

Preliminary Site Investigation

Maitland Gaol Redevelopment

Prepared for Maitland City Council

January 2023

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Maitland Gaol Redevelopment

Maitland City Council

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January 2023

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Executive Summary

ES1 Introduction

EMM Consulting Pty Limited (EMM) was commissioned by Maitland City Council (MCC) to undertake a Stage 1 Preliminary Site Investigation (PSI) of a portion of Maitland Gaol (the Gaol) identified as part of Lot 469 in Deposited Plan (DP) 1002766 (hereafter referred to as the Site).

The PSI is required to support the development application for the Maitland Gaol redevelopment project which aims to activate areas inside the entrance of the Gaol. The project will consist of:

- Redevelopment of the 'Store' building (Building 14) to provide:
 - a new ticketing office and gift store;
 - new administration office space;
 - upgraded amenities;
 - renovated theatre with bar, foyer, auditorium (pax:256) and back of house; and
 - a new loading dock.
- Redevelopment of the 'Gaol Staff/Warder's Amenities' building (Building 22) consisting of:
 - Demolition of Building 22;
 - Construction of a new café (pax: 76);
 - Construction of basement staff parking; and
 - Construction of enhanced access points.
- Construction of a new 17 space gravel car park including two accessible parking spaces and associated landscaping.

ES2 Objectives and scope of work

The objectives of obtaining and reviewing the information in this PSI are to:

- identify and assess potential contamination risks associated with current and historical site uses; and
- provide recommendations for any further investigations or management to mitigate contamination risk, if required.

To achieve the objectives, EMM conducted a Site inspection and completed a desktop review of available information relating to the Site to assess current and historical potential contamination sources. The scope of work for the desktop review included:

- a Summary of relevant contamination related background information relating to the Site and surrounding area, including:
 - the NSW EPA Contaminated Land Record register;

- database searches to assess elements of environmental inputs including historical land use, land zoning, geology, hydrogeology and topography;
 - historical aerial imagery (for changes over time);
 - online searches for specific historical information and other relevant documents;
 - review of acid sulfate soil maps for the Site and surrounding land;
 - review of a previous investigation report information provided by MCC; and
 - historical certificates of title; and
- development of a preliminary conceptual site model (CSM) and qualitative risk assessment to assess the potential contamination risks and determine whether further investigation or management is required.

ES3 Findings

The majority of the Site is understood to have been occupied by the Gaol since the late 19th century with some agricultural land use along the north-west boundary until the 1970s. The layout of the Site has changed over time. Based on historical aerial imagery and photographs provided by MCC, it is understood that at least two smaller buildings were historically present on the Site (one within the current footprint of the Store Building (Building 14) and one within the central courtyard area of the Site) which have since been demolished. The Gaol's closed in 1998, with part of the Gaol Staff/Warders Amenities Building (Building 22) converted to a café.

The Site is bounded by the remainder of the Gaol to the east, the East Maitland Courthouse and Anzac Park to the south-west and by low-density residential properties to the north and west. Further to the south-west is the Main Northern Railway with East Maitland Station being located to the west of the Site. Some agricultural properties are also located approximately 100 meters (m) north of the Site. A disused boiler room is present within the north-east section of Building 14 but is outside of the Site boundary.

In addition to the four buildings subject to redevelopment as part of the proposed Maitland Gaol redevelopment, the Site inspection identified the presence of:

- three petrol bowsers and associated vent pipes, indicating the presence of three underground petroleum storage systems (UPSS);
- a wastewater cooling pit;
- an industrial cooling unit;
- a large generator;
- a legionella treatment plant; and
- a water feature.

A maintenance workshop within Building 14 was visited during the Site inspection which contained garden maintenance equipment. Several 20 litre (L) fuel and oil drums were identified and a hydrocarbon odour was noted. A 20 L drum of BL10-B Turbo Truckwash was also identified near the entrance to the basement loading

dock in Building 14. Several 20 L drums believed to contain used cooking oil were also observed near the generator.

The Gaol relied on the local Fire Brigade for firefighting. Firefighting training is known to have occurred off-Site at the Gaol however as no formal records exist, firefighting training may have also been undertaken within the Site.

Potential asbestos containing material (ACM) was identified during the Site inspection and ACM is known to occur in all four buildings within the Site. No spills, stains nor gross contamination at the ground surface was observed at the ground surface. It is noted that a Hazardous Materials Register has recently been updated (Hazmat Services, 2022).

The information inputs summarised herein identify potentially complete source-pathway-receptor (S-P-R) linkages resulting from potential contamination at the Site. Based on the Site inspection and information reviewed as part of this PSI, any contamination present on the Site would most likely be attributed to:

- the presence of ACM in building materials;
- the presence of UPSS and associated infrastructure;
- spills and leaks from the operation and/or deterioration of a large generator;
- improper storage of chemicals including used cooking oil;
- potential firefighting training that may have historically occurred at the Site;
- potential use of the Site as a washdown area;
- use of fill which may contain ACM or other contaminants of potential concern (CoPC); and
- improper use of the wastewater cooling pit resulting in overtopping.

Key pathways include the vertical migration of CoPC through the soil profile, migration of CoPC via groundwater transport, surface water runoff and atmospheric dispersion of dust or fibres. Potential receptors include current and future land users, construction workers involved in the redevelopment works, off-Site land users and ecological receptors.

The Site's preliminary CSM identified several potential contamination sources which have a potential exposure scenario to on-Site and off-Site receptors. Key areas and contaminants around the Site have been identified as requiring further assessment through intrusive investigation to provide a quantitative assessment of the risk to receptors and the overall contamination risk and suitability of the Site for the proposed land use.

Significant and/or widespread chemical contamination of fill, soil, surface water and groundwater at the has not been identified however the presence of ACM in the buildings within the Site is noted. As such, potentially complete S-P-R linkages exist for construction workers involved in the redevelopment works.

Additionally, there are several moderate risk potential contamination sources that are unquantified and potentially complete S-P-R linkages may already exist with off-Site human and ecological receptors or may form with human receptors as part of the proposed redevelopment works.

ES4 Recommendations

A detailed site investigation (DSI) is recommended to be undertaken at the site prior to the commencement of redevelopment works to:

- further evaluate the presence of potential contamination identified in this PSI;

- ensure any potential contamination does not pose a risk to construction workers or future users of the Site; and
- characterise material to evaluate suitability for disposal (if required).

Furthermore, it is recommended that the identified UPSS are managed in accordance with the *Protection of the Environment Operations (Underground Petroleum Storage Systems) Regulation 2019*. This includes removing residual product that may be present in underground storage tanks (UST's) and decommissioning by removal if the tanks have not been used for two years or longer.

Given the Site has been identified to be present within the Maitland unexploded ordinance (UXO) area further desktop assessment should be undertaken and documented in an unexpected finds protocol for future redevelopment works.

Abbreviations

| Abbreviation | Term |
|--------------|---|
| ACM | Asbestos containing materials |
| ANZG | Australian and New Zealand Governments |
| ASC NEPM | National Environment Protection (Assessment of Site Contamination) Measure 2013 |
| ASS | Acid sulfate soils |
| BTEXN | Benzene, toluene, ethylbenzene, xylene, naphthalene |
| CHL | Commonwealth Heritage List |
| CLM Act | NSW Contaminated Land Management Act 1997 |
| CMP | Conservation management plan |
| CoPC | Contaminants of Potential Concern |
| CSM | Conceptual site model |
| DP | Deposited Plan |
| EMAA | Erin Martin & Associates |
| EMM | EMM Consulting Pty Limited |
| EP&A Act | NSW Environmental Planning and Assessment Act 2000 |
| EPA | Environmental Protection Authority |
| EPL | Environmental Protection Licence |
| ESP | Environmental & Safety Professionals |
| GDE | Groundwater dependant ecosystems |
| HEPA | Heads of EPAs Australia and New Zealand |
| LABS | Linear alkyl benzene sulfates |
| LEP | Local Environmental Plan |
| m | metres |
| m AHD | metres Australian Height Datum |
| MCC | Maitland City Council |
| NHL | National Heritage List |
| NSW | New South Wales |
| OCPs | Organochlorine pesticides |
| OPPs | Organophosphate pesticides |
| PAH | Polynuclear aromatic hydrocarbons |
| PFAS | Per- and polyfluoroalkyl substances |
| POEO Act | NSW Protection of the Environment Operations Act 1997 |

| Abbreviation | Term |
|---------------------|--------------------------------------|
| PSI | Preliminary Site Investigation |
| SDS | Safety Data Sheet |
| SEPP | State Environmental Planning Policy |
| S-P-R | Source-pathway-receptor |
| SVOC | Semi-volatile organic compounds |
| TRH | Total recoverable hydrocarbons |
| UPSS | Underground petroleum storage system |
| USTs | Underground storage tanks |
| UXO | Unexploded ordinance |
| VOCs | Volatile organic compounds |
| WHA | World Heritage Area |
| WWII | Second World War |

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1 Introduction

1.1 Background

EMM Consulting Pty Limited (EMM) was commissioned by Maitland City Council (MCC) to undertake a Stage 1 Preliminary Site Investigation (PSI) to assess a portion of Maitland Gaol (the Site, the Gaol). The Site is identified as a portion of Lot 469 in Deposited Plan (DP) 1002766. Refer to Figure 1.1 for the Site location.

EMM understand that this PSI is required to support the development application for the Maitland Gaol redevelopment project which aims to activate areas inside the entrance of the Gaol. The project works will consist of:

- Redevelopment of the 'Store' building (Building 14) to provide:
 - a new ticketing office and gift store;
 - new administration office space;
 - upgraded amenities;
 - renovated theatre with bar, foyer, auditorium (pax:256) and back of house; and
 - a new loading dock.
- Redevelopment of the 'Gaol Staff/Warder's Amenities' building (Building 22) consisting of:
 - Demolition of Building 22;
 - Construction of a new café (pax: 76);
 - Construction of basement staff parking; and
 - Construction of enhanced access points.

Construction of a new 17 space gravel car park including two accessible parking spaces and associated landscaping.

1.2 Objectives

The objectives of obtaining and reviewing the information in this PSI are to:

- identify and assess potential contamination risks associated with current and historical site uses; and
- provide recommendations for any further investigations or management to mitigate contamination risk, if required.

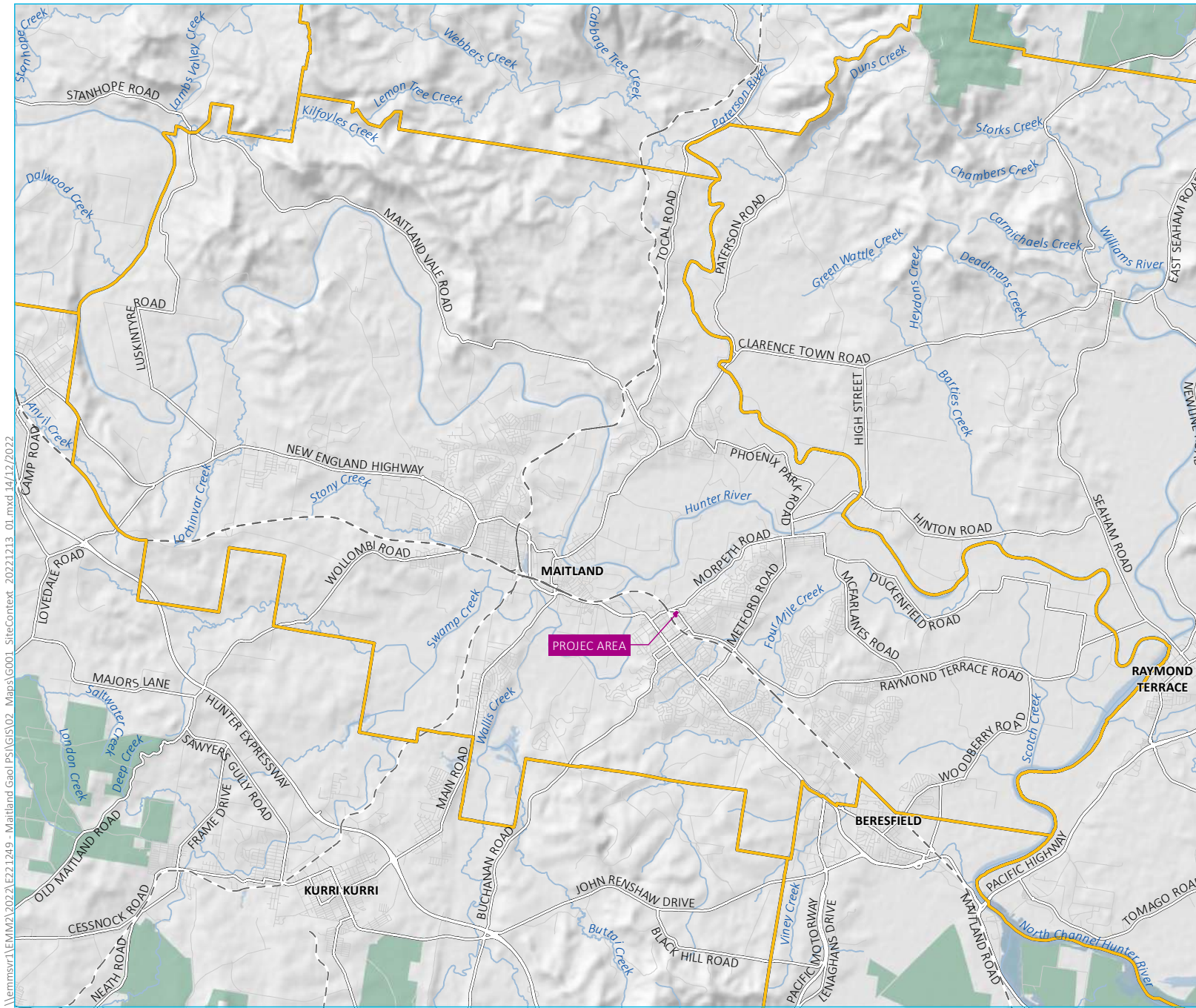
1.3 Scope of works

To achieve the objectives, EMM conducted a Site inspection and completed a desktop review of available information relating to the Site to assess current and historical potential contamination sources. The methodology for the desktop review included:

- a summary of relevant contamination related background information relating to the Site and surrounding area, including:

- the NSW EPA Contaminated Land Record register;
 - database searches¹ to assess elements of environmental inputs including historical land use, land zoning, geology, hydrogeology and topography;
 - historical aerial imagery (for changes over time);
 - online searches for specific historical information and other relevant documents;
 - review of acid sulfate soil maps for the Site and surrounding land;
 - review of a previous investigation report information provided by MCC; and
 - historical certificates of title; and
- development of a preliminary conceptual site model (CSM) and qualitative risk assessment to assess the potential contamination risks and determine whether further investigation or management is required.

¹ The database searches were conducted by Land Insight and Resources Pty Ltd (LI Resources). The LI Resources Due Diligence Insight report is provided in Appendix A which includes a list of all searches and data sources including NSW Environmental Protection Authority contaminated lands databases, NSW groundwater bore databases, geological and soil landscape maps and historical business directory data.



- KEY**
- Project area
 - Rail line
 - Major road
 - Minor road
 - Named watercourse
 - Named waterbody
 - Local government area
 - NPWS reserve
 - State forest
- INSET KEY**
- Major road

\\lemmsvr1\EMM2\2022\E221249 - Maitland Gaol PSI\GIS\02 Maps\G001 SiteContext_20221213_01.mxd 14/12/2022

Source: EMM (2022); ABS (2021); DFSI (2020, 2021); GA (2011)



Site location

Maitland Gaol
Preliminary Site Investigation
Figure 1.1



2 Regulatory framework

Applicable legislation informing this assessment includes:

- *NSW Contaminated Land Management Act 1997* (CLM Act);
- *NSW Protection of the Environment Operations Act 1997* (POEO Act); and
- *NSW Environmental Planning and Assessment Act 2000* (EP&A Act) and State Environmental Planning Policy (SEPP) (Resilience and Hazards) 2021.

Applicable guidelines supporting this assessment include:

- National Environment Protection (Assessment of Site Contamination) Measure (2013), including 20 Schedules and Appendices (B1 to B9), and the NEPM Toolbox, updated April 2014 (the ASC NEPM);
- NSW EPA Consultants reporting on contaminated land: Contaminated land guidelines, updated May 2020; and
- NSW EPA Guidelines for the NSW Site Auditor Scheme (3rd edition), 2017.

3 Environmental setting

3.1 Site identification

Site identification details are presented in Table 3.1 below.

Table 3.1 Site description

| | |
|------------------------------|---|
| Site location | 6-18 John Street Maitland, NSW |
| Site layout | Refer to Figure 3.1 |
| Title identification details | Part Lot 469 DP1002766 |
| Lease/ownership details | Crown Land managed by Maitland City Council. |
| Site features | <p>The Site includes the following:</p> <ul style="list-style-type: none">• Building 2 – Former Lieutenant Governor’s Residence (currently unused/used for storage)• Building 3 – Former Governor’s Residence (currently the Maitland Gaol Visitor information centre and with some rooms used as a rehearsal space for the University of Newcastle’s Conservatorium of Music)• Building 14 – Former Store and Work Centres (formerly housed the shower block and the laundry, now used for storage, as a rehearsal space for the Maitland Musical Society and houses an Auditorium)• Building 22 – Former Gaol Staff/Warden’s Amenities (currently the Bread and Water Café) <p>The outdoor area in the north-west portion of the Site includes (from north-east to south-west):</p> <ul style="list-style-type: none">• a cooling pit for laundry wastewater;• an industrial cooling unit;• three petrol bowsers and associated underground storage tanks (USTs);• a large generator;• a legionella treatment plant; and• a water feature. <p>All of these were disused at the time of inspection. These Site features are displayed on Figure 3.1.</p> |
| Local government area | Maitland City Council |
| Current land use and zoning | <p>Zoning: SP3 - Tourist</p> <p>Land use: The Site currently has several users including the Maitland Gaol Visitor Information Centre, the Bread and Water Café and tourist activities. The Maitland Gaol offers tours and hosts several festivals. A more detailed description of the land use of the Site is provided in Section 6.1.</p> <p>Environmental Planning Instruments: The Site is included in the State Environmental Planning Policy (SEPP) (Resources and Energy 2021 as being within a Coal Seam Gas Exclusion zone.</p> |

Table 3.1 **Site description**

| | |
|----------------------|---|
| Proposed land use | The proposed land use for the Site is primarily commercial. It will largely be focussed on providing visitor information and amenities. The project will aim to provide central support services and amenities for the entire Gaol, improved café operation, larger and more suitable spaces for sales. Building 2 – Lieutenant Governor’s Residence and Building 3 - Governor’s Residence are both proposed to be refurbished for boutique accommodation. |
| Surrounding land use | <p>North: Low-density residential properties adjacent to the Site with agricultural properties located further to the north. The Maitland Grossmann High School is approximately 50 m north-east of the Site. Several unnamed channels exist approximately 250 m north-west of the Site which may be used for irrigation. The former Pender and Foster Sawmill is located approximately 400 m north-west of the Site.</p> <p>East: Primarily low-density residential properties with some public recreational areas further to the east. The Hiland Crescent Cemetery is located approximately 600 m north-east of the Site.</p> <p>South: Low-density residential properties are located immediately south of the Site</p> <p>West: The East Maitland Court House is located adjacent to and south-west of the Site and is surrounded by Anzac Park. The Main Northern Railway runs north-west/south-east and is adjacent to Anzac Park. East Maitland Station is situated west of the Site. Further to the south-west are primarily low-density residential and commercial properties. A drainage line appears to be present in the north portion of Anzac Park between the Site and East Maitland Station.</p> |

3.2 Geology and soils

The dominant subsurface profile at the Site consists of mixed interbedded sedimentary deposits associated with the Tomago Coal Measures which are overlain by moderately deep to deep, moderately well to imperfectly drained soils consistent with the Beresfield Residual soil group. To the north and west of the Site and adjacent to Wallis Creek, the underlying geology consists of alluvial floodplain and terrace deposits consisting of clay, silt, fine to medium-grained quartz-lithic sand and polymictic gravel consistent which is overlain by Hunter Alluvium. A tabulated summary of the geology and soils is provided in Appendix A. The geological and soil mapping is presented in Appendix B.

The NSW Planning and Environment acid sulfate soils (ASS) database reports the Site is classified as Soil Class 5, indicating that the potential for adverse environmental impacts associated with ASS is very low. Acid sulphate soils are not typically found in Class 5 areas. The soils within 500 m of the property are classified as Class 4 (approximately 100 m to the north). Acid sulphate soils in Class 4 areas are likely to be found beyond 2 metres below the natural ground surface. Therefore, it is considered that there is a very low potential risk of ASS and specific ASS mitigation measures would not be required as part of any potential future excavation works.

No salinity hazard was identified for the Site.

3.3 Hydrology and hydrogeology

The Site and surrounds feature porous, extensive aquifers of high productivity. There were no groundwater dependant ecosystems (GDE) identified within the Site or immediate surrounds.

A search of the NSW Department of Primary Industries – Office of Water dataset indicated that there are 27 registered groundwater bores within 2000 m of the Site. No registered groundwater wells were identified within 500 m of the Site. Available information on these monitoring wells is provided in Appendix A.

The database search (Appendix A) returned 54 other known borehole investigations within a 500 m buffer from the Site. The majority of these were investigations undertaken by the NSW Roads and Maritime Service (now Transport for NSW) approximately 300 m to the north-west of the Site except for two mineral exploration boreholes and a single geotechnical investigation all occurring within 50 m of the Site.

The Site was identified as being situated within an underground petroleum storage system (UPSS) sensitive zone. Three USTs and associated bowsers are known to be present at the Site.

The Site is situated approximately 1.3 kilometres (km) east of Wallis Creek and 1.3 km south-east of the Hunter River. Hydrological and hydrogeological mapping is presented in Appendix B.

3.4 Ecology and natural hazards

Except for the agricultural area, located north-east of the Site, the area surrounding the Site is completely urbanised.

Protected environmental corridors were identified within 2000 m of the Site and occur along the Hunter River and Wallis Creek. Wetlands were identified along the Hunter River to the north-west of the Site and within a quarry located adjacent (south) to the Main Northern Railway to the south-east of the Site. Neither protected environmental corridors or wetlands occur within a 500 m radius of the Site. Mapping of these features is provided in Appendix B.

The agricultural land approximately 90 m north of the Site was identified as having medium bushfire risk with a potential impact area extending to within approximately 60 m of the Site. Bushfire hazard mapping is provided in Appendix B.

The Site has moderate risks for wind and water erosion. The Maitland LEP (2011) also classifies and are approximately 60 m north-west of the Site as being a flood planning area.

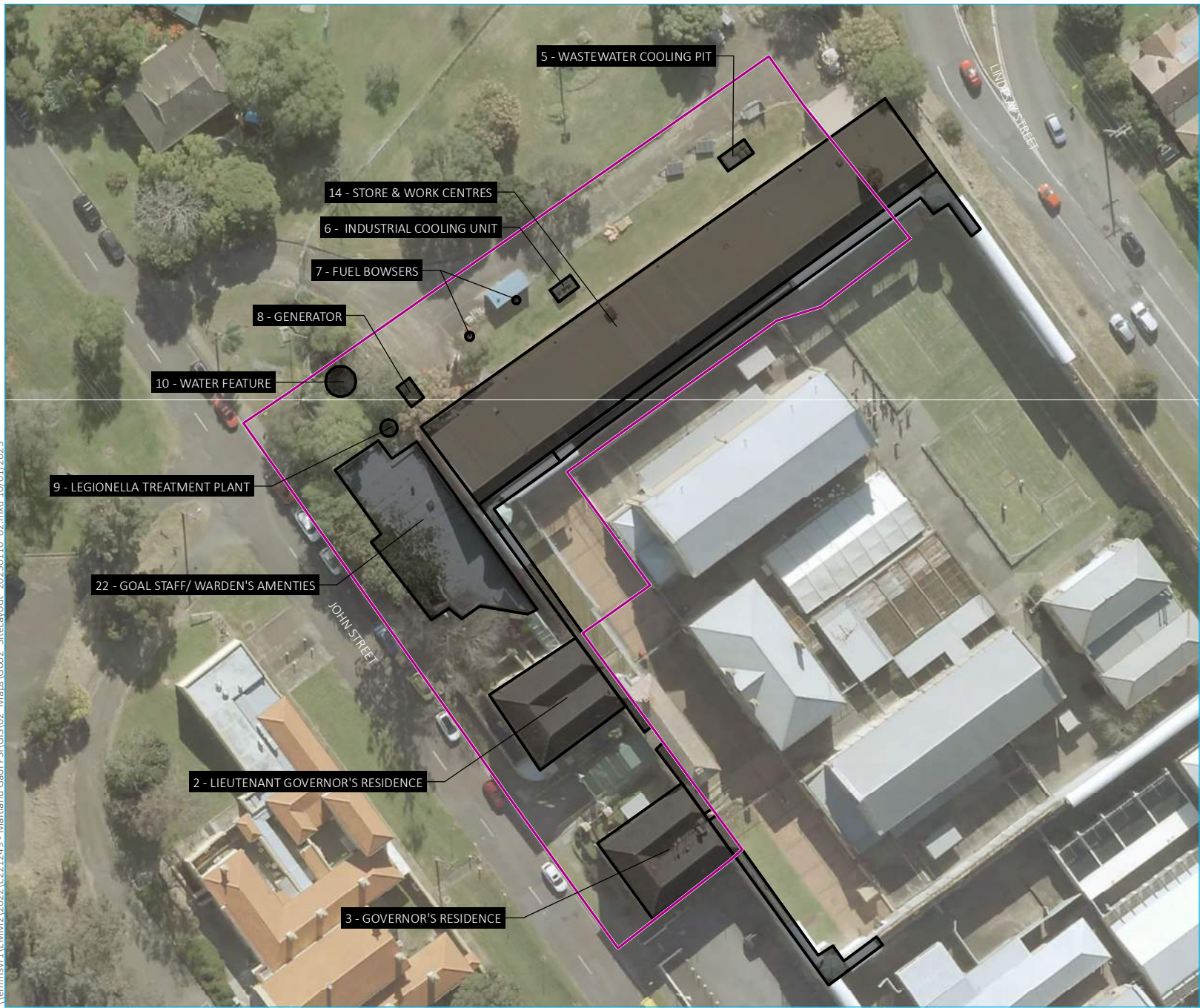
3.5 Heritage

The Site is listed on the Maitland Local Environmental Plan (LEP) (2011) (site ID I52 and C3). Site ID I52 includes the entire Maitland Correctional Centre and site ID C3 encompasses the East Maitland Heritage Conservation Area, which includes the East Maitland Courthouse and associated parklands, the East Maitland Police Station, the former East Maitland Post Office, the Main Northern Railway and a number of houses (Appendix A).

The Site is also listed on the State Heritage Inventory (site ID 1296), which includes the entire Maitland Correctional Centre.

The Site does not contain items listed on the following heritage registers:

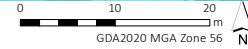
- National Heritage List (NHL);
- Commonwealth Heritage List (CHL); or
- World Heritage Area (WHA).



KEY
 [Pink outline] Project area
 [Black outline] Building asset

\\lemmsvr1\EMM2\2022\E221249 - Maitland Gaol PSI\GIS\02 Maps\G002_SiteLayout_20230110_02.mxd 10/01/2023

Source: EMM (2023); DFSI (2020, 2021); Metromap (2022)



Site layout

Maitland Gaol
 Preliminary Site Investigation
 Figure 3.1



4 Site history

A review of historical aerals for the period 1954–2022 provided insights into the historical and current land uses at the Site as described in Table 4.1. The historical aerals are provided in Appendix C.

4.1 Aerial review

Table 4.1 Aerial photograph review

| Year/Image quality | Site | Surrounding area |
|-------------------------|--|--|
| 1954 Black and white | The Building 2 and Building 3 are both visible. Building 14 and Building 22 are not present. The north-west border section of the Site appears to be used for agricultural activities. | The area surrounding the Site is generally consistent with present day conditions (predominantly low density residential with agricultural land use north of the Site) with key differences being: <ul style="list-style-type: none"> • Building 18 – 5 Wing Maximum Security and Building 36 – Visits Processing Centre within the south-east portion of the Gaol are not visible; • agricultural land use is present to the immediate north-west of the Site; • the Pender and Foster Sawmill located approximately 400 m north-west of the Site appears to be operational; • current industrial land use west of the Main Northern Railway is not present; • the Maitland Grossman Highschool is much smaller than its present size; and • areas currently occupied by low density residential properties east of the Site appear to be used for agricultural activities. |
| 1966 Black and white | Generally consistent with the previous aerial. A building may be present within the north-west portion of the Site. | Generally consistent with the previous aerial. New buildings have been constructed at the Maitland Grossman Highschool. The area immediately east of the Sawmill is disturbed and may be used for stockpiling. There are also an increased number of low-density residential properties to the east of the Site. Industrial land use may be present west of the Main Northern Railway. |
| 1970 Black and white | Generally consistent with the previous aerial. | Generally consistent with the previous aerial. |
| 1976 Black and white | Generally consistent with the previous aerial. Building 14 is now visible. | Generally consistent with the previous aerial. Building 18 within the south-east portion of the Gaol appears to be visible. There is also an increased number of low-density residential properties to the east of the Site. Agricultural land use is no longer visible to the immediate north-west of the Site. |
| 1984 Black and white | Generally consistent with the previous aerial. | Generally consistent with the previous aerial. |
| 1987 Black and white | Generally consistent with the previous aerial. Detail cannot be discerned due to the poor quality of the photograph. | Generally consistent with the previous aerial. Detail cannot be discerned due to the poor quality of the photograph. |

Table 4.1 **Aerial photograph review**

| Year/Image quality | Site | Surrounding area |
|---------------------------|--|--|
| 1993 Colour | Generally consistent with the previous aerial. The Gaol Staff/Warden's Amenities (Building 22) is now visible. | Generally consistent with the previous aerial. Building 36 is now visible within the southeast portion of the Gaol. The disturbed area adjacent to the Sawmill is largely intact and appears to be used for stockpiling of logs. The roundabout at the junction of Morpeth Road, Cumberland Street and John Street has been constructed. |
| 1998 Colour | Generally consistent with the previous aerial. | Generally consistent with the previous aerial. The area adjacent to the Sawmill appears to be disused. |
| 2001 Colour | Generally consistent with the previous aerial. | Generally consistent with the previous aerial. |
| 2005 Colour | Generally consistent with the previous aerial. | Generally consistent with the previous aerial. The Sawmill appears to have ceased operation. |
| 2011 Colour | Generally consistent with the previous aerial. | Generally consistent with the previous aerial. The Pitnacree Road overpass of the Main Northern Railway north-west of the Site has been constructed. |
| 2014 Colour | Generally consistent with the previous aerial. | Generally consistent with the previous aerial. |
| 2016 Colour | Generally consistent with the previous aerial. | Generally consistent with the previous aerial. |
| 2019 Colour | Generally consistent with the previous aerial. | Generally consistent with the previous aerial. |
| 2022 Colour | Generally consistent with the previous aerial. | Generally consistent with the previous aerial. Additional buildings have been constructed at the Maitland Grossman High School. |

4.2 Review of historical mapping

A review of historical mapping identified two maps of the Site and surrounds as described below:

- 1969 1:25,000 Topographic Map Maitland 9232-4S; and
- 1991 1:25,000 Topographic Map Beresfield 9232-3N.

The Site itself is shown within the 1969 Maitland sheet with the 1991 Beresfield sheet showing the surrounding area to the south. The historical maps are provided in Appendix C.

An isolated building (purpose unknown) is marked within the north-west portion of the Site. This is consistent with historical aerial imagery from 1966-1970. The remainder of the mapping is generally consistent with the current Site and surrounds with the exceptions of the Pitnacree Road overpass of the Main Northern Railway and the roundabout at the junction of Morpeth Road, Cumberland Street and John Street. This is consistent with historical aerial imagery from this time.

4.3 Review of historical photographs

MCC provided EMM with five historical photographs of the Site. The dates of these photographs are unknown. These have been provided in Appendix D.

Photograph 1 shows the Site viewed from the west. Building 14 and Building 22 are not present however several smaller buildings are present within the north-west portion of the Site.

Photograph 2 shows the Gaol from the watchtower located within the central area of the Site, looking north-east. Building 14 does not appear to be present in the photograph.

Photograph 3 has been taken from near the western boundary of the Site, looking east towards the present location of Building 22. Building 14 and Building 22 are not present in the photograph however Building 2 is visible.

Photograph 4 shows the Gaol from the watchtower located within the central area of the Site, looking south-east. A building, labelled as being the Photo Gallery/Messenger's Shed, is present within the brick courtyard area within the central portion of the Site. Building 2 is also visible in the photograph.

Photograph 5 is taken slightly to the north-east of Photo 4 facing towards the south and shows an alternative view of the Photo Gallery/Messenger's Shed and Building 2. The Gatehouse (Building 1) is also visible within the photograph.

4.4 Previous investigations

Two previous investigations reports were made available to EMM and is summarised below.

4.4.1 Erin Martin & Associates (EMAA) (2022), Maitland Gaol Conservation Management Plan

MCC engaged EMAA to update the Conservation Management Plan (CMP) for the Gaol. The objectives of the CMP were to:

- provide a sound basis for the development of a master plan for the Gaol;
- provide a detailed heritage assessment, policies and implementation strategies for individual buildings and areas; and
- facilitate site specific exemptions for future development proposals, and specific conservation work exemptions under the NSW Heritage Act.

EMAA found that Building 2 and Building 3 were both completed in 1875, however information provided by MCC suggests that construction of Building 2 only commenced in 1877. They list the condition of both buildings as being "poor through lack of use" and "reasonable except for the basement which has rising damp and water ponding in the light well" respectively. EMAA also states that both buildings are constructed of ashlar sandstone.

No construction dates were provided for Building 14 and Building 22 however EMAA suggests both were built post 1900 with Building 22 being a "modern addition". Building 22 is known to have been constructed in the 1970s. They state that Building 14 is constructed of orange brick and the condition of both buildings is "reasonable" however EMAA were unable to inspect Building 22 internally.

4.4.2 Environmental & Safety Professionals (ESP) (2015), Maitland City Council Asbestos Register Update

ESP were engaged by MCC to carry out an inspection at Maitland Gaol on 11 November 2015 and update the Asbestos Register. The inspection involved visual inspection and sampling of suspected asbestos containing materials (ACM) where practicable.

The results of the survey indicated:

- friable asbestos was not identified within internal or external areas; and
- bonded asbestos was identified within internal and external areas.

Within the Project Site, bonded asbestos was detected in the following areas:

- Building 2 – Lieutenant Governor’s Residence: ceiling and vinyl flooring: Chrysotile asbestos detected;
- Building 3 – Governor’s Residence: ceiling lining, wall lining, vinyl flooring and ceiling cavity: Chrysotile asbestos detected;
- Building 22 – Gaol Staff/Warden’s Amenities: Chrysotile asbestos detected in air-conditioning awning adjacent to the Bakery/Café; and
- Building 14 – Workshop/stores Building: Auditorium vinyl floor tiles: Chrysotile asbestos detected and laundry, toilet partitions deemed to contain asbestos.

External eaves at various locations throughout the Gaol were deemed to contain asbestos which may include buildings within the Site. EMM also notes that potential ACM was identified during the Site inspection undertaken on 20 December 2022 that was not analysed or reported on by ESP (refer to Section 6.1).

4.4.3 Hazmat Services (2022), Hazardous Materials Survey: Maitland Gaol – 6-18 John Street, East Maitland (Draft version)

MCC engaged Hazmat Services to undertake a Hazardous Materials Survey of the accessible exterior and interior of Building 2, Building 3, Building 14 and Building 22.

The purpose of the survey was to identify the location, extent and condition of accessible hazardous building materials present at the Site and also determine the likely impact of these materials on persons accessing the Buildings. The scope of the survey included asbestos containing materials (ACM), synthetic mineral fibres (SMF), lead based paint, polychlorinated biphenyls (PCB) materials and lead and asbestos in ceiling dust.

The results of the survey indicated the following hazardous building materials were discovered:

- Building 2 – Lieutenant Governor’s Residence: ACM, SMF and lead based paint.
- Building 3 – Governor’s Residence: ACM, SMF and lead based paint.
- Building 14 – Stores Building: ACM and lead based paint.
- Building 22 – Café/Old Warders Amenities: ACM and SMF.

5 Potential regulatory contamination issues

5.1 Contaminated land records

Three contaminated sites were identified on the NSW EPA Contaminated Land Record of Notices within 1000 m of the Site:

- Caltex East Maitland Service Centre;
- United Service Station East Maitland; and
- Former Gasworks Site at the corner of Melbourne Street and Brisbane Street, East Maitland.

No sites were identified within 500 m of the Site.

5.2 Licensed activities

There is one surrendered NSW EPA Environment Protection License (EPL) at the Site issued to the NSW Soil Conservation Service for the Waterways Within the Hunter Valley Flood Mitigation Scheme (EPL Number 12439).

An additional two licenses were issued to the Forestry Corporation of NSW (EPL Numbers 3957 and 4017) which encompass the Lower and Upper North East Regions respectively, however these only relate to forestry activities in State Forests and Crown-Timber Lands. Both licenses are no longer in force.

5.3 Clean-up and penalty notices

No clean-up or penalty notices were identified for the Site or immediate surrounds.

5.4 Other potentially contaminating activities

The Site is located within the Maitland unexploded ordinance (UXO) area. Maitland was used for military training and camps during the Second World War (WWII).

The Main Northern Railway (approximately 110 m south-west of the Site) is also listed as a potentially contaminating activity.

There were no other identified NSW EPA records or other potential regulatory contamination issues within a minimum 500 m radius of the Site for the following searches undertaken (refer to Appendix A):

- per- and poly-fluoroalkyl substances (PFAS) site investigations;
- aviation fire fighting facilities;
- cattle dip sites;
- derelict mines/quarries;
- dry cleaners;
- gas terminals;
- liquid fuel depots or terminals;
- petrol stations;

- landfills/waste management or water treatment facilities;
- telephone exchanges;
- power stations; and
- electrical substations.

5.5 Commercial and trade directory data

A search of historical business directories found that the area surrounding the Site has historically included businesses in construction, manufacturing, plumbing, painting and retail (refer to Appendix A).

5.6 Historical certificates of title

Table 5.1 shows the historical certificates of title (refer to Appendix E).

Table 5.1 Historical certificates of title

| Date | Proprietor |
|--|--|
| Lot 469 DP1002766 | |
| 2 July 1999 to date | The State of NSW |
| <i>(12 May 1894 to date)</i> | <i>(Reserve 20743 for Gaol and Lockup, notified Government Gazette 12 May 1894 & Government Gazette 18 Mar 1977)</i> |
| Allotment 6 Section 21 Town East Maitland² | |
| Prior to 2 July 1999 | Crown Land |
| <i>(18 Mar 1977 to 02 Jul 1999)</i> | <i>(Part Allotment 6 Section 21 Town East Maitland, added to Reserve 20743 for Gaol and Lockup, notified Government Gazette 12 May 1894 vide Government Gazette 18 Mar 1977)</i> |
| <i>(23 Feb 1973 to 18 Mar 1977)</i> | <i>(Reserve 888858 for Civil Defence Purposes)</i> |
| <i>(21 Sept 1889 to 02 Jul 1999)</i> | <i>(Reserve 9705 for Police Purposes, notified Government Gazette 21 Sep 1889)</i> |
| Allotment 7 Section 21 Town East Maitland³ | |
| Prior to 02 Jul 1999 | Crown Land |
| <i>(12 May 1894 to 02 Jul 1999)</i> | <i>(Reserve 20743 for Gaol and Lockup, notified Government Gazette 12 May 1894)</i> |

² The north-west portion of Lot 469 DP1002766 (refer to Appendix E)

³ The south-east portion of Lot 469 DP1002766 (refer to Appendix E)

6 Site inspection and surrounding lands

6.1 Site observations

A walkover of the Site was undertaken by an EMM environmental engineer on 20 December 2022 accompanied by a MCC representative.

During the Site inspection, it was communicated that the Gaol relied on the local Fire Brigade for firefighting. It was also communicated that the original ground level around Building 2 and Building 3 had been raised from the basement floor level to the first-floor level.

Features identified during the Site inspection are presented in Table 6.1 with a photographic record included in Appendix F.

Table 6.1 Site observations

| Feature | Photos (Appendix D) | Comments |
|---|---|--|
| Building 2 – Former Lieutenant Governor’s Residence | 1, 2, 3, 4 and 5 | <p>Building 2 was disused during the time of inspection. A former exercise/gym area was identified in the basement. Other rooms in Building 2 may have been used for office spaces.</p> <p>Potential ACM was observed in the ceiling material of the ground floor and in the wall cladding in the basement. Water damage resulting from ingress of groundwater was observed in the basement. ACM may also be associated with the carpet in the exercise/gym area.</p> |
| Building 3 – Former Governor’s Residence | 6 | <p>Building 3 was largely used by the Maitland Gaol Visitor Information Centre at the time of inspection. This included a reception area and conference room downstairs and a kitchen area and office space upstairs. Two upstairs rooms were also used as rehearsal spaces for the University of Newcastle’s Conservatorium. The basement is used as document and electronics storage.</p> <p>Potential ACM was observed in the wall cladding in the basement. Water damage resulting from ingress of groundwater was observed in the basement.</p> |
| Building 14 – Former Store and Work Centres | 8, 9, 10, 11, 12, 13, 14, 17, 18, 19, 20, 21, 22, 23, 25 and 26 | <p>Building 14 included a rehearsal/storage space and auditorium used by the Maitland Musical Society, the former shower block and the former laundry. A disused boiler room is also located within the north-east section of the building however it is excluded from the Site. There are also a number of rooms used for storage.</p> <p>The former laundry was used to store garden maintenance equipment at the time of inspection. Several 20 L fuel containers were observed in an attached room. A hydrocarbon odour was noted.</p> <p>A 20 L drum of BL10-B Turbo Truckwash was observed near the entrance basement loading dock.</p> <p>A disused boiler room was identified in the north-east end of Building 14. It should be noted that the boiler room is outside of the Site. A fuel/oil emergency shutoff valve was identified on the north-west wall of Building 14 adjacent to and on the southern side of the boiler room.</p> |
| Building 22 – Gaol Staff/Warden’s Amenities | 27 | <p>Building 22 is currently leased by the Bread and Water Café. It includes an open seating area and a kitchen.</p> |
| UPSS and Petroleum Bowers | 18, 19, 20 and 23 | <p>Three petroleum bowers (labelled as diesel, super and standard) along with three vents were observed north-west of Building 14. Whilst the exact age of the bowers is unknown, it is estimated that they are over 50 years old. The bowers appeared to be deteriorating with a large amount of surface rust. Fill points and monitoring wells were not observed during the Site inspection.</p> |

Table 6.1 **Site observations**

| Feature | Photos (Appendix D) | Comments |
|----------------------------|---------------------|---|
| Generator | 17 | A large, derelict generator was observed in the vegetated area near Buildings 14 and 22. Several 20 L plastic and metal cooking oil drums were observed. The drums were filled to varying levels with what appeared to be used cooking oil. The drums appeared to be intact and were in reasonable condition. |
| Legionella Treatment Plant | 16 | A disused treatment plant believed to be used for the treatment of legionella in the air conditioning system was observed adjacent to the derelict generator near the Café. Based on observed signage, it is believed that chlorine was used in the treatment process. |
| Water Feature | 15 | A disused water feature was observed in the western portion of the Site. |
| Cooling Unit | 23 | A large cooling unit was observed during the Site inspection on the ground to the north-west of Building 14. The unit appears to have been disconnected and was in reasonable condition with some surface rust. |
| Wastewater Cooling Pit | 24 | A large pit was observed towards the northern area of the Site. It is understood that wastewater from the laundry was held here to cool prior to discharge into the sewer. It was non-operational at the time of inspection. |
| Courtyard | 7 | A brick courtyard is present in the central portion of the Site. |

6.2 Surrounding lands

The Site forms part of the western portion of the Maitland Gaol. The main Gaol area is located immediately to the east of the Site and consists of the A, B and C Wings, exercise yards, a former chapel and associated prison infrastructure. Immediately to the north-west of the Site and within the Gaol boundary, land use comprised open space.

The Gaol is bordered by Lindesay Street to the north-east and by John Street to the south-west with the Gaol only being accessible from John Street. Opposite the Gaol to the south-west of the Site is the East Maitland Courthouse, which is surrounded by Anzac Park. Beyond this is the Main Northern Railway including the East Maitland Railway Station to the west of the Site. Further to the west are low density commercial and residential properties with some industrial properties located along Melbourne Road.

Surrounding the Gaol to the north-west, north-east and south-east are low density residential properties. The Maitland Grossman Highschool is located approximately 100 m to the north-east of the Site and the Hunter River Community School is located approximately 420 m to the south-east of the Site. Agricultural land is located approximately 180 m to the north of the Site along with a disused sawmill approximately 400 m north-west of the Site.

Several irrigation channels exist to the north of the Site with the nearest being located approximately 250 m from the Site. A drainage line is present within Anzac Park near the East Maitland Railway Station approximately 100 m to the west of the Site.

7 Assessment of sources, pathways and receptors

7.1 Sources and contaminants of potential concern

Table 7.1 shows a summary of the potential sources of contamination and associated contaminants of potential concern (CoPC) identified as an outcome of the information review and Site inspection.

Table 7.1 Summary of potential sources of historical contamination and CoPC

| Potential sources of contamination | CoPC | Likelihood of contamination/release mechanisms |
|--|--|---|
| USTs and associated infrastructure | BTEXN ⁴ , TRH ⁵ , ACM ⁶ , heavy metals ⁷ | <p>Potential – the presence of three fuel bowsers and vent pipes to the north-west of Building 14 indicate the presence of three USTs used for petroleum storage. As no known records exist pertaining to the USTs (including maintenance records), the condition of the USTs is unknown.</p> <p>Given the estimated age of the bowsers, ACM may be present in components of the UPSS and associated infrastructure.</p> <p>Contamination may have resulted from spills associated with the use of the UPSS or from leaks resulting from deterioration of the USTs.</p> |
| Building materials notably ACM and lead. | ACM, heavy metals | <p>Known – ACM has been identified within each of the buildings located within the Site as documented in the asbestos register (ESP, 2015). Any historical conduits, service pipes or waste fill material may also contain bonded or friable asbestos. Lead may also be present in cladding and paint. ACM and lead may also be present in soils resulting from the demolition of former buildings and services.</p> |

⁴ BTEXN – benzene, toluene, ethylbenzene, xylene and naphthalene

⁵ TRH – total recoverable hydrocarbons

⁶ ACM – asbestos containing material

⁷ Heavy metals – arsenic, cadmium, copper, chromium, nickel, lead, mercury, tin, zinc

Table 7.1 Summary of potential sources of historical contamination and CoPC

| Potential sources of contamination | CoPC | Likelihood of contamination/release mechanisms |
|------------------------------------|---|---|
| Chemical storage | BTEXN, TRH, PAHs ⁸ , heavy metals, phenols, VOCs ⁹ , SVOCs ¹⁰ , ACM, OCPs, OPPs, formaldehyde, nutrients ¹¹ | <p>Potential – Building 14 formerly housed the shower block, laundry and boiler room in addition to various storage areas all of which may have stored various chemicals.</p> <p>Additionally, the laundry is currently used as a storage area/maintenance workshop for gardening equipment. At the time of inspection, several 20 L petrol and oil drums were observed here with a strong hydrocarbon odour being noted. A 20 L drum of BL10-B Turbo Truckwash was also identified during the Site inspection.</p> <p>Contamination may be present because of spills and leaks.</p> |
| Kitchen and wastes | Oil and grease, surfactants, nutrients | <p>Potential – whilst the Café in Building 22 was unable to be inspected, it is understood that it houses a fully functioning kitchen including a 1000 L grease trap. Contamination may result from overtopping of the grease trap or from leaks however the latter is unlikely due to the age of the building.</p> <p>At the time of inspection, a large 20 L plastic drums containing what appeared to be used cooking oil were observed in an outdoor area adjacent to the derelict generator. Contamination may result from leaks forming due to deterioration, spills during handling or from oily residue on the exterior if the drums.</p> |
| Wastewater cooling pit | Oil and grease, surfactants, nutrients, formaldehyde | <p>Unlikely – it is understood that the large pit located north-west of Building 14 was used to cool untreated wastewater from the laundry, prior to discharge into the sewer. Contamination may be present downgradient of the pit resulting from overtopping of the pit although this would be considered unlikely if proper management procedures were observed.</p> |
| Firefighting training | PFAS ¹² | <p>Potential – it is understood that the Gaol relied on the local Fire Brigade. Firefighting training is known to have occurred off-Site at the Gaol however as no formal records exist, firefighting training may have also been undertaken within the Site.</p> |

⁸ PAHs – polycyclic aromatic hydrocarbons

⁹ SVOCs – volatile organic compounds

¹⁰ SVOCs – semi volatile organic compounds

¹¹ Nutrients – total nitrogen, total kjeldahl nitrogen, nitrate, nitrite, ammonia, total phosphorus

¹² PFAS – per- and polyfluoroalkyl substances

Table 7.1 Summary of potential sources of historical contamination and CoPC

| Potential sources of contamination | CoPC | Likelihood of contamination/release mechanisms |
|------------------------------------|---|--|
| Generator | BTEXN, TRH, PAHs, VOCs, heavy metals, SVOCs, phenols, ACM | Potential – the large generator located to the north-west of Building 14 and Building 22 was in a visible state of deterioration at the time of inspection. Whilst the generator is situated on a concrete hardstand, the state of the hardstand and whether it acts as a bund is unknown. Contamination may have resulted from spills during the generator's use or may be the result of deterioration of the generator itself. |
| Potential washdown area | BTEXN, TRH, PAHs, VOCs, heavy metals, SVOCs, phenols, surfactants | Potential – a 20 L drum of BL10-B Turbo Truckwash was observed near the entrance to the basement loading dock in Building 14 during the Site inspection. The Safety Data Sheet (SDS) for the truckwash states that it contains linear alkyl benzene sulfates (LABS) which are a type of ecotoxic anionic surfactant; however, it is expected to readily breakdown in the environment. It should be noted that this does not preclude the use of other longer-lasting compounds that may have been used historically. |
| Use of fill materials | BTEXN, TRH, PAHs, heavy metals, phenols, ACM, SVOCs, PFAS | Potential – it is understood that the original ground level around Building 2 and Building 3 was the same as the basement floor level and has since been built up using fill material to the first floor level. Potential contaminants may have been brought onto the Site as a result. |
| UXO | UXO ¹³ and associated chemicals | Unlikely – whilst the Site has been identified as being within the Maitland UXO area, the risk of UXO is related to the use of Maitland as a military training area during WWII. As the Gaol remained in operation throughout the War, the risk of UXO being present at the Site is considered unlikely. |
| Main Northern Railway | ACM, heavy metals, TRH | Unlikely – whilst the Main Northern Railway is located approximately 110 m to the west of the Site, the risk of CoPC migrating to the Site is considered negligible due to the Railway being situated downgradient from the Site. |

The following transport mechanisms may apply to CoPC identified at the Site:

- surface water runoff;
- vertical leaching by rainwater;
- groundwater transport;
- aeolian (windblown) transport of dust and fibres; and
- excavation and relocation of soils as part of proposed redevelopment activities.

Identified potential exposure pathways for the nominated CoPC include:

¹³ UXO – unexploded ordnance

- i) dermal contact and incidental ingestion of soil;
- ii) inhalation of dust, paint flakes (including soil derived) or fibres;
- iii) dermal contact and incidental ingestion of groundwater/surface water;
- iv) inhalation of soil/groundwater vapours in indoor air;
- v) inhalation of soil/groundwater/surface water vapours in outdoor air;
- vi) inhalation of soil/groundwater vapours within a trench;
- vii) plant uptake and/or ingestion by animals (including aquatic flora and fauna); and
- viii) uptake of CoPC from groundwater (stygo fauna and microorganisms).

Based on the physical and chemical features of the CoPC identified, the exposure pathways that may be applicable to each CoPC at the Site are presented in Table 7.2.

Table 7.2 CoPC and applicable exposure pathways

| CoPC | Applicable pathways |
|----------------------|----------------------------------|
| Asbestos | ii |
| TRH/BTEXN | i, iii, iv, v, vi, vii, viii |
| PAHs | i, iii, iv, v, vi, vii, viii |
| VOCs/SVOCs | i, iii, iv, v, vi, vii, viii |
| Formaldehyde | i, ii, iii, iv, v, vi, vii, viii |
| Heavy metals | i, ii, iii, vii, viii |
| Nutrients | vii, viii |
| OCPs/OPPs | i, ii, iii, iv, v, vi, vii, viii |
| Phenols | i, ii, iii, iv, v, vi, vii, viii |
| PFAS and surfactants | i, iii, vii, viii |
| UXO | i |

7.2 Preliminary qualitative risk assessment methodology

EMM has quantified potential contamination risks using a risk assessment matrix. Each identified contamination issue was assessed in terms of the potential consequence for redevelopment and future use of the Site, using the matrix of consequences and likelihoods in Table 7.3. This information was subsequently used to inform the preliminary CSM and preliminary risk assessment in Table 7.4.

Table 7.3 Preliminary qualitative risk assessment matrix

| Consequence | Likelihood of soil, surface water or groundwater contamination to be present | | | | |
|--|---|---|--|--|--|
| | Rare (1) - Very unlikely at concentrations above the relevant assessment criteria and limited in extent | Unlikely (2) - Potentially present at concentrations above the relevant assessment criteria and limited in extent | Possible (3) - Potentially present at concentrations above the relevant assessment criteria and widespread | Likely (4) - Most likely present at concentrations above the relevant assessment criteria and widespread | Almost certain (5) - Known to be present at concentrations above the relevant assessment criteria and widespread |
| Insignificant (1) - No or highly unlikely exposure pathway for human or ecological receptors under proposed redevelopment and future land use [^] | Low 1 | Low 2 | Low 3 | Low 4 | Moderate 5 |
| Minor (2) - Unlikely exposure pathway for human or ecological receptors under proposed redevelopment and future land use [^] | Low 2 | Low 4 | Low 6 | Moderate 8 | Moderate 10 |
| Moderate (3) - Exposure pathway for human or ecological receptors may be present and complete under proposed redevelopment and future land use [^] | Low 3 | Low 6 | Moderate 9 | Moderate 12 | High 15 |
| High (4) - Exposure pathway for human or ecological receptors likely to be present and complete under proposed redevelopment and future land use [^] | Low 4 | Moderate 8 | Moderate 12 | High 16 | High 20 |
| Significant (5) - Exposure pathway for human or ecological receptors present and are considered complete under redevelopment and future land use [^] | Moderate 5 | Moderate 10 | High 15 | High 20 | High 25 |

[^] Without further investigation or implementation of appropriate management controls as outlined in Section 8.3.

7.3 Receptors

A preliminary CSM has been developed to identify existing known sources and areas of contamination, associated potential impacts to human health and ecological receptors and to identify exposure source-pathway-receptor (S-P-R) linkages. Typical receptors of the Site would include:

- current and future Site users including visitors, maintenance and office workers;
- future project construction workers;
- users and occupants of adjoining land;
- users of surface water downgradient from the Site; and
- ecological receptors, including agricultural receptors, and terrestrial, groundwater and aquatic ecosystems.

The preliminary CSM is presented in Table 7.4.

Table 7.4 Preliminary conceptual Site model

| Source | CoPC | Potential exposure and migration pathways | Receptor | Potential for complete S-P-R linkage | Tier 1 preliminary risk assessment ¹⁴ |
|------------------------------------|-------------------------------|--|---|--|--|
| USTs and associated infrastructure | BTEXN, TRH, ACM, heavy metals | <p>Exposure:</p> <ul style="list-style-type: none"> • Dermal contact or incidental ingestion of soil, groundwater and/or surface water • Inhalation of dust and/or fibres • Inhalation of soil/groundwater vapours in indoor/outdoor air and/or vapours within a trench • Plant uptake and/or ingestion by animals (including aquatic flora and fauna) • Uptake of CoPC from groundwater (stygo fauna and microorganisms) <p>Migration:</p> <ul style="list-style-type: none"> • Surface water runoff • Vertical leaching by rainwater • Groundwater transport • Excavation and relocation of impacted soils as part of redevelopment works | <ul style="list-style-type: none"> • Current and future Site users • Future project construction workers • Users and occupants of adjoining land • Users of surface water downgradient from the Site • Ecological receptors, including agricultural receptors, and terrestrial, groundwater and aquatic ecosystems | <p>Potential – the presence of three fuel bowsers and vent pipes to the north-west of Building 14 indicate the presence of three USTs used for petroleum storage. As no known records exist pertaining to the USTs (including maintenance records), the condition of the USTs is unknown, however the bowsers appear to be old and are in poor condition.</p> <p>Given the estimated age of the bowsers, ACM may be present in components of the UPSS and associated infrastructure.</p> <p>Contamination may have resulted from spills associated with the use of the UPSSs or from leaks resulting from deterioration of the USTs.</p> <p>The unknown condition and location of the three potential USTs represents considerable risk to on- and off-Site receptors. The Site’s position in the landscape means that migration of any contamination (if present) off-Site is likely to occur readily and has potential to be widespread.</p> | Moderate 12 |

¹⁴ The contamination risk level is based on a tier-one preliminary qualitative risk assessment matrix as outlined in Section 7.2.

Table 7.4 Preliminary conceptual Site model

| Source | CoPC | Potential exposure and migration pathways | Receptor | Potential for complete S-P-R linkage | Tier 1 preliminary risk assessment ¹⁴ |
|---|-------------------|---|---|---|--|
| Hazardous building materials notably ACM, SMF and lead. | ACM, heavy metals | <p>Exposure:</p> <ul style="list-style-type: none"> • Dermal contact (metals) or incidental ingestion of soil • Inhalation of dust and/or fibres • Dermal contact and incidental ingestion of groundwater/surface water (metals) • Plant uptake and/or ingestion of metals by animals (including aquatic flora and fauna) • Uptake of CoPC (metals) from groundwater (stygo fauna and microorganisms) <p>Migration:</p> <ul style="list-style-type: none"> • Surface water runoff • Vertical leaching by rainwater (metals) • Groundwater transport (metals) • Aeolian (windblown) transport of dust and fibres • Excavation and relocation of soils as part of redevelopment works | <ul style="list-style-type: none"> • Current and future Site users • Future project construction workers • Users and occupants of adjoining land • Users of surface water downgradient from the Site • Ecological receptors, including agricultural receptors, and terrestrial, groundwater and aquatic ecosystems | <p>Likely/known – ACM and other hazardous building materials have been identified within each of the buildings located within the Site as documented in the Hazardous Materials Register (Hazmat Services, 2022). Any historical conduits, service pipes or waste fill material may also contain bonded or friable asbestos. Lead may also be present in cladding and paint. ACM and lead may also be present in soils resulting from the demolition of former buildings and services.</p> <p>As ACM present within the buildings is likely to be encountered as part of the planned redevelopment works, this represents a complete S-P-R linkage. Additional S-P-R linkages may potentially become complete if ACM and/or lead in soils is disturbed as part of the redevelopment works. If lead contamination is present at the Site, the contamination has potential to migrate off-Site.</p> | Moderate 12 |

Table 7.4 Preliminary conceptual Site model

| Source | CoPC | Potential exposure and migration pathways | Receptor | Potential for complete S-P-R linkage | Tier 1 preliminary risk assessment ¹⁴ |
|------------------|---|---|---|---|--|
| Chemical storage | BTEXN, TRH, PAHs, heavy metals, phenols, VOCs, ACM, OCPs, OPPs, formaldehyde, nutrients | <p>Exposure:</p> <ul style="list-style-type: none"> • Dermal contact or incidental ingestion of soil, groundwater and/or surface water • Inhalation of dust and/or fibres • Inhalation of soil/groundwater vapours in indoor/outdoor air and/or vapours within a trench • Plant uptake and/or ingestion by animals (including aquatic flora and fauna) • Uptake of CoPC from groundwater (stygo fauna and microorganisms) <p>Migration:</p> <ul style="list-style-type: none"> • Surface water runoff • Vertical leaching by rainwater • Groundwater transport <p>Excavation and relocation of soils as part of redevelopment works</p> | <ul style="list-style-type: none"> • Current and future Site users • Future project construction workers • Users and occupants of adjoining land • Users of surface water downgradient from the Site • Ecological receptors, including agricultural receptors, and terrestrial, groundwater and aquatic ecosystems | <p>Potential – Building 14 formerly housed the shower block, laundry and boiler room in addition to various storage areas all of which may have stored various chemicals.</p> <p>Additionally, the laundry is currently used as a storage area/maintenance workshop for gardening equipment. At the time of inspection, several 20 L petrol and oil drums were observed here with a strong hydrocarbon odour being noted. A 20 L drum of BL10-B Turbo Truckwash was also identified during the Site inspection.</p> <p>Whilst Building 14 represents a bunded area, there is still potential for spills and leaks to enter the environment over time if not correctly managed. Additionally, improper storage and management of chemicals may represent a potentially complete S-P-R linkage for current users of the Site and future construction workers.</p> | Low 6 |

Table 7.4 Preliminary conceptual Site model

| Source | CoPC | Potential exposure and migration pathways | Receptor | Potential for complete S-P-R linkage | Tier 1 preliminary risk assessment ¹⁴ |
|--------------------|--|---|---|---|--|
| Kitchen and wastes | Oil and grease, surfactants, nutrients | <p>Exposure:</p> <ul style="list-style-type: none"> • Dermal contact or incidental ingestion of soil, groundwater and/or surface water • Inhalation of dust • Inhalation of soil/groundwater vapours in indoor/outdoor air and/or vapours within a trench • Plant uptake and/or ingestion by animals (including aquatic flora and fauna) • Uptake of CoPC from groundwater (stygo fauna and microorganisms) <p>Migration:</p> <ul style="list-style-type: none"> • Surface water runoff • Vertical leaching by rainwater • Groundwater transport • Excavation and relocation of soils as part of redevelopment works | <ul style="list-style-type: none"> • Current and future Site users • Future project construction workers • Users and occupants of adjoining land • Users of surface water downgradient from the Site • Ecological receptors, including agricultural receptors, and terrestrial, groundwater and aquatic ecosystems | <p>Potential – whilst the Café in Building 22 was unable to be inspected, it is understood that it houses a fully functioning kitchen including a 1000 L grease trap. Contamination may result from overtopping of the grease trap or from leaks however the latter is unlikely due to the age of the building.</p> <p>At the time of inspection, a large 20 L plastic drums containing what appeared to be used cooking oil were observed in an outdoor area to the west of Building 14. Contamination may result from leaks forming due to deterioration, spills during handling or from oily residue on the exterior if the drums.</p> <p>Potentially complete S-P-R linkages may form during planned construction work as part of the redevelopment of the Site. Additionally, the location of the potential used cooking oil has significant potential for off-Site migration of potential contaminants.</p> | Moderate 12 |

Table 7.4 Preliminary conceptual Site model

| Source | CoPC | Potential exposure and migration pathways | Receptor | Potential for complete S-P-R linkage | Tier 1 preliminary risk assessment ¹⁴ |
|------------------------|-------------------------------------|---|---|--|--|
| Wastewater cooling pit | Nutrients, formaldehyde, OCPs, OPPs | <p>Exposure:</p> <ul style="list-style-type: none"> • Dermal contact or incidental ingestion of soil, groundwater and/or surface water • Inhalation of dust • Inhalation of soil/groundwater vapours in indoor/outdoor air and/or vapours within a trench • Plant uptake and/or ingestion by animals (including aquatic flora and fauna) • Uptake of CoPC from groundwater (stygo fauna and microorganisms) <p>Migration:</p> <ul style="list-style-type: none"> • Surface water runoff • Vertical leaching by rainwater • Groundwater transport • Excavation and relocation of soils as part of redevelopment works | <ul style="list-style-type: none"> • Current and future Site users • Future project construction workers • Users and occupants of adjoining land • Users of surface water downgradient from the Site • Ecological receptors, including agricultural receptors, and terrestrial, groundwater and aquatic ecosystems | <p>Unlikely – it is understood that the large pit located north-west of Building 14 was used to cool untreated wastewater from the laundry, prior to discharge into the sewer. Contamination may be present downgradient of the pit resulting from overtopping of the pi although this would be considered unlikely if proper management procedures were observed.</p> <p>As the area surrounding the pit is not banded, any potential contamination would be able to readily migrate off-Site. Additionally, S-P-R linkages may potentially become complete during planned redevelopment works.</p> | Low 6 |

Table 7.4 Preliminary conceptual Site model

| Source | CoPC | Potential exposure and migration pathways | Receptor | Potential for complete S-P-R linkage | Tier 1 preliminary risk assessment ¹⁴ |
|-----------------------|----------------------|--|---|--|--|
| Firefighting training | PFAS and surfactants | <p>Exposure:</p> <ul style="list-style-type: none"> • Dermal contact or incidental ingestion of soil, groundwater and/or surface water • Inhalation of dust • Plant uptake and/or ingestion by animals (including aquatic flora and fauna) • Uptake of CoPC from groundwater (stygo fauna and microorganisms) <p>Migration:</p> <ul style="list-style-type: none"> • Surface water runoff • Vertical leaching by rainwater • Groundwater transport • Excavation and relocation of soils as part of redevelopment works | <ul style="list-style-type: none"> • Current and future Site users • Future project construction workers • Users and occupants of adjoining land • Users of surface water downgradient from the Site • Ecological receptors, including agricultural receptors, and terrestrial, groundwater and aquatic ecosystems | <p>Potential – it is understood that the Gaol relied on the local Fire Brigade. Firefighting training is known to have occurred off-Site at the Gaol however as no formal records exist, firefighting training may have also been undertaken within the Site..</p> <p>S-P-R linkages have potential to become complete under the planned redevelopment works. Additionally, PFAS are highly mobile compounds and if used historically at the Site, have potential to be widespread on- and off-Site.</p> | Moderate 12 |

Table 7.4 Preliminary conceptual Site model

| Source | CoPC | Potential exposure and migration pathways | Receptor | Potential for complete S-P-R linkage | Tier 1 preliminary risk assessment ¹⁴ |
|---------------------|---|---|---|---|--|
| Generator operation | BTEXN, TRH, PAHs, VOCs, heavy metals, SVOCs, phenols, ACM | <p>Exposure:</p> <ul style="list-style-type: none"> • Dermal contact or incidental ingestion of soil, groundwater and/or surface water • Inhalation of dust and/or fibres • Inhalation of soil/groundwater vapours in indoor/outdoor air and/or vapours within a trench • Plant uptake and/or ingestion by animals (including aquatic flora and fauna) • Uptake of CoPC from groundwater (stygo fauna and microorganisms) <p>Migration:</p> <ul style="list-style-type: none"> • Surface water runoff • Vertical leaching by rainwater • Groundwater transport • Excavation and relocation of soils as part of redevelopment works | <ul style="list-style-type: none"> • Current and future Site users • Future project construction workers • Users and occupants of adjoining land • Users of surface water downgradient from the Site • Ecological receptors, including agricultural receptors, and terrestrial, groundwater and aquatic ecosystems | <p>Potential – the large generator located near Building 14 and Building 22 was in a visible state of deterioration at the time of inspection. Whilst the generator is situated on a concrete hardstand, the state of the hardstand and whether it acts as a bund is unknown. Contamination may have resulted from spills during the generators use or may be the result of deterioration of the generator itself.</p> <p>It is understood that the generator is to be removed as part of the proposed redevelopment works. As such, there is potential for S-P-R linkages to become complete. Furthermore, any potential contamination may migrate readily off-Site.</p> | Moderate 12 |

Table 7.4 Preliminary conceptual Site model

| Source | CoPC | Potential exposure and migration pathways | Receptor | Potential for complete S-P-R linkage | Tier 1 preliminary risk assessment ¹⁴ |
|-------------------------|---|---|---|---|--|
| Potential washdown area | BTEXN, TRH, PAHs, VOCs, heavy metals, SVOCs, phenols, surfactants | <p>Exposure:</p> <ul style="list-style-type: none"> • Dermal contact or incidental ingestion of soil, groundwater and/or surface water • Inhalation of dust • Inhalation of soil/groundwater vapours in indoor/outdoor air and/or vapours within a trench • Plant uptake and/or ingestion by animals (including aquatic flora and fauna) • Uptake of CoPC from groundwater (stygo fauna and microorganisms) <p>Migration:</p> <ul style="list-style-type: none"> • Surface water runoff • Vertical leaching by rainwater • Groundwater transport • Excavation and relocation of soils as part of redevelopment works | <ul style="list-style-type: none"> • Current and future Site users • Future project construction workers • Users and occupants of adjoining land • Users of surface water downgradient from the Site • Ecological receptors, including agricultural receptors, and terrestrial, groundwater and aquatic ecosystems | <p>Potential – a 20 L drum of truckwash was observed near the entrance to the basement loading dock in Building 14 during the Site inspection.</p> <p>The Safety Data Sheet (SDS) for the truckwash states that it contains linear alkyl benzene sulfates (LABS) which are a type of ecotoxic anionic surfactant however it is expected to readily breakdown in the environment. It should be noted that this does not preclude the use of other longer lasting compounds that may have been used historically.</p> <p>S-P-R linkages may potential become complete during the planned redevelopment works. Additionally, contaminants may readily migrate off-Site resulting in potential complete S-P-R linkages.</p> | Moderate 12 |

Table 7.4 Preliminary conceptual Site model

| Source | CoPC | Potential exposure and migration pathways | Receptor | Potential for complete S-P-R linkage | Tier 1 preliminary risk assessment ¹⁴ |
|-----------------------|---|---|---|---|--|
| Use of fill materials | BTEXN, TRH, PAHs, heavy metals, phenols, ACM, SVOCs, PFAS | <p>Exposure:</p> <ul style="list-style-type: none"> • Dermal contact or incidental ingestion of soil, groundwater and/or surface water • Inhalation of dust and/or fibres • Inhalation of soil/groundwater vapours in indoor/outdoor air and/or vapours within a trench • Plant uptake and/or ingestion by animals (including aquatic flora and fauna) • Uptake of CoPC from groundwater (stygo fauna and microorganisms) <p>Migration:</p> <ul style="list-style-type: none"> • Surface water runoff • Vertical leaching by rainwater • Groundwater transport • Aeolian (windblown) transport of dust and fibres • Excavation and relocation of soils as part of redevelopment works | <ul style="list-style-type: none"> • Current and future Site users • Future project construction workers • Users and occupants of adjoining land • Users of surface water downgradient from the Site • Ecological receptors, including agricultural receptors, and terrestrial, groundwater and aquatic ecosystems | <p>Potential – it is understood that the original ground level around Building 2 and Building 3 was the same as the basement floor level and has since been built up to the first floor level. Fill is likely to have also been used elsewhere on-Site such as around Building 14 and Building 22. Potential contaminants may have been brought onto the Site as a result of this.</p> <p>Potential contaminants present in fill material may readily migrate off-Site or become disturbed as part of redevelopment works representing potentially complete S-P-R linkages.</p> | Moderate 12 |

Table 7.4 Preliminary conceptual Site model

| Source | CoPC | Potential exposure and migration pathways | Receptor | Potential for complete S-P-R linkage | Tier 1 preliminary risk assessment ¹⁴ |
|--------|------------------------------|---|---|--|--|
| UXO | UXO and associated chemicals | <p>Exposure:</p> <ul style="list-style-type: none"> • Dermal contact or incidental ingestion of soil, groundwater and/or surface water • Inhalation of dust • Inhalation of soil/groundwater vapours in indoor/outdoor air and/or vapours within a trench • Plant uptake and/or ingestion by animals (including aquatic flora and fauna) • Uptake of CoPC from groundwater (stygo fauna and microorganisms) <p>Migration:</p> <ul style="list-style-type: none"> • Surface water runoff • Vertical leaching by rainwater • Groundwater transport • Excavation and relocation of soils as part of redevelopment works | <ul style="list-style-type: none"> • Current and future Site users • Future project construction workers • Users and occupants of adjoining land • Users of surface water downgradient from the Site • Ecological receptors, including agricultural receptors, and terrestrial, groundwater and aquatic ecosystems | <p>Unlikely – whilst the Site has been identified as being within the Maitland UXO area, the risk of UXO is related to the use of Maitland as a military training area during WWII. As the Gaol remained in operation throughout the War, the risk of UXO being present at the Site is considered unlikely.</p> <p>If UXO is present at the Site, there is potential for S-P-R linkages to become complete during redevelopment works. Additionally, chemicals present within deteriorating UXO may have migrated off-Site representing potentially complete S-P-R linkages.</p> | Low 3 |

Table 7.4 Preliminary conceptual Site model

| Source | CoPC | Potential exposure and migration pathways | Receptor | Potential for complete S-P-R linkage | Tier 1 preliminary risk assessment ¹⁴ |
|-----------------------|---|---|---|---|--|
| Main Northern Railway | BTEXN, TRH, PAHs, heavy metals, phenols, ACM, SVOCs | <p>Exposure:</p> <ul style="list-style-type: none"> • Dermal contact or incidental ingestion of soil, groundwater and/or surface water • Inhalation of dust and/or fibres • Inhalation of soil/groundwater vapours in indoor/outdoor air and/or vapours within a trench • Plant uptake and/or ingestion by animals (including aquatic flora and fauna) • Uptake of CoPC from groundwater (stygo fauna and microorganisms) <p>Migration:</p> <ul style="list-style-type: none"> • Surface water runoff • Vertical leaching by rainwater • Groundwater transport • Aeolian (windblown) transport of dust and fibres • Excavation and relocation of soils as part of redevelopment works | <ul style="list-style-type: none"> • Current and future Site users • Future project construction workers • Users and occupants of adjoining land • Users of surface water downgradient from the Site • Ecological receptors, including agricultural receptors, and terrestrial, groundwater and aquatic ecosystems | Unlikely – whilst the Main Northern Railway is located approximately 110 m to the west of the Site, the risk of CoPC migrating to the Site is considered negligible due to the Railway being situated downgradient from the Site. | Low 1 |

8 Conclusions and recommendations

The majority of the Site is understood to have been occupied by the Gaol since the late 19th century with some agricultural land use along the north-west boundary up until the 1970s. The layout of the Site has changed over time with Building 2 – Lieutenant Governor’s Residence and Building 3 – Governor’s Residence both being constructed as part of the original Gaol in the 1870s. Building 14 – Stores & Work Centres and Building 22 – Gaol Staff/Warden’s Amenities are understood to have both been constructed in the 1970s. Based on historical aerial imagery and photographs provided by MCC, it is understood that at least two smaller buildings were present on the Site (one within the current footprint of Building 14 and one within the central courtyard area of the Site) but have since been demolished. Since the Gaol’s closure in 1998, Building 22 has been converted to a café.

The Site is bounded by the remainder of the Gaol to the east, the East Maitland Courthouse and Anzac Park to the south-west and by low-density residential properties to the north and west. Further to the south-west is the Main Northern Railway with East Maitland Station being located to the west of the Site. Some agricultural properties are also located approximately 100 m north of the Site. A disused boiler room is present within the north-east section of Building 14 but is outside of the Site boundary. Whilst it is considered unlikely that the majority these historical and current land uses within the vicinity of the Site have caused significant or widespread Site contamination, activities associated with the boiler room may have historically contributed to contamination at the Site.

In addition to the four buildings subject to redevelopment as part of the Maitland Gaol Activity Hub, the Site inspection identified the presence of:

- three petrol bowsers and associated vent pipes and UPSS;
- a wastewater cooling pit;
- an industrial cooling unit;
- a large generator;
- a legionella treatment plant; and
- a water feature.

A maintenance workshop within Building 14 was visited during the Site inspection which contained garden maintenance equipment. Several 20 L fuel and oil drums were identified and a hydrocarbon odour was noted. A 20 L drum of BL10-B Turbo Truckwash was also identified near the entrance to the basement loading dock in Building 14. Several 20 L drums believed to contain used cooking oil were also observed near the generator.

The Gaol relied on the local Fire Brigade for firefighting. Firefighting training is known to have occurred off-Site at the Gaol however as no formal records exist, firefighting training may have also been undertaken within the Site.

Potential ACM was identified during the Site inspection and ACM is known to occur in all four buildings within the Site, as per the Hazardous Materials Register (Hazmat Services, 2022). No spills, stains nor gross contamination at the ground surface was observed at the ground surface.

8.1 Environmental Risk

The information inputs summarised herein identify potentially complete S-P-R linkages resulting from potential contamination at the Site. Based on the Site inspection and information reviewed as part of this PSI, any contamination present on the Site would most likely be attributed to:

- the presence of ACM in building materials;
- the presence of UPSS and associated infrastructure;
- spills and leaks from the operation and/or deterioration of a large generator;
- improper storage of chemicals including used cooking oil;
- potential firefighting training that may have historically occurred at the Site;
- potential use of the Site as a washdown area;
- use of fill which may contain ACM or other contaminants of potential concern (CoPC); and
- improper use of the wastewater cooling pit resulting in overtopping.

Key pathways include the vertical migration of CoPC through the soil profile, migration of CoPC via groundwater transport, surface water runoff and atmospheric dispersion of dust or fibres. Potential receptors include current and future land users, construction workers involved in the redevelopment works, off-Site land users and ecological receptors.

The Site's preliminary CSM identified several potential contamination sources which have a potential exposure scenario to on-Site and off-Site receptors. Key areas and contaminants around the Site have been identified as requiring further assessment through intrusive investigation to provide a quantitative assessment of the risk to receptors and the overall contamination risk and suitability of the Site for the proposed land use.

Significant and/or widespread chemical contamination of fill, soil, surface water and groundwater at the has not been identified however the presence of ACM in the buildings within the Site is noted. As such, potentially complete S-P-R linkages exist for construction workers involved in the redevelopment works.

Additionally, there are several moderate risk potential contamination sources that are unquantified and potentially complete S-P-R linkages may already exist with off-Site human and ecological receptors or may form with human receptors if no managed as part of the proposed redevelopment works.

8.2 Recommendations

A detailed site investigation (DSI) is recommended to be undertaken at the site prior to the commencement of redevelopment works to:

- further evaluate the presence of potential contamination identified in this PSI;
- ensure any potential contamination does not pose a risk to construction workers or futures users of the Site; and
- characterise material to evaluate suitability for disposal (if required).

Furthermore, it is recommended that the identified UPSS are managed in accordance with the *Protection of the Environment Operations (Underground Petroleum Storage Systems) Regulation 2019*. This includes removing residual product that may be present in UST's and decommissioning by removal if the tanks have not been used for two years or longer.

Given the Site has been identified to be present within the Maitland unexploded ordinance (UXO) area further desktop assessment should be undertaken and documented in an unexpected finds protocol for future redevelopment works.

References

EMAA 2022, *Maitland Gaol Conservation Management Plan*

ESP 2015, *Maitland City Council Asbestos Register Update*

Hazmat Services 2022, *Hazardous Materials Survey: Maitland Gaol – 6-18 John Street, East Maitland (Draft version)*

National Environment Protection Council (NEPC) 1999, *National Environment Protection (Assessment of Site Contamination) Measure 2013* (ASC NEPM 2013)

NSW Department of Urban Affairs and Planning (DUAP) and NSW EPA 1998, *Managing Land Contamination, Planning Guidelines SEPP 55-Remediation of Land*

NSW EPA 2015, *Guidelines on the Duty to Report Contamination under the Contaminated Land Management Act 1997*

NSW EPA 2017, *Guidelines for the NSW Site Auditor Scheme* (3rd edition)

NSW EPA 2020, *Guidelines for consultants reporting on contaminated land: Contaminated land guidelines*

Premier One Products Pty Ltd 2021, *Safety Data Sheet BL10B Truckwash*, November 2021

Safe Work Australia 2018, *Workplace Exposure Standards for Airborne Contaminants*, 27 April 2018

Appendix A

Database search results


A.1 Appendix A: Database search results

Due Diligence Insight Report

Maitland Gaol
6-18 John Street Maitland, NSW

8 December 2022

Report n°:
LI-3132 DDR



Understanding your report

Your Report has been produced by Land Insight and Resources (Land Insight).

Your Report is based on information available from public databases and sources at the date of reporting. The information gathered relates to land that is within a 200 to 2000m radius (buffer zone) from the boundaries of the Property. A smaller or larger radius may be applied for certain records (as listed under records and as shown in report maps).

While every effort is made to ensure the details in your Report are correct, Land Insight cannot guarantee the accuracy or completeness of the information or data provided.

The report provided by Land Insight includes

data listed on page 4 (table of contents). All sources of data and definitions are provided in the Product Guide (Attached). For a full list of references, metadata, publications or additional information not provided in this report, please contact info@landinsight.co

The report does not include title searches; dangerous good searches or; property certificates (unless requested); or information derived from a physical inspection, such as hazardous building materials, areas of infilling or dumping/spilling of potentially contaminated materials. It is important to note that these documents and an inspection can contain information relevant to contamination that may not be identified by this Report.

Due to the ongoing nature of database development and frequency of updates provided by various state government regulators the data displayed within this report is only current from date of production.

This Report, and your use of it, is regulated by Land Insight's Terms and Conditions (See Land Insight's Product Guide).

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ATTACHMENTS

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Land Insight Product Guide and Terms and Conditions

SUMMARY

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|---|---|-------------------|
|  Section 1 | PROPERTY SETTING | Identified |
| Sensitive Receptors Planning Control Heritage Soil and Land Information Geology and Topography | | |
|  Section 2 | HYDROGEOLOGY | Identified |
| Aquifer Groundwater Bores and Other Borehole investigations Groundwater Dependent Ecosystems (GDE) Hydrogeology Units Wetlands | | |
|  Section 3 | ENVIRONMENTAL REGISTERS LICENCES AND INCIDENTS | Identified |
| Contaminated Land Public Register Sites Regulate by Other Jurisdictional Body (Former Gaswork sites / PFAS sites) Licensing and Regulated Sites National Pollutant Inventory (NPI) | | |
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| Former Potentially Contaminated Land Current and Historical Potentially Contaminating activities (PCA) | | |
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| Erosion risk Bushfire prone land Fire history Flood hazards | | |



Section 1 Property Setting

1.1 SENSITIVE RECEPTORS

Map 1.1 (200m Buffer)

| Sensitive receptor | Type | Distance (m) | Direction |
|--------------------------------|-----------|--------------|------------|
| Anzac Park | Parks | 82.5 | South-west |
| Maitland Grossmann High School | Education | 184.4 | North-east |

1.2a PLANNING CONTROLS

Map 1.2a (500m Buffer)

Zoning

| Zoning | Type | Details | Distance (m) | Direction |
|--------|---------------------|--|--------------|------------|
| SP3 | Tourist | Maitland Local Environmental Plan 2011 | 0.0 | Onsite |
| R1 | General Residential | | 0.0 | Adjacent |
| RE1 | Public Recreation | | 25.4 | South-west |
| SP1 | Special Activities | | 25.4 | South-west |
| SP2 | Infrastructure | | 63.4 | North-west |
| RU1 | Primary Production | | 86.7 | North-west |
| B4 | Mixed Use | | 164.4 | West |
| B2 | Local Centre | | 289.5 | South |
| RE2 | Private Recreation | | 467.3 | South-west |

1.2b PLANNING OVERLAYS

Map 1.2b (500m Buffer)

Environmental Planning Instruments

| Name | Type | Details | Distance (m) | Direction |
|-----------------------------|-------------------------------------|---|--------------|-----------|
| Coal Seam Gas Exclusions | State Environmental Planning Policy | State Environmental Planning Policy (Resources and Energy) 2021 | 0.0 | Onsite |
| Strategic Agricultural Land | | | 86.4 | North |

Other Planning Information

| Name | Category | Details | Distance (m) | Direction |
|------|----------|---------|--------------|-----------|
| - | - | - | - | - |

1.3 HERITAGE

Map 1.3 (200m Buffer)

State and Local Heritage Registers

| Site ID | Site Name | Type | Details | Distance (m) | Direction |
|---------|--|--------------------------|-----------------------------|--------------|------------|
| C3 | East Maitland Heritage Conservation Area | Heritage | Conservation Area - General | 0.0 | Onsite |
| I52 | Maitland Correctional Centre | Heritage | Item - General | 0.0 | Onsite |
| I49 | Courthouse Parklands | Heritage | Item - General | 23.0 | South-west |
| I50 | Courthouse | Heritage | Item - General | 23.0 | South-west |
| I51 | Police station | Heritage | Item - General | 25.9 | North-west |
| I65 | Nenagh | Heritage | Item - General | 27.3 | North-east |
| I53 | House | Heritage | Item - General | 39.1 | South-east |
| I119 | Government Railway | Heritage | Item - General | 72.7 | West |
| I31 | Former Post Office & Stables | Heritage | Item - General | 151.1 | South-west |
| I73 | Hillside | Heritage | Item - General | 176.8 | North-east |
| 1296 | Maitland Correctional Centre | State Heritage Inventory | Complex / Group | 0.0 | Onsite |
| 1016 | Police Station (East Maitland) | State Heritage Inventory | Built | 25.0 | North-west |
| 1135 | East Maitland Railway Station group | State Heritage Inventory | Complex / Group | 73.1 | West |
| 494 | Post Office & Stables (former) | State Heritage Inventory | Built | 152.2 | South-west |

Australian Heritage Database Register

| Site ID | Site Name | Type | Details | Distance (m) | Direction |
|----------------|-----------|------|---------|--------------|-----------|
| Not identified | - | - | - | - | - |

Commonwealth Heritage List, National Heritage List and World Heritage Area.

Soil Landscape

| Code | Soil Landscape | Soil Group | Description | Distance (m) | Direction |
|------|----------------|------------|---|--------------|------------|
| REbe | Beresfield | Residual | <p>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%).</p> <p>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.</p> <p>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.</p> | 0.0 | Onsite |
| ALhu | Hunter | Alluvial | <p>This soil landscape covers the floodplains of the Hunter River and its tributaries. The main soils are all formed in alluvium. They include Brown Clays and Black Earths (Ug5.34, Ug5.17) on prior stream channels and on tributary flats, with Chernozems (Uf5.1) on prior stream channels adjacent to Dartbrook and Brays Hill soil landscapes and in many of the valleys such as Martindale and Widden. Alluvial Soils (loams – Um5 and sands – Um5.52, Um6.1, Uc) occur on levees and flats adjacent to the present river channel. Red Podzolic Soils and Lateritic Podzolic Soils (Dr2.11, Db2.41) are located on old terraces, with Non-calciic Brown Soils (Db1.13) and Yellow Solodic Soils in some drainage lines.</p> | 100.2 | North-west |
| REri | Rivermead | Residual | <p>Landscape—moderately broad to extensive, level to gently undulating alluvial terraces in the Hunter Plain and Paterson Mountains regions. Slope 0–4%, elevation is 5–20 m, local relief is 5–10 m. Cleared tall open-forest.</p> <p>Soils—deep (>200 cm), well-drained Yellow Earths (Gn2.41, Gn2.42) and Red Earths (Gn2.15, Gn2.44) and shallow (<35 cm) to deep (>200 cm), moderately well to imperfectly drained Brown Podzolic Soils (Db1.21), with some Chocolate Soils (Db3.11) and deep (>130 cm), moderately well-drained Brown Clays (Ug5.16). Qualities and Limitations—high foundation hazard, localised flood hazard, seasonal waterlogging on imperfectly drained terraces.</p> | 301.8 | North-west |

Salinity

| Salinity Hazard | Type | Details | Distance (m) | Direction |
|-----------------|------|---------|--------------|-----------|
| - | - | - | - | - |

Radon

| Radon Level (Bq/m ³) | Distance (m) | Direction |
|----------------------------------|--------------|-----------|
| 8 | 0.0 | Onsite |

Typical radon levels in Australia are low and the values shown are the average values for each census district. For specific location, factors such as the local geology and house type could lead to different values. (ARPANSA).

1.4b ACID SULFATE SOIL

Map 1.4b (500m Buffer)

State and Local Acid Sulfate Soil Registers

| Name | Classification | Description | Distance (m) | Direction |
|---------|--------------------|--|--------------|------------|
| Class 5 | Acid Sulfate Soils | Acid sulfate soils are not typically found in Class 5 areas. Areas classified as Class 5 are located within 500 metres on adjacent class 1,2,3 or 4 land. Development consent requirement: Works within 500 metres of adjacent Class 1, 2a, 2b, 3 or 4 land that is below 5 metres Australian Height Datum and by which the watertable is likely to be lowered below 1 metre Australian Height Datum on adjacent Class 1, 2a, 2b, 3 or 4 land. | 0.0 | Onsite |
| Class 4 | | Acid sulfate soils in a class 4 area are likely to be found beyond 2 metres below the natural ground surface. Development consent requirement: Works more than 2 metres below the natural ground surface. Works by which the watertable is likely to be lowered more than 2 metres below the natural ground surface. | 104.6 | North-west |

To ensure that development does not disturb, expose or drain acid sulfate soils and cause environmental damage, development consent may be required for the carrying out of works within areas and land shown on the Acid Sulfate Soils Map.

National Acid Sulfate Soil Register

| Name | Classification | Description | Distance (m) | Direction |
|--------|---|--------------------------------|--------------|------------|
| Bn(p4) | ASS in inland lakes, waterways, wetlands and riparian zones | Low Probability of occurrence | 0.0 | Onsite |
| Ag(p-) | ASS in floodplains | High Probability of occurrence | 104.6 | North-west |

Source: ASRIS Atlas of Australian Sulfate Soils (CSIRO). Acid Sulfate Soils (ASS) are all those soils in which sulfuric acid may be produced, is being produced, or has been produced in amounts that have a lasting effect on main soil characteristics.

1.5 GEOLOGY AND TOPOGRAPHY

Map 1.5 (500m Buffer)

Geology

| Map Sheet | Code | Formation | Age | Group | Dominant Lithology | Description | Distance (m) | Direction |
|--|------|-----------|-----------|----------------------|--------------------|--|--------------|-----------|
| Newcastle Coalfield 100K, modified by Lower NE RFA | Pto | <Null> | Lopingian | Tomago Coal Measures | Sandstone | Very fine- to medium-grained grey lithic sandstone, (sporadically interbedded with) laminated to carbonaceous shale and mudstone, siltstone, coal with | 0.0 | Onsite |

| Map Sheet | Code | Formation | Age | Group | Dominant Lithology | Description | Distance (m) | Direction |
|-----------|-------|------------------------------|----------|------------------------------|--------------------|--|--------------|------------|
| | | | | | | sporadic interbeds of carbonaceous shale, claystone, sideritic bands, rare pebble paraconglomerate | | |
| | QH_af | Alluvial floodplain deposits | Holocene | Alluvial floodplain deposits | Clastic sediment | Silt, very fine- to medium-grained lithic to quartz-rich sand, clay. | 70.2 | North-west |
| | QP_at | Alluvial terrace deposits | Holocene | Alluvial terrace deposits | Clastic sediment | Silt, clay, (fluviually-deposited) fine- to medium-grained quartz-lithic sand, polymictic gravel. | 122.4 | North-west |

Naturally Occurring Asbestos Potential (NOA)

| Category | On the Property? | Within Buffer? |
|----------------|------------------|----------------|
| Not identified | - | - |

Topography

| | |
|---------------------|------------|
| Topography (onsite) | 14-30 mAHD |
|---------------------|------------|



Section 2 Hydrogeology



2.1 HYDROGEOLOGY AND GROUNDWATER BORES

Map 2.1 (2000m Buffer)

| | On the Property? | Within Buffer? |
|-------------------------------------|--|--|
| Aquifer Type | Porous, extensive highly productive aquifers | Porous, extensive highly productive aquifers |
| Drinking Water Catchments | Not identified | Not identified |
| Protected Riparian Corridor | Not identified | Hunter River Wallis Creek |
| UPSS Environmentally Sensitive Zone | Hunter River | Hunter River |
| Wetlands | Not identified | Estuarine Wetland |

Groundwater Bores

| Map ID | Groundwater Bore ID | Authorised Purpose | Completion Date | Drilled Depth (m) | Final Depth (m) | SWL (m) | Salinity (mg/l) | Yield (L/s) | Distance (m) | Direction |
|--------|---------------------|-----------------------|-----------------|-------------------|-----------------|---------|-----------------|-------------|--------------|------------|
| 26 | GW019629 | Unknown | 1/03/1963 | <Null> | 6.1 | <Null> | <Null> | <Null> | 782.0 | North-west |
| 25 | GW065476 | Irrigated agriculture | 1/01/1987 | <Null> | 13.0 | <Null> | <Null> | <Null> | 1003.8 | West |
| 11 | GW202610 | Monitoring | 23/05/2012 | 0.0 | 6.0 | 6.18 | <Null> | <Null> | 1041.4 | South-west |
| 12 | GW202609 | Monitoring | 22/05/2012 | 0.0 | 12.5 | 7.77 | <Null> | <Null> | 1043.5 | South-west |
| 10 | GW202608 | Monitoring | 22/05/2012 | 0.0 | 7.5 | 5.63 | <Null> | <Null> | 1044.0 | South-west |
| 27 | GW201107 | Irrigated agriculture | 1/07/1987 | 13.0 | 13.0 | 6 | <Null> | 7 | 1045.7 | West |
| 7 | GW203477 | Irrigation | 1/01/1980 | 0.0 | 6.5 | 5 | <Null> | <Null> | 1052.5 | North-west |

| Map ID | Groundwater Bore ID | Authorised Purpose | Completion Date | Drilled Depth (m) | Final Depth (m) | SWL (m) | Salinity (mg/l) | Yield (L/s) | Distance (m) | Direction |
|--------|---------------------|-----------------------|-----------------|-------------------|-----------------|---------|-----------------|-------------|--------------|------------|
| 9 | GW202611 | Monitoring | 23/05/2012 | 10.0 | 10.0 | 5.51 | <Null> | <Null> | 1062.0 | South-west |
| 4 | GW202612 | Monitoring | 24/05/2012 | 7.0 | 7.0 | 4.24 | <Null> | <Null> | 1068.0 | South-west |
| 5 | GW202613 | Monitoring | 24/05/2012 | 6.0 | 6.0 | 4.45 | <Null> | <Null> | 1099.0 | South-west |
| 6 | GW202614 | Monitoring | 24/05/2012 | 0.0 | 9.5 | 4.71 | <Null> | <Null> | 1100.4 | South-west |
| 2 | GW202476 | Monitoring | 25/05/2012 | 4.0 | 4.0 | 1.06 | <Null> | <Null> | 1133.4 | South-west |
| 3 | GW202477 | Monitoring | 25/05/2012 | 6.0 | 6.0 | 2.71 | <Null> | <Null> | 1183.1 | South-west |
| 1 | GW068666 | Monitoring | <Null> | 12.5 | <Null> | 6 | <Null> | <Null> | 1218.7 | West |
| 22 | GW078839 | Monitoring | 21/07/1993 | 23.7 | 23.7 | 9.69 | <Null> | 0.5 | 1521.2 | South-east |
| 23 | GW078838 | Monitoring | 20/07/1993 | 26.7 | 26.7 | 13.83 | <Null> | 0.2 | 1601.9 | South-east |
| 24 | GW078842 | Monitoring | 18/07/1996 | 24.0 | 24.0 | 83 | <Null> | <Null> | 1611.4 | South-east |
| 18 | GW078841 | Monitoring | 18/07/1996 | 29.6 | 29.6 | 85 | <Null> | <Null> | 1673.1 | South-east |
| 19 | GW078840 | Monitoring | 22/07/1993 | 32.8 | 32.8 | 17.02 | <Null> | 0.7 | 1783.8 | South-east |
| 8 | GW202163 | Irrigation,stock | 3/03/2008 | 12.0 | 12.0 | 5.5 | Good | 3 | 1806.6 | North |
| 16 | GW047691 | Irrigated agriculture | 1/05/1980 | 10.5 | 10.5 | <Null> | <Null> | <Null> | 1813.5 | West |
| 17 | GW014307 | Irrigated agriculture | 1/10/1956 | 9.1 | 9.1 | 2.9 | <Null> | 1.263 | 1833.2 | North-west |
| 13 | GW027203 | Irrigated agriculture | 1/05/1967 | 9.1 | 9.1 | 3.7 | <Null> | <Null> | 1893.6 | North-west |
| 21 | GW078843 | Monitoring | 14/11/1996 | 11.2 | 11.2 | <Null> | <Null> | <Null> | 1909.4 | South-east |
| 20 | GW078844 | Monitoring | 15/11/1996 | 24 | 24 | 18.99 | <Null> | <Null> | 1923.3 | South-east |
| 15 | GW053069 | Irrigated agriculture | <Null> | 13 | 12 | 9 | Poor | <Null> | 1924.3 | North-east |
| 14 | GW029701 | Unknown | <Null> | 10.4 | 10.4 | 3.7 | <Null> | <Null> | 1935.6 | North-east |

Groundwater Bores Driller Lithology Details

| Groundwater Bore ID | From Depth – To Depth (m) | Lithology | Distance (m) | Direction |
|---------------------|---------------------------|-----------|--------------|------------|
| GW019629 | #N/A | | 782.0 | North-west |
| GW065476 | #N/A | | 1003.8 | West |
| GW202610 | #N/A | | 1041.4 | South-west |
| GW202609 | #N/A | | 1043.5 | South-west |
| GW202608 | #N/A | | 1044.0 | South-west |
| GW201107 | #N/A | | 1045.7 | West |
| GW203477 | #N/A | | 1052.5 | North-west |
| GW202611 | #N/A | | 1062.0 | South-west |
| GW202612 | #N/A | | 1068.0 | South-west |
| GW202613 | #N/A | | 1099.0 | South-west |
| GW202614 | #N/A | | 1100.4 | South-west |
| GW202476 | #N/A | | 1133.4 | South-west |

| Groundwater Bore ID | From Depth – To Depth (m) | Lithology | Distance (m) | Direction |
|---------------------|--|-----------|--------------|------------|
| GW202477 | #N/A | | 1183.1 | South-west |
| GW068666 | 0m-1m Top soil 4m-6m Heavy clay 6m-12m Water bearing sand & gravel | | 1218.7 | West |
| GW078839 | 0m-1m Fill material 1m-4m Clay/shale, cream, plastic 4m-8m Shale, dark grey 8m-10m Sandstone, grey, fine 10m-15.5m Siltstone, grey, fine 15.5m-16m Coal, black 16m-20m Shale, brown to light brown 20m-22m Sandstone, grey, medium 22m-22.5m Coal, black 22.5m-23.3m Sandstone, grey, medium 23.3m-23.7m Siltstone, grey, fine | | 1521.2 | South-east |
| GW078838 | 0m-0.5m Topsoil, clayey 0.5m-3.5m Sandstone, yellow with iron stains 3.5m-5m Shale/siltstone, dark grey, fine, laminitic 5m-6.5m Sandstone, yellow orange 6.5m-6.8m Coal 6.8m-9m Shale/claystone, grey 9m-10m Siltstone, light grey 10m-20m Shale, grey to dark grey 20m-26.7m Sandstone, grey, hard, carbonaceous | | 1601.9 | South-east |
| GW078842 | 0m-0.1m Fill 0.1m-3m Clay 3m-8.5m Claystone 8.5m-9m Coal 9m-14.5m Siltstone 14.5m-17.8m Sandstone 17.8m-22.5m Mudstone 22.5m-24m Coal/mudstone | | 1611.4 | South-east |
| GW078841 | 0m-1.2m Silty clay 1.2m-2.5m Clay 2.5m-3m Clay 3m-4m Clay 4m-9.8m Siltstone 9.8m-10.3m Coal 10.3m-14.5m Claystone 14.5m-14.6m Coal 14.6m-15m Clay 15m-17.5m Siltstone 17.5m-23.5m Siltstone 23.5m-29.5m Coal 29.5m-29.6m Clay | | 1673.1 | South-east |
| GW078840 | 0m-2.5m Clay, grey brown 2.5m-4.7m Siltstone, cream, soft 4.7m-5.2m Coal, black 5.2m-5.5m Siltstone/claystone 5.5m-6.5m Shale, dark grey, carbonaceous 6.5m-8m Sandstone, light grey 8m-9m Shale, grey 9m-10.5m Siltstone, grey 10.5m-11.5m Shale, grey 11.5m-17m Siltstone, grey, layered 17m-22m Sandstone, brown grey 22m-28.5m Coal, black 28.5m-29m Sandstone, grey 29m-30.5m Coal, black, hard 30.5m-32m Siltstone, grey 32m-32.8m Coal | | 1783.8 | South-east |
| GW202163 | #N/A | | 1806.6 | North |
| GW047691 | 0m-2m Topsoil 2m-6m Soil clay 6m-10.5m Gravel | | 1813.5 | West |
| GW014307 | 0m-2.74m Silt sandy 2.74m-5.18m Soil black | | 1833.2 | North-west |

| Groundwater Bore ID | From Depth – To Depth (m) | Lithology | Distance (m) | Direction |
|---------------------|---|-----------|--------------|------------|
| | 5.18m-6.4m Clay 6.4m-9.14m Sand water supply | | | |
| GW027203 | 0m-3.05m Soil 3.05m-4.88m Mud black 4.88m-9.14m Sand water bearing | | 1893.6 | North-west |
| GW078843 | 0m-4m Fill 4m-5m Silty clay 5m-7.5m Silty clay 7.5m-10m Siltstone 10m-11.2m Silty clay | | 1909.4 | South-east |
| GW078844 | 0m-1m Fill 1m-3m Silty clay 3m-5m Silty clay 5m-6m Sandstone 6m-10m Siltstone 10m-15m Sandstone 15m-19m Siltstone 19m-24m Coal | | 1923.3 | South-east |
| GW053069 | 0m-2m Topsoil 2m-4m Soil black 4m-9m Mud 9m-12m Gravel water supply 12m-13m Mud | | 1924.3 | North-east |
| GW029701 | 0m-3.05m Soil 3.05m-7.32m Clay cryptocrystalline 7.32m-10.36m Sand coarse water bearing | | 1935.6 | North-east |

2.2 HYDROGEOLOGY AND OTHER BOREHOLES

Map 2.2 (500m Buffer)

| | On the Property? | Within Buffer? |
|--|--|--|
| Groundwater Vulnerability | Not identified | Not identified |
| Groundwater Exclusion Zones ^{1,2} | Not identified | Not identified |
| Hydrogeologic Unit | Palaeozoic and Pre-Cambrian Fractured Rock Aquifers (low permeability) | Surficial Sediment Aquifer (porous media - unconsolidated) Palaeozoic and Pre-Cambrian Fractured Rock Aquifers (low permeability) |

¹ - Botany Groundwater Management Zones (BGMZ): Zone 1 – the use of groundwater remains banned; Zones 2 to 4 – domestic groundwater use is banned, especially for drinking water, watering gardens, washing windows and cars, bathing, or to fill swimming pools.

² - Williamstown Groundwater Management Zones (WGMZ): Primary Management Zone – this area has significantly higher levels of PFAS detected and therefore, the strongest advice applies. Secondary Management Zone – this area has some detected levels of PFAS; Broader Management Zone – the topography and hydrology of the area means PFAS detections could occur now and into the future.

Groundwater Dependent Ecosystems (GDE)

| | On the Property? | Within Buffer? |
|--------------------------|------------------|----------------|
| Aquatic (Surface) | Not identified | Not identified |
| Terrestrial (Subsurface) | Not identified | Not identified |

Aquatic - Ecosystems that rely on the Surface expression of groundwater.

Terrestrial - Ecosystems that rely on the Subsurface expression of groundwater.

Other Known Borehole Investigations (Coal Seam Gas (CSG), Petroleum Wells and Other Boreholes)

| Borehole ID | Purpose | Project | Client/ License | Date Drilled | Depth (m) | Distance (m) | Direction |
|---------------------|-------------------------|---|---|--------------|-----------|--------------|------------|
| 28197 | Mineral Exploration | EAST MAITLAND GAOL | NSW Mines Department | 01/01/1885 | 227.3 | 18.0 | South-east |
| COAL_DMED GAOLD1 | Mineral Exploration | DPI Minerals Borehole Register - Department Of Mineral Resources, | Department Of Mineral Resources, | | 227.3 | 18.7 | South-east |
| GT0001772 | Intrusive Investigation | A collection of NSW geotechnical reports as part of the NSW Government Geotechnical Report Database Project (GGRD). | Drilling, Soil Sample Analysis located at Maitland Gaol geotechnical investigation - Geotechnical Centre - 18 April 1 | | 0.0 | 37.2 | West |
| TP118 | Test Pit | Proposed 3rd Hunter River Crossing Investigation | RMS | | 1.8 | 284.7 | North-west |
| TP117 | Test Pit | Proposed 3rd Hunter River Crossing Investigation | RMS | | 2.2 | 296.8 | North-west |
| TP207 | Test Pit | Proposed Bridge over Northern Railway Maitland | RMS | | 3.0 | 303.5 | North-west |
| BH209 | Borehole | Proposed Bridge over Northern Railway Maitland | RMS | | 22.4 | 308.0 | North-west |
| CPTu209 | Intrusive Investigation | Proposed Bridge over Northern Railway - Pitnacree Road East Maitland | RMS | | 15.9 | 308.9 | North-west |
| CPTu213 | Intrusive Investigation | Proposed Bridge over Northern Railway - Pitnacree Road East Maitland | RMS | | 18.0 | 309.2 | North-west |
| CPTu212 | Intrusive Investigation | Proposed Bridge over Northern Railway - Pitnacree Road East Maitland | RMS | | 20.8 | 310.0 | North-west |
| TP212 | Test Pit | Proposed Bridge over Northern Railway Maitland | RMS | | 1.8 | 313.1 | North-west |
| TP208 | Test Pit | Proposed Bridge over Northern Railway Maitland | RMS | | 1.8 | 314.1 | North-west |
| CPTu211 | Intrusive Investigation | Proposed Bridge over Northern Railway - Pitnacree Road East Maitland | RMS | | 14.4 | 314.7 | North-west |
| TP206 | Test Pit | Proposed Bridge over Northern Railway Maitland | RMS | | 3.0 | 315.2 | North-west |
| TP209 | Test Pit | Proposed Bridge over Northern Railway Maitland | RMS | | 3.1 | 316.8 | North-west |
| CPTu207 | Intrusive Investigation | Proposed Bridge over Northern Railway - Pitnacree Road East Maitland | RMS | | 15.6 | 321.5 | North-west |
| CPTu210 | Intrusive Investigation | Proposed Bridge over Northern Railway - Pitnacree Road East Maitland | RMS | | 9.4 | 324.8 | North-west |
| BH208 | Borehole | Proposed Bridge over Northern Railway Maitland | RMS | | 23.3 | 334.2 | North-west |

| Borehole ID | Purpose | Project | Client/ License | Date Drilled | Depth (m) | Distance (m) | Direction |
|-------------|-------------------------|--|-----------------|--------------|-----------|--------------|------------|
| TP211 | Test Pit | Proposed Bridge over Northern Railway Maitland | RMS | | 0.9 | 335.9 | North-west |
| CPTu208 | Intrusive Investigation | Proposed Bridge over Northern Railway - Pitnacree Road East Maitland | RMS | | 17.7 | 336.2 | North-west |
| TP205 | Test Pit | Proposed Bridge over Northern Railway Maitland | RMS | | 3.0 | 337.3 | North-west |
| BH206 | Borehole | Proposed Bridge over Northern Railway Maitland | RMS | | 26.3 | 345.1 | North-west |
| CPTu206 | Intrusive Investigation | Proposed Bridge over Northern Railway - Pitnacree Road East Maitland | RMS | | 17.3 | 345.1 | North-west |
| TP116 | Test Pit | Proposed 3rd Hunter River Crossing Investigation | RMS | | 2.2 | 350.1 | North-west |
| ABH7 | Borehole | Proposed MR101 - Third Hunter River Crossing between Melbourne St and Pitnacree Rd | RMS | | 25.5 | 353.1 | North-west |
| TP204 | Test Pit | Proposed Bridge over Northern Railway Maitland | RMS | | 3.0 | 357.6 | North-west |
| BH205 | Borehole | Proposed Bridge over Northern Railway Maitland | RMS | | 17.0 | 358.8 | West |
| CPTu205 | Intrusive Investigation | Proposed Bridge over Northern Railway - Pitnacree Road East Maitland | RMS | | 17.2 | 360.1 | West |
| ABH6 | Borehole | Proposed MR101 - Third Hunter River Crossing between Melbourne St and Pitnacree Rd | RMS | | 30.0 | 363.7 | North-west |
| CPT03 | Intrusive Investigation | Proposed Hunter River Crossing, Elizabeth St East Maitland | RMS | 12/01/2007 | 17.7 | 368.3 | North-west |
| CPT02 | Intrusive Investigation | Proposed Hunter River Crossing, Elizabeth St East Maitland | RMS | 12/01/2007 | 20.0 | 372.7 | North-west |
| TP210 | Test Pit | Proposed Bridge over Northern Railway Maitland | RMS | | 3.0 | 372.9 | North |
| TP203 | Test Pit | Proposed Bridge over Northern Railway Maitland | RMS | | 3.0 | 373.8 | West |
| CPTu203 | Intrusive Investigation | Proposed Bridge over Northern Railway - Pitnacree Road East Maitland | RMS | | 16.4 | 376.1 | West |
| ABH5 | Borehole | Proposed MR101 - Third Hunter River Crossing between Melbourne St and Pitnacree Rd | RMS | | 33.0 | 379.3 | North-west |
| CPT01 | Intrusive Investigation | Proposed Hunter River Crossing, Elizabeth St East Maitland | RMS | 12/01/2007 | 10.0 | 383.1 | West |
| TP106A | Test Pit | Proposed 3rd Hunter River Crossing Investigation | RMS | | 1.1 | 383.4 | North-west |
| TP106B | Test Pit | Proposed 3rd Hunter River Crossing Investigation | RMS | | 1.1 | 383.4 | North-west |

| Borehole ID | Purpose | Project | Client/ License | Date Drilled | Depth (m) | Distance (m) | Direction |
|-------------|-------------------------|--|-----------------|--------------|-----------|--------------|------------|
| TP217 | Test Pit | Proposed Bridge over Northern Railway Maitland | RMS | | 1.8 | 386.3 | West |
| TP218 | Test Pit | Proposed Bridge over Northern Railway Maitland | RMS | | 1.0 | 386.5 | West |
| TP112 | Test Pit | Proposed 3rd Hunter River Crossing Investigation | RMS | | 5.0 | 391.0 | West |
| TP105 | Test Pit | Proposed 3rd Hunter River Crossing Investigation | RMS | | 1.0 | 394.1 | West |
| ABH4 | Borehole | Proposed MR101 - Third Hunter River Crossing between Melbourne St and Pitnacree Rd | RMS | | 6.6 | 403.8 | West |
| TP119 | Test Pit | Proposed 3rd Hunter River Crossing Investigation | RMS | | 1.9 | 404.1 | North |
| TP111 | Test Pit | Proposed 3rd Hunter River Crossing Investigation | RMS | | 2.1 | 406.0 | West |
| TP215 | Test Pit | Proposed Bridge over Northern Railway Maitland | RMS | | 1.1 | 406.6 | West |
| TP214 | Test Pit | Proposed Bridge over Northern Railway Maitland | RMS | | 0.9 | 407.6 | West |
| TP216 | Test Pit | Proposed Bridge over Northern Railway Maitland | RMS | | 0.9 | 408.0 | West |
| CPTu204 | Intrusive Investigation | Proposed Bridge over Northern Railway - Pitnacree Road East Maitland | RMS | | 15.8 | 411.0 | West |
| TP201 | Test Pit | Proposed Bridge over Northern Railway Maitland | RMS | | 3.0 | 413.0 | West |
| TP113 | Test Pit | Proposed 3rd Hunter River Crossing Investigation | RMS | | 1.4 | 414.7 | West |
| CPTu201 | Intrusive Investigation | Proposed Bridge over Northern Railway - Pitnacree Road East Maitland | RMS | | 15.4 | 416.1 | West |
| TP202 | Test Pit | Proposed Bridge over Northern Railway Maitland | RMS | | 3.1 | 417.9 | West |
| CPTu202 | Intrusive Investigation | Proposed Bridge over Northern Railway - Pitnacree Road East Maitland | RMS | | 15.6 | 437.4 | North-west |



Section 3 Environmental Registers, Licences and Incidents



3.1 CONTAMINATED LAND PUBLIC REGISTER

Map 3.1 (1000m Buffer)

Contaminated Sites

| Register Type | Site Name | Address | Description | Details | Distance (m) | Direction |
|---------------------------------|--------------------------------------|--|-----------------|--|--------------|------------|
| EPA Notified Contaminated Sites | Caltex East Maitland Service Station | Newcastle Road, Corner William STREET EAST MAITLAND | Service Station | Regulation under CLM Act not required | 687.3 | South-west |
| EPA Notified Contaminated Sites | United Service Station East Maitland | 164 (also known as 250) Newcastle Street, EAST MAITLAND | Service Station | Regulation under CLM Act not required | 722.7 | South |
| EPA Notified Contaminated Sites | Former Gasworks Site | Corner Melbourne Street and Brisbane Street, EAST MAITLAND | Gasworks | Regulation under CLM Act not required | 999.0 | South-west |
| EPA Record of Notices | Former Gasworks Site | Corner Melbourne Street and Brisbane Street, EAST MAITLAND | Gasworks | Notices relating to this site (2 former) | 999.0 | South-west |

If the record does not contain a complete street address and/or cannot be located, the records' geographic location will be approximated and reported as being within the surrounding area.

| Table 3.1.1 Contaminated Land Public Register | | |
|---|--|---|
| State | Regulatory Body | Information included in this search (by state) |
| ACT | EPA (Environment Protection Authority) | Contaminated Land Search Register of Contaminated Sites |
| NSW | EPA (Environment Protection Authority) | Sites Notified as Contaminated |

| Table 3.1.1 Contaminated Land Public Register | | |
|---|---|---|
| | | Records of Notices |
| NT | EPA (Environment Protection Authority) | Contaminated Land Audit Pollution Abatement Notice |
| QLD | DES (Department of Environment and Science) | Environmental Management Register (EMR) Contaminated Land Register (CLR) |
| SA | EPA (Environment Protection Authority) | Site Contamination Index |
| TAS | EPA (Environment Protection Authority) | Regulated Sites and Premises Lutana and Parts of Hobarts Eastern Shore |
| VIC | EPA (Environment Protection Authority) | Priority Sites Register Pollution Abatement Notice |
| WA | DWER (Department of Water and Environmental Regulation) | Contaminated Sites Database |

This search contains information retrieved from the relevant state authority, agency/department, or government authority that notifies and identifies contaminated land. The list only contains contaminated sites that the regulatory body is aware of or that have been notified by owners or occupiers as contaminated land. The sites are recorded on the register at various stages of the assessment and/or remediation process. If a site is not on the list, it does not necessarily mean the site is not contaminated.

3.2 LICENCES, APPROVALS & ASSESSMENTS

Map 3.2 (500m Buffer)

Licences

| Licence N° | Type | Licence holder | Location Name | Premise Address | Activity | Dist. (m)* | Direct |
|------------|--------------------|---|--|---|--------------------|------------|------------|
| 3957 | No longer in force | FORESTRY CORPORATION OF NEW SOUTH WALES | Lower North East Region (L.N.E.R) Means State Forests And Crown - Timber Lands (ex. Plantations) | WITHIN THE L.N.E.R. SHOWN ON MAP 1 TO THE NSW L.N.E.R. FOREST AGREEMENT GRANTED ON THE 5 MARCH 1999, KEMPSEY, NSW 2440 | Logging operations | 0.0 | Not mapped |
| 4017 | No longer in force | FORESTRY CORPORATION OF NEW SOUTH WALES | Upper North East Region (L.N.E.R) Means State Forests And Crown - Timber Lands (ex. Plantations) | WITHIN THE U.N.E.R. SHOWN ON MAP 1 TO THE NSW U.N.E.R. FOREST AGREEMENT GRANTED ON THE 5 MARCH 1999., COFFS HARBOUR, NSW 2450 | Logging operations | 0.0 | Not mapped |
| 12439 | Surrendered | STATE OF NEW SOUTH WALES (Department of Primary Industries - Lands) | STATE OF NEW SOUTH WALES (Department of Primary Industries - Lands) | STATE OF NEW SOUTH WALES (Department of Primary Industries - Lands) | Other activities | 0.0 | Not mapped |

If the record does not contain a complete street address and/or cannot be located, the records' geographic location will be approximated and reported as being within the surrounding area.

* Not mapped - Licences that are applied to larger areas and/or without specific definition; such as waterways, forests etc will still be identified in the search results but will not be show within the map.

Audits

| N° | Type | Licence holder | Location Name | Premise Address | Activity | Dist. (m)* | Direction |
|----|----------------|----------------|---------------|-----------------|----------|------------|-----------|
| - | Not identified | - | - | - | - | - | - |

If the record does not contain a complete street address and/or cannot be located, the records' geographic location will be approximated and reported as being within the surrounding area.

Clean Up, Penalty Notices and Orders

| N° | Type | Licence holder | Location Name | Premise Address | Details | Dist. (m)* | Direction |
|----|------|----------------|---------------|-----------------|---------|------------|-----------|
| - | - | - | - | - | - | - | - |

If the record does not contain a complete street address and/or cannot be located, the records' geographic location will be approximated and reported as being within the surrounding area.

3.3a SITES REGULATED BY OTHER JURISDICTIONAL BODY

Map 3.3a (2000m Buffer)

Contaminated Legacy Areas

| Site Name | Description | Distance (m) | Direction |
|----------------|-------------|--------------|-----------|
| Not identified | - | - | - |

Includes known contaminated areas such as James Hardies Asbestos waste legacy areas, Pasmenco Smelter and Uranium processing site.

Defence, Military Sites and UXO Areas

| Site name | Type* | Details | Distance (m) | Direction |
|-----------|---------------------------|---|--------------|-----------|
| Maitland | Unexploded Ordnance (UXO) | This site was used for Military Training and Camps during WWII. | 0.0 | Onsite |

*RCIP (Regional Contamination Investigation Program). UXO (Unexploded Ordnance Areas)

Former Gasworks Sites

| Site name | Description | Distance (m) | Direction |
|----------------|--|--------------|------------|
| Former Gaswork | Although both Tuck and the Maitland Gas Company were authorised to supply East and West Maitland with gas, a municipal works was commenced in East Maitland in 1887. Dissatisfaction with the performance of the East Maitland gasworks led the council, in 1911, to seek the expert advice of J. McKenzie, engineer to the Newcastle Gas Company, as well as opinions from other gas enterprises in New South Wales. All agreed that East Maitland gasworks was old-fashioned and inefficient. Council was advised to redesign the retort benches so they could be serviced by fewer stokers; spend £1,000 on renewing the mains; and upgrade the street lights from flat-flame to the new incandescent burners. Seriously damaged by floods in 1949 and 1955 the East Maitland works needed to be replaced by another on higher ground. At the same time, the Maitland council undertaking wanted to take it over. At the suggestion of the state government both the Maitland works were replaced in 1960 by a new works built at Cessnock. | 997.8 | South-west |

PFAS Sites

| Site name | Description | Source | Distance (m) * | Direction |
|----------------|-------------|--------|----------------|-----------|
| Not identified | - | - | - | - |

3.3b OTHER POTENTIAL POLLUTION SOURCES

Map 3.3b (500m Buffer)

Derelict Mines and Quarries

| Site name | Description | Distance (m) | Direction |
|----------------|-------------|--------------|-----------|
| Not identified | - | - | - |

Historical Landfills

| Site name | Description | Distance (m) | Direction |
|----------------|-------------|--------------|-----------|
| Not identified | - | - | - |

National Pollutant Inventory (NPI)

| Facility name | Address | Primary ANZSIC Class | Latest report | Distance (m) | Direction |
|----------------|---------|----------------------|---------------|--------------|-----------|
| Not identified | - | - | - | - | - |



Section 4 Potentially Contaminated Areas



4.1 POTENTIALLY CONTAMINATING ACTIVITIES (PCA)

Map 4.1 (200m Buffer)

Industries, businesses and activities that may cause contamination

| Map ID | Site name | Category | Location | Status* | Dist. (m) | Direction |
|--------|---------------|---|------------------------|---------|-----------|------------|
| 3 | Rail Corridor | Rail Industry and Associated Activities | East Maitland NSW 2323 | Current | 115.4 | South-west |

*Status:

Data is current as when this report was created.

The operational status of the business is determined using the available data sources and does not indicate real-time conditions at the site.

Current: business is operating on the day this report was issued.

Former: business that have been closed or discontinued within 2 years from the date of this report.

Categories included in this search. (Notifiable activities)

| | | |
|-------------------------------------|-----------------------------------|---|
| Abattoirs | Explosives and Dangerous Goods | Paint Industries |
| Abrasive Blasting | Extractive Industries | Petrol Stations |
| Agriculture / Horticulture | Fire and Rescue | Pharmaceuticals |
| Airports | Food Manufacturing | Port and Marina Operations |
| Asbestos | Foundry, Smelting or Refining | Power Plants |
| Asphalt or Bitumen | Fuel Terminals & Depots | Printing and Photography |
| Batteries | Glass, Ceramics and Plastic | Rail Industry and Associated Activities |
| Breweries / Distilleries | Gun, Pistol or Rifle Ranges | Rubber and Tyre |
| Cement, Concrete or Lime | Hospitals and Research Facilities | Storage Tanks |
| Cemeteries | Landfill Sites | Substations and Switching Stations |
| Chemicals | Livestock Dips | Textiles and Tannery |
| Coal Yards | Mechanical and Automotive | Timber, Pulp and Paper Works |
| Depots and Storage Yards | Metal Fabrication and Treatments | Waste and Recycling Facilities |
| Dry Cleaners | Oil and Gas | Wastewater Treatment Facilities |
| Electrical or Electrical Components | Other Infrastructure Facilities | - |

Industries, businesses, and activities identified as having an increased likelihood of causing contamination.

The industries and business activities listed above have been identified as having an increased likelihood of causing contamination and have been identified through published state and national guidelines and regulations. These industries are noted due to their potential to store or use substances that could cause contamination to the surrounding environment if not managed appropriately. The identification of these activities does not imply the presence of contamination at the site.

The records identified are based on the reported business activity and have not been assessed based on any current or previous site inspection. Please note that records not identified within this section (due to error or unforeseen omission) does not necessarily mean that the screened area is not potentially contaminated or free of any risks.

4.2 HISTORICAL BUSINESS DIRECTORIES

(not mapped)

1930 Historical Business Data

| Activity | Name | Address | Positional accuracy ¹ | Distance (m) | Direction |
|----------------|------|---------|----------------------------------|--------------|-----------|
| Not identified | - | - | - | - | - |

1940 Historical Business Data

| Activity | Name | Address | Positional accuracy ¹ | Distance (m) | Direction |
|----------------|------|---------|----------------------------------|--------------|-----------|
| Not identified | - | - | - | - | - |

1950 Historical Business Data

| Activity | Name | Address | Positional accuracy ¹ | Distance (m) | Direction |
|----------------|------|---------|----------------------------------|--------------|-----------|
| Not identified | - | - | - | - | - |

1965 Historical Business Data

| Activity | Name | Address | Positional accuracy ¹ | Distance (m) | Direction |
|----------------|------|---------|----------------------------------|--------------|-----------|
| Not identified | - | - | - | - | - |

1970 Historical Business Data

| Activity | Name | Address | Positional accuracy ¹ | Distance (m) | Direction |
|--------------------------|--------------|---------------------------------|----------------------------------|--------------|------------|
| Butter Factory Engineers | Greedy C J | 4 Clara, East Maitland,NSW | Address | 171.1 | East |
| Builders & Contractors | Smithwaite W | 77 Narang, East Maitland,NSW | Address | 177.3 | South-east |

1980 Historical Business Data

| Activity | Name | Address | Positional accuracy ¹ | Distance (m) | Direction |
|----------------|------|---------|----------------------------------|--------------|-----------|
| Not identified | - | - | - | - | - |

1990 Historical Business Data

| Activity | Name | Address | Positional accuracy ¹ | Distance (m) | Direction |
|----------------|------|---------|----------------------------------|--------------|-----------|
| Not identified | - | - | - | - | - |

2005 Historical Business Data

| Activity | Name | Address | Positional accuracy ¹ | Distance (m) | Direction |
|---|-----------------------------------|---|----------------------------------|--------------|------------|
| Safety Equipment & Accessories | Maitland Safety Training Services | 7 John St, EAST MAITLAND,NSW,2323 | Address | 24.7 | North-west |
| Painters & Decorators | Rite Price Painting Service | 16 Lindesay St, MAITLAND,NSW,2320 | Address | 37.8 | North-east |
| Building Contractors-- Alterations & Repairs | Lantry Gary | 5 Davidson St,EAST MAITLAND,NSW,2323 | Address | 106.0 | East |

| Activity | Name | Address | Positional accuracy ¹ | Distance (m) | Direction |
|--|----------------------|--------------------------------------|----------------------------------|--------------|-----------|
| Hot Water Systems; Plumbers & Gasfitters | BRT Plumbing Pty Ltd | 1 Davidson St,EAST MAITLAND,NSW,2323 | Address | 135.8 | East |

2010 Historical Business Data

| Activity | Name | Address | Positional accuracy ¹ | Distance (m) | Direction |
|----------------|------|---------|----------------------------------|--------------|-----------|
| Not identified | - | - | - | - | - |

2015 Historical Business Data

| Activity | Name | Address | Positional accuracy ¹ | Distance (m) | Direction |
|----------------|------|---------|----------------------------------|--------------|-----------|
| Not identified | - | - | - | - | - |

Land Insight uses a number of address geocoding techniques and has characterised them based on completeness (match rates) and positional accuracy. When a historical street address is incomplete or a match is not found, a record identified as being in the surrounding area will be included for reference and the accuracy of the data is approximate only. An explanation of the positional accuracy records is defined in the table below.

| Historical data positional accuracy and georeferencing results explanation | | |
|--|---|--|
| Positional accuracy | Georeferenced | Description |
| Address | Located to the address level | <i>When street address and names fully match.</i> |
| Street | Located to the street centroid | <i>When street names match but no exact address was found. Location is approximate.</i> |
| Place | Located to the structure, building or complex | <i>When building, residential complex or structure name match but no exact address was found. Location is approximate.</i> |
| Suburb | Located to the suburb area | <i>When suburb name match but no exact address was found. Location is approximate.</i> |

The data used in this section was extracted from range of historical commercial trade directories and business listings. The business addresses were geocoded using historical information and the accuracy of the data may vary due to changes to the physical address at a given locality over time or the quality of the original records. From 2005, the historical business records in this section are considered more accurate as information was extracted from digital directories with geographic coordinate location information available. On this basis, reliance on the historic listing data should be considered when assessing the risk of contamination from an activity at the site. The presence of a business listing does not definitively confirm the actual activity that has occurred at the site. For more information on how these records were geocoded and the methodology used by Land Insight, contact us at info@landinsight.co.

Historical business directory listings have been filtered to match activities and industries identified as PCAs in Section 4.2. Please note that any record not identified within this section (due to error or unforeseen omission) does not necessarily mean that the screened area is not potentially contaminated or free of any risks.



Section 5 Natural Hazards



5.1 Fire Hazard

Map 5.1 (500m Buffer)

Bushfire Prone Areas

| Category | Type | Details | Distance (m) | Direction |
|---------------------|-----------------------|-----------------------|--------------|------------|
| Bushfire Prone Area | Vegetation Buffer | Potential Impact Area | 58.5 | North-west |
| Bushfire Prone Area | Vegetation Category 3 | Medium Risk Area | 89.0 | North-west |

Bushfire History

| Type | Season | Details | Distance (m) | Direction |
|----------------|--------|---------|--------------|-----------|
| Not identified | | | - | - |

5.2 Flood and Erosion Hazards

Map 5.2 (500m Buffer)

Erosion Hazard

| Category | Type | Details | Distance (m) | Direction |
|-----------------------|---------------------------------------|----------|--------------|------------|
| Landslip Erosion Risk | Very slight to negligible limitations | Very Low | 0.0 | Onsite |
| Water Erosion Risk | Moderate limitations | Moderate | 0.0 | Onsite |
| | Very slight to negligible limitations | Very Low | 97.8 | North-west |
| Wind Erosion Risk | Moderate limitations | Moderate | 0.0 | Onsite |

| Category | Type | Details | Distance (m) | Direction |
|----------|------------------------------------|---------|--------------|------------|
| | Slight but significant limitations | Low | 97.8 | North-west |

Flood Hazard

| Category | Type | Details | Distance (m) | Direction |
|---------------------|------------------|--|--------------|------------|
| Flood Planning Area | Flood Prone Land | Maitland Local Environmental Plan 2011 | 58.7 | North-west |

Generalised flood information definitions and explanations

Annual Exceedance Probability (AEP) - The probability of a flood event of a given size occurring in any one year, usually expressed as a percentage annual chance

| | |
|---------|---|
| 0.2%AEP | A flood event of this size is considered rare but may still occur. A flood of size or larger has a 1 in 500 chance or a 0.2% probability of occurring in any year |
| 1% AEP | A flood of this size or larger has a 1 in 100 chance or a 1% probability of occurring in any year |
| 2% AEP | A flood of this size or larger has a 1 in 50 chance or a 2% probability of occurring in any year. |
| 5% AEP | A flood of this size or larger has a 1 in 20 chance or a 5% probability of occurring in any year |
| 20%AEP | A flood of this size or larger has a 1 in 5 chance or a 20% probability of occurring in any year. |

Average Recurrence Interval (ARI). The long-term average number of years between the occurrence of a flood as big as, or larger than, the selected event. For example, floods reaching a height as great as, or greater than, the 20 year ARI flood event will occur on average once every 20 years

Flood Liable Land - Synonymous with flood prone land, i.e. land susceptible to flooding by the Probable Maximum Flood (PMF) event. Note that the term flood liable land covers the whole floodplain, not just the part below the flood planning level

Flood Planning Area (FPA) - Councils develop Flood Planning Areas (FPAs) as part of Flood Overlay mapping to guide future building and development in flood prone areas. The FPAs are designed to recognise the flood hazard for different flooding types.

Flood Hazard - Flood hazard is a combination of frequency of flooding, the flood depth, and the speed or velocity at which the water can travel.

Probable Maximum Flood (PMF) - The largest flood that could conceivably be expected to occur at a particular location, usually estimated from probable maximum precipitation. The PMF defines the maximum extent of flood prone land, that is, the floodplain. It is difficult to define a meaningful Annual Exceedance Probability for the PMF, but it is commonly assumed to be of the order of 10^4 to 10^7 (once in 10,000 to 10,000,000 years)



The Commons
388 George Street
Sydney NSW 2000 Australia
info@landinsight.co
www.landinsight.co

Appendix B

Environmental Mapping

B.1 Appendix B: Environmental Mapping



Appendix A

REPORT MAPS

Maitland Gaol
6-18 John Street Maitland, NSW

Report n°:
LI-3145



Subject Area and Sensitive Receptors



©2022 Land Insight (U) www.landinsight.co | 15/12/2022 | Data source: Please refer to 'Digital Data Sources' in the Product Guide

- Subject area
- Education
- Parks



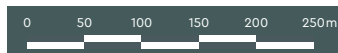


Zoning



©2022 Land Insight (U) www.landinsight.co | 15/12/2022 | Data source: Please refer to 'Digital Data Sources' in the Product Guide

| | | |
|--------------------------|--|--------------------------|
| Subject area | Land Zoning | RE2 Private Recreation |
| B2 Local Centre | RU1 Primary Production | SP1 Special Activities |
| B4 Mixed Use | SP2 Special Purposes Zone - Infrastructure | SP3 Tourist |
| R1 General Residential | RE1 Public Recreation | |



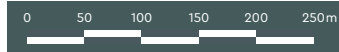


Planning Overlays



©2022 Land Insight (U) www.landinsight.co | 15/12/2022 | Data source: Please refer to 'Digital Data Sources' in the Product Guide

- Subject area
- Coal Seam Gas Exclusions
- Strategic Agricultural Land





Heritage



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- Subject area
- State Heritage Register (SHR)
- Heritage (LEP)



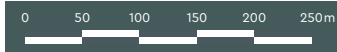


Soil Landscape and Salinity



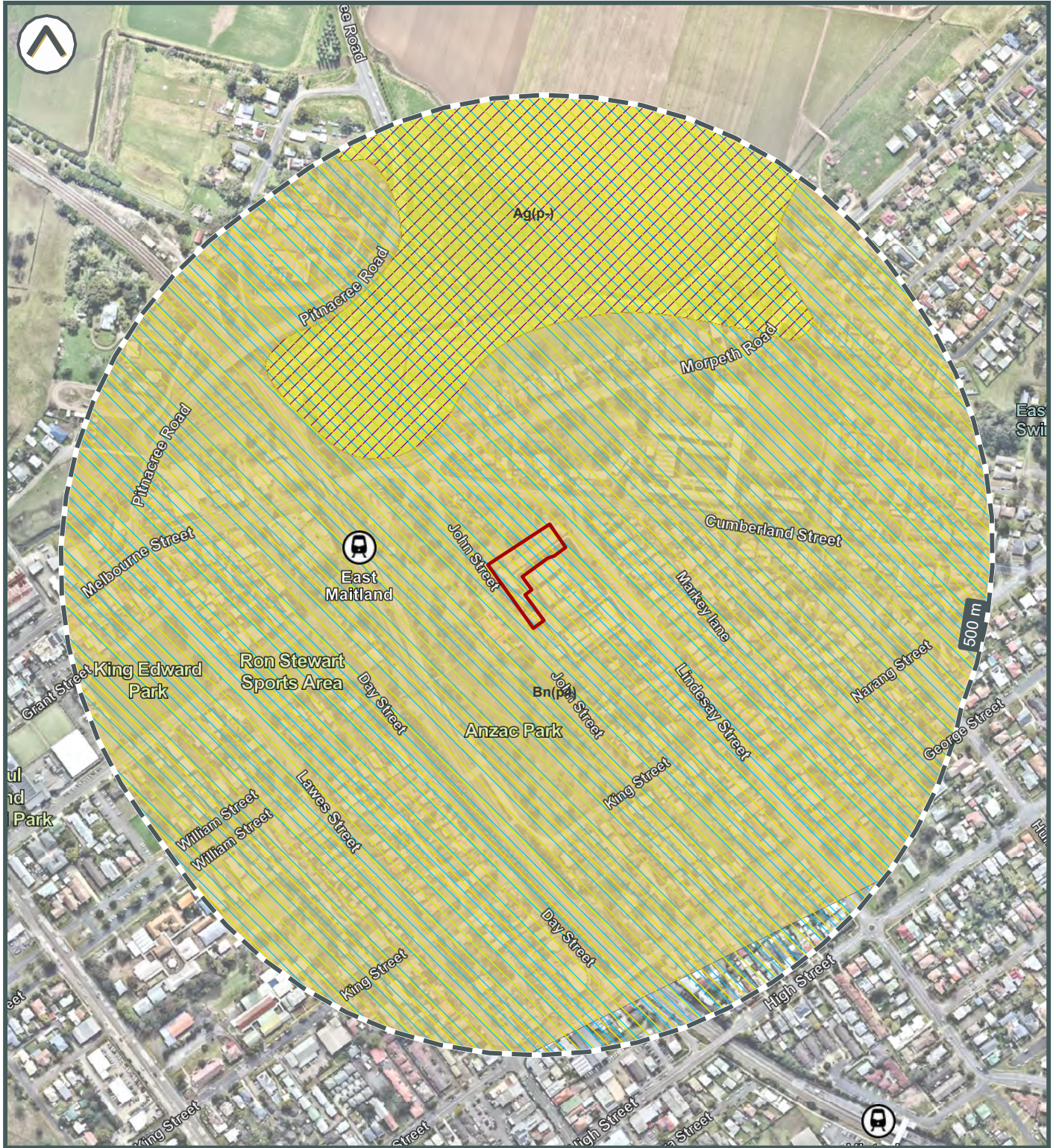
©2022 Land Insight (U) www.landinsight.co | 15/12/2022 | Data source: Please refer to 'Digital Data Sources' in the Product Guide

- Subject area
- Radon Level (Bq/m³)
- 5-19
- Soil Landscape
- ALhu, Alluvial
- REbe, Residual
- REri, Residual





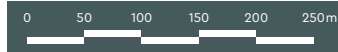
Acid Sulfate Soils



©2022 Land Insight (U) www.landinsight.co | 15/12/2022 | Data source: Please refer to 'Digital Data Sources' in the Product Guide

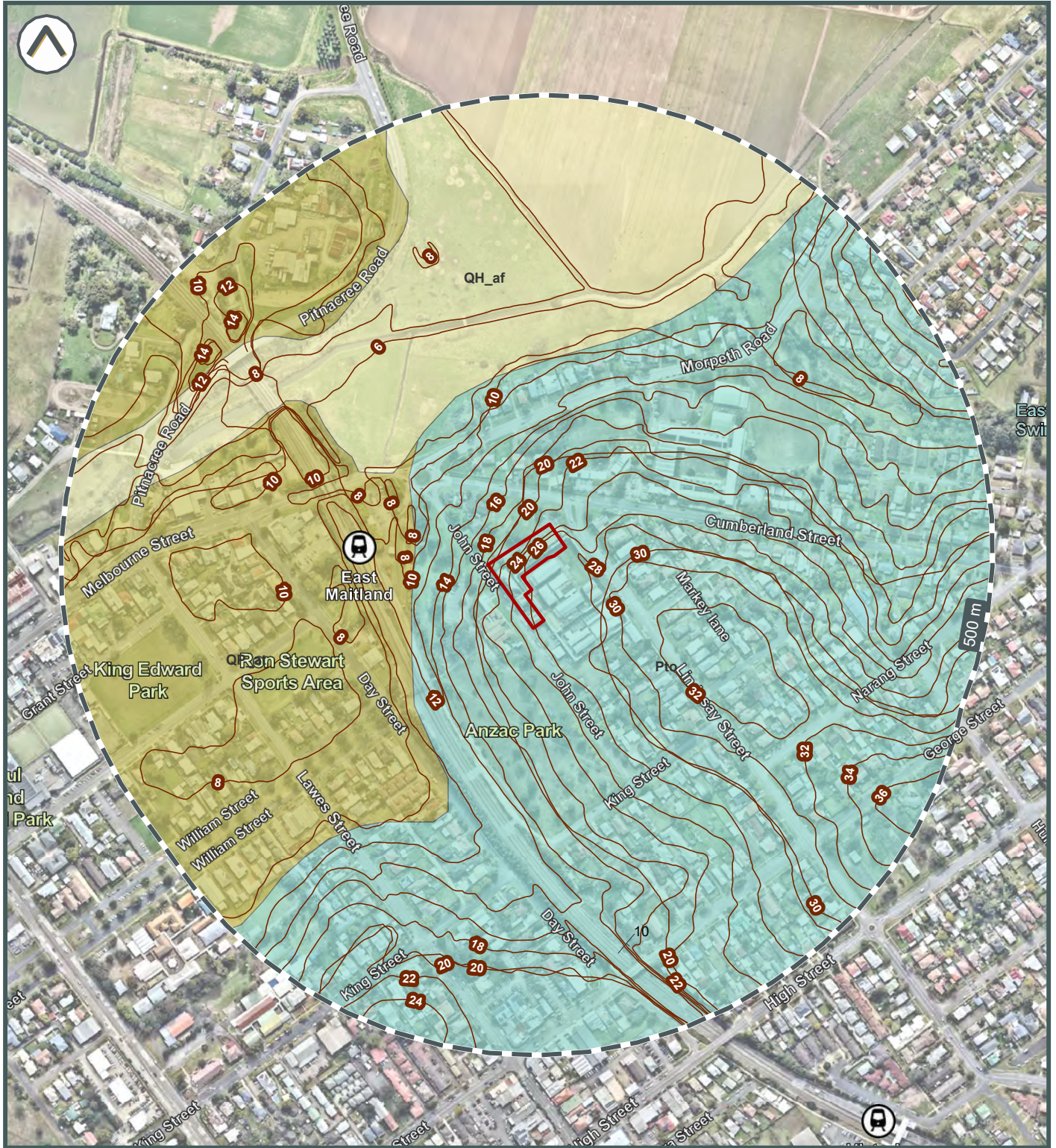
- Subject area
- ASRIS Atlas of Australian Sulfate Soils**
- Ag(p-) | ASS in floodplains
- Bn(p4) | ASS in inland lakes, waterways, wetlands and riparian zones

- Acid Sulfate Soil Risk**
- Class 4
- Class 5



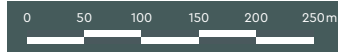


Geology and Topography



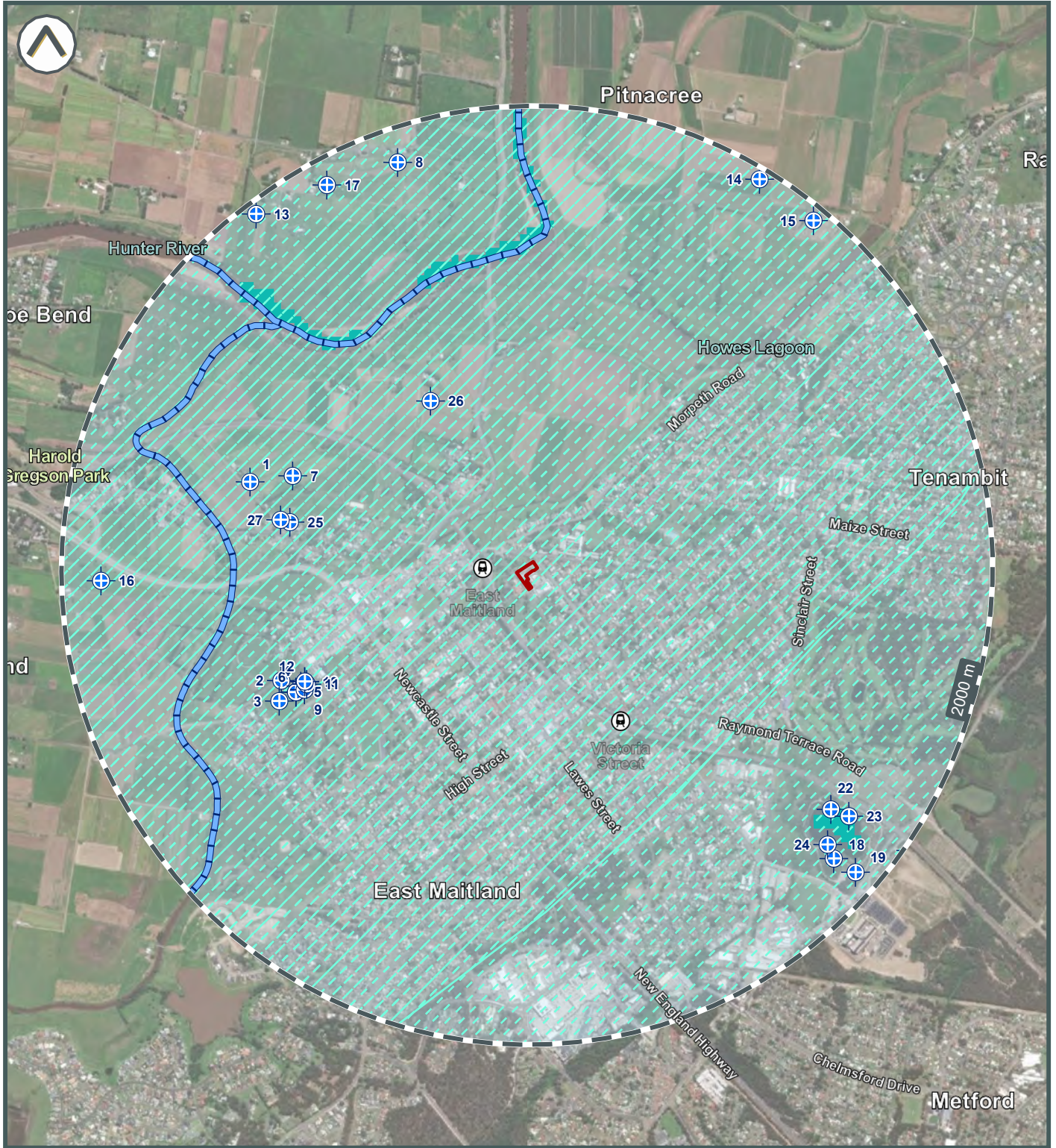
©2022 Land Insight (U) www.landinsight.co | 15/12/2022 | Data source: Please refer to 'Digital Data Sources' in the Product Guide

- Subject area
- Topographic contour (m)
- Strike and dip of bedding
- Cenozoic Sedimentary Province
- QH_af
- QP_at
- PERMO-TRIASSIC BASINS
- Pto





Hydrogeology and Groundwater Boreholes



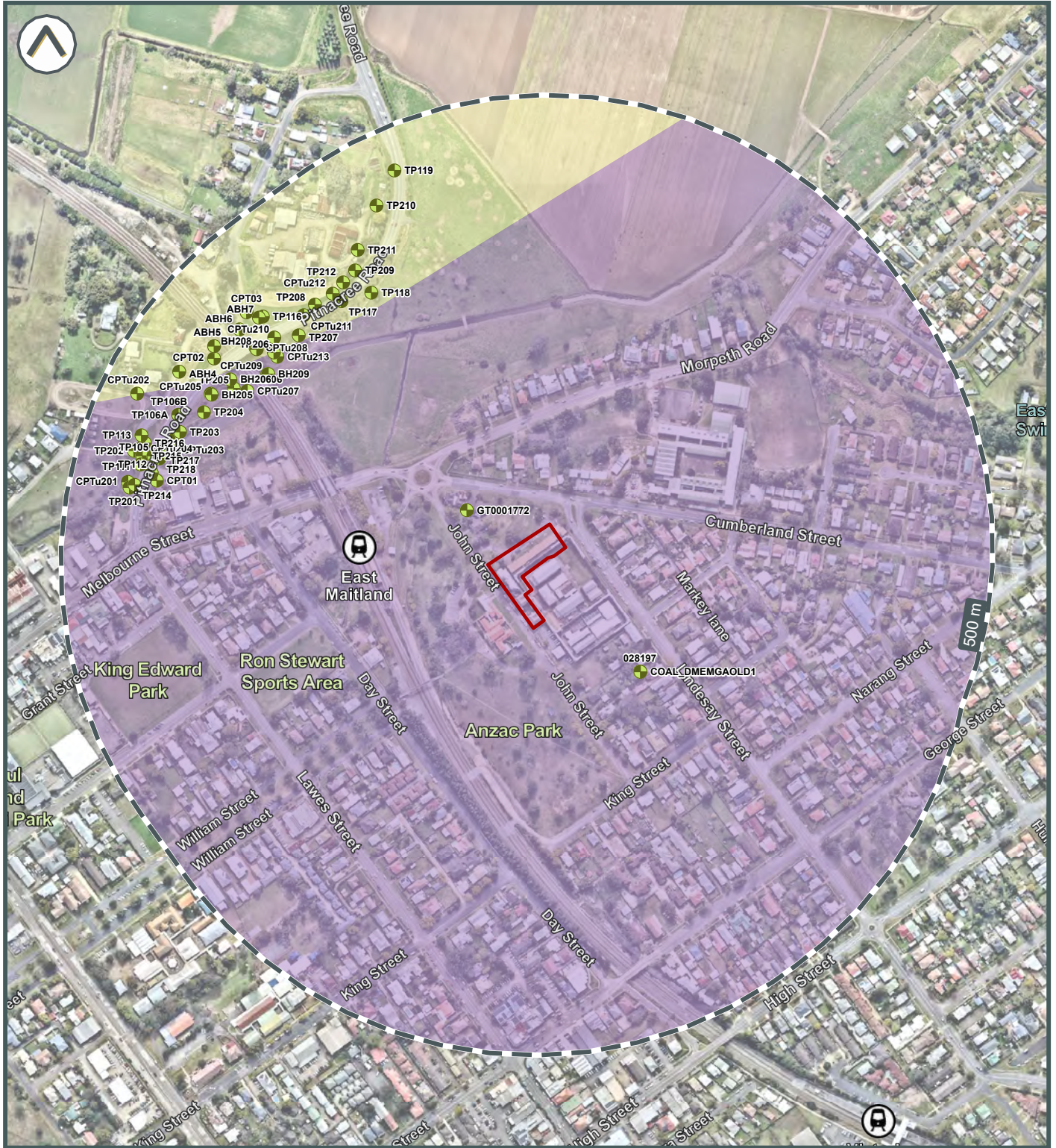
©2022 Land Insight (U) www.landinsight.co | 15/12/2022 | Data source: Please refer to 'Digital Data Sources' in the Product Guide

- Subject area
- Groundwater bores
- Protected Riparian Corridor
- UPSS Environmentally Sensitive Zone
- Wetlands
- Aquifer type**
- Porous, extensive highly productive aquifers



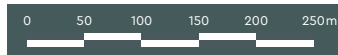


Hydrogeology and Other Boreholes



©2022 Land Insight (U) www.landinsight.co | 15/12/2022 | Data source: Please refer to 'Digital Data Sources' in the Product Guide

- Subject area
- Other borehole/monitoring well location
- Hydrogeologic Unit**
- Surficial Sediment Aquifer (porous media – unconsolidated)
- Palaeozoic and Pre-Cambrian Fractured Rock Aquifers (low permeability)



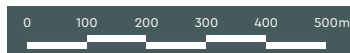


Contaminated Land Public Register



©2022 Land Insight (U) www.landinsight.co | 15/12/2022 | Data source: Please refer to 'Digital Data Sources' in the Product Guide

- Subject area
- Contaminated Land Public Register (EPA)
- [Current] Sites Notified as Contaminated





Licences, Approvals & Assessments

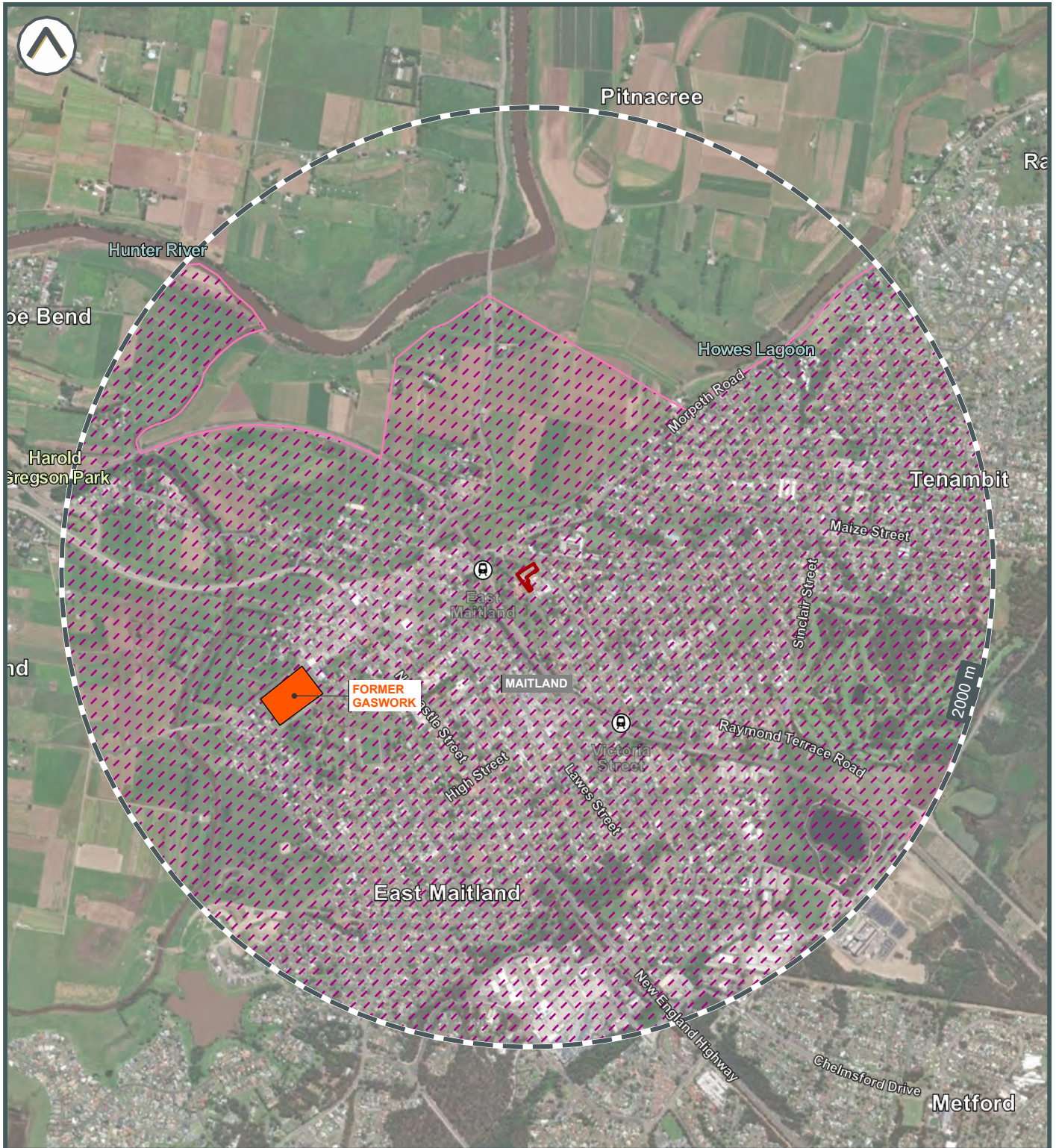


 Subject area





Sites Regulated by Other Jurisdictional Body



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- Subject area
- PFAS sites
- Unexploded Ordnance (UXO) Areas
- Former Gasworks
- Substantial Potential
- Defence Area / Military Sites
- Slight potential
- Defence Controlled Area
- Sea Dumping of Depth Charges
- Sea Dumping of Depth Charges (Chemical munitions sea dumping)
- Other Sea Dumping Sites
- Other

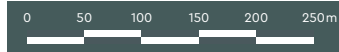




Other Potential Pollution Sources



Subject area





Potentially Contaminating Activities (PCAs)



©2022 Land Insight (U) www.landinsight.co | 15/12/2022 | Data source: Please refer to 'Digital Data Sources' in the Product Guide

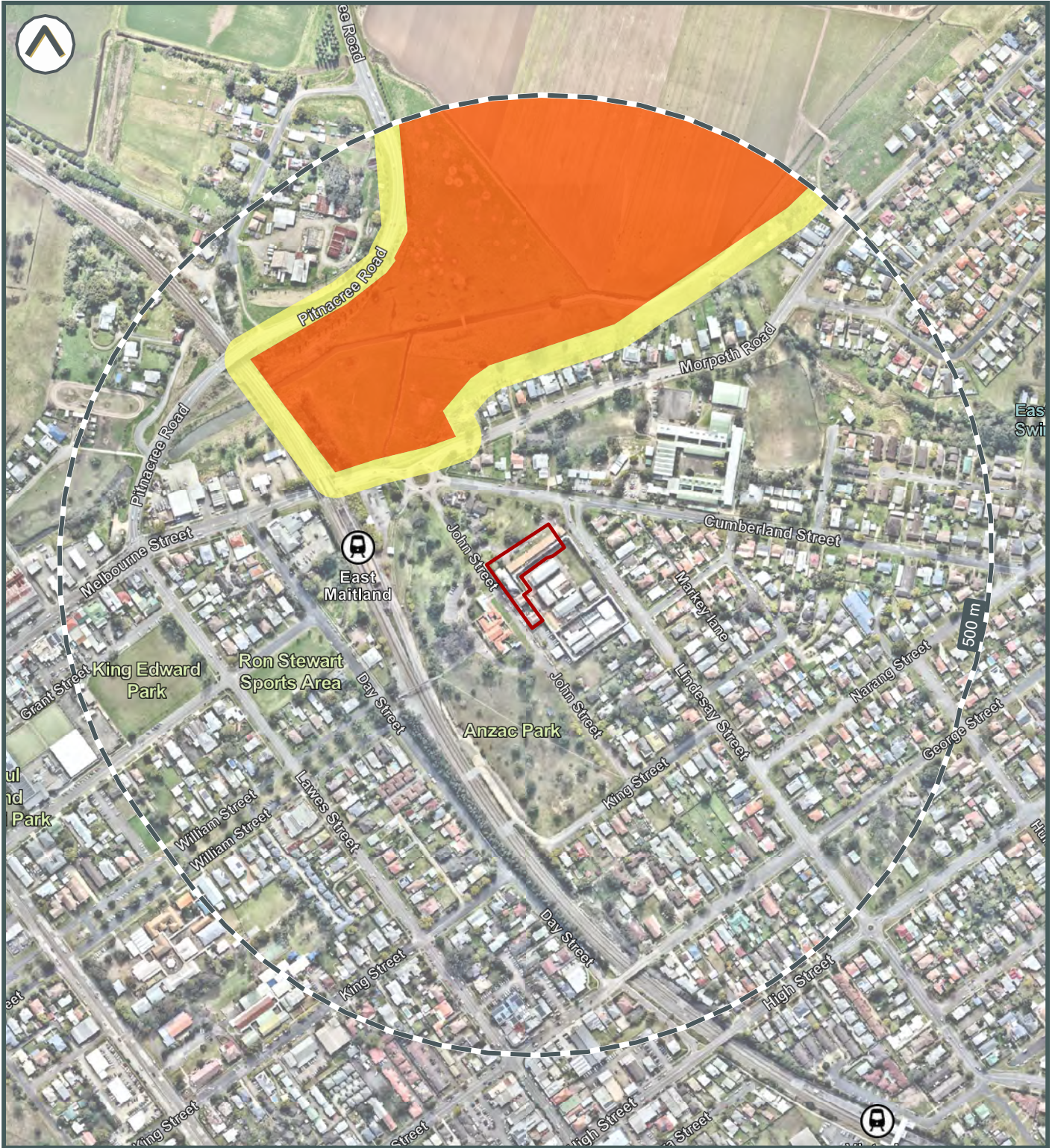
- Subject area
- Rail Industry and Associated Activities

Data is current as when this report was created. However due to the turnover of business locations, some addresses may be former.

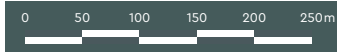




Fire Hazards



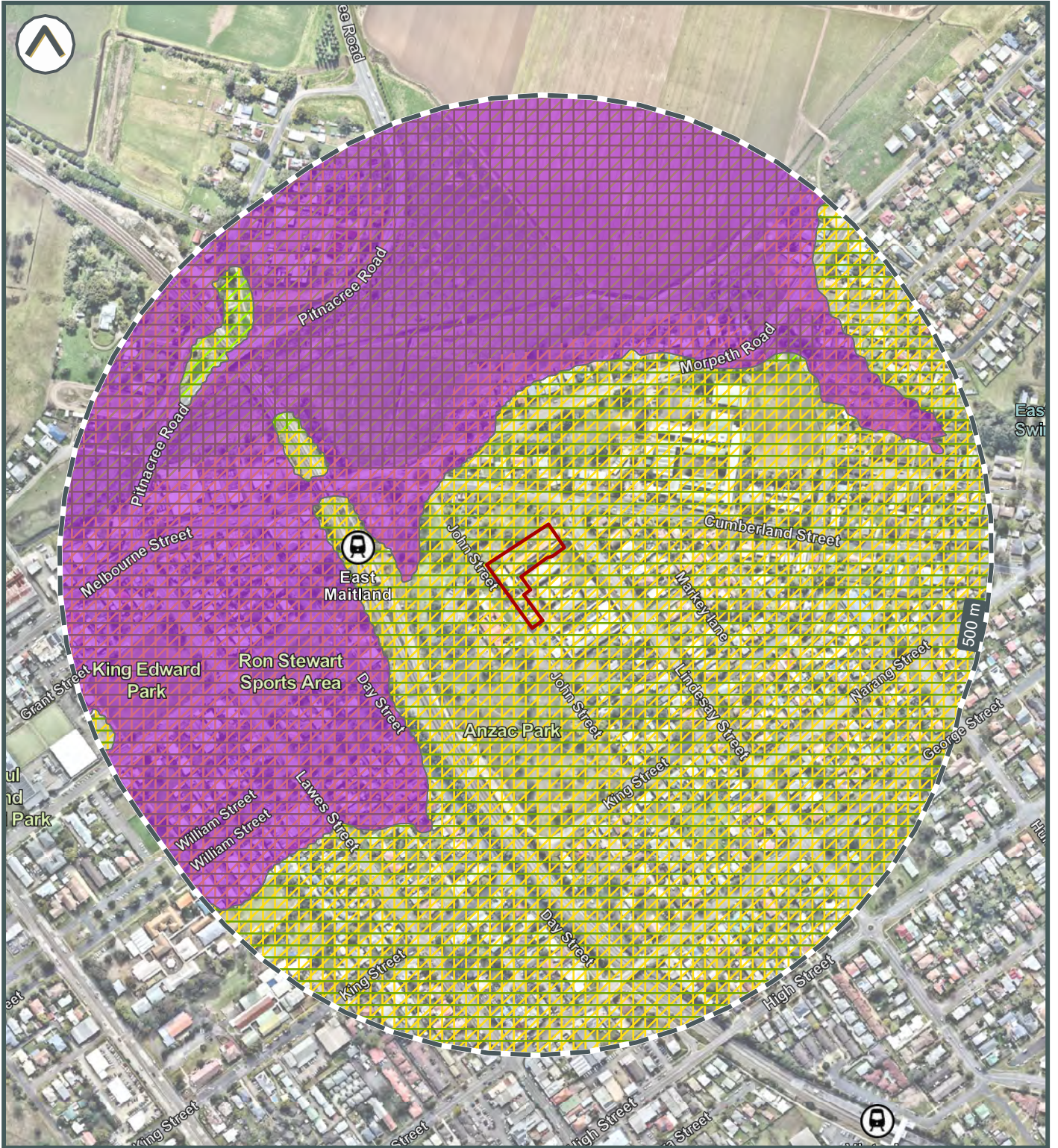
- Subject area
- Vegetation Buffer
- Bushfire Prone Area
- Vegetation Category 3



©2022 Land Insight (U) www.landinsight.co | 15/12/2022 | Data source: Please refer to 'Digital Data Sources' in the Product Guide

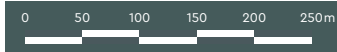


Fire and Flood Hazards



©2022 Land Insight (U) www.landinsight.co | 15/12/2022 | Data source: Please refer to 'Digital Data Sources' in the Product Guide

- Subject area
- Flood
- Flood Planning Area
- Wind Erosion Risk
- Moderate
- Low
- Water Erosion Risk, Moderate
- Water Erosion Risk, Very Low
- Landslip Erosion Risk
- Landslip Erosion Risk, Very Low



Appendix C

Historical Aerials and Mapping

C.1 Appendix C: Historical Aerials and Mapping

An aerial photograph of a vibrant turquoise river winding through a rugged, rocky landscape. The river is surrounded by dense, green and yellowish vegetation. The rocks are large and grey, with some showing signs of weathering and erosion. The overall scene is a natural, scenic view of a river valley.

Appendix B

HISTORIC IMAGERY

Maitland Gaol
6-18 John Street Maitland, NSW

Report n°:
LI-3145

Historic Aerial Photograph - 1954



LI-3132 Aerial Photograph 1954, 07 12 2022. Data source: Please refer to 'Digital Data Sources' in the Product Guide

 Subject area

 0 200m



Historic Aerial Photograph - 1966



LI-3132 Aerial Photograph 1966.07.12.2022. Data source: Please refer to 'Digital Data Sources' in the Product Guide



Historic Aerial Photograph - 1970



LI-3145 Aerial Photograph 1970 15.12.2022. Data source: Please refer to 'Digital Data Sources' in the Product Guide



Historic Aerial Photograph - 1976



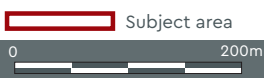
LI-3132 Aerial Photograph 1976, 07.12.2022. Data source: Please refer to 'Digital Data Sources' in the Product Guide



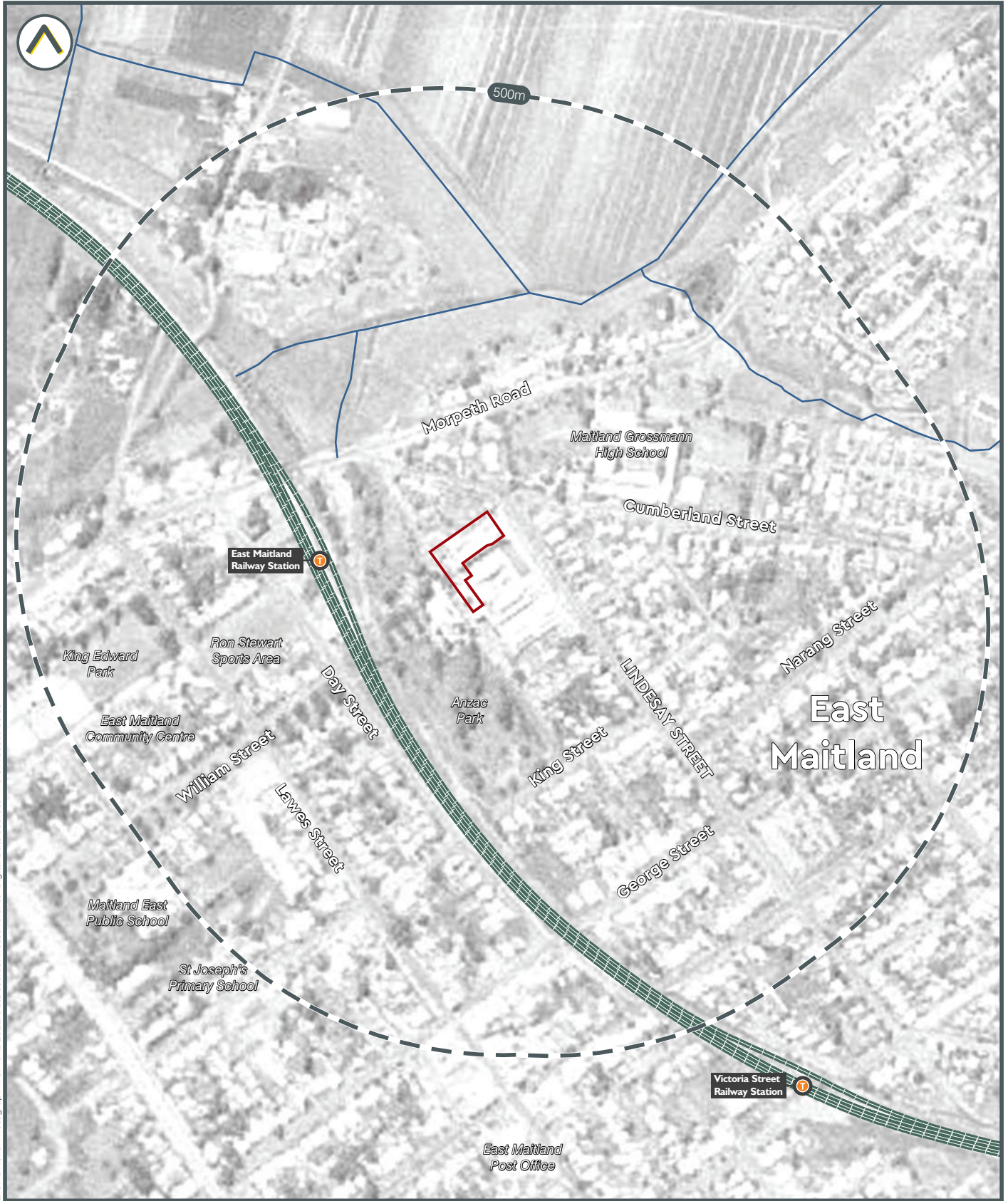
Historic Aerial Photograph - 1984



LI-3132 Aerial Photograph 1976, 07.12.2022. Data source: Please refer to 'Digital Data Sources' in the Product Guide



Historic Aerial Photograph - 1987



LI-3145 Aerial Photograph 1987.15.12.2022. Data source: Please refer to 'Digital Data Sources' in the Product Guide



Historic Aerial Photograph - 1993



LI-3145 Aerial Photograph 1993, 15.12.2022. Data source: Please refer to 'Digital Data Sources' in the Product Guide



Historic Aerial Photograph - 1998



LI-3145 Aerial Photograph 1998, 15.12.2022. Data source: Please refer to 'Digital Data Sources' in the Product Guide



Historic Aerial Photograph - 2001



LI-3145 Aerial Photograph 2001 15 12 2002. Data source: Please refer to 'Digital Data Sources' in the Product Guide



Historic Aerial Photograph - 2005



LI-3145 Aerial Photograph 2005 15 12 2022. Data source: Please refer to 'Digital Data Sources' in the Product Guide

Subject area

0 200m



Historic Aerial Photograph - 2011



LI-3145 Aerial Photograph 2011 15 12 2022. Data source: Please refer to 'Digital Data Sources' in the Product Guide



Historic Aerial Photograph - 2014



LI-3145 Aerial Photograph 2014, 15.12.2022. Data source: Please refer to 'Digital Data Sources' in the Product Guide



Historic Aerial Photograph - 2016



LI-3145 Aerial Photograph 2016.15.12. 2022. Data source: Please refer to 'Digital Data Sources' in the Product Guide



Historic Aerial Photograph - 2019



LI-3145 Aerial Photograph 2019 15.12.2022. Data source: Please refer to 'Digital Data Sources' in the Product Guide



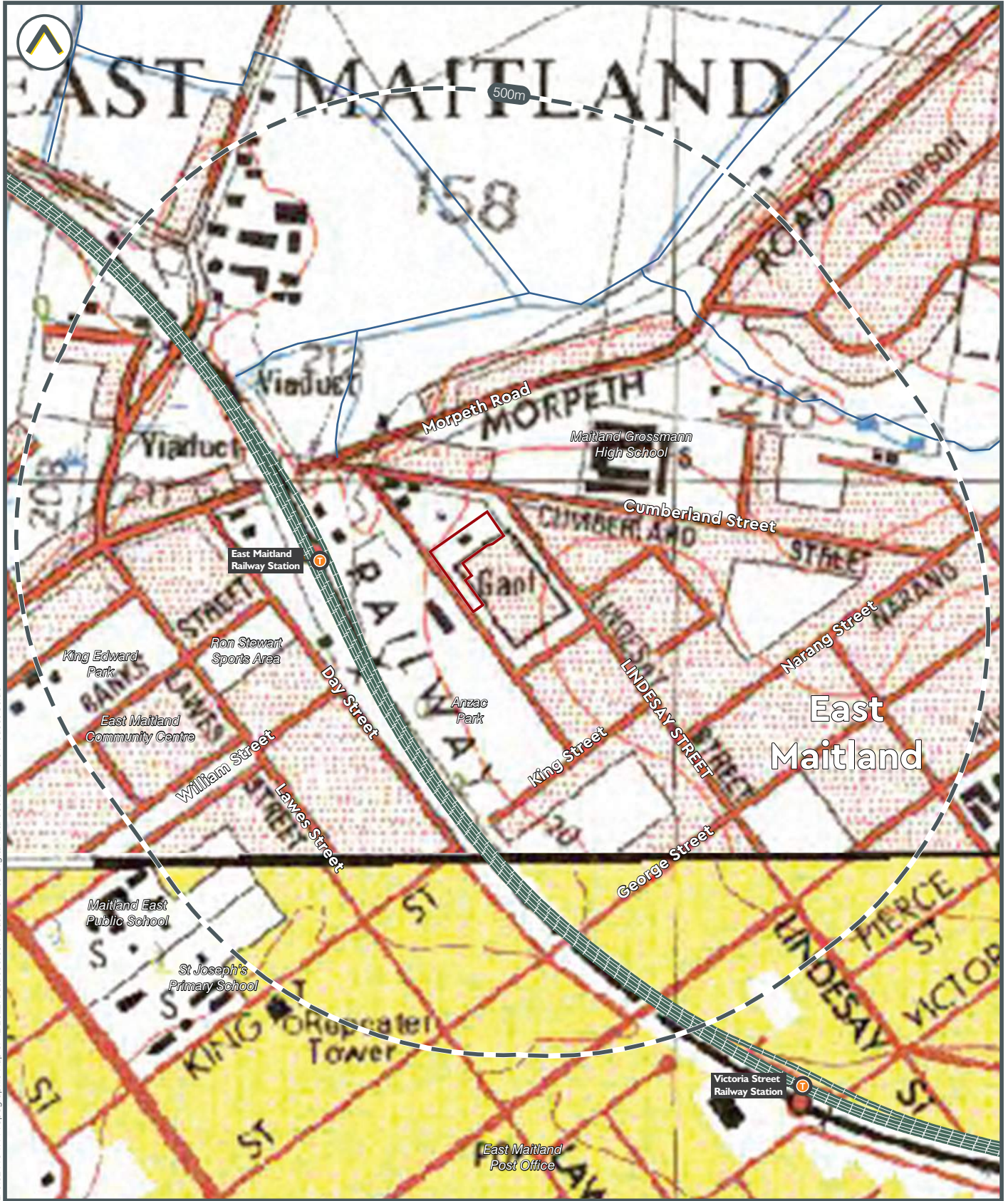
Historic Aerial Photograph - 2022



LI-3132 Aerial Photograph 2022 07 12 2022. Data source: Please refer to "Digital Data Sources" in the Product Guide



1969-1991 1:25,000 Topographic Map (Maitland 9232-4S, Beresfield 9232-3N)



LI-3132 Pre-1991 Topographic Map 07.12.2022. Data source: Please refer to "Digital Data Sources" in the Product Guide



Appendix D

Supporting Information

D.1 Supporting Information

Text here

Supporting Information

| | | | |
|----------------|--|-------------------|---------|
| Project | Maitland Gaol – Preliminary Site Investigation | | |
| Client | MCC | Job number | E221249 |



Photo 1

View from west of Maitland Gaol looking east. Photo taken from near current Pitnacree Road overpass of Main Northern Railway

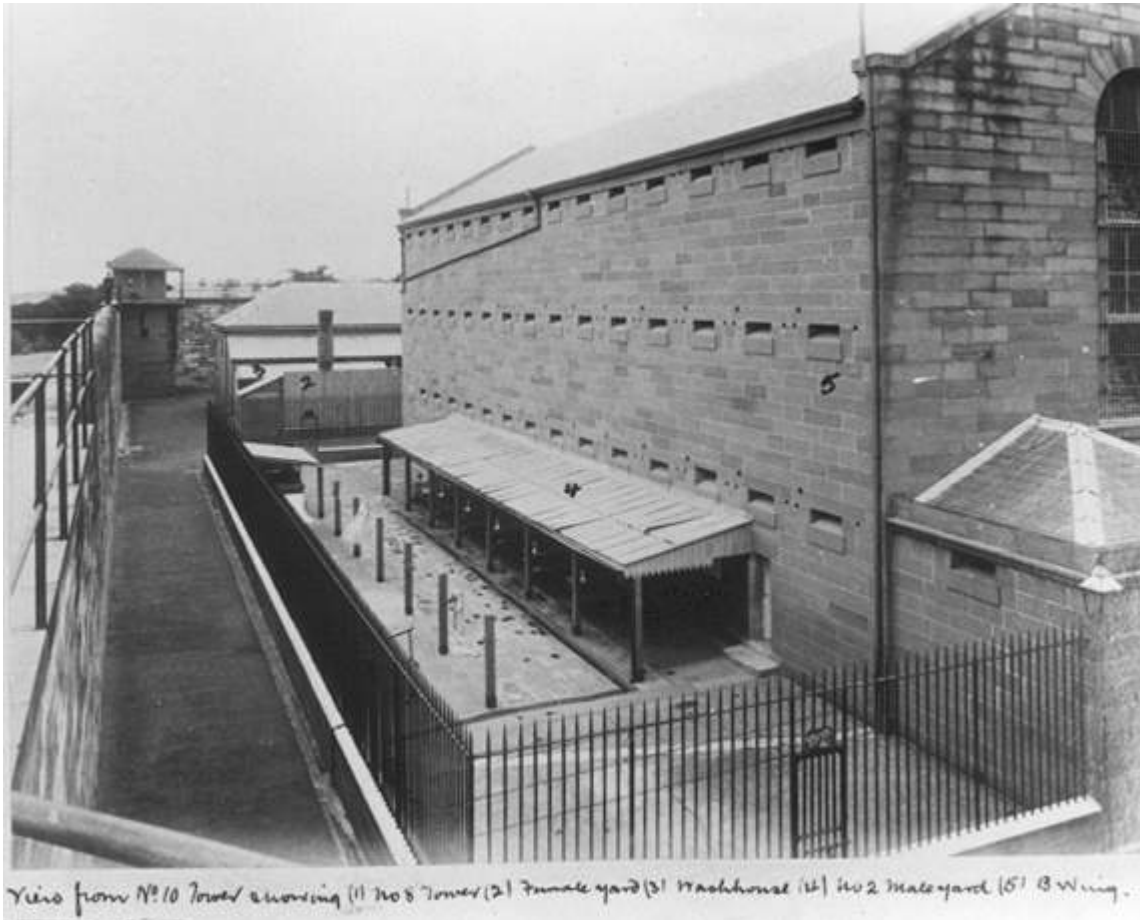


Photo 2

Photo taken from watchtower located on the southern corner of Building 14 looking north-east. Inscription reads "View from No. 10 Tower showing (1) No. 8 Tower (2) Female Yard (3) Washhouse (4) No. 2 Male Yard (5) B Wing".

Note that Building 14 does not appear to be extant in the photograph.



Photo 3

View of Maitland Gaol from southwest boundary of the Site looking east. Building 2 is visible in the photograph. Building 14 and Building 22 are not extant in the photograph.



Photo 4

Photo taken from watchtower located on the southern corner of Building 14 looking south-east. Inscription reads "View from No. 10 Tower showing (1) Store (2) Entrance to B Wing (3) Visiting Room (4) Female Wardens Quarters (5) Entrance to Church and Governor's Office (6) A Wing (7) No. 2 Post (8) Gate (9) Photo Gallery (10) Messengers Shed".

Building 2 is visible in the right of the photograph (marked as "11"). The Photo Gallery/Messengers Shed (marked as "9" and "10") is located within the Site however has since been demolished.



View from No. 10 Tower showing (1) B. Wing (2) Church (3) Gate (4) Back of Deputy Governor's quarters (5) Photo Gallery (6) messengers shed.

Photo 5

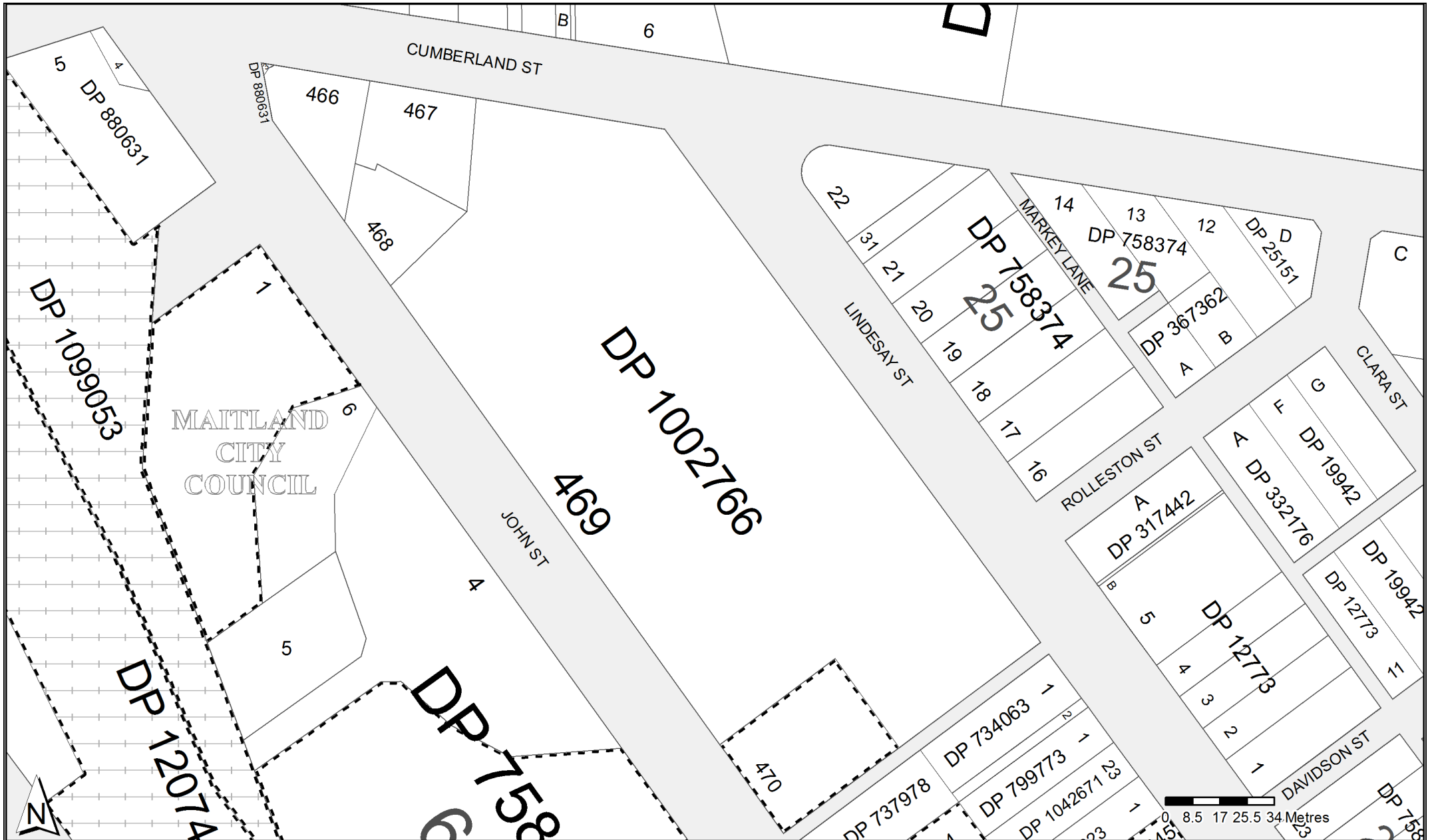
Photo taken from north-east of the watchtower located on the southern corner of Building 14 looking south-east. Inscription reads "View from No. 10 Tower showing (1) B Wing (2) Church (3) Gate (4) Back of Deputy Governor's Quarters (5) Photo Gallery (6) Messengers Shed".

Building 2 is visible in the right of the photograph (marked as "4"). The Photo Galley/Messengers Shed (marked as "5" and "6") is located within the Site however has since been demolished.

Appendix E

Historical Certificates of Title

E.1 Appendix E: Historical Certificates of title



| Status | Surv/Comp | Purpose |
|---|-----------|-------------|
| DP758374 Lot(s): 1, 3 Section : 60 CA101887 - LOTS 1-3 SECTION 60 DP758374 | | |
| DP1002766 Lot(s): 470 | | |
| NSW GAZ. 19-01-2007 REVOCATION OF RESERVATION OF CROWN LAND RESERVE NO. 9705 - AFFECTING LOT 470 DP1002766 | | Folio : 179 |
| NSW GAZ. 25-01-2007 REVOCATION OF RESERVATION OF CROWN LAND RESERVE NO. 9705 AND ERRATUM - AFFECTING LOT 470 DP1002766 | | Folio : 351 |
| DP1094345 Lot(s): 4 CA98277 - LOT 4 DP1094345 | | |
| DP1097144 Lot(s): 2 CA98591 - LOT 2 DP1097144 CA100811 - NPW | | |
| DP1099053 Lot(s): 1 CA101109 - LOT 1 DP1099053 | | |
| DP1207466 Lot(s): 1027 CA174019 - LOT 1027 DP1207466 | | |

Caution: This information is provided as a searching aid only. Whilst every endeavour is made to ensure that current map, plan and titling information is accurately reflected, the Registrar General cannot guarantee the information provided. For **ALL ACTIVITY PRIOR TO SEPTEMBER 2002** you must refer to the RGs Charting and Reference Maps.

| Plan | Surv/Comp | Purpose |
|-----------|-------------|------------------------|
| DP12773 | SURVEY | UNRESEARCHED |
| DP19942 | SURVEY | UNRESEARCHED |
| DP20142 | SURVEY | UNRESEARCHED |
| DP25151 | SURVEY | UNRESEARCHED |
| DP317442 | SURVEY | UNRESEARCHED |
| DP332176 | COMPILATION | UNRESEARCHED |
| DP348906 | SURVEY | UNRESEARCHED |
| DP367362 | SURVEY | UNRESEARCHED |
| DP372846 | COMPILATION | UNRESEARCHED |
| DP433262 | COMPILATION | UNRESEARCHED |
| DP433836 | COMPILATION | UNRESEARCHED |
| DP530498 | SURVEY | SUBDIVISION |
| DP734063 | COMPILATION | DEPARTMENTAL |
| DP737978 | COMPILATION | DEPARTMENTAL |
| DP744923 | COMPILATION | DEPARTMENTAL |
| DP758374 | COMPILATION | CROWN ADMIN NO. |
| DP799085 | COMPILATION | DEPARTMENTAL |
| DP799773 | COMPILATION | DEPARTMENTAL |
| DP880631 | SURVEY | SUBDIVISION |
| DP1002766 | SURVEY | SUBDIVISION |
| DP1042671 | COMPILATION | LIMITED FOLIO CREATION |
| DP1094345 | COMPILATION | LIMITED FOLIO CREATION |
| DP1097144 | COMPILATION | LIMITED FOLIO CREATION |
| DP1099053 | COMPILATION | LIMITED FOLIO CREATION |
| DP1207466 | COMPILATION | LIMITED FOLIO CREATION |

Caution: This information is provided as a searching aid only. Whilst every endeavour is made to ensure that current map, plan and titling information is accurately reflected, the Registrar General cannot guarantee the information provided. For **ALL** **ACTIVITY PRIOR TO SEPTEMBER 2002** you must refer to the RGs Charting and Reference Maps.

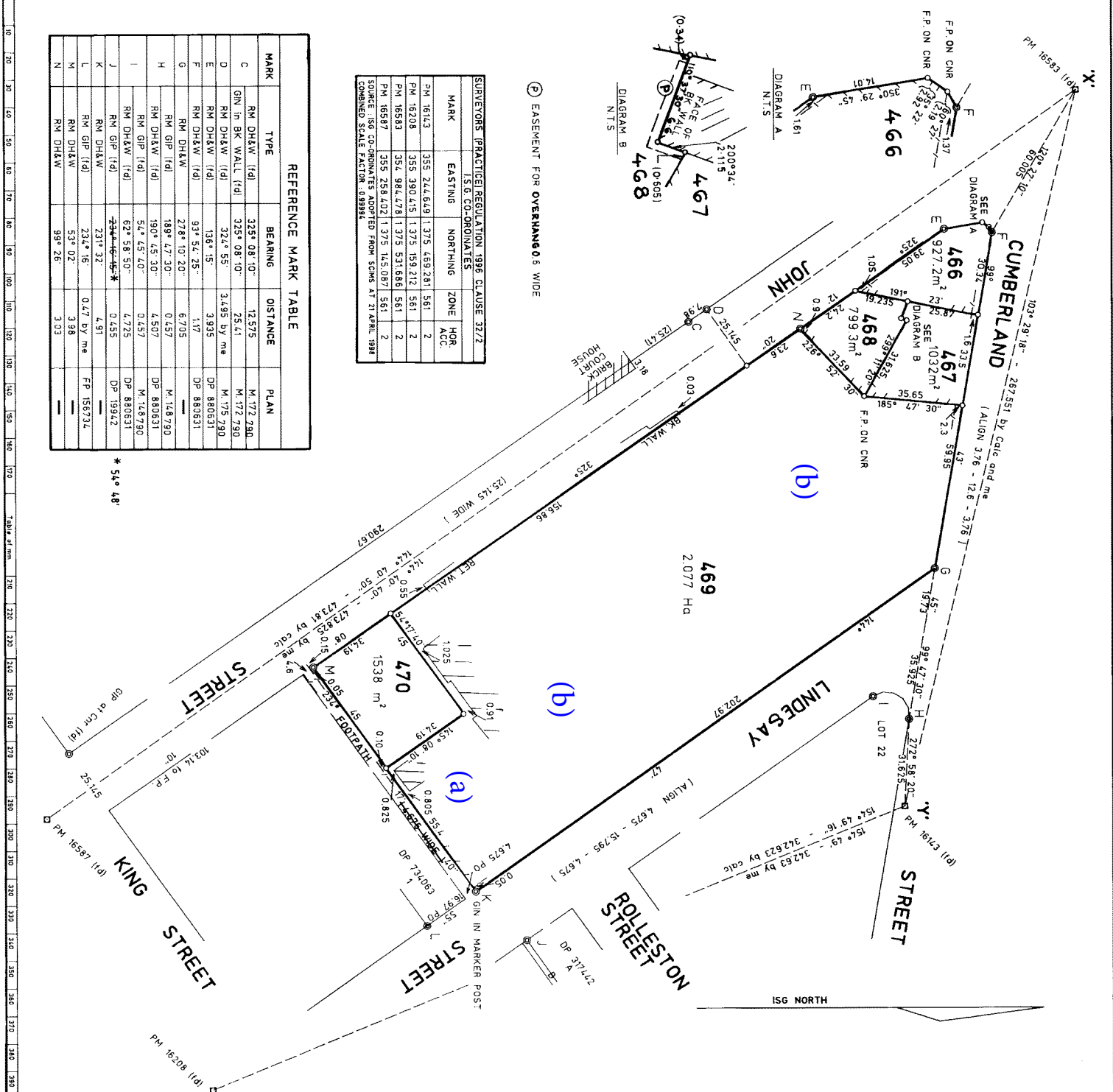
SIGNATURES AND STATEMENTS of intention to dedicate public roads or to create public reserves, drainage reserves, easements or other restrictions on the use of land or positive covenants.

By agreement between the Crown and the owners of the land shown in this plan, the Registrar-General has approved the plan and the Registrar-General has issued this plan under section 131 of the Real Property Act 1909 from the Minister administering the Crown Lands Act 1989 on behalf of the State of New South Wales.
 28 NOV 1999

Crown Lands Office Approval
 PLAN APPROVED: *[Signature]* 26/5/99
 Land District: Maitland
 Paper No.: M102766
 Field Book: M102766
 Council's Certificate

1. Intended for registration
 2. Details of easements

Supervisor's Reference: 98174



⊕ EASEMENT FOR OVERHANGING WIDE

| MARK | EASTING | NORTHING | ZONE | HOR. ACC. |
|----------|-------------|---------------|------|-----------|
| PM 16143 | 355 244.629 | 1 375 469.281 | 561 | 2 |
| PM 16208 | 355 390.415 | 1 375 159.212 | 561 | 2 |
| PM 16583 | 352 984.781 | 1 375 531.686 | 561 | 2 |
| PM 16587 | 355 258.402 | 1 375 145.087 | 561 | 2 |

SOURCE: ISG CO-ORDINATES ADAPTED FROM SCMS AT 21 APRIL 1988
 COMBINED SCALE FACTOR: 0.99994

| MARK | TYPE | BEARING | DISTANCE | PLAN |
|------|---------------------|--------------|-------------|-----------|
| C | RM D&W (rd) | 325° 08' 10" | 12.975 | M.172.790 |
| D | GIN in BK WALL (fd) | 325° 08' 10" | 25.41 | M.172.790 |
| E | RM D&W (rd) | 324° 55' | 3.495 by me | M.175.790 |
| F | RM D&W (rd) | 136° 15' | 3.935 | DP 880631 |
| G | RM D&W (rd) | 93° 54.25' | 1.17 | DP 880631 |
| H | RM GIP (fd) | 278° 10' 20" | 6.705 | M.14.8790 |
| I | RM D&W (rd) | 189° 47' 30" | 0.457 | DP 880631 |
| J | RM GIP (fd) | 190° 45' 30" | 4.507 | M.14.8790 |
| K | RM D&W (rd) | 54° 45' 40" | 0.257 | M.14.8790 |
| L | RM GIP (fd) | 62° 58' 50" | 4.725 | DP 880631 |
| M | RM D&W (rd) | 234° 46' 45" | 0.455 | DP 19942 |
| N | RM GIP (fd) | 231° 32' | 4.91 | FP 156734 |
| O | RM D&W (rd) | 232° 16' | 0.477 by me | FP 156734 |
| P | RM D&W (rd) | 53° 02' | 3.98 | --- |
| Q | RM D&W (rd) | 99° 26' | 3.03 | --- |

⊕ EASEMENT FOR OVERHANGING WIDE

54° 48'

Registered: DP1002766
 CA: 2-7-1999
 The system: CROWN LAND
 Purpose: CROWN FOLIO CREATION
 Ref: U5472-43
 Last Plan: ---
 PLAN OF SUBDIVISION OF LOTS 6 & 7, SECTION 21, DP 758374

Lengths are in metres, Reduction Ratio 1:1000
 L&A: MAITLAND
 Shire/Locality: EAST MAITLAND
 Parish: MAITLAND
 County: NORTHUMBERLAND

This is sheet 1 of 1 plan in sheet 1002766 (if applicable)

Survey Certificate
 Surveyor's Practice/Regulation 1988
 I, EDWARD JAMES GRAY
 of DEPT OF PUBLIC WORKS & SERVICES
 a surveyor registered under the Surveyors Act 1931,
 hereby certify that the survey represented in this plan
 was conducted in accordance with the
 Surveyors (Practice/Regulation) 1988 and was completed
 on 12th February 1999.
 The survey relates to
 SUBDIVISION

Datum: Line: X Y
 Zone: Substation: SA
 Signature: *[Signature]*
 Surveyor's Practice/Regulation 1988

Plans used in preparation of survey/compilation:
 DP 880631
 DP 839468
 DP 156734
 DP 172-790
 DP 175-790
 DP 78-790

PANEL FOR USE ONLY for statements of intention to dedicate public roads or to create public reserves, drainage reserves, easements or other restrictions on the use of land or positive covenants.
 PURSUANT TO SECTION 88B OF THE CONVEYANCING ACT 1919 IT IS INTENDED TO CREATE:
 ⊕ EASEMENT FOR OVERHANGING WIDE



NEW SOUTH WALES LAND REGISTRY SERVICES - HISTORICAL SEARCH

SEARCH DATE

8/12/2022 9:11AM

FOLIO: 469/1002766

First Title(s): THIS FOLIO
Prior Title(s): CROWN LAND

| <u>Recorded</u> | <u>Number</u> | <u>Type of Instrument</u> | <u>C.T. Issue</u> |
|-----------------|---------------|---------------------------|----------------------------|
| 2/7/1999 | DP1002766 | DEPOSITED PLAN | FOLIO CREATED EDITION 1 |
| 18/5/2011 | AG239593 | DEPARTMENTAL DEALING | |
| 4/6/2013 | AH778147 | DEPARTMENTAL DEALING | |

*** END OF SEARCH ***

advlegs

PRINTED ON 8/12/2022



NEW SOUTH WALES LAND REGISTRY SERVICES - TITLE SEARCH

FOLIO: 469/1002766

| SEARCH DATE | TIME | EDITION NO | DATE |
|-------------|---------|------------|----------|
| ----- | ---- | ----- | ---- |
| 8/12/2022 | 9:11 AM | 1 | 2/7/1999 |

LAND

LOT 469 IN DEPOSITED PLAN 1002766
AT EAST MAITLAND
LOCAL GOVERNMENT AREA MAITLAND
PARISH OF MAITLAND COUNTY OF NORTHUMBERLAND
TITLE DIAGRAM DP1002766

FIRST SCHEDULE

THE STATE OF NEW SOUTH WALES

SECOND SCHEDULE (3 NOTIFICATIONS)

- 1 LAND EXCLUDES MINERALS (S.171 CROWN LANDS ACT 1989)
- * 2 RESERVE NO. 20743 FOR GAOL AND LOCKUP NOTIFIED IN THE GOVERNMENT GAZETTE OF 12 MAY 1894 AND 18 MARCH 1977
- * 3 THE LAND IS A RESERVE WITHIN THE MEANING OF PART 5 OF THE CROWN LANDS ACT 1989 AND THERE ARE RESTRICTIONS ON TRANSFER AND OTHER DEALINGS IN THE LAND UNDER THAT ACT, WHICH MAY REQUIRE CONSENT OF THE MINISTER.

NOTATIONS

UNREGISTERED DEALINGS: NIL

*** END OF SEARCH ***

advlegs

PRINTED ON 8/12/2022



| Status | Surv/Comp | Purpose |
|---|-----------|-------------|
| DP758374 Lot(s): 1, 3 Section : 60 CA101887 - LOTS 1-3 SECTION 60 DP758374 | | |
| DP1002766 Lot(s): 470 | | |
| NSW GAZ. 19-01-2007 REVOCATION OF RESERVATION OF CROWN LAND RESERVE NO. 9705 - AFFECTING LOT 470 DP1002766 | | Folio : 179 |
| NSW GAZ. 25-01-2007 REVOCATION OF RESERVATION OF CROWN LAND RESERVE NO. 9705 AND ERRATUM - AFFECTING LOT 470 DP1002766 | | Folio : 351 |
| DP1094345 Lot(s): 4 CA98277 - LOT 4 DP1094345 | | |
| DP1097144 Lot(s): 2 CA98591 - LOT 2 DP1097144 CA100811 - NPW | | |
| DP1099053 Lot(s): 1 CA101109 - LOT 1 DP1099053 | | |
| DP1207466 Lot(s): 1027 CA174019 - LOT 1027 DP1207466 | | |

Caution: This information is provided as a searching aid only. Whilst every endeavour is made to ensure that current map, plan and titling information is accurately reflected, the Registrar General cannot guarantee the information provided. For **ALL ACTIVITY PRIOR TO SEPTEMBER 2002** you must refer to the RGs Charting and Reference Maps.

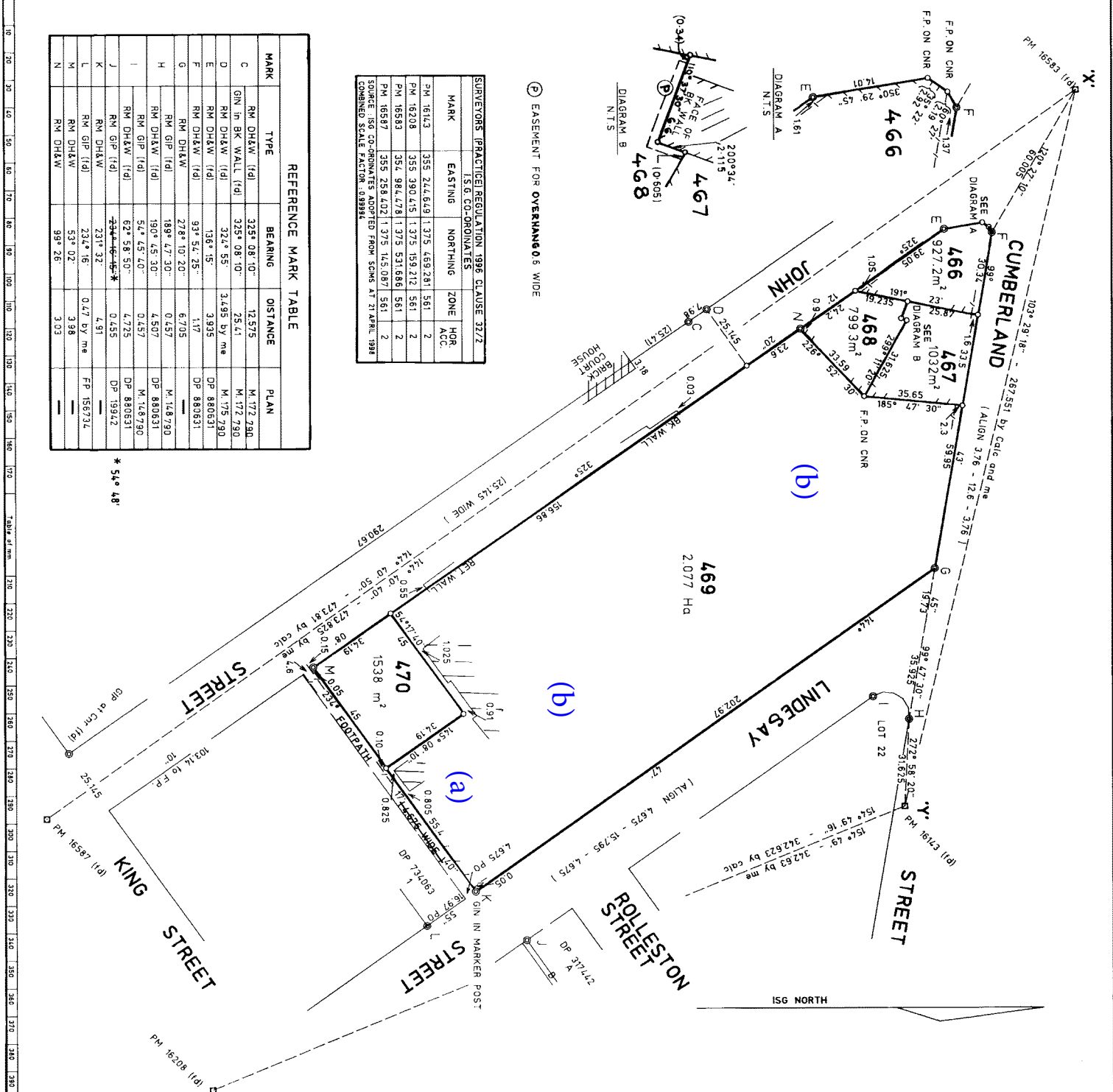
| Plan | Surv/Comp | Purpose |
|-----------|-------------|------------------------|
| DP12773 | SURVEY | UNRESEARCHED |
| DP19942 | SURVEY | UNRESEARCHED |
| DP20142 | SURVEY | UNRESEARCHED |
| DP25151 | SURVEY | UNRESEARCHED |
| DP317442 | SURVEY | UNRESEARCHED |
| DP332176 | COMPILATION | UNRESEARCHED |
| DP348906 | SURVEY | UNRESEARCHED |
| DP367362 | SURVEY | UNRESEARCHED |
| DP372846 | COMPILATION | UNRESEARCHED |
| DP433262 | COMPILATION | UNRESEARCHED |
| DP433836 | COMPILATION | UNRESEARCHED |
| DP530498 | SURVEY | SUBDIVISION |
| DP734063 | COMPILATION | DEPARTMENTAL |
| DP737978 | COMPILATION | DEPARTMENTAL |
| DP744923 | COMPILATION | DEPARTMENTAL |
| DP758374 | COMPILATION | CROWN ADMIN NO. |
| DP799085 | COMPILATION | DEPARTMENTAL |
| DP799773 | COMPILATION | DEPARTMENTAL |
| DP880631 | SURVEY | SUBDIVISION |
| DP1002766 | SURVEY | SUBDIVISION |
| DP1042671 | COMPILATION | LIMITED FOLIO CREATION |
| DP1094345 | COMPILATION | LIMITED FOLIO CREATION |
| DP1097144 | COMPILATION | LIMITED FOLIO CREATION |
| DP1099053 | COMPILATION | LIMITED FOLIO CREATION |
| DP1207466 | COMPILATION | LIMITED FOLIO CREATION |

Caution: This information is provided as a searching aid only. Whilst every endeavour is made to ensure that current map, plan and titling information is accurately reflected, the Registrar General cannot guarantee the information provided. For **ALL** **ACTIVITY PRIOR TO SEPTEMBER 2002** you must refer to the RGs Charting and Reference Maps.

SIGNATURES AND STATEMENTS of intention to dedicate public roads or to create public reserves, drainage reserves, easements or other restrictions on the use of land or positive covenants.

By agreement between the Crown Land Act 1989 and section 180 of the Crown Land Act 1989 and with authority under section 151 of the Road Property Act 1960 from the Minister administering the Crown Land Act 1989 on behalf of the State of New South Wales.
 28 NOV 1999

Crown Lands Office Approval
 PLAN APPROVED: *[Signature]* 26/5/99
 Land District: Maitland
 Paper No.: M19/27/1999 (10/605)
 Field Book: M19/27/1999 (10/605) pages: 1-3
 Council's Certificate
 (a) The requirements of the Road Property Act 1960 (other than section 151) are satisfied.
 (b) The requirements of the Road Property Act 1960 (section 151) are satisfied.
 * This plan is a preliminary plan and is subject to the provisions of the Road Property Act 1960 (section 151) and the Road Property Act 1960 (section 152).
 have been compiled with the approval in relation to the proposed road, 'subdivision' or 'conveyancing act' of the Registrar-General.
 Section No.:
 Date:
 Signature:
 General Manager/Authorised Person
 Council File No.:
 * This part of the certificate is to be deleted when the application is only for a subdivision or a conveyancing act.
 * This part of the certificate is to be deleted when the application is only for a subdivision or a conveyancing act.
 SURVEYOR'S REFERENCE: 9814



⊕ EASEMENT FOR OVERHANGING WIDE

| MARK | EASTING | NORTHING | ZONE | HOR. ACC. |
|----------|-------------|---------------|------|-----------|
| PM 16143 | 355 244.629 | 1 375 469.281 | 561 | 2 |
| PM 16208 | 355 390.415 | 1 375 159.212 | 561 | 2 |
| PM 16583 | 352 984.781 | 1 375 531.686 | 561 | 2 |
| PM 16587 | 355 258.402 | 1 375 145.087 | 561 | 2 |

SOURCE: ISG CO-ORDINATES ADAPTED FROM SCMS AT 21 APRIL 1988
 COMBINED SCALE FACTOR: 0.99994

REFERENCE MARK TABLE

| MARK | TYPE | BEARING | DISTANCE | PLAN |
|------|---------------------|--------------|-------------|-----------|
| C | RM D&W (Td) | 325° 08' 10" | 12.975 | M.172.790 |
| D | GIN in BK WALL (Td) | 325° 08' 10" | 25.41 | M.172.790 |
| E | RM D&W (Td) | 324° 55' | 3.495 by me | M.175.790 |
| F | RM D&W (Td) | 156° 15' | 3.935 | DP 880631 |
| G | RM D&W (Td) | 93° 54.25' | 1.17 | DP 880631 |
| H | RM GIP (Td) | 278° 10' 20" | 6.705 | M.148.790 |
| I | RM D&W (Td) | 189° 47' 30" | 0.457 | DP 880631 |
| J | RM GIP (Td) | 190° 45' 30" | 4.507 | DP 880631 |
| K | RM D&W (Td) | 54° 45' 40" | 0.257 | M.148.790 |
| L | RM GIP (Td) | 62° 58' 50" | 4.725 | DP 880631 |
| M | RM D&W (Td) | 234° 46' 45" | 0.655 | DP 19942 |
| N | RM GIP (Td) | 231° 32' | 4.91 | DP 156734 |
| O | RM D&W (Td) | 232° 16' | 0.47 by me | DP 156734 |
| P | RM D&W (Td) | 53° 02' | 3.98 | DP 156734 |
| Q | RM D&W (Td) | 99° 26' | 3.03 | DP 156734 |

* 54° 48'

M P D

WARNING: CREASING OR FOLDING WILL LEAD TO REJECTION

Plan Drawing only to appear in this space

Registered DP1002766
 CA 2-7-1999
 The system: CROWN LAND
 Purpose: CROWN FOLIO CREATION
 Ref: U5472-43
 Last Plan:
 PLAN OF SUBDIVISION OF LOTS 6 & 7, SECTION 21, DP 758374
 Lengths are in metres, Reduction Ratio 1:1000
 L&A: MAITLAND
 Shire/Locality: EAST MAITLAND
 Parish: MAITLAND
 County: NORTHUMBERLAND
 This is sheet 1 of 1 plan in 1 sheet.
 Survey Certificate
 Surveyor: EDWARD JAMES GRAY
 Surveyor's Practice/Regulation: 1986
 DEPT OF PUBLIC WORKS & SERVICES
 A surveyor registered under the Surveyors Act 1931
 The survey was conducted in accordance with the Surveyors (Practising Regulation) 1986 and was completed on 12th February 1999.
 The survey relates to SUBDIVISION
 Datum: X Y
 Zone: SA
 Signature: *[Signature]*
 Surveyor's Practice/Regulation: 1986
 Plans used in preparation of survey/compilation:
 DP 880631
 DP 839468
 DP 156734
 DP 172-790
 DP 175-790
 DP 78-790
 PANSUANT TO SECTION 88B OF THE CONVEYANCING ACT 1919 IT IS INTENDED TO CREATE:
 ⊕ EASEMENT FOR OVERHANGING WIDE



NEW SOUTH WALES LAND REGISTRY SERVICES - HISTORICAL SEARCH

SEARCH DATE

8/12/2022 9:11AM

FOLIO: 469/1002766

First Title(s): THIS FOLIO
Prior Title(s): CROWN LAND

| <u>Recorded</u> | <u>Number</u> | <u>Type of Instrument</u> | <u>C.T. Issue</u> |
|-----------------|---------------|---------------------------|----------------------------|
| 2/7/1999 | DP1002766 | DEPOSITED PLAN | FOLIO CREATED EDITION 1 |
| 18/5/2011 | AG239593 | DEPARTMENTAL DEALING | |
| 4/6/2013 | AH778147 | DEPARTMENTAL DEALING | |

*** END OF SEARCH ***



NEW SOUTH WALES LAND REGISTRY SERVICES - TITLE SEARCH

FOLIO: 469/1002766

| SEARCH DATE | TIME | EDITION NO | DATE |
|-------------|---------|------------|----------|
| 8/12/2022 | 9:11 AM | 1 | 2/7/1999 |

LAND

LOT 469 IN DEPOSITED PLAN 1002766
AT EAST MAITLAND
LOCAL GOVERNMENT AREA MAITLAND
PARISH OF MAITLAND COUNTY OF NORTHUMBERLAND
TITLE DIAGRAM DP1002766

FIRST SCHEDULE

THE STATE OF NEW SOUTH WALES

SECOND SCHEDULE (3 NOTIFICATIONS)

- 1 LAND EXCLUDES MINERALS (S.171 CROWN LANDS ACT 1989)
- * 2 RESERVE NO. 20743 FOR GAOL AND LOCKUP NOTIFIED IN THE GOVERNMENT GAZETTE OF 12 MAY 1894 AND 18 MARCH 1977
- * 3 THE LAND IS A RESERVE WITHIN THE MEANING OF PART 5 OF THE CROWN LANDS ACT 1989 AND THERE ARE RESTRICTIONS ON TRANSFER AND OTHER DEALINGS IN THE LAND UNDER THAT ACT, WHICH MAY REQUIRE CONSENT OF THE MINISTER.

NOTATIONS

UNREGISTERED DEALINGS: NIL

*** END OF SEARCH ***

advlegs

PRINTED ON 8/12/2022

Appendix F

Photographic Plates

F.1 Appendix F: Photographic plates

Photo log

| | | | |
|------------------------|--|-------------------|------------|
| Project | Maitland Gaol – Preliminary Site Investigation | | |
| Client | MCC | Job number | E221249 |
| EMM field staff | Thomas Mailler | Date: | 20/12/2022 |



Photo 1

Potential ACM identified in roof of western room

Location: Building 2, groundfloor

Direction: 333° clockwise from north



Photo 2

Potential ACM in roof of western room

Location: Building 2, groundfloor

Direction: 280° clockwise from north



Photo 3

Water ingress in western room

Location: Building 2, basement

Direction: 179° clockwise from north



Photo 4

Possible gym in southern room, note water damage to walls

Location: Building 2, basement

Direction: 258° clockwise from north



Photo 5

Potential friable ACM observed in gym/southern room

Location: Building 2, basement

Direction: 57° clockwise from north

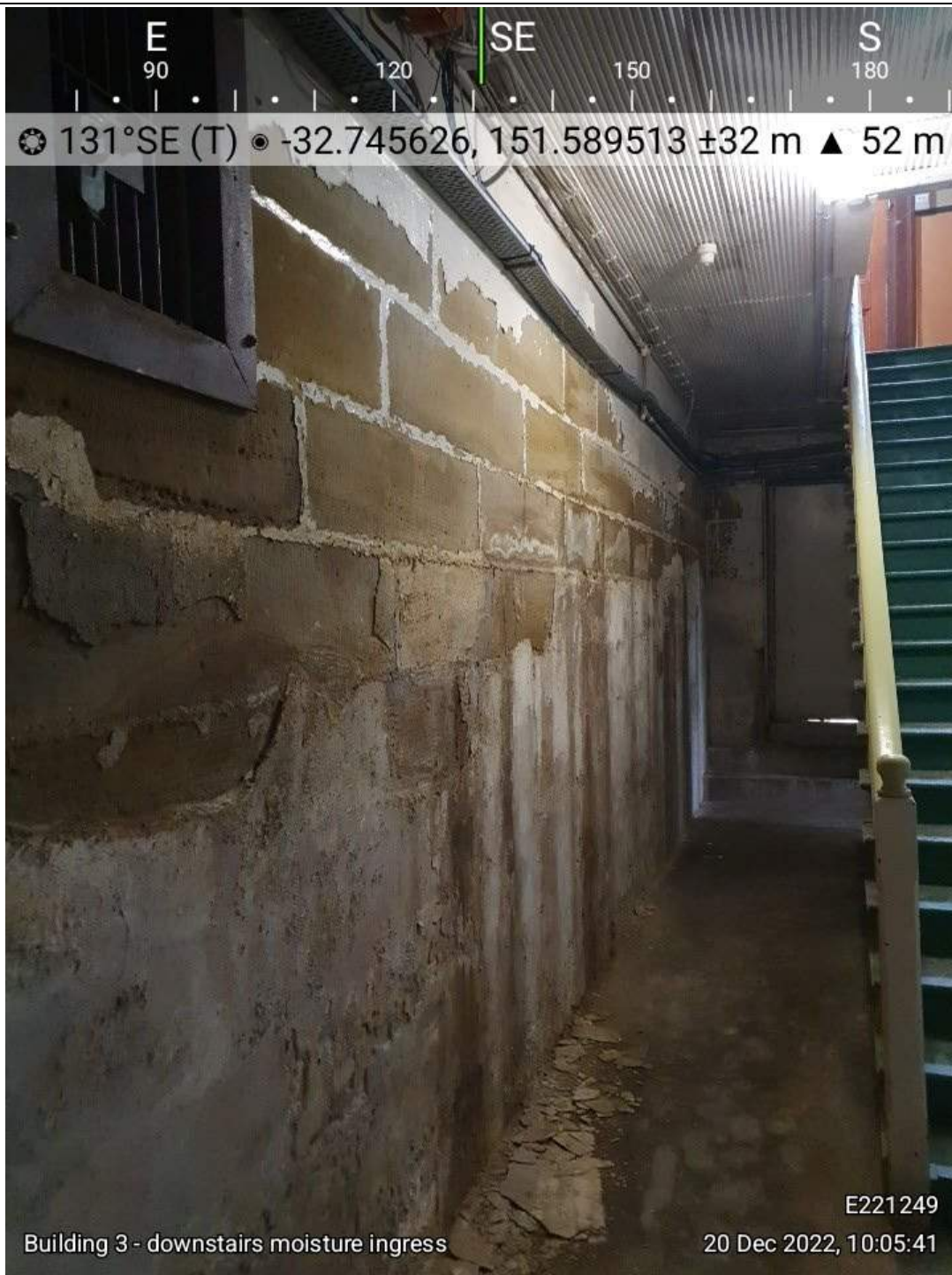


Photo 6

Damage to cladding resulting from water ingress

Location: Building 3, basement

Direction: 131° clockwise from north



Photo 7

Future courtyard area viewed from south-east entrance

Location: North-east of Building 1 – Gatehouse

Direction: 41° clockwise from north



Photo 8

Auditorium viewed from internal entrance

Location: Building 14

Direction: 28° clockwise from north



Photo 9

Maitland Musical Society rehearsal space/storeroom as viewed from auditorium entrance

Location: Building 14

Direction: 218° clockwise from north



Photo 10

Shower room as viewed from entrance

Location: Building 22

Direction: 23° clockwise from north



Photo 11

Former laundry/current maintenance workshop as viewed from entrance

Location: Building 22

Direction: 343° clockwise from north

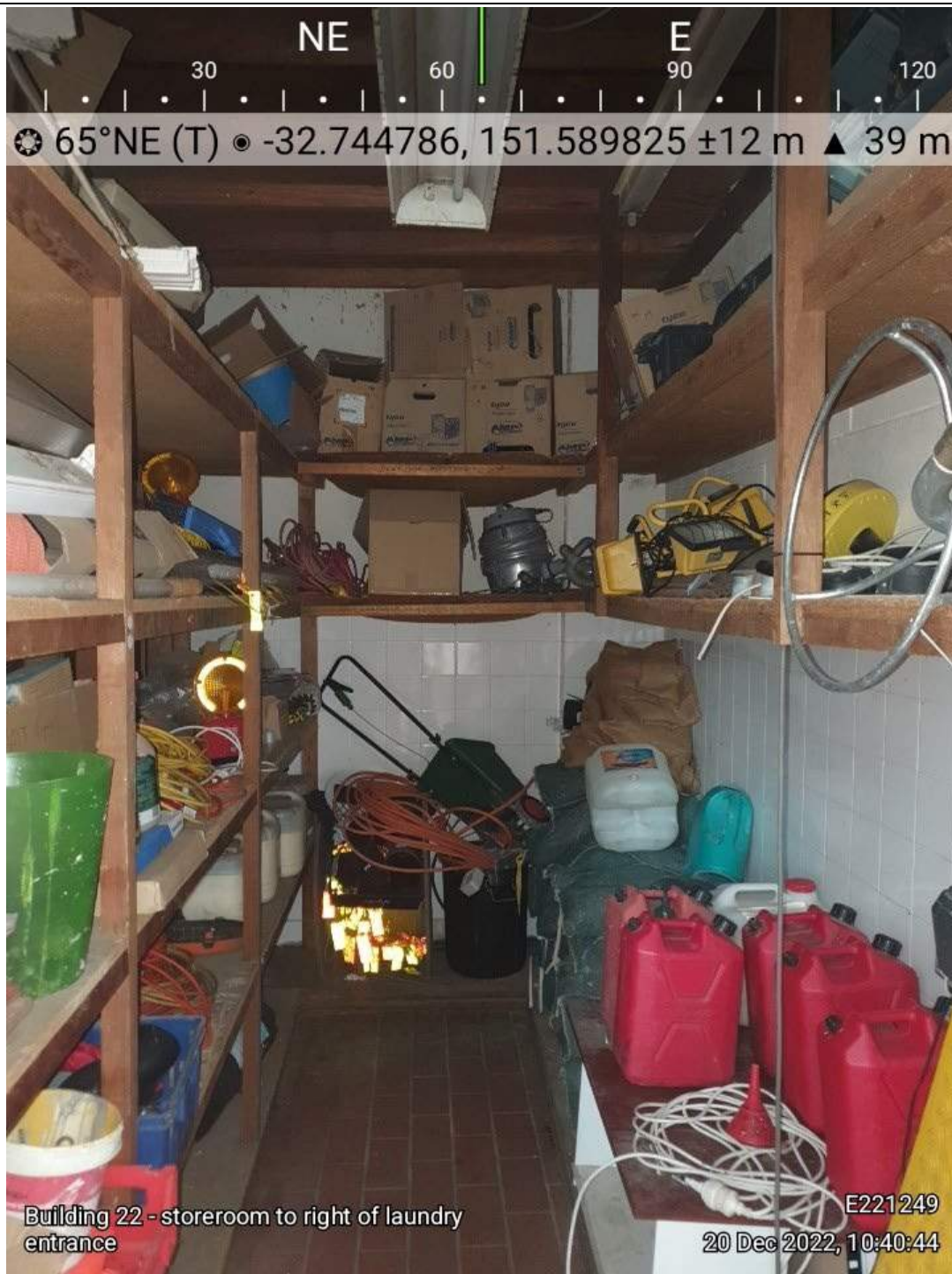


Photo 12

Storeroom to right of former laundry entrance, note 20 L fuel and oil drums. Room had a strong hydrocarbon odour at time of inspection

Location: Building 14

Direction: 65° clockwise from north



Photo 13

Mowers stored in former laundry

Location: Building 22

Direction: 327° clockwise from north



Photo 14

Disused laundry equipment

Location: Building 22

Direction: 349° clockwise from north



Photo 15

Sewer pits looking towards Building 22. Note the disused water feature in the top left of the photo.

Location: West of Building 22

Direction: 105° clockwise from north



Photo 16

Disused legionella treatment plant
Location: Northern corner of Building 22
Direction: 324° clockwise from north



Photo 17

Used kitchen oil. Note the derelict generator in the right of the photo. Building 14 is visible in the left of the photo.

Location: Western corner of Building 14

Direction: 328° clockwise from north



Photo 18

Disused and operational fridges in western garage/storage area

Location: Building 14

Direction: 39° clockwise from north



Photo 19

20 L drum of truckwash near entrance to western garage/storage area

Location: Building 14

Direction: 69° clockwise from north



Photo 20

Southern petrol bowsers. Note that the UPSS vents are visible on the wall of Building 22 in the background

Location: Northwest of Building 14

Direction: 74° clockwise from north



Photo 21

Northern petrol bowser. Building 22 is visible in the background

Location: North-west of Building 14

Direction: 118° clockwise from north



Photo 22

UPSS ventilation risers against the wall of Building 14

Location: North-west of Building 14

Direction: 37° clockwise from north



Photo 23

Disused cooling unit. Building 14 and the UPSS risers are visible in the background

Location: North-west of Building 14

Direction: 194° clockwise from north



Photo 24

Disused legionella treatment plant
Location: Northern corner of Building 14
Direction: 324° clockwise from north



Photo 25

Disused boilers (yellow units) and associated pipes. Note that these are outside of the Site boundary

Location: Northern portion of Building 14

Direction: 75° clockwise from north



Photo 26

Fuel/oil emergency shutoff valve located on corner of boiler room

Location: North-west wall of Building 14

Direction: 132° clockwise from north



Photo 27

Bread and Butter Café entrance

Location: Building 22

Direction: 18° clockwise from north

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