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Ryde to Pymble Pipeline Upgrade
Aboriginal Heritage Due Diligence Assessment

Prepared for Sydney Water

Ku-Ring-Gai and Ryde Local Government Areas

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1 Introduction

1.1 Background

Sydney Water is preparing a Review of Environmental Factors (REF) for proposed upgrades to the existing RP03 drinking water main. The existing RP03 runs from Ryde to Wahroonga and is part of the Ryde Delivery System within the Prospect Water System. RP03 was decommissioned in 2014 due to its poor condition and an unacceptable risk of failure. Strategic planning has identified the opportunity to upgrade RP03 and put it back into service to meet system planning objectives for Epping to St Leonards Growth Servicing. Upgrading RP03 would increase the water distribution system's capacity for servicing increased drinking water demand in the Prospect Water System. Additionally, the enhanced capacity of the Ryde System will cater for increased growth within the North Shore.

The proposal involves constructing a DN900 water main about 9.5 kilometre between Sydney Water's West Ryde Pumping Station and Roland Avenue, Wahroonga. The proposed works would be undertaken using a combination of open trenching and trenchless construction methods. The proposal extends through the suburbs of West Ryde, Ryde, Denistone East, Eastwood, Marsfield, North Ryde, Macquarie Park, South Turramurra, Turramurra, Warrawee, and Wahroonga within the Ryde and Ku-Ring-Gai local government areas (LGAs). The proposal constitutes the 'study area' for this assessment and is shown on Figures 1 and 2.

Kelleher Nightingale Consulting Pty Ltd (KNC) was engaged by Sydney Water to undertake an Aboriginal heritage due diligence assessment of the study area. The assessment aimed to identify if Aboriginal objects were likely to be located in the study area and if so, whether the proposed works were likely to harm those objects.

This report presents the findings of a due diligence Aboriginal heritage assessment of the study area. This assessment has been conducted in accordance with the Heritage NSW *Due Diligence Code of Practice for the Protection of Aboriginal Objects in New South Wales* (Heritage NSW, 2010).

1.2 Aboriginal heritage due diligence assessment process

The due diligence assessment process is a step by step method designed to give proponents a baseline level of information outlining opportunities and constraints related to Aboriginal heritage. The relevant steps are:

- Determining if the activity will disturb the ground surface or any culturally modified trees (Step 1)
- Database search: Aboriginal heritage information management system (AHIMS) and known information sources (Step 2a)
- Landscape assessment (Step 2b)
- Impact avoidance assessment (Step 3)
- Desktop assessment and visual inspection (Step 4).

The *Due Diligence Code of Practice* specifies that if the initial assessment process identifies that Aboriginal objects will be or are likely to be harmed, then further investigation and impact assessment is required (Step 5). The process involves "taking reasonable and practical measures to determine whether your actions will harm an Aboriginal object and, if so, what measures can be taken to avoid that harm" (Heritage NSW, 2010:4).

1.3 Due Diligence Assessment Summary

Assessment under the *Due Diligence Code of Practice for the Protection of Aboriginal Objects in New South Wales* did not identify any Aboriginal sites, objects or areas of Aboriginal archaeological potential within the study area.

Landform and disturbance assessment found that contemporary land use primarily related to development of road corridors, residential areas, recreation areas and existing water related infrastructure has led to high levels of disturbance throughout the study area corridor. The more intact Lane Cove National Park portion of the study area contains greater potential to retain archaeological sites, however this area will not be impacted by the works, with the proposed use of trenchless construction at this location.

It is reasonable to assume that no Aboriginal objects or sites would be affected by the proposal. Based on the results of this assessment there are no archaeological constraints to the proposal and according to the Heritage NSW *Due Diligence Code of Practice for the Protection of Aboriginal Objects in New South Wales*, the proposed works can proceed with caution.

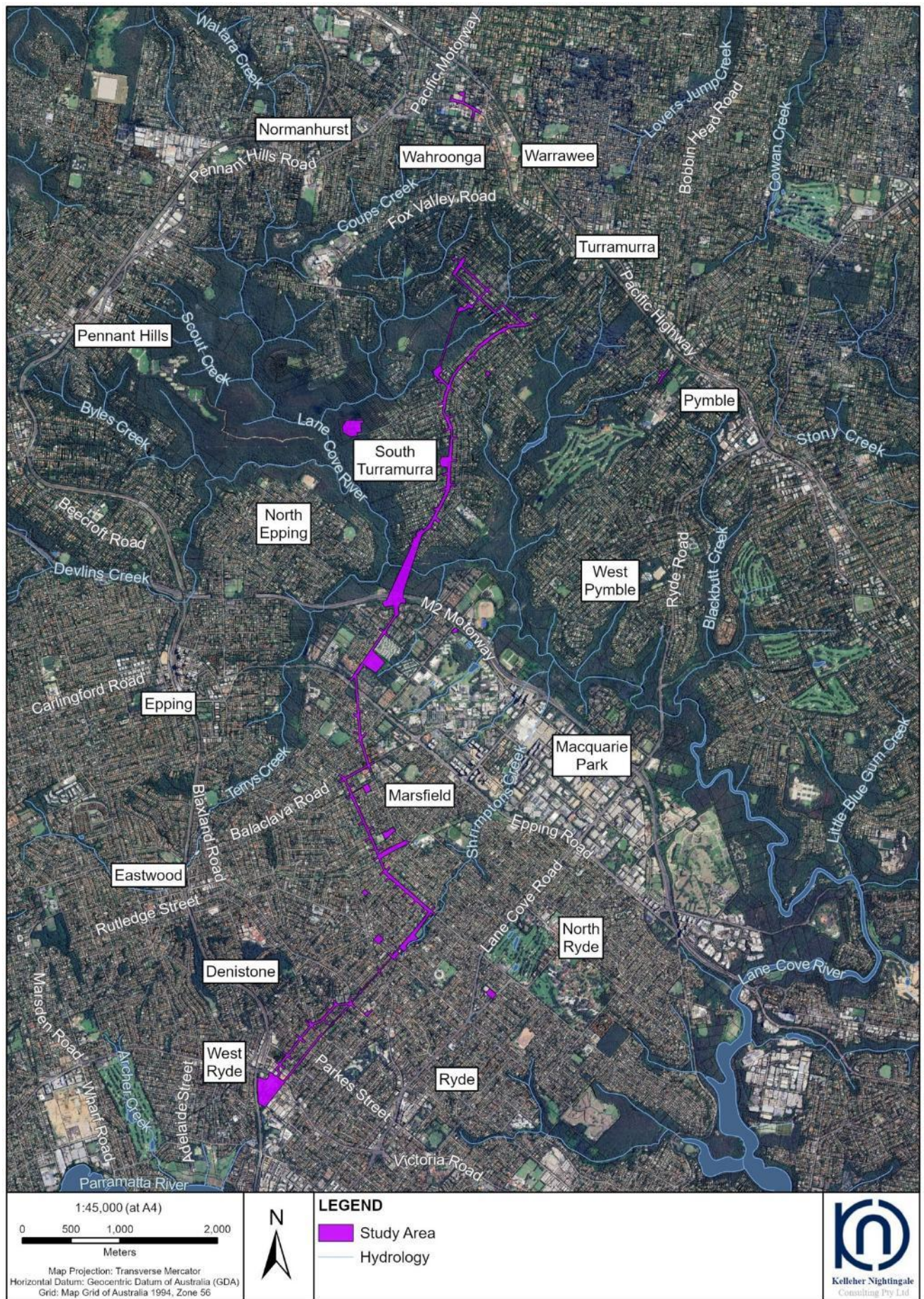


Figure 1. Overview of study area



Figure 2. Location of study area

2 Assessment Process

2.1 Identify if the proposed activity will disturb the ground surface

The proposed works will involve open trenching, tree removal and compound construction activities which would impact the ground surface and have the potential to impact on any Aboriginal objects or Aboriginal heritage items that may be present. Some level of ground disturbance is unavoidable for the proposal as a whole. As a result, the due diligence process progressed to the next step.

2.2 Database searches and known information sources

2.2.1 AHIMS web service and other heritage databases

The Aboriginal Heritage Information Management System (AHIMS) is a database operated by Heritage NSW and regulated under section 90Q of the *National Parks and Wildlife Act 1974*. AHIMS contains information and records pertaining to registered Aboriginal archaeological sites (Aboriginal objects, as defined under the Act) and declared Aboriginal places (as defined under the Act) in NSW.

A search of AHIMS was conducted on 4 April 2025 to identify registered (known) Aboriginal sites or declared Aboriginal places within or adjacent to the study area (AHIMS Client Service ID: 992431). The AHIMS search results are attached as Appendix A and discussed below.

The AHIMS Web Service database search was conducted within the following coordinates (GDA, Zone 56):

Eastings: 322683 – 327522
 Northings: 6256619 - 6272696
 Buffer: 0 metres (search area included an extensive buffer)

The AHIMS search results showed:

74	Aboriginal sites are recorded in or near the above location
0	Aboriginal places have been declared in or near the above location

The distribution of recorded Aboriginal sites within these coordinates is shown on Figure 3. The frequencies of site types within the AHIMS database search area are listed in Table 1.

Table 1. Site features and context from AHIMS database search

Site Context	Site Feature	Number	Frequency (%)
Open	Art (Pigment or Engraved)	16	22
	Grinding Groove	12	16
	Grinding Groove; Water Hole	1	1
	Grinding Groove; Art (Pigment or Engraved)	1	1
	Potential Archaeological Deposit (PAD)	6	8
	Artefact	1	1
	Artefact; Potential Archaeological Deposit (PAD)	1	1
	Artefact; Habitation Structure	1	1
	Modified Tree (Carved or Scarred)	1	1
	Shell; Artefact	2	3
Closed	Art (Pigment or Engraved)	13	18
	Artefact; Art (Pigment or Engraved)	3	4
	Art (Pigment or Engraved); Potential Archaeological Deposit (PAD)	1	1
	Artefact	12	16
	Potential Archaeological Deposit (PAD)	3	4
Total		74	100

AHIMS records show that there are no previously registered sites located within the study area. The AHIMS results, the nature of previously recorded sites and previous archaeological investigations in the area are discussed further in section 2.2.3.

2.2.2 Aboriginal heritage register searches

A search was undertaken of the following statutory and non-statutory heritage registers for Aboriginal heritage items:

- State Heritage Register and State Heritage Inventory
- Ku-Ring-Gai Local Environmental Plan 2015
- Ryde Local Environment Plan 2014
- Section 170 Heritage and Conservation Registers

- National Heritage List
- Commonwealth Heritage List
- Australian Heritage Database (Register of the National Estate – Non-statutory archive)
- Australian Heritage Places Inventory (Register of the National Estate – Non-statutory archive).

No Aboriginal archaeological sites or Aboriginal heritage items were recorded on these databases within the study area.

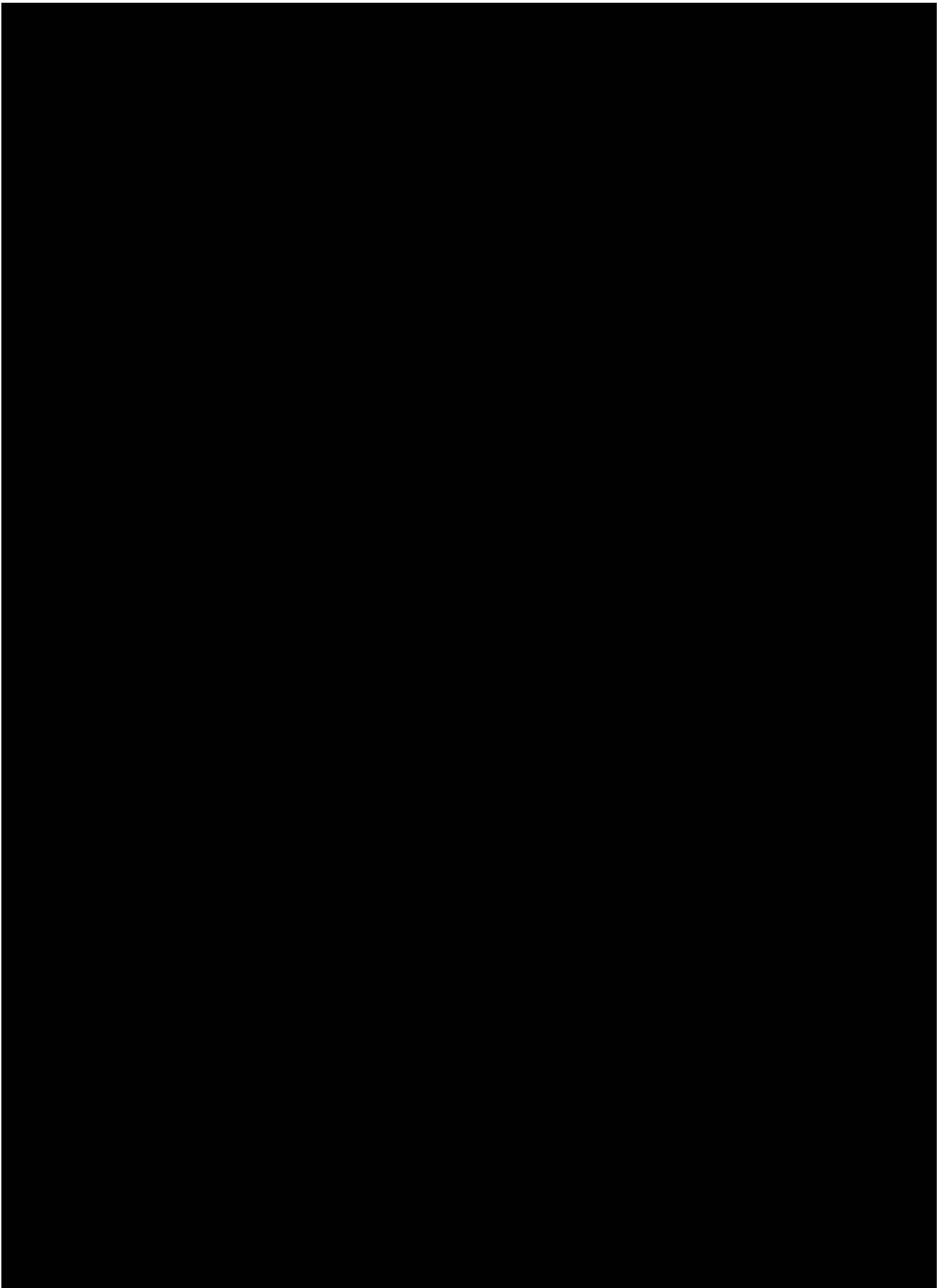


Figure 3. AHIMS search results

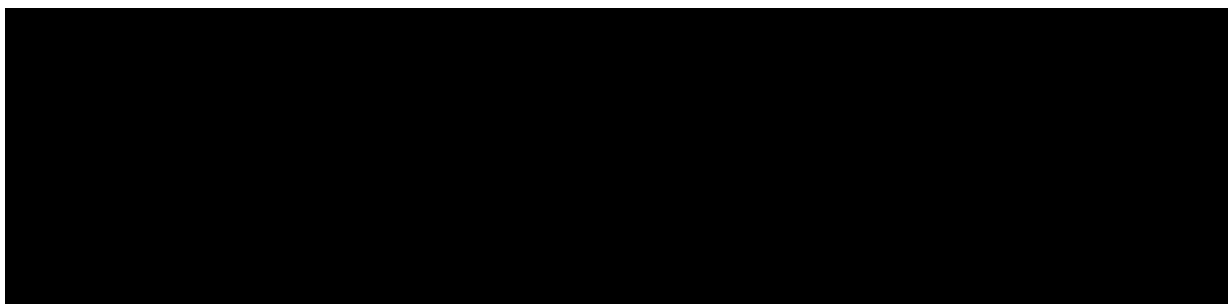
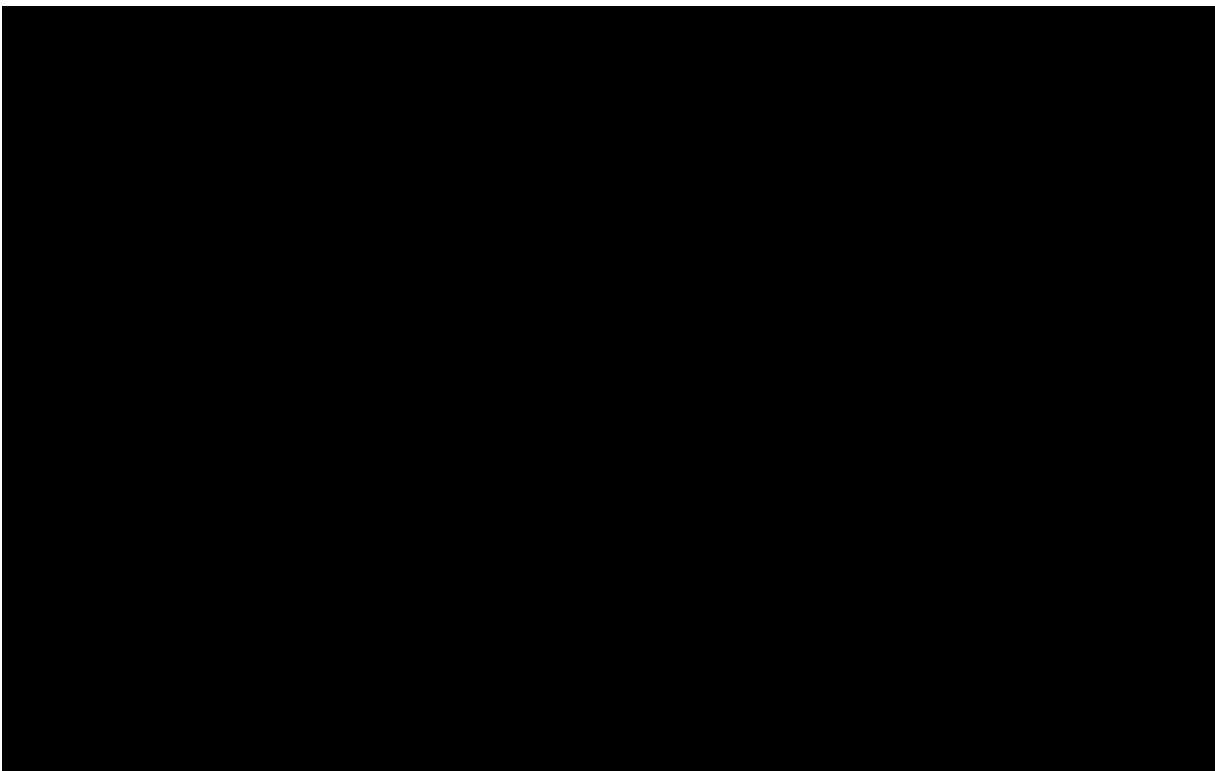
2.2.3 Previous archaeological investigations

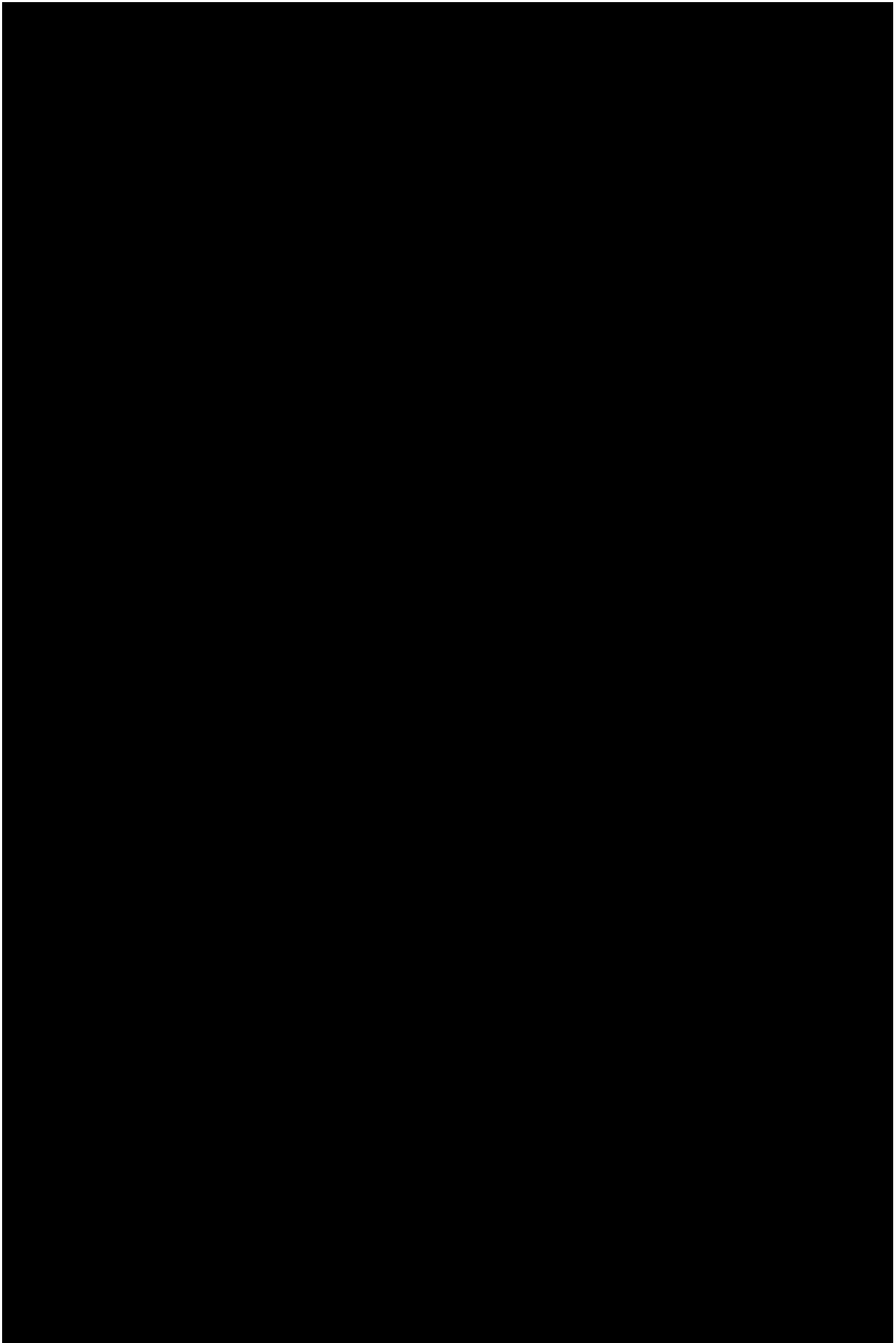
Previous archaeological investigations have been undertaken within and surrounding the study area, including the Aboriginal Heritage and History Within the Ku-ring-gai Local Government Area Report (2015) which encompassed the northern portion of the current study area located in the Ku-ring-gai LGA. The majority of the study area is located within existing road corridors which have not been subject to extensive Aboriginal archaeological assessment. Other site assessments have been undertaken during recordings by amateur archaeologists or as part of site inspections carried out by the Aboriginal Heritage Office. These archaeological investigations have resulted in the identification of several registered AHIMS sites within 200 metres of the study area. AHIMS registered sites are shown on Figure 3 and are discussed in detail below.

Aboriginal Heritage and History Within the Ku-Ring-Gai Local Government Area

A report providing an overview of the Aboriginal heritage and history of the Ku-ring-gai LGA was prepared by the Aboriginal Heritage Office in 2015 for Ku-ring-gai Council (Aboriginal Heritage Office 2015). The report provided a predictive model for Aboriginal heritage sites within the Ku-Ring-Gai LGA and described the landscape features where sites were likely to occur. The model identified the potential for engravings, rockshelters, and grinding groove sites to be found wherever outcroppings of Hawkesbury Sandstone occur. Engraving sites were stated as likely to occur on ridge tops, flat surfaces above cliffs and scarps and on isolated outcrops and boulders. Rockshelters containing potential for art, archaeological deposit or middens were considered likely to occur on slopes below ridges, cliffs and scarps or beneath isolated boulders. Grinding groove sites were stated to likely occur on fairly level rock surfaces in creeks, swampy areas and isolated areas with an adjacent water source or in association with other sites.

Other potential site types within the LGA included shell middens and archaeological deposit; both were considered most likely to occur within rockshelters or on level areas near the harbour or creek lines. The potential for burials to occur in middens, shelter deposits, archaeological deposits or soft ground such as sandy banks was also identified. Scarred tree and fish trap sites were described as rare within the LGA. The study described the reduced potential for sites to occur in areas that have been more intensively developed, with the lowest frequency of sites found in commercial areas that had been subject to intensive land disturbance.





Summary and Implications for Study Area

A review of the database searches and associated background information has revealed that no registered Aboriginal archaeological sites are located within the study area. The distribution of previously recorded Aboriginal archaeological sites in the wider region correlates with topographic and geological factors in areas least impacted by development and land use. Rockshelter sites with art, artefacts and/or PAD are common on slopes below ridges associated with waterways, rock engraving sites have been identified on exposed sandstone outcrops and grinding groove sites have been identified in areas of outcropping sandstone. [REDACTED]

The variety of site types suggests that this area was utilised by Aboriginal peoples in the past, likely due to the presence of fresh water, food resources and suitable occupation sites in the form of rockshelters. Archaeological traces of this landscape use will remain in contexts where archaeological preservation is favourable, and modern disturbance has been limited. The majority of the current study area has been subject to disturbance related to land clearing activities, road and residential construction and recreational land use, leading to a low likelihood of any intact archaeological deposit or sites remaining.

2.3 Landscape Assessment

The *Due Diligence Code of Practice* identifies several landscape features that were often used by Aboriginal people in the past and consequently are often associated with Aboriginal objects, provided that the landscape has not been significantly disturbed. An evaluation of landscape features within the study area aids in assessing whether Aboriginal archaeology is likely to exist.

The study area is located on the southern fringes of the Hornsby Plateau, the high plateau located at the north-east margin of Sydney's Cumberland Plain. The underlying geology of the study area is composed of Hawkesbury Sandstone (Rh) and Wianamatta Group Ashfield shale (Rwa). Hawkesbury Sandstone (Rh) consists of a medium to very coarse-grained quartz sandstone, with minor laminated mudstone and siltstone lenses. This geological formation occurs within the study area along the valleys of the upper Lane Cove River catchment and at the southern edge of the study area towards the Parramatta River (Herbert, 1983). The more recent Wianamatta Group Ashfield shale unit (Rwa) consists of a dark grey to black claystone-siltstone and fine sandstone-siltstone laminate and occurs within the study area on the more elevated ridge lines, crests and slopes surrounding the sandstone based valleys of the upper Lane Cove River catchment (Figure 4).

Soil landscapes found in the study area are varied, reflecting the influence of the underlying geologies of the study area. Soils across the study area principally derive from the erosional Glenorie soil landscape, however Hawkesbury, Lucas Heights, Gymea, West Pennant Hills and Lambert soil landscapes also occur within the study area (Figure 5). Glenorie soils are present within the study area south of the Lane Cove River valley, occurring on the undulating to rolling low hills associated with the Wianamatta Group shales with local relief between 50-120 metres and slope gradients of 5-20%. Glenorie soils consist of topography-dependent shallow to moderately deep red, brown and yellow podzolic soils, with a high erosion hazard (Chapman & Murphy, 1989). The Glenorie soil landscape is generally not conducive to the survival of Aboriginal objects in situ, particularly in areas subject to high levels of disturbance.

The colluvial Hawkesbury soil landscape occurs on rugged, rolling to very steep hills and narrow incised valleys with steep side slopes. It is present within the study area in valleys of the Lane Cove River, Water Dragon Creek and Peppermint Creek. Soils are shallow and siliceous, with occasional red and yellow podzolics where shale lenses occur. Rock outcropping is common (>50%) and soils possess an extreme erosion hazard, with mass movement (rockfalls) common on steep slopes. These soils are less likely to exhibit intact archaeological deposit in an exposed context due to the high erodibility and high deflation rate of the soil. The colluvial movement and sandy matrix of Hawkesbury soils along the waterway also makes this soil landscape unlikely to exhibit intact archaeological material outside of closed contexts (rockshelters) where soil movement is restricted. Although artefacts may survive in open contexts, they are likely to have been decontextualised by soil movement.

Lucas Heights residual soil landscape occurs on gently undulating crests and ridges on plateau surfaces, where shale, laminate and sandstone are interbedded (Chapman & Murphy 1989). Within the study area, it occurs on the elevated crests and ridges bordering the Lane Cove River valley and at the southern edge of the study area where the soil landscape borders the Parramatta River. Soils consist of moderately deep hardsetting yellow podzolics and soloths, with yellow earths occurring on outer crest edges. Rock outcropping is absent although soils may be stony. Soils are generally stable but display moderate susceptibility to erosion.

The erosional Gymea soil landscape occurs within the study area on the elevated broad ridges with convex crests bordering the valleys of the Lane Cove River and Water Dragon Creek. Soils are generally shallow but may be moderately deep inside of benches and in drainage lines. Soil materials consist of yellow earths and sands, as well as both gleyed and yellow podzolics. Gymea soils are highly susceptible to erosion from both concentrated and non-concentrated flows (Chapman & Murphy 1989). Preservation of archaeological deposit in Gymea soils is strongly dependent on topography and the level of surface disturbance.

The colluvial West Pennant Hills soil landscape occurs within the study area on steep, narrow hill slopes within areas of Wianamatta Group shales and shale colluvium with local relief between 40-200 metres and slope gradients of 20-40%. Typical soil profiles consist of deep red, brown, yellow or gleyed podzolics. West Pennant Hills soils are highly susceptible to erosion, located on mass movement derived landforms subject to soil creep, earthflow, slumping and tension cracks (Chapman and Murphy 1989). This soil landscape is present towards the southern end of the study area at West Ryde and Denistone and towards the northern end of the study area at Wahroonga.

The erosional Lambert soil landscape is typical of convex ridges and coastal headlands (Chapman and Murphy 1989). Lambert soils are prone to severe erosion, with rock outcrop approaching 50%. These soils consist of shallow earthy sands and yellow earths on crests and inside benches, shallow siliceous sands/lithosols on leading edges, shallow to moderately deep leached sands, grey earths, and gleyed podzolic soils in poorly drained areas and localised yellow podzolic soils in association with shale lenses. These soils are present in a small portion of the study area in Twin Creeks Reserve on the elevated ridge between Water Dragon Creek and Peppermint Creek.

Hydrology around the study area is dominated by the Lane Cove River catchment, formed by the Lane Cove River as it cut down through the shale capping and underlying Hawkesbury Sandstone to form a narrow, steep-sided valley (NSW National Parks and Wildlife Service 2016). The Lane Cove River catchment covers approximately 80 square kilometres and flows into the Parramatta River and Sydney Harbour, with 21 creeks feeding directly into river. The study area alignment transects the Lane Cove River and runs in proximity to Shrimptons Creek, Mars Creek, Water Dragon Creek and Peppermint Creek. The catchment is mostly situated within the Lane Cove National Park bushland, however it has been subject to urban and industrial development with up to 40 per cent of the catchment surface area replaced by impervious surfaces causing high levels of erosion within creek channels. The varied hydrological features surrounding the study area would have led to a range of different environmental contexts and a diversity of available resources for Aboriginal people.

The study area traverses several different landforms across the suburbs of West Ryde, Ryde, Denistone East, Eastwood, Marsfield, North Ryde, Macquarie Park, South Turramurra, Turramurra, Warrawee, and Wahroonga. Landforms were characterised by gentle, moderate and steep slopes, ridges, crests and the steep gully slopes associated with the Lane Cove River valley. The majority of the study area consists of road, utilities and water-related infrastructure corridors built to accommodate residential development in the local area. Areas proposed as compound locations have been subject to disturbance through their use as public recreation parks, water reserves, sporting grounds, car parking areas, and existing Sydney Water compounds.

The study area has been largely cleared of original vegetation in built areas with short, maintained grasses, isolated trees present within road verges and tree plantings in public park areas. The river corridor and valley slopes of Lane Cove National Park is for the most part heavily vegetated, with dominant vegetation reflecting the underlying geology and soils. Lane Cove National Park contains important communities of bushland within the Sydney metropolitan area, being the largest and most biodiverse bushland area between the sandstone national parks in the north, south and west of Sydney (NSW National Parks and Wildlife Service 2016). The variety of vegetation communities within the park include forests of turpentine and red mahogany, woodlands, shrublands and heaths of scribbly gums, dwarf apple and saw banksia, open forests of Sydney red gum, Sydney peppermint and red bloodwood, and closed forest communities of black wattle, blueberry ash, sweet pittosporum, water gum, lilly pilly and coachwood. There is some potential for old growth trees to remain where clearing has been limited. Invasive weed species such as privet and lantana are also present along the river, creeklines and side slopes.

The study area is located in proximity to landform features (within 200 metres of waterways; ridgelines) which are often associated with Aboriginal occupation/activity as determined by the *Due Diligence Code of Practice for the Protection of Aboriginal Objects in New South Wales* (Heritage NSW, 2010). Based on the landscape assessment, the study area has the potential to retain Aboriginal objects and archaeological deposit in contexts where the ground has not been subject to significant disturbance.

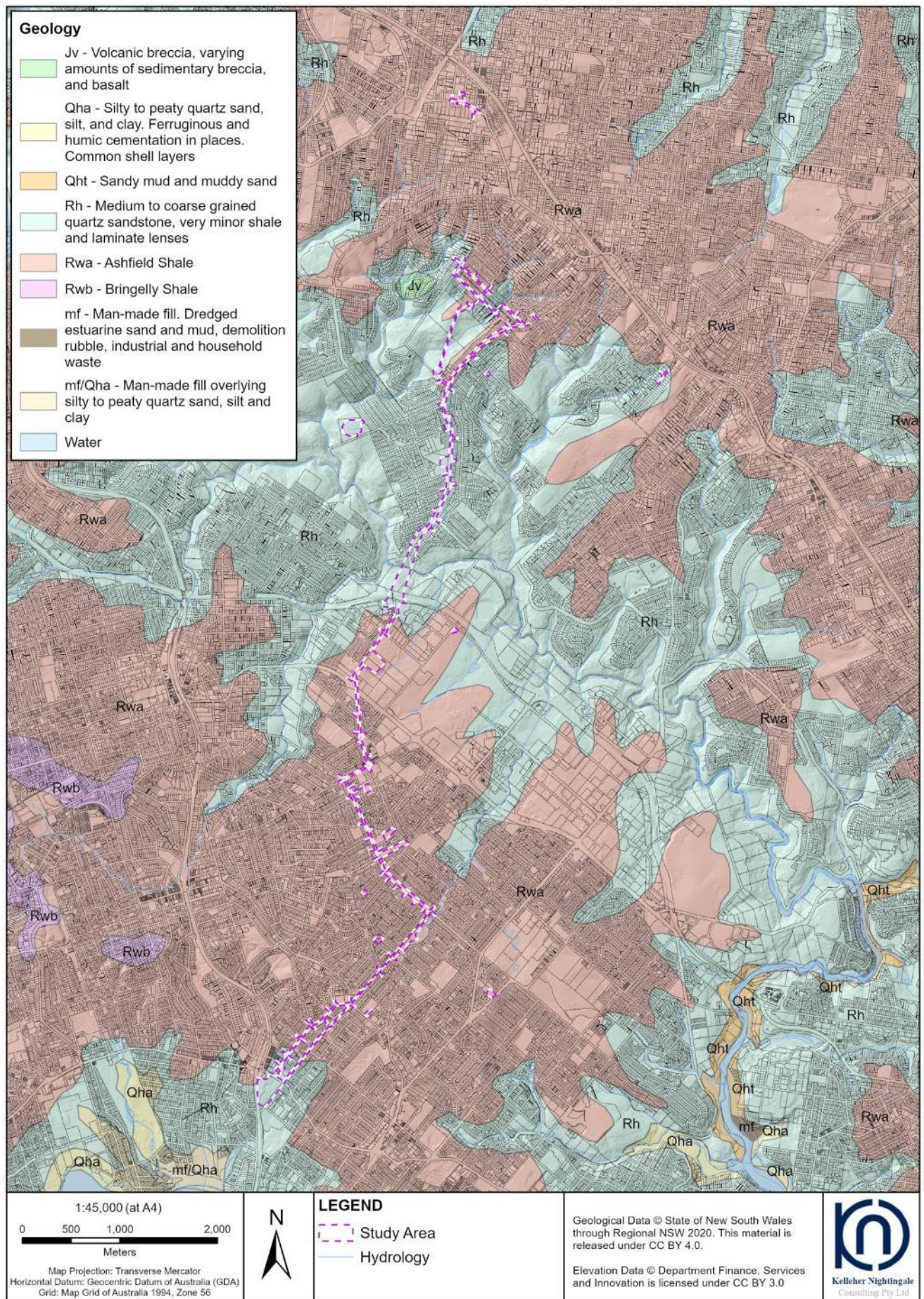


Figure 4. Geology of the study area

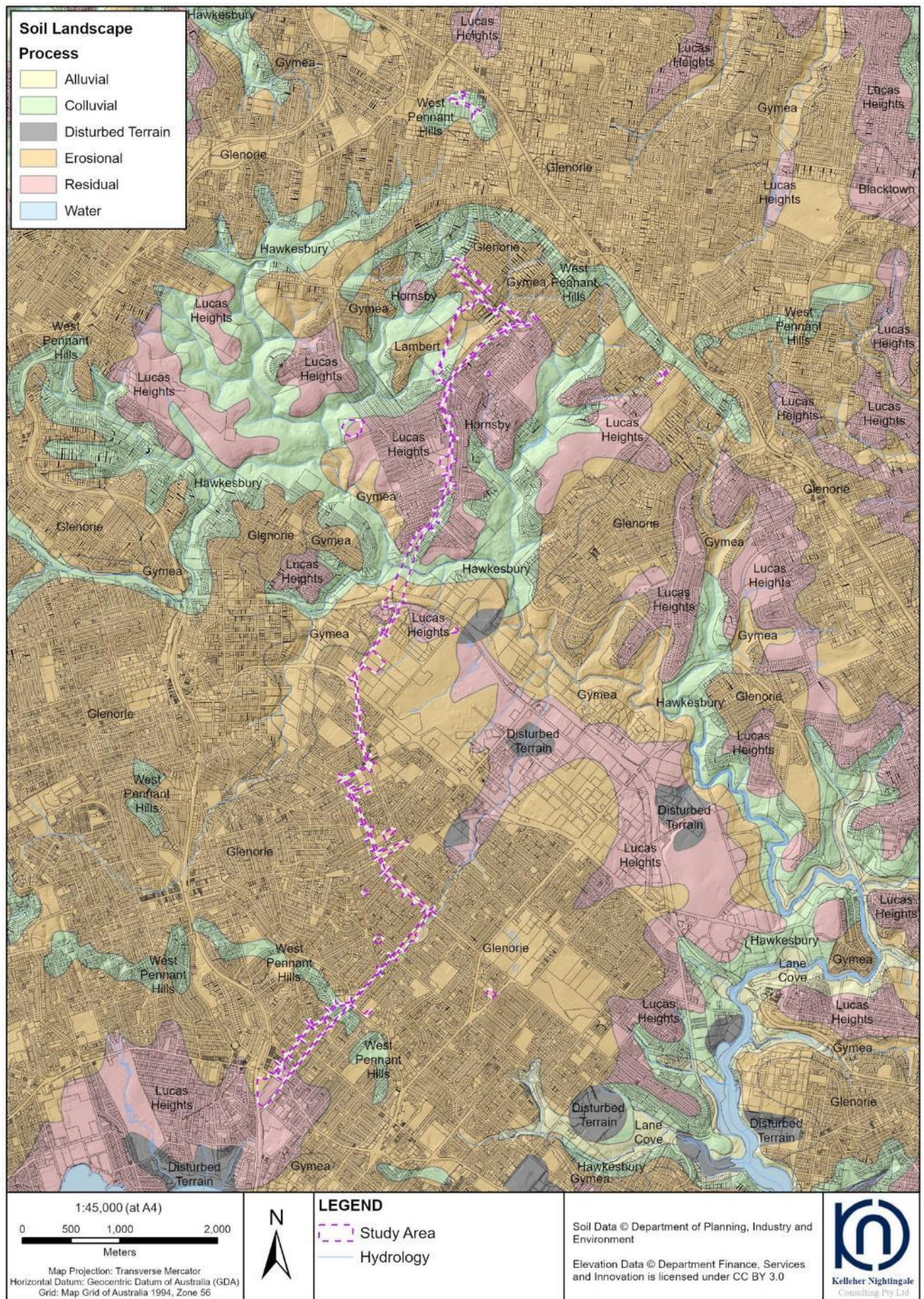


Figure 5. Soils of the study area

2.4 Impact Avoidance

Background research did not identify any previously registered Aboriginal archaeological sites in the current study area. Landscape assessment identified the presence of landforms considered archaeologically sensitive by Heritage NSW under the *Due Diligence Code of Practice* (study area is in proximity to waterways and ridgelines).

Activities associated with the proposed works would impact the ground surface to some degree and therefore have the potential to harm Aboriginal objects which may be present. Some level of ground disturbance to archaeologically-sensitive landforms is unavoidable for the proposal as a whole. As a result, the due diligence process progressed to the next step.

2.5 Desktop Assessment

The desktop review and assessment combined the results of heritage register searches, previous investigations and landscape assessment. Background research has confirmed that no previously identified Aboriginal archaeological sites occur within the study area.

The desktop assessment identified the potential for Aboriginal sites to occur in the form of rockshelters, grinding grooves and rock engravings within the study area, especially on slopes beneath ridges associated with creeklines and on areas of outcropping sandstone in proximity to Lane Cove River, Shrimptons Creek, Water Dragon Creek, Peppermint Creek and their associated tributaries. Previously recorded sites of this type have been recorded in the general vicinity of the study area.

Several soil landscapes found within the study area are generally not conducive to the survivability of archaeological deposit in open contexts, being prone to erosion and deflation. Overall, disturbance levels across the study area appear to range between low, moderate and high and are associated with use of the study area corridor for water related utilities, road infrastructure and residential development. Slope gradients across the study area range from gentle and moderate to steep. Well-established native vegetation is present in the portions of the study area located at Lane Cove National Park, suggestive of potential soil stability in this area.

A favourable landscape assessment (waterways and ridgelines) and the presence of known Aboriginal archaeological sites within the local area therefore necessitated a visual inspection of the study area. Visual inspection aimed to identify Aboriginal objects, sites and areas of potential archaeological deposit.

2.6 Visual Inspection

The study area was inspected and assessed on 12-15th March 2025 by [REDACTED]. The visual inspection aimed to identify Aboriginal objects or sites and assess the potential of the archaeologically sensitive landforms identified within the study area to contain Aboriginal objects.

No Aboriginal objects or areas of archaeological potential were identified within the study area.

The majority of the study area was disturbed by existing infrastructure and traversed established residential areas. Much of the study area route follows existing infrastructure and sewer easements under sealed roadways, or within old Metropolitan Board of Water and Sewerage water reserves. In many cases the environment within the study area was modified with little to no intact original soil, these areas are not conducive to artefact survivability and do not display archaeological potential.

Inspection of the study area alignment commenced in the southern portion of the study area at the Sydney Water compound located at 51 Hermitage Road, West Ryde. This area was a level bitumen covered block with demountable offices, driveways, car parking spaces and some tree plantings. The study area extended north-east from this location as two separate arms up the moderate to steep slopes of Hermitage Road and Anzac Avenue. The soils in this section of the study area were modified, truncated or highly disturbed by existing infrastructure and roads.

The study area joined into one alignment at the high ridge crest of Blaxland Road, Denistone East and extended north-east across an existing grass covered water reserve. This area was disturbed by existing buried water infrastructure. A proposed compound location at a large recreational reserve known as Santa Rosa Park was inspected. This area contained a level playing field, landscaped ground and existing buried water infrastructure, with the western banks of Shrimptons Creek altered by drainage works and tree planting. No Aboriginal objects or areas of archaeological potential were identified within this portion of the study area.



Plate 1. View to northwest at existing Sydney Water compound, 51 Hermitage Road (southern end of study area).



Plate 2. View to northeast at Santa Rosa Park, Ryde. Levelled and down cut sports field. Planted trees and Shrimptons Creek at right.

The inspection of the study area continued northwest, traversing the existing road corridors of Bridge Road, Abuklea Road, Balaclava Road, Agincourt Road, Dayman Place and continued along Vimiera Road before intersecting the M2 Motorway. This portion of the study area alignment displayed high levels of disturbance from existing infrastructure.

A proposed compound location on the eastern side of Abuklea Road opposite the Woorang Street intersection was inspected; this proposed compound was located on a grassed covered drainage channel with existing buried water related infrastructure present. The proposed compound location at Marsfield Park on the eastern side of Vimiera Road was inspected; this area consisted of a levelled sports field.

Two proposed compound locations on the eastern and western sides of the cul-de-sac at the northern end of Vimiera Road were also inspected. The western proposed compound area was located on a levelled and landscaped block utilised for horses and the eastern proposed compound area was located on a cleared crest landform adjacent to a unit complex. Both areas were considered to display low archaeological potential due to disturbance and previous land clearing. No Aboriginal objects or areas of archaeological potential were identified within these proposed compound areas or within this portion of the study area alignment.



Plate 3. View to northwest at Abuklea Road. Intersection with Balaclava Road in background.



Plate 4. View to southwest at proposed compound location on western side of cul-de-sac at northern end of Vimiera Road. Drainage works for M2 at right.

The inspection continued north of the M2 Motorway through bushland in the Lane Cove National Park and across the Lane Cove River. The portions of this bushland located within the study area corridor were inspected for rock outcrops. It is anticipated that potentially intact soils and sandstone outcrops at this location will be avoided through use of trenchless construction methods. No Aboriginal archaeological sites were identified within the portion of the Lane Cove National Park bushland located in the current study area.

Inspection of the study area continued north along the existing roadway of Kissing Point Road, and included a proposed compound located at the southern end of Kissing Point Road. This proposed compound area showed evidence of ground surface disturbance from an existing vehicle carriageway. Two other proposed compound locations on the western side of Kissing Point Road were inspected, these included a cleared block and Auluba Reserve which was identified as a modified, levelled sports field. Large erosion scours showed good exposure, no Aboriginal objects were identified on exposures. No Aboriginal archaeological sites or areas of archaeological potential were identified at the proposed compound areas.



Plate 5. View to north. Proposed compound area at southern end of Kissing Point Road, South Turramurra. To left of road is minor tributary creek gully.



Plate 6. View to north-west at Auluba Reserve, South Turramurra. Proposed compound area. Level playing field used for baseball.

The inspection continued north along Kissing Point Road with a separate arm branching northwest along Gipps Close. A proposed compound location at the end of Gipps Close in the Twin Creeks Reserve bushland was inspected for possible rock outcrops; no Aboriginal objects or areas of archaeological potential were identified.

The study area alignment continued northwest, following in the roadways of Monteith Street, Montrose Street, Rothwell Road, Mitchell Crescent and Roland Avenue. This northern portion of the study area alignment followed steep side slopes off crests into gullies formed by the headwaters of Water Dragon Creek and Peppermint Creek, ending at a small sewer reserve. These areas comprised existing roadways with no Aboriginal archaeological sites identified. Inspection of the proposed compound location at Mitchell Crescent Reserve at the northern end of Twin Creeks Reserve identified disturbance from ground levelling and landscaping.



Plate 7. View to southwest at Mitchell Crescent Reserve. Proposed compound area. This area has been levelled with a playground present. Landscaped mounds along southern and northern edges.



Plate 8. View to northwest at Rothwell Road, north of Mitchell Crescent. Study area alignment runs down into a gully formed by headwaters of Peppermint Creek, following the left side of the fork in the road.

The study area alignment contained several additional short sections running perpendicular from the main study area alignment, proposed as potential areas for future service locations. These sections were all located within existing road corridors and had been subject to extensive disturbance. No Aboriginal objects or areas of archaeological potential identified in these areas.

Several isolated proposed compound areas were inspected. These proposed compound areas consisted of existing Sydney Water compounds, car parking areas, cleared vacant blocks, public parks and recreation areas. Most proposed compound locations were in proximity to the main study area alignment with two located further to the north at Wahroonga. Inspection of these areas identified disturbed soils from existing infrastructure, landscaping, land clearing and buried water infrastructure, as well as constructed sports and recreational areas including tennis courts and netball courts. No Aboriginal objects, Aboriginal archaeological sites or areas of archaeological potential were identified at the proposed compound locations.



Plate 9. View to south-west at Canoon Road Recreation Area. Proposed compound area. Netball courts constructed by levelling and downcutting on a ridge crest.



Plate 10. View to west at Neringah Avenue South, Wahroonga. Proposed compound area. Ground surface covered in demolition rubble.

In summary, the visual inspection did not identify any Aboriginal objects or archaeological sites within the study area. It is anticipated that there will not be any impacts to potentially intact soils and sandstone outcrops within the Lane Cove National Park portion of the study area due to the use of trenchless construction method at this location.

The majority of the study area was found to have been extensively disturbed by contemporary land use activities and existing road and water-related infrastructure.

3 Statutory Requirements

The *National Parks and Wildlife Act 1974* (NPW Act) is the primary statutory control dealing with Aboriginal heritage in New South Wales. Items of Aboriginal heritage (Aboriginal objects) or Aboriginal places (declared under section 84) are protected and regulated under the NPW Act.

Under the Act, an “Aboriginal object” is defined as “any deposit, object or material evidence (not being a handicraft made for sale) relating to the Aboriginal habitation of the area that comprises New South Wales, being habitation before or concurrent with (or both) the occupation of that area by persons of non-Aboriginal extraction, and includes Aboriginal remains”. As such, Aboriginal objects are confined to physical evidence and are commonly referred to as Aboriginal sites.

Aboriginal objects are protected under section 86 of the Act. It is an offence to harm or desecrate an Aboriginal object, either knowingly [section 86 (1)] or unknowingly [section 86 (2)]. An Aboriginal heritage impact permit (AHIP) issued under section 90 (1) of the Act is required for any activity which will harm an Aboriginal object or declared Aboriginal place.

Section 87 (2) of the Act provides a defence against prosecution under section 86 (2) if “the defendant exercised due diligence to determine whether the act or omission constituting the alleged offence would harm an Aboriginal object and reasonably determined that no Aboriginal object would be harmed”. This defence appears to specifically relate to Aboriginal objects.

Under section 87 (1) it is also a defence if “(a) the harm or desecration concerned was authorised by an Aboriginal heritage impact permit, and (b) the conditions to which that Aboriginal heritage impact permit was subject were not contravened”.

Section 89A of the Act relates to the notification of sites of Aboriginal objects, under which it is an offence if the location of an Aboriginal object is not notified to the Director-General in the prescribed manner within a reasonable time.

Under section 90 (1) of the Act “the Director-General may issue an Aboriginal heritage impact permit”. The regulation of Aboriginal heritage impact permits is provided in Part 6 Division 2 of the Act, including regulations relating to consultation (section 90N).

4 Summary and Recommendations

The study area was assessed under the *Due Diligence Code of Practice for the Protection of Aboriginal Objects in New South Wales* (Heritage NSW, 2010). No Aboriginal objects, archaeological sites or areas of archaeological potential were identified within the study area as a result of the due diligence assessment.

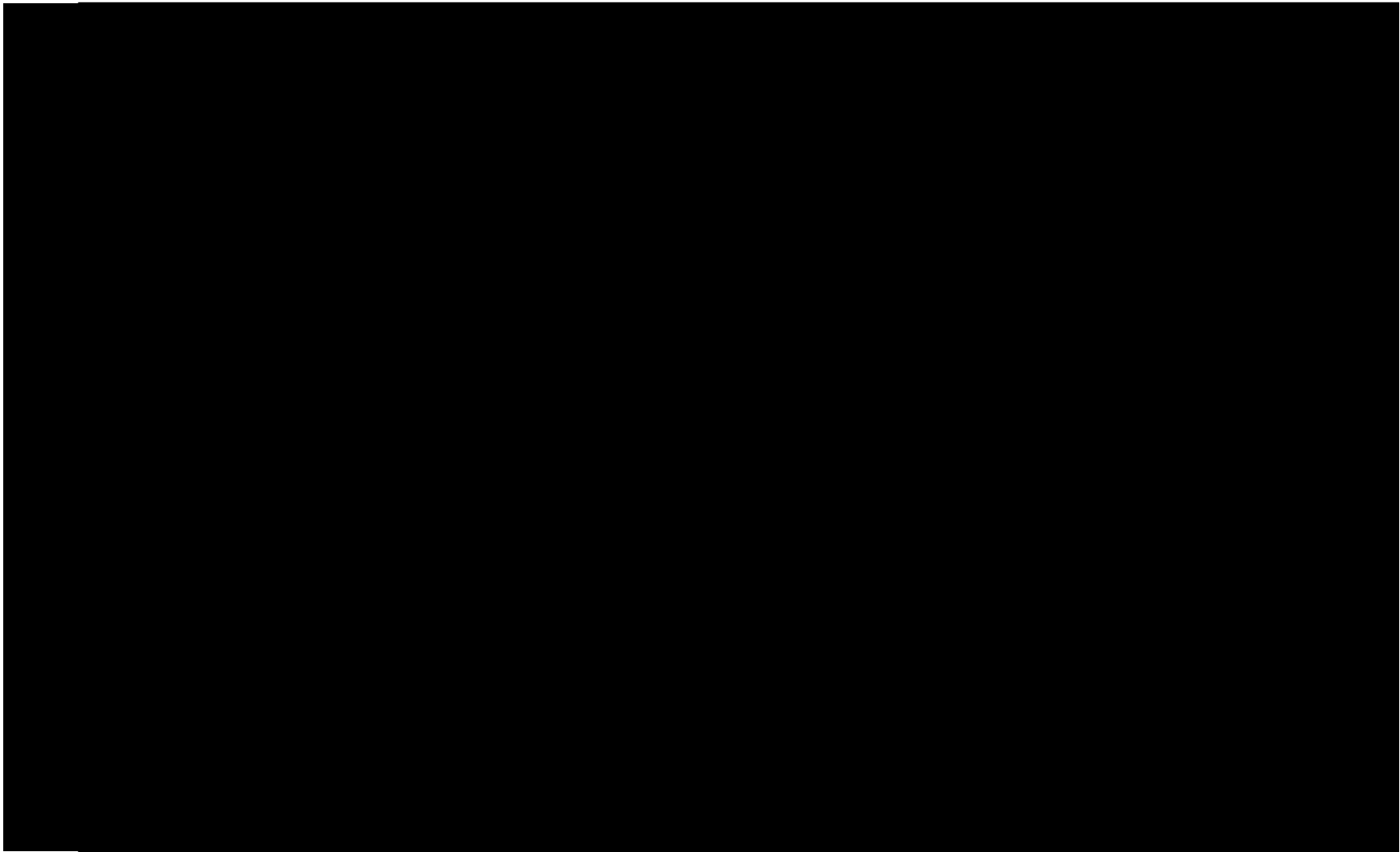
Landform and disturbance assessment found that contemporary land use has led to high levels of disturbance due to road construction, existing water-related infrastructure, landscaping and installation of utilities. The existing road corridor is a modified environment. The more intact, archaeologically sensitive portion of the study area within Lane Cove National Park will not be impacted due to the proposed use of trenchless construction at this location.

Based on the results of this assessment there are no archaeological constraints to the proposal provided that trenchless construction methods are undertaken through the portion of the study area within Lane Cove National Park. According to the Heritage NSW *Due Diligence Code of Practice for the Protection of Aboriginal Objects in New South Wales* the proposed works can proceed with caution.

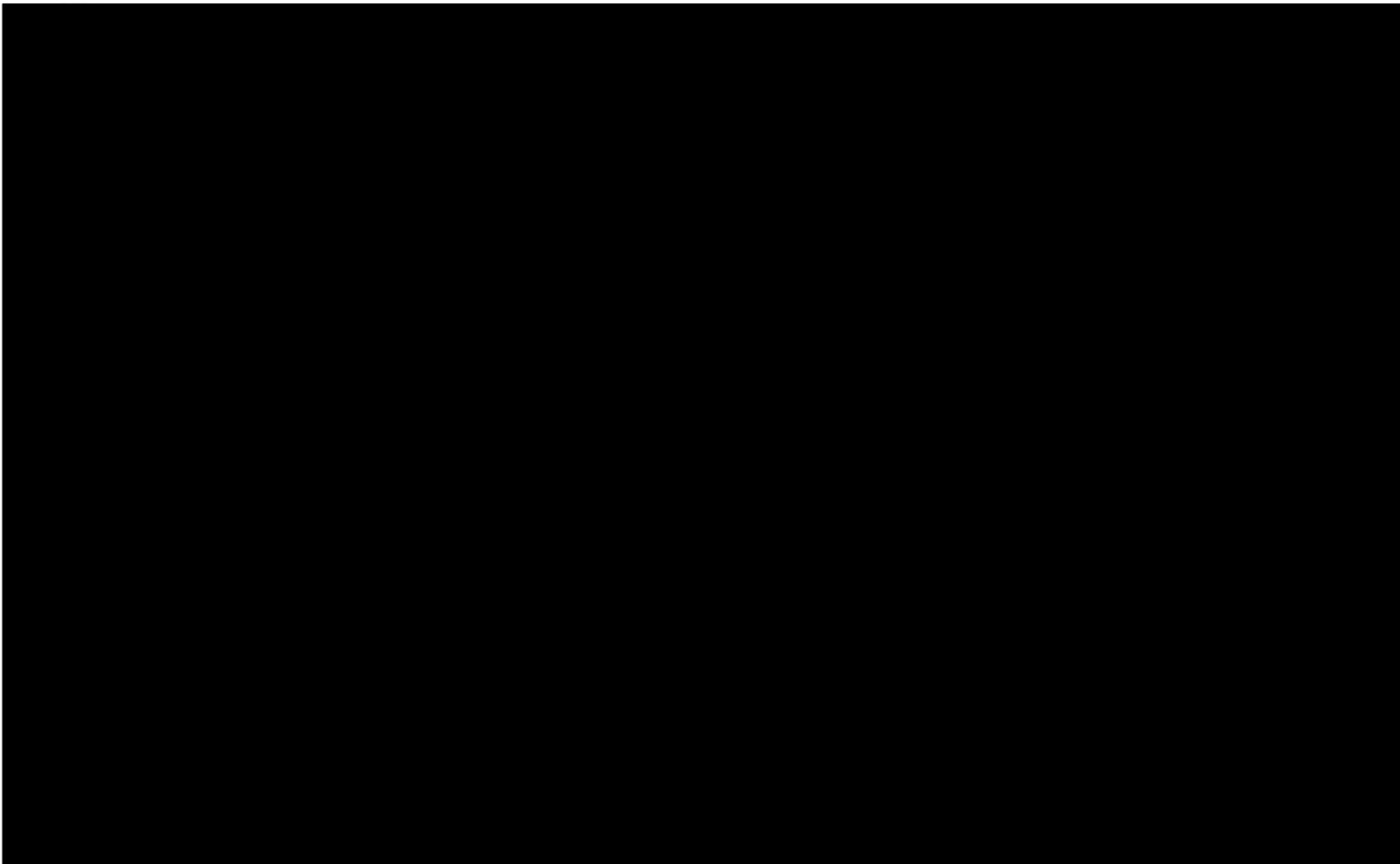
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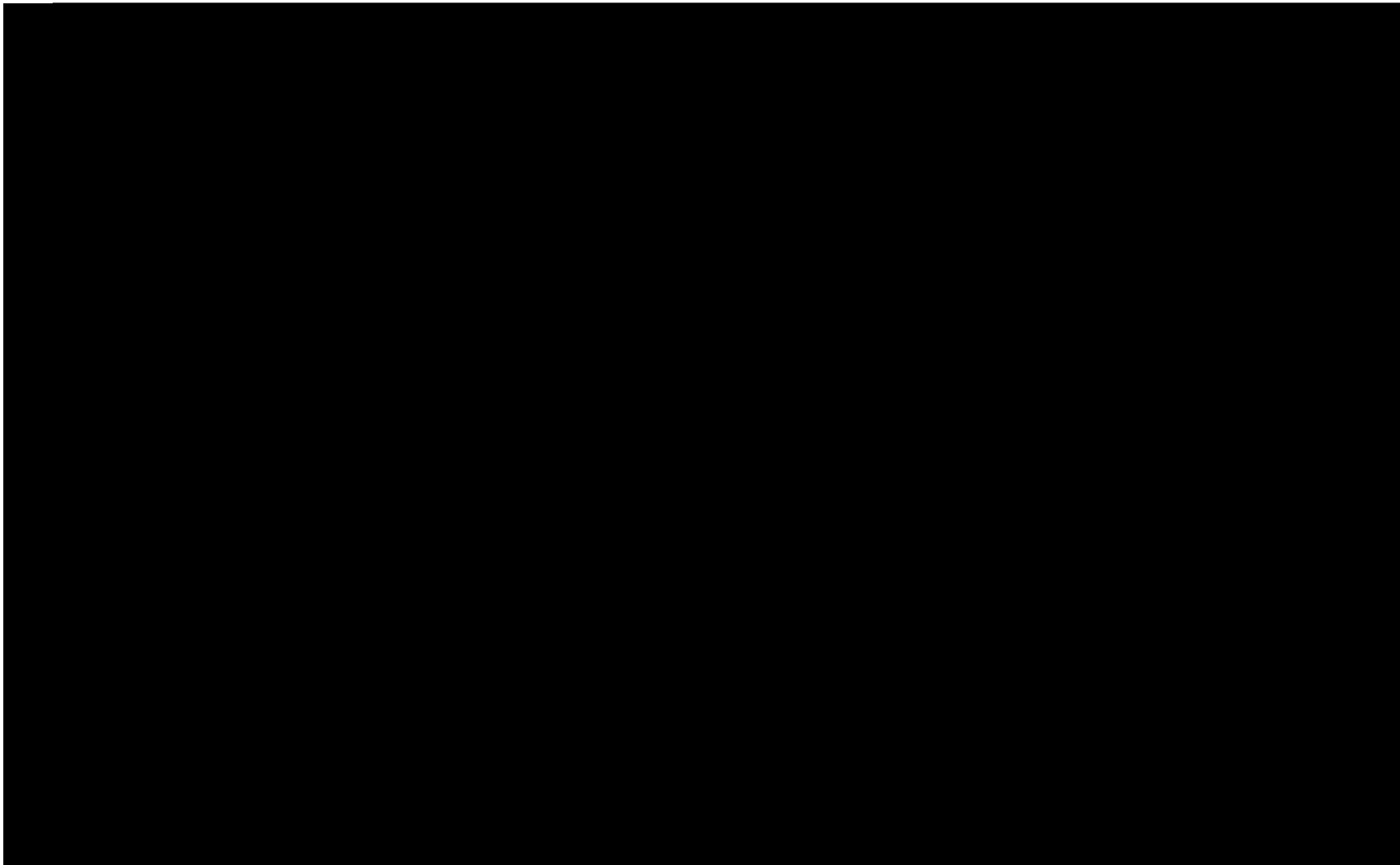
Appendix A –AHIMS Extensive Search Results



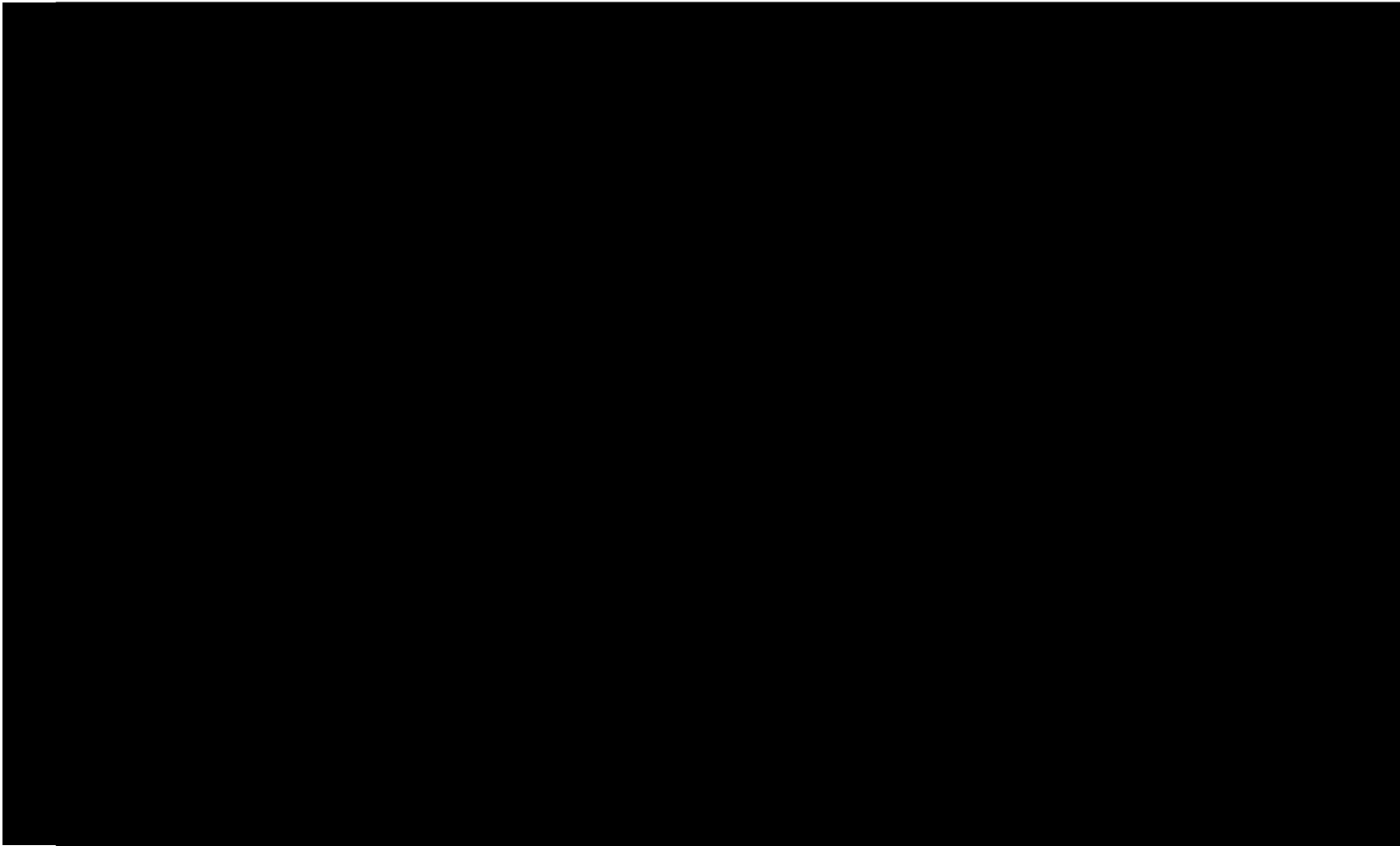
Report generated by AHIMS Web Service on 04/04/2025 for Matthew Kelleher for the following area at Datum :GDA, Zone : 56, Eastings : 322683.0 - 327522.0, Northings : 6256619.0 - 6272696.0 with a Buffer of 0 meters. Number of Aboriginal sites and Aboriginal objects found is 74
This information is not guaranteed to be free from error omission. Heritage NSW and its employees disclaim liability for any act done or omission made on the information and consequences of such acts or omission.



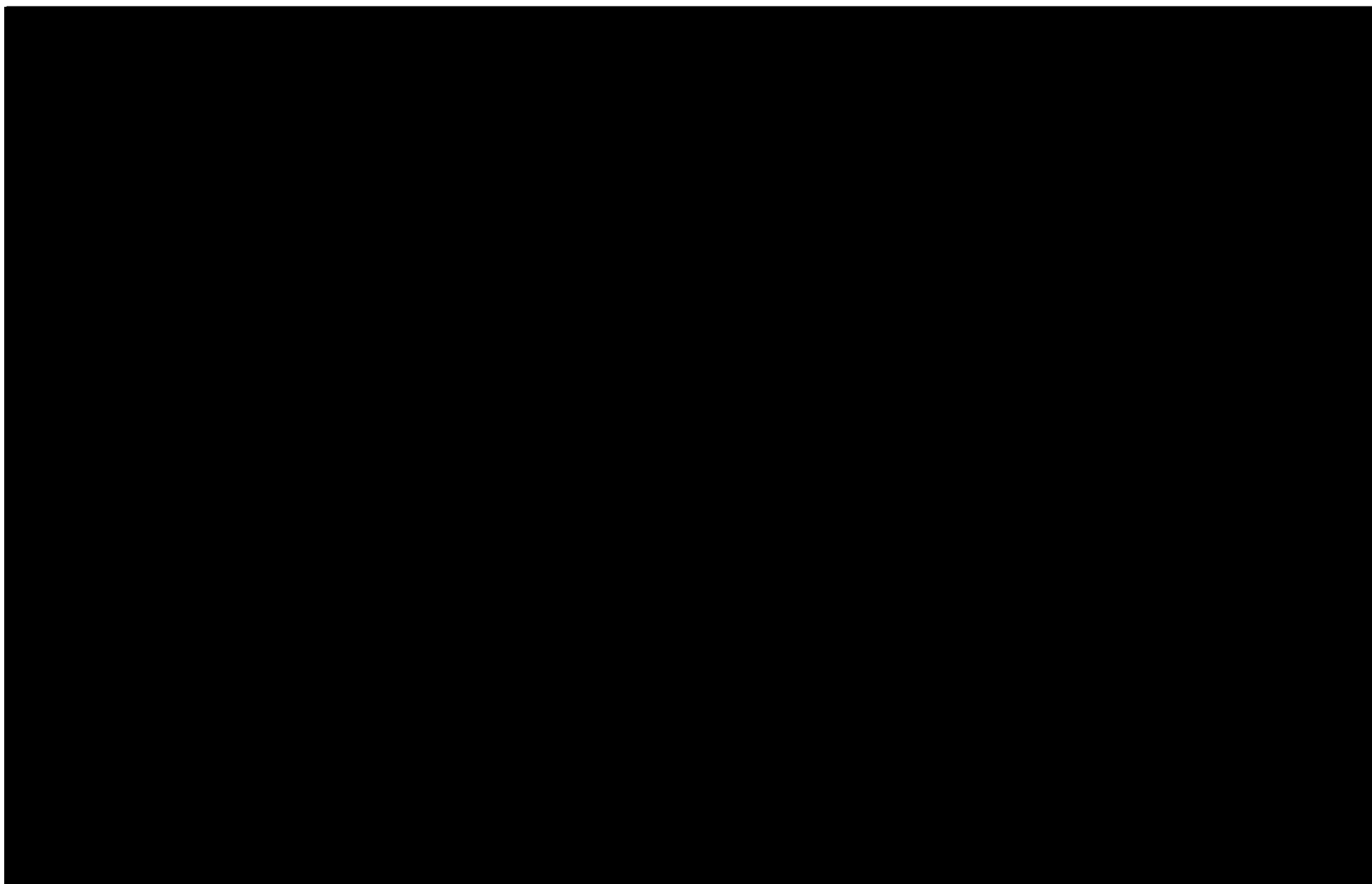
Report generated by AHIMS Web Service on 04/04/2025 for Matthew Kelleher for the following area at Datum :GDA, Zone : 56, Eastings : 322683.0 - 327522.0, Northings : 6256619.0 - 6272696.0 with a Buffer of 0 meters.. Number of Aboriginal sites and Aboriginal objects found is 74
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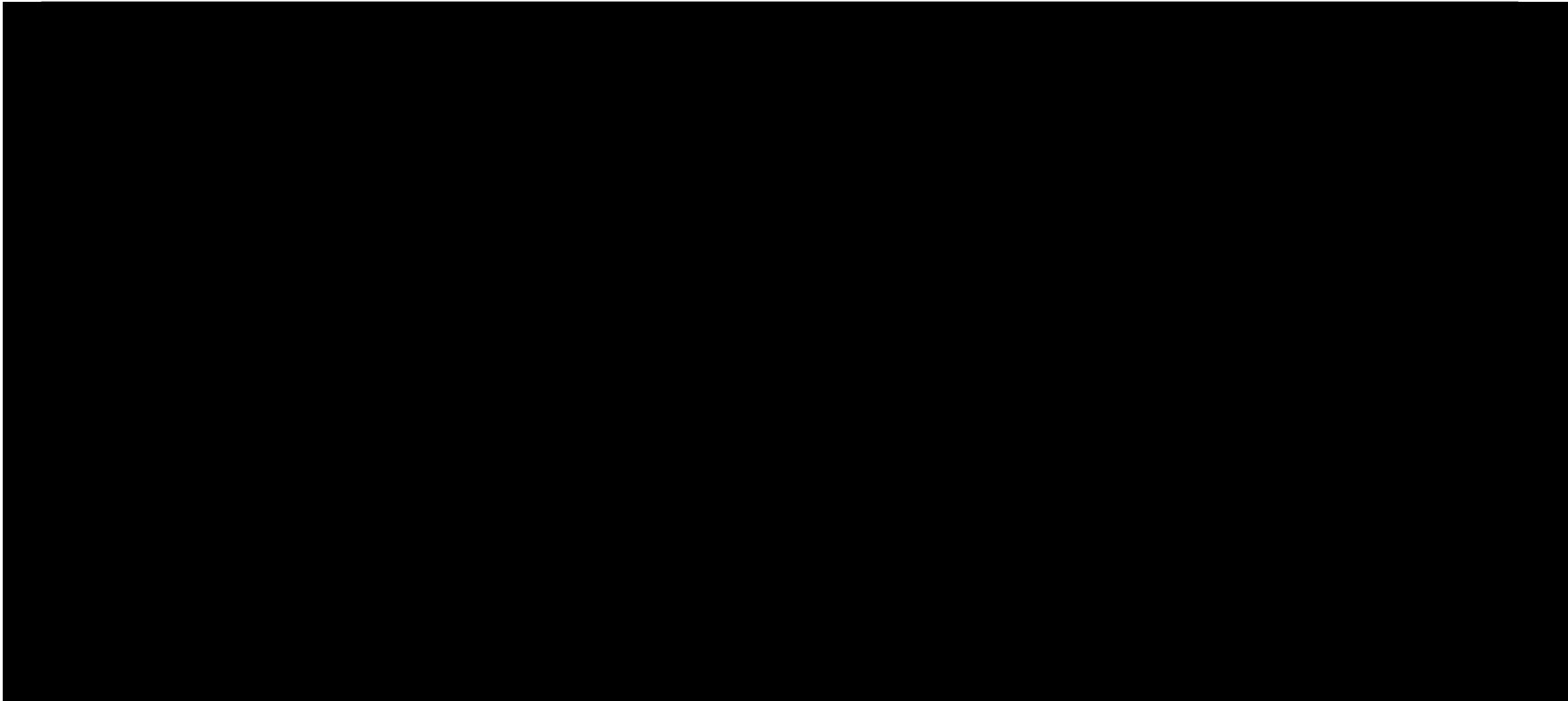
Report generated by AHIMS Web Service on 04/04/2025 for Matthew Kelleher for the following area at Datum :GDA, Zone : 56, Eastings : 322683.0 - 327522.0, Northings : 6256619.0 - 6272696.0 with a Buffer of 0 meters.. Number of Aboriginal sites and Aboriginal objects found is 74
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** Site Status Valid - The site has been recorded and accepted onto the system as valid. Destroyed - The site has been completely impacted or harmed usually as consequence of permit activity but sometimes also after natural events. There is nothing left of the site on the ground but proponents should proceed with caution. Partially Destroyed - The site has been only partially impacted or harmed usually as consequence of permit activity but sometimes also after natural events. There might be parts or sections of the original site still present on the ground. Not a site - The site has been originally entered and accepted onto AHIMS as a valid site but after further investigations it was decided it is NOT an aboriginal site. Impact of this type of site does not require permit but Heritage NSW should be notified.

Report generated by AHIMS Web Service on 04/04/2025 for Matthew Kelleher for the following area at Datum :GDA, Zone : 56, Eastings : 322683.0 - 327522.0, Northings : 6256619.0 - 6272696.0 with a Buffer of 0 meters.. Number of Aboriginal sites and Aboriginal objects found is 74

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