

# Kings Hill Water and Wastewater Infrastructure

PUBLIC VERSION

Aboriginal Cultural Heritage  
Assessment Report

Report to Arcadis  
October 2019



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## EXECUTIVE SUMMARY

Kings Hill Development Pty Ltd (KHD) is seeking approval for the development of a water and wastewater supply pipeline and a wastewater pumping station (the Proposal) to support the development of the Kings Hill Urban Release Area (Kings Hill URA).

The Kings Hill URA was rezoned in 2010 to support a mix of general residential, mixed use and local centre land uses. It is expected to comprise in excess of 3,500 residential dwellings developed over a twenty-five-year period. Key development features of the Kings Hill URA will also include the provision of utilities and supporting infrastructure, including a Pacific Highway grade separated interchange, stormwater channel and water and wastewater infrastructure. There is currently no water and wastewater infrastructure present with the capacity to service Kings Hill URA.

No previously registered Aboriginal sites were present in the Proposal site based on the AHIMS search. Archaeological survey was conducted over one and a half days (30 July to 31 July 2019). The Proposal site was covered on foot and the corridor was mainly accessible, with the exception of a few areas which were highly vegetated and/or too steep.

Two newly recorded Aboriginal sites were located during the survey and have been registered with the Aboriginal Heritage Information Management System: AHIMS ID 38-4-2023 - KHW01 Artefact Scatter and PAD; and AHIMS ID 38-4-2025 - KHW02 PAD. Outside of these Aboriginal sites, no further Aboriginal objects were identified within the Proposal site.

## Recommendations

With respect to AHIMS ID 38-4-2023 - KHW01 Artefact Scatter and PAD:

- If works do not impact KHW01 AHIMS ID 38-4-2023 - Artefact Scatter and PAD, prior to commencement of construction in the vicinity of AHIMS ID 38-4-2023 - KHW01 Artefact Scatter and PAD the site boundaries are to be delineated by temporary fencing or other visual markers. Such protection should involve minimal disturbance to the soils. A heritage consultant is to be on site to delineate where the fencing is to be installed around the artefacts. If necessary, geofabric is to be laid down to protect erosion of soil around the artefacts and its installation is to be supervised by a heritage consultant. Once construction has ceased and the work area has been remediated, the heritage consultant is to supervise the deconstruction of the temporary fencing and the removal of geofabric, as necessary.
- If impact to AHIMS ID 38-4-2023 - KHW01 cannot be avoided, a program of archaeological test excavation under the *Code of Practice* is to be undertaken to determine if there are subsurface artefacts present and to determine their extent. An AHIP may be required for impact to, or salvage of, subsurface artefacts prior to commencement of pipeline installation works. If surface artefacts are at risk of impact, then these may also require surface salvage under an AHIP. Test excavation and AHIP works would need to be completed prior to the commencement of earthmoving works in the vicinity of AHIMS ID 38-4-2023 - KHW01.

With respect to AHIMS ID 38-4-2025 - KHW02 PAD:

- If possible, AHIMS ID 38-4-2025 - KHW02 PAD will be avoided by the Proposed Pipeline Alignment. Fencing or other visual markers should be installed to clearly demarcate the works area and ensure there are no inadvertent impacts.
- If impact to AHIMS ID 38-4-2025 - KHW02 PAD cannot be avoided, a visual inspection is to determine if there are localised areas within the Proposed Pipeline Alignment which require testing, if test areas are identified a program of archaeological test excavation under the Code of Practice is to be undertaken to determine if there are subsurface artefacts present and to determine their extent. An AHIP may be required for impact to, or salvage of, subsurface artefacts prior to commencement of pipeline installation works. If surface artefacts are at risk of impact, then these may also require surface salvage under an AHIP. Test excavation and AHIP works would need to be completed prior to the commencement of earthmoving works in the vicinity of AHIMS ID 38-4-2025 - KHW02 PAD.
- A portion of AHIMS ID 38-4-2025 - KHW02 PAD is in close proximity to a historic archaeological site Kings House, Winery and Barn which is part of the Irrawang Pottery Site listed on the Port Stephens Local Environmental Plan and on the Hunter Water s170 register (LEP A4 / ID127). Due to the overlap between AHIMS ID 38-4-2025 - KHW02 PAD and potentially significant historic archaeological remains, the methodology for archaeological test excavation will need to take into consideration the protection of relics under the *Heritage Act 1977* and the conditions of any s139 exception and/or s140 permit issued for investigation and/or impact to significant historic archaeological remains. It is likely that appropriate historic heritage approval will need to be in place prior to the commencement of the Aboriginal heritage investigation within AHIMS ID 38-4-2025 - KHW02 PAD.

General mitigation and management strategies to apply to the whole Proposal site:

- No Aboriginal objects can be impacted without an AHIP
- Works within the Proposal site outside the delineated boundaries of AHIMS ID 38-4-2023 - KHW01 Artefact Scatter and PAD and AHIMS ID 38-4-2025 - KHW02 PAD may proceed with caution and with no recommendations for further archaeological investigation or permits under the *National Parks and Wildlife Act 1974*
- A heritage induction is to be provided to all onsite personnel so that they are aware of their obligations under the NSW *National Parks and Wildlife Act 1974*. The heritage induction is to include procedures for unexpected Aboriginal finds.
- The boundaries of the Proposal site should be made clear to all on-site personnel so that all works are undertaken within its boundaries. If there is any ambiguity of the Proposal site boundaries due to landform, vegetation or other factors the Proposal site boundaries are to be marked with temporary fencing or other visual markers to guide on-site personnel.
- Site cards for the newly recorded sites will be submitted to AHIMS and attached with the final version of this report.

- A copy of this final report will be provided to all registered Aboriginal stakeholder groups.
- If the design of the Proposal is changed and areas not surveyed are to be impacted, or other Aboriginal sites not identified are to be impacted, further archaeological assessment would be required.



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## 1.0 INTRODUCTION AND BACKGROUND

### 1.1 Project Background

Kings Hill Development Pty Ltd (KHD) is seeking approval for the development of a water and wastewater supply pipeline and a wastewater pumping station (the Proposal) to support the development of the Kings Hill Urban Release Area (Kings Hill URA).

The Kings Hill URA was rezoned in 2010 to support a mix of general residential, mixed use and local centre land uses. It is expected to comprise in excess of 3,500 residential dwellings developed over a twenty-five-year period. Key development features of the Kings Hill URA will also include the provision of utilities and supporting infrastructure, including a Pacific Highway grade separated interchange, stormwater channel and water and wastewater infrastructure. There is currently no water and wastewater infrastructure present with the capacity to service Kings Hill URA.

### 1.2 Key Terms

The key terms are outlined in Table 1

**Table 1: Terminology**

Term	Definition
Kings Hill URA	Kings Hill Urban Release Area
Proposal	Water and wastewater supply pipeline and a wastewater pumping station to support the Kings Hill URA
Proposal site	The Proposal stretches about 6.7 kilometres between Raymond Terrace in the south and Kings Hill Urban Residential Area in the north. The Proposal Site encompasses the total construction footprint which includes the footprints of the wastewater pumping station, water pipeline and wastewater pipeline, in addition to buffer areas and temporary construction compounds.
Proposed Pipeline Alignment	This is the proposed route of the pipeline (including water and wastewater) it will typically be 1 m in width.

### 1.3 Proposal Site

The Proposal is located within Port Stephens Local Government Area (LGA), approximately 4 kilometres north of Raymond Terrace, 25 kilometres north of Newcastle and 135 kilometres north of Sydney. The Proposal stretches approximately 6.7 kilometres (the Proposal Site) between Raymond Terrace in the south, and Kings Hill URA in the north. The location of the Proposal site is shown in Figure 1.



The Proposal Site includes the footprints of the wastewater pumping station, water pipeline and wastewater pipeline, in addition to buffer areas and temporary construction compounds.

The Proposed Pipeline Alignment includes the proposed route for the water and wastewater pipelines.

## 1.4 Proposal Description

This study forms part of the investigations needed for the wider Environmental Impact Statement (EIS) for the project.

An EIS is to be prepared for the Proposal seeking approval as Designated Development under Part 4 of the *Environmental Planning and Assessment 1979* (EP&A Act).

The key components of the Proposal would include:

- Installation of a water and wastewater pipelines, approximately 6.7km and 4.2km in length, respectively. These pipelines would be located within a joint corridor. This would require vegetation clearing, trenching and under boring for the pipes to be laid.
- Construction of a wastewater pumping station (WWPS) within the eastern catchment of Kings Hill URA, including installation of electrical components, mechanical installation of pumps, valves and fittings, and construction of adjacent hardstand areas.
- Restoration of area upon completion of pipe laying, including backfilling the trench and restoring all surfaces to their pre-construction condition where practicable.
- Connection of the proposed infrastructure to existing Hunter Water services.

The Key components of the Proposal which relate to this heritage assessment are:

- Earthworks - Trenching, under boring, back filling and restoration works, as well as construction of the Wastewater Pumping Station (WWPS).
- Vegetation Clearance.

The water pipeline would connect to existing Hunter Water infrastructure in the south and the Kings Hill URA in the north, while the wastewater pipeline would connect to the proposed WWPS in Kings Hill URA and existing Hunter Water infrastructure in the south.

## 1.5 Objectives of the study

The objectives of the study are to comply with the Office of Environment and Heritage (OEH) regulations, including the *Code of Practice for Archaeological Investigation of Aboriginal Objects in New South Wales 2010* ('the Code of Practice'), and the *Aboriginal Cultural Heritage Consultation Requirements for Proponents 2010*. The main objectives of this study include:

- A description of the Proposal and the extent of the Proposal site.
- A description of Aboriginal community involvement and Aboriginal consultation.
- A significance assessment of the study area including cultural and archaeological values.
- A description of statutory requirements for the protection of Aboriginal heritage.
- An impact assessment for the recorded Aboriginal sites and areas of archaeological potential.

- Provision of recommendations for management and mitigation measures for Aboriginal sites and areas of archaeological potential.

## 1.6 Development context

The proposed infrastructure will support the wider Kings Hill URA. It will provide water and wastewater to the residential dwellings to be developed over a twenty-five-year period. The proposal is crucial to servicing the needs of residents in the Kings Hill URA.

## 1.7 Investigator and contributions

Tessa Boer-Mah, Senior Heritage Consultant and Jennifer Norfolk, Heritage Consultant at Artefact Heritage. Tessa Boer-Mah wrote this report and her qualifications and experience satisfy the standards for practitioners as stipulated in the Code of Practice.

## 2.0 ABORIGINAL COMMUNITY INVOLVEMENT

### 2.1 Previous Aboriginal Consultation

This Proposal is to support the Kings Hill Urban Release Area. Aboriginal consultation for the parcels of land which make up the Kings Hill URA has occurred during a number of previous studies which have covered the Kings Hill area. Worimi Local Aboriginal Land Council was involved in the assessment of the Kings Hill area in 2003 and 2019 (Myall Coast Archaeological Services, 2003; Myall Coast Archaeological Services, 2019).

### 2.2 Current Aboriginal Consultation

#### 2.2.1 Survey participation

The following Registered Aboriginal Party (RAP) representatives took part in the survey on 30 July 2019:

- Brendan Lilley (Worimi Local Aboriginal Land Council),
- Tamara Towers (Worimi Aboriginal Cultural Services),
- Luke Knight (Worimi Traditional Owners Indigenous Corporation),
- Chris Collison (Nur-Run-Gee) and
- Rebecca Young (Mur-Roo-Ma).

For the survey on 31 July 2019 RAP representation was by:

- Brendan Lilley (Worimi Local Aboriginal Land Council),
- Chris Collison (Nur-Run-Gee) and
- Rebecca Young (Mur-Roo-Ma).

#### 2.2.2 Stakeholder identification and consultation

In accordance with the OEH *Aboriginal Heritage Consultation Requirements for Proponents 2010*, an advertisement was placed and invitations for expressions of interest were sent out. As a result, 13 Aboriginal stakeholders were listed as Registered Aboriginal Parties (Table 2) for the Proposal, of which one requested that their details are not shared.



**Table 2: Registered Aboriginal Parties for the Project**

Organisation	Representative's Name
Nur-Run-Gee Pty Ltd	Leonard Anderson
Didge Ngunawal Clan	Paul Boyd and Lilly Carroll
Undisclosed	Undisclosed
Mur-Roo-Ma Inc	Anthony Anderson
AHCS	Amanda Hickey
A1 Indigenous Services	Carolyn Hickey
Widescope Indigenous Group	Steven Hickey
Worimi Traditional Owners Indigenous Corporation	Candy Lee Towers
Murra Bidgee Mullangari Aboriginal Corporation	Ryan Johnson & Darleen Johnson - Carroll
Muragadi	Anthony Johnson
Merrigarn	Shaun Carroll
Worimi Aboriginal Cultural Services	Tamara Towers
Karuah Indigenous Corporation	David Feeney
Worimi Local Aboriginal Land Council	CEO

Consultation for the Proposal so far has included, with reference to the specific steps of the OEH consultation requirements:

- Step 4.1.2 – Letters to agencies seeking information on knowledge holders 13/6/2019 (consultation log in Appendix C)
- Step 4.1.3 – An advertisement published in the Port Stephens Examiner published 13 June 2019 (Appendix A)
- Step 4.1.3 – Compilation of a Registered Aboriginal Parties list (Table 2)
- Step 4.1.6 – letter advising OEH and Worimi Local Aboriginal Land Council of the RAP list 20 Aug 2019 (Appendix A)

Letters seeking feedback on the ACHAR were sent on 13 August 2019 and responses were received on or before 10 September 2019, responses are documented in the consultation log (Appendix C).

The draft report was sent out to the RAPs on 27 September 2019 with a 28 day review period provided to the RAPs. Three responses were received for the draft report and have been documented in Appendix B and included in the consultation log (Appendix C) and are outlined below.

Karuah Indigenous Corporation sent an email (12/10/2019) indicating they are satisfied with the draft report. A1 Indigenous Services send an email (13/10/2019) indicating that they supported the findings in the ACHAR and would like to be involved in future works. Mur-Roo-Ma sent a letter (23/10/2019) and indicated they agreed with the results of the survey, agreed with the mitigation options and would like to be consulted for any future works.

Information gained through the Aboriginal consultation has been reflected in the ACHAR and the Aboriginal heritage mitigation strategies have incorporated this consultation.

## 3.0 ABORIGINAL CULTURAL VALUES ASSESSMENT

### 3.1 Aboriginal cultural values

The opportunity for providing input into the cultural values of the Proposal site was provided in the invitation for feedback on the Aboriginal Cultural Heritage Assessment Report methodology, during the site survey, and during the ongoing consultation process. Overall, the Proposal site was regarded by the RAPs as having moderate-high cultural significance as part of the wider cultural landscape. The artefacts identified at AHIMS ID 38-4-2023 - KHW01 were regarded to have high significance in demonstrating Aboriginal occupation of the area.

## 4.0 ARCHAEOLOGICAL ASSESSMENT

### 4.1 Environmental information

#### 4.1.1 Landform units

The Proposal site is located on an undulating landscape which separates Grahamstown dam (built on former swamps) and the Williams River/Hunter River catchment. The southern portion of the Proposal site is highly urbanised, with the northern portion occupied by rural residential and rural land. Only first order creeks are present in parts of the Proposal site.

#### 4.1.2 Geology and Soils

The northern half of the Proposal site is underlain by sandstone, lithic sandstone, conglomerate, siltstone and basalt associated with the Permian Dalwood Group. The southern half of the Proposal site is underlain by conglomerate, sandstone and siltstone associated with the Maitland Group of the Upper Permian Branxton Formation (NSW Resources and Geoscience, 2019).

The Bolwarra Heights Soil Landscape covers the Proposal Site from Grahamstown Spillway south and is an erosional landscape. Typically topsoils comprise of an A<sub>1</sub> brownish gravelly loam topsoil to a depth of 25 cm, followed by an A<sub>2</sub> horizon of earthy gravelly sandy clay loam 15-20 cm thick. The transition to the B horizon is sharp and clear and comprises yellowish-brown pedal clay (NSW Soil Landscapes, 2019).

Soils from Grahamstown Spillway to the north of the Proposal site are part of the Wallalong Soil Landscape which is a residual landscape. Topsoils comprise an A<sub>1</sub> horizon of weakly pedal brown loam which is 5-20 cm in depth and is underlain by an A<sub>2</sub> horizon of hard setting bleached sandy clay loam 10-40 cm in thickness. The B horizon comprises a brown harsh sticky clay (NSW Soil Landscapes, 2019).

#### 4.1.3 Topography and Hydrology

The Proposal site is located on an undulating landscape as part of very low-lying river floodplain, ranging from 10 m to 20 m Australian Height Datum (AHD).

The southern portion of the Proposal site lies 700 metres east from the Hunter River, it also passes within 700 metres of a bend in the Williams River. The remaining 3.5 kms of the Proposal Site passes alongside the Grahamstown reservoir. The construction of Grahamstown dam began in 1955, storing water from the Williams River. It was built on land formerly known as the Grahamstown moors and was previously associated with the Campvale and Sandhole swamps.

#### 4.1.4 Natural Resources

Past vegetation is likely to have included Sydney Coastal Dry Sclerophyll Forest, Hunter Macleay Dry Sclerophyll Forest, Coastal Swamp Forest, and Coastal Floodplain Wetland. Each ecological zone hosts a different array of floral and faunal species, many of which would have been utilised by Aboriginal people according to seasonal availability, however the area has undergone significant changes since colonisation and is now considered to also bear non-native vegetation.

The native vegetation that would have grown in this area in the past would likely have included a combination of upper canopy trees: Sydney red gum, red bloodwood, spotted gum, grey gum, grey box, ironwood, Sydney blue gum, flooded gum, cabbage gum, swamp mahogany, swamp oak, cabbage palm, bottlebrush, and paperbark. Some common shrubs found in the area would have

included wattle, banksia, hakea, tea tree, geebung, grasstrees, forest oak, coffee bush, and mutton wood. Ground cover would have included yellow burr daisy, kidney weed, kangaroo grass, common rush, common reed, and spiny headed mat rush (Keith, 2006).

Many of these plants were used as food and medicine sources as well as for timber to produce tools, weapons and implements. Various other parts of the plants were used for weaving, making fibre cord, and resin for glue. Bark was a major resource, used for making canoes, shields, burial wrappings, containers, and for other purposes.

Past fauna is likely to have included kangaroos, possums, gliders, reptiles and birds and thus would have provided food resources for Aboriginal people.

#### 4.1.5 Land use history

The first land grants began from the 1820s, by 1837 Raymond Terrace was gazetted as a town and was subsequently developed. One of the free settlers, James King, was granted land in the north of the Proposal site near the Grahamstown spillway and set up a pottery works, as well as residence and winery. The southern third of the Proposal site is heavily urbanised, the middle third is characterised by larger residential blocks, some rural residential and the top third is paddocks and rural land.

## 4.2 Aboriginal material culture

Aboriginal people have occupied Australia for at least 50,000 years, with potential evidence for earlier occupation. Evidence for earlier occupation is limited by the lower preservation of archaeological deposits extending back in time but is also limited by the types of scientific dating techniques available.

The earliest confirmed dates in the Hunter region extend back to approximately 20,000 years before present (BP). A hearth feature was uncovered during a monitoring program at Glennies Creek, Central Lowlands, Hunter Valley and was radiocarbon dated to >20,200 years BP (Koettig, 1987). Excavations at Moffats Swamp Due in the Tomago Coastal Plain returned a date of 14,750±130 years BP (Baker, 1994). More locally, excavations at Black Hill in Woods Gully identified an intact stone-lined hearth which returned a radiocarbon date of 2130±70 years BP.

The majority of sites in the Lower Hunter region are considered to date to the Holocene period (last 10,000 years BP). Excavations throughout the east coast of Australia provide evidence for the appearance of backed artefacts during the Early Holocene period, with substantial proliferation of these artefacts from about 3000 years BP (Hiscock & Attenbrow, 2004).

Early records kept by the first Europeans in the area include written records of their observations of Aboriginal culture, including the use of tools, resources, particular places, and in some instances, even recorded indigenous language. These records have become important sources of information, although it must be remembered they also contain cultural and historical biases. These primary sources used in conjunction with archaeological sources and traditional knowledge can reveal much about Aboriginal society, history, lifestyle and use of resources.

Aboriginal people not only survived but thrived in the harsh and changing Australian environment for thousands of years. Some European observers, when recording the life of Aboriginal people, recognised that “The forest in its natural state, affords them everything necessary for their subsistence” (Dawson, 1831, p.203).

Many plants were used for food, some needing to be processed to remove toxins before being safe to eat. Plants were also used for medicinal and manufacturing purposes. One plant of particular value

was the grass-tree (*Xanthorrhoea australis*), as its flowering spike was used for spear making, its nectar as a sweet drink, its resin as an adhesive, and its dried stems as fire-sticks (Brayshaw, 1987).

Drinking water was obtained from rivers, creeks and lagoons. Early European observations include the skill of Aboriginal people finding fresh potable water even in times of drought. Pastoralist Robert Dawson observed Aboriginal people finding water by digging into the ground and then filtering it through the grass. He noted that “they would walk miles rather than drink bad water. Indeed, they were such excellent judges of water, that I always depended upon their selection when we encamped any distance from a river, and was never disappointed” (Dawson, 1831, p.150).

#### 4.2.1 Aboriginal histories of the locality

Aboriginal people traditionally lived in small family or clan groups that were associated with particular territories or places. The Worimi people (also spelt Warrimay) are the traditional custodians of the Port Stephens area, including the Proposal site located in Raymond Terrace. They are part of the Gathang language group (also consisting of Birrbay and Guringay). It is difficult to put precise borders on traditional lands, although it is generally accepted that the lands of the Worimi were bounded by the Hunter River to the south, the Manning River to the north and the Allyn and Patterson Rivers to the west. Significant social relationships existed between the Worimi and their neighbouring groups, including the Anaiwan, Dhungutti, Gumbayngirr, Awabakal, Wonnarua and Darkinyung (Worimi Conservation Lands, n.d.).

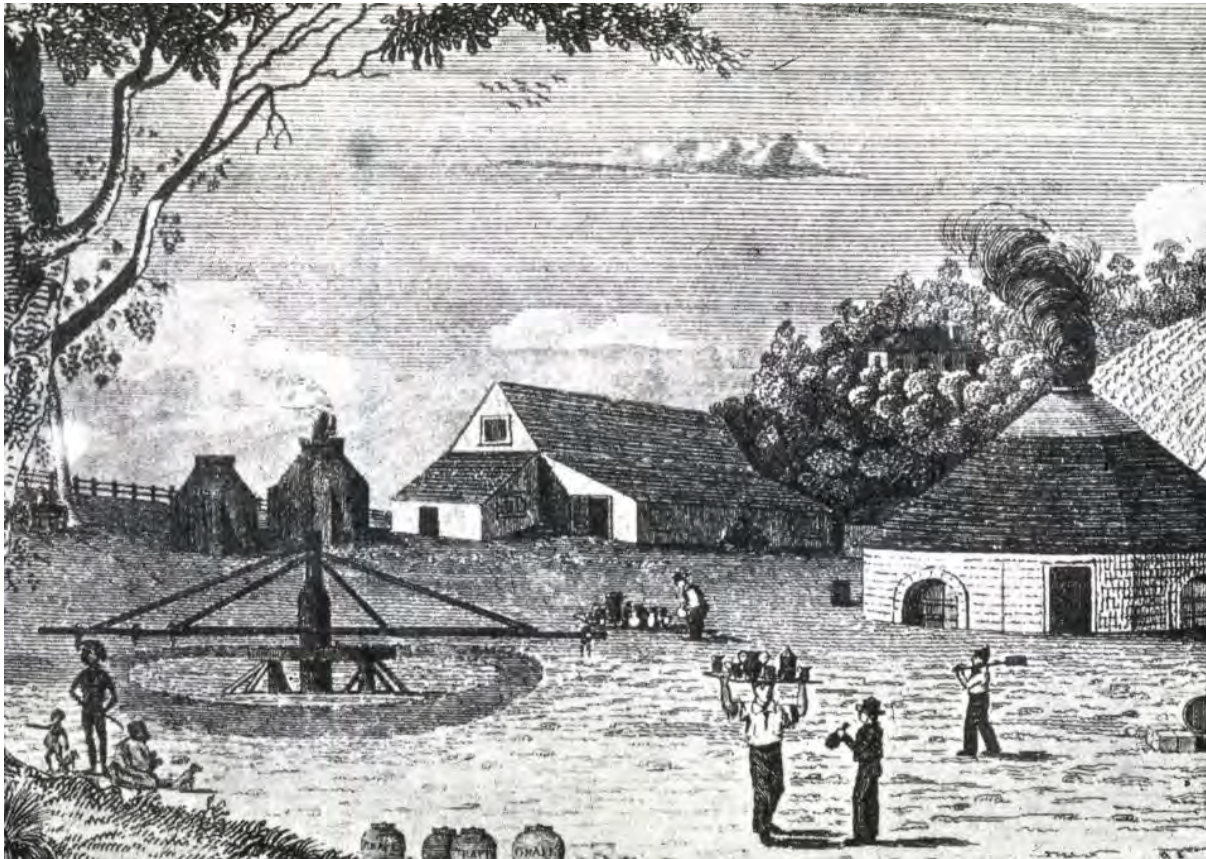
Worimi people had incredible knowledge of the seasonal availability of marine, estuarine and terrestrial resources in their local environment. Their varied diet would have included large animals such as kangaroos and emus, as well as smaller marsupials, and reptiles, birds, shellfish, crustaceans, fish, vegetables, fruit and insects (Aborigines of the Hunter Region, p. 22). The Worimi also used the resources available in their environment to manufacture all the things they needed for daily life. The wood and bark from trees, particular plants and grasses as well as stones, clay, shells, and parts of animals, were utilised in making shelter, fire, tools, weapons, implements, apparel and ceremonial equipment (Aborigines of the Hunter Region, p. 35).

Archaeological data gathered both locally and regionally suggests that Aboriginal people often occupied elevated areas that border wetlands. Artefacts are found across the landscape in varying densities, with higher densities expected in close proximity to water sources. The main limitations to the survivability of archaeological material are the organic nature of most of the material culture, as well as disturbances from land clearing, agriculture, and construction.

There are few historic records that directly relate to Aboriginal occupation of the Proposal site. There is, however, a connection between Aboriginal people and the Irrawang Pottery Site (the curtilage of which is in the Proposal site). An 1830s engraving of the Irrawang Pottery Site shows an Aboriginal family in the foreground and everyone pictured in the engraving appears to be quite accustomed to them being at the site (Plate 1).



**Plate 1: Irrawang Pottery Site c1830s engraving**



### 4.3 Previous archaeological work in the local area

This section summarises archaeological studies in the local area, the areas subject to these studies is referred to as 'investigation areas' and are separate from the Proposal site. No previous studies in the AHIMS database are registered for the current Proposal site.

**McCardle Cultural Heritage Pty Ltd (2018), Aboriginal Heritage Impact Assessment (Salvage) AHIP # 1132063, Heatherbrae, NSW.**

McCardle Cultural Heritage was commissioned by CABP Group Pty Ltd to undertake the required archaeological works for a 145 Lot Industrial Estates development at Heatherbrae, which is 2.25 kilometres south of the southern portion of the current Proposal site. The archaeological works were for the salvage of AHIMS sites #38-4-1937, #38-4-1936 and #38-4-1749. Worimi LALC, Mur-Roo-Ma Inc, Nur-Run Gee Pty Ltd and Karuah Indigenous Corporation were identified as traditional knowledge holders with an interest in that project, as per the Aboriginal Cultural Heritage Consultation Requirements for Proponents. AHIMS sites #38-4-1937 and #38-4-1936 which comprised isolated finds were not relocated.

A total of 100 salvage pits (1m x 1m) along a 50 metre x 2 metre transect were completed, with the objective of the salvage operations being to ensure the recovery and protection of cultural materials from AHIMS #38-4-1749, and to examine the evidence in terms of content, context, seasonality, travel, trade and antiquity. The salvaged material included 64 stone artefacts. The stone was primarily tuff (61%), silcrete (34%) and mudstone (3%) and one item of unidentified raw material. The assemblage included flakes, broken flakes and flake pieces, showing varying skills in knapping. Both

the artefacts and raw materials are consistent with sites both locally and regionally, with the potential age of the deposits determined as within the last 4,000 years BP. No evidence of use-wear was identified, and the location was identified as a flood prone area with no close proximity to fresh water sources. It was concluded that the investigation area was utilised for transitory hunting and gathering activities.

This report demonstrates that subsurface archaeological material is present, despite its surrounds having been subject to urban development. It is representative of Aboriginal occupation further away from the main water bodies in the area. The McCardle investigation area is 2 kilometres east of the Hunter River, the current Proposal Site is 0.7 kilometres from the Hunter and Williams Rivers.

**McCardle Cultural Heritage Pty Ltd (2003) Indigenous Cultural Heritage Assessment, Raymond Terrace, NSW.**

MCH was commissioned by Project Plan to prepare an Indigenous Cultural Heritage Assessment for a DA for a proposed residential subdivision along Mount Hall Road in Raymond Terrace (Lot 2 DP 8584853 and Lot 2 DP 787819). The investigation area comprised approximately 6.5 hectares of land in the eastern side of the Pacific Highway bypass and the southern side of Mount Hall Rd, which is approximately 1.2 kilometres east of the southern portion of the Proposal site.

An AHIMS search indicated 32 known sites within six kilometres of the investigation area, including middens, open campsites, isolated finds, shelters with deposits, burials, quarries, and bora ring/ceremonial grounds. Predictive modelling showed the investigation area was considered likely to contain evidence of past Aboriginal occupation, with the most likely site types being artefact scatters (open camps), isolated artefacts and possibly burials.

The survey area consisted of two distinct landforms, so these were divided into two investigation areas. The northern half (SU1) consisted of flat, previously cleared pasture, while the southern half (SU2) consisted of a gentle slope with a dense cover of tree, grass and leaf litter. A PAD (potential archaeological deposit) was identified in SU2, and an isolated artefact within disturbed shell was found just outside of the investigation area. The artefact was relatively dated to 4000-1000 years BP. The conclusion of the survey was that it was likely that further cultural materials would be present in the southern part of the investigation area. Mitigation and conservation measures for the development were provided, including test excavations in SU2.

This investigation area is less archaeologically sensitive than the current Proposal site due to its distance from major water bodies. The investigation area was 2 kilometres southeast of the Williams River, despite this evidence for Aboriginal occupation was still identified.

**Environmental Resources Management Australia (ERM) (2003) Indigenous Cultural Heritage Assessment, Electricity Supply Access Road, Tomago to Salt Ash, NSW.**

ERM was commissioned by Energy Australia to carry out an assessment of the proposed access road from Tomago to Salt Ash, which is approximately 5.8 kilometres south of the current Proposal Site. This study demonstrates Aboriginal occupation between the Raymond Terrace area and Fullerton Cove. The investigation included areas from the existing Tomago substation and extended 16km east through the Pleistocene dunes, the Inter-barrier depression, and the Holocene dunes, ending at Salt Ash. The project was carried out in consultation with the Worimi LALC.

An AHIMS search showed 91 previously recorded Aboriginal sites within the Tomaree Peninsula, including middens, open campsites, scarred trees, burials, shelters with deposits, art sites and isolated finds. The archaeological potential for the investigation area was predicted, with no sites expected to occur in the Inter-barrier depression, and a number of site types likely to occur throughout the Pleistocene and Holocene portions.

Methodology for the survey involved division of the land into seven separate units and surveying by foot in single transects. Six sites were recorded, all being open campsites containing microlith assemblages which can be relatively dated to 4000 – 1000BP. These were all situated either on the landward margin of the Outer Holocene dunes or the coastward margin of the Pleistocene dunes. These sites provide valuable information about past occupation and utilisation of the environment and its specific resources including diet, raw material transportation, stone tool manufacture, and movement of groups along the dune system. All sites were assessed as having moderate to high research potential.

Mitigation and conservation measures were provided, including test excavations for the Pleistocene portion, the implementation of fenced buffer zones and site stabilisation measures during construction. Sites 38-4-0664 and 38-4-0649 were identified as requiring heritage permits.

**Environmental Resources Management Australia (ERM) (2003) Indigenous Cultural Heritage Assessment, Electricity Supply Upgrade, Tomago to Tomaree, NSW.**

ERM was commissioned by Energy Australia to carry out an assessment of the proposed route of electricity supply upgrade from Tomago to Tomaree, which is approximately 5.8 kilometres south of the current Proposal Site. The investigation included areas throughout the Tomaree Peninsula and adjoining land to the west and extended 40km and ranging from 15metres to 50 metres wide. The investigation area is in the Newcastle Bight sand barrier system bounded by the Hunter River in the south and Port Stephens to the north. Both inner Pleistocene and outer Holocene dunes are incorporated in this system. The project was carried out in consultation with the Worimi LALC.

An AHIMS search showed 98 previously recorded Aboriginal sites within an 8km radius, including middens, open campsites, scarred trees, burials, shelters with deposits, art sites and isolated finds. The archaeological potential for the investigation area was predicted, with no sites expected to occur in the Inter-barrier depression, and a number of site types likely to occur throughout the Pleistocene and Holocene portions.

Methodology for the survey included division of the land into 7 survey units based on geomorphological landforms. Fifteen sites were found within the proposed construction area, with nine of these being new recordings. All new sites and those previously recorded were either on the landward margin of Holocene dunes or the coastward margin of Pleistocene dunes. No sites were found in the Inter-barrier depression. Open campsites and middens containing microlith stone tool assemblages can be relatively dated to 4000-1000 years BP. Previous clearing and bush fires resulted in no scarred or carved trees being recorded, and while it is considered likely to have once been a site for burials, none have been recorded throughout the dunes.

The sites represent spatially and temporally continued occupation along the coast. Past Aboriginal societies were living throughout the area and their activities are evident in the local and regional archaeological record. This study shows that Aboriginal occupation continued from the Raymond Terrace Area down to Fullerton Cove.

The study determined that the construction proposal had the potential to impact the research potential of these important archaeological sites, so mitigation and conservation measures were provided to minimise the impact. These recommendations included setting minimum distances from sites for construction, undertaking test excavations across a number of sites, the implementation of fenced buffer zones and site stabilisation measures during construction. Sites 38-4-0650, 38-4-0664 and 38-4-0649 would require an Aboriginal Heritage Impact Permit.



## 4.4 Aboriginal land use

The exact nature of Aboriginal land use patterns in the vicinity of the Proposal site before colonisation is unknown. Assumptions about land use patterns are made on the basis of archaeological information gained from the local area, from observations made by the Europeans after settlement of the area, and from information known about available natural resources.

It is likely that Aboriginal people moved across the landscape between resources as part of a mobile land-use strategy. It would also be likely that movement was related to socio/cultural factors such as gatherings and ceremonial obligations. Campsites would have provided temporary residences such as bark structures. It is difficult to ascertain whether a campsite existed at a given location, but correlations between stone artefact density and campsites are often assumed. While it would be likely that knapping would have occurred at a campsite, it would also be likely that knapping would have occurred during movement across the landscape, as tools were prepared or repaired during daily activities.

A model of Aboriginal land use on the east coast of Australia has been developed by Attenbrow (2006). The model comprises base camps, transit camps and activity locations as a means of characterising Aboriginal habitation (Attenbrow 2006 p.217-247). Base camps are locations which were occupied for several nights (or longer) and are bases from which hunting and other activities are undertaken (Attenbrow 2006 p.220-221). Base camps would be expected to have evidence for a range of activities including food preparation, skin working, tool manufacture and tool maintenance, as well as other campsite activities.

Transit camps are occupied short term for a day or two, they are used as part of a mobile hunter-gatherer strategy as rest locations between base camps, resource areas or ceremonial areas. Activities undertaken at transit camps are less varied and less rich in terms of artefact types and faunal remains. For example, Meehan (1988 p.179-180) identified that base camps had a wider range of food species, but may not, necessarily, have the remains of whole animals since these may have been partially consumed at transit (dinner-time) camps. Base camps are likely to be larger in size, have more artefacts and more varied activities than transit camps. Activity locations are locations at which a particular activity took place, for instance, quarrying of rock, initial reduction of cobbles to test raw material quality and similar.

Archaeological studies undertaken in the Lower Hunter have identified a pattern of base camps being located on the margins of swamps and wetlands where food resources are in abundance. Transit camps more commonly along the creek and riparian corridors between the major fresh water bodies. Archaeological evidence from Blue Gum Vista Estate on the Margin of Hexham Swamp contained evidence for base camps with high quantities of artefacts retrieved and a rich and diverse stone assemblage. These base camps reflected a wider range of knapping technologies than the transit camp occupation in the surrounding creek corridors (Umwelt 2002).

## 4.5 Predictive model

The predictive model used in the current study comprises a series of statements about the nature and distribution of evidence of Aboriginal land use that is expected in the Proposal Site. These statements were based on the information gathered regarding:

- Landscape context and landform units.
- Ethno-historical evidence of Aboriginal land use.
- Distribution of natural resources.
- Results of previous archaeological work in the vicinity of the Proposal Site.

- Predictive modelling proposed in previous investigations.

Predictive statements were as follows:

- Stone artefact scatters and isolated finds would be the most common Aboriginal site type. The AHIMS results and previous studies show these Aboriginal site types are common in the local area.
- Tuff and silcrete artefacts are expected to be the most common stone raw material types. These are the common raw material types identified in previous studies in the area.
- Sites are likely to be located on ridgelines and adjacent to water bodies.
- Scarred trees may be present where older trees still exist in the Proposal Site.

#### 4.6 Registered Aboriginal sites in the local area – AHIMS search

A search of the Aboriginal Heritage Information System (AHIMS) database was undertaken on the 26 June 2019. The search area was of Datum: GDA, Zone: 56, Eastings: xxx000 - xxx240, Northing: xxx1975 - xxx0640 with a Buffer of 50 metres (Client ID 430711). The total number of Aboriginal sites was 19, as summarised in Table1.

**Table 1 AHIMS search site types and incidence**

Site types	Count	Percentage
Artefact	8	42.11%
Open Camp Site	4	21.05%
PAD	3	15.79%
Quarry	1	5.26%
Scarred Tree	2	10.53%
Shelter with Deposit	1	5.26%
<b>Total</b>	<b>19</b>	<b>100.00%</b>

All sites in the AHIMS search are currently valid. None of the recorded sites are within the Proposal site (Figure 2), with the closest being 140 metres to the south-east in Boomerang Park (Figure 3).

Analysis of the sites found in the search reveals that the site type with the highest occurrence is artefacts and open camp site scatters, with over half of the recorded sites being of this type. Potential archaeological deposits account for 16% of sites, while scarred trees and rock shelter with deposit make up the remaining percentage.

#### 4.7 Previously recorded Aboriginal sites

No previously recorded sites were identified in the AHIMS search of the Proposal site.

## 4.8 Newly recorded Aboriginal sites

Two newly recorded Aboriginal sites were located during the survey: AHIMS ID 38-4-2023 - KHW01 Artefact Scatter and PAD; and AHIMS ID 38-4-2025 - KHW02 PAD.

### 4.8.1 AHIMS ID 38-4-2023 - KHW01 Artefact Scatter and PAD

Site AHIMS ID 38-4-2023 - KHW01 is located immediately east of Rees James Road, Raymond Terrace. It is located on the edge of a gentle north-east to south-west ridgeline which is located between a back swamp of the William River to the west. To the east it overlooks what originally would have been Campvale/Sandhole Swamp, but is now Grahamstown Dam. In the north the ridgeline begins at the termination of Rees James Road and in the south, ends at an unnamed creek line (north of Green Slopes Drive). The site has a north aspect and is partially vegetated.

AHIMS ID 38-4-2023 - KHW01 comprises an artefact scatter and PAD. Three cream tuff flakes were identified (Table 3). The largest one (ID1) has possible use wear, however, it was excessively weathered so it could not definitively be identified as a tool. The artefact scatter was 70 m in length and 12 m wide. Observations during the survey, such as inspection of a road cutting, indicate that there is possibility around 30 cm of soil deposition at this site. The PAD at this site extends 170 m, is 12 m wide (limited by the assessment corridor and the road siding) and likely 30 cm in depth (Figure 4).

**Table 3: AHIMS ID 38-4-2023 - KHW01 Artefacts**

ID	Material	Colour	Type	Length	Width	Thickness
A01	Tuff	Cream	Flake	5.4 cm	4.1 cm	1.2 cm
A02	Tuff	Cream	Flake	3.0 cm	3.4 cm	1.0 cm
A03	Tuff	Cream	Flake	3.5 cm	2.1 cm	0.9 cm



Plate 2: KWH01 view to south



Plate 3: KWH01 view to east



Plate 4: A01 Ventral view



Plate 5: A01 possible use wear



#### 4.8.2 AHIMS ID 38-4-2025 - KHW02 PAD

This area was north of AHIMS ID 38-4-2023 - KHW01. This area was identified as a potential archaeological deposit due to its strategic location between the Williams River back swamp and the Campvale / Sandhole swamps (which are now Grahamstown Dam). It is also the next highest location in the local area north of AHIMS ID 38-4-2023 - KHW01 where surface artefacts were identified (Plate 2). The northern portion of this area was occupied by King's Irrawang House, Winery and Barn from 1835 and land surfaces here have remained relatively the same, as these structures were only demolished in 1969, there was a short period where a residence was constructed, but by 1976 the area became isolated due to the building of Irrawang spill way. The main disturbance in the area at present is the installation of power poles (Plate 7) and telecommunications cabling. This area was heavily grassed and thus no surface artefacts were able to be identified. It measures 560m north to south and approximately 100m wide, but for the purposes of this assessment is bounded by the Proposal site (Figure 5), the spill way is excluded from the PAD.

**Plate 6: AHIMS ID 38-4-2025 - KHW02 PAD, view to south, AHIMS ID 38-4-2023 - KHW01 in background, marked by arrow**



**Plate 7: AHIMS ID 38-4-2025 - KHW02 PAD, view to south**



## 4.9 Summary of results

No previously registered sites were present in the Proposal site based on the AHIMS search. Two newly recorded Aboriginal sites were located during the survey, AHIMS ID 38-4-2023 - KHW01 Artefact Scatter and PAD; and AHIMS ID 38-4-2025 - KHW02 PAD.

## 4.10 Effective survey coverage and survey units

The Proposal site was surveyed in five survey units which were bounded by landform, disturbances and streetscape/urbanisation (Figure 6).

**Survey Unit 1** comprised the paddocks north of the Riding School for the Disabled. It comprised a crest 20 m in elevation and slope. Ground surface exposures were present in tracks (Plate 8) and in depressions caused by fallen trees (Plate 9). Topsoils ranged from 5 cm to 20 cm in depth. Ground surface exposure was approximately 15% and was created by the dirt track or fallen trees. Ground surface visibility was approximately 20% with some ground surface visible between the grass as well as in exposures. The main disturbances in this area was fallen trees and track cuttings.

**Survey Unit 2** comprised grassed areas and electricity power poles and lines (Plate 11). Disturbances included the installation of the Grahamstown and Irrawang Spillways. High ground surface exposure was noted near the Irrawang Spillway (Plate 11) but was low throughout the rest of the survey unit. Ground surface exposure was approximately 10%. Ground surface visibility was approximately 15% with visible areas in exposure and between the grass where it was thinner. Survey Unit 2 occupies a strategic location between the Williams River back swamp and the Campvale / Sandhole swamps (which are now Grahamstown Dam) and thus while it is a sensitive landform, the identification of Aboriginal Objects was hindered by the low ground surface exposure and visibility.

**Survey Unit 3** comprised the northern portion of a north-east to south-west ridgeline. The main disturbance in the area was Rees James Road and its associated cuttings and sidings (Plate 12). There were areas of high ground surface exposure associated with the road cuttings and erosion scalds (Plate 13). Ground surface exposure was approximately 30% with ground surface visibility of 40%.

**Survey Unit 4** comprised the portion of Rees James Road between Kuranga Avenue to Adelaide Street. The survey unit covered gentle inclined slopes with two shallow crests and a depression, a

drainage line dissects the depression and feeds into Grahamstown Lake. The majority of the survey unit is covered with bitumen road surface and the verges were well grassed with scattered sparse trees and shrubs. The survey unit has been disturbed by the road construction (levelling and cutting) and the installation of a gas pipeline running the length of the eastern edge, minor disturbance in the form of overhead powerlines (Plate 7). There was low visibility (20%) across the survey unit, areas of disturbance along the verges showed visible soils, sandy loam with small rounded pebbles and few shale fragments (Plate 15). There were two areas of exposure, along the crest thin bands of sandstone bedrock were visible, and in the depression an area being excavated showed silty/ sandy clays (Plate 18). Visibility across compound areas was low (Plate 19). Ground surface exposure was approximately 2%. No Aboriginal objects or sites were identified within the survey unit.

**Survey Unit 5** comprised the southern portion of the Proposal Site and was the most developed, having footpaths and curbing installed along the roadway (Plate 18). It comprised crests, slopes and depressions, but had been highly disturbed as a result of urban development. Despite this there were still areas which had high exposure due to cuttings (Plate 19) and recent earth works. Overall, ground surface exposure was 15% with visibility of 20%.

There was one area in this survey unit near the junction of Irrawang and Thomas Streets that was a modified watercourse (Plate 20, Plate 21 and Figure 6) and is the southern portion of Newbury Park. Soil in this area changed from loamy clays to sand. Ground surface visibility and exposure were high in this section. It contained likely modern oyster shell, a silcrete fragment (non-artefactual) and sedimentary cobble which had no signs of use. The RAP representatives suggested that this area should be considered for subsurface testing depending on the footprint of the proposed pipeline.

The southern portion of Newbury Park has been highly modified, with a track alignment having been built up substantially from the previous drainage course. There is an Optus cable approximately 3m to the west of the Proposed Pipeline Alignment and it is also crossed by a Hunter Water Pipeline (Figure 7). Based on the extent of modification and other disturbances in the area archaeological testing has been deemed not to be warranted in this area.

#### 4.10.1 Summary

Overall ground surface exposure and visibility were low, with much of the Proposal site disturbed by urban development or previous roadways (Table 4).

**Table 4: Survey Coverage**

Survey Unit	Survey Unit Area	Landform	Visibility	Exposure	Effective Coverage Area	Effective coverage (%)
1	29930	Crest and Lower Slope	20%	15%	897.9	3%
2	42673	Depression	15%	10%	640.095	2%
3	38335	Ridge	40%	30%	4600.2	12%
4	65087	Crest, Slope and depression	20%	2%	260.3	0.4%
5	69418	Crest, Slope and depression	20%	15%	2082.54	3%



**Plate 8: Survey Unit 1, view to west**



**Plate 9: Survey Unit 1, example of exposure likely caused by fallen tree**



**Plate 10: Survey Unit 2 View to south, note raised section on the left half of photo which used to be the old Pacific Highway.**



**Plate 11: Survey Unit 2 example of exposure**



**Plate 12: Survey Unit 3 View to south**



**Plate 13: Survey Unit 3 example of exposure**





**Plate 14: Survey Unit 4 facing north**



**Plate 15: Ground visibility in Survey Unit 4**



**Plate 16: Exposure in Survey Unit 4 along drainage line, earthworks unrelated to current Proposal**



**Plate 17: No visibility across large compound area**



**Plate 18: Survey Unit 5 facing north**



**Plate 19: Survey Unit 5 example of exposure**



**Plate 20: Survey Unit 5 view of modified  
drainage line view to south**



**Plate 21: Survey Unit 5 example of exposure**





## 5.0 SIGNIFICANCE ASSESSMENT

This significance assessment has been undertaken in accordance with the OEH *Guide to Investigating, Assessing and Reporting on Aboriginal Cultural Heritage in New South Wales 2010*.

### 5.1 Cultural heritage values

Cultural heritage consists of places, or objects, that are of significance to Aboriginal people. Cultural heritage values are the attributes of these places or objects that allow the assessment of levels of cultural significance.

### 5.2 Cultural significance

Assessing the cultural significance of a place or object means defining why a place or object is culturally important. It is only when these reasons are defined that measures can be taken to appropriately manage possible impacts on this significance. Assessing cultural significance involves two main steps, identifying the range of values present across the Proposal Site and assessing why they are important.

The Proposal Site has been assessed according to the following significance criteria: social/cultural, historic, scientific/archaeological and aesthetic.

#### 5.2.1 Social/cultural heritage values and significance

Social/cultural heritage significance should be addressed by the Aboriginal people who have a connection to, or interest in, the Proposal site. As part of the consultation process the registered Aboriginal parties (RAP) representatives were asked to provide appropriate information on the cultural significance of the study area.

The RAP representatives indicated that the Proposal site is significant as part of a wider cultural landscape and is an area which spans the Williams River catchment in the west and the Campvaley/Sandhole Swamp area to the east; and that it should be regarded as moderate-high in significance. The RAP representatives suggested that the sandy area which is the southern portion of Newbury Park in Survey Unit 1 should be considered for subsurface testing depending on the footprint of the proposed pipeline and other factors.

The southern portion of Newbury Park has been highly modified, with a track alignment having been built up substantially from the previous drainage course. There is an Optus cable approximately 3m to the west of the Proposed Pipeline Alignment and it is also crossed by a Hunter Water Pipeline (Figure 7). Based on the extent of modification and other disturbances in the area archaeological testing has been deemed not to be warranted in this area.

The RAPs have reviewed the ACHAR with the updated information on the previous modifications of Newbury Park (which was not available during the survey), comments received are in support of the findings of this report, and none of the RAPs have requested testing of this area.

#### 5.2.2 Historic values and significance

Historic values refer to the association of the place with aspects of Aboriginal history. Historic values are not necessarily reflected in physical objects, but may be intangible and relate to memories, stories or experiences.

There are few historic records that directly relate to Aboriginal occupation of the Proposal site. There is, however, a reference to Aboriginal people present in an 1830s engraving (Plate 1) of the Irrawang Pottery Site (the curtilage of which is in the Proposal site). Based on this association, the Proposal site is assessed to have moderate historical significance.

The Aboriginal cultural significance of the Proposal site derives from its location within the wider cultural landscape and is an area which spans the Williams River catchment in the west and the Campvale/Sandhole Swamp are to the east. No additional cultural information was provided on the historic values of the Proposal site during the consultation for the draft report.

### 5.2.3 Scientific/archaeological values and significance

Archaeological significance refers to the archaeological or scientific importance of a landscape or area. This is characterised by using archaeological criteria such as archaeological research potential, representativeness and rarity of the archaeological resource and potential for educational values. These are outlined below:

- Research potential: does the evidence suggest any potential to contribute to an understanding of the area and/or region and/or state's natural and cultural history?
- Representativeness: how much variability (outside and/or inside the subject area) exists, what is already conserved, how much connectivity is there?
- Rarity: is the subject area important in demonstrating a distinctive way of life, custom, process, land-use, function or design no longer practised? Is it in danger of being lost or of exceptional interest?
- Education potential: does the subject area contain teaching sites or sites that might have teaching potential?

Aboriginal site AHIMS ID 38-4-2023 - KHW01 has been assessed for scientific significance. AHIMS ID 38-4-2025 - KHW02 PAD will need to be further investigated before its significance can be determined.

#### **AHIMS ID 38-4-2023 - KHW01 Artefact Scatter and PAD**

AHIMS ID 38-4-2023 - KHW01 comprises an artefact scatter and PAD. Three cream tuff flakes were identified. The artefact scatter was 70 m in length and 12 m wide. The PAD at this site extends 170 m, is 12 m wide (limited by the assessment corridor and the road siding) and likely 30 cm in depth.

The site has the potential for archaeological deposit and thus may have associated evidence that could be used for radiocarbon dating, for example a hearth. The PAD would have originally been larger but has been truncated by the Pacific highway in the east and Rees James Road on the west. Based on its potential to provide new information of the local area and because it is the only remaining portion of the site in the immediate area, the research potential of the site is moderate-high on a local scale. More broadly in the region, however, there are sites of higher research potential and thus it has low research potential on a regional scale.

This site contains the expected stone raw materials and artefact types which is also represented in the local area. This is the only site located on a ridge between Kings Hills and Raymond Terrace and thus is the only site that represents this landform. It has high representativeness on a local scale and moderate representativeness on a regional scale.

The contents of the site cream tuff flakes are not rare artefact types; however, the site is the only one of its kind (Artefacts and PAD) in the Proposal site and the only site on ridge between Kings Hill and Raymond Terrace; it is also rare as it contains PAD of which there is only one other in the Raymond Terrace area on the basis of AHIMS results. The site has high rarity on a local scale and moderate rarity on a regional scale.

The site is demonstrative of Aboriginal occupation, but its location on a road siding, its small size and ubiquitous nature of the artefacts means that it is of moderate education potential on a local scale and has low significance on a regional scale.

Overall AHIMS ID 38-4-2023 - KHW01 has high local significance and low regional significance.

#### 5.2.4 Aesthetic values and significance

Aesthetic values refer to the sensory, scenic, architectural and creative aspects of the place. These values may be related to the landscape and are often closely associated with social/cultural values.

The southern two-thirds of the Proposal site has been subject to residential development. There is some aesthetic value to the northern portion of the Proposal site which has vistas towards Kings Hill (Plate 22). The Proposal site has low-moderate aesthetic significance.

**Plate 22: Vista north-west towards King Hill  
from northern portion of Survey Unit 3**



#### 5.2.5 Statement of significance

The cultural significance of the Proposal site derives from its location within the wider cultural landscape and is an area which spans the Williams River catchment in the west and the Campvale/Sandhole Swamp are to the east; and has moderate-high in significance. The historic values of the Proposal site are associated with Aboriginal involvement in the Irrawang Pottery Site. The scientific value of the Proposal Site is related to the presence of artefacts and PAD at AHIMS ID 38-4-2023 - KHW01 as well as KWH02 PAD. The aesthetic values relate to the northern third of the Proposal Site which is still rural in character and has vistas to Kings Hill. Overall, the Proposal site has moderate-high significance.

## 6.0 STATUTORY REQUIREMENTS

This study has been undertaken in the context of several pieces of legislation that relate to Aboriginal heritage and its protection in New South Wales (NSW).

### 6.1.1 National Parks and Wildlife Act (1974)

The *National Parks & Wildlife Act 1974* (the Act), administered by the OEH provides statutory protection for all Aboriginal 'objects' (consisting of any material evidence of the Aboriginal occupation of NSW) and 'Aboriginal Places' (areas of cultural significance to the Aboriginal community).

The protection provided to Aboriginal objects applies irrespective of the level of their significance or issues of land tenure. However, areas are only gazetted as Aboriginal Places if the Minister is satisfied that sufficient evidence exists to demonstrate that the location was and/or is, of special significance to Aboriginal culture.

An Aboriginal Heritage Impact Permit (AHIP) is needed for impact to Aboriginal sites and is granted by the OEH. Various factors are considered by OEH in the AHIP application process, such as site significance, Aboriginal consultation requirements, project justification and consideration of alternatives. The penalties and fines for damaging or defacing an Aboriginal object have also increased.

As part of the administration of Part 6 of the Act, OEH has developed regulatory guidelines on Aboriginal consultation, which are outlined in *Aboriginal Cultural Heritage Consultation Requirements for Proponents* (2010). Guidelines have also been developed for the processes of due diligence; *Due Diligence Code of Practice for the Protection of Aboriginal Objects in NSW* (2010), and for investigation of Aboriginal objects - *Code of Practice for Archaeological Investigation of Aboriginal Objects in New South Wales* (2010) in accordance with the 2010 amendment to the Act.

### 6.1.2 Environmental Planning & Assessment Act (1979)

The *Environmental Planning & Assessment Act 1979* (EP&A Act) is administered by the Department of the Planning and Environment and provides planning controls and requirements for environmental assessment in the development approval process. This Act has three main parts of direct relevance to Aboriginal cultural heritage; namely, Part 3 which governs the preparation of planning instruments, Part 4 which relates to development assessment process for local government (consent) authorities and Part 5 which relates to activity approvals by governing (determining) authorities.

Planning decisions within LGAs are guided by Local Environmental Plans (LEPs). Each LGA is required to develop and maintain an LEP that includes Aboriginal and historical heritage items which are protected under the EP&A Act and the *Heritage Act 1977*. The Port Stephens LEP (2013) (Part 8, Clause 5.10) makes standard provision for the protection of Aboriginal heritage items that applies to the current Proposal Site.

Development Control Plans (DCPs) provide specific and more detailed guidelines for certain types of development, or small sections within an LGA. These guidelines are in addition to the provisions of the LEP. Section 5.04.01 of the Port Stephens DCP (2013) lists specific controls relating to Aboriginal heritage within the LGA.

### 6.1.3 Aboriginal Land Rights Act (1983)

The *Aboriginal Land Rights Act 1983* (the Land Rights Act) is administered by the NSW Department of Human Services -Aboriginal Affairs. The Land Rights Act established Aboriginal Land Councils (at

State and Local levels). These bodies have a statutory obligation under the Land Rights Act to; (a) take action to protect the culture and heritage of Aboriginal persons in the council's area, subject to any other law, and (b) promote awareness in the community of the culture and heritage of Aboriginal persons in the council's area.

The Proposal Site is located within the boundaries of the Worimi Local Aboriginal Land Council.

#### 6.1.4 Native Title Act (1994)

The *Native Title Act 1994* was introduced to work in conjunction with the Commonwealth Native Title Act. Native Title claims, registers and Indigenous Land Use Agreements are administered under the Act.

## 7.0 IMPACT ASSESSMENT

### 7.1 Proposed works

The proposed works are to develop a water and wastewater supply pipeline and a wastewater pumping station to support the development of the Kings Hill URA. The water pipeline would connect to existing Hunter Water infrastructure in the south and the Kings Hill URA in the north, while the wastewater pipeline would connect to the proposed WWPS in Kings Hill URA and existing Hunter Water infrastructure in the south.

The Key components of the Proposal which relate to this heritage assessment are:

- Earthworks - Trenching, under boring, back filling and restoration works, as well as construction of the Wastewater Pumping Station (WWPS).
- Vegetation Clearance.

### 7.2 Impact Assessment

Potential impacts to AHIMS ID 38-4-2023 - KHW01 Artefact Scatter and PAD, AHIMS ID 38-4-2025 - KHW02 PAD and the remainder of the Proposal site is considered below.

#### 7.2.1 AHIMS ID 38-4-2023 - KHW01 Artefact Scatter and PAD

**AHIMS ID 38-4-2023 - KHW01 is located on a raised landform context on the east road siding of Rees James Drive (Plate 23 -**

Plate 26). The road siding has been cut through rock and is raised approximately 1.2m above the road level.

Detailed design for the Proposed Pipeline Alignment is yet to be finalised and thus there are two options that may be taken for works in the vicinity of this site.

#### **Option 1 – Avoidance possible**

There is potential that earthworks in the vicinity of KWH01 can be limited to the bottom of the road siding and the pipes installed directly beside the road. This would ensure that works are outside the demarcated Aboriginal site and vegetation clearance would not be necessary. Under this scenario there is still potential for inadvertent impact to this site. Inadvertent impacts would be managed through delineation of the site boundary during works (see Section 8).

#### **Option 2 – Avoidance of site not possible**

If earthworks cannot be restricted to the bottom of the road siding, then there is risk of impact to AHIMS ID 38-4-2023 - KHW01 Artefact Scatter and PAD. Appropriate mitigation may include undertaking a program of archaeological test excavation to determine whether there are sub-surface artefacts in the portion of AHIMS ID 38-4-2023 - KHW01 Artefact Scatter and PAD to be impacted. An AHIP would be required for impact to identified surface artefacts and/or the extent of any sub-surface artefacts identified during archaeological test excavation.



**Plate 23: AHIMS ID 38-4-2023 - KHW01 located on raised siding, view to south**



**Plate 24: AHIMS ID 38-4-2023 - KHW01 located on raised siding, view to south**



**Plate 25: AHIMS ID 38-4-2023 - KHW01 located in soil which overlies a rock stratum (indicated by figure on left) which was cut through for the road**



**Plate 26: AHIMS ID 38-4-2023 - KHW01 located on raised siding, view to north**



### 7.2.2 AHIMS ID 38-4-2025 - KHW02 PAD

AHIMS ID 38-4-2025 - KHW02 PAD is located on a raised landform within the Proposal site. Depending on the final design for the Proposed Pipeline Alignment avoidance of this site may be possible, such as by under boring. Potential impacts to AHIMS ID 38-4-2025 - KHW02 PAD are outlined below.

#### **Option 1 – Avoidance possible**

Depending on the overall design requirements, it may be possible to avoid AHIMS ID 38-4-2025 - KHW02 PAD. Under this scenario there is still potential for inadvertent impact to this site. Inadvertent impacts would be managed through delineation of the site boundary during works (see Section 8).

#### **Option 2 – Avoidance of site not possible**

If the Proposed Pipeline Alignment cannot avoid AHIMS ID 38-4-2025 - KHW02 PAD, then there is risk of impact. Suitable mitigation may include undertaking a program of archaeological test excavation to determine whether there are sub-surface artefacts in the portion of AHIMS ID 38-4-

2025 - KHW02 PAD to be impacted. An AHIP would be required for impact to the extent of sub-surface artefacts identified during archaeological test excavation.

### 7.2.3 Remainder of the Proposal Site

No Aboriginal sites or areas of archaeological sensitivity have been identified in the remaining portion of the Proposal site.

## 7.3 Summary

The final design may be able to avoid AHIMS ID 38-4-2023 - KHW01 and AHIMS ID 38-4-2025 - KHW02 and thus these Aboriginal sites will not be impacted. However, if the Proposed Pipeline Alignment cannot avoid AHIMS ID 38-4-2023 - KHW01 and AHIMS ID 38-4-2025 - KHW02, then further investigation will be required and harm to the sites will need to be mitigated.

**Table 5: Impacts arising from the Proposal**

Site Number	Option	Type of Harm	Degree of Harm	Consequence
AHIMS ID 38-4-2023 - KHW01	1	None	None	No Loss of Value
AHIMS ID 38-4-2023 - KHW01	2	Direct	Partial	Partial Loss of Value
AHIMS ID 38-4-2025 - KHW02 PAD	1	None	None	No Loss of Value
AHIMS ID 38-4-2025 - KHW02 PAD	2	Further Investigation (visual inspection/test excavation) required to determine the type of harm	Further Investigation (visual inspection/test excavation) required to determine the type of harm	Further Investigation (visual inspection/test excavation) required to determine the type of harm

## 8.0 MANAGEMENT AND MITIGATION MEASURES

### 8.1 Guiding principles

The overall guiding principle for cultural heritage management is that where possible Aboriginal heritage should be conserved. If conservation is not practical, measures should be taken to mitigate against impacts to Aboriginal sites. The nature of the mitigation measures recommended is primarily based on an assessment of archaeological significance.

### 8.2 Mitigation measures

#### 8.2.1 Archaeological Testing under the Code of Practice

Archaeological testing under the *Code of Practice* allows for investigation of subsurface archaeological deposit in order to inform conservation goals and develop harm mitigation measures for the proposed activity.

Archaeological testing under the *Code of Practice* requires the development of a sampling strategy of the PAD including testing of areas with low ground surface visibility and developed in accordance with the impact area. It also requires that the sampling strategy be subject to Aboriginal consultation under the Aboriginal Cultural Heritage Consultation Requirements.

OEH/DPIE need to be advised at least 14 days before undertaking test excavations, including the details of the area to be excavated, the name and contact details of the legal entity responsible for the overall project, the name and contact details of the person undertaking the test excavations, proposed date of commencement and completion, location of the temporary storage of any Aboriginal objects and a copy of the sampling strategy.

If test excavation identify that the subject area is not a PAD and there is no risk of impact to Aboriginal objects, then works can proceed without an AHIP, provided that such findings are documented.

If test excavation identifies that the subject area contains subsurface Aboriginal objects, then mitigation measures will need to be developed and may involve the application for an AHIP over the PAD.

#### 8.2.2 Aboriginal Heritage Impact Permit

Where possible, impacts to Aboriginal heritage sites are to be avoided. If impacts cannot be avoided, then an AHIP will be required. An AHIP may include provisions for surface salvage of artefacts as well as subsurface archaeological excavation.

An AHIP application to OEHD/DPIE will need to be accompanied by an Aboriginal Cultural Heritage Assessment Report which includes documentation of Aboriginal consultation under the Aboriginal Cultural Heritage Consultation Requirements. It will also require a methodology for surface salvage of artefacts and subsurface archaeological excavation, as needed. The AHIP application will need to be accompanied by an AHIP form, the required lodgement fee, and the development approval.

Archaeological works in accordance with an AHIP will need to be carried out prior to the commencement of construction (or any other ground disturbing works). The AHIP archaeological works are to be undertaken by a qualified heritage consultant and RAP representatives and need to be documented and reported as per the approved AHIP conditions. Impacts to Aboriginal sites will need to be recorded in an Aboriginal Site Impact Recording form and submitted to OEHD/DPIE.

### 8.2.3 AHIMS ID 38-4-2023 - KHW01 Artefact Scatter and PAD Mitigation Measures

Below are the mitigation measures for the two options for AHIMS ID 38-4-2023 - KHW01.

#### 8.2.3.1 Option 1 Avoidance possible

If works do not impact AHIMS ID 38-4-2023 - KHW01 Artefact Scatter and PAD, prior to commencement of construction the site boundaries for AHIMS ID 38-4-2023 - KHW01 Artefact Scatter and PAD are to be delineated by temporary fencing or other visual markers. Such protection should involve minimal disturbance to the soils. A heritage consultant is to be on site to delineate where the fencing is to be installed around the artefacts. If necessary, geofabric is to be laid down to protect erosion of soil around the artefacts and its installation is to be supervised by a heritage consultant. Once construction has ceased and the work area has been remediated, the heritage consultant is to supervise the deconstruction of the temporary fencing and the removal of geofabric, as necessary.

#### 8.2.3.2 Option 2 Avoidance not possible

If impact to AHIMS ID 38-4-2023 - KHW01 cannot be avoided, a program of archaeological test excavation under the *Code of Practice* is to be undertaken to determine if there are subsurface artefacts present and to determine their extent. An AHIP may be required for impact to, or salvage of, subsurface artefacts prior to commencement of pipeline installation works. If surface artefacts are at risk of impact, then these may also require surface salvage under an AHIP. Test excavation and AHIP works would need to be completed prior to the commencement of earthmoving works in the vicinity of AHIMS ID 38-4-2023 - KHW01.

### 8.2.4 AHIMS ID 38-4-2025 - KHW02 PAD

Below are the mitigation measures for the two options for AHIMS ID 38-4-2025 - KHW02. Under Option 2, there are sub-options to respond to the nature of impact.

#### 8.2.4.1 Option 1 Avoidance possible

If possible, AHIMS ID 38-4-2025 - KHW02 PAD will be avoided by the Proposed Pipeline Alignment. Fencing or other visual markers should be installed to clearly demarcate the works area and ensure there are no inadvertent impacts.

#### 8.2.4.2 Option 2a Avoidance not possible - visual inspection

If impact to AHIMS ID 38-4-2025 - KHW02 PAD cannot be avoided, then a visual inspection is to be undertaken to identify if localised areas within the Proposed Pipeline Alignment require archaeological testing and in particular for Area A in Figure 5. The results of the visual inspection are to be documented.

#### 8.2.4.3 Option 2b Avoidance not possible – test excavation

If the visual inspection under 2a identifies that localised test excavation is required, then a test excavation methodology under the *Code of Practice* is to be developed.

The test excavation methodology will be sent to the RAPs for review. If areas require testing under the test excavation methodology, then a program of archaeological testing under the *Code of Practice* is to be undertaken to determine if there are subsurface artefacts present and to determine their extent. An AHIP may be required for impact to, or salvage of, subsurface artefacts prior to commencement of pipeline installation works.

#### 8.2.4.4 Option 2c Avoidance not possible - AHIP

A portion of AHIMS ID 38-4-2025 - KHW02 PAD is in close proximity to a historic archaeological site Kings House, Winery and Barn which is part of the Irrawang Pottery Site listed on the Port Stephens Local Environmental Plan and on the Hunter Water s170 register (LEP A4 / ID127). Due to the overlap between AHIMS ID 38-4-2025 - KHW02 PAD and potentially significant historic archaeological



remains, the methodology for archaeological test excavation will need to take into consideration the protection of relics under the *Heritage Act 1977* and the conditions of any s139 exception and/or s140 permit issued for investigation and/or impact to significant historic archaeological remains. It is likely that an appropriate historic heritage approval will need to be in place prior to the commencement of the Aboriginal heritage investigation within AHIMS ID 38-4-2025 - KHW02 PAD.

#### 8.2.5 Historical Archaeology

A s139 exception or s140 historic heritage permit under the *Heritage Act 1977* is needed to address the historic heritage constraints associated with the heritage listed Irrawang Pottery Site. Non-Aboriginal relics cannot be impacted under an AHIP and historical archaeological investigations cannot impact Aboriginal Objects. Hence, historic heritage and AHIP approvals will need to be held concurrently to allow for the excavation of Aboriginal and non-Aboriginal contexts.

### 8.3 Management strategies

The proposed works are to be carried out in a manner which enhances the conservation and protection of Aboriginal heritage, as such the following general management strategies are to be implemented for the project.

#### 8.3.1 Heritage induction

A heritage induction is to be provided to all onsite personnel so that they are aware of their obligations under the NSW National Parks and Wildlife Act 1974. The induction is to make any onsite personnel aware that penalties apply for harm to an Aboriginal object, to define that harm can include destruction, defacing, damaging or moving an Aboriginal object and that Aboriginal objects or suspected Aboriginal objects are to be reported to OEH and penalties apply for non-compliance. The heritage induction should also identify the no-go zones in relation to Aboriginal sites, as well as, as the procedure for the discovery of human remains.

#### 8.3.2 Protection from indirect impacts

All works are to be undertaken within the Proposal site, as subject to this assessment. The Proposed Pipeline Alignment needs to be visibly marked during works and the boundaries of the Proposal site made clear to all on-site personnel so that all works are undertaken within its boundaries. If there is any ambiguity of the Proposal Site Boundaries due to landform, vegetation or other factors the Proposal Site Boundaries are to be marked with temporary fencing or other visual markers to guide on-site personnel.

#### 8.3.3 Discovery of human remains

In the unlikely event that human remains are discovered in the Proposal Site, all works are to stop in that area. The location of the human remains is to be cordoned off and protected from disturbance. The proponent must contact the local NSW police who will make an assessment as to whether the remains are part of a crime scene or whether they possible Aboriginal remains. In the case of possible Aboriginal remains OEH must be contacted on the Enviroline 131555. OEH will determine if the remains are Aboriginal or not. If the remains are determined to be Aboriginal, then the Aboriginal community is to be contacted and a management plan developed and implemented, before work recommences.

#### 8.3.4 Changes to the Proposal site

This report has been constrained to the area of the Proposal Site for the purposes of Aboriginal cultural heritage assessment. If the Proposal site is enlarged, then additional cultural heritage assessment will be required. If the Proposal site is reduced, then a review of mitigation and management strategies is to be undertaken.

#### 8.3.5 Ongoing Aboriginal consultation

In principle, Aboriginal consultation should be ongoing throughout the life of the project with processes in place to involve the Aboriginal community. Appropriate circumstances for further Aboriginal consultation include, but would not be limited to, the discovery of Aboriginal skeletal remains, or proposed changes to heritage impacts at a later stage of the project. If there is an increased impact to a known Aboriginal site, or if a new area needs to be assessed to accommodate a change in the development design, the registered Aboriginal groups would be consulted. It should be noted that if there has been a gap of greater than six months in consultation for a project, and an AHIP or an AHIP variation would be required, the consultation process would restart with the compilation of a new registered Aboriginal party list.

### 8.4 Ecologically Sustainable Development principles

In accordance with the OEH *Guide to Investigating, Assessing and Reporting on Aboriginal Cultural Heritage in New South Wales 2010*, Ecologically Sustainable Development (ESD) principles have been considered in the preparation this assessment. This has included options to avoid impacts to Aboriginal cultural heritage, assessment of unavoidable impacts, identification of mitigation and management measures, and taking into account Aboriginal community views.

The principles of ESD are detailed in the NSW *Protection of the Environmental Administration Act 1991*. The ESD principles which apply to Aboriginal cultural heritage are considered below.

#### 8.4.1 The integration principle

Decision-making processes should effectively integrate both long term and short term economic, environmental, social and equitable considerations (the 'integration principle').

The Proposal has complied with this principle by considering the Aboriginal cultural heritage values of the area including feedback for undertaking subsurface archaeological investigation. Aboriginal sites, where possible, have been avoided by the Proposed Pipeline Alignment.

#### 8.4.2 The precautionary principle

If a proposed development has the potential to cause serious or irreversible environmental damage, then the lack of full scientific certainty should not be used as a reason for postponing measures to prevent environmental degradation (the 'precautionary principle'). In this instance, 'environmental' includes cultural landscapes and heritage.

The impacts of the Proposal have not been identified to cause serious or irreversible damage and therefore the precautionary principle does not need to be applied.



#### 8.4.3 The principle of intergeneration equity

The present generation should ensure that the health, diversity and productivity of the environment is maintained or enhanced for the benefit of future generations (the 'principle of intergenerational equity').

Aboriginal sites, where possible, have been avoided by the Proposed Pipeline Alignment. Mitigation of areas of archaeological sensitivity has been proposed and the results and subsequent reporting will maintain intergenerational equity of the environment for this specific area, the remaining portion of the area will not be impacted by the Proposal.

### 8.5 Summary

The following mitigation measures are proposed for options associated with AHIMS ID 38-4-2023 - KHW01 Artefact Scatter and PAD:

- Where impacts can be avoided – installation of hi-visibility markers and/or protective fencing
- Where impacts cannot be avoided – a program of archaeological test excavation under the *Code of Practice* and an AHIP if the Proposal will impact identified surface artefacts and/or identified extent of sub-surface artefacts and/or requires salvage of surface or subsurface artefacts

The following mitigation measures are proposed for options associated with AHIMS ID 38-4-2025 - KHW02 PAD:

- Where impacts can be avoided - installation of hi-visibility markers and/or protective fencing
- Where impacts cannot be avoided – a visual inspection is to determine if there are localised areas within the Proposed Pipeline Alignment which require testing, if test areas are identified a program of archaeological test excavation under the *Code of Practice* is to be undertaken and an AHIP if the Proposal will impact the identified extent of sub-surface artefacts and/or requires salvage of subsurface artefacts
- Ensure appropriate historical archaeology approval under the *Heritage Act 1977* is in place before commencing works at AHIMS ID 38-4-2025 - KHW02

General mitigation and management strategies to apply to the whole Proposal site:

- Heritage induction for onsite personnel
- Protection measures for indirect impacts
- Protocol for the discovery of human remains
- Limit impact to Proposal Site or additional assessment required
- Ongoing Aboriginal consultation

ESD principles have been complied with through this assessment, as well as in the avoidance and mitigation measures proposed.

## 9.0 CONCLUSIONS AND RECOMMENDATIONS

No previously registered sites were present in the Proposal Site based on the AHIMS search. Two newly recorded Aboriginal sites were located during the survey, AHIMS ID 38-4-2023 - KHW01 Artefact Scatter and PAD; and AHIMS ID 38-4-2025 - KHW02 PAD.

### Recommendations

With respect to AHIMS ID 38-4-2023 - KHW01 Artefact Scatter and PAD:

- If works do not impact AHIMS ID 38-4-2023 - KHW01 Artefact Scatter and PAD, prior to commencement of construction in the vicinity of AHIMS ID 38-4-2023 - KHW01 Artefact Scatter and PAD the site boundaries are to be delineated by temporary fencing or other visual markers. Such protection should involve minimal disturbance to the soils. A heritage consultant is to be on site to delineate where the fencing is to be installed around the artefacts. If necessary, geofabric is to be laid down to protect erosion of soil around the artefacts and its installation is to be supervised by a heritage consultant. Once construction has ceased and the work area has been remediated, the heritage consultant is to supervise the deconstruction of the temporary fencing and the removal of geofabric, as necessary.
- If impact to AHIMS ID 38-4-2023 - KHW01 cannot be avoided, a visual inspection is to determine if there are localised areas within the Proposed Pipeline Alignment which require testing, if test areas are identified a program of archaeological test excavation under the *Code of Practice* is to be undertaken to determine if there are subsurface artefacts present and to determine their extent. An AHIP may be required for impact to, or salvage of, subsurface artefacts prior to commencement of pipeline installation works. If surface artefacts are at risk of impact, then these may also require surface salvage under an AHIP. Test excavation and AHIP works would need to be completed prior to the commencement of earthmoving works in the vicinity of AHIMS ID 38-4-2023 - KHW01.

With respect to AHIMS ID 38-4-2025 - KHW02 PAD:

- If possible, AHIMS ID 38-4-2025 - KHW02 PAD will be avoided by the Proposed Pipeline Alignment. Fencing or other visual markers should be installed to clearly demarcate the works area and ensure there are no inadvertent impacts.
- If impact to AHIMS ID 38-4-2025 - KHW02 PAD cannot be avoided, a visual inspection is to determine if there are localised areas within the Proposed Pipeline Alignment which require testing, if test areas are identified a program of archaeological test excavation under the *Code of Practice* is to be undertaken to determine if there are subsurface artefacts present and to determine their extent. An AHIP may be required for impact to, or salvage of, subsurface artefacts prior to commencement of pipeline installation works. If surface artefacts are at risk of impact, then these may also require surface salvage under an AHIP. Test excavation and AHIP works would need to be completed prior to the commencement of earthmoving works in the vicinity of AHIMS ID 38-4-2025 - KHW02 PAD.

- A portion of AHIMS ID 38-4-2025 - KHW02 PAD is in close proximity to a historic archaeological site Kings House, Winery and Barn which is part of the Irrawang Pottery Site listed on the Port Stephens Local Environmental Plan and on the Hunter Water s170 register (LEP A4 / ID127). Due to the overlap between AHIMS ID 38-4-2025 - KHW02 PAD and potentially significant historic archaeological remains, the methodology for archaeological test excavation will need to take into consideration the protection of relics under the *Heritage Act 1977* and the conditions of any s139 exception and/or s140 permit issued for investigation and/or impact to significant historic archaeological remains. It is likely that appropriate historic heritage approval will need to be in place prior to the commencement of the Aboriginal heritage investigation within AHIMS ID 38-4-2025 - KHW02 PAD.

General mitigation and management strategies to apply to the whole Proposal site:

- No Aboriginal objects can be impacted without an AHIP
- Works within the Proposal site outside the delineated boundaries of AHIMS ID 38-4-2023 - KHW01 Artefact Scatter and PAD and AHIMS ID 38-4-2025 - KHW02 PAD may proceed with caution and with no recommendations for further archaeological investigation or permits under the *National Parks and Wildlife Act 1974*
- A heritage induction is to be provided to all onsite personnel so that they are aware of their obligations under the NSW *National Parks and Wildlife Act 1974*. The heritage induction is to include procedures for unexpected Aboriginal finds.
- The boundaries of the Proposal site should be made clear to all on-site personnel so that all works are undertaken within its boundaries. If there is any ambiguity of the Proposal site boundaries due to landform, vegetation or other factors the Proposal site boundaries are to be marked with temporary fencing or other visual markers to guide on-site personnel.
- Site cards for the newly recorded sites will be submitted to AHIMS and attached with the final version of this report.
- A copy of this final report will be provided to all registered Aboriginal stakeholder groups.
- If the design of the Proposal is changed and areas not surveyed are to be impacted, or other Aboriginal sites not identified are to be impacted, further archaeological assessment would be required.

## 10.0 REFERENCES

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## APPENDIX A ADVERTISEMENT FOR REGISTERED ABORIGINAL PARTIES

Advert placed in Port Stephens Examiner 13 June 2019

**Water and Wastewater Infrastructure  
between Raymond Terrace and the  
Kings Hill Urban Release Area,  
Aboriginal Cultural Heritage  
Assessment  
Invitation to Register an Interest.**

On behalf of PM No 1 Pty Ltd, Artefact Heritage is undertaking an Aboriginal cultural heritage assessment of an area between Raymond Terrace and the Kings Hill Urban Release Area, in advance of proposed installation of water and wastewater infrastructure. The project area is within the Port Stephens Local Government Area, and will include portions of Rees James Road, Adelaide Street, Irrawang Street, Newbury Park, Lot 1 DP 1085482, Lot 113 DP 733181, Lot 5 DP 234521, and Lot 41 DP 1037411. The proponent's contact details are:

**Adam Smith**  
Level 7, 116 Miller Street,  
North Sydney NSW 2060  
0497 794 863  
adam.smith@app.com.au

The proponent is inviting Aboriginal groups and individuals who hold cultural knowledge relevant to determining the significance of Aboriginal objects and/or places in the locality to register an interest in a process of community consultation with the proponent regarding the proposed activity. The purpose of community consultation is to assist the proponent in the preparation of the Aboriginal cultural heritage assessment report and, if required, an Aboriginal Heritage Impact Permit application. The purpose of consultation with registered Aboriginal parties is also to assist the Director General of OEH in his or her consideration of the application.

Please register your interest in the project by 27 June 2019 by contacting:

**Josh Symons, Artefact Heritage**  
Level 4, Building B, 35 Saunders Street,  
Pyrmont NSW 2009  
02 9518 8411  
josh.symons@artefact.net.au

Please note that the consultation guidelines require the proponent to provide details of registered Aboriginal parties to the Office of Environment and Heritage and Worimi Local Aboriginal Land Council. In your response could you please advise if you would not like your details to be provided.



## APPENDIX B ABORIGINAL STAKEHOLDER CONSULTATION

### Aboriginal consultation log

This section has been redacted from the public version of this report

## Kings Hill Water and Wastewater Infrastructure Aboriginal Cultural Heritage Assessment

Contact	Organisation	Contacted by	Organisation	Method	Date	Comment/ response
<b>AGENCY LETTERS 4.1.2 NOTIFICATION</b>						
	National Native Title Tribunal	A Haast	Artefact Heritage	Email	13/06/2019	Section 4.1.2 Letter requesting list of potentially interested stakeholders, information, requested by 29 June 2019
	NTS Corp	A Haast	Artefact Heritage	Email	13/06/2019	Section 4.1.2 Letter requesting list of potentially interested stakeholders, information, requested by 29 June 2019
	Office of Environment and Heritage-Hunter region	A Haast	Artefact Heritage	Email	13/06/2019	Section 4.1.2 Letter requesting list of potentially interested stakeholders, information, requested by 29 June 2019
	Office of the Registrar	A Haast	Artefact Heritage	Email	13/06/2019	Section 4.1.2 Letter requesting list of potentially interested stakeholders, information, requested by 29 June 2019
	Hunter Local Land Services	A Haast	Artefact Heritage	Email	13/06/2019	Section 4.1.2 Letter requesting list of potentially interested stakeholders, information, requested by 29 June 2019
	Worimi Local Aboriginal Land Council	A Haast	Artefact Heritage	Email	13/06/2019	Section 4.1.2 Letter requesting list of potentially interested stakeholders, information, requested by 29 June 2019
	Port Stephens Council	A Haast	Artefact Heritage	Email	13/06/2019	Section 4.1.2 Letter requesting list of potentially interested stakeholders, information, requested by 29 June 2019
	Port Stephens Examiner	A Haast	Artefact Heritage	Email	13/06/2019	Section 4.1.2 Letter requesting list of potentially interested stakeholders, information, requested by 29 June 2019
Gillian Goode	Office of Environment and Heritage	J Symons	Artefact Heritage	Email	20/06/2019	Provided copy of the study area map to supplement section 4.1.2 letter
	Port Stephens Examiner	A Haast	Artefact Heritage	Email	20/06/2019	Provided copy of the study area map to supplement section 4.1.2 letter
	NTS Corp	A Haast	Artefact Heritage	Email	20/06/2019	Provided copy of the study area map to supplement section 4.1.2 letter
	Office of the Registrar	A Haast	Artefact Heritage	Email	20/06/2019	Provided copy of the study area map to supplement section 4.1.2 letter
	Worimi Local Aboriginal Land Council	A Haast	Artefact Heritage	Email	20/06/2019	Provided copy of the study area map to supplement section 4.1.2 letter
	Hunter Local Land Services	A Haast	Artefact Heritage	Email	20/06/2019	Provided copy of the study area map to supplement section 4.1.2 letter
	Mindaribba Local Aboriginal Land Council	A Haast	Artefact Heritage	Email	1/07/2019	Section 4.1.2 Letter requesting list of potentially interested stakeholders following recommendation of Office of the Registrar, information, requested by 15 July 2019
	Karuah Local Aboriginal Land Council	J Norfolk	Artefact Heritage	Email	18/07/2019	Section 4.1.2 Letter requesting list of potentially interested stakeholders following recommendation of Office of the Registrar, information, requested by 31 July 2019
<b>4.1.3 AD</b>						
Port Stephens Examiner		J mark	Artefact Heritage	Email	13/06/2019	Published Ad 13 June 2019 with a response date of 27 June 2019
<b>Registration</b>						
<b>Agency Responses</b>						
A Haast	Artefact Heritage		National Native Title Tribunal	Email	13/06/2019	Letter identifying that native title has undertaken steps to remove itself from the formal list of sources regarding Aboriginal groups in development areas. Indicated that information on native title claims and land use agreements are listed on the tribunal's website.
A Haast	Artefact Heritage	Gillian Goode	Office of Environment and Heritage	Email	19/06/2019	Requested figure to help identify the extent of project area by email
A Haast	Artefact Heritage	Steven Cox	Office of Environment and Heritage	Email	20/06/2019	Received stakeholder list
A Haast	Artefact Heritage		Port Stephens Council	Email	20/06/2019	Provided list of potential Aboriginal stakeholders

## Agency Letters

## Alyce Haast

---

**From:** Alyce Haast  
**Sent:** Thursday, 13 June 2019 1:10 PM  
**To:** admin.hunter@lls.nsw.gov.au  
**Subject:** Section 4.1.2 - Identification of Interested Aboriginal Parties: Raymond Terrace to Kings Hill  
**Attachments:** 19056\_Agency Letter\_HLLS.pdf

Dear Sir or Madam,

I am commencing Aboriginal stakeholder consultation for a Water and Wastewater Infrastructure between Raymond Terrace and the Kings Hill Urban Release Area Aboriginal Heritage Assessment.

Please find attached a letter regarding step 4.1.2 – 'Notification of project proposal and registration of interest' of the Aboriginal cultural heritage consultation requirements for proponents 2010.


Kind regards,

**Alyce Haast**  
**Senior Heritage Consultant**

### ARTEFACT

**Telephone:** 61 2 9518 8411 **Mobile:** 0412 487 963  
**Address:** Level 4, Building B, 35 Saunders Street, Pyrmont NSW 2009  
**Web:** [www.artefact.net.au](http://www.artefact.net.au)

Cultural Heritage Management | Archaeology | Heritage Interpretation

 *We acknowledge the Traditional Custodians of Country in which we live and work, and pay our respects to them, their culture and their Elders past, present and future*

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## Alyce Haast

---

**From:** Alyce Haast  
**Sent:** Thursday, 13 June 2019 1:10 PM  
**To:** reception@worimi.org.au  
**Subject:** Section 4.1.2 - Identification of Interested Aboriginal Parties: Raymond Terrace to Kings Hill  
**Attachments:** 19056\_Agency Letter\_Worimi\_LALC.pdf

Dear Sir or Madam,

I am commencing Aboriginal stakeholder consultation for a Water and Wastewater Infrastructure between Raymond Terrace and the Kings Hill Urban Release Area Aboriginal Heritage Assessment.

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**From:** Alyce Haast  
**Sent:** Thursday, 13 June 2019 1:10 PM  
**To:** Enquiries  
**Subject:** Section 4.1.2 - Identification of Interested Aboriginal Parties: Raymond Terrace to Kings Hill  
**Attachments:** 19056\_Agency Letter\_NNTT.pdf

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**From:** Alyce Haast  
**Sent:** Thursday, 13 June 2019 1:10 PM  
**To:** adminofficer@oralra.nsw.gov.au  
**Subject:** Section 4.1.2 - Identification of Interested Aboriginal Parties: Raymond Terrace to Kings Hill  
**Attachments:** 19056\_Agency Letter\_Office\_of\_the\_Registrar.pdf

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**Sent:** Thursday, 13 June 2019 1:10 PM  
**To:** council@portstephens.nsw.gov.au  
**Subject:** Section 4.1.2 - Identification of Interested Aboriginal Parties: Raymond Terrace to Kings Hill  
**Attachments:** 19056\_Agency Letter\_Port Stephens Council.pdf

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**Sent:** Thursday, 13 June 2019 1:10 PM  
**To:** rog.hcc@environment.nsw.gov.au  
**Subject:** Section 4.1.2 - Identification of Interested Aboriginal Parties: Raymond Terrace to Kings Hill  
**Attachments:** 19056\_Agency Letter\_OEH.pdf

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## Alyce Haast

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**From:** Alyce Haast  
**Sent:** Thursday, 13 June 2019 1:09 PM  
**To:** information@ntscorp.com.au  
**Subject:** Section 4.1.2 - Identification of Interested Aboriginal Parties: Raymond Terrace to Kings Hill  
**Attachments:** 19056\_Agency Letter\_NTS Corp.pdf

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artefact

13 June 2019

Hunter Local Land Services

via email: [admin.hunter@lls.nsw.gov.au](mailto:admin.hunter@lls.nsw.gov.au)

To whom it may concern,

**Re: Water and Wastewater Infrastructure between Raymond Terrace and the Kings Hill Urban Release Area Aboriginal Heritage Assessment**

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Arcadis, on behalf of the proponent, have engaged Artefact Heritage (Artefact) to prepare the ACHAR in accordance with the OEH 'Guide to investigating, assessment and reporting on Aboriginal cultural heritage in NSW'. Preparation of the ACHAR will include consultation with registered Aboriginal parties conducted in accordance with the 'Aboriginal cultural heritage consultation requirements for proponents 2010'.

The contact details for the proponent are:

Adam Smith  
Level 7, 116 Miller Street, North Sydney NSW 2060  
0497 794 863  
[adam.smith@app.com.au](mailto:adam.smith@app.com.au)

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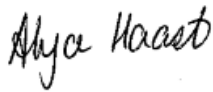
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Please forward any information available before 29 June 2019 to:

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Artefact Heritage  
Building B, 35 Saunders Street  
Pymont NSW 2009  
email: [alyce.haast@artefact.net.au](mailto:alyce.haast@artefact.net.au)

Kind Regards,



Alyce Haast  
Senior Heritage Consultant  
Artefact Heritage

[alyce.haast@artefact.net.au](mailto:alyce.haast@artefact.net.au)  
(02) 9518 8411



artefact

13 June 2019

National Native Title Tribunal

via email: [nswenquiries@nntt.gov.au](mailto:nswenquiries@nntt.gov.au)

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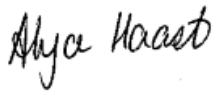
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Kind Regards,



Alyce Haast  
Senior Heritage Consultant  
Artefact Heritage

[alyce.haast@artefact.net.au](mailto:alyce.haast@artefact.net.au)  
(02) 9518 8411



artefact

13 June 2019

NTS Corp  
PO Box 2105  
Strawberry Hills NSW 2012

via email: [information@ntscorp.com.au](mailto:information@ntscorp.com.au)

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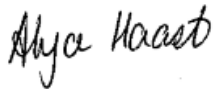


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Artefact Heritage

[alyce.haast@artefact.net.au](mailto:alyce.haast@artefact.net.au)  
(02) 9518 8411



artefact

13 June 2019

Office of Environment and Heritage  
Regional Operations, Hunter Central Coast Branch  
Level 4, 26 Honeysuckle Drive Newcastle

via email: [rog.hcc@environment.nsw.gov.au](mailto:rog.hcc@environment.nsw.gov.au)

To whom it may concern,

**Re: Water and Wastewater Infrastructure between Raymond Terrace and the Kings Hill Urban Release Area Aboriginal Heritage Assessment**

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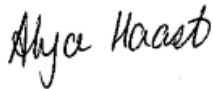
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13 June 2019

Office of the Registrar

via email: [adminofficer@oralra.nsw.gov.au](mailto:adminofficer@oralra.nsw.gov.au)

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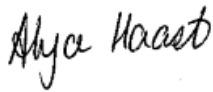
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(02) 9518 8411





artefact

13 June 2019

Port Stephens Council  
116 Adelaide Street  
Raymond Terrace NSW

via email: [council@portstephens.nsw.gov.au](mailto:council@portstephens.nsw.gov.au)

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[adam.smith@app.com.au](mailto:adam.smith@app.com.au)

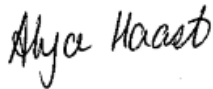
The proponent wishes to consult with any Aboriginal persons or organisations that hold cultural knowledge relevant to determining the significance of Aboriginal objects and places in the Raymond Terrace area. The purpose of community consultation with registered Aboriginal parties is to assist the proponent in the preparation of the ACHAR and, if required, an AHIP application. The purpose of consultation with registered Aboriginal parties is also to assist the Director General of OEH in his or her consideration and determination of the application.

In accordance with the OEH consultation requirements, I am writing to you to request the names and contact details that your organisation has for Aboriginal people or groups that hold cultural knowledge relevant to determining the significance of Aboriginal object(s) and/or place(s) in the area of the proposed project.

Please forward any information available before 29 June 2019 to:

Alyce Haast  
Artefact Heritage  
Building B, 35 Saunders Street  
Pyrmont NSW 2009  
email: [alyce.haast@artefact.net.au](mailto:alyce.haast@artefact.net.au)

Kind Regards,



Alyce Haast  
Senior Heritage Consultant  
Artefact Heritage

[alyce.haast@artefact.net.au](mailto:alyce.haast@artefact.net.au)  
(02) 9518 8411



artefact

13 June 2019

Worimi Local Aboriginal Land Council  
2163 Nelson Bay Road, Williamstown NSW 2318

via email: [reception@worimi.org.au](mailto:reception@worimi.org.au)

To whom it may concern,

**Re: Water and Wastewater Infrastructure between Raymond Terrace and the Kings Hill Urban Release Area Aboriginal Heritage Assessment**

PM No 1 Pty Ltd (the proponent) propose to submit a Designated Development application for installation of water and wastewater infrastructure between Raymond Terrace and the Kings Hill Urban Release Area. This will include a 4.2 kilometre wastewater pipeline, a 6.7 kilometre water pipeline, and a wastewater pumping station.

The location for proposed works is within the Port Stephens Local Government Area (LGA), and includes Rees James Road, Adelaide Street, Irrawang Street, Newbury Park, Lot 1 DP 1085482, Lot 113 DP 733181, Lot 5 DP 234521, and Lot 41 DP 1037411.

An Environmental Impact Statement (EIS) is being prepared by Arcadis Australia Pacific Pty Ltd (Arcadis) on behalf of PM No 1 Pty Ltd for the Designated Development application. In accordance with the Planning Secretary's Environmental Assessment Requirements (SEARs) 1291, an Aboriginal Cultural Heritage Assessment Report (ACHAR) must be prepared for the EIS.

If it is identified in the ACHAR and supporting documentation that Aboriginal objects will be impacted by the proposal, at least one application to the Office of Environment and Heritage (OEH) for an Aboriginal Heritage Impact Permit (AHIP) under Section 90 of the *National Parks and Wildlife Act 1974* will be required.

Arcadis, on behalf of the proponent, have engaged Artefact Heritage (Artefact) to prepare the ACHAR in accordance with the OEH 'Guide to investigating, assessment and reporting on Aboriginal cultural heritage in NSW'. Preparation of the ACHAR will include consultation with registered Aboriginal parties conducted in accordance with the 'Aboriginal cultural heritage consultation requirements for proponents 2010'.

The contact details for the proponent are:

Adam Smith  
Level 7, 116 Miller Street, North Sydney NSW 2060  
0497 794 863  
[adam.smith@app.com.au](mailto:adam.smith@app.com.au)

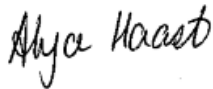
The proponent wishes to consult with any Aboriginal persons or organisations that hold cultural knowledge relevant to determining the significance of Aboriginal objects and places in the Raymond Terrace area. The purpose of community consultation with registered Aboriginal parties is to assist the proponent in the preparation of the ACHAR and, if required, an AHIP application. The purpose of consultation with registered Aboriginal parties is also to assist the Director General of OEH in his or her consideration and determination of the application.

In accordance with the OEH consultation requirements, I am writing to you to request the names and contact details that your organisation has for Aboriginal people or groups that hold cultural knowledge relevant to determining the significance of Aboriginal object(s) and/or place(s) in the area of the proposed project.

Please forward any information available before 29 June 2019 to:

Alyce Haast  
Artefact Heritage  
Building B, 35 Saunders Street  
Pyrmont NSW 2009  
email: [alyce.haast@artefact.net.au](mailto:alyce.haast@artefact.net.au)

Kind Regards,



Alyce Haast  
Senior Heritage Consultant  
Artefact Heritage

[alyce.haast@artefact.net.au](mailto:alyce.haast@artefact.net.au)  
(02) 9518 8411



artefact

1 July 2019

Mindaribba Local Aboriginal Land Council

Via email: [ceo@mindaribbalalc.org](mailto:ceo@mindaribbalalc.org)

To whom it may concern,

**Re: Water and Wastewater Infrastructure between Raymond Terrace and the Kings Hill Urban Release Area Aboriginal Heritage Assessment**

PM No 1 Pty Ltd (the proponent) propose to submit a Designated Development application for installation of water and wastewater infrastructure between Raymond Terrace and the Kings Hill Urban Release Area. This will include a 4.2 kilometre wastewater pipeline, a 6.7 kilometre water pipeline, and a wastewater pumping station.

The location for proposed works is within the Port Stephens Local Government Area (LGA), and includes Rees James Road, Adelaide Street, Irrawang Street, Newbury Park, Lot 1 DP 1085482, Lot 113 DP 733181, Lot 5 DP 234521, and Lot 41 DP 1037411.

An Environmental Impact Statement (EIS) is being prepared by Arcadis Australia Pacific Pty Ltd (Arcadis) on behalf of PM No 1 Pty Ltd for the Designated Development application. In accordance with the Planning Secretary's Environmental Assessment Requirements (SEARs) 1291, an Aboriginal Cultural Heritage Assessment Report (ACHAR) must be prepared for the EIS.

If it is identified in the ACHAR and supporting documentation that Aboriginal objects will be impacted by the proposal, at least one application to the Office of Environment and Heritage (OEH) for an Aboriginal Heritage Impact Permit (AHIP) under Section 90 of the *National Parks and Wildlife Act 1974* will be required.

Arcadis, on behalf of the proponent, have engaged Artefact Heritage (Artefact) to prepare the ACHAR in accordance with the OEH 'Guide to investigating, assessment and reporting on Aboriginal cultural heritage in NSW'. Preparation of the ACHAR will include consultation with registered Aboriginal parties conducted in accordance with the 'Aboriginal cultural heritage consultation requirements for proponents 2010'.

The contact details for the proponent are:

Adam Smith  
Level 7, 116 Miller Street, North Sydney NSW 2060  
0497 794 863  
[adam.smith@app.com.au](mailto:adam.smith@app.com.au)


The proponent wishes to consult with any Aboriginal persons or organisations that hold cultural knowledge relevant to determining the significance of Aboriginal objects and places in the Raymond Terrace area. The purpose of community consultation with registered Aboriginal parties is to assist the proponent in the preparation of the ACHAR and, if required, an AHIP application. The purpose of consultation with registered Aboriginal parties is also to assist the Director General of OEH in his or her consideration and determination of the application.

In accordance with the OEH consultation requirements, I am writing to you to request the names and contact details that your organisation has for Aboriginal people or groups that hold cultural knowledge relevant to determining the significance of Aboriginal object(s) and/or place(s) in the area of the proposed project.

Please forward any information available before 15 July 2019 to:

Alyce Haast  
Artefact Heritage  
Building B, 35 Saunders Street  
Pyrmont NSW 2009  
email: [alyce.haast@artefact.net.au](mailto:alyce.haast@artefact.net.au)

Kind Regards,



Alyce Haast  
Senior Heritage Consultant  
Artefact Heritage

[alyce.haast@artefact.net.au](mailto:alyce.haast@artefact.net.au)  
(02) 9518 8411



## Alyce Haast

---

**From:** Alyce Haast  
**Sent:** Monday, 1 July 2019 4:46 PM  
**To:** ceo@mindaribbalalc.org  
**Subject:** Section 4.1.2 Identification of Interested Aboriginal Parties: Raymond Terrace to Kings Hill  
**Attachments:** Agency Letter\_Mindaribba LALC\_190701.pdf; AA006855\_WasteWater\_003\_ProposalOverview\_A4P\_v4.pdf

Dear Sir or Madam,

I am commencing Aboriginal stakeholder consultation for a Water and Wastewater Infrastructure between Raymond Terrace and the Kings Hill Urban Release Area Aboriginal Heritage Assessment.

Please find attached a letter regarding step 4.1.2 – 'Notification of project proposal and registration of interest' of the Aboriginal cultural heritage consultation requirements for proponents 2010.


Kind regards,

**Alyce Haast**  
**Senior Heritage Consultant**

### ARTEFACT

**Telephone:** 61 2 9518 8411 **Mobile:** 0412 487 963  
**Address:** Level 4, Building B, 35 Saunders Street, Pyrmont NSW 2009  
**Web:** [www.artefact.net.au](http://www.artefact.net.au)

Cultural Heritage Management | Archaeology | Heritage Interpretation

 *We acknowledge the Traditional Custodians of Country in which we live and work, and pay our respects to them, their culture and their Elders past, present and future*

**Notice:** This message contains privileged and confidential information intended only for the use of the addressee. If you are not the intended recipient you must not disseminate, copy or take any action in reliance upon it. If you received this in error, please notify us immediately.

## Alyce Haast

---

**From:** Alyce Haast  
**Sent:** Thursday, 20 June 2019 4:47 PM  
**To:** admin.hunter@lls.nsw.gov.au  
**Subject:** FW: Section 4.1.2 - Identification of Interested Aboriginal Parties: Raymond Terrace to Kings Hill  
**Attachments:** 19056\_Agency Letter\_HLLS.pdf; AA006855\_WasteWater\_003\_ProposalOverview\_A4P\_v4.pdf

Dear Sir or Madam,

Please find attached with this email the project area map to accompany the Step 4.1.2 agency letter forwarded to the Hunter Local Land Service last week.


Thank you,

**Alyce Haast**  
**Senior Heritage Consultant**

### ARTEFACT

**Telephone:** 61 2 9518 8411 **Mobile:** 0412 487 963  
**Address:** Level 4, Building B, 35 Saunders Street, Pyrmont NSW 2009  
**Web:** [www.artefact.net.au](http://www.artefact.net.au)

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---

**From:** Alyce Haast  
**Sent:** Thursday, 13 June 2019 1:10 PM  
**To:** admin.hunter@lls.nsw.gov.au  
**Subject:** Section 4.1.2 - Identification of Interested Aboriginal Parties: Raymond Terrace to Kings Hill

Dear Sir or Madam,

I am commencing Aboriginal stakeholder consultation for a Water and Wastewater Infrastructure between Raymond Terrace and the Kings Hill Urban Release Area Aboriginal Heritage Assessment.

Please find attached a letter regarding step 4.1.2 – 'Notification of project proposal and registration of interest' of the Aboriginal cultural heritage consultation requirements for proponents 2010.

Kind regards,

**Alyce Haast**  
**Senior Heritage Consultant**

### ARTEFACT

**Telephone:** 61 2 9518 8411 **Mobile:** 0412 487 963  
**Address:** Level 4, Building B, 35 Saunders Street, Pyrmont NSW 2009  
**Web:** [www.artefact.net.au](http://www.artefact.net.au)

## Alyce Haast

---

**From:** Alyce Haast  
**Sent:** Thursday, 20 June 2019 4:46 PM  
**To:** reception@worimi.org.au  
**Subject:** FW: Section 4.1.2 - Identification of Interested Aboriginal Parties: Raymond Terrace to Kings Hill  
**Attachments:** 19056\_Agency Letter\_Worimi\_LALC.pdf; AA006855\_WasteWater\_003\_ProposalOverview\_A4P\_v4.pdf

Dear Sir or Madam,

Please find attached with this email the project area map to accompany the Step 4.1.2 agency letter forwarded to Worimi LALC last week.


Thank you,

**Alyce Haast**  
**Senior Heritage Consultant**

### ARTEFACT

**Telephone:** 61 2 9518 8411 **Mobile:** 0412 487 963  
**Address:** Level 4, Building B, 35 Saunders Street, Pyrmont NSW 2009  
**Web:** [www.artefact.net.au](http://www.artefact.net.au)

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---

**From:** Alyce Haast  
**Sent:** Thursday, 13 June 2019 1:10 PM  
**To:** reception@worimi.org.au  
**Subject:** Section 4.1.2 - Identification of Interested Aboriginal Parties: Raymond Terrace to Kings Hill

Dear Sir or Madam,

I am commencing Aboriginal stakeholder consultation for a Water and Wastewater Infrastructure between Raymond Terrace and the Kings Hill Urban Release Area Aboriginal Heritage Assessment.

Please find attached a letter regarding step 4.1.2 – 'Notification of project proposal and registration of interest' of the Aboriginal cultural heritage consultation requirements for proponents 2010.

Kind regards,

**Alyce Haast**  
**Senior Heritage Consultant**

### ARTEFACT

**Telephone:** 61 2 9518 8411 **Mobile:** 0412 487 963  
**Address:** Level 4, Building B, 35 Saunders Street, Pyrmont NSW 2009  
**Web:** [www.artefact.net.au](http://www.artefact.net.au)

Cultural Heritage Management | Archaeology | Heritage Interpretation

## Alyce Haast

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**From:** Alyce Haast  
**Sent:** Thursday, 20 June 2019 4:45 PM  
**To:** adminofficer@oralra.nsw.gov.au  
**Subject:** FW: Section 4.1.2 - Identification of Interested Aboriginal Parties: Raymond Terrace to Kings Hill  
**Attachments:** 19056\_Agency Letter\_Office\_of\_the\_Registrar.pdf

Dear Sir or Madam,

Please find attached with this email the project area map to accompany the Step 4.1.2 agency letter forwarded to the Office of the Registrar last week.


Thank you,

**Alyce Haast**  
**Senior Heritage Consultant**

### ARTEFACT

**Telephone:** 61 2 9518 8411 **Mobile:** 0412 487 963  
**Address:** Level 4, Building B, 35 Saunders Street, Pyrmont NSW 2009  
**Web:** [www.artefact.net.au](http://www.artefact.net.au)

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---

**From:** Alyce Haast  
**Sent:** Thursday, 13 June 2019 1:10 PM  
**To:** adminofficer@oralra.nsw.gov.au  
**Subject:** Section 4.1.2 - Identification of Interested Aboriginal Parties: Raymond Terrace to Kings Hill

Dear Sir or Madam,

I am commencing Aboriginal stakeholder consultation for a Water and Wastewater Infrastructure between Raymond Terrace and the Kings Hill Urban Release Area Aboriginal Heritage Assessment.

Please find attached a letter regarding step 4.1.2 – 'Notification of project proposal and registration of interest' of the Aboriginal cultural heritage consultation requirements for proponents 2010.

Kind regards,

**Alyce Haast**  
**Senior Heritage Consultant**

### ARTEFACT

**Telephone:** 61 2 9518 8411 **Mobile:** 0412 487 963  
**Address:** Level 4, Building B, 35 Saunders Street, Pyrmont NSW 2009  
**Web:** [www.artefact.net.au](http://www.artefact.net.au)

## Alyce Haast

---

**From:** Alyce Haast  
**Sent:** Thursday, 20 June 2019 4:45 PM  
**To:** information@ntscorp.com.au  
**Subject:** FW: Section 4.1.2 - Identification of Interested Aboriginal Parties: Raymond Terrace to Kings Hill  
**Attachments:** 19056\_Agency Letter\_NTS Corp.pdf; AA006855\_WasteWater\_003\_ProposalOverview\_A4P\_v4.pdf

Dear Sir or Madam,

Please find attached with this email the project area map to accompany the Step 4.1.2 agency letter forwarded to NTS Corp last week.


Thank you,

**Alyce Haast**  
**Senior Heritage Consultant**

### ARTEFACT

**Telephone:** 61 2 9518 8411 **Mobile:** 0412 487 963  
**Address:** Level 4, Building B, 35 Saunders Street, Pyrmont NSW 2009  
**Web:** [www.artefact.net.au](http://www.artefact.net.au)

Cultural Heritage Management | Archaeology | Heritage Interpretation

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---

**From:** Alyce Haast  
**Sent:** Thursday, 13 June 2019 1:09 PM  
**To:** information@ntscorp.com.au  
**Subject:** Section 4.1.2 - Identification of Interested Aboriginal Parties: Raymond Terrace to Kings Hill

Dear Sir or Madam,

I am commencing Aboriginal stakeholder consultation for a Water and Wastewater Infrastructure between Raymond Terrace and the Kings Hill Urban Release Area Aboriginal Heritage Assessment.

Please find attached a letter regarding step 4.1.2 – 'Notification of project proposal and registration of interest' of the Aboriginal cultural heritage consultation requirements for proponents 2010.

Kind regards,

**Alyce Haast**  
**Senior Heritage Consultant**

### ARTEFACT

**Telephone:** 61 2 9518 8411 **Mobile:** 0412 487 963  
**Address:** Level 4, Building B, 35 Saunders Street, Pyrmont NSW 2009  
**Web:** [www.artefact.net.au](http://www.artefact.net.au)

## Alyce Haast

---

**From:** Alyce Haast  
**Sent:** Thursday, 20 June 2019 4:44 PM  
**To:** council@portstephens.nsw.gov.au  
**Subject:** FW: Section 4.1.2 - Identification of Interested Aboriginal Parties: Raymond Terrace to Kings Hill  
**Attachments:** 19056\_Agency Letter\_Port Stephens Council.pdf; AA006855\_WasteWater\_003\_ProposalOverview\_A4P\_v4.pdf

Dear Sir or Madam,

Please find attached with this email the project area map to accompany the Step 4.1.2 agency letter forwarded to Port Stephens council last week.


Thank you,

**Alyce Haast**  
**Senior Heritage Consultant**

### ARTEFACT

**Telephone:** 61 2 9518 8411 **Mobile:** 0412 487 963  
**Address:** Level 4, Building B, 35 Saunders Street, Pyrmont NSW 2009  
**Web:** [www.artefact.net.au](http://www.artefact.net.au)

Cultural Heritage Management | Archaeology | Heritage Interpretation

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---

**From:** Alyce Haast  
**Sent:** Thursday, 13 June 2019 1:10 PM  
**To:** council@portstephens.nsw.gov.au  
**Subject:** Section 4.1.2 - Identification of Interested Aboriginal Parties: Raymond Terrace to Kings Hill

Dear Sir or Madam,

I am commencing Aboriginal stakeholder consultation for a Water and Wastewater Infrastructure between Raymond Terrace and the Kings Hill Urban Release Area Aboriginal Heritage Assessment.

Please find attached a letter regarding step 4.1.2 – 'Notification of project proposal and registration of interest' of the Aboriginal cultural heritage consultation requirements for proponents 2010.

Kind regards,

**Alyce Haast**  
**Senior Heritage Consultant**

### ARTEFACT

**Telephone:** 61 2 9518 8411 **Mobile:** 0412 487 963  
**Address:** Level 4, Building B, 35 Saunders Street, Pyrmont NSW 2009  
**Web:** [www.artefact.net.au](http://www.artefact.net.au)

Cultural Heritage Management | Archaeology | Heritage Interpretation



## Alyce Haast

---

**From:** Josh Symons  
**Sent:** Thursday, 20 June 2019 9:21 AM  
**To:** gillian.goode@environment.nsw.gov.au  
**Cc:** Alyce Haast  
**Subject:** Kings Hill Wastewater Pipeline - Step 4.1.2  
**Attachments:** AA006855\_WasteWater\_003\_ProposalOverview\_A4P\_v4.pdf

Hi Gillian,

Please find attached with this email the project area map to accompany the Step 4.1.2 agency letter forwarded to OEH last week.

Thank you,


Josh

**Josh Symons**  
**Principal**

### ARTEFACT

**Telephone:** 61 2 9518 8411 **Mobile:** 0402 433 432  
**Address:** Level 4, Building B, 35 Saunders Street, Pyrmont NSW 2009  
**Web:** [www.artefact.net.au](http://www.artefact.net.au)

Cultural Heritage Management | Archaeology | Heritage Interpretation

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## Agency Responses

This section has been redacted from the public version of this report

## Registration of Interest

Example of Registration of Interest Letter sent to potential stakeholders



artefact

02 July 2019

XXXX  
10 XXXX Place  
XXXX NSW 2000  
XXXX@live.com

Dear XXXX,

**Re: Water and Wastewater Infrastructure between Raymond Terrace and the Kings Hill Urban Release Area Aboriginal Heritage Assessment – Step 4.1.3 Registration of interest**

PM No 1 Pty Ltd (the proponent) propose to submit a Designated Development application for installation of water and wastewater infrastructure between Raymond Terrace and the Kings Hill Urban Release Area. This will include a 4.2-kilometre wastewater pipeline, a 6.7-kilometre water pipeline, and a wastewater pumping station.

An Environmental Impact Statement (EIS) is being prepared by Arcadis Australia Pacific Pty Ltd (Arcadis) on behalf of PM No 1 Pty Ltd for the Designated Development application. In accordance with the Planning Secretary's Environmental Assessment Requirements (SEARs) 1291, an Aboriginal Cultural Heritage Assessment Report (ACHAR) must be prepared for the EIS.

If it is identified in the ACHAR and supporting documentation that Aboriginal objects will be impacted by the proposal, at least one application to the Office of Environment and Heritage (OEH) for an Aboriginal Heritage Impact Permit (AHIP) under Section 90 of the *National Parks and Wildlife Act 1974* will be required.

Arcadis, on behalf of the proponent, have engaged Artefact Heritage (Artefact) to prepare the ACHAR in accordance with the 'Guide to investigating, assessing and reporting on Aboriginal cultural heritage in NSW' (OEH 2011). Preparation of the ACHAR will include consultation with registered Aboriginal parties conducted in accordance with the 'Aboriginal cultural heritage consultation requirements for proponents 2010' (OEH 2010).

In accordance with these requirements the proponent would like to consult with any Aboriginal persons or organisations that hold cultural knowledge relevant to determining the significance of Aboriginal objects and places in the Raymond Terrace and Kings Hill area. The purpose of community consultation is to assist the proponent in identifying and describing the Aboriginal cultural heritage values within the proposal area and aid in the documentation of these values in the environmental assessment.

The contact details for the proponent are:

Adam Smith  
Level 7, 116 Miller Street, North Sydney NSW 2060  
0497 794 863  
adam.smith@app.com.au

If you hold cultural knowledge of the Raymond Terrace and Kings Hill area, we invite you to register your interest in the process of community consultation. Please forward your registration of interest in writing before **16 July 2019** to:

Jennifer Norfolk  
Artefact Heritage  
Level 4, Building B  
35 Saunders St  
Pymont, 2009  
Phone: 95188411  
or email [jennifer.norfolk@artefact.net.au](mailto:jennifer.norfolk@artefact.net.au)

Please be advised that, in accordance with the consultation requirements, if you are registering an interest in the project your contact details will be forwarded to OEH and Worimi Local Aboriginal Land Council, unless you specify that you do not wish your contact details to be released.

Kind Regards,

A handwritten signature in dark ink, appearing to read 'J Norfolk', is positioned above the printed name and title.

Jennifer Norfolk  
Heritage Consultant  
Artefact Heritage

[Jennifer.norfolk@artefact.net.au](mailto:Jennifer.norfolk@artefact.net.au)  
02 9518 8411

**LEGEND**

- Proposed alignment
- Ancillary facilities
- Kings Hill URA
- NSW Coastal Management SEPP (2016) Coastal Wetlands
- Coastal Wetlands Proximity Area

**ARCADIS AUSTRALIA PACIFIC PTY LTD**  
 40/41, 19-20, 201-202  
 Level 10, 201-202, 201-202  
 19-20, 201-202, 201-202  
 Newcastle, NSW 2300  
 Australia  
 Newcastle, NSW 2300  
 Australia

1:2,525,540 at A4

**ARCADIS**

NEWCASTLE



## Response to Registration of Interest

This section has been redacted from the public version of this report

## ACHAR Methodology

Sample of methodology letter sent to



artefact

13 August 2019

XXXX Pty Ltd

XXXXX@bigpond.com

Dear XXXX,

**Re: Water and Wastewater Infrastructure between Raymond Terrace and the Kings Hill Urban Release Area – Aboriginal Heritage Assessment: Proposed ACHAR Methodology**

Thank you for registering as a stakeholder for the proposed infrastructure project between Raymond Terrace and the Kings Hill Urban Release Area (Kings Hill URA). I am looking forward to working with you on this proposal. Included below are details, and the proposed Aboriginal cultural heritage assessment (ACHAR) methodology for your review.

If you would like to comment on the Aboriginal cultural heritage of the study area or the proposed methodology, please provide your response by **10 September 2019**. Please address your response to me at:

Jennifer Norfolk  
Artefact Heritage  
Level 4, Building B, 35 Saunders Street  
Pyrmont NSW 2009

Or via email: [jennifer.norfolk@artefact.net.au](mailto:jennifer.norfolk@artefact.net.au)

In your response, please consider the following points:

- Do you know of any objects or places of value to Aboriginal people in the study area or locality?
- Are there any protocols that you would like incorporated into the assessment methodology?
- Are there any access requirements or restrictions that should be applied to the information you are providing?

Please also note that consultation will not necessarily involve paid engagement, as this is not a requirement of the consultation guidelines issued by the Office of Environment and Heritage.

## 1.1 Proposed Development

Kings Hill Development (KHD) proposed to install water and wastewater infrastructure between Raymond Terrace and Kings Hill to service the future Kings Hill Urban Release Area (URA). The proposed water infrastructure alignment will comprise the following:

- A 6.7-kilometre-long water main lead in, from Raymond Terrace Water Pump Station to Kings Hill URA
- A 4.2-Kilometre-long sewer rising main and transfer wastewater pump station, from the Kings Hill URA to the existing gravity network at MH K1950 Raymond Terrace.

- The majority of the alignment falls within cleared HWC-owned land and the road verges of Rees James Road, Adelaide Street and Irrawang Street. Kings Hill URA is located at the northern extent of the water main and the sewer rising main alignment. The pipelines would be trenched, with some under boring where the pipeline crosses under local roads.

## 1.2 Proposed Assessment Methodology

The Secretary's Environmental Assessment Requirements (SEAR 1291) states that an Aboriginal Cultural Heritage Assessment Report (ACHAR) must be prepared in accordance with the Office of Environment and Heritage Guidelines.

The ACHAR will be completed in accordance with the relevant OEH guidelines:

- *Aboriginal Cultural Heritage Consultation Requirements for Proponents*
- *Code of Practice for Archaeological Investigation of Aboriginal Objects in New South Wales*

The assessment will also be guided by:

- *Guide to Investigating, Assessing and Reporting on Aboriginal Cultural Heritage in NSW*

The initial stages of this process have been completed, and a list of Registered Aboriginal Parties (RAPs) has been compiled. The present letter provides the RAPs with project information and the proposed assessment methodology for review.

An archaeological survey has been conducted for the study area, the objectives of which were to:

- Assess the Aboriginal archaeological values of the study area in accordance with the Code of Practice
- Identify Aboriginal archaeological and cultural heritage values that may be impacted by the proposed works
- Identify any further investigations, and mitigation and management measures that may be required, should the project proceed.

Reporting relating to the archaeological survey will be incorporated into the ACHAR and include:

- A description of the project and the extent of the study area
- An archaeological significance assessment of the study area
- A description of the statutory requirements for the protection of Aboriginal heritage
- An impact assessment for recorded Aboriginal sites and areas of archaeological potential
- Provision of measures to avoid, minimise, and if necessary, offset the predicted impacts on Aboriginal heritage values.

An ACHAR would also assesses Aboriginal heritage significance of the study area, based on comments received from the RAPs and the results of the archaeological survey. The potential impact of the proposed infrastructure works on this significance would be assessed, and management recommendations would be developed accordingly.

A draft copy would be sent out for your review, prior to finalisation of the document.

I would like to ask you to review the above information and let me know if you have any comments to make. As mentioned, I would appreciate if you could provide comments by **10 September 2019**.

Thank you very much for your involvement in the project. If you require any additional information, please do not hesitate to contact me.

Kind Regards,

A handwritten signature in dark ink, appearing to read 'J. Norfolk', is centered below the 'Kind Regards,' text.

Jennifer Norfolk  
Artefact Heritage  
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## Responses to ACHAR Methodology

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## Draft ACHAR sent for review

This section has been redacted from the public version of this report

## Responses to Draft ACHAR

This section has been redacted from the public version of this report

## APPENDIX C ABORIGINAL HERITAGE MAPS

**Figure 2: AHIMS Map**

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**Figure 3: AHIMS Sites in close proximity to the Proposal Site**

This map has been redacted from the public version of this report



**Figure 4: Artefact Scatter and PAD KHW01**

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**Figure 5: KHW02 PAD**

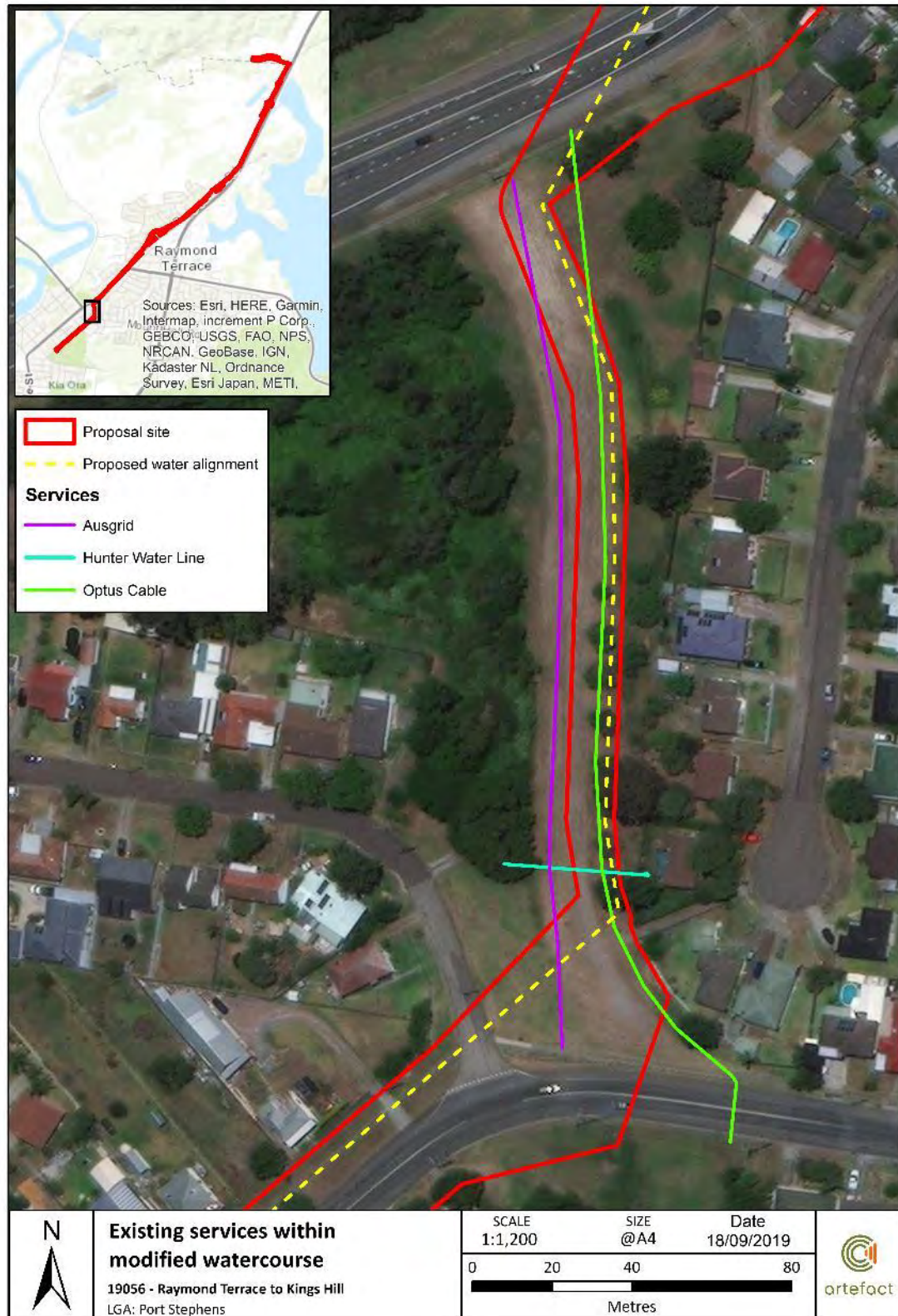
This map has been redacted from the public version of this report

Figure 6: Survey Units





Figure 7: Modified Watercourse



## APPENDIX D AHIMS SEARCH RESULTS



artefact

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