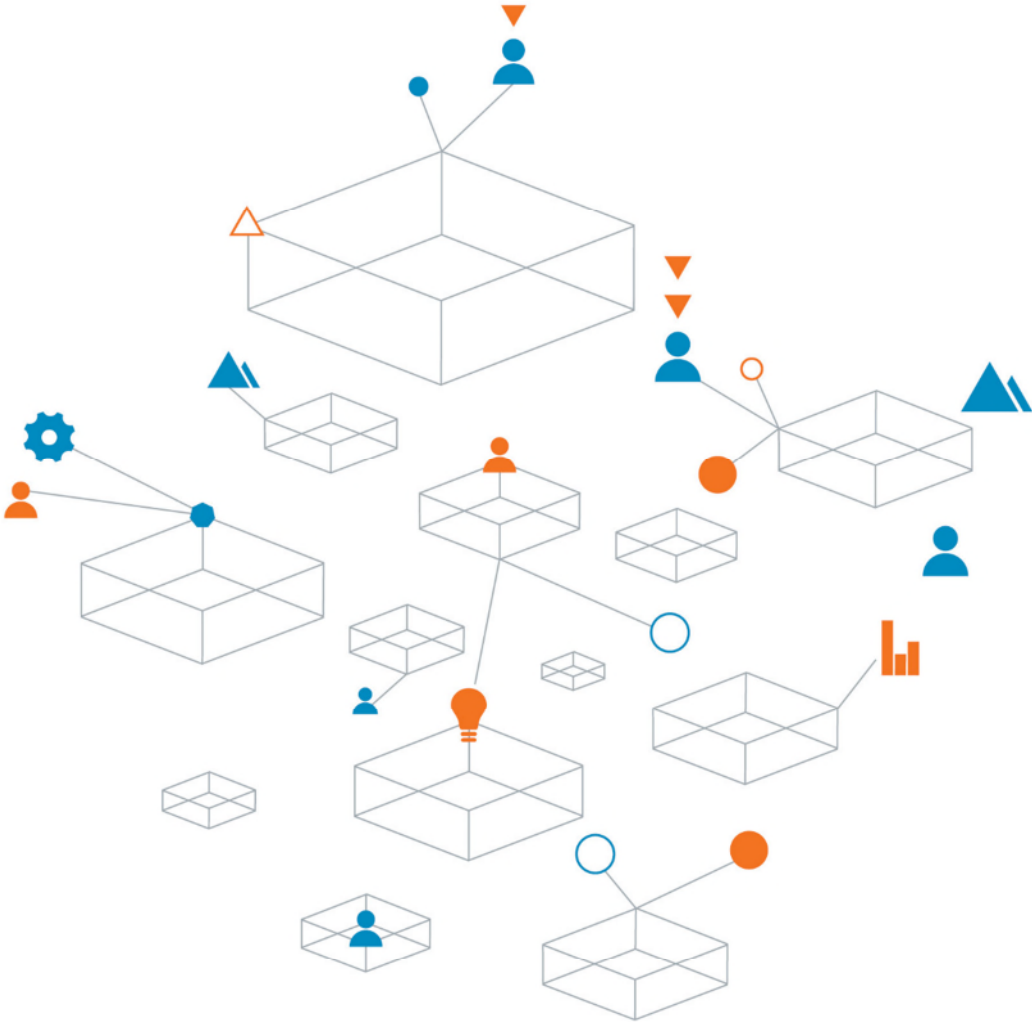


Richard Crookes Constructions
Remedial Action Plan - Addendum 1
Sydney Modern Development
Art Gallery Road, Sydney NSW

5 May 2020



Trust is the
cornerstone
of all our
projects

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Remedial Action Plan - Addendum 1

Prepared for
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1. Introduction

1.1. General

Coffey Services Australia Pty Ltd (Coffey) was engaged by Richard Crookes Constructions (RCC) to prepare an Addendum to the Remedial Action Plan (RAP) for the Sydney Modern development site located on Lincoln Crescent, Woolloomooloo NSW (‘the site’).

1.2. Background

The Sydney Modern development is a planned major extension of the existing Art Gallery of NSW. The expansion is a separate building located north of the Eastern Distributor Motorway (EDM) in an area largely occupied by a disused Navy fuel bunker that was excavated into the hillside in the 1930s. The proposed gallery building will include several levels with different footprints that will involve further excavation west of the bunker adjacent to the EDM. The location and extent of the development boundary (the ‘site’) are shown on Figure 1.

Richard Crookes Constructions (RCC) has been appointed by Infrastructure NSW (INSW) to implement the development. RCC engaged Coffey Services Australia Pty Ltd (Coffey) to provide advice to manage ground contamination issues, amongst other advice, within the site. As part of this commission, Coffey developed the following document to manage contamination during the development:

- Coffey (Oct 2019); *Remedial Action Plan: Sydney Modern Gallery, Art Gallery Road, Sydney NSW* (Ref: SYDGE234348-EA RAP for Construction; dated 15th October 2019) (the ‘RAP’)

The RAP was developed using data from several previous phases of investigation which identified one remediation area and other areas that required additional investigation to characterise suspected contamination.

1.3. Purpose and Objectives of the RAP Addendum

This RAP Addendum is relevant to land within the northern and western edges of the site to the west of the pile retaining wall (referred to as the Western Wedge and North of Tank areas) where impact has been identified requiring remediation. During detailed design, the presence of a buried High Voltage (HV) electricity cable was recognised which prevents the strategy outlined within the RAP being implemented.

The purpose of this document is to outline the aspects of the RAP that require amendment and the revised strategy to manage contamination during the site’s development. This document is not intended to supersede the RAP but rather present some key changes to specific components of the RAP. This RAP Addendum proposes the following amendments to the measures outlined within the RAP:

- A revised strategy to mitigate risks from contaminated soil in the easement of a HV electricity cable buried parallel to Art Gallery Road.
- A remediation strategy to mitigate risks from asbestos containing materials (ACM) in fill encountered within the North of Tank area.
- A methodology for validation of the remediation area.
- Aspects of site management during, and post-implementation of the remediation works.

Further investigation of fill materials was proposed in two areas where uncertainty remained regarding contamination conditions. This Addendum describes how the detailed design of Sydney Modern requires removal of most of this fill material, making the investigations proposed in the RAP redundant.

2. Site Information

2.1. Site Description and Setting

The site covers an area of 3.95 hectares which is situated between Art Gallery Road/Mrs Macquarie's Road to the west, Lincoln Crescent to the east, the existing Art Gallery of NSW to the south. The northern boundary is formed by a stepped footpath that extends from Lincoln Crescent to Mrs Macquarie Road. The site includes a 'land bridge' that covers the EDM. The site title descriptors are presented in the RAP (Coffey, Oct 2015), and the site boundary is shown on Figure 1.

The site currently comprises an enclosed construction site that slopes down in a north-easterly direction towards Woolloomooloo Bay, located 80m from the site boundary at its closest point. Disused Navy fuel tanks exist within the eastern half of the site and comprise an enclosed space with concrete floor, walls and roof, which is supported by a grid of columns within the tank. The footprint and some structural elements of these fuel tanks will be retained to form part of the development.

For management purposes, the site has been divided into five areas which are shown Figure 1. These areas are known as Land Bridge (i.e. area above the EDM), Oil Tank (i.e. area above the former Navy fuel tank), South of Tank, North of Tank and Western Wedge.

The local geology comprises the Hawkesbury Sandstone Formation which is overlain by fill materials of various thickness and composition. Foreign materials including tile, brick, concrete, glass, coal and bitumen materials were encountered during previous investigations. Fragments of asbestos cement sheeting (Bonded ACM) have recently been discovered within fill in the Western Wedge, North of Tank and Oil Tank (on top of the roof) areas.

Groundwater was reported to occur at depths between 1.6 and 2.0mbgs (0.4m and 1.3m AHD) along Lincoln Crescent. No information on depth to groundwater is available for the majority of the site, however the presence of the EDM Tunnel is expected to result in substantial depression of groundwater levels across much of the site. Groundwater is expected to flow in a northeasterly direction towards Woolloomooloo Bay.

2.2. Site History

A summary of the historic use of the site is provided within the RAP (Coffey, Oct 2015). The following summarises the key historic land uses of the site:

- The art gallery building was originally constructed between 1896 and 1909 and has been extended several times. Land immediately surrounding the gallery appears to have remained in use for either parkland or roadways.
- The Navy fuel bunkers were constructed during the 1930s and remained in use until the 1990s, when they were decommissioned.
- The Cahill Expressway was built in the late 1950s to early 1960s and most likely will have involved the import of fill to assist with construction. The source of fill is not known but likely to comprise sandstone excavated locally from along the expressway alignment.

2.3. Contamination Requiring Remediation

2.3.1. Previous Conclusion about Remediation

The RAP identified one remediation area, and other areas of the site where further investigation (around location BH3 and in a disturbed area immediately west of the North Tank) which have the potential for unacceptable contamination but where existing information is insufficient to determine the need for remediation or otherwise. Table 2.1 summarises the existing remediation and investigation scope outlined within the RAP.

Table 2.1: Summary of Existing Remediation and Investigation Scope outlined in RAP

| | |
|----------------------------|--|
| Remediation Area | Removal of PAH Impacts and Odorous Fill around BH2 and BH4 The RAP identified contamination warranting remediation in fill materials in an area 25 m by 12 m within the Western Wedge adjacent to Art Gallery Road and on the northern side of the EDM Tunnel. Contamination comprised carcinogenic polycyclic aromatic hydrocarbons (PAH) and fill with strong hydrocarbon odours. The RAP recommended excavation of this fill material, typically 1.5 to 2 m deep, and disposal off-site to landfill as waste. |
| Investigation Areas | Supplementary Investigation of Odorous Ground around BH3 Odorous fill material was encountered in BH3 at approximately 1mbgs. Further investigation was recommended to confirm the presence of contamination and delineate the extent of contamination requiring remediation. |
| | Supplementary Investigation of Disturbed Ground The land immediately west of the North Tank was identified as being disturbed during construction of the tanks, but the current topography (steepness) precluded adequate investigation without substantial earthworks to provide suitable working areas. The supplementary investigation was recommended to reduce uncertainty about potential contamination in this area. |

The location of the Remediation and Investigation Areas is shown on Figure 1.

2.3.2. Basis for Modifying the Remediation Scope

The following aspects of the site and proposed development has triggered the need to modify the scope of remediation works:

- An existing Ausgrid HV electrical cable is buried parallel to Art Gallery Road in the western half of the remediation area at a depth of approximately 0.8m below the current surface. Relocation of the HV cable is not feasible.
- Data from recent investigations indicate that soils impacted with PAH extend in a northern direction beyond the boundary of the Remediation Area defined within the RAP. Samples collected from SW01 at 0.9mbgs and SW05 at 0.2mbgs (refer Figure 1) reported concentrations of carcinogenic PAH (BaP TEQ) above the corresponding health investigation level (HIL) for recreational land uses. Conversely, samples collected from SW04 reported concentrations of BaP TEQ below the recreational HIL. The presence of the HV electrical cable and a mature tree restricts investigation in this area.
- Approximately 20% of the remediation area is on the eastern side of the pile retaining wall and requires removal.
- The discovery of asbestos impacted fill (Bonded ACM) within the North of Tank area on the western side of the retaining wall. This asbestos impact extends into a tree protection zone along the western edge of the North of Tank area which means that unless protected trees can be removed, the asbestos impacted fill beneath those trees remains.

2.3.3. Basis for Modifying the Investigation Scope

The proposed development includes a contiguous pile retaining wall in the North of Tank and Western Wedge areas as shown as a black dashed line in Figure 1. Existing topsoil and fill material from the eastern side of that wall will be removed entirely to provide a void with a floor level of approximately 9mAHD to allow future construction. Consequently, the majority of the soil from within the two areas where further investigation was required will now be removed entirely. As such, further investigations outlined within the RAP has no purpose and therefore will no longer be completed.

It is assessed that the potential impact of hydrocarbon odours at 1 m depth in fill on the western side of the pile wall is negligible because this area will remain open to the air and potential for odour intrusion into the gallery space is negligible due to the presence of the pile wall. Exposure risks via direct contact pathways will be managed through the placement of a Cover Layer, as described within Table 3.1.

2.4. Amended Conceptual Site Model

The following table presents an amended Conceptual Site Model based on the known contamination issues identified at the site:

Table 2.2: Amended Conceptual Site Model

| Contamination Sources | Transport Mechanisms & Plausible Exposure Pathways | Receptors |
|---|---|--|
| Remediation Area: Fill material around BH2 and BH4 (Western Wedge) containing elevated carcinogenic PAH and strong hydrocarbon odours to depths up to 2m below the previous surface. | <ul style="list-style-type: none"> • Dermal contact, ingestion or inhalation of impacted soil | <ul style="list-style-type: none"> • Construction Workers • Future Site Users • Future workers completing subsurface maintenance works |
| Bonded ACM identified within fill in the North of Tank area west of the pile retaining wall at various depths. | <ul style="list-style-type: none"> • Disturbance of fill during construction or future subsurface works • Dispersion via wind • Inhalation of airborne respirable fibres | <ul style="list-style-type: none"> • Construction Workers • Future Site Users and public using the staircase immediately north of the site • Future workers completing subsurface maintenance works |

3. Amended Remediation Strategy

3.1. Preferred Remedial Strategy

Based upon a review of viable remedial options, construction information, and consultation with RCC and the Site Auditor, the preferred remedial strategy for the site is summarised below.

Table 3.1: Summary of Preferred Remedial Strategy

| Site Area | Preferred Remedial Strategy |
|---|---|
| Remediation Area: Fill material around BH2 and BH4 (Western Wedge) | <ul style="list-style-type: none"> • Excavate and remove impacted fill materials within the Remediation Area east of the contiguous pile wall and dispose offsite as waste. • Fill material within the Remediation Area that is west of the contiguous pile wall will be retained within the site beneath an appropriate Cover Layer that will be managed over the long term. Some excavation and off-site disposal of soil from this area may be required to achieve design levels to establish landscaping and pavements. • The extent of the Cover Layer for the Remediation Area is shown on Figure 2. |
| North of Tank | <ul style="list-style-type: none"> • Excavate and remove asbestos impacted fill materials east of the contiguous pile wall and dispose offsite as waste. • Fill material west of the contiguous pile wall will be retained within the site beneath an appropriate Cover Layer that will be managed over the long term. Some |

| Site Area | Preferred Remedial Strategy |
|-----------|---|
| | <p>excavation and off-site disposal of soil from this area may be required to achieve design levels.</p> <ul style="list-style-type: none"> The extent of the Cover Layer for the North of Tank Area is shown on Figure 3. |

Remediation excavation to remove impacted fill materials shall be completed in accordance with the procedures outlined within Section 8.4 of the RAP.

Soil wastes generated from the Western Wedge and North of Tank areas shall be assessed to classify the material as waste in accordance with the Waste Classification Guidelines (NSW EPA, 2014) and the procedures outlined within Section 8.5 of the RAP.

3.2. Cover Layer

3.2.1. Cover Layer – Remediation Area (Western Wedge)

The Remediation Area shall form part of a landscaped strip between the Sydney Modern building and Art Gallery Road. Following regrading works (mostly addition of fill) required to achieve the design level, historical fill within the Remediation Area shall be covered with materials to mitigate health risks future site users. The presence and shallow depth of the HV cable restricts the thickness of the Cover Layer that can be placed in the Remediation Area. As such, it is proposed that this Cover Layer utilise landscaping and pavements proposed within these areas to separate impacted fill from future site users.

Based on the concept landscape design plans, the Remediation Area will be covered by a combination of hard pavement and soft landscaped materials and shown in Figure 2. This area is designed for movement of pedestrians and not as a location where users would occupy for long periods (a few hours). The Cover Layers shall be formed as follows:

- **For new soft landscaping areas:** a high tensile strength biaxial geogrid with nominal aperture size of 30-40mm¹ shall be anchored over historical fill material, and covered by a minimum 200mm thick clean validated imported soil as planting media and mulch layer. Landscape design plans require 'shrub and groundcover mass planting' which will restrict site visitors accessing the soil, and limit the potential for eroding the planting media, once the plants are established.
- **For existing mature trees retained in the development:** placement of a high tensile strength biaxial geogrid with nominal aperture size of 30-40mm over the root zone that requires protection, and place a nominal 100mm thick layer of mulch. The edge of the root zone shall be surrounded by a proprietary hard edging material specified by the Landscape Architect that aims to contain the mulch cover over the root zone and separates these areas from other cover materials.
- **For hard pavement areas:** a high tensile strength biaxial geogrid with nominal aperture size of 30-40mm shall be placed over historical fill material, covered by a 100mm thick layer of clean validated imported pavement subbase material.
- **Services:** Underground services (such as lighting) shall be installed within clean validated imported aggregate or sand. A high visibility geotextile marker layer (i.e. Bidim® A34 or equivalent specification) shall be placed to line the service trench to separate the historical fill from the imported aggregate/sand. The service trench shall be covered by a minimum 200mm thick clean validated imported soil if in soft landscaped area, or 100mm thick pavement bedding if in a hard

¹ The geogrid has been proposed to act as a marker layer that would not hinder the growth of plants whilst providing reasonable resistance to hand tools typically used by gardeners and discouraging unintentional deep excavation. For hard paved areas, the geogrid also improves the bearing capacity and reduces the required thickness of the pavement subbase which is important given the constraints imposed on cover materials placed over existing HV cables.

pavement area. Service trenches would not be permitted within the easement of the HV cable without prior consultation with Ausgrid.

3.2.2. Cover Layer – North of Tank Area

Based on the landscape design information provided by RCC, this area will be covered by a combination of hard pavement and soft landscaped materials. The extent of the Cover Layer proposed in the North of Tank area is shown on Figure 3.

The Cover Layers shall be formed as follows:

- **For soft landscaping areas:** a high tensile strength biaxial geogrid with nominal aperture size of 30-40mm shall be anchored over historical fill material and covered by a minimum 200mm thick clean validated imported soil as planting media. The steep topography of this area will limit site visitors accessing the soil beneath planting. The geogrid will enable plants to stabilise the soil and minimise erosion.
- **For existing mature trees retained in the development:** placement of a high visibility geotextile marker layer (i.e. Bidim® A34 or equivalent specification) over the root zone that requires protection, and place a nominal 100mm thick layer of mulch. The edge of the root zone shall be surrounded by a proprietary hard edging material specified by the Landscape Architect that aims to contain the mulch cover over the root zone and separates these areas from other cover materials. The trees remaining within the North of Tank Area are identified on Figure 3.
- **For hard pavement areas:** A high visibility geotextile marker layer (i.e. Bidim® A34 or equivalent specification) shall be placed over historical fill material, covered by a 100mm thick layer of clean validated imported pavement subbase material.
- **Services:** Underground services (such as lighting) shall be installed within clean validated imported aggregate or sand. A high visibility geotextile marker layer (i.e. Bidim® A34 or equivalent specification) shall be placed to line the service trench to separate the historical fill from the imported aggregate/sand. The service trench shall be covered by a minimum 200mm thick clean validated imported soil if in soft landscaped area, or 100mm thick pavement bedding if in a hard pavement area.

3.2.3. Contingent Remedial Strategy

In the event that the preferred remedial strategy becomes impractical, or less feasible as a result of unexpected ground conditions, depth of fill, steep topography etc., the contingent strategy would entail the removal of contaminated fill. Such excavations would require validation in accordance with the procedures outlined within Section 10.3 of the RAP. Waste generated from these excavations would require assessment as per the process outlined within Section 8.5 of the RAP. The extent of remedial excavations shall be recorded and presented with validation and waste classification data within the validation report.

3.3. Validation Requirements for Cover Layer

Section 10 of the RAP outlines the validation plan for implementing remediation works at the site. The following additional measures apply to validate the installation of Cover Layer outlined above.

3.3.1. Cover Layer Materials

Section 10.3.4 of the RAP sets out the requirements to assess the suitability of materials imported for use during the development. The following requirements are proposed to validate materials that will be used within Cover Layers used within the site.

- Soils imported as landscaped planting media for use within the Cover Layer shall be a commercial product that has been assessed by the Environmental Consultant to confirm it is suitable for its intended use. This will include periodic observations of materials delivered to site,

supported by the analysis of representative samples where the supplier cannot provide appropriate material specification.

- Imported aggregate used within the Cover Layer will be required to be classified a material compliant with a relevant resource recovery order or virgin excavated natural material (VENM) and have appropriate certification.
- Mulch will be required to be a commercial product and have a specification that meets the NSW EPA Mulch Exemption.
- Due to the potential for ACM to be encountered in fill materials on site and the lack of space to store fill materials, site won materials shall not be used to construct Cover Layers within the site unless appropriate validation and secure storage of such material is provided.

3.3.2. Cover Layer Inspections and Survey

The Environmental Consultant shall attend site periodically to assess whether the Cover Layer meets the requirements outlined in Section 3.2. Photographs shall be taken to support observations to demonstrate material type and cover thickness.

Topographic surveys shall be carried out following placement of the geogrid and geotextile marker layers and at the completion of landscaping so that the depth of capping can be recorded for inclusion in the Validation Report and the Environmental Management Plan (EMP).

3.3.3. Validation Report

The Validation Report outlined within Section 12.5 of the RAP shall collate records relating to the installation of the Cover Layer, including:

- Information and observations to demonstrate the suitability of materials used within the Cover Layer.
- Topographic survey results showing the extent and thickness of the Cover Layer, supported by inspection notes/photographs taken by the Environmental Consultant during periodic inspections.
- Scope and outline requirements for the management of the Cover Layer over the long term.

3.4. On-going Management

Isolation of historical fill materials within designated areas within the site requires long-term maintenance of the Cover Layer. An EMP will be prepared by a suitably qualified Environmental Consultant following installation of the Cover Layer which succinctly describes the nature and location of contamination remaining on-site that requires management, states what the objectives of the plan are, how contaminants will be managed, who will be responsible for the plan's implementation and over what time frame actions specified in the plan will take place.

It is important that the actions set out within the EMP are enforceable. It is intended that the EMP will form part of the overall Facility Management Plan for Sydney Modern and that nominated roles for Sydney Modern facility will be responsible for its implementation. It is also intended that the EMP is recorded on the site's Planning Certificate issued under Section 10.7 of the EP&A Act 1979.

The EMP shall include the following:

- A summary of the location, nature and types of contamination remaining within the site.
- The assumptions on which exposure settings and risk management protocols are based.
- A long-term maintenance and monitoring/inspection programme to maintain the effectiveness of the Cover Layers.
- Identify persons responsible for the implementation of the EMP.
- Outline controls to mitigate potential health risks during future excavations and subsurface ground works that may disturb the capping layer.

- An unexpected-finds protocol.

The EMP will be required to be reviewed and endorsed by a NSW EPA accredited Site Auditor.

4. Conclusion

Detailed design for the Sydney Modern development has identified constraints to implement the strategy outlined within the RAP. This document outlines those constraints and presents a revised strategy to manage contamination that will be retained on site during the development. The revised strategy relies on the placement of engineered Cover Layers to isolate residual contamination from future site users. A validation plan outlines the procedures to collect information to demonstrate that the Cover Layers have been constructed in accordance with this RAP Addendum.

The isolation of historical fill materials requires maintenance of the Cover Layers over the long term. An EMP is required that documents the location and extent of the Cover Layers within the site, and procedures to maintain this cover.

Subject to the successful implementation of the measures detailed in the RAP, RAP Addendum, and EMP, it is considered that the site will be suitable for the proposed commercial and public open space land-uses.

Important information about your Coffey Environmental Report

Introduction

This report has been prepared by Coffey for you, as Coffey's client, in accordance with our agreed purpose, scope, schedule and budget.

The report has been prepared using accepted procedures and practices of the consulting profession at the time it was prepared, and the opinions, recommendations and conclusions set out in the report are made in accordance with generally accepted principles and practices of that profession.

The report is based on information gained from environmental conditions (including assessment of some or all of soil, groundwater, vapour and surface water) and supplemented by reported data of the local area and professional experience. Assessment has been scoped with consideration to industry standards, regulations, guidelines and your specific requirements, including budget and timing. The characterisation of site conditions is an interpretation of information collected during assessment, in accordance with industry practice,

This interpretation is not a complete description of all material on or in the vicinity of the site, due to the inherent variation in spatial and temporal patterns of contaminant presence and impact in the natural environment. Coffey may have also relied on data and other information provided by you and other qualified individuals in preparing this report. Coffey has not verified the accuracy or completeness of such data or information except as otherwise stated in the report. For these reasons the report must be regarded as interpretative, in accordance with industry standards and practice, rather than being a definitive record.

Your report has been written for a specific purpose

Your report has been developed for a specific purpose as agreed by us and applies only to the site or area investigated. Unless otherwise stated in the report, this report cannot be applied to an adjacent site or area, nor can it be used when the nature of the specific purpose changes from that which we agreed.

For each purpose, a tailored approach to the assessment of potential soil and groundwater contamination is required. In most cases, a key objective is to identify, and if possible quantify, risks that both recognised and potential contamination pose in the context of the agreed purpose. Such risks may be financial (for example, clean up costs or constraints on site use) and/or physical (for example, potential health risks to users of the site or the general public).

Limitations of the Report

The work was conducted, and the report has been prepared, in response to an agreed purpose and scope, within time and budgetary constraints, and in reliance on certain data and information made available to Coffey.

The analyses, evaluations, opinions and conclusions presented in this report are based on that purpose and scope, requirements, data or information, and they could change if such requirements or data are inaccurate or incomplete.

This report is valid as of the date of preparation. The condition of the site (including subsurface conditions) and extent or nature of contamination or other environmental hazards can change over time, as a result of either natural processes or human influence. Coffey should be kept apprised of any such events and should be consulted for further investigations if any changes are noted, particularly during construction activities where excavations often reveal subsurface conditions.

In addition, advancements in professional practice regarding contaminated land and changes in applicable statutes and/or guidelines may affect the validity of this report. Consequently, the currency of conclusions and recommendations in this report should be verified if you propose to use this report more than 6 months after its date of issue.

The report does not include the evaluation or assessment of potential geotechnical engineering constraints of the site.

Interpretation of factual data

Environmental site assessments identify actual conditions only at those points where samples are taken and on the date collected. Data derived from indirect field measurements, and sometimes other reports on the site, are interpreted by geologists, engineers or scientists to provide an opinion about overall site conditions, their likely impact with respect to the report purpose and recommended actions.

Variations in soil and groundwater conditions may occur between test or sample locations and actual conditions may differ from those inferred to exist. No environmental assessment program, no matter how comprehensive, can reveal all subsurface details and anomalies. Similarly, no professional, no matter how well qualified, can reveal what is hidden by earth, rock or changed through time.

The actual interface between different materials may be far more gradual or abrupt than assumed based on the facts obtained. Nothing can be done to change the actual site conditions which exist, but

steps can be taken to reduce the impact of unexpected conditions.

For this reason, parties involved with land acquisition, management and/or redevelopment should retain the services of a suitably qualified and experienced environmental consultant through the development and use of the site to identify variances, conduct additional tests if required, and recommend solutions to unexpected conditions or other unrecognised features encountered on site. Coffey would be pleased to assist with any investigation or advice in such circumstances.

Recommendations in this report

This report assumes, in accordance with industry practice, that the site conditions recognised through discrete sampling are representative of actual conditions throughout the investigation area. Recommendations are based on the resulting interpretation.

Should further data be obtained that differs from the data on which the report recommendations are based (such as through excavation or other additional assessment), then the recommendations would need to be reviewed and may need to be revised.

Report for benefit of client

Unless otherwise agreed between us, the report has been prepared for your benefit and no other party. Other parties should not rely upon the report or the accuracy or completeness of any recommendation and should make their own enquiries and obtain independent advice in relation to such matters.

Coffey assumes no responsibility and will not be liable to any other person or organisation for, or in relation to, any matter dealt with or conclusions expressed in the report, or for any loss or damage suffered by any other person or organisation arising from matters dealt with or conclusions expressed in the report.

To avoid misuse of the information presented in your report, we recommend that Coffey be consulted before the report is provided to another party who may not be familiar with the background and the purpose of the report. In particular, an environmental disclosure report for a property vendor may not be suitable for satisfying the needs of that property's purchaser. This report should not be applied for any purpose other than that stated in the report.

Interpretation by other professionals

Costly problems can occur when other professionals develop their plans based on misinterpretations of a report. To help avoid misinterpretations, a suitably qualified and experienced environmental consultant should be retained to explain the implications of the report to other professionals referring to the report and then review plans and specifications produced to see how other professionals have incorporated the report findings.

Given Coffey prepared the report and has familiarity with the site, Coffey is well placed to provide such

assistance. If another party is engaged to interpret the recommendations of the report, there is a risk that the contents of the report may be misinterpreted and Coffey disowns any responsibility for such misinterpretation.

Data should not be separated from the report

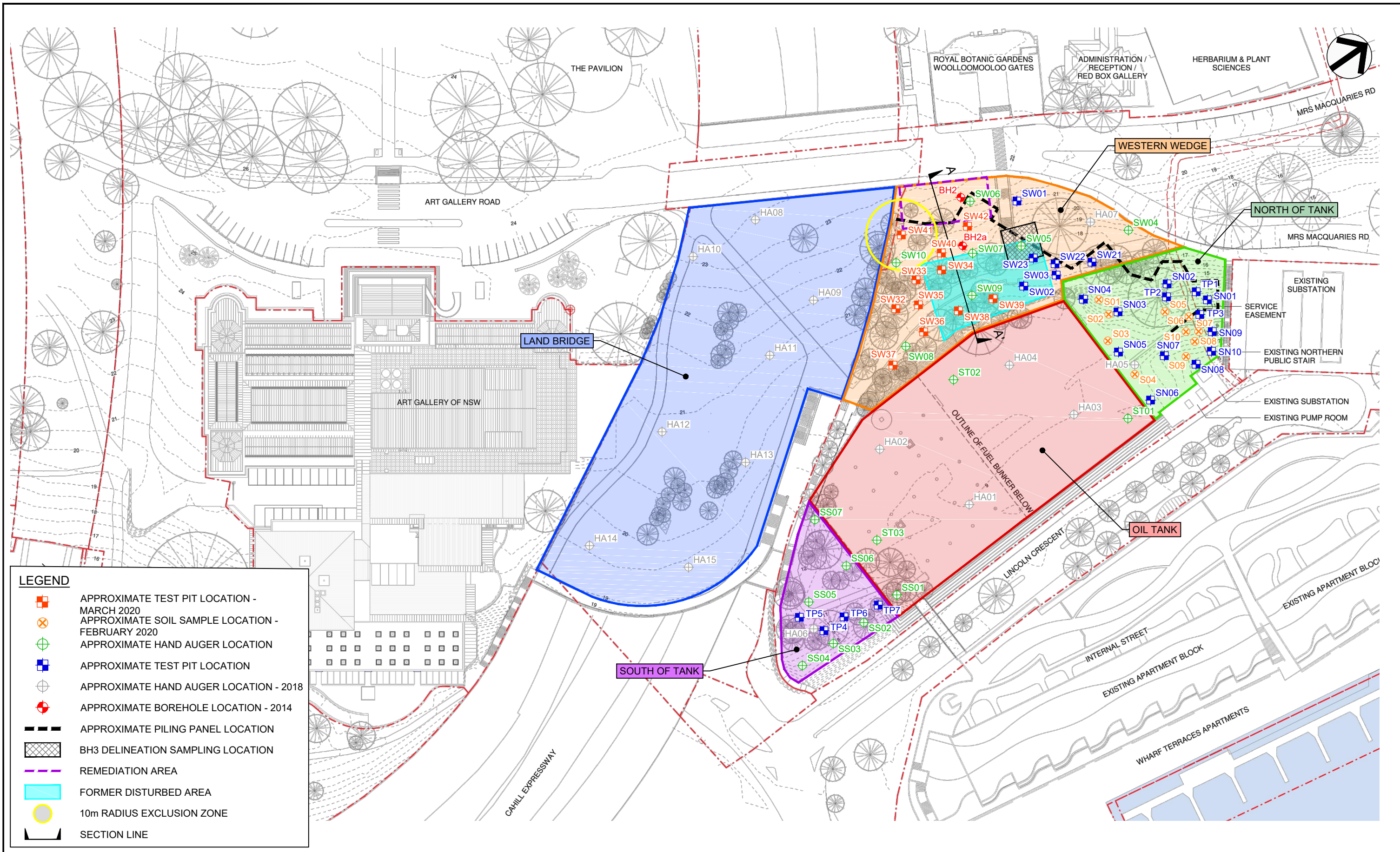
The report as a whole presents the findings of the site assessment and the report should not be copied in part or altered in any way. Logs, figures, laboratory data, drawings, etc. are customarily included in our reports and are developed by scientists or engineers based on their interpretation of field logs, field testing and laboratory evaluation of samples. This information should not under any circumstances be redrawn for inclusion in other documents or separated from the report in any way.

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Responsibility

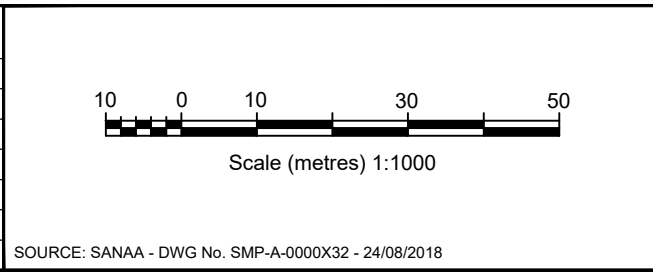
Environmental reporting relies on interpretation of factual information using professional judgement and opinion and has a level of uncertainty attached to it, which is much less exact than other design disciplines. This has often resulted in claims being lodged against consultants, which are unfounded. As noted earlier, the recommendations and findings set out in this report should only be regarded as interpretive and should not be taken as accurate and complete information about all environmental media at all depths and locations across the site.

Appendix A - Figures



PLOT DATE: 23/03/2020 12:53:28 PM DWG FILE: F:\1. PROJECTS\4. SYD-GEO\TECHNICS\019\SYDGE234348 RCC SYDNEY MODERN\13. CAD\754-SYDGE234348-REV.DWG

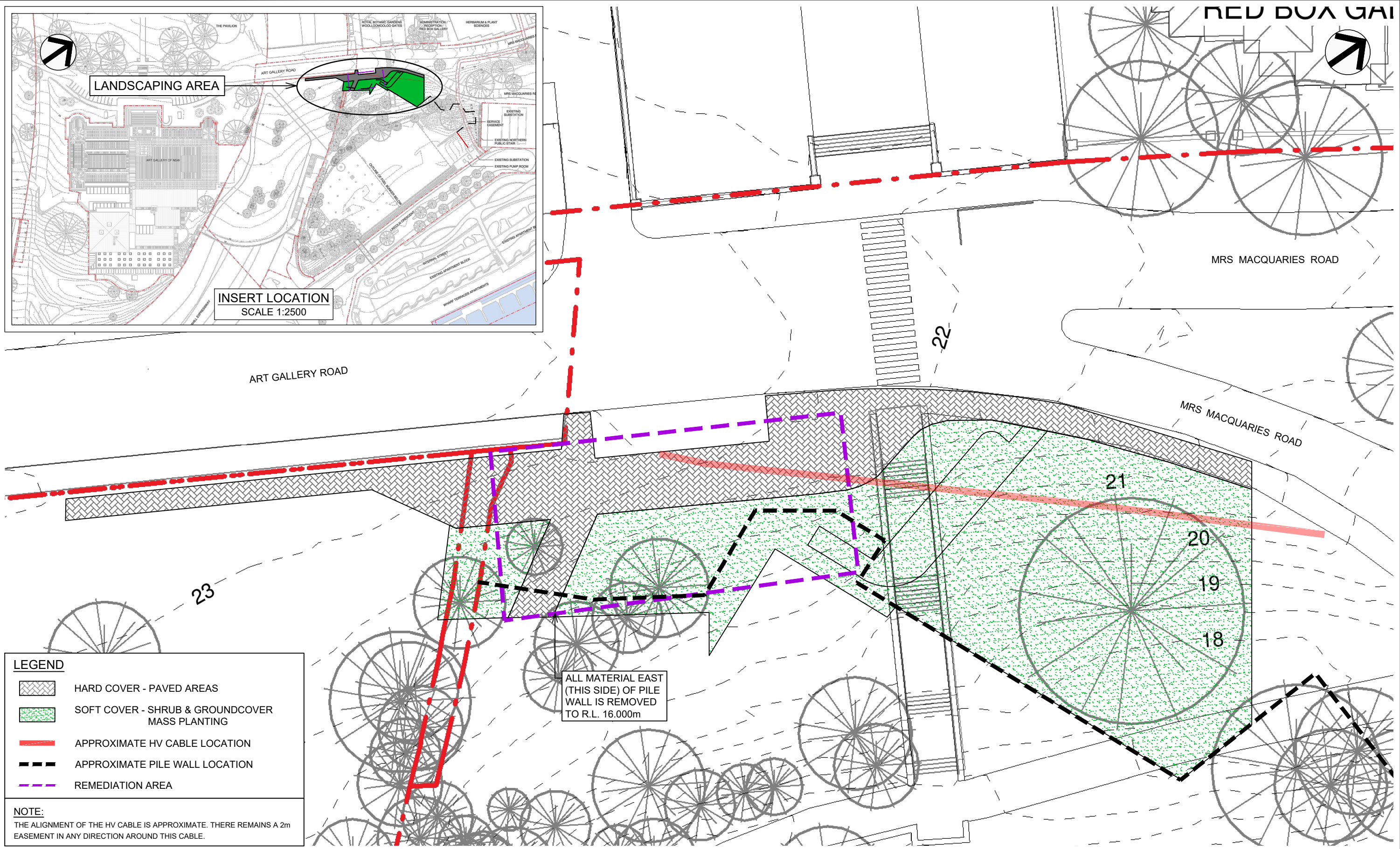
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| B | ADDITIONAL TEST PITS | AW | ML | 23/03/20 |
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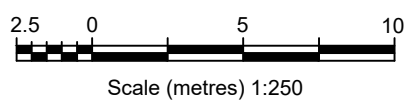


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| project: | ENVIRONMENTAL MANAGEMENT PLAN SYDNEY MODERN PROJECT WOOLLOOMOOLOO, NSW | | |
| title: | SITE LAYOUT PLAN | | |
| project no: | 754-SYDGE234348 | figure no: | FIGURE 1 |
| rev: | B | | |



PLOT DATE: 17/04/2020 3:03:45 PM DWG FILE: F:\1 - PROJECTS\4 - SYD-GEOTECHNICS\2019\SYDGE234348 RCC SYDNEY MODERN\13_CAD\754-SYDGE234348-EH.DWG

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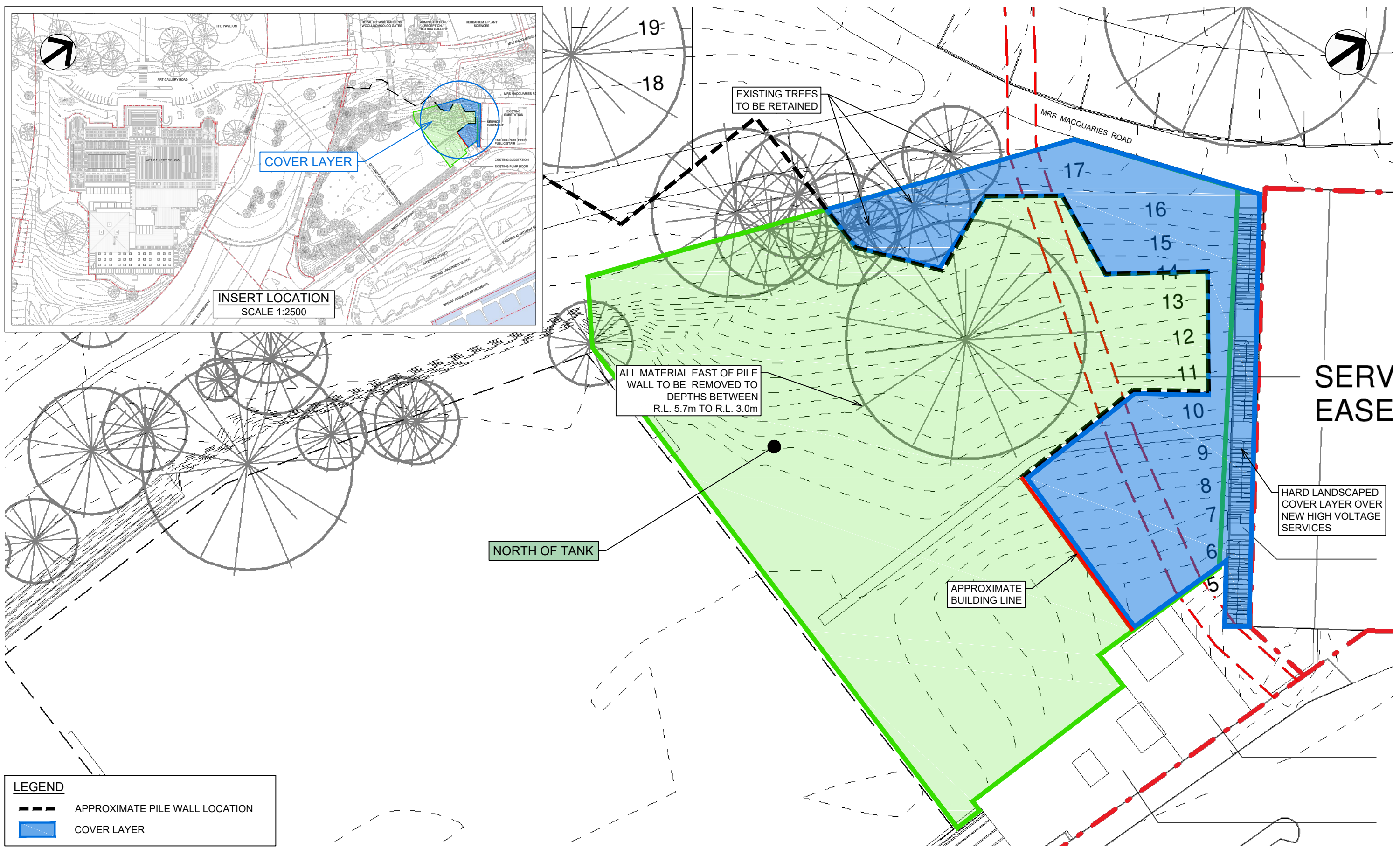


SOURCE: SANAA - DWG No. SMP-A-0000X32 - 24/08/2018

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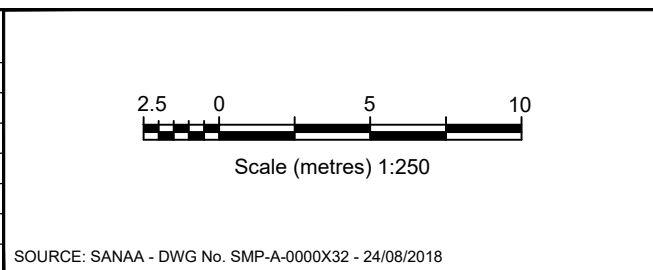
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| title: | COVER LAYER - WESTERN WEDGE AREA | | |
| project no: | 754-SYDGE234348-EH | figure no: | FIGURE 2 |
| rev: | A | | |



LEGEND

- APPROXIMATE PILE WALL LOCATION
- COVER LAYER

| no. | description | drawn | approved | date |
|-----|----------------|-------|----------|------|
| A | ORIGINAL ISSUE | | | |
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| drawn | ML / AW |
| approved | - |
| date | 05/05/2020 |
| scale | AS SHOWN |
| original size | A3 |



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|-------------|---|
| client: | RICHARD CROOKES CONSTRUCTIONS |
| project: | SYDNEY MODERN PROJECT WOOLLOOMOOLOO, NSW |
| title: | COVER LAYER - NORTH TANK AREA |
| project no: | 754-SYDGE234348-EH |
| figure no: | FIGURE 3 |
| rev: | A |

PLOT DATE: 5/05/2020 12:45:15 PM DWG FILE: P11 - PROJECT34 - SYD-GEOTECHNICS\2019\SYDGE234348 RCC SYDNEY MODERN\13_CAD\754-SYDGE234348-EH.DWG

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