

**UNEXPECTED FINDS PROTOCOL
PREPARED FOR
COBRA WASTE SOLUTIONS PTY LTD
30 LOFTUS ROAD, YENNORA NSW 2161**

Prepared for: Cobra Waste Solutions Pty Ltd

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Attachments

Attachment 1: Aboriginal Cultural Heritage Assessment Report by McCardle Cultural Heritage





1. INTRODUCTION

This Unexpected Finds Protocol for contamination has been prepared for Cobra Waste Solutions Pty Ltd for the site located at 30 Loftus Road, Yennora NSW 2161. It has been prepared in conjunction with a Construction Environmental Management Plan (CEMP) Ref: 201156-06_CEMP_Rev1 to satisfy condition B34 of consent conditions SSD-9320662 , required prior to the commencement of construction, operations and post-operations for the facility.

This condition states that:

B43. Prior to the commencement of construction, the Applicant must prepare an unexpected contamination finds procedure to ensure that potentially contaminated material is appropriately managed. The procedure must form part of the of the CEMP in accordance with condition C2 and must ensure any material identified as contaminated is disposed of in accordance with the POEO Act and its associated regulations. Details of the final disposal location and the results of any associated testing must be submitted to the Planning Secretary prior to removal of the contaminated material from the site.

The purpose of the unexpected finds protocol is to facilitate the process of dealing with contamination, suspect material or Aboriginal objects found on site during the excavation/construction phase, and aims to:

1. Facilitate the process of dealing with unauthorised or non-conforming incoming waste.
2. Facilitate the process of dealing with contamination or suspect material found on site during any excavations or construction.
3. Provide guidance on what to do if any Aboriginal cultural material or unrecorded Aboriginal sites are discovered during the works.

All Aboriginal objects and places are protected under the *Aboriginal and Torres Strait Islander Heritage Protection Act 1984* and it is an offence to knowingly disturb an Aboriginal site without a consent permit issued by the Office of Environment and Heritage (OEH). Procedures in this protocol provide guidance on what to do should Aboriginal objects be discovered during the works.

1.1 SCOPE OF WORKS

The scope of this report is limited to the following:

- Define “unexpected find”, “suspect material” and “contamination” and describe how this material is identified;
- Provide a detailed step by step procedure for handling, treatment, on-site management and testing (if required) of unexpected finds;
- Prepare a flowchart of the above procedure for ease of use and training purposes; and
- Provide guidance on how to identify potential unexpected finds, and steps to take.



1.2 DEFINITIONS

The following definitions are of relevance:

Aboriginal ancestral remains

Human remains that may include the whole or part of the body of an Aboriginal person from the past.

Aboriginal objects

Physical objects that may include items such as stone, wood and shell artefacts that were used to make tools, weapons and implements. They could include fish traps, stone arrangements, middens, scarred or carved trees and sites of occupational fringe camps. (Office of Environment and Heritage).

Aboriginal Places

An area of land that has special significance to Aboriginal people. It can have spiritual, historical, social, educational, natural resource use or other type of significance to Aboriginal people. These places range from ceremonial sites to mountains and lagoons. (Office of Environment and Heritage)

Acid Sulfate Soil (ASS)

Acid sulfate soils (ASS) are those naturally occurring sediments and soils which contain sulfides, mainly iron sulfide and iron disulfide or their precursors. Exposure of these sulfides in the soil to oxygen – often as a result of drainage or excavation – can produce sulfuric acid, which may have a significant impact on the environment. (NSW EPA)

Acceptable wastes

Acceptable wastes include construction and demolition waste with some domestic waste such as general household waste or from renovations and is expected to include:

- Excavated material such as rock and soil;
- Waste asphalt, bricks, concrete, plasterboard, timber and vegetation;
- General non-recyclable waste

Asbestos

Asbestos is a group of naturally-occurring fibrous minerals that were used in many buildings during the 1980's. When disturbed, asbestos can generate fibres that are hazardous to human health. Breathing in asbestos fibres can lead to diseases such as asbestosis, lung cancer and mesothelioma. (NSW Government)

Contaminated Material

Materials that contain substances that are of sufficient concentration to potentially cause harm to human health or the environment. (EP&A Act)

Potential Acid Sulfate Soils (PASS)

Potential ASS are soils that contain iron sulfides or sulfidic materials that have not been exposed to air and thus are not oxidised. (NSW EPA).



Suspect material/Not accepted

Not accepted at the site are any contaminated or non-conforming wastes such as:

- Hazardous materials;
- Chemicals of any description;
- Asbestos;
- Fibro;
- Putrescible materials;
- Hazardous Liquid waste;
- Spent gas bottles;
- Fibreglass;
- Palm trees;
- Stumps;
- Batteries;
- Paint; and
- Any of the above mixed with accepted waste types.

Unexpected finds

For the purposes of this procedure, an “unexpected find” includes:

- Suspect materials identified by unusual staining, odour, discolouration or inclusions such as building rubble, asbestos, ash material, animal material etc. (NSW EPA); and
- Aboriginal object or place as defined above.



2. UNEXPECTED FINDS PROTOCOL

During the course of the construction works, inspections need to be undertaken of any disturbed material such as excavated soil.

An unexpected find includes:

Suspect materials identified by unusual staining, odour, discolouration or inclusions such as building rubble, asbestos, ash material, animal material etc.

There could be many kinds of “suspect material” encountered during excavation works including:

- Asbestos or other similar fibro material, gyprock or plasterboard;
- Buried wastes such as containers, drums, rubble, asphalt and other such items;
- Contaminated soil – identified by discolouration, staining or odour;
- Potential Acid Sulfate Soils (PASS) or Acid Sulfate Soils (ASS); and
- Aboriginal objects, places or remains.

If contaminated land is discovered and not controlled appropriately there is potential for the contamination to impact soil, water and human health during construction, including:

- Contaminant exposure risk to construction personnel and the general public
- Contaminant exposure to environmental receptors
- Cross contamination associated with the incorrect handling or disposal of spoil/unexpected finds
- Contamination of previously uncontaminated areas

If such material is encountered at any stage of excavation, earthworks or construction, then in order to ensure appropriate management, the following steps would be taken:

1. Cease work immediately. Do not touch the suspect material or object.
2. Contact the Principal Contractor and inform of findings.
3. Set up temporary barricades (tape, bunting, or temporary fencing) to segregate the material and prevent access to the area.
4. Install erosion and sediment controls if necessary. Such controls include hay bales, geotextile fences and sediment barriers to prevent rainwater from transferring the suspect material off site.
5. Cover any stockpiled material containing the suspect material with tarps or plastic sheeting.
6. Arrange inspection by a suitably qualified person to confirm identification of the suspect material. Sampling and testing (if required) will be undertaken as recommended by this consultant. In the event that the object is suspected to be an Aboriginal object a qualified archaeologist will need to confirm this and make further recommendations.
7. If any suspected human remains are discovered during any activity, you must notify the NSW Police and the NSW EPA's Environmental Line on 131 555 as soon as practicable and provide details of the remains and their location. Do not recommence work at that location unless authorised in writing by the NSW EPA.
8. If material is confirmed to be contaminated, a remedial action plan (RAP) may need to be prepared to deal with the material. Undertake recommendations outlined in the RAP.
9. If the material is not contaminated and poses no threat to the human health or the environment, the barricades can be removed and work can continue as normal.



10. Record details of any unexpected find in the incident register.

A flowchart that includes the steps above has been provided for guidance in Section 2.2. For specific instructions regarding the types of suspect material, information has been provided in the sub-sections following.

It should be noted that EPA must be notified if any contamination identified meets the trigger in the EPA Guidelines for the Duty to Report Contamination.

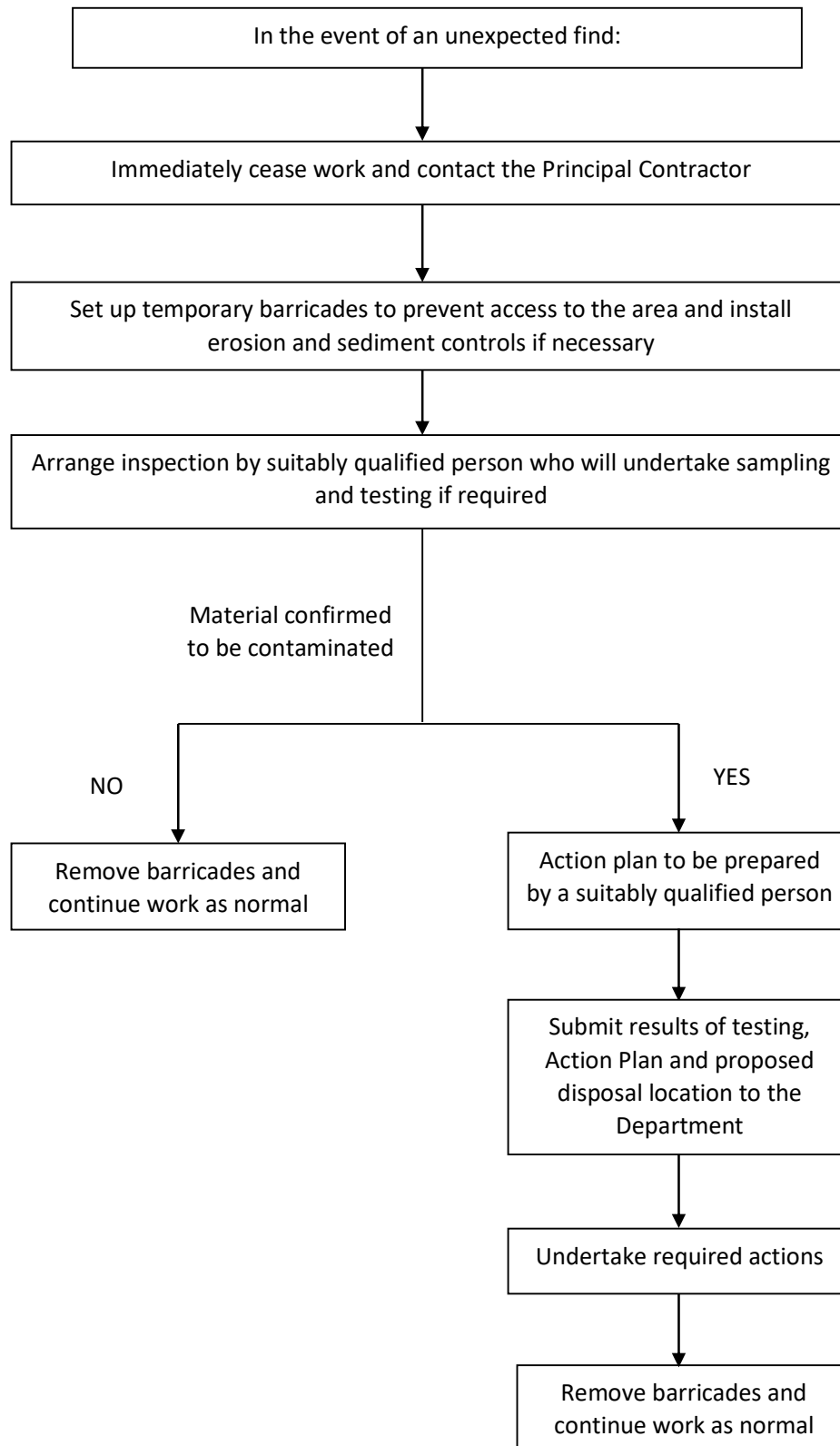
2.1 WASTE MANAGEMENT

All waste associated with unexpected finds will be management in accordance with the Waste Management Plan Ref: 201156-06_Waste_Rev1, with all waste:

- Appropriately segregated and stored;
- Classified in accordance with the NSW EPA Waste Classification Guidelines (2014);
- Tracked by the Project and evidence of receipt at an appropriately licensed waste facility;

It should be noted that details of the final disposal location and the results of any associated testing must be submitted to the Planning Secretary prior to removal of the contaminated material from the site.

2.2 UNEXPECTED FINDS FLOWCHART



2.2.1 Asbestos

Personnel trained in identification of suspect asbestos must be on site during excavation activities to observe material being excavated and check for the presence of asbestos. Excavator operators often have been trained to identify asbestos fragments in the material as it is dug up.

The minimum training requirement for personnel at the site undertaking asbestos identification is an “asbestos awareness course”.

Where suspect asbestos is identified in buildings to be demolished, a licenced asbestos contractor shall be used for removal and disposal of asbestos.

Where suspect asbestos fragments are identified in excavated material, the material must immediately be wetted down and this Unexpected Finds Protocol shall be followed.

Confirmation of asbestos containing material shall be undertaken by sampling and testing using a suitably qualified consultant.

Example photographs of unexpected finds of asbestos fragments are shown in Figure 2-1.

Figure 2-1: Asbestos examples.

Asbestos fragments found in excavated material



2.2.2 Buried Wastes

This section provides a visual guide to enable identification of buried wastes in the unlikely event that these are encountered. Example pictures of buried wastes are shown in Figure 2-2. Buried wastes can include:

- Contaminated material identified by discolouration, staining or odour;
- Buried demolition wastes such as concrete, rubble, asphalt, bricks, tiles, timber, glass, piping and plastics;
- Buried industrial wastes including chemical containers or drums, ash, scrap metal and paint; and
- Buried domestic wastes such as plastic bags, cans, cardboard, paper, fabrics and food wastes.

Figure 2-2: Buried waste examples.

Buried Wastes



2.2.3 Contaminated Soil

Contaminated soil can be identified by discolouration, staining and/or unpleasant or unusual odour. Examples of potentially contaminated soils are provided in Figure 2-3.

If these attributes are encountered during excavation, the Principal Contractor needs to be informed immediately upon the find and a decision needs to be made as to whether the issue requires further investigation. In addition, in the event of observing contaminated soils/ground during excavation work, site supervisor and construction team need to document in site diary records, soil during excavations for any indicators of contamination.

Indicators of potential contamination include:

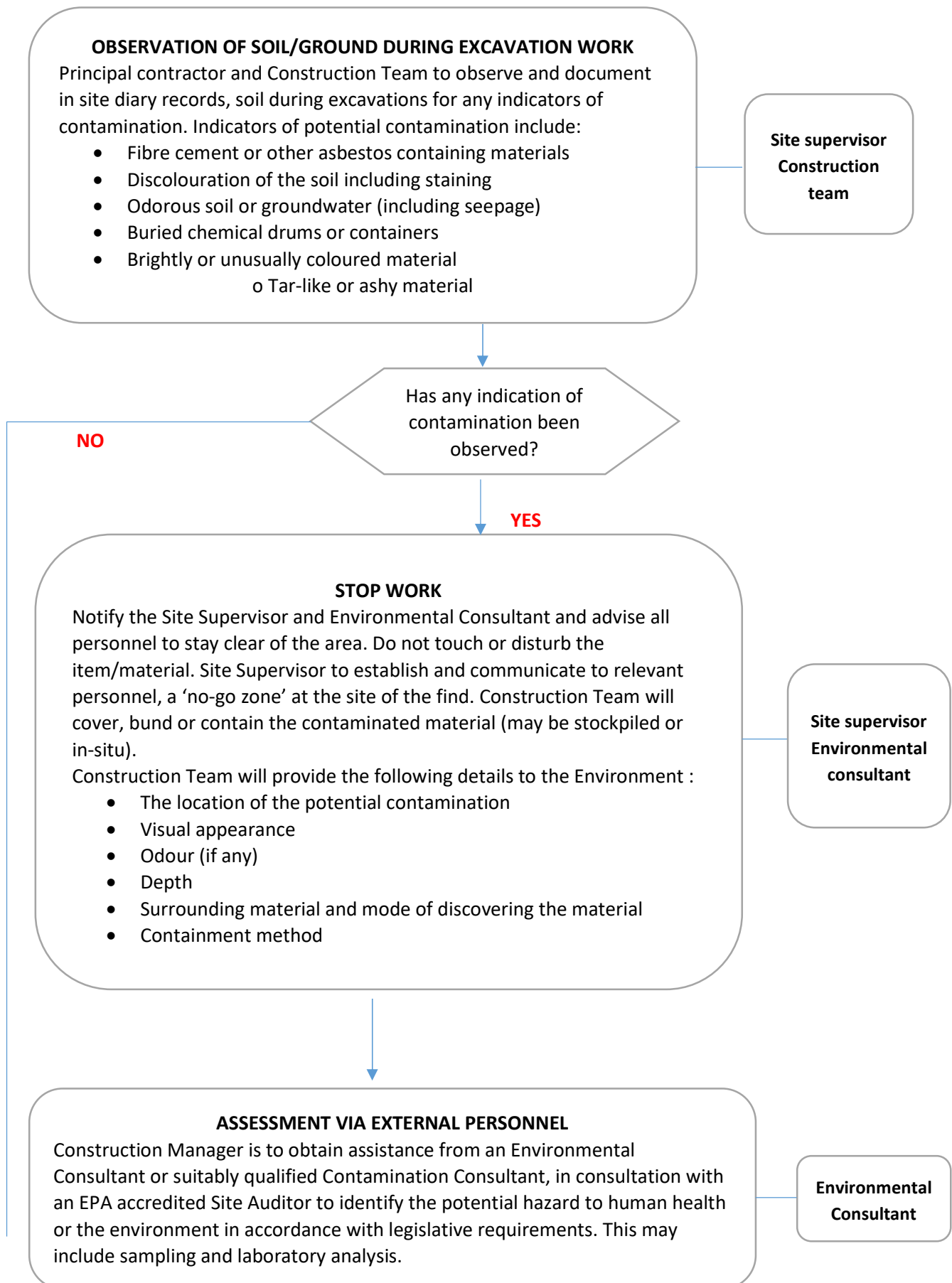
- Fibre cement or other asbestos containing materials
- Discolouration of the soil including staining
- Odorous soil or groundwater (including seepage)
- Buried chemical drums or containers or brightly or unusually coloured material
- Tar-like or ashy material

Figure 2-3: Potentially contaminated soil examples.

Potentially contaminated soil – is discoloured and often has an unpleasant or unusual odour



Figure 2-4: Unexpected Finds Protocol for Contaminated Soil





MANAGEMENT AND IMPLEMENT STRATEGY

Construction Team and Environment Team will:

- Develop and implement a plan, in coordination with the Contamination Consultant, the EPA accredited Site auditor
- After the classification of the find, obtain any further approvals required to handle the find accordingly.
- Should the find require removal off-site, review waste management requirements to ensure disposal at facility licenced to accept the contaminated waste.
- Maintain waste records for auditing/validation purposes in accordance with the requirements set out in the CEMP and relevant sub-plans.

The engaged Environmental Consultant will also ensure that any contaminated material that has been removed or left in-situ is managed appropriately in accordance with agreed plan.

The Environmental Consultant will document compliance and provide records to the owner or the owner's nominated representative, for validation purposes.

Construction
Team
Environment
Team
EPA
accredited
Site auditor

CONTINUE WORK

Works may continue in the affected area when it is safe, remediated or where works will not exacerbate contamination or hinder future remediation work. Project Manager (where required), providing authority to recommence work at the affected location.

Project Manager

2.2.4 Potential Acid Sulfate Soils (PASS) and Acid Sulfate Soils (ASS)

A search of the CSIRO Atlas of Australian Acid Sulfate Soils database shows this site is located over an area having a low probability of occurrence and a very low confidence level of ASS occurrence. The map in Figure 6 1 illustrates these findings. Additionally, the subject site is not classed on an area of acid sulphate soils on the Cumberland LEP 2021 maps.

Only minor excavation may be required to establish a swale for stormwater and flood management along the rear boundary of the site.

Due to the minimal earthworks required by the development and location of the site in relation to acid sulphate soil occurrence, an acid sulphate soil assessment is not deemed necessary. Figure 2-5 provides a photographic example of PASS and ASS in soils. Identifying and differentiating PASS and ASS is briefly described below.

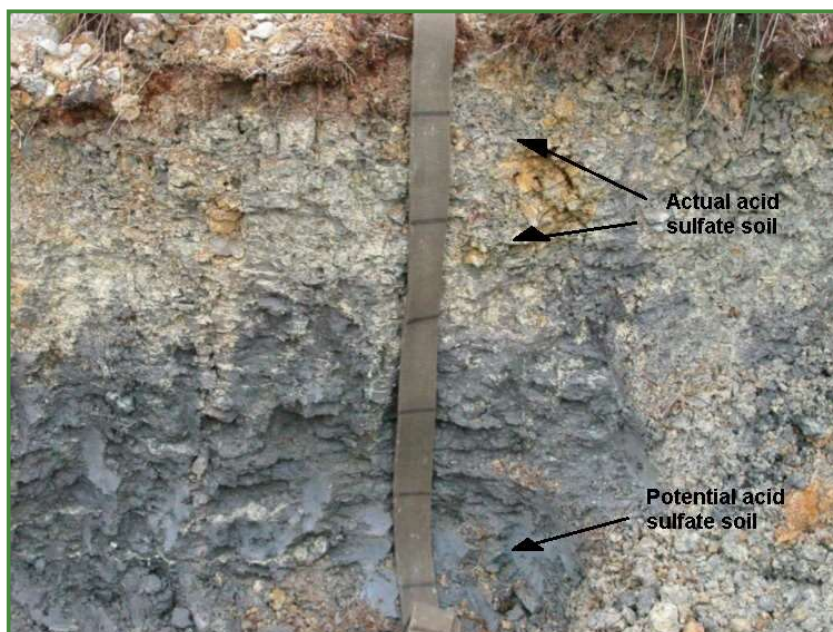
1. Potential Acid Sulfate Soils (PASS) have the following characteristics:

- Always wet, usually entirely saturated and not easy to walk on;
- Steely blue-grey in colour;
- May contain organic materials such as remnants of grass or plants;
- A strong smell of rotten eggs would be present.

2. Acid Sulfate Soils (ASS) have the following characteristics:

- Dry with strong blocky structure;
- Dark to pale brown in colour;
- Will often contain yellow and orange mottling (spots blotches or streaks of colours that differ from the soil matrix colour).

Figure 2-5: PASS and ASS in excavated pit.





Should the presence of the above characteristics be evident in the excavated material, works must cease immediately and the Unexpected Finds Protocol must be followed.

2.2.5 Identifying Aboriginal Objects, Places and Remains

A review of the NSW Heritage Register

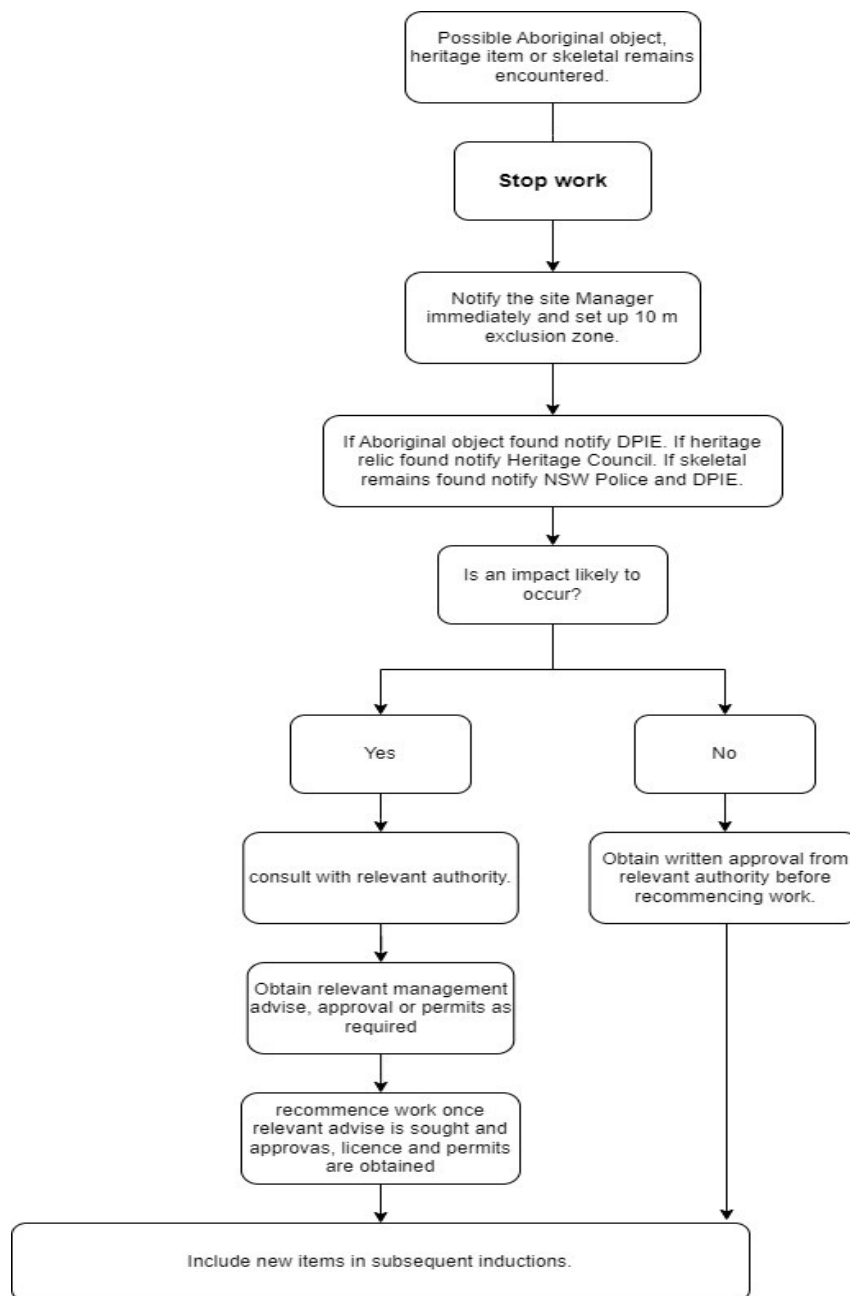
(<https://www.environment.nsw.gov.au/heritageapp/heritagesearch.aspx#amapsearch>) indicates that the land does not contain a listed heritage item of State Significance, nor does it adjoin or is within a reasonable vicinity of such an item. The site is also not listed as being a heritage item or containing items under the Cumberland LEP 2021. The nearest heritage items to the site identified is "Linnwood" 1.1 km north-east and Fairfield Public School 1.2 km south-west of the property boundary. However, planned excavations may result in ground disturbance and therefore a full Aboriginal cultural heritage assessment report has been prepared by McCardle Cultural Heritage.

This report has been attached as Attachment 1A.

The below protocol has been developed to provide a consistent method to manage unexpected Aboriginal and non-Aboriginal heritage items that may be discovered during construction of the Project.

This protocol applies to all construction activities associated with the Project. Should an unexpected Aboriginal or non-Aboriginal heritage item, or skeletal remains be discovered, the protocol in Figure 2-6 should be followed.

Figure 2-6: Unexpected Finds Protocol for Aboriginal heritage.



Work in the immediate vicinity of the Aboriginal item or object may only recommence in accordance with the provisions of Part 6 of the National Parks and Wildlife Act 1974.

2.2.5.1 Isolated Artefacts and Scatters

Figure 2-7 provides a photographic example of an isolated artefact. The Aboriginal heritage office describes a single artefact as an isolated find:

“These can be verified by identifying the stone and sourcing its origin, or verifying the manufacturing scars on the artefact. The isolated find can be a flaked stone, core or any finished implement. Raw materials most commonly used are chert, silcrete, and mudstones, while larger axe heads are usually made from river rocks or iron stone materials. Although

isolated finds are generally artefacts found on their own, they often imply other artefacts will be present in associated deposit nearby.”

Figure 2-7: Aboriginal isolated artefact



2.2.5.2 Burials

The Aboriginal heritage office describes a burial as follows:

“Burials are found where soft soils are located. Burials can be found throughout the Sydney area, and a number have been found over the past years in middens and within shelters. Traditional burial practices for the Sydney clans are unclear, however, it is known that traditional practices gave way when disease from the European invasion ravaged the groups throughout Sydney. Burials are an important part of Aboriginal culture, and contemporary practice is to recover what remains have been excavated and rebury them in a secure place at the location of origin. This practice is the consensus of the Metropolitan Local Aboriginal Land Council.”

Should the presence of the above items be encountered in the excavated material, works must cease immediately, and the Unexpected Finds Protocol must be followed.



3. SAMPLING AND TESTING

Any sampling and testing required for unexpected finds shall be undertaken in accordance with the following relevant guidelines and legislation:

- Sampling Design Guidelines (NSW EPA, September 1995);
- NEPC (2013), "National Environmental Protection (Assessment of Site Contamination Amended Measure (NEPM)", May 2013;
- AS 4482.1-2005 Guide to the investigation and sampling of sites with potentially contaminated soil;
- NEPC (2013) National Environmental Protection (Assessment of Site Contamination) Schedule B(1) Guideline on the Investigation Levels for Soil and Groundwater;
- Guidelines for Consultants Reporting on Contaminated Sites NSW OEH (EPA) August 2011;
- Guidelines for the NSW Site Auditor Scheme (3rd Edition);
- Acid Sulfate Soils Assessment Guidelines in 'Acid Sulfate Soils Manual 1998' (ASSMAC);
- Waste Classification Guidelines, Part 1: Classifying Waste, (NSW EPA); and
- Compliance with the Environmental Planning and Assessment Regulation 2021.

Analysis of samples shall be undertaken by a NATA accredited laboratory.



4. INSPECTION AND RECORDS

Any unexpected find must be recorded in an incident register. The following information shall be recorded:

- Date and time of the incident/unexpected find;
- Details of the type of material found such as description of material, any discolouration, odour or other information;
- Location of the suspect material;
- Immediate action taken in relation to the find;
- Name and contact information for the suitably qualified person undertaking any required investigations;
- Copy of any sampling and testing results or reports to confirm the identification of the suspect material;
- Copy of any remedial action plan prepared;
- Correspondence with Cumberland City Council concerning the unexpected find;
- Details of actions undertaken; and
- Any other relevant matters.

Documentation for any testing, corrective and preventative actions must also be maintained, as described in the *Corrective and Preventative Actions* section of the CEMP. They must be kept for a minimum of five years.

The results of any testing undertaken, and proposed disposal location must be submitted to the Department prior to removal of material off site.

This concludes the Unexpected Finds Protocol.

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Environmental Scientist

R T Benbow
Principal Consultant

ATTACHMENTS

Attachment 1: Aboriginal Cultural Heritage Assessment Report by McCardle Cultural Heritage



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14 September 2020

Linda Zanotto
Senior Environmental Engineer
Benbow Environmental
PO Box 687
Parramatta, NSW 2124

Dear Linda,

RE: Request for an exemption from preparing an Aboriginal cultural heritage impact assessment report (ACHAR) – PDA-9031357 Proposed Cobra Bins Resource Recovery Facility Yennora

Aboriginal cultural heritage has been considered for the above-named project and this applicant seeking an exemption from preparing an Aboriginal cultural heritage impact assessment report (ACHAR) is provided for submission to Heritage NSW with supporting evidence.

The subject site

The subject site is located at 30 Loftus Road, Yennora and is within a developed industrial area of Yennora (Figure 1). The subject site is surrounded in all directions by existing industrial and commercial facilities. The site contains two warehouse buildings separated with a concrete wall. Two storey offices exist at the front of warehouse B and there are two roller door entrances at the front of the building. The site fronts Loftus Road and has an existing sealed driveway access into the site. The remainder of the site is sealed concrete hardstand and landscaped areas along the frontage to Loftus Road and along the western boundary. Warehouse A is not included in the development and is leased by an industrial equipment supplier.

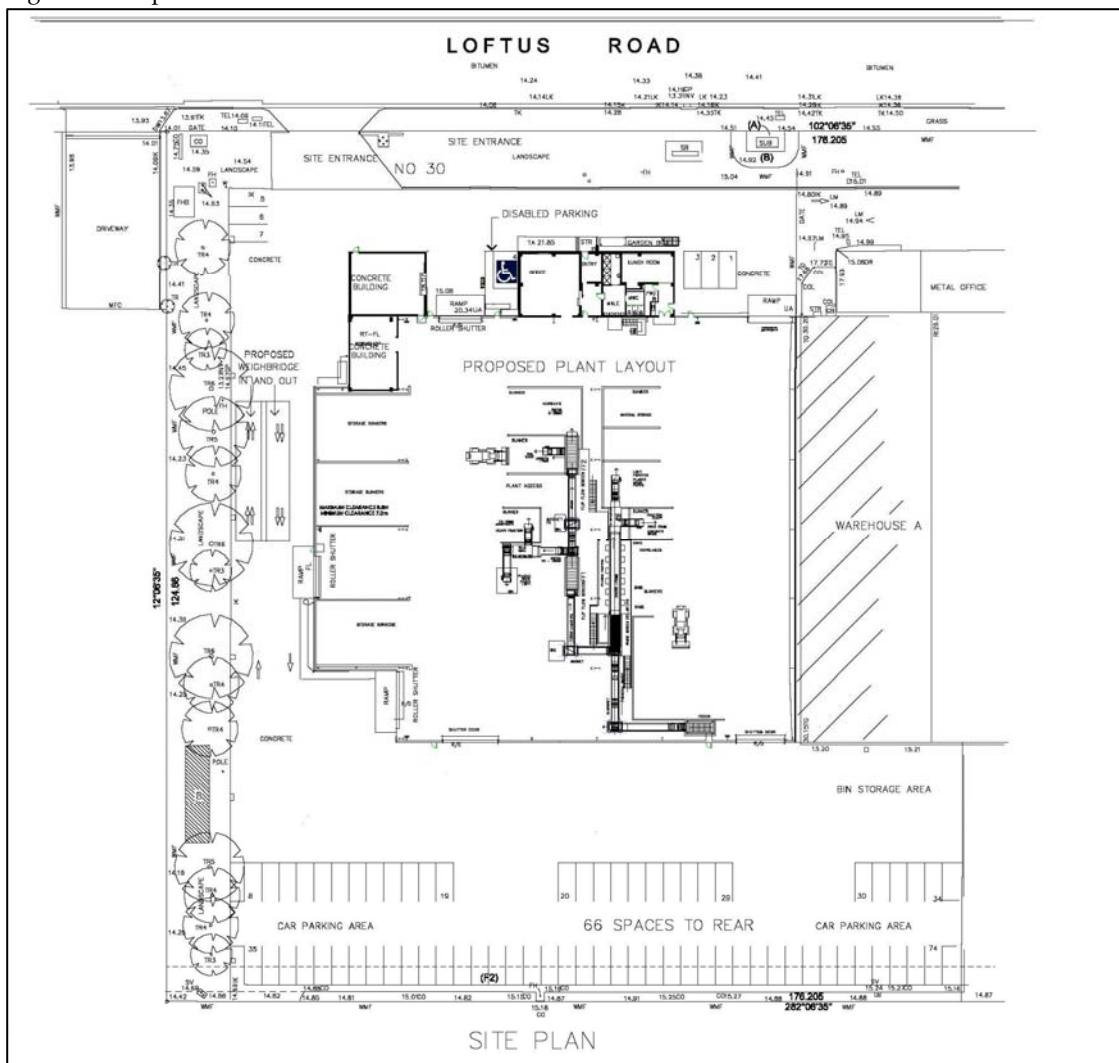
Figure 1. Location of the project area



The proposed project

Cobra Waste Solutions Pty Ltd proposes to establish a resource recovery facility (RRF) at Warehouse A, 30 Loftus Road, Yennora (Figure 2). The facility would receive, handle and process Construction and Demolition C&D) and Commercial and Industrial (C&I) waste. The amount of waste to be received and processed is estimated to be up to 150,000 tonnes per year.

Figure 2. Site plan



The proposed facility will be installed within an existing industrial building on land within the established industrial area of Yennora. All resource recovery activities and storage of waste would be undertaken within the existing building. A new resource recovery system would be developed with components being pre-fabricated off site for installation. The system is likely to consist of a pre-sorting and material inspection area, feed hopper, series of waste/flip flop screens for sorting heavy and light material, conveyors, extractors/blowers, an enclosed picking station and three (3) magnets to enable efficient recovery and separation of material. Separated material would be captured in bays or bins at various points on the line.

Storage bunkers for waste would be established inside the building and would be constructed of concrete walls. There would be storage bunkers and bins located along the processing line to capture recovered material at various points. These storage bunkers and bins are expected to store a maximum of 1,500 tonnes

of waste wholly within the building at any one time based on the preliminary site layout. The layout of the system would facilitate a regular turnover of waste through the system therefore requiring limited storage space.

A water misting system would be installed within the building for dust suppression. Water for this purpose would be sourced from rainwater tanks to be installed at the site. No structural changes to the existing building will be required. The site contains existing infrastructure that would be utilised for the proposed development. This includes extensive fire protection equipment and a sprinkler system that is currently being installed within the building by the owner of the property. On-site car parking would be established in the rear hardstand area with consideration given to ease of on-site vehicle movements. Two weighbridges would also be installed on the eastern driveway of the site. The current site floor plan is provided in Figure 3 and the proposed floor plan is provided in Figure 4. As illustrated, all works will be within the existing disturbed footprint.

Figure 3. Existing floor plan

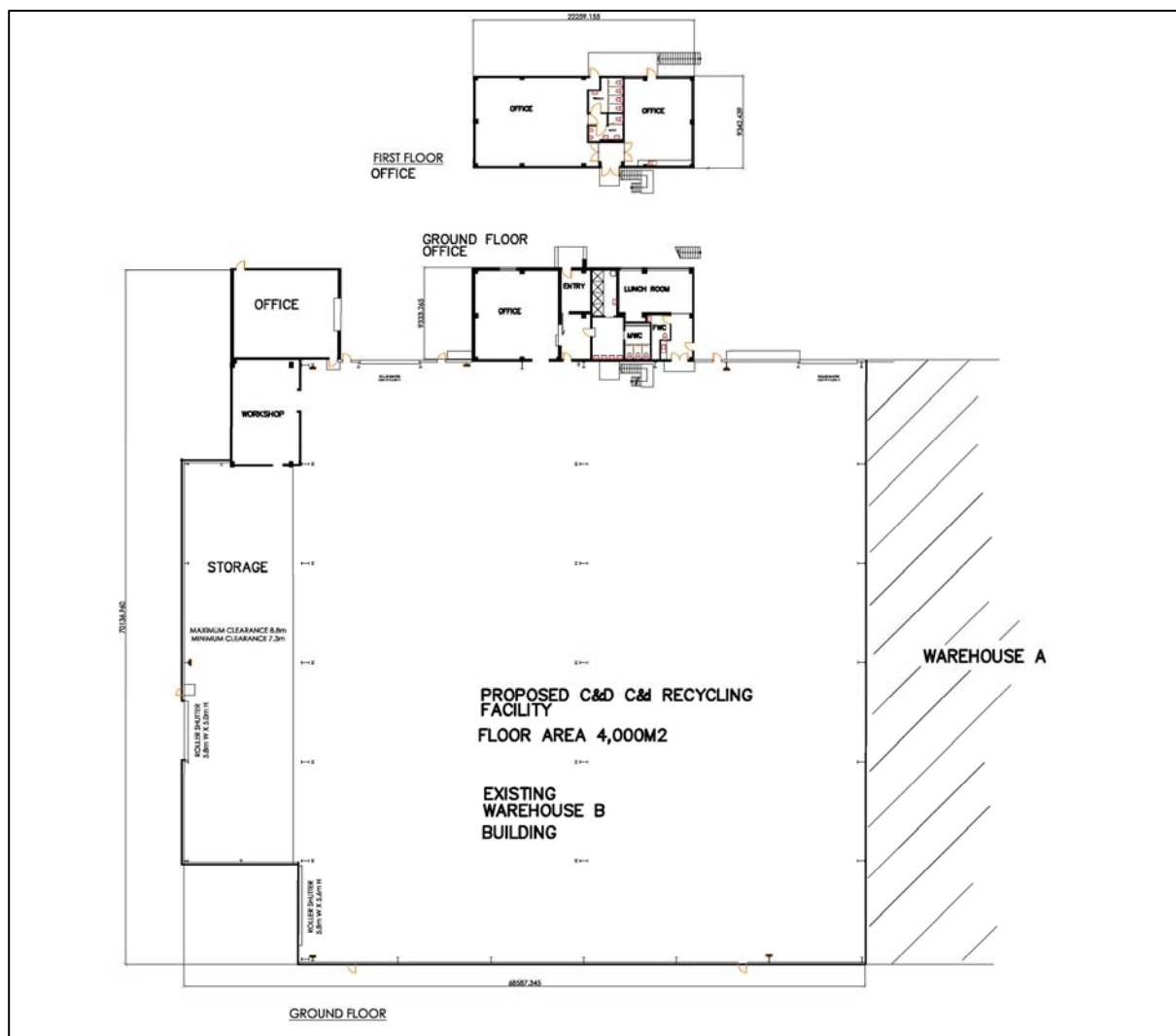
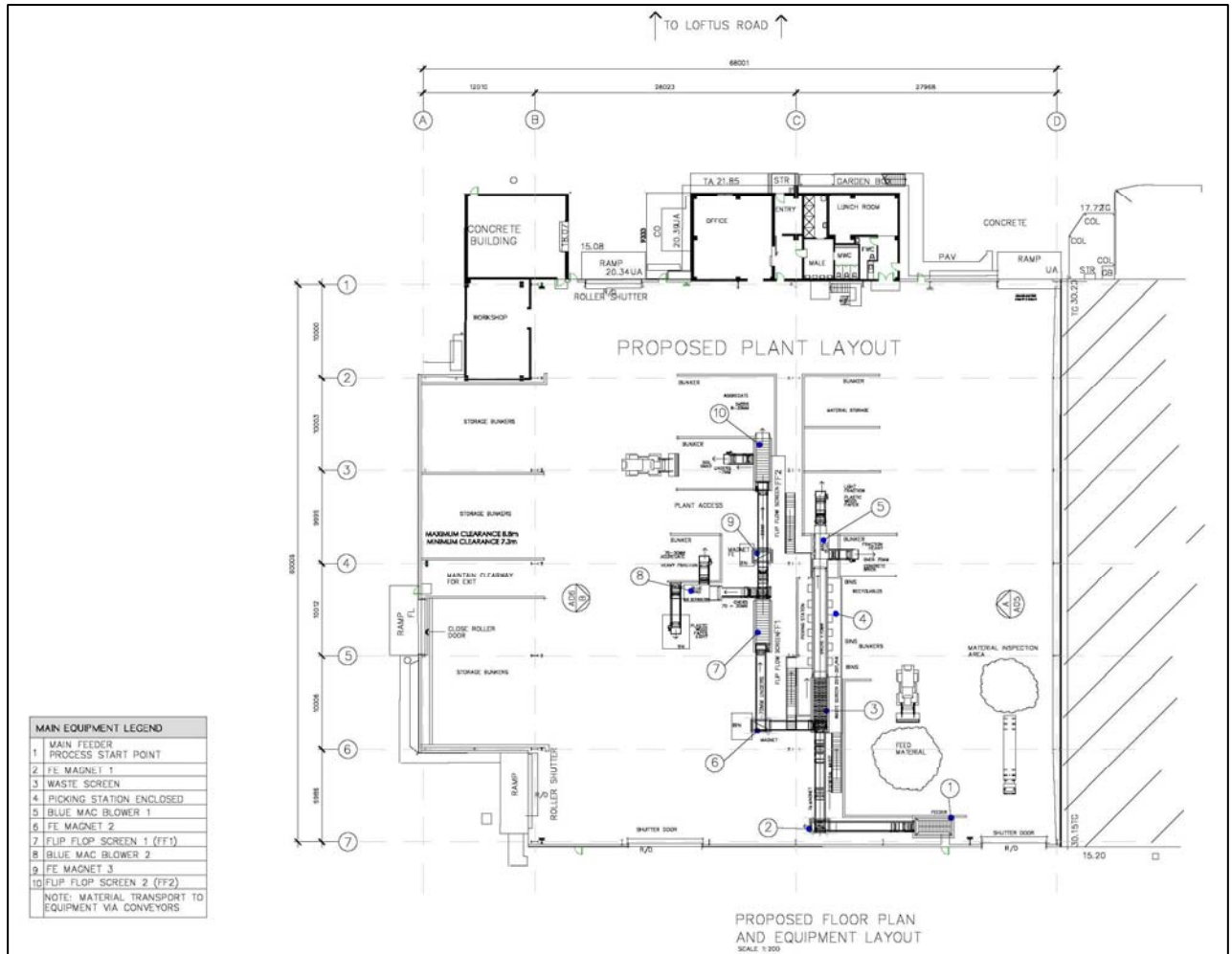


Figure 4. Proposed floor plan



Archaeological context

An AHIMS search was undertaken and this identified one site within 2 kilometres of the project area (Figure 5). The site is a PAD and is located approximately 2.6 kilometres south west of the project area and in close proximity to Prospect Creek (2nd order).

Figure 5. Location of the AHIMS site and project area



The project area is located in the Cumberland Plain and previous research of the regional and local area (e.g. McDonald and White 2010; Haglund 1978, Austral 1984, McDonald 2002, Oakley 2007, AMBS 2008, AHMS 2012, AECOM 2012; 2015; 2017, MCH 2020) have identified that artefact scatters and isolated finds are the most prominent site type. These assessments have also identified that both landform and distance to water were important factors in past Aboriginal land use. Elevated landforms within 50 metres of reliable water appear to have been the most favoured. In relation to fresh water sources, the higher the stream order (and more reliable water source) the higher the numbers of sites and site densities and both decrease with distance from the resource. These studies have highlighted that;

- a wide variety of site types are represented in the project area with open campsites and isolated artefacts by far the most common;
- lithic artefacts are primarily manufactured from silcrete and mudstone with a variety of other raw materials also utilised but in smaller proportions;
- lithic artefacts are predominantly flake pieces, broken flakes, flakes, cores and reduced numbers of tools;

- sites in proximity to ephemeral water sources or located in the vicinity of headwaters of upper tributaries (1st order streams) have a sparse distribution and density and contain little more than a background scatter;
- sites located in the vicinity of the upper reaches of minor tributaries (2nd order streams) also have a relatively sparse distribution and density and may represent evidence of localised one-off behaviour;
- sites located in the vicinity of the lower reaches of tributaries (3rd order creeks) have an increased distribution and density and contain evidence that may represent repeated occupation or concentration of activity;
- sites located in the vicinity of major tributaries (4th and 5th order streams/rivers) have the highest distribution and densities. These sites tend to be extensive and complex in landscapes with permanent and reliable water and contain evidence representative of concentrated activity;
- sites located within close vicinity at the confluence of any order stream may be a focus of activity and may contain a relatively higher artefact distribution and density; and
- the geomorphology of the region is dominated by an upper A horizon and a lower B horizon clays). Unit A and Unit B are interpreted as being Holocene and Pleistocene in age respectively and within the region, sites tend to occur on or within soil Horizon A or are often present at the interface of the A and B horizons. Within the A horizon the lowermost (in terms of vertical positioning) artefact assemblages tend to contain artefacts that are typically attributed to the mid-Holocene, as characterised by an increase in the number of backed artefacts.

The previous assessments also noted that all sites had been disturbed through past landuses including but not limited to clearing, agricultural and pastoral activities, residential developments, utilities, infrastructure and erosion. All excavations also identified highly disturbed subsurface deposits due to the above mentioned intensive long-term land uses.

The project area is situated over 600 metres east of Prospect Creek (2nd order) with the closest reliable water source (Georges River) located approximately 4 kilometres to the south and the Parramatta River located approximately 7.5 kilometres north east. Thus, the project area was not resourced in terms of fresh water availability nor any associated subsistence or medicinal resources and it is unlikely to have been utilised for more than transitory activities such as hunting and gathering. Evidence of such past Aboriginal land use manifests in the archaeological record as very low-density artefacts scatters and isolated finds of discarded artefacts.

Exemption

As outlined above the project area is located over 600 metres from fresh water and as water is necessary for survival, it is unlikely that the project area would have been used for anything more than hunting and gathering. This is supported by previous assessments that have identified proximity to water was one major factor in past Aboriginal land use and site location.

In terms of impacts to the archaeological record and the need for an ACHA, the project area has been significantly altered through the completed excavation and fill works across the entire subject site associated with the existing building and concreted areas. Such works remove the topsoils (A horizon) and at least the upper B horizon, where artefacts are found and as such the likelihood of any cultural materials remaining under the current project area is minimal to nil. As the proposed development will be maintained within the already highly disturbed footprint, an ACHA will not identify any sites in the project area and as such an exemption is sought.

Should you wish to discuss this matter, please do not hesitate to contact me on 0412 702 396.

Yours sincerely,

for McCardle Cultural Heritage Pty Ltd

A handwritten signature in dark ink, appearing to read 'Penny McCardle', followed by a small asterisk.

Dr. Penny McCardle
Principal Archaeologist
Forensic Anthropologist

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