
TRH C_{10} - C_{14}	mg/kg	<50	<50	<50	75	75
TRH C_{15} - C_{28}	mg/kg	<100	<100	<100	600	480
TRH C_{29} - C_{36}	mg/kg	140	<100	<100	1,100	530
Total +ve TRH (C10-C36)	mg/kg	140	<50	<50	1,800	1,100
TRH >C_{10} -C_{16}	mg/kg	<50	<50	<50	110	120
TRH >C_{10} -C_{16} less Naphthalene (F2)	mg/kg	<50	<50	<50	110	120
TRH >C_{16} -C_{34}	mg/kg	160	<100	<100	1,300	830
TRH >C_{34} -C_{40}	mg/kg	160	<100	<100	1,000	380
Total +ve TRH (>C10-C40)	mg/kg	330	<50	<50	2,400	1,300
Surrogate o-Terphenyl	%	98	95	96	116	123

svTRH (C10-C40) in Soil			
Our Reference		371771-6	371771-7
Your Reference	UNITS	BH4	DUP
Depth		0.7	-
Date Sampled		20/01/2025	20/01/2025
Type of sample		Soil	Soil
Date extracted	-	03/02/2025	03/02/2025
Date analysed	-	04/02/2025	04/02/2025
TRH C_{10} - C_{14}	mg/kg	<50	<50
TRH C_{15} - C_{28}	mg/kg	<100	<100
TRH C_{29} - C_{36}	mg/kg	<100	<100
Total +ve TRH (C10-C36)	mg/kg	<50	<50
TRH >C_{10} -C_{16}	mg/kg	<50	<50
TRH >C_{10} -C_{16} less Naphthalene (F2)	mg/kg	<50	<50
TRH >C_{16} -C_{34}	mg/kg	<100	<100
TRH >C_{34} -C_{40}	mg/kg	<100	<100
Total +ve TRH (>C10-C40)	mg/kg	<50	<50
Surrogate o-Terphenyl	%	95	99

PAHs in Soil						
Our Reference		371771-1	371771-2	371771-3	371771-4	371771-5
Your Reference	UNITS	BH1	BH1	BH2	BH3	BH3
Depth		0.5	1.5	1.0	0.1	0.8
Date Sampled		20/01/2025	20/01/2025	20/01/2025	20/01/2025	20/01/2025
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	03/02/2025	03/02/2025	03/02/2025	03/02/2025	03/02/2025
Date analysed	-	04/02/2025	04/02/2025	04/02/2025	04/02/2025	04/02/2025
Naphthalene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthylene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fluorene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Phenanthrene	mg/kg	0.3	<0.1	<0.1	0.2	0.4
Anthracene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fluoranthene	mg/kg	1.1	<0.1	<0.1	0.5	1.3
Pyrene	mg/kg	1	<0.1	<0.1	0.5	1.1
Benzo(a)anthracene	mg/kg	0.6	<0.1	<0.1	0.4	0.6
Chrysene	mg/kg	0.5	<0.1	<0.1	0.5	0.7
Benzo(b,j+k)fluoranthene	mg/kg	0.8	<0.2	<0.2	0.7	1
Benzo(a)pyrene	mg/kg	0.4	<0.05	<0.05	0.4	0.55
Indeno(1,2,3-c,d)pyrene	mg/kg	0.3	<0.1	<0.1	0.2	0.5
Dibenzo(a,h)anthracene	mg/kg	<0.1	<0.1	<0.1	<0.1	0.1
Benzo(g,h,i)perylene	mg/kg	0.4	<0.1	<0.1	0.4	0.6
Total +ve PAH's	mg/kg	5.4	<0.05	<0.05	3.6	7.2
Benzo(a)pyrene TEQ calc (zero)	mg/kg	0.6	<0.5	<0.5	<0.5	0.9
Benzo(a)pyrene TEQ calc(half)	mg/kg	0.7	<0.5	<0.5	0.5	0.9
Benzo(a)pyrene TEQ calc(PQL)	mg/kg	0.7	<0.5	<0.5	0.6	0.9
Surrogate p-Terphenyl-d14	%	111	111	119	120	126

PAHs in Soil			
Our Reference		371771-6	371771-7
Your Reference	UNITS	BH4	DUP
Depth		0.7	-
Date Sampled		20/01/2025	20/01/2025
Type of sample		Soil	Soil
Date extracted	-	03/02/2025	03/02/2025
Date analysed	-	04/02/2025	04/02/2025
Naphthalene	mg/kg	<0.1	<0.1
Acenaphthylene	mg/kg	<0.1	<0.1
Acenaphthene	mg/kg	<0.1	<0.1
Fluorene	mg/kg	<0.1	<0.1
Phenanthrene	mg/kg	<0.1	<0.1
Anthracene	mg/kg	<0.1	<0.1
Fluoranthene	mg/kg	<0.1	<0.1
Pyrene	mg/kg	<0.1	<0.1
Benzo(a)anthracene	mg/kg	<0.1	<0.1
Chrysene	mg/kg	<0.1	<0.1
Benzo(b,j+k)fluoranthene	mg/kg	<0.2	<0.2
Benzo(a)pyrene	mg/kg	<0.05	<0.05
Indeno(1,2,3-c,d)pyrene	mg/kg	<0.1	<0.1
Dibenzo(a,h)anthracene	mg/kg	<0.1	<0.1
Benzo(g,h,i)perylene	mg/kg	<0.1	<0.1
Total +ve PAH's	mg/kg	<0.05	<0.05
Benzo(a)pyrene TEQ calc (zero)	mg/kg	<0.5	<0.5
Benzo(a)pyrene TEQ calc(half)	mg/kg	<0.5	<0.5
Benzo(a)pyrene TEQ calc(PQL)	mg/kg	<0.5	<0.5
Surrogate p-Terphenyl-d14	%	120	109

Organochlorine Pesticides in soil						
Our Reference		371771-1	371771-2	371771-3	371771-4	371771-5
Your Reference	UNITS	BH1	BH1	BH2	BH3	BH3
Depth		0.5	1.5	1.0	0.1	0.8
Date Sampled		20/01/2025	20/01/2025	20/01/2025	20/01/2025	20/01/2025
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	03/02/2025	03/02/2025	03/02/2025	03/02/2025	03/02/2025
Date analysed	-	04/02/2025	04/02/2025	04/02/2025	04/02/2025	04/02/2025
alpha-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
HCB	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
beta-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
gamma-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Heptachlor	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
delta-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aldrin	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Heptachlor Epoxide	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
gamma-Chlordane	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
alpha-chlordane	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan I	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
pp-DDE	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Dieldrin	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endrin	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan II	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
pp-DDD	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endrin Aldehyde	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
pp-DDT	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan Sulphate	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Methoxychlor	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Mirex	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Total +ve DDT+DDD+DDE	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Total Positive Aldrin+Dieldrin	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Surrogate 4-Chloro-3-NBTF	%	115	118	118	118	110

Organochlorine Pesticides in soil			
Our Reference		371771-6	371771-7
Your Reference	UNITS	BH4	DUP
Depth		0.7	-
Date Sampled		20/01/2025	20/01/2025
Type of sample		Soil	Soil
Date extracted	-	03/02/2025	03/02/2025
Date analysed	-	04/02/2025	04/02/2025
alpha-BHC	mg/kg	<0.1	<0.1
HCB	mg/kg	<0.1	<0.1
beta-BHC	mg/kg	<0.1	<0.1
gamma-BHC	mg/kg	<0.1	<0.1
Heptachlor	mg/kg	<0.1	<0.1
delta-BHC	mg/kg	<0.1	<0.1
Aldrin	mg/kg	<0.1	<0.1
Heptachlor Epoxide	mg/kg	<0.1	<0.1
gamma-Chlordane	mg/kg	<0.1	<0.1
alpha-chlordane	mg/kg	<0.1	<0.1
Endosulfan I	mg/kg	<0.1	<0.1
pp-DDE	mg/kg	<0.1	<0.1
Dieldrin	mg/kg	<0.1	<0.1
Endrin	mg/kg	<0.1	<0.1
Endosulfan II	mg/kg	<0.1	<0.1
pp-DDD	mg/kg	<0.1	<0.1
Endrin Aldehyde	mg/kg	<0.1	<0.1
pp-DDT	mg/kg	<0.1	<0.1
Endosulfan Sulphate	mg/kg	<0.1	<0.1
Methoxychlor	mg/kg	<0.1	<0.1
Mirex	mg/kg	<0.1	<0.1
Total +ve DDT+DDD+DDE	mg/kg	<0.1	<0.1
Total Positive Aldrin+Dieldrin	mg/kg	<0.1	<0.1
Surrogate 4-Chloro-3-NBTF	%	122	118

Organophosphorus Pesticides in Soil						
Our Reference		371771-1	371771-2	371771-3	371771-4	371771-5
Your Reference	UNITS	BH1	BH1	BH2	BH3	BH3
Depth		0.5	1.5	1.0	0.1	0.8
Date Sampled		20/01/2025	20/01/2025	20/01/2025	20/01/2025	20/01/2025
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	03/02/2025	03/02/2025	03/02/2025	03/02/2025	03/02/2025
Date analysed	-	04/02/2025	04/02/2025	04/02/2025	04/02/2025	04/02/2025
Dichlorvos	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Mevinphos	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Phorate	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Dimethoate	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Diazinon	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Disulfoton	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Chlorpyrifos-methyl	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Parathion-Methyl	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Ronnel	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fenitrothion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Malathion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Chlorpyriphos	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fenthion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Parathion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Bromophos-ethyl	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Methidathion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fenamiphos	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Ethion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Phosalone	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Azinphos-methyl (Guthion)	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Coumaphos	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Surrogate 4-Chloro-3-NBTF	%	115	118	118	118	110

Organophosphorus Pesticides in Soil			
Our Reference		371771-6	371771-7
Your Reference	UNITS	BH4	DUP
Depth		0.7	-
Date Sampled		20/01/2025	20/01/2025
Type of sample		Soil	Soil
Date extracted	-	03/02/2025	03/02/2025
Date analysed	-	04/02/2025	04/02/2025
Dichlorvos	mg/kg	<0.1	<0.1
Mevinphos	mg/kg	<0.1	<0.1
Phorate	mg/kg	<0.1	<0.1
Dimethoate	mg/kg	<0.1	<0.1
Diazinon	mg/kg	<0.1	<0.1
Disulfoton	mg/kg	<0.1	<0.1
Chlorpyrifos-methyl	mg/kg	<0.1	<0.1
Parathion-Methyl	mg/kg	<0.1	<0.1
Ronnel	mg/kg	<0.1	<0.1
Fenitrothion	mg/kg	<0.1	<0.1
Malathion	mg/kg	<0.1	<0.1
Chlorpyriphos	mg/kg	<0.1	<0.1
Fenthion	mg/kg	<0.1	<0.1
Parathion	mg/kg	<0.1	<0.1
Bromophos-ethyl	mg/kg	<0.1	<0.1
Methidathion	mg/kg	<0.1	<0.1
Fenamiphos	mg/kg	<0.1	<0.1
Ethion	mg/kg	<0.1	<0.1
Phosalone	mg/kg	<0.1	<0.1
Azinphos-methyl (Guthion)	mg/kg	<0.1	<0.1
Coumaphos	mg/kg	<0.1	<0.1
Surrogate 4-Chloro-3-NBTF	%	122	118

PCBs in Soil						
Our Reference		371771-1	371771-2	371771-3	371771-4	371771-5
Your Reference	UNITS	BH1	BH1	BH2	BH3	BH3
Depth		0.5	1.5	1.0	0.1	0.8
Date Sampled		20/01/2025	20/01/2025	20/01/2025	20/01/2025	20/01/2025
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	03/02/2025	03/02/2025	03/02/2025	03/02/2025	03/02/2025
Date analysed	-	04/02/2025	04/02/2025	04/02/2025	04/02/2025	04/02/2025
Aroclor 1016	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1221	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1232	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1242	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1248	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1254	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1260	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Total +ve PCBs (1016-1260)	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Surrogate 2-Fluorobiphenyl	%	100	109	121	101	108

PCBs in Soil			
Our Reference		371771-6	371771-7
Your Reference	UNITS	BH4	DUP
Depth		0.7	-
Date Sampled		20/01/2025	20/01/2025
Type of sample		Soil	Soil
Date extracted	-	03/02/2025	03/02/2025
Date analysed	-	04/02/2025	04/02/2025
Aroclor 1016	mg/kg	<0.1	<0.1
Aroclor 1221	mg/kg	<0.1	<0.1
Aroclor 1232	mg/kg	<0.1	<0.1
Aroclor 1242	mg/kg	<0.1	<0.1
Aroclor 1248	mg/kg	<0.1	<0.1
Aroclor 1254	mg/kg	<0.1	<0.1
Aroclor 1260	mg/kg	<0.1	<0.1
Total +ve PCBs (1016-1260)	mg/kg	<0.1	<0.1
Surrogate 2-Fluorobiphenyl	%	116	115

Acid Extractable metals in soil						
Our Reference		371771-1	371771-2	371771-3	371771-4	371771-5
Your Reference	UNITS	BH1	BH1	BH2	BH3	BH3
Depth		0.5	1.5	1.0	0.1	0.8
Date Sampled		20/01/2025	20/01/2025	20/01/2025	20/01/2025	20/01/2025
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	03/02/2025	03/02/2025	03/02/2025	03/02/2025	03/02/2025
Date analysed	-	04/02/2025	04/02/2025	04/02/2025	04/02/2025	04/02/2025
Arsenic	mg/kg	6	9	8	9	18
Cadmium	mg/kg	<0.4	<0.4	<0.4	0.7	0.8
Chromium	mg/kg	15	9	9	54	27
Copper	mg/kg	16	2	4	53	81
Lead	mg/kg	18	15	9	55	74
Mercury	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Nickel	mg/kg	18	1	4	17	21
Zinc	mg/kg	74	7	14	220	270

Acid Extractable metals in soil				
Our Reference		371771-6	371771-7	371771-8
Your Reference	UNITS	BH4	DUP	BH1 - [TRIPLICATE]
Depth		0.7	-	0.5
Date Sampled		20/01/2025	20/01/2025	20/01/2025
Type of sample		Soil	Soil	Soil
Date prepared	-	03/02/2025	03/02/2025	03/02/2025
Date analysed	-	04/02/2025	04/02/2025	04/02/2025
Arsenic	mg/kg	5	6	6
Cadmium	mg/kg	<0.4	<0.4	<0.4
Chromium	mg/kg	6	9	12
Copper	mg/kg	3	2	18
Lead	mg/kg	12	9	21
Mercury	mg/kg	<0.1	<0.1	<0.1
Nickel	mg/kg	2	1	18
Zinc	mg/kg	20	6	69

Moisture						
Our Reference		371771-1	371771-2	371771-3	371771-4	371771-5
Your Reference	UNITS	BH1	BH1	BH2	BH3	BH3
Depth		0.5	1.5	1.0	0.1	0.8
Date Sampled		20/01/2025	20/01/2025	20/01/2025	20/01/2025	20/01/2025
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	03/02/2025	03/02/2025	03/02/2025	03/02/2025	03/02/2025
Date analysed	-	04/02/2025	04/02/2025	04/02/2025	04/02/2025	04/02/2025
Moisture	%	14	18	18	17	23

Moisture			
Our Reference		371771-6	371771-7
Your Reference	UNITS	BH4	DUP
Depth		0.7	-
Date Sampled		20/01/2025	20/01/2025
Type of sample		Soil	Soil
Date prepared	-	03/02/2025	03/02/2025
Date analysed	-	04/02/2025	04/02/2025
Moisture	%	13	19

Method ID	Methodology Summary
Inorg-008	Moisture content determined by heating at 105+/-5 °C for a minimum of 12 hours.
Metals-020	Determination of various metals by ICP-AES. Total Phosphate determined stochiometrically from Phosphorus (assumed to be present as Phosphate). Where salts (oxides, chlorides etc.) are calculated from the element concentration stoichiometrically there is no guarantee that the salt form is completely soluble in the acids used in the preparation.
Metals-021	Determination of Mercury by Cold Vapour AAS.
Org-020	Soil samples are extracted with Dichloromethane/Acetone and waters with Dichloromethane and analysed by GC-FID. F2 = (>C10-C16)-Naphthalene as per NEPM B1 Guideline on Investigation Levels for Soil and Groundwater (HSLs Tables 1A (3, 4)). Note Naphthalene is determined from the VOC analysis.
Org-020	Soil samples are extracted with Dichloromethane/Acetone and waters with Dichloromethane and analysed by GC-FID. F2 = (>C10-C16)-Naphthalene as per NEPM B1 Guideline on Investigation Levels for Soil and Groundwater (HSLs Tables 1A (3, 4)). Note Naphthalene is determined from the VOC analysis. Note, the Total +ve TRH PQL is reflective of the lowest individual PQL and is therefore "Total +ve TRH" is simply a sum of the positive individual TRH fractions (>C10-C40).
Org-021/022/025	Soil samples are extracted with dichloromethane/acetone and waters with dichloromethane and analysed by GC-ECD and/or GC-MS/GC-MSMS. Note, the Total +ve PCBs PQL is reflective of the lowest individual PQL and is therefore" Total +ve PCBs" is simply a sum of the positive individual PCBs.
Org-022/025	Soil samples are extracted with Dichloromethane/Acetone and waters with Dichloromethane and analysed by GC-MS/GC-MSMS.
Org-022/025	Soil samples are extracted with dichloromethane/acetone and waters with dichloromethane and analysed by GC-MS/GC-MSMS. Note, the Total +ve reported DDD+DDE+DDT PQL is reflective of the lowest individual PQL and is therefore simply a sum of the positive individually report DDD+DDE+DDT.

Method ID	Methodology Summary
Org-022/025	Soil samples are extracted with Dichloromethane/Acetone and waters with Dichloromethane and analysed by GC-MS and/or GC-MS/MS. Benzo(a)pyrene TEQ as per NEPM B1 Guideline on Investigation Levels for Soil and Groundwater - 2013. For soil results:- 1. 'EQ PQL'values are assuming all contributing PAHs reported as <PQL are actually at the PQL. This is the most conservative approach and can give false positive TEQs given that PAHs that contribute to the TEQ calculation may not be present. 2. 'EQ zero'values are assuming all contributing PAHs reported as <PQL are zero. This is the least conservative approach and is more susceptible to false negative TEQs when PAHs that contribute to the TEQ calculation are present but below PQL. 3. 'EQ half PQL'values are assuming all contributing PAHs reported as <PQL are half the stipulated PQL. Hence a mid-point between the most and least conservative approaches above. Note, the Total +ve PAHs PQL is reflective of the lowest individual PQL and is therefore "Total +ve PAHs" is simply a sum of the positive individual PAHs.
Org-023	Soil samples are extracted with methanol and spiked into water prior to analysing by purge and trap GC-MS.
Org-023	Soil samples are extracted with methanol and spiked into water prior to analysing by purge and trap GC-MS. Water samples are analysed directly by purge and trap GC-MS. F1 = (C6-C10)-BTEX as per NEPM B1 Guideline on Investigation Levels for Soil and Groundwater.
Org-023	Soil samples are extracted with methanol and spiked into water prior to analysing by purge and trap GC-MS. Water samples are analysed directly by purge and trap GC-MS. F1 = (C6-C10)-BTEX as per NEPM B1 Guideline on Investigation Levels for Soil and Groundwater. Note, the Total +ve Xylene PQL is reflective of the lowest individual PQL and is therefore "Total +ve Xylenes" is simply a sum of the positive individual Xylenes.

QUALITY CONTROL: vTRH(C6-C10)/BTEXN in Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-3	371771-2
Date extracted	-			03/02/2025	1	03/02/2025	03/02/2025		03/02/2025	03/02/2025
Date analysed	-			04/02/2025	1	04/02/2025	04/02/2025		04/02/2025	04/02/2025
TRH C_6 - C_9	mg/kg	25	Org-023	<25	1	<25	<25	0	109	104
TRH C_6 - C_{10}	mg/kg	25	Org-023	<25	1	<25	<25	0	109	104
Benzene	mg/kg	0.2	Org-023	<0.2	1	<0.2	<0.2	0	115	110
Toluene	mg/kg	0.5	Org-023	<0.5	1	<0.5	<0.5	0	117	112
Ethylbenzene	mg/kg	1	Org-023	<1	1	<1	<1	0	107	102
m+p-xylene	mg/kg	2	Org-023	<2	1	<2	<2	0	103	97
o-Xylene	mg/kg	1	Org-023	<1	1	<1	<1	0	114	108
Naphthalene	mg/kg	1	Org-023	<1	1	<1	<1	0	[NT]	[NT]
Surrogate aaa-Trifluorotoluene	%		Org-023	123	1	108	103	5	111	103

QUALITY CONTROL: svTRH (C10-C40) in Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-3	371771-2
Date extracted	-			03/02/2025	1	03/02/2025	03/02/2025		03/02/2025	03/02/2025
Date analysed	-			04/02/2025	1	04/02/2025	04/02/2025		04/02/2025	04/02/2025
TRH C_{10} - C_{14}	mg/kg	50	Org-020	<50	1	<50	<50	0	108	100
TRH C_{15} - C_{28}	mg/kg	100	Org-020	<100	1	<100	140	33	104	100
TRH C_{29} - C_{36}	mg/kg	100	Org-020	<100	1	140	230	49	114	74
TRH >C_{10} -C_{16}	mg/kg	50	Org-020	<50	1	<50	<50	0	108	100
TRH >C_{16} -C_{34}	mg/kg	100	Org-020	<100	1	160	280	55	104	100
TRH >C_{34} -C_{40}	mg/kg	100	Org-020	<100	1	160	250	44	114	74
Surrogate o-Terphenyl	%		Org-020	94	1	98	98	0	100	99

QUALITY CONTROL: PAHs in Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-3	371771-2
Date extracted	-			03/02/2025	1	03/02/2025	03/02/2025		03/02/2025	03/02/2025
Date analysed	-			04/02/2025	1	04/02/2025	04/02/2025		04/02/2025	04/02/2025
Naphthalene	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	94	94
Acenaphthylene	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Acenaphthene	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	92	90
Fluorene	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	90	88
Phenanthrene	mg/kg	0.1	Org-022/025	<0.1	1	0.3	3.0	164	86	88
Anthracene	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	0.7	150	[NT]	[NT]
Fluoranthene	mg/kg	0.1	Org-022/025	<0.1	1	1.1	7.0	146	112	102
Pyrene	mg/kg	0.1	Org-022/025	<0.1	1	1	4.7	130	116	106
Benzo(a)anthracene	mg/kg	0.1	Org-022/025	<0.1	1	0.6	2.1	111	[NT]	[NT]
Chrysene	mg/kg	0.1	Org-022/025	<0.1	1	0.5	1.9	117	92	86
Benzo(b,j+k)fluoranthene	mg/kg	0.2	Org-022/025	<0.2	1	0.8	3.7	129	[NT]	[NT]
Benzo(a)pyrene	mg/kg	0.05	Org-022/025	<0.05	1	0.4	2.0	133	78	96
Indeno(1,2,3-c,d)pyrene	mg/kg	0.1	Org-022/025	<0.1	1	0.3	0.8	91	[NT]	[NT]
Dibenzo(a,h)anthracene	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	0.2	67	[NT]	[NT]
Benzo(g,h,i)perylene	mg/kg	0.1	Org-022/025	<0.1	1	0.4	1.0	86	[NT]	[NT]
Surrogate p-Terphenyl-d14	%		Org-022/025	129	1	111	118	6	106	94

QUALITY CONTROL: Organochlorine Pesticides in soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-3	371771-2
Date extracted	-			03/02/2025	1	03/02/2025	03/02/2025		03/02/2025	03/02/2025
Date analysed	-			04/02/2025	1	04/02/2025	04/02/2025		04/02/2025	04/02/2025
alpha-BHC	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	112	111
HCB	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
beta-BHC	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	118	102
gamma-BHC	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Heptachlor	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	88	100
delta-BHC	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Aldrin	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	106	109
Heptachlor Epoxide	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	96	113
gamma-Chlordane	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
alpha-chlordane	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Endosulfan I	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
pp-DDE	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	94	113
Dieldrin	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	100	112
Endrin	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	110	104
Endosulfan II	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
pp-DDD	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	126	111
Endrin Aldehyde	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
pp-DDT	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Endosulfan Sulphate	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	62	111
Methoxychlor	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Mirex	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Surrogate 4-Chloro-3-NBTF	%		Org-022/025	119	1	115	115	0	108	116

QUALITY CONTROL: Organophosphorus Pesticides in Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-3	371771-2
Date extracted	-			03/02/2025	1	03/02/2025	03/02/2025		03/02/2025	03/02/2025
Date analysed	-			04/02/2025	1	04/02/2025	04/02/2025		04/02/2025	04/02/2025
Dichlorvos	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	88	78
Mevinphos	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Phorate	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Dimethoate	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Diazinon	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Disulfoton	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Chlorpyrifos-methyl	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Parathion-Methyl	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Ronnel	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	90	82
Fenitrothion	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	100	102
Malathion	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	74	68
Chlorpyriphos	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	110	96
Fenthion	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Parathion	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	88	92
Bromophos-ethyl	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Methidathion	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Fenamiphos	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Ethion	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	128	128
Phosalone	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Azinphos-methyl (Guthion)	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Coumaphos	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Surrogate 4-Chloro-3-NBTF	%		Org-022/025	119	1	115	115	0	108	118

QUALITY CONTROL: PCBs in Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-3	371771-2
Date extracted	-			03/02/2025	1	03/02/2025	03/02/2025		03/02/2025	03/02/2025
Date analysed	-			04/02/2025	1	04/02/2025	04/02/2025		04/02/2025	04/02/2025
Aroclor 1016	mg/kg	0.1	Org-021/022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1221	mg/kg	0.1	Org-021/022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1232	mg/kg	0.1	Org-021/022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1242	mg/kg	0.1	Org-021/022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1248	mg/kg	0.1	Org-021/022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1254	mg/kg	0.1	Org-021/022/025	<0.1	1	<0.1	<0.1	0	96	88
Aroclor 1260	mg/kg	0.1	Org-021/022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Surrogate 2-Fluorobiphenyl	%		Org-021/022/025	106	1	100	119	17	110	99

QUALITY CONTROL: Acid Extractable metals in soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-3	371771-2
Date prepared	-			03/02/2025	1	03/02/2025	03/02/2025		03/02/2025	03/02/2025
Date analysed	-			04/02/2025	1	04/02/2025	04/02/2025		04/02/2025	04/02/2025
Arsenic	mg/kg	4	Metals-020	<4	1	6	5	18	84	83
Cadmium	mg/kg	0.4	Metals-020	<0.4	1	<0.4	<0.4	0	76	76
Chromium	mg/kg	1	Metals-020	<1	1	15	120	156	79	86
Copper	mg/kg	1	Metals-020	<1	1	16	16	0	82	87
Lead	mg/kg	1	Metals-020	<1	1	18	14	25	76	75
Mercury	mg/kg	0.1	Metals-021	<0.1	1	<0.1	<0.1	0	105	95
Nickel	mg/kg	1	Metals-020	<1	1	18	14	25	77	79
Zinc	mg/kg	1	Metals-020	<1	1	74	58	24	75	74

Result Definitions

NT	Not tested
NA	Test not required
INS	Insufficient sample for this test
PQL	Practical Quantitation Limit
<	Less than
>	Greater than
RPD	Relative Percent Difference
LCS	Laboratory Control Sample
NS	Not specified
NEPM	National Environmental Protection Measure
NR	Not Reported

Quality Control Definitions

Blank	This is the component of the analytical signal which is not derived from the sample but from reagents, glassware etc, can be determined by processing solvents and reagents in exactly the same manner as for samples.
Duplicate	This is the complete duplicate analysis of a sample from the process batch. If possible, the sample selected should be one where the analyte concentration is easily measurable.
Matrix Spike	A portion of the sample is spiked with a known concentration of target analyte. The purpose of the matrix spike is to monitor the performance of the analytical method used and to determine whether matrix interferences exist.
LCS (Laboratory Control Sample)	This comprises either a standard reference material or a control matrix (such as a blank sand or water) fortified with analytes representative of the analyte class. It is simply a check sample.
Surrogate Spike	Surrogates are known additions to each sample, blank, matrix spike and LCS in a batch, of compounds which are similar to the analyte of interest, however are not expected to be found in real samples.

Australian Drinking Water Guidelines recommend that Thermotolerant Coliform, Faecal Enterococci, & E.Coli levels are less than 1cfu/100mL. The recommended maximums are taken from "Australian Drinking Water Guidelines", published by NHMRC & ARMC 2011.

The recommended maximums for analytes in urine are taken from “2018 TLVs and BEIs”, as published by ACGIH (where available). Limit provided for Nickel is a precautionary guideline as per Position Paper prepared by AIOH Exposure Standards Committee, 2016.

Guideline limits for Rinse Water Quality reported as per analytical requirements and specifications of AS 4187, Amdt 2 2019, Table 7.2

Laboratory Acceptance Criteria

Duplicate sample and matrix spike recoveries may not be reported on smaller jobs, however, were analysed at a frequency to meet or exceed NEPM requirements. All samples are tested in batches of 20. The duplicate sample RPD and matrix spike recoveries for the batch were within the laboratory acceptance criteria.

Filters, swabs, wipes, tubes and badges will not have duplicate data as the whole sample is generally extracted during sample extraction.

Spikes for Physical and Aggregate Tests are not applicable.

For VOCs in water samples, three vials are required for duplicate or spike analysis.

Duplicates: >10xPQL - RPD acceptance criteria will vary depending on the analytes and the analytical techniques but is typically in the range 20%-50% – see ELN-P05 QA/QC tables for details; <10xPQL - RPD are higher as the results approach PQL and the estimated measurement uncertainty will statistically increase.

Matrix Spikes, LCS and Surrogate recoveries: Generally 70-130% for inorganics/metals (not SPOCAS); 60-140% for organics/SPOCAS (+/-50% surrogates) and 10-140% for labile SVOCs (including labile surrogates), ultra trace organics and speciated phenols is acceptable.

In circumstances where no duplicate and/or sample spike has been reported at 1 in 10 and/or 1 in 20 samples respectively, the sample volume submitted was insufficient in order to satisfy laboratory QA/QC protocols.

When samples are received where certain analytes are outside of recommended technical holding times (THTs), the analysis has proceeded. Where analytes are on the verge of breaching THTs, every effort will be made to analyse within the THT or as soon as practicable.

Where sampling dates are not provided, Envirolab are not in a position to comment on the validity of the analysis where recommended technical holding times may have been breached.

Where matrix spike recoveries fall below the lower limit of the acceptance criteria (e.g. for non-labile or standard Organics <60%), positive result(s) in the parent sample will subsequently have a higher than typical estimated uncertainty (MU estimates supplied on request) and in these circumstances the sample result is likely biased significantly low.

Measurement Uncertainty estimates are available for most tests upon request.

Analysis of aqueous samples typically involves the extraction/digestion and/or analysis of the liquid phase only (i.e. NOT any settled sediment phase but inclusive of suspended particles if present), unless stipulated on the Envirolab COC and/or by correspondence. Notable exceptions include certain Physical Tests (pH/EC/BOD/COD/Apparent Colour etc.), Solids testing, total recoverable metals and PFAS where solids are included by default.

Samples for Microbiological analysis (not Amoeba forms) received outside of the 2-8°C temperature range do not meet the ideal cooling conditions as stated in AS2031-2012.

Report Comments

Acid Extractable Metals in Soil: The laboratory RPD acceptance criteria has been exceeded for 371771-1 for Cr. Therefore a triplicate result has been issued as laboratory sample number 371771-8.

PAHs in Soil - The RPD for duplicate results is accepted due to the non homogenous nature of sample/s 371771-1.

CHAIN OF CUSTODY - Client

ENVIROLAB GROUP - National phone number 1300 424 344

Client: Sanko Excavation Environmental & Civil Services P/L
Contact Person: Damien Sankowsky
Project Mgr:
Sampler:
Address: 26 LEARMONTH ST, WILLOW TREE, NSW, 2339

0407 434 604

Phone: **Mob:**
Email: seecservices@hotmail.com

Client Project Name / Number / Site etc (to report title): C24 078 - 71 TURTON ROAD
PO No.: METFORD
Envirolab Quote No.: 175Y106C3
Date results required:
Or choose: standard / same day / 1 day / 2 day / 3 day
Note: Inform lab in advance if urgent turnaround is required - surcharges apply
Additional report format: esdat / equis /
Lab Comments: TRH/BTEX/PAH/PCB/OCOP/4MS.

Sydney Lab - Envirolab Services
12 Ashley St, Chatswood, NSW 2067
Ph: 02 9910 6200 / sydney@envirolab.com.au

Perth Lab - MPL Laboratories
16-18 Hayden Crt Myaree, WA 6154
Ph: 08 9317 2505 / lab@mpl.com.au

Melbourne Lab - Envirolab Services
1A Dalmore Drive Scoresby VIC 3179
Ph: 03 9763 2500 / melbourne@envirolab.com.au

Adelaide Office - Envirolab Services
7a The Parade, Norwood, SA 5067
Ph: 08 7087 6200 / adelaide@envirolab.com.au

Brisbane Office - Envirolab Services
20a, 10-20 Depot St, Banyo, QLD 4014
Ph: 07 3266 9532 / brisbane@envirolab.com.au

Darwin Office - Envirolab Services
Unit 7, 17 Willes Rd, Berrimah, NT 0820
Ph: 08 8967 1201 / darwin@envirolab.com.au

Sample Information

Tests Required

Comments

Envirolab Sample ID	Client Sample ID or Information	Depth	Date sampled	Type of sample	Combo 6 Suite												Provide as much information about the sample as you can
1	BH1	0.5	20/1	SOIL JAR	/												
2	BH1	1.5			/												
3	BH2	1.0			/												
4	BH3	0.1			/												
5	BH3	0.8			/												
6	BH4	0.7			/												
7	DUP	—			/												

Envirolab Services
12 Ashley St
Chatswood NSW 2067
Ph: (02) 9910 6200

Job No: 371771
Date Received: 31/01/25
Time Received: 1440
Received By: WW
Temp: Cool/Ambient 8°C
Cooling: Ice/Icepack
Security: Intact/Broken/None

Relinquished by (Company): SANKO
Print Name: D. SANKOWSKY
Date & Time: 23-1-25
Signature:

Received by (Company): ELS SYD
Print Name: Kathy Wayne
Date & Time: 31/01/25 1440
Signature:

Lab use only:
Samples Received: Cool or Ambient (circle one)
Temperature Received at: 8 °C (If applicable)
Transported by: Hand delivered / courier

INVOICE DETAILS: BROWN COMMERCIAL BUILDING P/L ATTN: CAITLIN O'BRIEN
PO BOX EAST MAITLAND, NSW

Envirolab Services Pty Ltd
ABN 37 112 535 645
12 Ashley St Chatswood NSW 2067
ph 02 9910 6200 fax 02 9910 6201
customerservice@envirolab.com.au
www.envirolab.com.au

SAMPLE RECEIPT ADVICE

Client Details

Client	Sanko excavation Environmental & Civil Services
Attention	Damien Sankowsky

Sample Login Details

Your reference	E24 078- 71 Turton Road Metford
Envirolab Reference	371771
Date Sample Received	31/01/2025
Date Instructions Received	31/01/2025
Date Results Expected to be Reported	07/02/2025

Sample Condition

Samples received in appropriate condition for analysis	Yes
No. of Samples Provided	7 Soil
Turnaround Time Requested	Standard
Temperature on Receipt (°C)	8
Cooling Method	Ice Pack
Sampling Date Provided	YES

Comments

Nil

Please direct any queries to:

Aileen Hie	Jacinta Hurst
Phone: 02 9910 6200	**Phone: 02 9910 6200**
Fax: 02 9910 6201	**Fax: 02 9910 6201**
Email: ahie@envirolab.com.au	**Email: jhurst@envirolab.com.au**

Invoice will be emailed separately. Results will be reported only if payment has been made. Details of analysis on the following page:

Envirolab Services Pty Ltd
ABN 37 112 535 645
12 Ashley St Chatswood NSW 2067
ph 02 9910 6200 fax 02 9910 6201
customerservice@envirolab.com.au
www.envirolab.com.au

Sample ID	vTRH(C6-C10)/BTEXN in Soil	svTRH (C10-C40) in Soil	PAHs in Soil	Organochlorine Pesticides in soil	Organophosphorus Pesticides in Soil	PCBs in Soil	Acid Extractable metalsin soil
BH1-0.5	✓	✓	✓	✓	✓	✓	✓
BH1-1.5	✓	✓	✓	✓	✓	✓	✓
BH2-1.0	✓	✓	✓	✓	✓	✓	✓
BH3-0.1	✓	✓	✓	✓	✓	✓	✓
BH3-0.8	✓	✓	✓	✓	✓	✓	✓
BH4-0.7	✓	✓	✓	✓	✓	✓	✓
DUP	✓	✓	✓	✓	✓	✓	✓

The '✓' indicates the testing you have requested. **THIS IS NOT A REPORT OF THE RESULTS.**

Additional Info

Sample storage - Waters are routinely disposed of approximately 1 month and soils approximately 2 months from receipt.
Requests for longer term sample storage must be received in writing.
Please contact the laboratory immediately if observed settled sediment present in water samples is to be included in the extraction and/or analysis (exceptions include certain Physical Tests (pH/EC/BOD/COD/Apparent Colour etc.), Solids testing, Total Recoverable metals and PFAS analysis where solids are included by default.
TAT for Micro is dependent on incubation. This varies from 3 to 6 days.

DA SET

BROWN COMMERCIAL BUILDING

Project:	SERVICE STATION
Client:	JAMES BRADSTREET
Lot:	418-419
No:	71
Street:	TURTON ROAD
Suburb:	METFORD
DP:	41113
Drawn by:	LT
Rev No:	7
Job No:	BC0537
Sheet No:	00
Scale:	1 : 1

SHEET LIST

Sheet Number	Sheet Name	Current Rev
00	Title Page	7
01	General Notes	1
02	Signage	2
03	Site Analysis Plan	1
04	Demolition Plan	1
05	Site Plan	6
06	Service Station Roof Plan & Electrical	1
07	Service Station General Arrangement	1
08	Service Station Elevations	1
10	Car Canopy Plans	2
11	Car Canopy Elevations	2
12	Car Wash Floor Plan	4
13	Car Wash Roof Plan	3
14	Car Wash Elevations	5
15	Vac Bays Plans	1
16	Vac Bays Elevations	1
17	Dog Wash Plans	2

BROWN COMMERCIAL BUILDING

PH: (02)4966 0218
ABN: 14 619 195 078
P.O. Box 596 East Maitland NSW 2323

GENERAL NOTES:

1. BUILDING SHELL DESIGN INTENT SHOWN.CONTRACTOR TO PROPOSE DETAILED DESIGN FOR CONSTRUCTION, INCLUDING ALL SITE RELATED WORKS, STRUCTURAL, CIVIL WORKS & BUILDING SERVICES.
2. THE CONTRACTOR SHALL VERIFY ALL EXISTING IN-GROUND AND ABOVE-GROUND SERVICES WITHIN THE SCOPE OF WORKS BEFORE COMMENCING CONSTRUCTION/DEMOLITION.
3. ANY 3D DRAWINGS ARE INDICATIVE ONLY, AND ARE TO BE READ IN CONJUNCTION WITH OTHER RELEVANT DRAWINGS.
4. ALL ACCESSIBILITY AND MOBILITY DESIGN (DDA) ITEMS TO COMPLY WITH A.S. 1428.1 2009
5. THIS DRAWINGS SHOULD BE READ IN CONJUNCTION WITH ALL RELEVANT CONTRACTS, SPECIFICATIONS, SCHEDULES AND DRAWINGS INCLUDING CIVIL, STRUCTURAL, HYDRAULIC
6. DIMENSIONS:

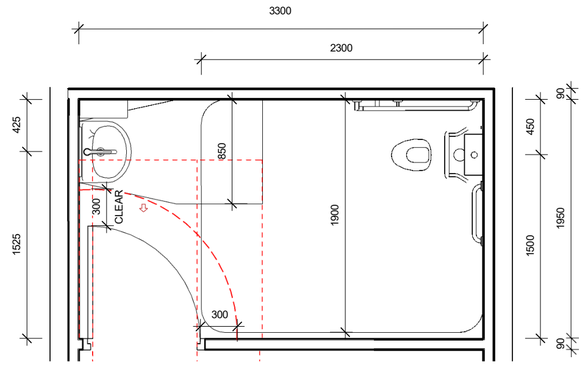
   CONTRACTOR AND SUB-CONTRACTOR SHALL VERIFY ALL DIMENSIONS OF THIS DRAWING AND SITE CONDITIONS PRIOR TO ANY WORK COMMENCING.
   FIGURED DIMENSIONS TAKE PRECEDENCE OVER SCALED DIMENSIONS (UNLESS NOTED OTHERWISE).
   FIGURED DIMENSIONS ARE:
   - WALL / PARTITIONS SETOUT TO CENTRE LINE WHERE NOTED
   - ALL OTHER WALL/PARTITION DIMENSIONS ARE TO FINISHED FACE OF PARTITION.
   - CEILINGS: FINISHED UNDERSIDE OF CEILINGS - CEILING HEIGHT IS MEASURED FROM FINISH FLOOR LEVEL.
   - FITTINGS AND FIXTURES: - DIMENSIONS TO FIXTURES AND FITTINGS ARE SETOUT FROM "FINISH" WALL FACE / FINISH FLOOR LEVEL.

PLANS TO BE READ IN CONJUNCTION WITH:

- BUILDING CODE OF AUSTRALIA
- RELEVANT AUSTRALIAN STANDARDS
- HYDRAULIC DRAWING SET
- CIVIL DRAWING SET
- STRUCTURAL DRAWING SET
- LANDSCAPE DRAWING SET

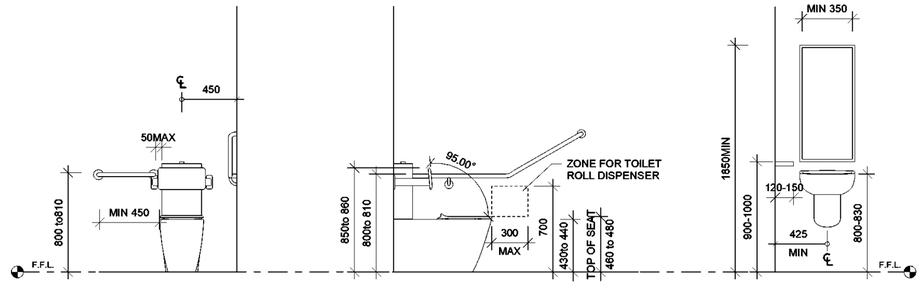
IF NO INTERNAL FITOUT FINISHES & PLANS ARE PRESENT, CLIENT SELECTIONS & DETAILS ARE TO TAKE PRECEDENCE.

PLEASE NOTE:
DETAILS SHOWN ON THIS PLAN ARE INTENDED TO BE ACCURATE, HOWEVER INFORMATION WRITTEN INTO INDIVIDUAL CONTRACTS AND DRAWINGS WILL TAKE PRECEDENCE OVER THIS SET.



5 Car Wash Toilet
1 : 25

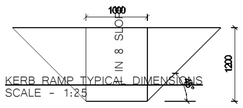
ACCESS AND MOBILITY



DISABLED BATHROOM TYPICAL DIMENSIONS
SCALE - 1:25

DIMENSIONS FROM WALLS ARE TAKE FROM THE FINISHED FACE

INFORMATION SHOWN IS INDICATIVE ONLY AND TO BE READ IN CONJUNTION WITH AS 1428.1 - 2009



KERB RAMP TYPICAL DIMENSIONS
SCALE - 1:25

REFER TO AS 1428.1 - 2009 FOR FURTHER INFORMATION

BCA 2022 LIST OF CLAUSES:

- **Clause B1D4 – Materials & Forms Constructions**
- **Spec. 5 - Fire-Resisting Construction**
- **Spec. 7 – Fire Hazard Properties**
- **Spec. 8 – Performance of External Walls in a Fire**
- **Clause C3D7 – Vertical Separation of Openings in External Walls**
- **Clause C3D13 – Separation of Equipment**
- **Clause C3D14 – Electricity Supply System**
- **Clause C4D5 – Acceptable Methods of Protection (of openings)**
- **Clause C4D9 – Opening in Fire Isolated Exits**
- **Clause C4D15 – Openings for Service Installations**
- **Clause D2D15 – Discharge from Exits**
- **Clause D3D8 – Installations in Exits and Paths of Travel**

***- Clause D3D14 – Goings and Risers**
Treads which have:-
a. A surface with a slip-resistance classification not less than that listed in Table D3D15 when tested in accordance with AS 4586 **or**
(b) A nosing strip with a slip-resistance classification not less than that listed in Table D3D15 when tested in accordance with AS 4586.

***- Clause 3D15 – Landings** which have: -
a. A surface with a slip-resistance classification not less than that listed in Table D3D15 when tested in accordance with AS 4586; or
b. A strip at the edge of the landing with a slip-resistance classification not less than that listed in Table D3D15 when tested in accordance with AS 4586, where the edge leads to a flight below.

- **Clause D3D16 – Thresholds**

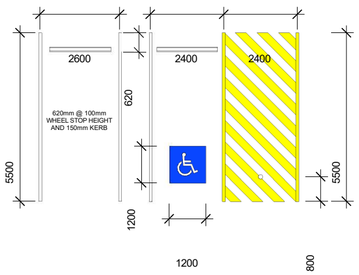
***- Clause D3D17 - D3D21 – Balustrades**

***- Clause D3D22 – Handrails**

- **Clause D3D26 – Operation of Latch**
- **Clause D3D28 – Signs on Doors**
- **Clause D4D2 – General Building Access Requirements**
- **Clause D4D4 – Parts of Building to be Accessible**

- **Clause D4D7 - Signage**
- **Clause D4D9 – Tactile Indicators**
- **Clause F2P2 - Wet Areas**
- **Clause F1D6 / F1D7 – Damp Proofing**
- **Clause F4D8 – Construction of Sanitary Compartments**
- **Part F6 – Light and Ventilation**
- **Clause F7D5 – Sound Insulation Rating of Floors**
- **Clause F7D6 – Sound Insulation Rating of Walls**
- **Clause F7D7 – Sound Insulation Rating of Internal Services**
- **Clause F7D8 – Sound Isolation of Pumps**

PARKING DETAILS



ALL PARKING TO COMPLY WITH:
AS/NZ 2890.1:2004 PART 1 OFF STREET PARKING
AS/NZ 2890.6:2009 PART 6 OFF-STREET PARKING FOR PEOPLE WITH DISABILITIES

Rev	Description	Date	Issued by
1	DA Set	18.12.24	LT

Client

JAMES BRADSTREET

Project

SERVICE STATION

Location:	
Lot:	118-419
No:	71
Street:	TURTON ROAD
Suburb:	METFORD
DP:	41113
Scale	
Drawn by	
Checked by	
Sheet Size	A1

Drawing

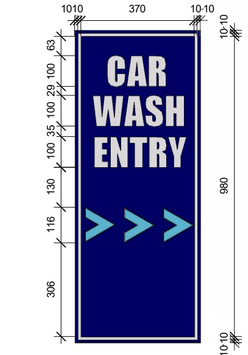
General Notes

Job No: Issue: No:

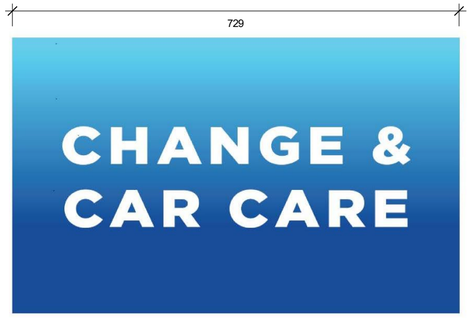
BC0537 1 **01**

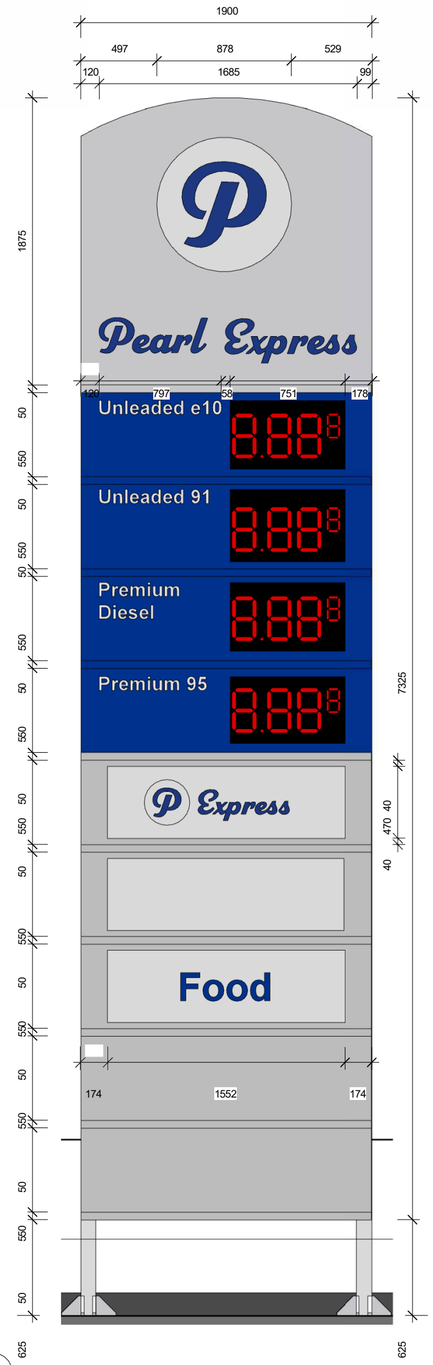
1 Car Wash Sign 1
1 : 10

2 Car Wash Sign 2
1 : 10

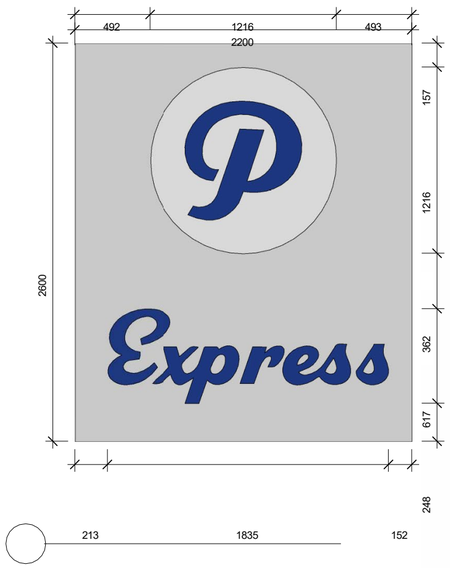


8 Car Wash Entry Sign
1 : 10





6 py Sign 1
1 : 20



Service Station Sign 1

9 Car Wash Sign 4
1 : 5

3 Car Wash Sign 3
1 : 5

5 Service Station Sign 2
1 : 20

4
1 : 20

Car
Cano

Rev	Description	Date	Issued by
	Car wash Changes	14.02.25	H.Skinner
1	DA Set	18.12.24	LT

Client

JAMES BRADSTREET

Project

SERVICE STATION

Location:	
Lot:	418-
No:	71
Street:	TURTON ROAD
Suburb:	METFORD
DP:	41113
Scale	As indicated
Drawn by	
Checked by	
Sheet Size	A1

Drawing

Signage

BC0537 2 **02**

Job No: Issue: No:

7 **Pylon**
1 : 20

1 Site Analysis Plan
1 : 250

N

Rev	Description	Date	Issued by
1	DA Set	18.12.24	LT

Client

JAMES BRADSTREET

Project

SERVICE STATION

Location:	
Lot:	418-419
No:	71
Street:	TURTON ROAD
Suburb:	METFORD
DP:	41113
Scale	As indicated
Drawn by	
Checked by	

Sheet Size A1

Drawing

Site Analysis Plan

Job No: BC0537 Issue: 1 No: 03

EXISTING FENCE TO BE REMOVED

EXISTING STORAGE TO BE REMOVED

B25.0 27° 04' 00"

B26.027° 04' 00"

B80.5 107° 36' 53"

EXISTING RETAINING WALL TO REMAIN

EXISTING WAREHOUSE TO BE DEMOLISHED

ALL EXISTING RAMPS & STRUCTURES TO BE REMOVED UNLESS NOTED OTHERWISE

EXISTING FENCE TO BE REMOVED

B29.705 292° 19' 00"

B33.97 305° 32' 20"

B11.315 260° 32' 40"

B76.649 112° 39' 53"

B28.0 215° 32' 40"

B212.30 215° 32' 40"

B20.205 215° 23' 20"

R112.433

LOT 418
2237m²

LOT 419
2095m²

EXISTING CLUSTER OF TREES TO REMAIN

EXISTING SIGNAGE TO BE REMOVED

EXISTING CONCRETE TO BE REMOVED

ALL EXISTING KERBS TO BE REMOVED

EXISTING DRIVEWAY TO BE REMOVED

EXISTING POWER POLE TO REMAIN

EXISTING WATER MAIN TO REMAIN

EXISTING CLUSTER OF TREES TO REMAIN

CHELMSFORD DRIVE

TURTON ROAD

1 Demolition Plan
1 : 150

Rev	Description	Date	Issued by
1	DA Set	18.12.24	LT

Client

JAMES BRADSTREET

Project

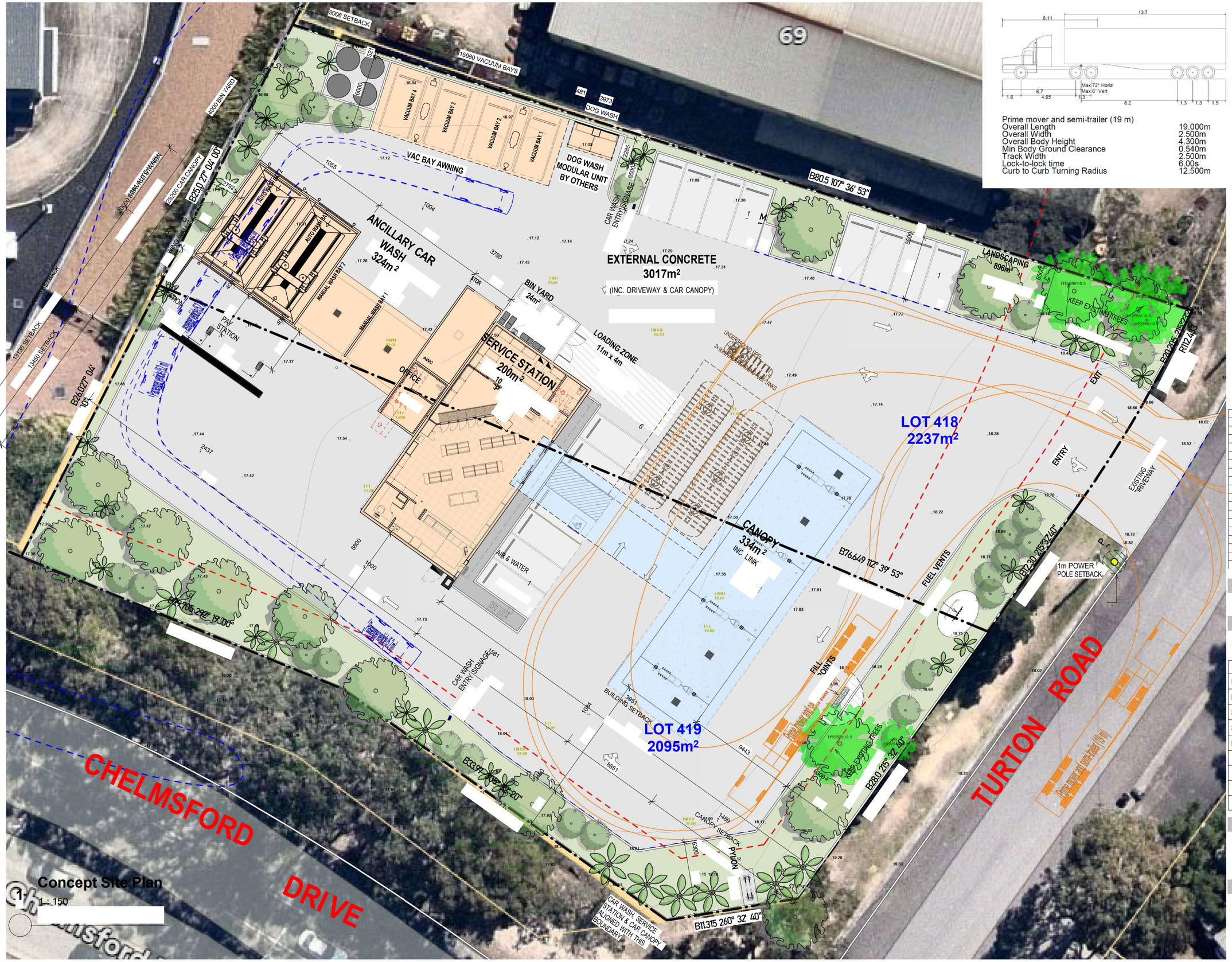
SERVICE STATION

Location:	
Lot:	418 419
No:	71
Street:	
Suburb:	
DP:	
Scale	
Drawn by	
Checked by	
Sheet Size	A1

Drawing

Demolition Plan

Job No: BC0537 Issue: 1 No: 04



Prime mover and semi-trailer (19 m)

Overall Length	19.000m
Overall Width	2.500m
Overall Body Height	4.300m
Min Body Ground Clearance	0.540m
Track Width	2.500m
Lock-to-lock time	6.00s
Curb to Curb Turning Radius	12.500m

MAITLAND CITY COUNCIL

ZONE : E4
GENERAL INDUSTRIAL

SETBACKS :
5m LANDSCAPED

CAR PARKING :

SERVICE STATION
1 space / 20m² GFA

Rev	Description	Date	Issued by
	Car Wash Changes	27.02.25	LT
	Car Wash Changes	25.02.25	LT
	Car wash Changes	14.02.25	H.Skinner
	Site Changes	13.02.25	H.Skinner
	Signage	16.01.25	H.Skinner
1	DA Set	18.12.24	LT

Client

JAMES BRADSTREET

Project

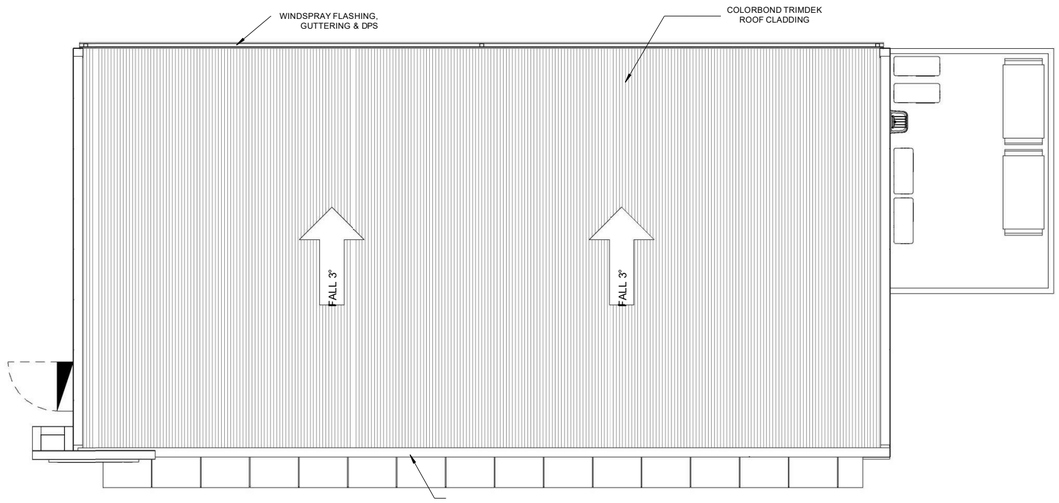
SERVICE STATION

Location:	
Lot:	418-419
No:	71
Street:	TURTON ROAD
Suburb:	METFORD
DP:	41113
Scale	1 : 150
Drawn by	
Checked by	
Sheet Size	A1

Drawing

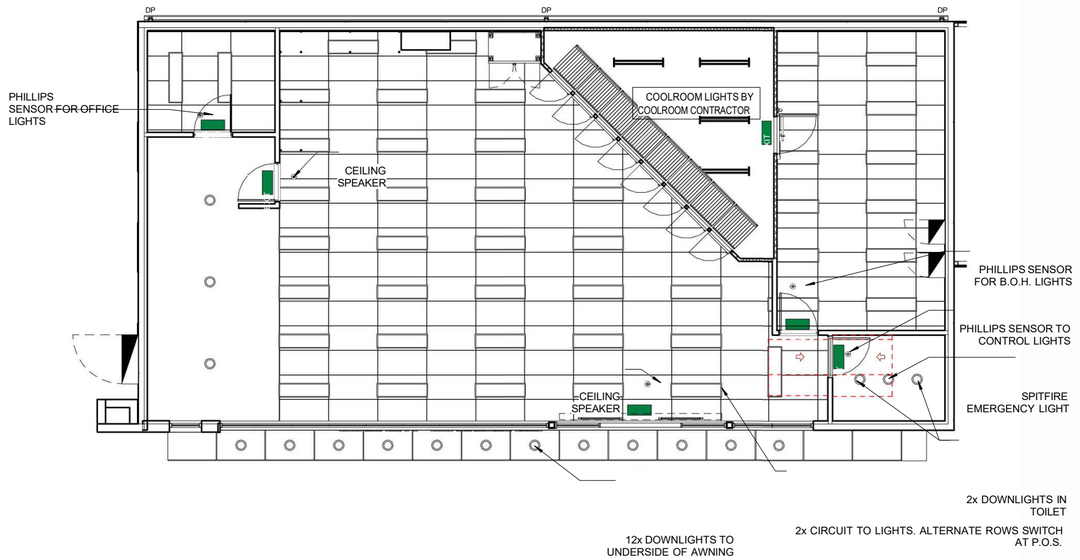
Site Plan

Job No:	Issue:	No:
BC0537	6	05



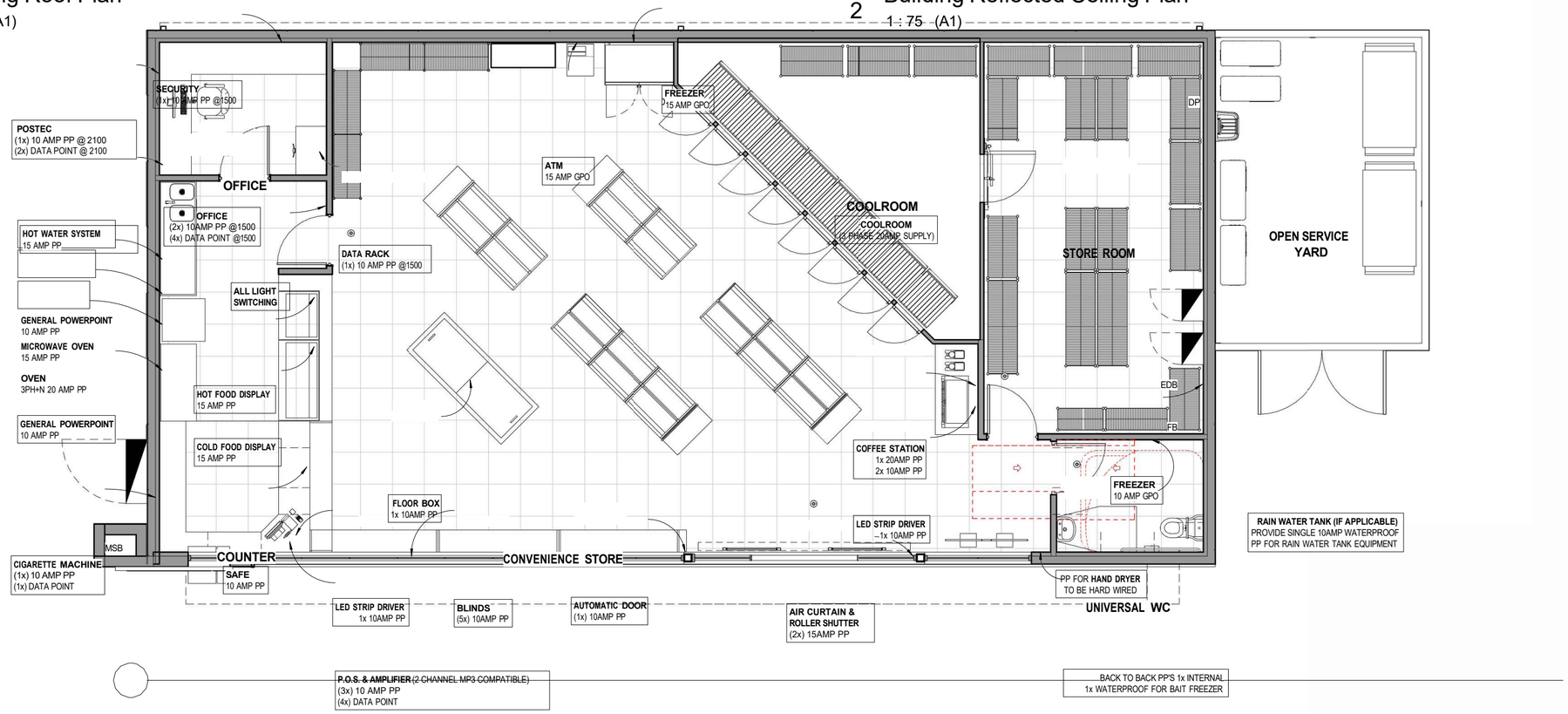
1 Building Roof Plan

1 : 75 (A1)



2 Building Reflected Ceiling Plan

1 : 75 (A1)



3 Building Electrical Plan

1 : 50 (A1)

Rev	Description	Date	Issued by
1	DA Set	11.12.24	LT

Client

JAMES BRADSTREET

Project

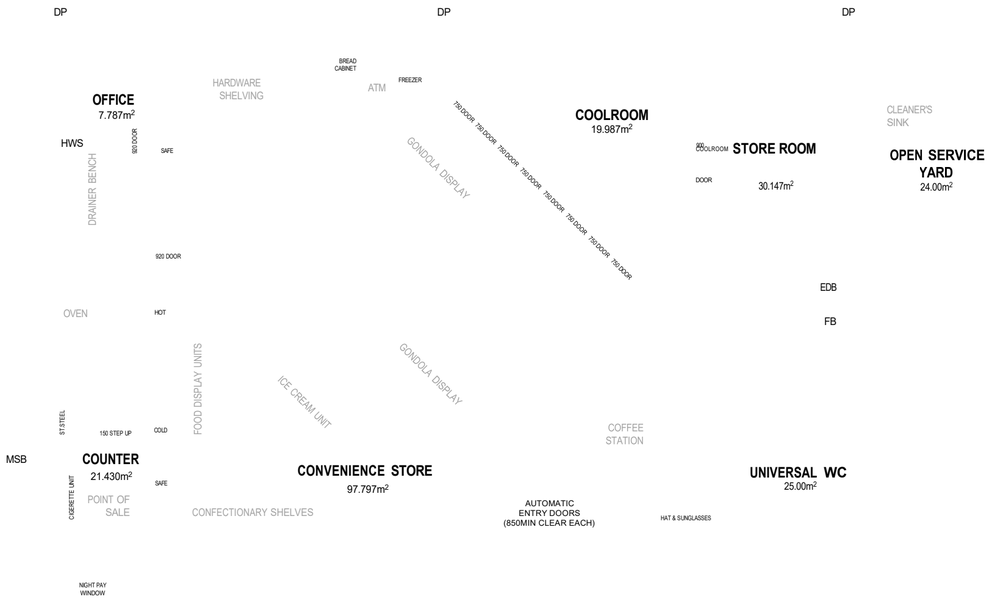
MIXED USE

Location:	
Lot:	418-419
No:	71
Street:	TURTON ROAD
Suburb:	METFORD
DP:	41113
Scale	As indicated
Drawn by	
Checked by	
Sheet Size	A1

Drawing

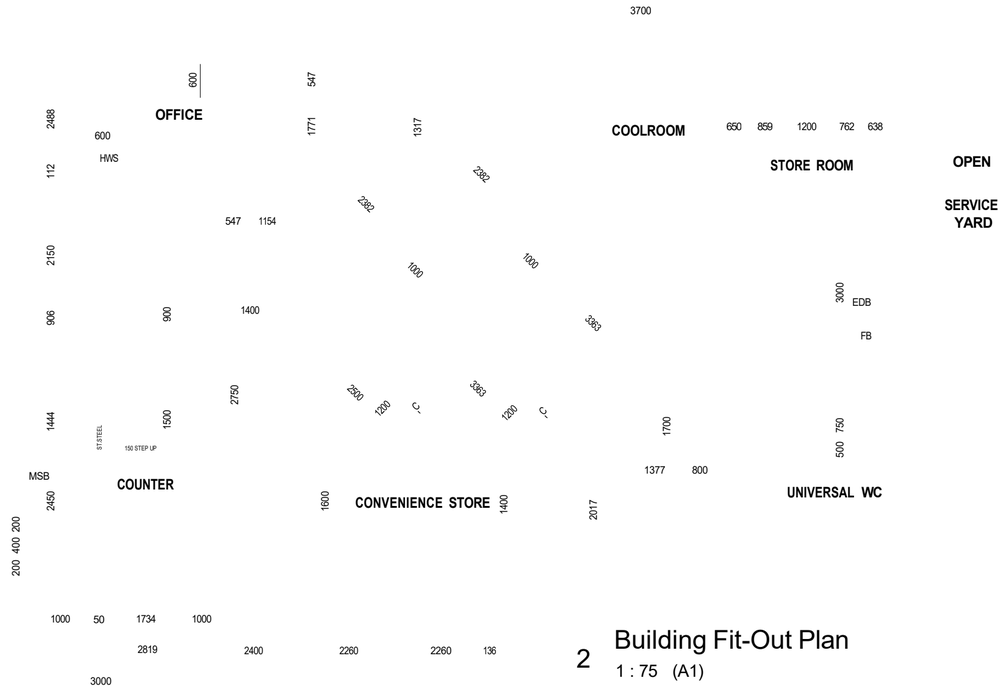
Service Station Roof Plan & Electrical

Job No:	Issue:	No:
BC0537	1	**06**



1 Building General Arrangement

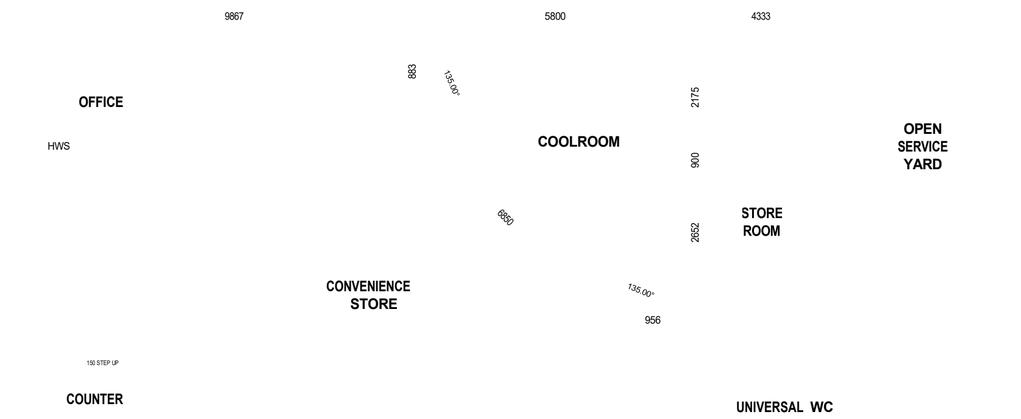
1 : 75 (A1)



2 Building Fit-Out Plan

1 : 75 (A1)

FOOD PREMISES NOTE:
The walls, floors & ceiling construction including finishes & fit-out of rooms(if included) used for food preparation, storage or display shall comply with the requirements of the food regulation 2004 under the food act 2003, standard 3.2.3 - food premises & equipment, of the Australia-New Zealand food standards code, australian standard as 4674-2004 "design, construction & fit-out of food premises", and council's local policies.



Rev	Description	Date	Issued by

Client

JAMES BRADSTREET

Project

MIXED USE

Location:	
Lot:	418-419
No:	71
Street:	TURTON ROAD
Suburb:	METFORD
DP:	41113
Scale	As indicated
Drawn by	
Checked by	
Sheet Size	A1

3 FLOOR FINISHES PLAN

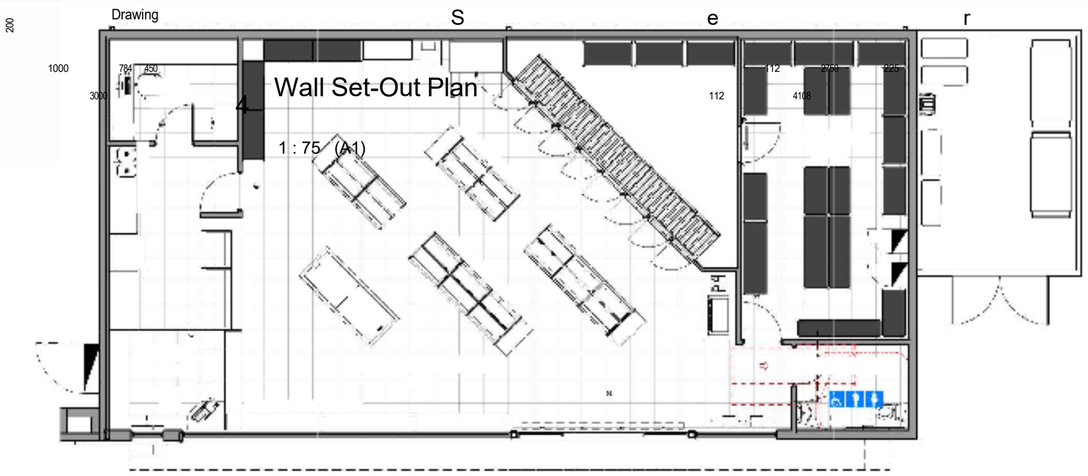
1 : 75 (A1)

Drawing Service Station General Arrangement

Job No: BC0537

Issue:

No: **07**

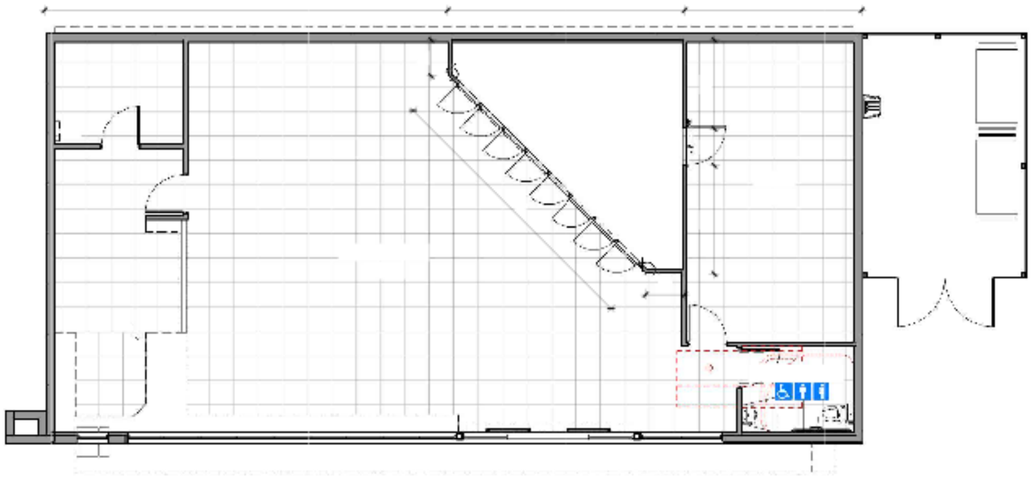


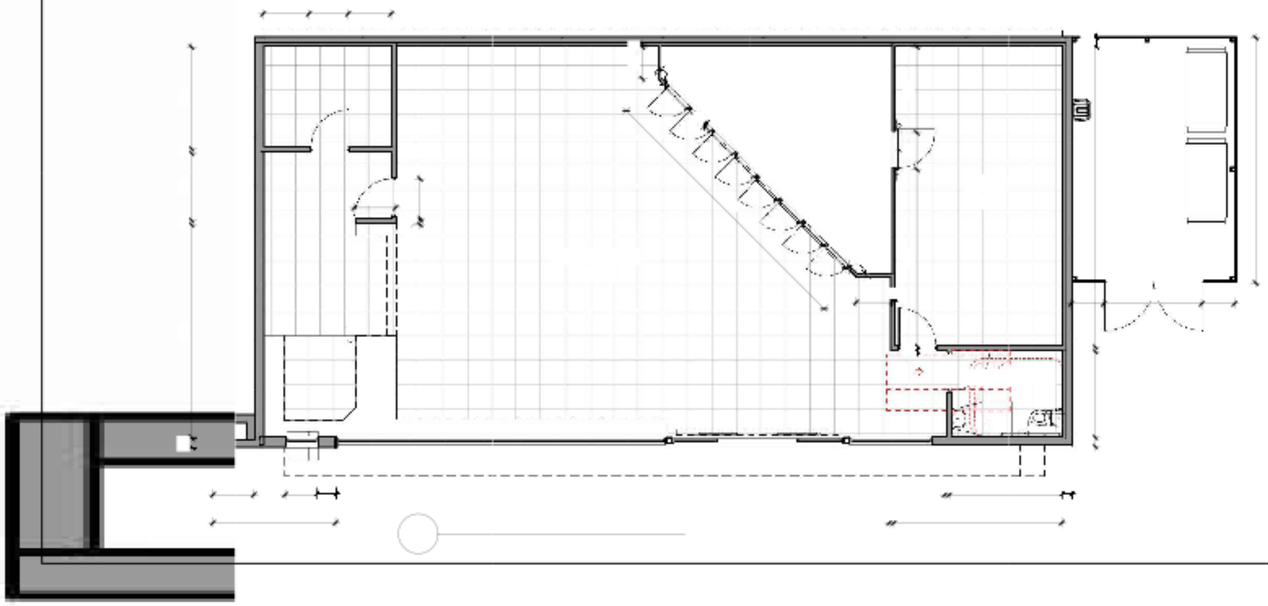
4 Wall Set-Out Plan

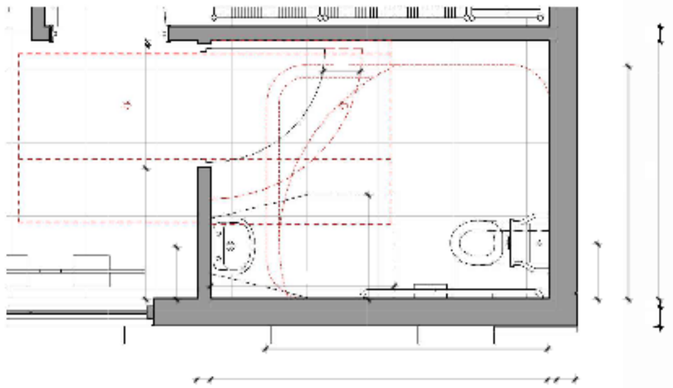
1 : 75 (A1)

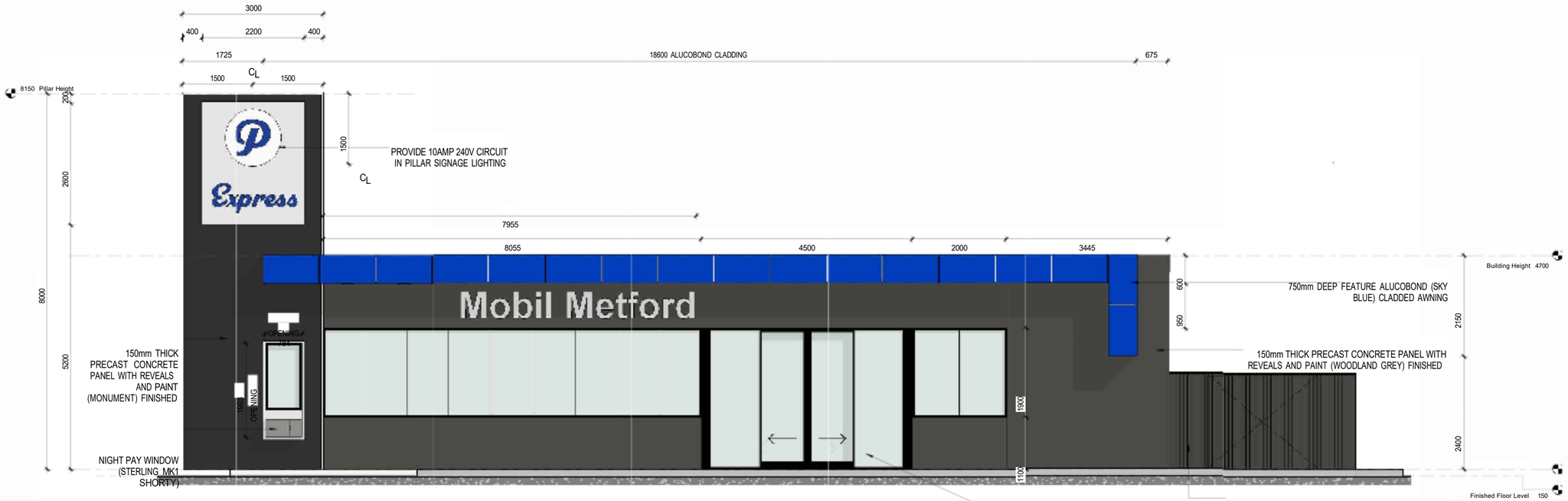
5 Universal Toilet Details

1 : 25 (A1)







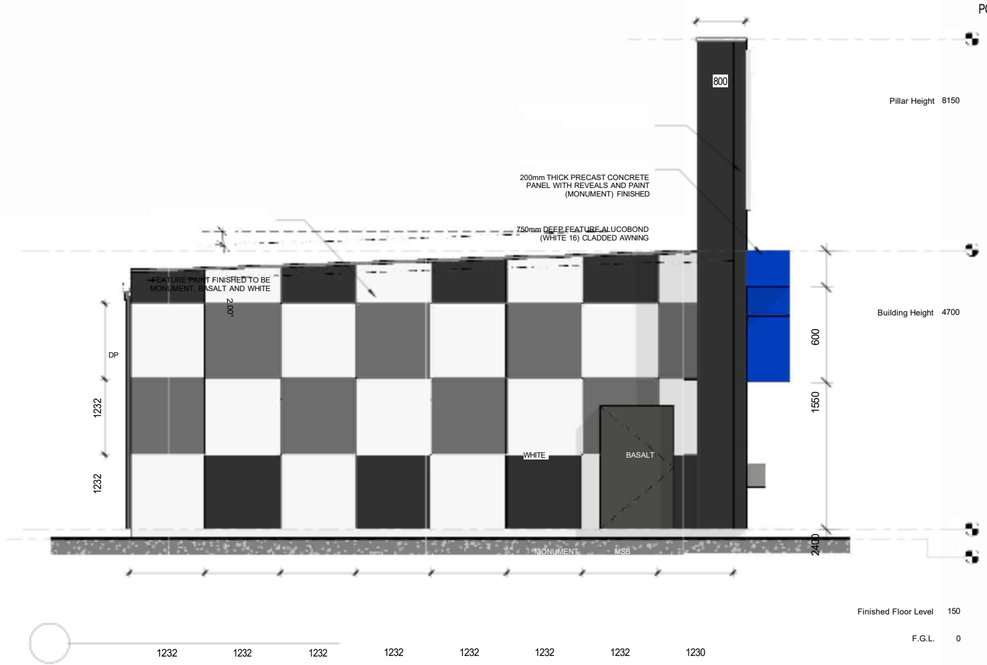


South-East Elevation

1

1 : 50 (A1)

ALL SHOPFRONT COLUMNS, DOORS AND WINDOWS TO BE POWDERCOATED (NIGHT SKY) ALUMINIUM FRAME



South-West Elevation

2

1 : 50 (A1)

Rev	Description	Date	Issued by
1	DA Set	11.12.24	LT

Client

JAMES BRADSTREET

Project

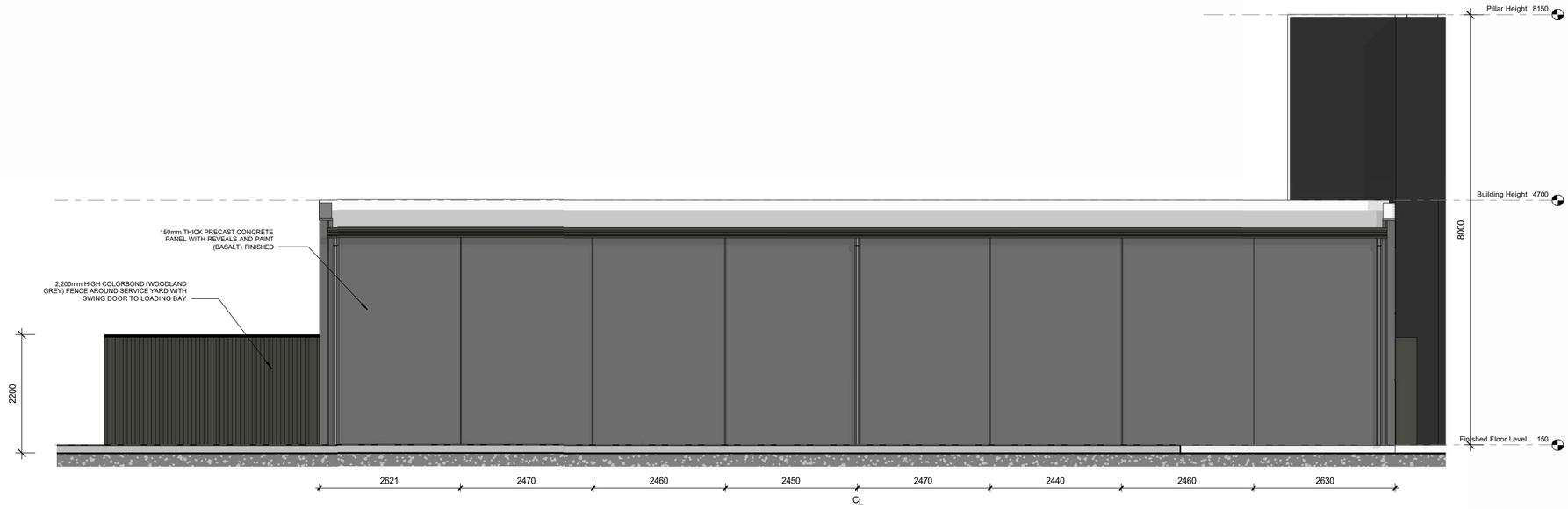
MIXED USE

Location:	
Lot:	418-419
No:	71
Street:	TURTON ROAD
Suburb:	METFORD
DP:	41113
Scale	1 : 50
Drawn by	
Checked by	
Sheet Size	A1

Drawing

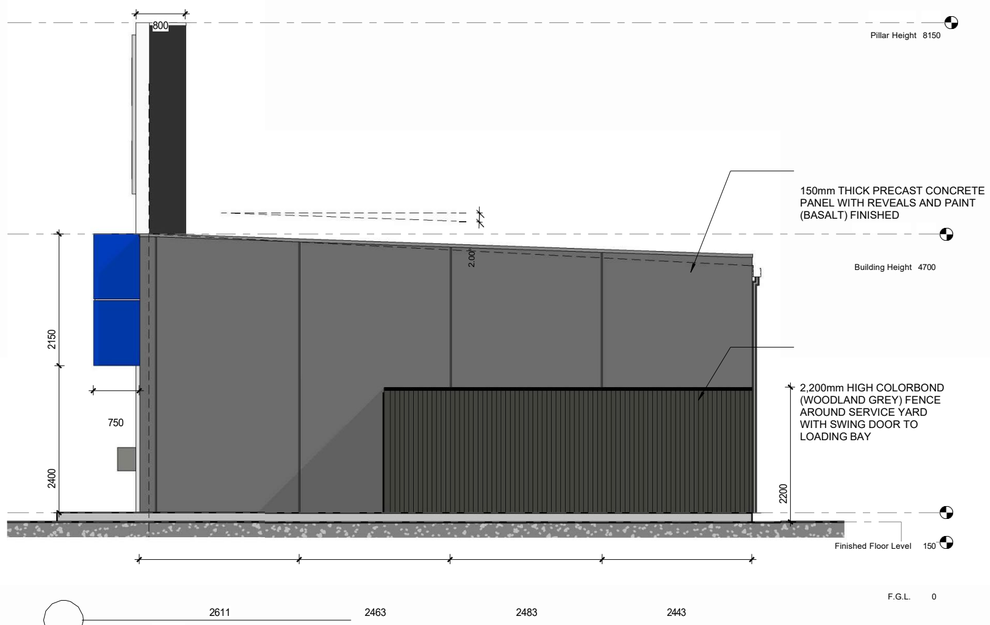
Service Station Elevations

Job No: Issue: No:



1 North-West Elevation

1 : 50 (A1)



2 North-East Elevation

1 : 50 (A1)

Rev	Description	Date	Issued by
1	DA Set	11.12.24	LT

Client

JAMES BRADSTREET

Project

MIXED USE

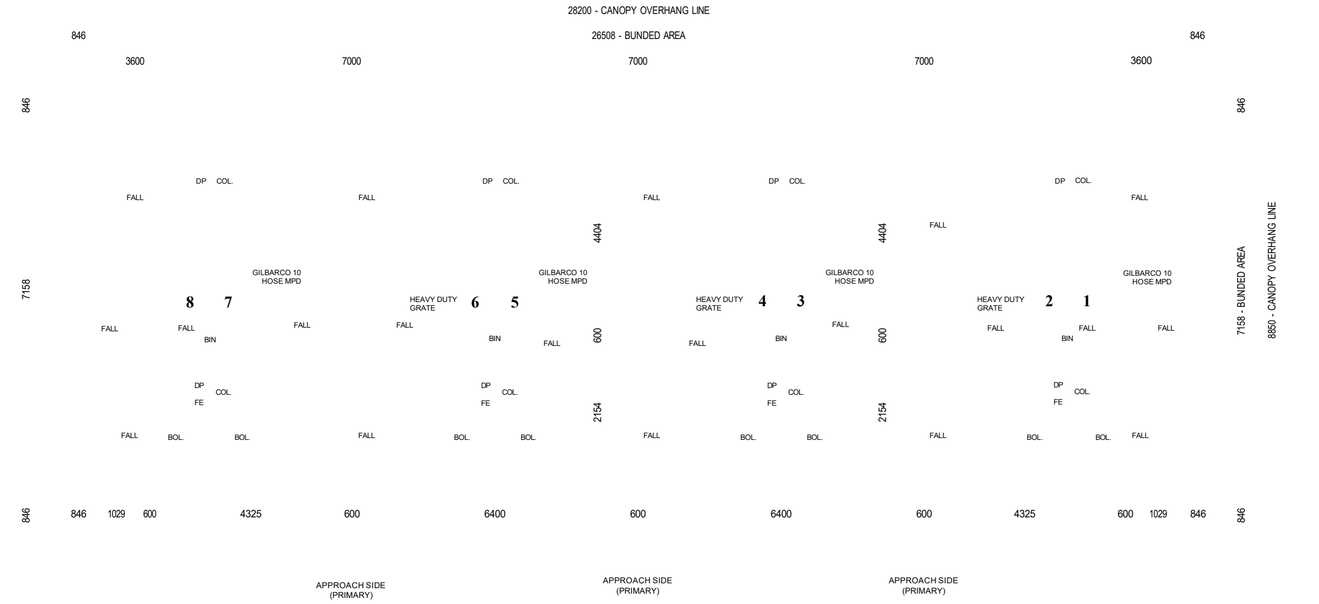
Location:	
Lot:	8-419
No:	
Street:	ROAD
Suburb:	ORD
DP:	41113
Scale	1 : 50
Drawn by	
Checked by	
Sheet Size	A1

Drawing

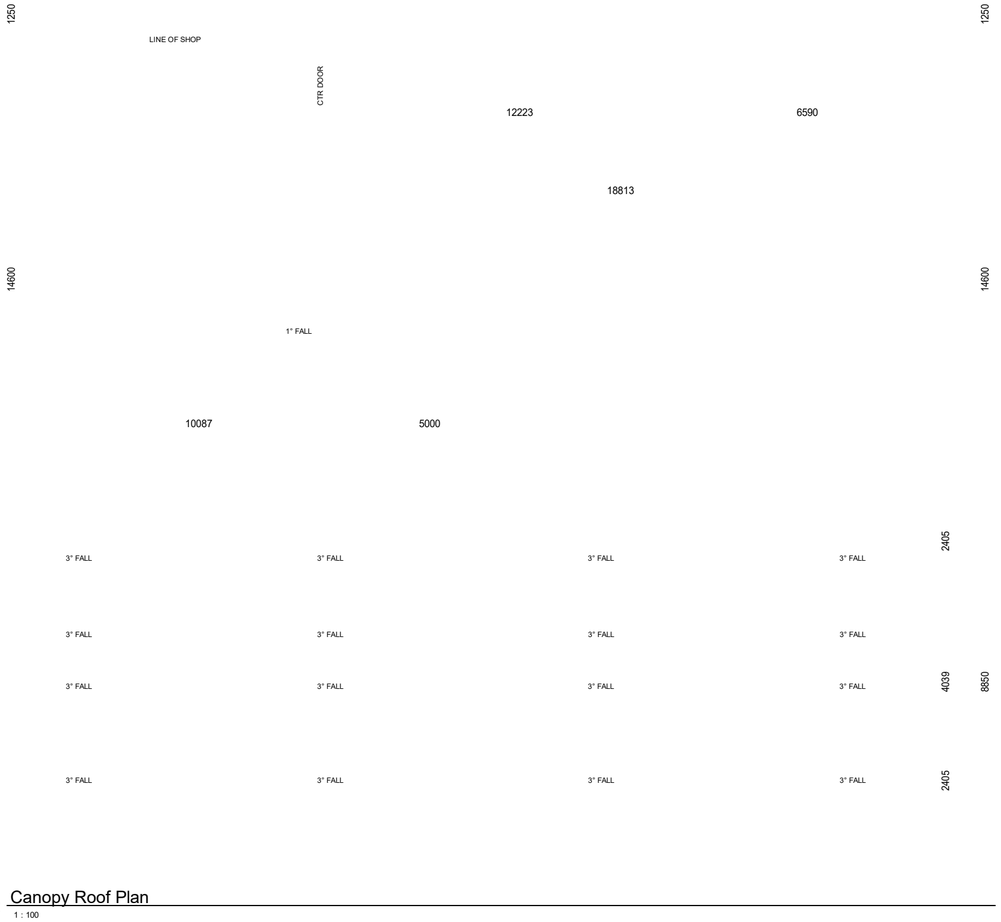
Service Station Elevations

Job No: Issue: No:

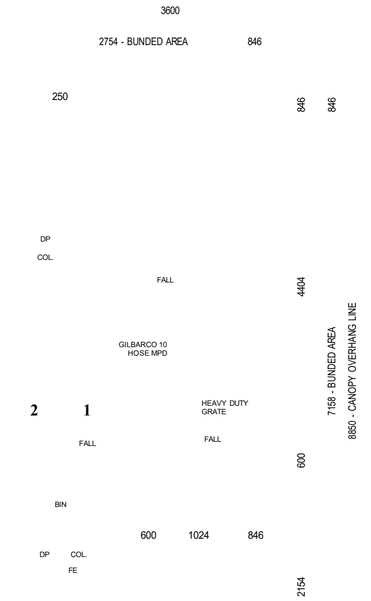
BC0537 1 **09**



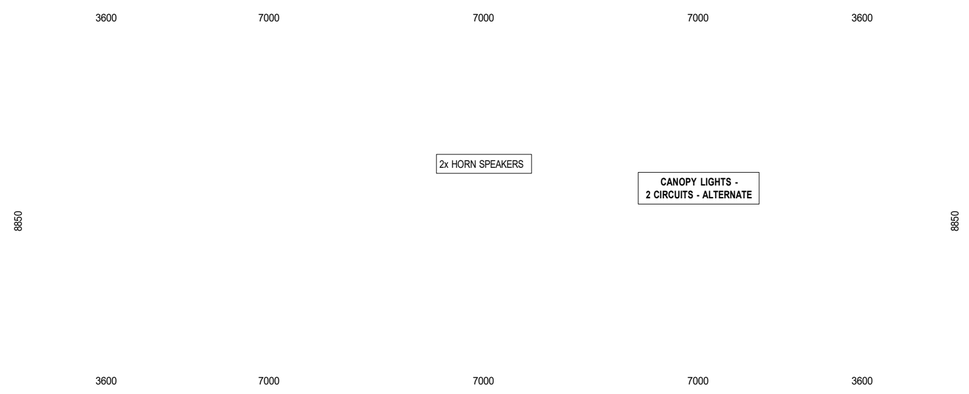
1 Canopy Floor Plan
1 : 75



2 Canopy Roof Plan
1 : 100



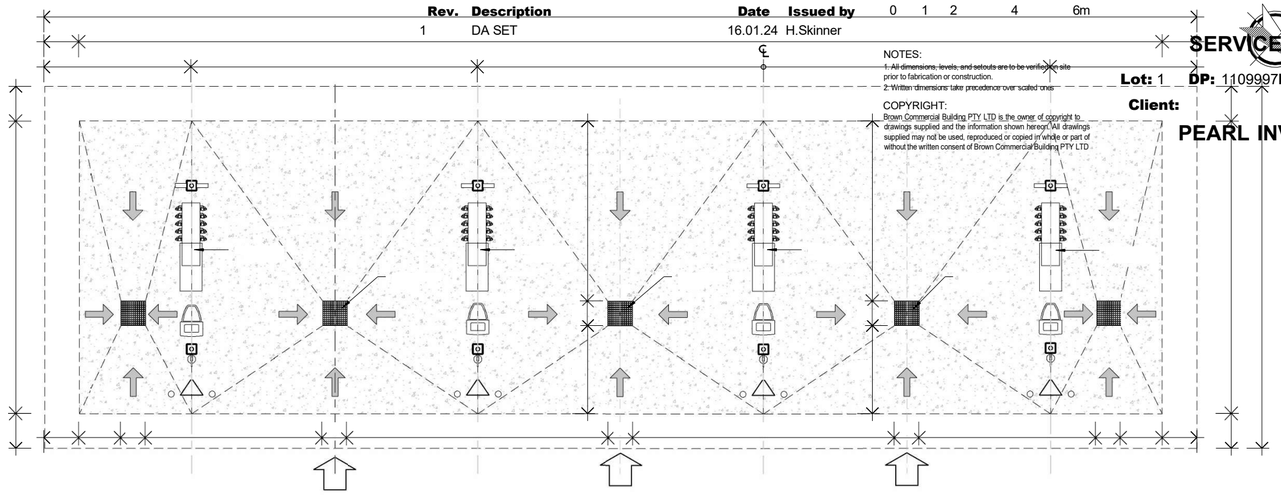
4 Set-out Plan
1 : 50



3 Reflected Ceiling Plan
1 : 100

Rev.	Description	Date	Issued by
1	DA SET	16.01.24	H.Skinner

0 1 2 4 6m



NOTES:
1. All dimensions, levels, and setouts are to be verified on site prior to fabrication or construction.
2. Written dimensions take precedence over scaled ones

SERVICE STATION

Lot: 1 **DP:** 1109997 **No:** 2325 **Street:** OXLEY HIGHWAY **Suburb:** WAUCHOPE

Client: PEARL INVESTMENTS

Project Status: CONSTRUCTION CERTIFICATE

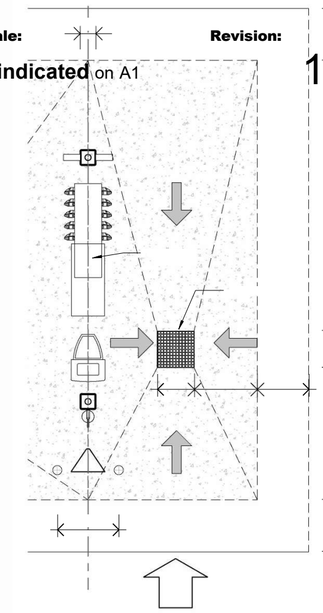
CAR CANOPY PLANS

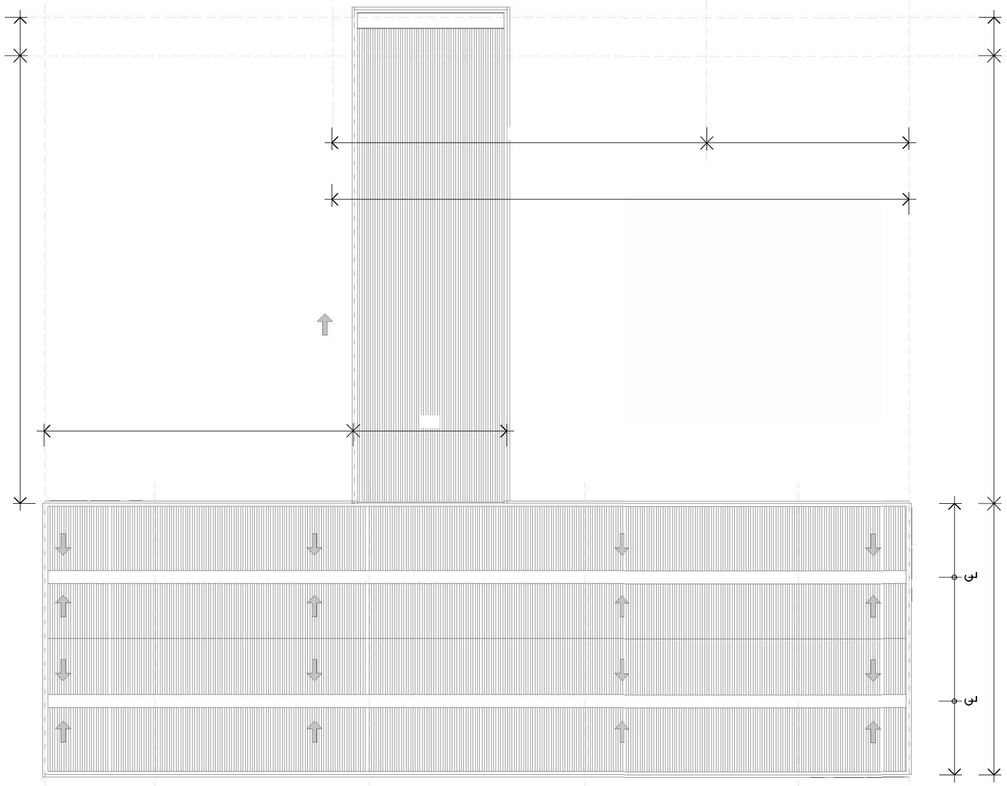
BC0537

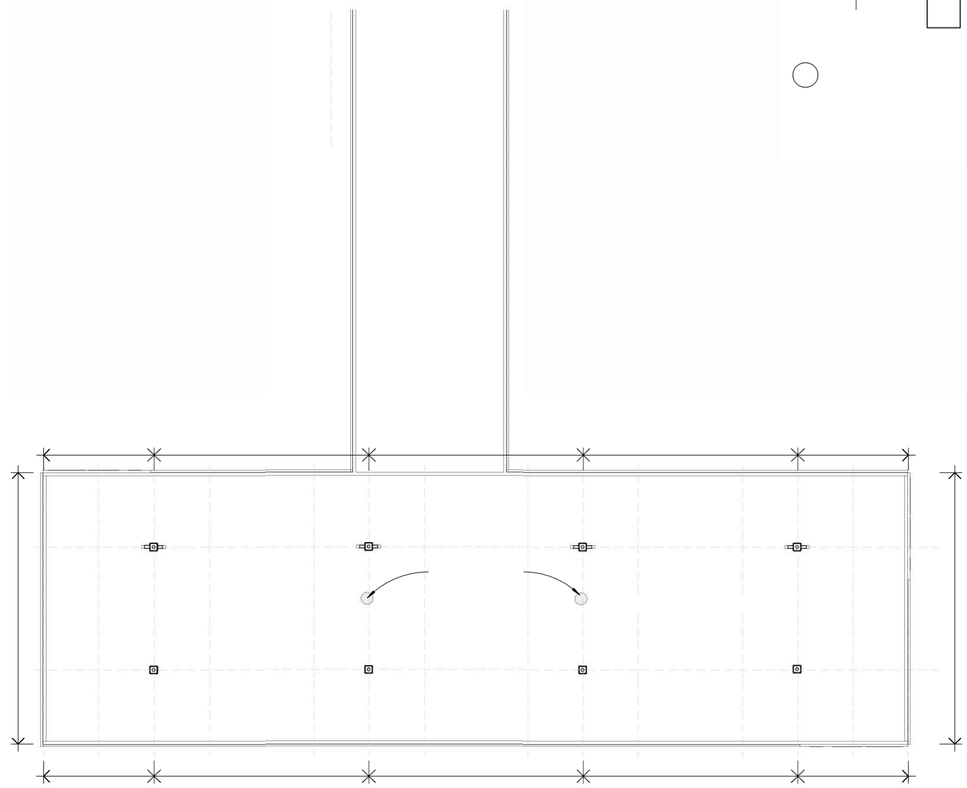
Scale: As indicated on A1

Revision: 1

DWG No: 10







BROWN COMMERCIAL BUILDING
www.brownbuild.com.au
2 Elwell Close
Beresfield, NSW 2322
PO Box 596
East Maitland NSW 2323
Ph: (02)4966 0218

Project:

Sheet Title:

Project No:

ILLUMINATED INDIVIDUAL LETTERING TO LESEE'S SPECIFICATION

Car Canopy Top
830
Car Canopy Eave

STRUCTURAL COLUMNS TO ENGINEER'S DETAILS
COLUMNS TO BE PAINTED DULUX (WHITE ONE WHITE)

8 7 6 5 4 3 2 1

SPREADER SIGNAGE TO LESEE'S SPECIFICATION

4800 5630

10.00°

BOLLARD'S TO BE PAINTED YELLOW

10.00°

Car Canopy Plan

846 26507 - BUNDED AREA 846

3600 7000 7000 7000 3600

1 NORTH EAST Elevation
1 : 75

0
2600
100
550
830
180

5 Canopy Signage Details
1 : 25

ILLUMINATED INDIVIDUAL LETTERING TO LESEE'S SPECIFICATION

10AMP-240V TO SIGNAGE

Car Canopy Top
Car Canopy Eave

STRUCTURAL COLUMNS TO ENGINEER'S DETAILS
COLUMNS
TO BE PAINTED DULUX (WHITE ONE WHITE)

COL. COL.

SELECTED FUEL DISPENSER
REFER TO LESEE'S SPECIFICATIONS

SPREADER SIGNAGE TO LESEE'S SPECIFICATION

4800

LINE OF SHOP

BOL.
10.00° BIN 10.00°

BOLLARD'S TO BE PAINTED YELLOW

FE

Car Canopy Plan

846 7157 - BUNDED AREA 846

8850 14600 1250

2 NORTH WEST Elevation
1 : 75

24x 10AMP - 240V TO EYEBROW LIGHTS
(CABLE RUNS ALL THE WAY AROUND CANOPY)

ILLUMINATED BAR TO LESEE'S SPECIFICATION

Car Canopy Top
830
Car Canopy Eave

1 2 3 4 5 6 7 8

STRUCTURAL COLUMNS TO ENGINEER'S DETAILS
COLUMNS TO BE PAINTED DULUX (WHITE ONE WHITE)

4800 5630

SELECTED FUEL DISPENSER
REFER TO LESEE'S SPECIFICATIONS

10.00° 10.00°

Car Canopy Plan

846 26507 846

3600 7000 7000 7000 3600

3 SOUTH WEST Elevation
1 : 75

Car Canopy Top
Car Canopy Eave

COL. COL.

SELECTED FUEL DISPENSER
REFER TO LESEE'S SPECIFICATIONS

STRUCTURAL COLUMNS TO ENGINEER'S DETAILS
COLUMNS
TO BE PAINTED DULUX (WHITE ONE WHITE)

1250 14600 8850

LINE OF SHOP

BOLLARD'S TO BE PAINTED YELLOW

BOL.
10.00° BIN 10.00°
FE

Car Canopy Plan

846 7157 - BUNDED AREA 846

4 SOUTH Elevation
1 : 75

Rev.	Description	Date	Issued by
1	DA SET	16.01.24	H.Skinner

0 1 2 4 6m

NOTES:
1. All dimensions, levels, and setouts are to be verified on site prior to fabrication or construction.
2. Written dimensions take precedence over scaled ones

Lot: 1

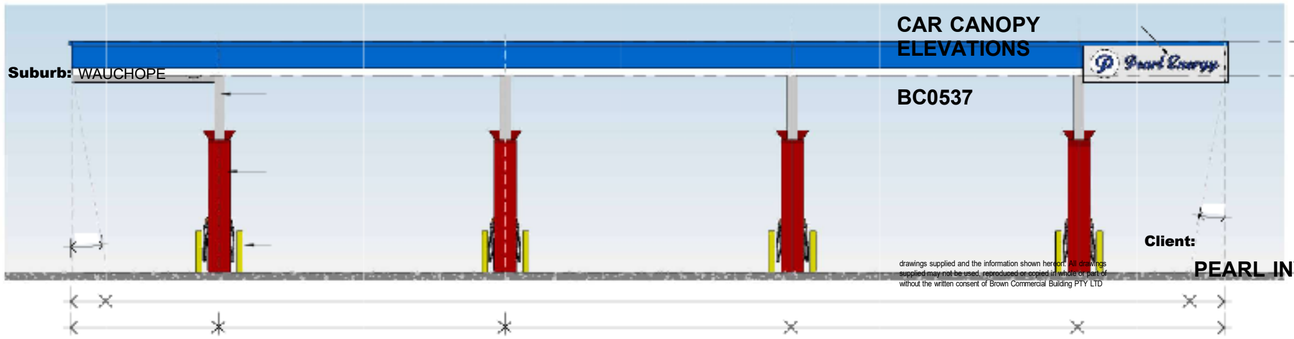
SERVICE STATION

DP: 1109997 **No:** 2325 **Street:** OXLEY HIGHWAY

Suburb: WAUCHOPE

CAR CANOPY ELEVATIONS

BC0537



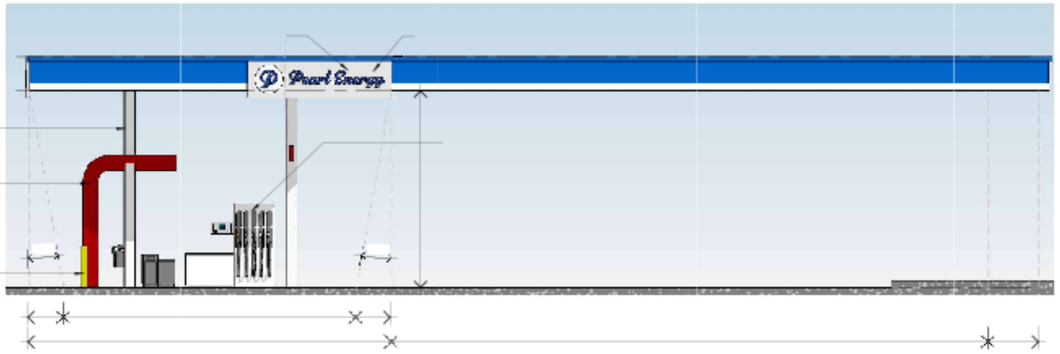
Client: PEARL INVESTMENTS

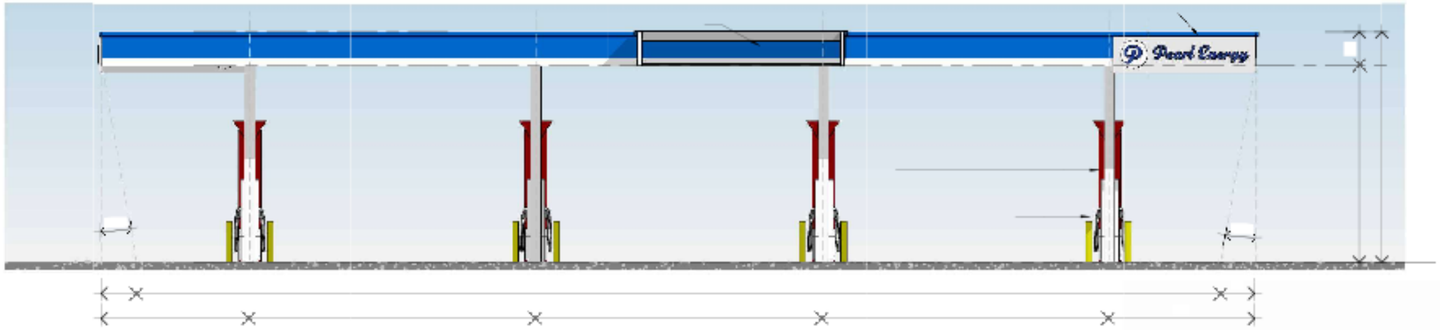
DWG No: 11

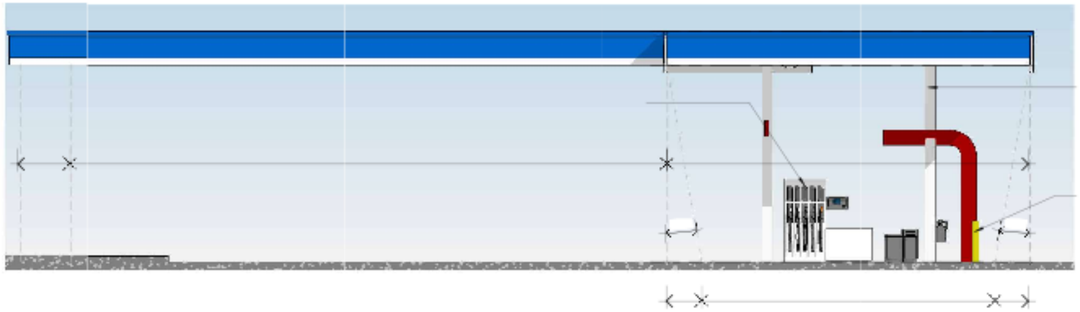
Project Status: CONSTRUCTION CERTIFICATE

Scale: As indicated on A1

Revision: 1





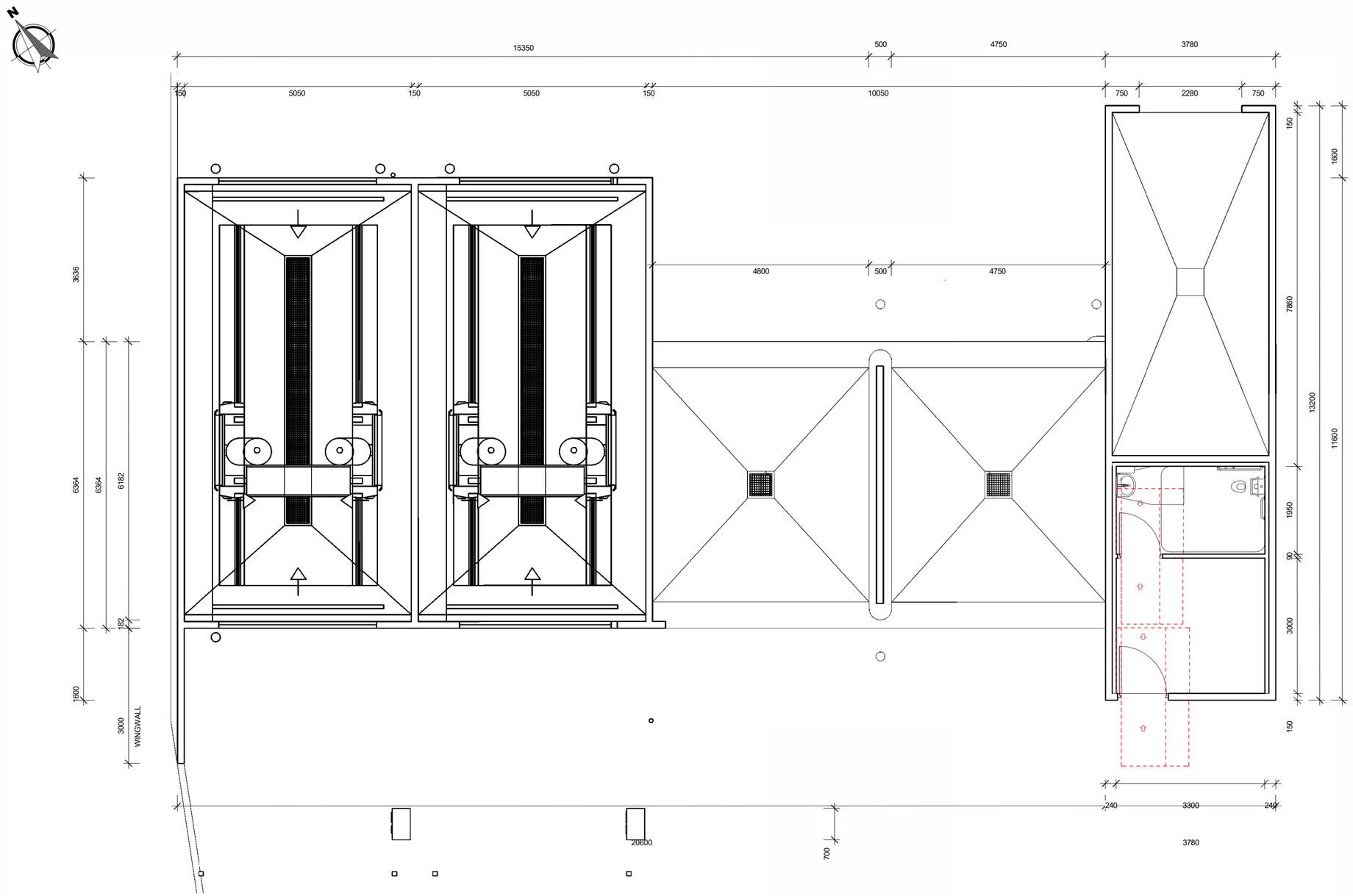


BROWN COMMERCIAL BUILDING
www.brownbuild.com.au
2 Elwell Close
Beresfield, NSW 2322
PO Box 596
East Maitland NSW 2323
Ph: (02)4966 0218

Project:

Sheet Title:

Project No:



1 Car Wash Floor Plan

1 : 50

Rev	Description	Date	Issued by
	Car Wash Changes	25.02.25	LT
	Car wash Changes	14.02.25	H.Skinner
	Signage	16.01.25	H.Skinner
1	DA Set	18.12.24	LT

Client

Project

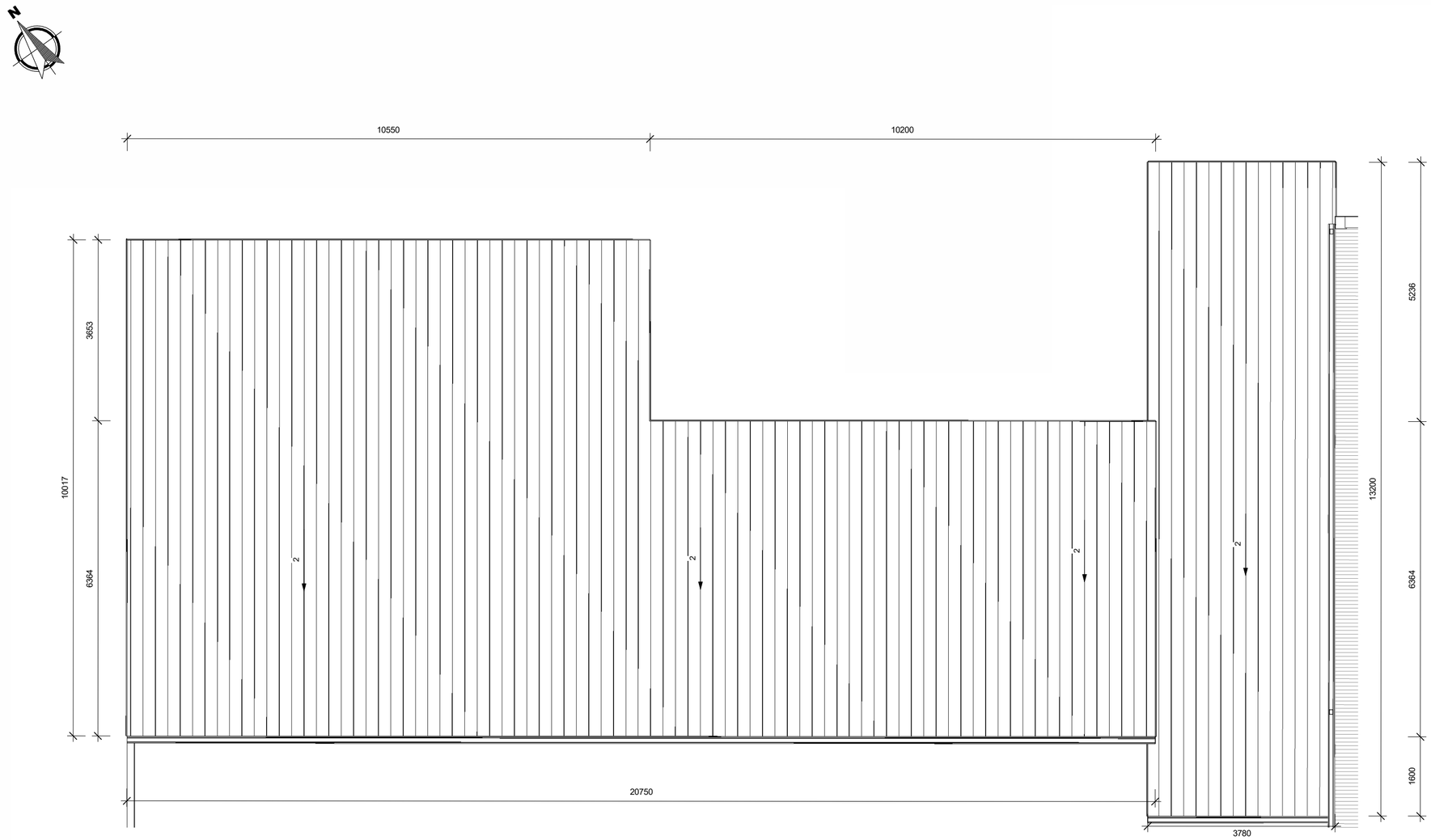
SERVICE STATION

Location:	
Lot:	418 419
No:	71
Street:	TURTON ROAD
Suburb:	METFORD
DP:	41113
Scale	1 : 50
Drawn by	
Checked by	
Sheet Size	A1

Drawing

Car Wash Floor Plan

Job No: Issue: No:



1 Car wash Roof plan

1 : 50

Rev	Description	Date	Issued by
	Car wash Changes	14.02.25	H.Skinner
	Signage	16.01.25	H.Skinner
1	DA Set	18.12.24	LT

Client

JAMES BRADSTREET

Project

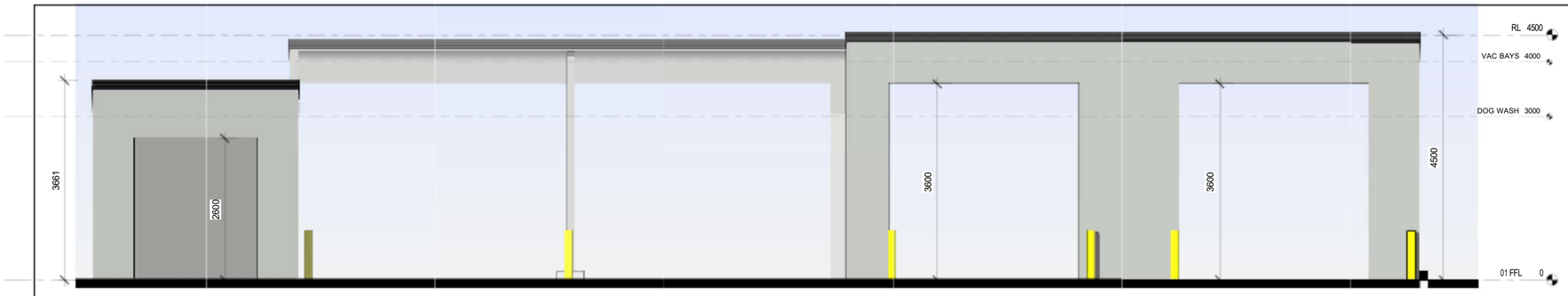
SERVICE STATION

Location:	
Lot:	418 419
No:	71
Street:	TURTON ROAD
Suburb:	METFORD
DP:	41113
Scale	1 : 50
Drawn by	
Checked by	
Sheet Size	A1

Drawing

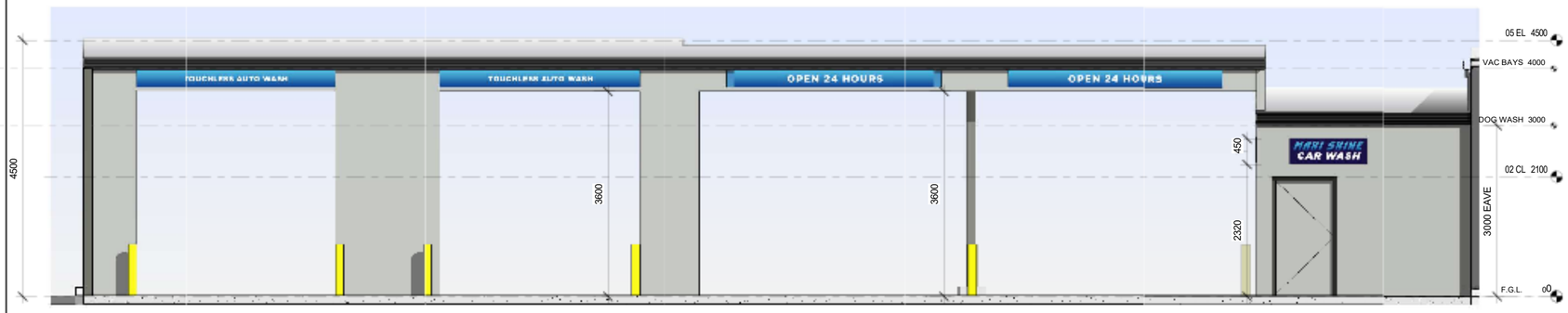
Car Wash Roof Plan

Job No:	Issue:	No:
BC0537	3	13



1 North-East Elevation CW

1 : 50

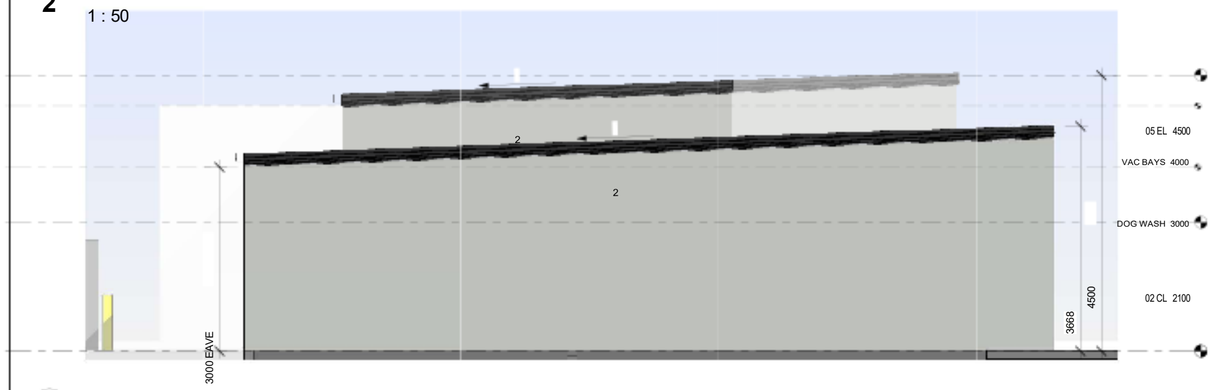


4 South-West Elevation CW

1 : 50

2 North-West Elevation CW

1 : 50



3 Sou th-East Elevation CW

Rev	Description	Date	Issued by
	Car Wash Changes	27.02.25	LT
	Car Wash Changes	25.02.25	LT
	Car wash Changes	14.02.25	H.Skinner
	Signage	16.01.25	H.Skinner
1	DA Set	18.12.24	LT

Client

JAMES BRADSTREET

Project

SERVICE STATION

Location:

Lot: 418-419
No: 71
Street: TURTON ROAD
Suburb: METFORD
DP: 41113
Scale 1 : 50
Drawn by
Checked by

Sheet Size A1

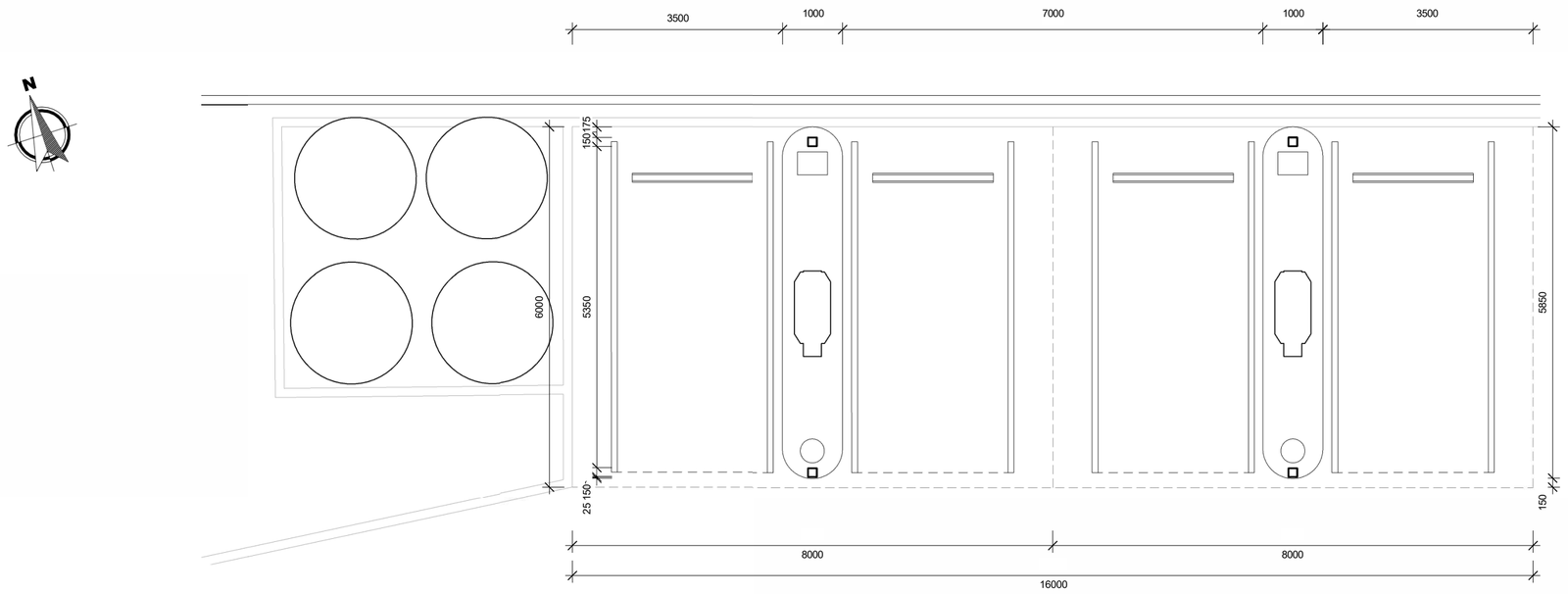
Drawing

Car Wash Elevations

1 : 50

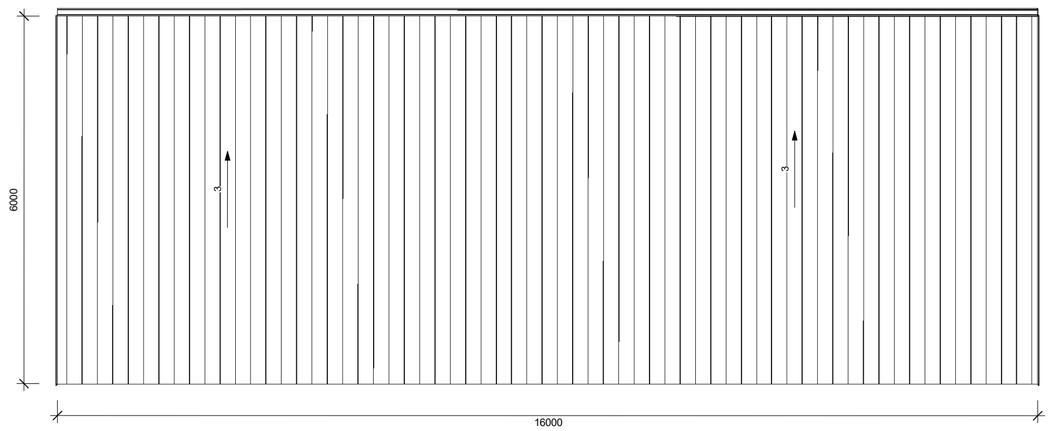
01 FFL 0

Job No:	Issue:	No:
BC0537	5	**14**



1 Vac Bay Floor plan

1 : 50



2 Vac Bay Roof Plan

1 : 50

Rev	Description	Date	Issued by
1	DA Set	18.12.24	LT

Client

JAMES BRADSTREET

Project

SERVICE STATION

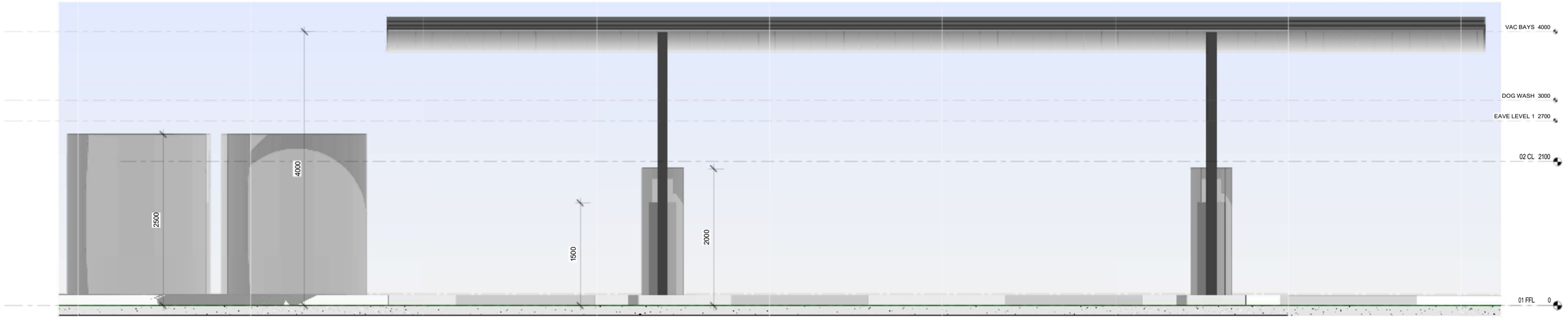
Location:	
Lot:	418 419
No:	71
Street:	TURTON ROAD
Suburb:	METFORD
DP:	41113
Scale	1 : 50
Drawn by	
Checked by	
Sheet Size	A1

Drawing

Vac Bays Plans

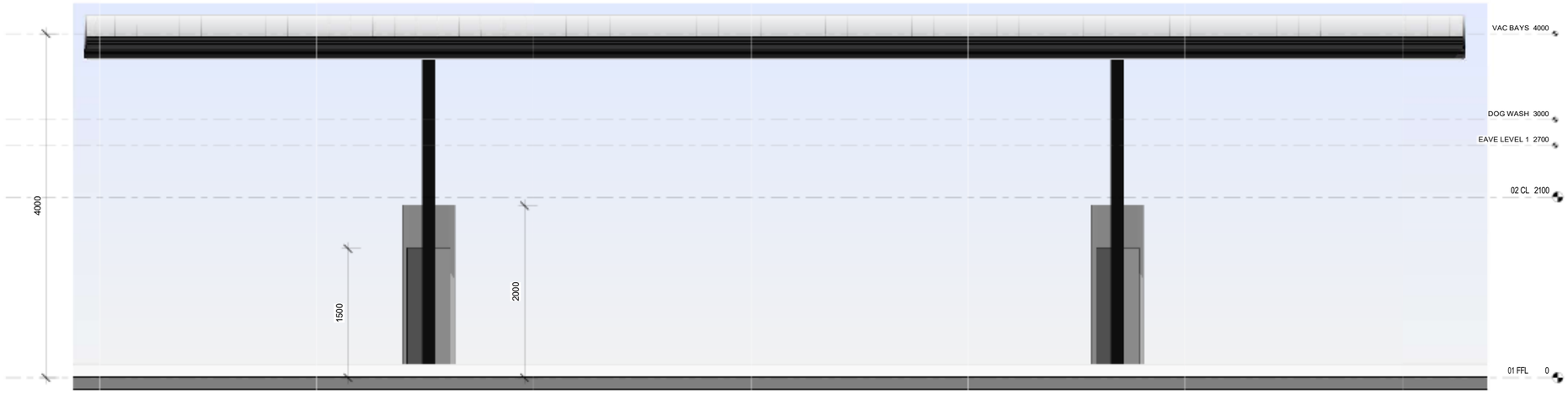
Job No: Issue: No:

BC0537 1 **15**



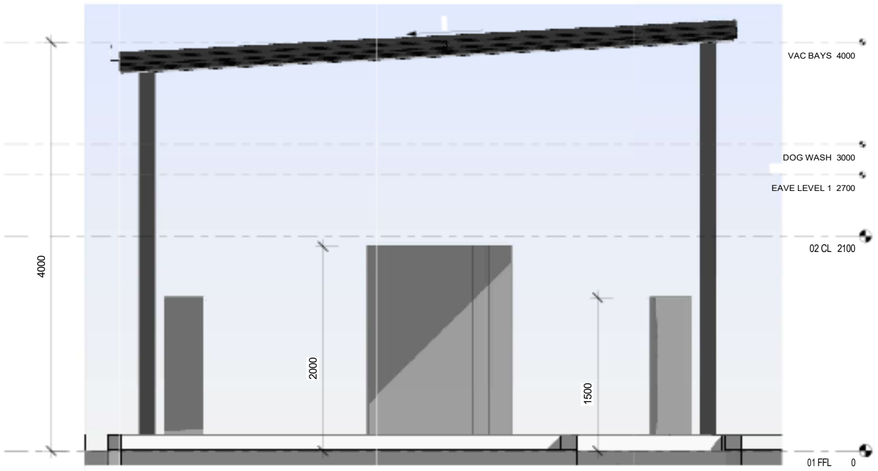
3 South Elevation VB

1 : 30



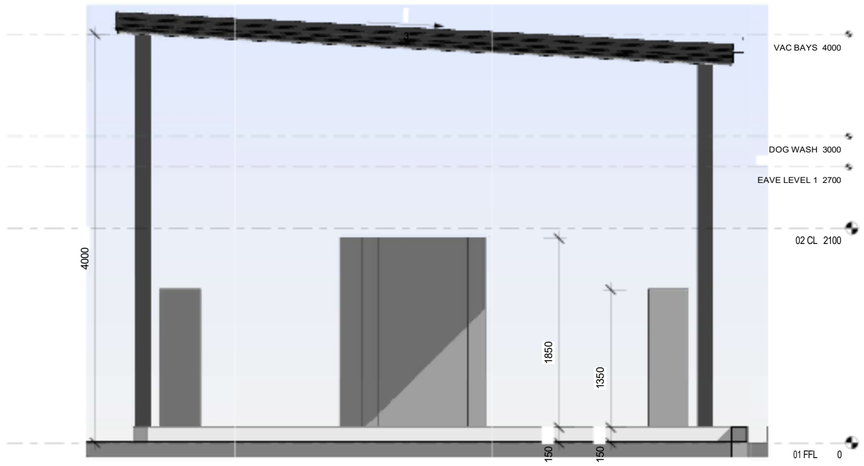
2 North Elevation VB

1 : 30



4 West Elevation VB

1 : 30



1 East Elevation VB

1 : 30

Rev	Description	Date	Issued by
1	DA Set	18.12.24	LT

Client

JAMES BRADSTREET

Project

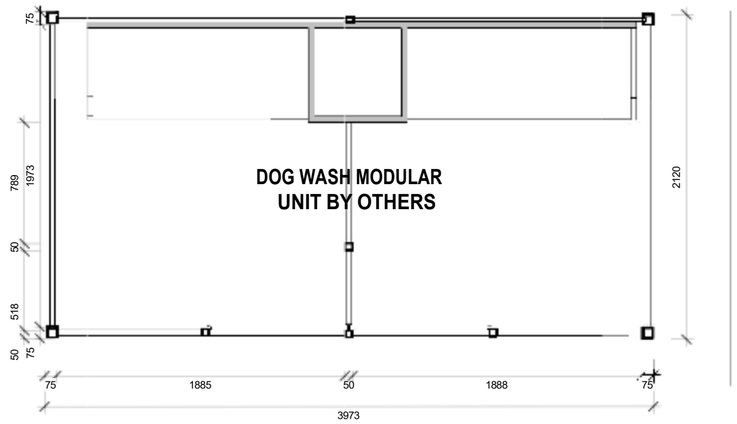
SERVICE STATION

Location:	
Lot:	418 419
No:	71
Street:	TURTON ROAD
Suburb:	METFORD
DP:	41113
Scale	1 : 30
Drawn by	
Checked by	
Sheet Size	A1

Drawing

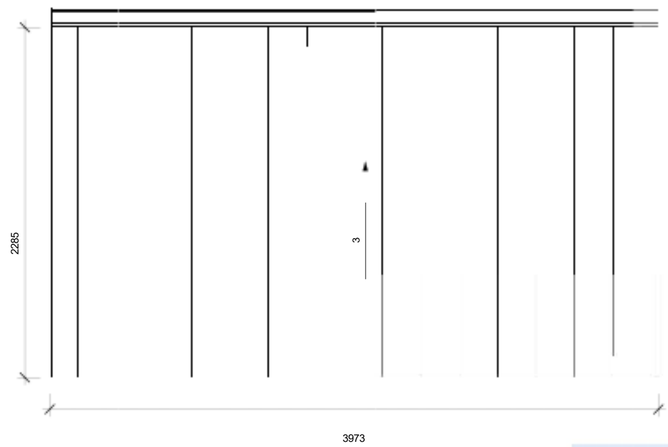
Vac Bays Elevations

Job No: BC0537 | Issue: 1 | No: 16



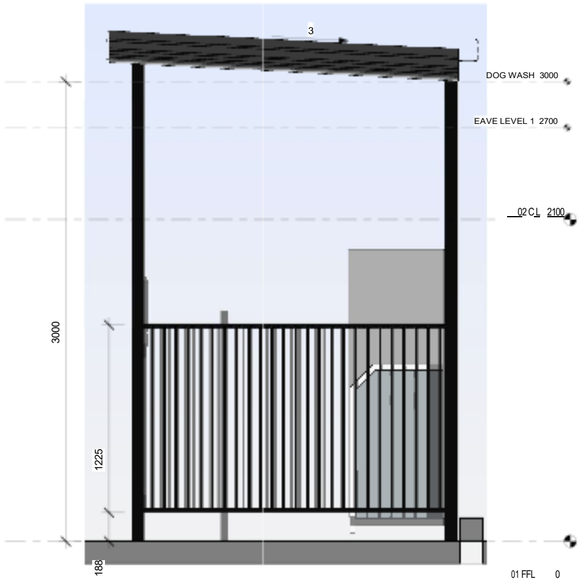
1 Dog Wash Floor Plan

1 : 20



2 Dog Wash Roof Plan

1 : 20

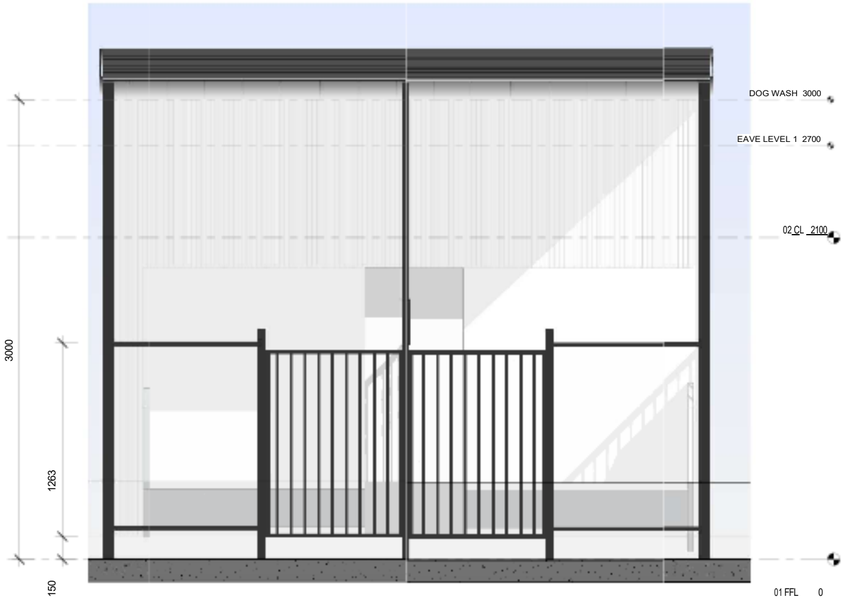


3 East Elevation DW

1 : 20

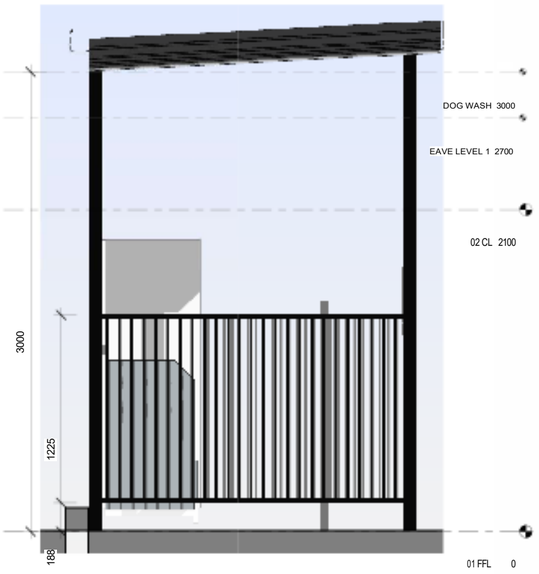
4 North Elevation DW

1 : 20



5 South Elevation DW

1 : 20



6 West Elevation DW

1 : 20

DOG WASH MODULAR
UNIT BY OTHERS

Rev	Description	Date	Issued by
	Car Wash Changes	27.02.25	LT
1	DA Set	18.12.24	LT

Client

JAMES BRADSTREET

Project

SERVICE STATION

Location:	
Lot:	418 419
No:	71
Street:	TURTON ROAD
Suburb:	METFORD
DP:	41113
Scale	1 : 20
Drawn by	
Checked by	
Sheet Size	A1

Drawing

Dog Wash Plans

Job No:	Issue:	No:
BC0537	2	17