

9.3 Appendix D: PACHCI Stage 2 Addendum to ASR



31 March 2014

Peter Hawkins
Project Development Manager
Development South
Infrastructure Development
Roads and Maritime Services
Level 6, 90 Crown Street
Wollongong NSW 2500

Dear Peter,

Re: Addendum to the PACHCI Stage 2 archaeological survey report for the Albion Park Rail Bypass Project

Artefact Heritage prepared an archaeological survey report in 2013 as part of Stage 2 of the Roads and Maritime Services (Roads and Maritime) *Procedure for Aboriginal Cultural Heritage Consultation and Investigation 2011* (PACHCI) of the proposed Albion Park Rail Bypass Project (previously referred to as the Yallah to Oak Flats Road Upgrade). Following finalisation of that document in June 2013, Roads and Maritime engaged Artefact Heritage to prepare an addendum to that investigation for properties within the study area that were not accessible for the original investigation, as well as an addition to the study area that incorporates the Croom Regional Sporting Complex. For the purposes of this report, the first PACHCI Stage 2 survey area is referred to as the original study area and the addendum PACHCI Stage 2 survey area is referred to as the current study area.

The aim of this investigation is to identify Aboriginal sites or areas of archaeological potential within the previously inaccessible areas and the additional area, and to assess the archaeological significance of any sites recorded. An Aboriginal Heritage Information Management System (AHIMS) database search will be undertaken to ascertain whether there are any recorded sites within the additional areas, and whether any sites have been recorded within or adjacent to the remainder of the original study area since the initial investigation. A ground survey will be conducted within those properties that could not be accessed for the original investigation, as well as within the additional area incorporating the Croom Regional Sporting Complex. This addendum report is to be read in conjunction with the 2013 PACHCI Stage 2 archaeological survey report prepared by Artefact Heritage, and will be included as an Appendix to that document.

The proposal and study area

Roads and Maritime is currently examining whether a proposed road corridor between Yallah and Oak Flats is suitable to provide a long term solution for an upgrade of the Princes Highway. Artefact Heritage has been engaged by Roads and Maritime to conduct an Aboriginal archaeological survey and assessment for the proposal in accordance with Stage 2 of the RMS PACHCI. The resulting ASR will be used to guide the future planning of an upgrade of the Princes Highway between Yallah and Oak Flats.

This addendum report deals with the properties within the proposed road corridor that were not accessible for the original investigation, as well as an addition to the study area that incorporates the Croom Regional Sporting Complex. These areas combined make up the current study area (Figure 1).

Objectives of addendum

This letter report outlines the following information:

- Description and analysis of the identified Aboriginal sites within the current study area.
- An updated Office of Environment and Heritage (OEH) Aboriginal Heritage Information Management System (AHIMS) search.
- Development of a significance assessment and impact assessment for Aboriginal sites located within the current study area.
- Management and mitigation measures for Aboriginal sites located within the current study area.

Further details of the proposal, including environmental and archaeological context of the local area, Aboriginal histories of the area, and predictive modelling are outlined in the 2013 archaeological survey report (Artefact Heritage 2013).

Aboriginal stakeholder consultation

Aboriginal stakeholder consultation throughout the preparation of this document was conducted by Barry Gunther, Roads and Maritime Senior Aboriginal Cultural Heritage Advisor, and Joanne Damcevski, Roads and Maritime Aboriginal Cultural Heritage Officer.

As the current study area is located within the boundaries of the Illawarra Local Aboriginal Land Council (ILALC), representatives of ILALC were invited to take part in the additional survey by Barry Gunther. Pamela Glover and Allan Walker, both representatives of ILALC, participated in the additional survey on 25-27 February 2014 inclusive. A copy of the report on the survey prepared by ILALC is attached to this report.

Figure 1: The study area (background © Google 2014 and © NSW LPI).



Legislative context

This letter report addendum was prepared in accordance with the following NSW legislation and legislative guidelines:

National Parks & Wildlife Act (1974)

The *National Parks & Wildlife Act 1974* (the NP&W Act) provides statutory protection for all Aboriginal 'objects' (consisting of any material evidence of the Aboriginal occupation of NSW) under Section 90 of the Act, and for 'Aboriginal Places' (areas of cultural significance to the Aboriginal community) under Section 90. Aboriginal objects are afforded automatic statutory protection in NSW whereby it is an offence to:

'damage, deface or destroy Aboriginal sites without the prior consent of the Director-General of the National Parks and Wildlife Service (now the OEH).'

The Act defines an Aboriginal 'object' as:

'any deposit, object or material evidence (not being a handicraft for sale) relating to indigenous and non-European habitation of the area that comprises New South Wales, being habitation before or concurrent with the occupation of that area by persons of non-Aboriginal European extraction, and includes Aboriginal remains'.

The Act was recently amended (2010), with the legislative structure for seeking permission to impact on heritage items modified. A s90 permit is now the only Aboriginal Heritage Impact Permit (AHIP) available and may only be granted by OEH if the conditions of the 'due diligence guidelines', and/or an 'archaeological investigation' have been met. The penalties and fines for damaging or defacing an Aboriginal object have also increased.

The Environmental Planning and Assessment Act 1979

The *Environmental Planning and Assessment Act 1979* (the EP&A Act) establishes the framework for cultural heritage values to be formally assessed in the land use planning and development consent process. The EP&A Act requires that environmental impacts are considered prior to land development; this includes impacts on cultural heritage items and places as well as archaeological sites and deposits. The overall study area falls within the boundaries of the Wollongong and Shellharbour Local Government Areas and is covered by the Wollongong Local Environmental Plan (LEP) 2009 and the Shellharbour LEP 2013. As the proposal is being undertaken by a state agency (Roads and Maritime), the LEP is overridden by the State Environmental Planning Policy (Infrastructure) (ISEPP) 2007.

Investigators and contributors

This report was written by Samantha Gibbins, archaeologist at Artefact Heritage. Project Director Dr Sandra Wallace provided management input and reviewed the report.

OEH Aboriginal Heritage Information Management System (AHIMS) search

A search of the OEH AHIMS site register was undertaken on 20 February 2014 (Client Service ID 125766). An earlier AHIMS search was conducted on 23 April 2013 (Client Service ID 98600). The later search on 20 February was required to determine whether any new sites had been recorded within the study area, including the additional area incorporating the Croom Regional Sporting Complex (the current study area), since the first search was undertaken.

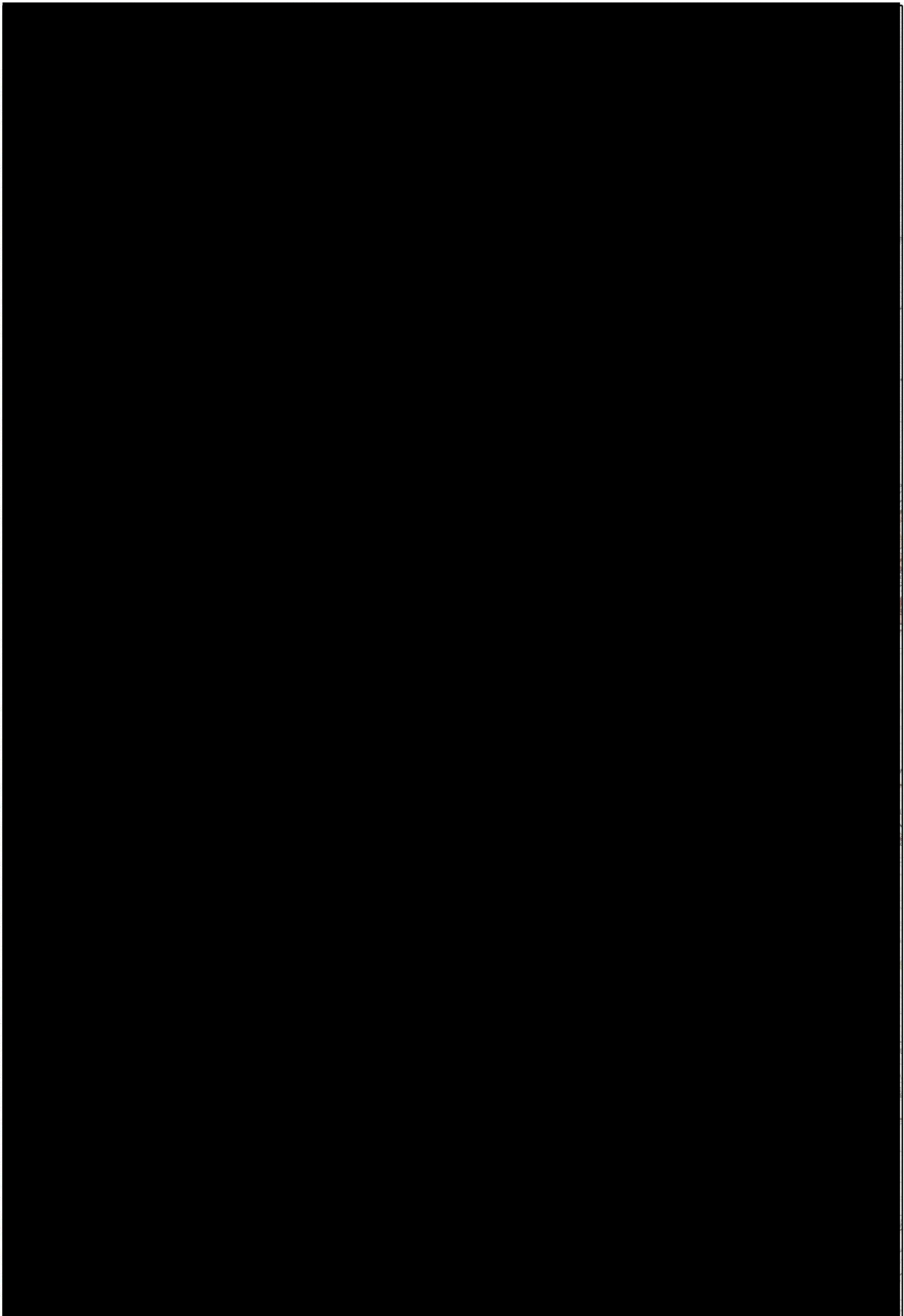
A search of 10.5 x 8.7 kilometre area centred on the study area was undertaken, with a total of 104 sites identified. The distribution of recorded sites within the search area is shown in (Figure 2). The location of Aboriginal sites is considered culturally sensitive information. It is advised that this information, including the AHIMS data appearing on the heritage map for the proposal, be removed from this report if it is to enter the public domain.

The frequency of recorded site types is summarised in Table 1. Of the 104 sites previously recorded in the 10.5 x 8.7 kilometre search area, Artefact sites are predominant (n=73). The remaining site types include Shell with Artefact (n=15); Potential Archaeological Deposit (PAD) (n=7); Shell (n=6); Modified Tree (n=2); and Modified Tree with Artefact (n=1). It can be seen in Figure 2 that the majority of sites are located within 200 metres of water sources such as Duck Creek, Macquarie Rivulet, Marshall Mount Creek and their tributaries, or close to the shores of Lake Illawarra. The site distribution is also a reflection of the pattern of archaeological assessments undertaken in relation to development activities.

Table 1: Frequency of site features from AHIMS data

Site Feature	Frequency	Percentage
Artefact	73	70.2
Shell; Artefact	15	14.4
PAD	7	6.7
Shell	6	5.8
Modified Tree	2	1.9
Modified Tree; Artefact	1	1.0

Figure 2: AHIMS results within/near the study area. Background image © NSW LPI.



Two previously recorded sites are located within the original study area (Figure 8). A substantial artefact scatter was recorded during survey work undertaken by AMBS (2006a) within the West Dapto Release Area (AHIMS site 52-5-0484) at approximately 420 metres to the south of Yallah Road. This site is duplicated within the AHIMS database as site 52-5-0512. Another artefact scatter was recorded by Navin, Officer and McIntyre as part of research for a Bachelor of Arts Honours thesis (Navin 1987) near the southern bank of Macquarie Rivulet (AHIMS site 52-5-0227). Description of these sites and an assessment of their significance are provided in the 2013 archaeological survey report, along with recommended mitigation measures (Artefact Heritage 2013). No sites have been newly recorded within or adjacent to the remainder of the original study area since the initial investigation.

No other previously recorded sites registered on AHIMS are located within or in close proximity to the previously inaccessible areas and the additional area that incorporates the Croom Regional Sporting Complex that make up the current study area.

Previously recorded Aboriginal sites that have not been registered on AHIMS

One previously recorded site that has not been registered on AHIMS is located within the current study area, in the industrial estate immediately to the south of Darcy Dunster Park. Ainsworth Heritage conducted an Aboriginal heritage due diligence assessment within the existing garden centre complex at [REDACTED]. A small midden site (AHUGC001), approximately two metres long, was recorded beneath a sediment trap at the north-eastern corner of the development site (Figure 8). The midden comprised a minimal scatter of shells and fragments of shell, including turbo, cockle and whelks. None of the intact shells were greater than four centimetres in length. It was noted that the midden appeared to be eroding out of the edge of the development area. The stratigraphy of the midden was not evident from the surface examination and it was suggested that the midden may have been disturbed or shifted during construction of the road. It could not be determined how far the midden may extend beneath the development area (Ainsworth Heritage 2012: 38). It was recommended that design modifications be implemented in order to avoid impact to the site and prevent the need for an AHIP (Ainsworth Heritage 2012: 44).

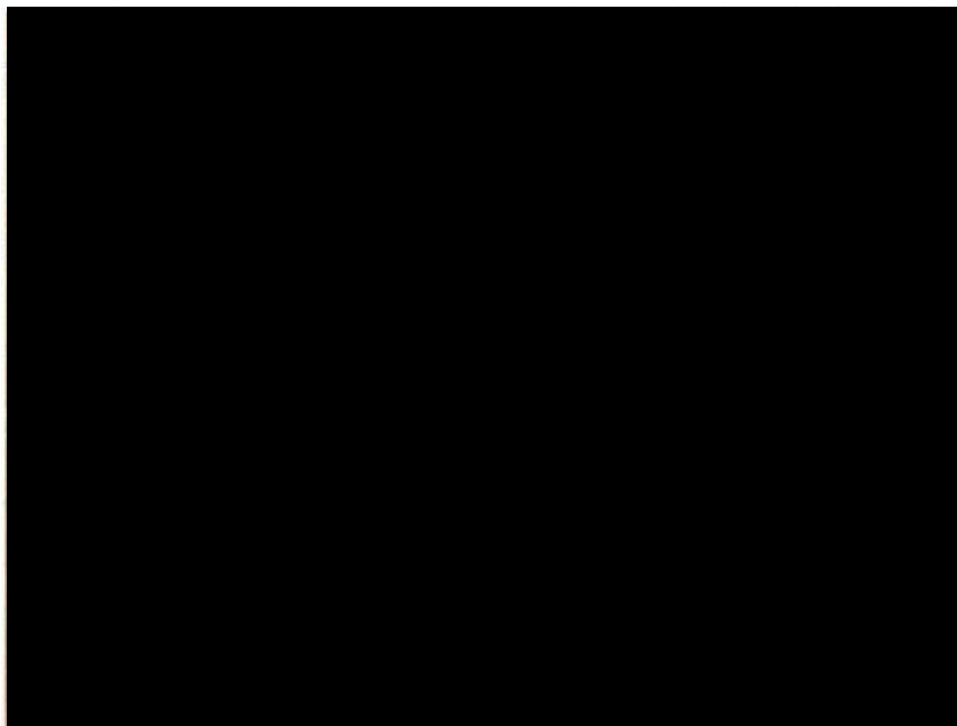
An Aboriginal heritage assessment was conducted within the Tate (former Delmo) property by HLA-Envirosciences in 2007. This includes the portion of that property within the proposed road corridor. An isolated Aboriginal object was identified on the bank of Frazers Creek, approximately 85 metres east of the current study area (Figure 2). It was concluded that the artefact was likely to have been disturbed by dredging activities and suggested that the property was likely to have been heavily modified by flooding events and historical period landform modifications (HLA 2007). This site is not registered on AHIMS.

Previously recorded Aboriginal archaeological potential

AHMS (2008)

Archaeological and Heritage Management Solutions (AHMS) undertook an Aboriginal and Historical Assessment and Impact Assessment at Lot 11 DP 883605, Albion Park in 2008. This area is immediately to the south of Tongarra Road, and incorporates part of the addition to the study area to the north of the Croom Regional Sporting Complex. An area of high potential for Aboriginal objects to occur in undisturbed A horizon soils at the top of the waning upper slope to within the first 150 metres east of Frazer's Creek was identified by AHMS (2008: 14). An area of moderate potential for Aboriginal objects to occur within 50 metres to the east and west of Frazer's Creek was also identified (Figure 3).

Figure 3: Approximate areas of Aboriginal archaeological potential identified by AHMS (2008: Fig. 7).
Yellow = low potential; orange = moderate potential; red = high potential



Artefact Heritage (2013)

One area of potential archaeological deposit (PAD) was identified during the initial survey of the proposed road corridor undertaken by Artefact Heritage in 2013. This is located along a very gentle lower slope less than 200 metres to the east of Frazers Creek (YTOF PAD 1), south of the Croom Regional Sporting Complex. Description of this PAD and recommended mitigation measures are provided by Artefact Heritage (2013). This PAD is discussed in more detail below.

Survey methodology

The study area was divided into seven survey units, some of which contained multiple landform units (Figure 4). The same survey methodology used during the original survey was employed (Artefact Heritage 2013: 25, 27).

A sample survey of Survey Units 5 and 6 was undertaken. A sample survey is acceptable under the OEH Code of Practice with justification. A sample survey of Survey Unit 5 was conducted primarily because the majority of the unit was covered in trees, dense grass and low-lying shrubs. Ground surface visibility across the majority of the survey unit was nil. A sample survey of Survey Unit 6 was undertaken because the majority of the survey unit was heavily disturbed through the installation of multiple sports fields, associated infrastructure and landscaping. Dense grass cover across most of the survey unit severely limited the ground surface visibility.

Survey results

Effective survey coverage

The study area was divided into seven survey units, all of which contained multiple landform units (Figure 4). Although mostly cleared of original vegetation, the landforms within the study area (flats, slopes and terrace) were covered in dense grass that limited ground surface visibility to zero, except in the odd areas of exposure. The only areas of surface visibility were observed in vehicle tracks, animal tracks, exposures around tree bases, exposures around sports fields and other areas of disturbance, and odd patches of erosion on the steeper slopes. Standing sections of deposit could be observed in some places along drainage channels. Vegetation was impenetrable or extremely dense in several sections of the study area and these were not surveyed. Visibility and exposure levels have been taken into consideration in determining the effective coverage area on this survey (Table 2 and Table 3).

Table 2: Survey Coverage

Survey Unit	Landform	Survey unit area (m ²)	Visibility (%)	Exposure (%)	Effective coverage area (m ²)	Effective coverage (%)
1	Modified	11,196	1	10	11.2	0.1
2	Flat, open depression, slope	113,197	1	10	113.2	0.1
3	Flat, open depression	10,749	1	10	10.8	0.1
4	Flat, open depression, slope	74,656	5	10	373.3	0.5
5*	Open depression, slope	58,010	5	20	580	1

Survey Unit	Landform	Survey unit area (m ²)	Visibility (%)	Exposure (%)	Effective coverage area (m ²)	Effective coverage (%)
6*	Flat, open depression, slope	72,350	5	20	723.5	1
7	Flat, terrace, open depression, slope	102,586	5	10	512.9	105

* = sample survey area

Table 3: Landform survey coverage

Landform	Landform area (m ²)	Area effectively surveyed (m ²)	% of landform effectively surveyed	Number of sites	Number of artefacts or features
Modified	11,196	11.2	0.1	1 site (AHUGC001)	-
Flat	132,478	363.1	0.27		
Open depression	44,590	228.2	0.51		-
Slope	235,716	1628.4	0.7	2 PAD (YTOF PAD1 and YTOF PAD3)	-
Terrace	18,764	94	0.5	1 site (YTOF IF1) 1 PAD (YTOF PAD2)	1

Figure 4: Overview of Survey Units (background © Google 2014 and © NSW LPI).



Survey observations

Survey Unit 1

Survey Unit 1 encompasses the industrial estate immediately to the south of Darcy Dunster Park (Figure 5). This estate, which includes a nursery and other businesses, is located across a terrace landform approximately 40 metres to the south of Macquarie Rivulet. Survey Unit 1 has been subject to high levels of disturbance associated with the construction of buildings and sheds, and the installation of paved roads, car park areas and landscaping. Levelling through the use of introduced fill was evident, and portions of the garden centre (nursery section) at the northern end had recently been scraped, with the earth mounded up along the northern boundary of the property.

According to the owner of the garden centre that currently occupies the northern third of the survey unit, the site was originally a sand and soil depot established in 1998. This area was very swampy, and in order to establish the depot excavation was undertaken across the area up to a depth of 600 millimetres. Imported fill was used to level the site, which was then compacted to facilitate heavy vehicle access (Michael McGill, personal communication, February 2014).

Ground surface visibility across the survey area was generally nil due to coverage by the buildings, paved surfaces and landscaped areas Plate 1. The bulk of the ground surface in the garden centre nursery was covered in matting and pot plants. Exposures were limited to the scraped area through the garden centre, and the small standing section along the western edge of the access road to the garden centre (Plate 2 and Plate 3). The middle lot within the industrial complex, currently occupied by DMT, could not be accessed during the survey because the gate was locked. However, it was evident in the standing section along the eastern property boundary that this lot has been levelled with introduced fill and the original ground surface would not have been visible in the area.

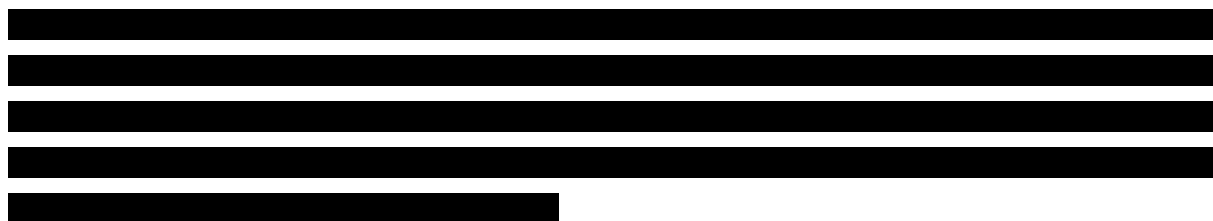


Figure 5: Survey Unit 1 (background © Google 2014).

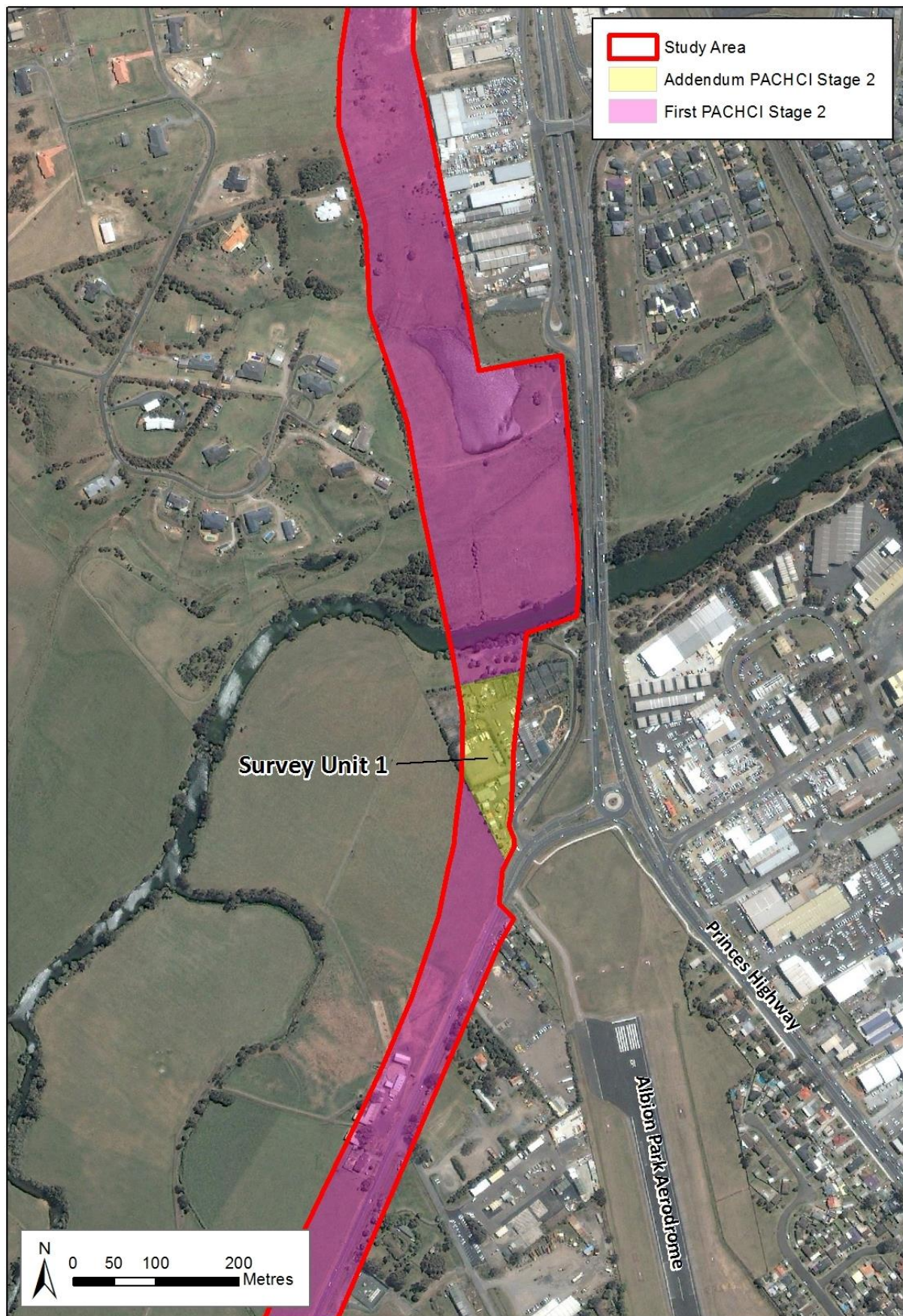


Plate 1: Survey Unit 1 – levelled, gravel surface, view to SW.



Plate 2: Survey Unit 1 – scraped surface through nursery (mounded earth to left), view to NE.



Plate 3: Survey Unit 1 – [REDACTED], view to SW.

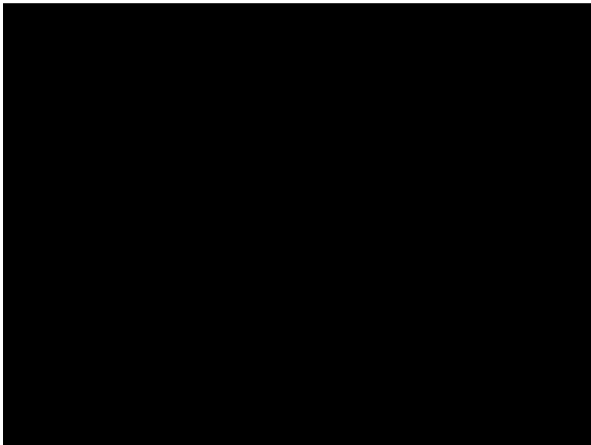
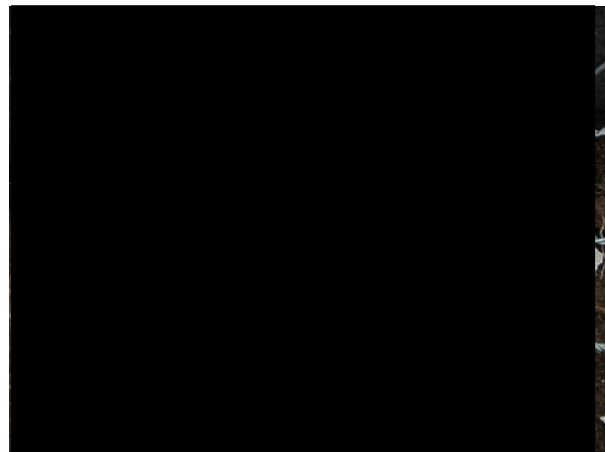


Plate 4: Survey Unit 1 – [REDACTED]



Survey Unit 2

Survey Unit 2 incorporates three main landform units – flat, open depression and slope. The section of the survey unit that crosses over the Illawarra Highway is classed as modified. Survey Unit 2 is a single, linear strip of land that crosses over the Illawarra Highway in the north and runs southwards, then south-eastwards, across a flat, low-lying landform towards Tongarra Road (Figure 6). The survey unit crosses over an unnamed drainage channel and two east-west branches of Frazers Creek, all of which have been modified and lead to dams and/or wetlands. To the south of the southern-most branch of Frazers Creek, the land rises up gently towards Tongarra Road and also slopes up gently, then more steeply, to the east.

Ground surface visibility across Survey Unit 2 was generally nil due to the dense grass cover. Some infrequent exposures were present in areas of disturbance, such as along drainage channels, animal tracks, vehicle tracks and erosion scours. Significant disturbance was noted at the northern end of the survey unit, associated with the construction of the Illawarra Highway (Plate 5). The flat is used for

pastoral purposes and an underground gas pipeline runs from north to south through the area. Much of the land was waterlogged, confirming that the area is frequently inundated (Plate 6 and Plate 7). The slightly more elevated slope landform at the southern end of the survey unit is positioned between two north-south running arms of Frazers Creek, within the floodplain, and would be subject to frequent inundation. This end of the survey unit has also been substantially disturbed by the construction of Tongarra Road (Plate 8).

Plate 5: Survey Unit 2 – northern end (Illawarra Highway in the background), view to south.



Plate 6: Survey Unit 2 – view to SE across proposed road corridor (note dense grass).



Plate 7: Survey Unit 2 – view to NW across proposed road corridor from southern-most branch of Frazers Creek (wetlands to left of frame).



Plate 8: Survey Unit 2 – sloping landform at southern end of survey unit (Tongarra Road in background), view to south.



Figure 6: Survey Unit 2 (background © Google 2014).



Survey Unit 3

Survey Unit 3 incorporates two main landform units – flat and open depression. The survey unit is bounded by Frazers Creek along the eastern edge and sports fields along the western edge (Figure 7). Ground surface visibility across Survey Unit 3 was generally nil due to the dense grass cover. Some infrequent exposures were present along eroded sections of the creek bank (Plate 9). The area is used for pastoral purposes and appears to be relatively disturbed. The ground was lumpy and mounded in places, possibly as a result of the installation of the adjacent sports fields, and a drainage ditch ran west-east through the area, leading to the creek. The northern end of the survey unit was slightly elevated and levelled, and an underground gas pipeline transects the south-eastern corner of the survey unit (Plate 10). The creek in this area appears to have been modified and is densely vegetated with introduced plant species such as Lantana. Overall, this is a low-lying landform adjacent to a creek that is subject to flooding.

Plate 9: Survey Unit 3 – erosion along the western bank of Frazers Creek, view to NW.



Plate 10: Survey Unit 3 – view to NW along gas pipeline route (sports fields in background).



Survey Unit 4

Survey Unit 4 incorporates three main landform units – slope, flat and open depression. It is bounded along the western edge by Croome Road and along the northern edge by the East West Link (Figure 7). The survey unit runs from southwest to northeast across the moderate to gentle lower northwest facing slopes of a steep hill. The slope culminates in a low-lying flat area at the north-eastern end of the survey unit. Two main ephemeral drainage channels dissect the slope, running downhill from south to north and discharging into the low-lying flat, which forms a broad drainage depression.

Ground surface visibility across Survey Unit 4 was generally nil due to dense grass cover (Plate 11). Some infrequent exposures were present in areas of disturbance, such as along vehicle and animal tracks, and along the drainage channels (Plate 12). The area is presently used for pastoral purposes. The southern end of the survey unit has been substantially disturbed by the construction of the existing house, outbuildings and associated infrastructure, including access tracks (Plate 13).

Dumped vehicles and building material were present in the vicinity of the house and a large drainage ditch had been excavated to bedrock to the south of the house. The western and northern edges of the survey unit have been heavily disturbed by the installation of Croome Road and the East West Link, respectively. The low-lying flat at the north-eastern end of the survey unit is occupied by a series of small sheds and fences, the installation of which has resulted in disturbances to the ground surface (Plate 14). Dumped rubbish and mounded earth was evident in the vicinity of the structures. Multiple small drainage channels run through this area, and a dam has been constructed along one of the main channels. Flash flooding was evident along the drainage channels.

Plate 11: Survey Unit 4 – view to north across survey unit (note grass cover).



Plate 12: Survey Unit 4 – exposure along drainage channel, view to SE.



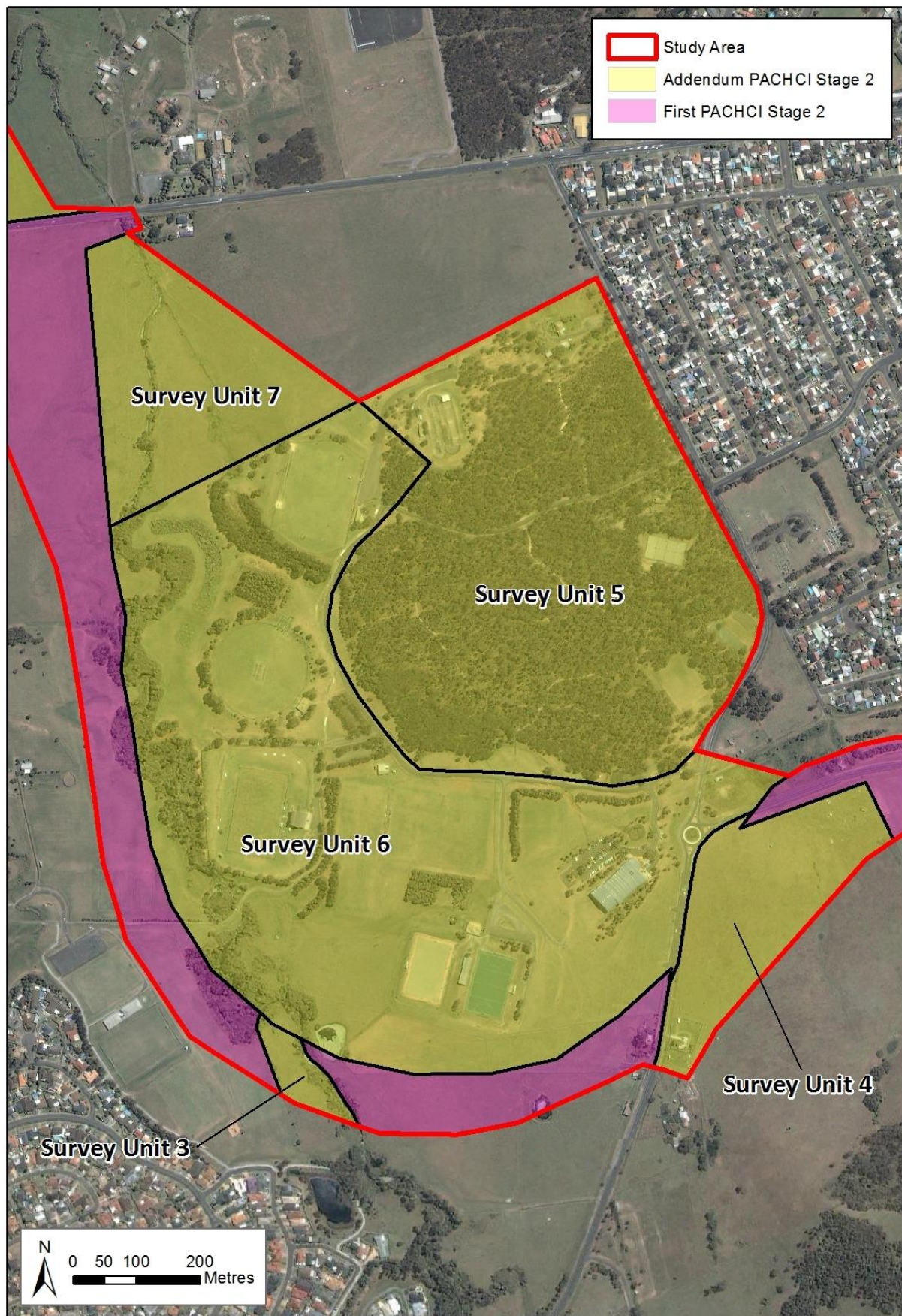
Plate 13: Survey Unit 4 – view to west across southern end of survey unit near the house (note steep slope down to Croome Road).



Plate 14: Survey Unit 4 – view to NE of sheds and fencing on the low-lying flat at the north-eastern end of the survey unit.



Figure 7: Survey Units 3-7 (background © Google 2014).



Survey Unit 5

Survey Unit 5 encompasses an area of bushland along the eastern edge of the Croom Regional Sporting Complex. It is bounded to the east and south by Croome Road, and to the south and west by the main access road within the sporting complex. The northern boundary is formed by the northern boundary of the sporting complex (Figure 7). A sample survey of Survey Unit 5 was conducted primarily because the majority of the unit was covered in trees, dense grass and low-lying shrubs. The survey unit incorporates two main landform units – slope, and open depression. An ephemeral tributary to Frazers Creek runs along the western edge of the survey unit. The gentle lower slopes of the Wentworth Hills extend north-westwards through the area. The ground rises gently-moderately eastwards from the tributary, before levelling out and then sloping gently down eastwards towards Croome Road.

Ground surface visibility across Survey Unit 5 was generally nil due to the dense grass and vegetation cover (Plate 15). Exposures were evident along the vehicle tracks and bike tracks that criss-crossed the area, and in patches of disturbance such as erosion scours (Plate 16). The trees in the area were mostly immature (regrowth) and the ground surface was lumpy and mounded in many places. Major disturbances within the survey unit have resulted from the installation of the BMX track and car parking facilities at the north-western end (Plate 17); the construction of a house and outbuildings (now abandoned) at the north-eastern end; and the installation of a tennis court complex, horse paddocks and dam in the south-eastern sector (Plate 18). Further disturbances have resulted from the installation of dirt tracks, pathways and paved roads through, and immediately adjacent to, the survey unit (Plate 19). Intermittent dumped rubbish was evident across the area. The drainage channel has been modified and is heavily eroded (Plate 20). A hard stand and blue metal stockpile has been installed at the southern end of the survey unit, leading off the access road to the sporting complex.

Plate 15: Survey Unit 5 – view to east across survey unit (note vegetation cover).



Plate 16: Survey Unit 5 – dirt vehicle track through area, view to north.



Plate 17: Survey Unit 5 – BMX track at north-western end, view to view to SW.



Plate 18: Survey Unit 5 – horse paddock in south-eastern sector, view to SE.



Plate 19: Survey Unit 5 – paved pathway at north-eastern end (near abandoned house), view to NE.



Plate 20: Survey Unit 5 – eroded bank of tributary to Frazers Creek, view to SSE.



Survey Unit 6

Survey Unit 6 incorporates the Croom Regional Sporting Complex and the land immediately to the south and west of the complex (including Frazers Creek). It is bounded to the north by the northern boundary of the sporting complex; to the east by Survey Unit 5; and to the south and west by the proposed road corridor that was originally surveyed in 2013 (Figure 7). A sample survey of Survey Unit 6 was undertaken because the majority of the survey unit was heavily disturbed through the installation of multiple sports fields, associated infrastructure and landscaping. The bulk of the survey unit has been classed as modified. The remainder of the survey unit incorporates three main landform units – slope, flat and open depression. Frazers Creek runs along the western edge of the survey unit and an unnamed tributary to Frazers Creek runs southeast to northwest through the survey unit at the northern end.

Ground surface visibility across Survey Unit 6 was generally nil due to dense grass cover. The creek banks were lined with dense, impenetrable vegetation including introduced species such as Lantana (Plate 21). Exposures were evident in areas of disturbance such as along artificial drainage ditches, vehicle tracks and erosion scours. The bulk of the survey unit has been highly disturbed and modified through the installation of the multiple sports fields and associated infrastructure, and the construction of Croome Road and the East West Link (Plate 22). The landforms were more intact along the southern edge of the survey unit (outside of the sporting complex) and, to some extent, on the flats immediately adjacent to Frazers Creek.

The land along the southern edge of Survey Unit 6 (immediately to the south of the hockey fields) comprises a flat adjacent to the eastern edge of Frazers Creek that rises gradually, and then more steeply, towards Croome Road in the east (Plate 23). This land is currently used for pastoral purposes, and disturbances through the area are localised only, including fencing and tracks. An artificial drainage ditch runs from east to west along the northern boundary of the survey unit. A second, deeper drainage ditch runs from northeast to southwest into a dam near Frazers Creek (Plate 24). During the original survey, YTOF PAD 1 was recorded within the proposed road corridor in the adjacent property (immediately to the south). It was determined during the current survey that YTOF PAD 1 extends northwards across the continuing landform through Survey Unit 6. For full details, refer to the summary of results section below.

The section of Survey Unit 6 to the west of the hockey fields and to the north of the dam comprises a low-lying flat adjacent to the eastern edge of Frazers Creek. This land undulates gently, but is prone to inundation. Disturbances in this area relate to the installation of the dam, sports and hockey fields, and a transmission line that runs from east to west through the area (Plate 25). The ground was highly disturbed in places, with earth mounds and localised excavation evident.

The areas immediately to the east and west of Frazers Creek in the northern portion of the survey unit also comprise low-lying flats with gentle undulations. The areas to the east of the creek have been substantially disturbed through the construction of sports fields and landscaping (Plate 26). The areas

to the west of the creek have been disturbed by landscaping and levelling associated with the pony club facilities and sports fields. Frazers Creek is heavily modified, with built up embankments and fencing evident in places, and the banks are lined with dense, impenetrable vegetation (Plate 21).

Plate 21: Survey Unit 6 – Modified and densely vegetated Frazers Creek, view to NW.



Plate 22: Survey Unit 6 – one of the sports fields, view to SE.



Plate 23: Survey Unit 6 – intact sloping landform along southern edge of survey unit, view to west.



Plate 24: Survey Unit 6 – drainage ditch leading into dam, view to SW.



Plate 25: Survey Unit 6 – disturbed flat to the west of the hockey fields, view to north.



Plate 26: Survey Unit 6 – Landscaping through north-western section of unit, view to south.



Survey Unit 7

Survey Unit 7 incorporates four main landform units – slope, flat, terrace and open depression. It is bounded to the north and west by the proposed road corridor that was originally surveyed in 2013; to the east by fields; and to the south by the Croom Regional Sporting Complex (Figure 7). Frazers Creek and an unnamed ephemeral tributary to Frazers Creek run south-north through the survey unit and converge in the northern portion of the unit. The creeks mostly cross through a low-lying flat area. A broad, elevated west-facing slope rises up from the flat to the east of the tributary, then levels out and extends into a crest beyond the eastern boundary of the survey unit. An elevated, level terrace rises above the flat immediately adjacent to the eastern edge of Frazers Creek at the southern end of the survey unit. The land to the west of Frazers Creek is a low-lying flat with some gentle undulations.

Ground surface visibility across Survey Unit 7 was generally nil due to dense grass cover (Plate 27 and Plate 28). Some infrequent exposures were evident in areas of disturbance such as vehicle and animal tracks, erosion scours and the eroded creek banks. A substantial area of erosion was noted at the confluence of Frazers Creek and its tributary (Plate 29). The land is currently used for pastoral purposes. Disturbances are localised only, associated with erosion, the construction of the house at the northern end of the survey unit, and the installation of fencing and vehicle tracks (Plate 30). Dumped building material was noted at the confluence of the creeks. The flat, low-lying portions of the survey unit would be subject to frequent inundation.

An isolated find (YTOF IF1) was located on an unformed vehicle track on the eastern bank of Frazers Creek during the survey. An area of PAD (YTOF PAD 2) was defined across the elevated, level terrace that rises above the flat immediately adjacent to the eastern edge of Frazers Creek at the southern end of the survey unit. The artefact is in close proximity to YTOF PAD 2. An area of PAD (YTOF PAD 3) was defined along the elevated west-facing slope that rises up to the east of the tributary, along the eastern edge of the survey unit. For full details of YTOF IF1, YTOF PAD 2 and YTOF PAD 3, refer to the summary of results section below.

Plate 27: Survey Unit 7 – view to SW across survey unit (Frazers Creek in background).



Plate 28: Survey Unit 7 – view to SE across survey unit.



Plate 29: Survey Unit 7 – erosion at confluence of Frazers Creek and its tributary, view to NE.



Plate 30: Survey Unit 7 – view to NW along flat towards confluence of creeks.



Summary of results

One previously recorded Aboriginal is located within the current study area (AHUGC001). A description of this site as recorded is provided above in the section on previously recorded Aboriginal sites that have not been registered on AHIMS. A copy of the site card for this site is also attached to this report. This site was located during the current survey. One isolated artefact (YTOF IF1) was recorded during the current survey. The area of PAD (YTOF PAD 1) that was recorded during the original survey in 2013 was extended, and two new areas of PAD were defined during the current survey (YTOF PAD 2 and TYOF PAD 3). The locations of the sites and PADs are shown in (Figure 8). A summary of the recorded sites and PADs is included in Table 4, and descriptions are provided below.

Figure 8: Sites and PAD within the study area (background © Google 2014 and © NSW LPI).

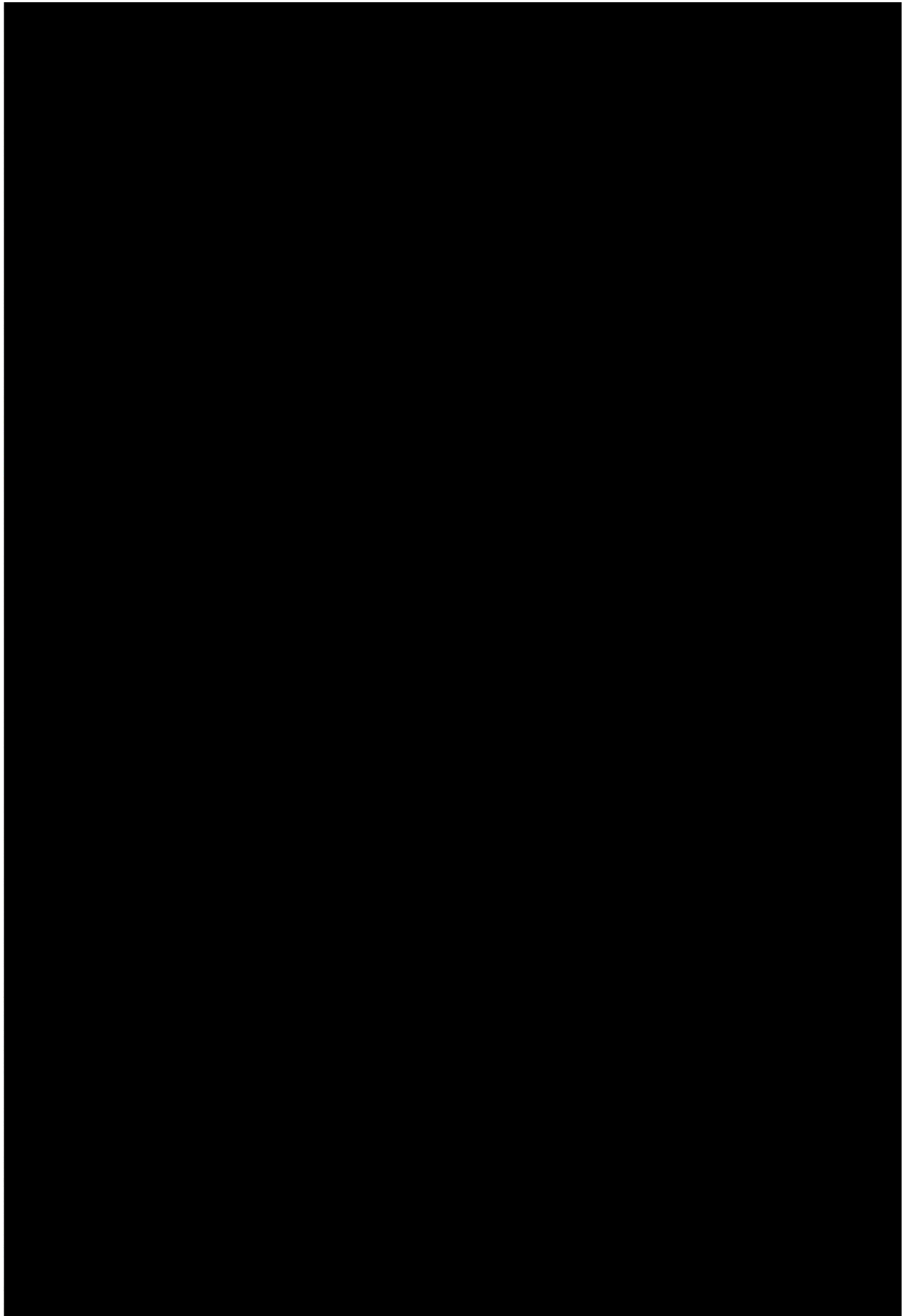


Table 4: Summary of survey findings

AHIMS number	Site name	Feature(s)	Survey Unit	Landform
-	AHUGC001	Midden	1	Modified terrace
-	YTOF IF1	Isolated find	7	Flat
-	YTOF PAD 1	PAD	5	Lower slope
-	YTOF PAD 2	PAD	7	Terrace
-	YTOF PAD 3	PAD	7	Slope

Site AHUGC001

Landform: Terrace
 Coordinates: [REDACTED]
 Site type: Midden
 Site Area: 2.0 x 0.1 m (visible extent)

Site AHUGC001 (not registered on AHIMS) is a disturbed midden site recorded [REDACTED] by Ainsworth Heritage (2012) [REDACTED]. The midden comprised a minimal scatter of shells and fragments of shell, including turbo, cockle and whelks. None of the intact shells were greater than four centimetres in length. It was noted that the midden appeared to be eroding out of the edge of the development area. The stratigraphy of the midden was not evident from the surface examination and it was suggested that the midden may have been disturbed or shifted during construction of the road. It could not be determined how far the midden may extend beneath the development area (Ainsworth Heritage 2012: 38). It was recommended for the previous development that design modifications be implemented in order to avoid impact to the site and prevent the need for an AHIP (Ainsworth Heritage 2012: 44).

The site was located during the current field survey. The details of the original recording were confirmed. However, the midden does not appear to be *in situ*. The shell material has clearly been disturbed and is likely to have been brought to the site as part of the levelling fill (Plate 3 and Plate 4).

Site YTOF IF1

Landform: Flat
 Coordinates: [REDACTED]
 Site type: Isolated find
 Site Area: n/a

Figure 9: Location of site AHUGC001 (background © Google 2014).

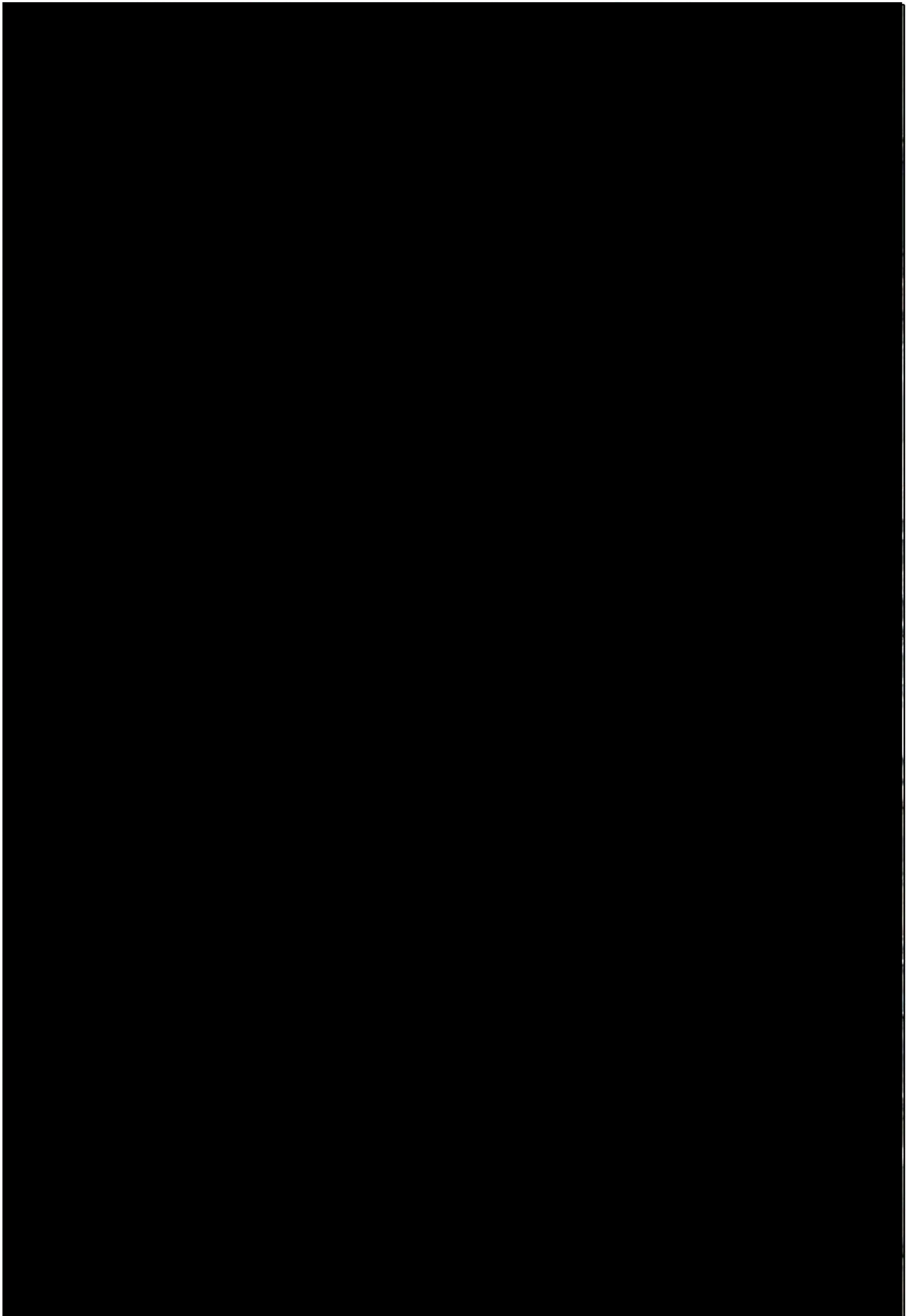
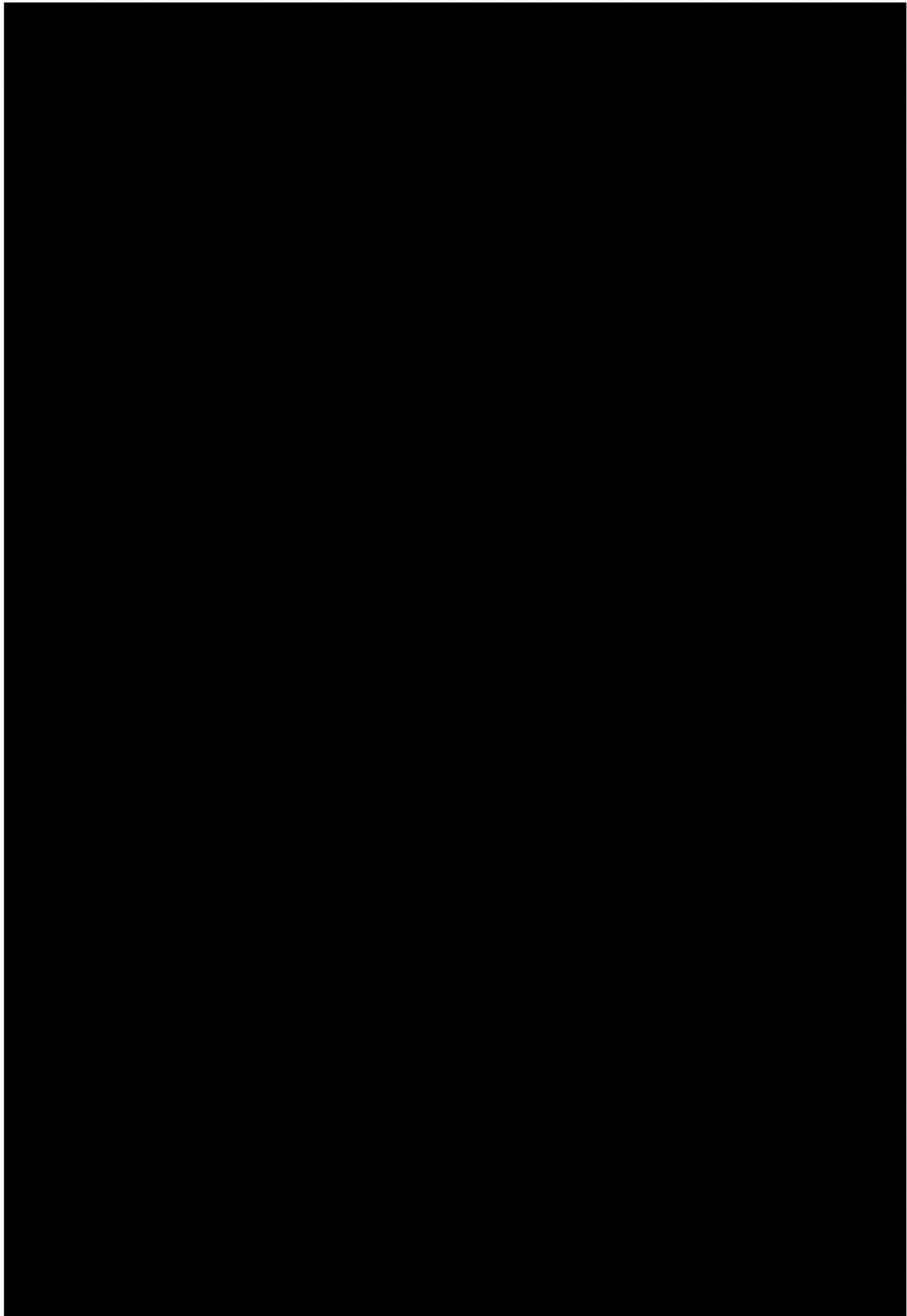


Figure 10: Location of YTOF IF1, YTOF PAD2 and YTOF PAD 3 (background © Google 2014).



Site YTOF IF1 is an isolated artefact located on an unformed vehicle track/erosion scour near the top of the eastern bank of Frazers Creek (Figure 10 and Plate 31). The artefact is a unifacial core of grey chert, which has been heavily reduced and possibly retouched. Two negative flake scars were evident (Plate 32). The overall dimensions were 8 mm long x 8 mm wide x 5 mm thick. The artefact was located in a disturbed context on a vehicle track/erosion scour. It is likely to have washed down from higher up and is therefore not at its original point of discard. The artefact may be associated with the nearby elevated terrace to the east that has been designated as YTOF PAD 2.

Plate 31: Location of YTOF IF1, view to NW.



Plate 32: YTOF IF1 (detail).



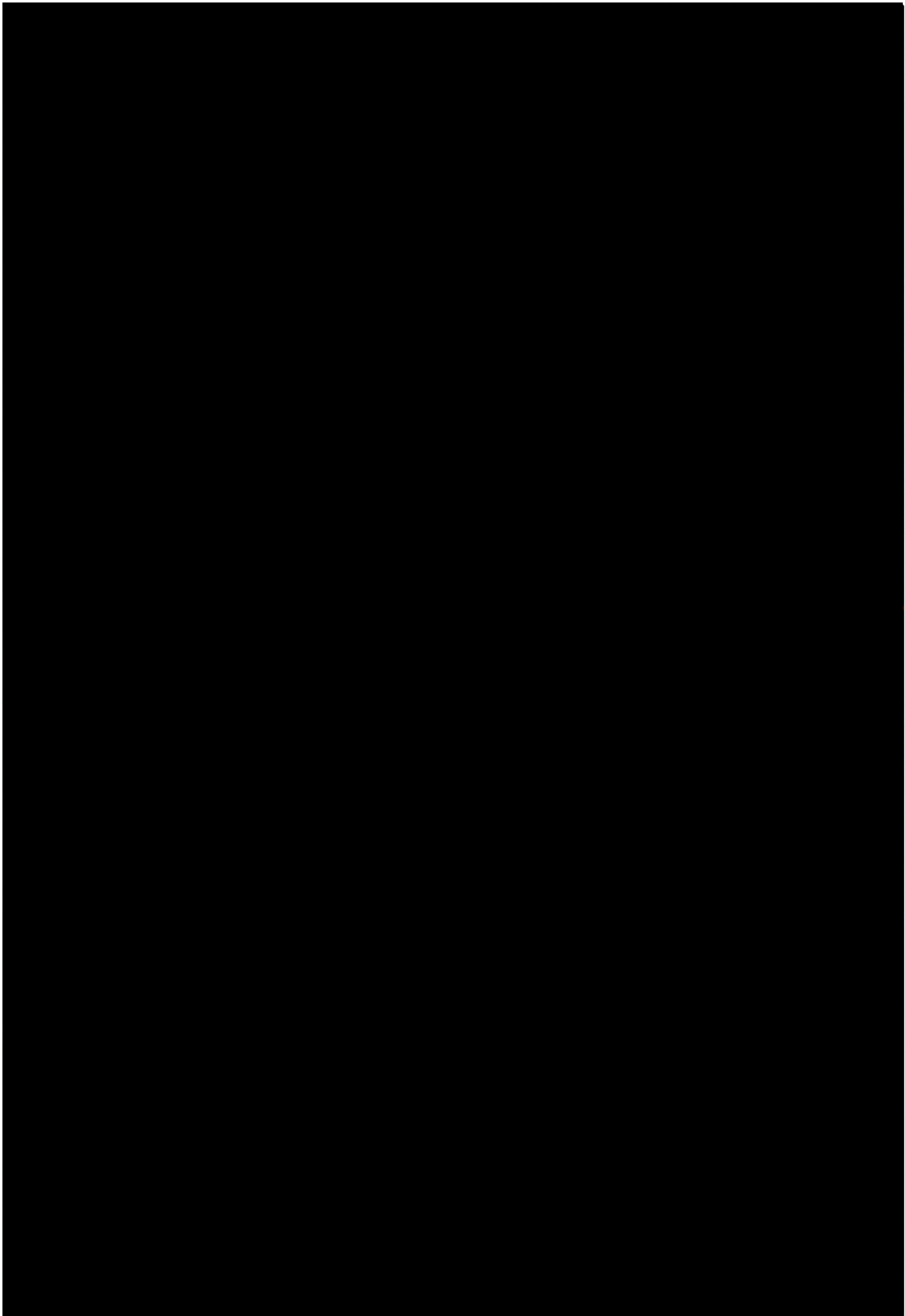
YTOF PAD 1

Landform:	Lower slope
Coordinates:	
Site type:	PAD
Site length:	340 metres
Site width:	80 metres
Site Area:	20,804 square metres

YTOF PAD 1 was identified during the original survey and is described by Artefact Heritage (2013: 50-51). It was determined during the current survey that YTOF PAD 1 extends northwards across the continuing landform through Survey Unit 6. The PAD is described here in its entirety.

PAD 1 is positioned on a very gentle southwest-facing slope above a flat that extends to Frazers Creek (Figure 11; Plate 33 and Plate 34). The PAD is located less than 200 metres to the east of the creek. The PAD area was densely grassed, leading to nil ground surface visibility. A dam is located approximately 50 metres to the east of the eastern edge of the PAD. The construction of this dam does not appear to have impacted on the PAD area. Other disturbances within PAD area are minimal and localised, related to the installation of property fences, unformed vehicle tracks and a drainage ditch. Minimal disturbances have resulted from the use of the land for pastoral purposes.

Figure 11: Location and extent of YTOF PAD 1 (background © Google 2014).



AMBS (2006) found that eight of 24 archaeological sites identified within the West Dapto Release Area (WDRA) were located on hill slopes. During test excavations within the WDRA it was determined that the highest number of artefacts was retrieved from a single test pit in a slope landform context. There is, therefore, potential for sub-surface artefacts to be present within the hill slope landform of PAD 1, particularly given the close proximity to Frazers Creek.

Plate 33: View to SE across YTOF PAD 1.



Plate 34: View to WSW across YTOF PAD 1.



YTOF PAD 2

Landform:	Terrace
Coordinates:	
Site type:	PAD
Site length:	100 metres
Site width:	120 metres
Site Area:	9342 square metres

YTOF PAD 2 is positioned on a broad, elevated flat terrace that is immediately adjacent to the eastern edge of Frazers Creek (Figure 10; Plate 35 and Plate 36). The PAD area was densely grassed, leading to nil ground surface visibility. Disturbances within the PAD area are minimal, related to the installation of property fences and unformed vehicle tracks. Minimal disturbances have resulted from the use of the land for pastoral purposes. The PAD does not extent south beyond the northern boundary of the Croom Regional Sporting Complex as this area is highly disturbed. Isolated artefact YTOF IF1 was located several metres to the west of the designated PAD area and may be associated with it, having washed downslope towards the creek.

Plate 35: View to south across YTOF PAD 2.



Plate 36: View to north across YTOF PAD 2.



YTOF PAD 3

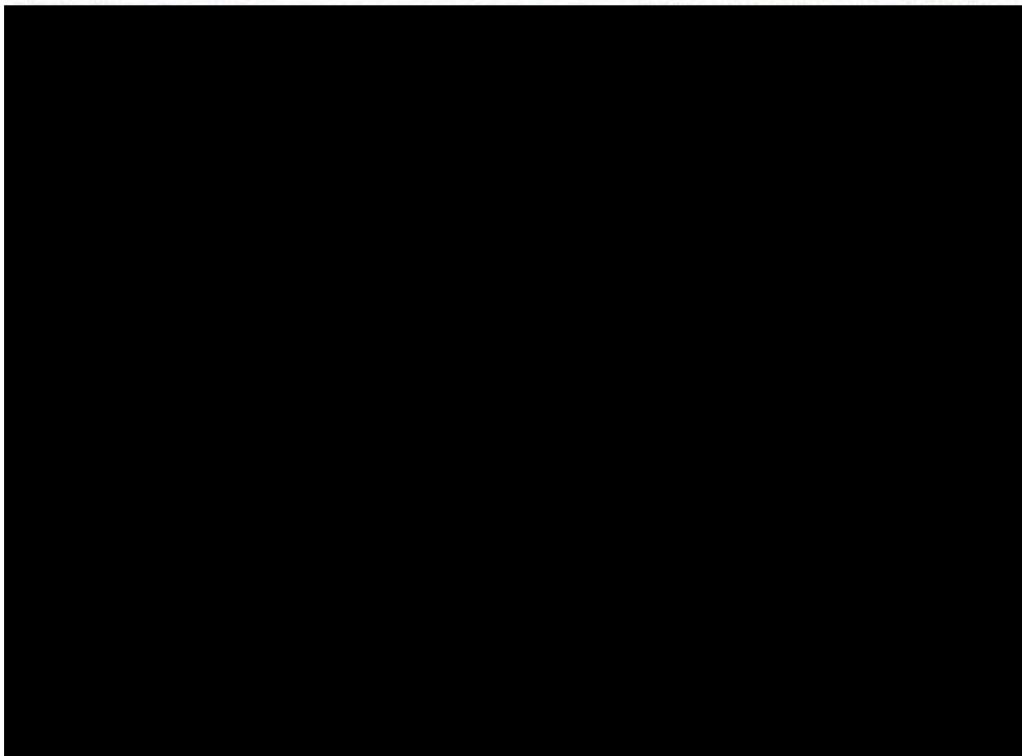
Landform:	Slope
Coordinates:	
Site type:	PAD
Site length:	340 metres
Site width:	80 metres
Site Area:	20,804 square metres

YTOF PAD 3 is positioned along a broad, elevated and relatively level west-facing slope that rises up to the east of an unnamed tributary to Frazers Creek (Figure 10 and Plate 37). The PAD is located within 200 metres to the east of Frazers creek and less than 100 metres to the east of the tributary. Dense grass cover across the PAD area led to nil ground surface visibility. Up to 30 centimetres depth of A Horizon soils were evident in the eroded section at the confluence of Frazers Creek and its tributary, near the PAD area. During the survey, disturbances across the PAD area appeared to be minimal, associated with localised fencing and use of the land for pastoral purposes. Research undertaken by AHMS (2008: 11) indicates that in 1949 several buildings were present within and in the immediate vicinity of the PAD area, along with a broad area of ploughing and/or cultivation (Figure 12). However, associated impacts to the ground surface would be localised and would not have necessarily impacted on any potential sub-surface Aboriginal objects.

Plate 37: View to west across YTOF PAD 3.



Figure 12: 1949 aerial indicating several buildings within and in the immediate vicinity of YTOF PAD 3 (source: AHMS 2008: Fig. 5).



Analysis and discussion

Disturbance levels

Overall, the current study area has high levels of ground disturbance. The construction of the Illawarra Highway, Tongarra Road, Croome Road and the East West Link has resulted in disturbance to localised sectors of the study area (Survey Units 2, 4 and 5). A substantial portion of the study area (most of Survey Unit 6) has been highly disturbed and modified through the installation of the multiple sports fields and infrastructure associated with the Croom Regional Sporting Complex.

The main drainage channels within the study area, including Frazers Creek and its unnamed tributary, have been heavily modified. Modifications include dredging and the installation of dams (e.g. Frazers Creek). A section of Frazers Creek within the vicinity of the current study area has been noted by a previous study to have been dredged, resulting in the formation of an embankment (HLA 2007: 13). The terrace immediately to the south of Macquarie Rivulet has been subject to extensive disturbance through the construction of an industrial development (Survey Unit 1).

Other localised disturbances within the study area have resulted from the construction of houses (Survey Units 4, 5 and 7) and the installation of utilities such as an underground gas pipeline and overhead transmission lines. Localised dumping of rubbish and mounding of earth was noted intermittently throughout parts of the study area. Low-lying flat areas adjacent to the drainage channels within the study area would be subject to frequent flooding.

Archaeological potential

Archaeological potential is closely related to the levels of ground disturbance in the area. Other factors are also taken into account when assessing archaeological potential, such as whether artefacts were located on the surface, and whether the area is within a sensitive landform unit according to the predictive statements for the area.

One Aboriginal site was previously recorded within the current study area. One new Aboriginal site was located during the current survey (YTOF IF1). The area of PAD (YTOF PAD 1) that was recorded during the original survey was extended as a result of the current assessment. Two new areas of PAD (YTOF PAD 2 and TYOF PAD 3) were identified during the current survey.

Site AHUGC001 (not registered on AHIMS) was located during the current survey, [REDACTED]. The details of the original recording were confirmed. The site comprised a sparse scatter of shells and fragments of shell, visible across a depth of approximately 10 centimetres within an exposed section along the eastern edge of an industrial lot. The material is located beneath a sediment trap and introduced fill within the lot. The scatter of shell extends for a length of approximately two metres, and it is uncertain how far the material may extend to the west beneath the sediment trap and fill. During the current survey it was observed that the shell material does not appear to be part of an *in situ* midden. The shell material has clearly been disturbed and is likely to have been brought to the

site as part of the levelling fill. Accordingly, the site has been assessed as demonstrating low archaeological potential.

Site YTOF IF1 is an isolated artefact located on an unformed vehicle track/erosion scour near the top of the eastern bank of Frazers Creek. The artefact was located in a disturbed context on a vehicle track/erosion scour. It is likely to have washed down from higher up and is therefore not at its original point of discard. The artefact may be associated with the nearby elevated terrace that has been designated as YTOF PAD 2. However, due to the disturbed context, site YTOF IF1 itself has been assessed as demonstrating low archaeological potential.

As Roads and Maritime requires management measures regarding archaeological potential to be based on the definition of PAD, areas of archaeological potential within the study area are described in terms of PAD instead of in terms of a gradient from low to high archaeological potential or sensitivity. One area of PAD was identified during the original survey (YTOF PAD 1). The area of this PAD was extended as a result of the current assessment. Because of the sensitivity of the locality (very gentle slope less than 200 metres from Frazers Creek) and low level of ground disturbance, there is potential for sub-surface artefacts to be present within YTOF PAD 1. This assessment is supported by the findings of AMBS (2006) that eight of 24 archaeological sites identified within the WDRA were located on hill slopes. Further, during test excavations within the WDRA it was determined that the highest number of artefacts was retrieved from a single test pit in a slope landform context. YTOF PAD 1 has been assessed as having a high archaeological potential.

Two new areas of PAD were identified during the current survey (YTOF PAD 2 and TYOF PAD 3). YTOF PAD 2 is positioned on a broad, elevated flat terrace that is immediately adjacent to the eastern edge of Frazers Creek. The terrace overlooks the lower flats of Frazers Creek and its tributary. Isolated artefact YTOF IF1 was located several metres to the west of the designated PAD area and may be associated with it, having washed downslope towards Frazers Creek. Ground surface disturbances within the PAD area are minimal. The elevated position of the terrace, above the creek and flats and immediately adjacent to the creek, would have made it a favourable camping location. YTOF PAD 2 has been assessed as having a high archaeological potential.

YTOF PAD 3 is positioned along a broad, elevated and relatively level west-facing slope that rises up to the east of an unnamed tributary to Frazers Creek. The PAD is located within 200 metres to the east of Frazers creek and less than 100 metres to the east of the tributary. The slope is prominent within the immediate landscape, rising well above the flats and terraces associated with Frazers Creek and its tributary and extending into a broad crest to the east beyond the study area. Ground surface disturbances across the PAD area appeared to be minimal and localised. The elevated, relatively level position providing a good vantage point over the surrounding areas, and the close proximity to Frazers Creek, would have made this a favourable camping location. YTOF PAD 3 has been assessed as having high archaeological potential.

Several other intact landforms were identified within the current study area, but these were determined to be of low archaeological potential. The hill slopes within Survey Unit 4 were moderate to steep and would not have been suited to Aboriginal occupation. The more gentle, relatively flat lower slopes within Survey Unit 4 (towards the East West Link) are located over 700 metres away from reliable water at Frazers Creek and would not have been suited to Aboriginal occupation. The archaeological potential is therefore assessed as low. The alluvial floodplain and creek flats within the current study area would not have been suited to occupation due to frequent inundation, and therefore have a low archaeological potential. The remainder of the current study area has low archaeological potential due to the high levels of ground disturbance.

No culturally modified trees were observed during the current survey. No specific areas for burials were identified during the current survey. As burials have the potential to occur across the landscape, further stakeholder consultation during Stage 3 of the PACHCI should include a request for cultural information relating to the study area, including any knowledge of potential burial locations.

Significance Assessment

Archaeological significance refers to the archaeological or scientific importance of a landscape, site or area. This is characterised 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?

Cultural values and significance would be discussed by the Aboriginal groups during ongoing Aboriginal consultation for the project and would be detailed in the Cultural Heritage Assessment Report during Stage 3 of the RMS PACHCI.

Site AHUGC001

The archaeological significance of site AHUGC001 has been determined based on the findings of the previous recorders, observations made during the current survey, and on the type and distribution of

other previously recorded Aboriginal sites in the local context. The shell material recorded as midden site AHUGC001 does not appear to be part of an *in situ* midden. The shell material has clearly been disturbed and is likely to have been brought to the site as part of the levelling fill. Accordingly, site AHUGC001 has low research potential, representative and rarity values. The shell material is located within a highly disturbed and modified terrace landform and would not enhance the current understanding of Aboriginal utilisation of these contexts. The site has been assessed as having low archaeological significance.

Site YTOF IF1

Site YTOF IF1 is an isolated artefact found in a disturbed context. It is likely to have eroded downslope out of its original context. Such artefacts have low representative and rarity values in the local/regional context. Accordingly, site YTOF IF1 has been assessed as having low archaeological significance.

PAD

The three identified PADs, YTOF PAD 1, PAD 2 and PAD 3, have been assessed as demonstrating high research potential. The identified PAD areas have the potential to provide information on the nature of occupation in the area and enable a comparative analysis with other sites in the vicinity. The archaeological values, representative and rarity values cannot be accurately determined until the results of further archaeological investigation are known.

A summary of the significance values of each recorded site and PAD within the current study area is outlined in Table 5.

Table 5: Summary of archaeological significance values

Site name	Research Potential	Scientific / Archaeological Value	Representative Value	Rarity Value	Overall Significance
AHUGC001	Low	Low	Low	Low	Low
YTOF IF1	Low	Low	Low	Low	Low
YTOF PAD 1	High	Unknown	Unknown	Unknown	Unknown
YTOF PAD 2	High	Unknown	Unknown	Unknown	Unknown
YTOF PAD 3	High	Unknown	Unknown	Unknown	Unknown

Impact assessment

An impact assessment cannot yet be made as there are no development plans available. Once a concept design has been developed an updated impact assessment would be added to this report.

Mitigation Measures

Mitigation measures recommended vary depending on the assessment of archaeological significance of an area, which is based on the research potential, rarity, representativeness and educational value. In general the significance of a site would involve the following mitigation measures:

- Low archaeological significance – No further investigations required. An Aboriginal Heritage Impact Permit (AHIP) would be required to impact the site before works can commence.
- Moderate archaeological significance – Conservation where possible. If conservation was not practicable further archaeological investigation would be required such as salvage excavation or surface collection. An AHIP would be required if Aboriginal objects are present.
- High archaeological significance – Conservation as a priority. An AHIP would be required only if other practical alternatives have been discounted. Conditions of this AHIP would depend on the nature of the site, but may include comprehensive salvage excavations.

Site AHUGC001 has been assessed as demonstrating low archaeological significance therefore no further archaeological investigations are required. If it is not practicable to avoid site AHUGC001 an AHIP will be required prior to impacts occurring.

Site YTOF IF1 has been assessed as demonstrating low archaeological significance therefore no further archaeological investigations are required. If it is not practicable to avoid site YTOF IF1 an AHIP will be required prior to impacts occurring.

The archaeological significance of the three PADs (YTOF PAD 1, PAD 2 and PAD 3) is at present unknown. If impacts to the PADs cannot be avoided by the proposed development, test excavation under the OEH Code of Practice would be undertaken in order to determine whether sub-surface Aboriginal objects are present in each area. The purpose of these excavations would be to assess the significance of the PADs, not to mitigate against impacts.

If a PAD area was found to be of a low archaeological significance, there would be no Aboriginal heritage constraints on the proposed development in that area. However, an AHIP would be required prior to any works commencing.

If a PAD area was found to have a moderate archaeological significance it is likely that there would be no constraints on the proposed development in that area, but that archaeological salvage excavations would be recommended to mitigate against any proposed impacts as a condition of an AHIP. An AHIP would be obtained from OEH prior to works commencing.

If a PAD area was found to be of high archaeological significance, this would inform the decisions made during Stage 3 of the RMS PACHCI regarding the future management of the area, such as conservation where possible. It is therefore important to understand the nature of the buried archaeological deposits within the PAD areas before further recommendations are made.

Recommendations

The following findings and recommendations were based on consideration of:

- Statutory requirements under the *National Parks and Wildlife Act 1974* as amended.
- *Roads and Maritime Services procedure for Aboriginal cultural heritage consultation and investigation* (PACHCI) (November 2011).
- The results of the 2013 PACHCI Stage 2 archaeological survey report (Artefact Heritage 2013).
- The results of background research and additional (recent) survey.
- The likely impacts of the proposed development.

The findings and recommendations incorporate those made in the 2013 PACHCI Stage 2 archaeological survey report by Artefact Heritage (2013: 66-67).

It was found that:

- Two artefact scatter sites (AHIMS sites 52-5-0484/52-5-0512 and 52-5-0227) were previously recorded within the original study area (Figure 8). Site 52-5-0484/52-5-0512 has been assessed as having moderate archaeological potential and an unknown archaeological significance. Site 52-5-0227 has been assessed as having low archaeological significance (Artefact Heritage 2013: 61).
- One midden site (AHUGC001, not registered on AHIMS) was previously recorded within the current study area (■■■■■). Site AHUGC001 has been assessed as having low archaeological significance.
- One newly recorded Aboriginal site (YTOF IF1, AHIMS # pending) was recorded within the current study area (Figure 8). Site YTOF IF1 has been assessed as having low archaeological significance.
- One area of high archaeological potential (YTOF PAD 1) was located within the original study area (Artefact Heritage 2013: 50-51). The area of this PAD was extended into the current study area as a result of the current assessment (Figure 8). The PAD has been assessed as having a high archaeological potential and an unknown archaeological significance.
- Two areas of high archaeological potential (YTOF PAD 2 and YTOF PAD 3) were located within the current study area (Figure 8). The PADs have both been assessed as having a high archaeological potential and an unknown archaeological significance.

It is therefore recommended that:

- If site 52-5-0227 was to be impacted by the proposed development an AHIP will be required prior to impacts occurring. No further archaeological investigations would be required at this site.
- If site 52-5-0484/52-5-0512 was to be impacted by the proposed development test excavations under the OEH Code of Practice would be necessary. Test excavations would be required to inform an assessment of archaeological significance. If the test excavations show that the site has low archaeological significance, there would be no constraints on impacts (apart from an AHIP if

required). If the site was shown to have a moderate archaeological significance, further mitigation measures such as salvage excavation and an AHIP may be recommended before impacts were to occur. If the site was shown to have high archaeological significance, this would inform the decisions made during Stage 3 of the RMS PACHCI regarding the future management of the site.

- If site AHUGC001 was to be impacted by the proposed development an AHIP will be required prior to impacts occurring. No further archaeological investigations would be required at this site.
- If site YTOF IF1 was to be impacted by the proposed development an AHIP will be required prior to impacts occurring. No further archaeological investigations would be required at this site.
- If the PAD areas (YTOF PAD 1, PAD 2 and PAD 3) were to be impacted, test excavation under the OEH Code of Practice would be necessary. Test excavations would be required to inform an assessment of archaeological significance. If the test excavations show that a PAD area has low archaeological significance, there would be no constraints on impacts in that area (apart from an AHIP if required). If a PAD area was shown to have a moderate archaeological significance, further mitigation measures such as salvage excavation and an AHIP may be recommended before impacts were to occur in that area. If a PAD area was shown to have high archaeological significance, this would inform the decisions made during Stage 3 of the RMS PACHCI regarding future management of that area.
- If impacts are proposed to the recorded Aboriginal sites and/or PAD areas, including test excavations under the OEH Code of Practice, Stage 3 PACHCI, including comprehensive Aboriginal consultation, would be initiated by RMS. A Cultural Heritage Assessment Report (CHAR) would be prepared as part of the Stage 3 PACHCI.
- If Aboriginal objects are located at any stage outside areas where test excavations are being undertaken, or outside areas for which an AHIP is granted, work would stop immediately and the RMS *Unexpected Archaeological Finds Procedure* 2011 would be followed. If human remains are located during any works associated with the project within the study area the RMS *Unexpected Archaeological Finds Procedure* 2011 would be followed.
- If the project design 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.

If you have any queries regarding this assessment and recommendations, please do not hesitate to contact me.

Yours sincerely,

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ROADS AND MARITIME SERVICES

**ARTEFACT CULTURAL HERITAGE MANAGEMENT
ARCHAEOLOGISTS- JOSH SYMON-SAM GIBBONS**

REPORT

ALBION PARK BYPASS

ABORIGINAL SITE OFFICERS

**PAM GLOVER
ALLAN WALKER**

**25-26-27 FEBRUARY 2014
25-26-27 FEBRUARY 2014**



SURVEY AIM

Conduct an Aboriginal Cultural Heritage site survey, to identify Aboriginal artifacts and sites of cultural significance and to assess the impact of the proposed works, (Albion Park Bypass) on Aboriginal heritage.

SURVEY EXAMINATION

Pam Glover-Allan Walker

Day 1-25 February 2014
Croome Road Complex

Today we conducted a visual site survey on foot north and south of the Croome Road complex. Visibility was poor due to the long grass, fallen tree branches and dense vegetation. The area was very wooded (Eucalyptus, paper bark, red cedar Etc.) it is also used a dumping area for building materials. The small drainage connected to the creek has thick vegetation. No Artefacts were found.

Day 2-26 February 2014
Tongarra Road

Today we surveyed a number of properties, the first property ran from the sporting complex, visibility was good and it had a running creek on it. The land was elevated and used to run cattle and horses, it also had some material waste (landfill-bricks and rocks).

We then surveyed a property on the Illawarra Highway visibility was good, no Artefact's were found.

We crossed over to the Bowels property, it had dense bush and very high grass. The land was level and used to run cattle and horses on it. There is a creek running through the land with thick vegetation.

Day 3-27 February 2014
East West Link

Today we surveyed land which was elevated and had a creek running through it. It is used to run cattle and sheep, there is a house and horse sheds on it and some building material waste.

Old Illawarra Highway-Nursery

We surveyed inside of the Nursery, Macquarie Rivulet. Next to the Nursery was highly disturbed, we found Shells (very chalky but whole) near a tarred road on entry to the nursery.



OUTCOME

No artefacts were identified during the survey.

RECOMMENDATION

- Any excavation/construction work carried out throughout this project will require Aboriginal site monitoring.
- Any Aboriginal artefacts identified during construction should remain in their place; if this is not possible then a care and control process should be discussed with the relevant Aboriginal stakeholders
- RMS should enter into discussion with the Aboriginal community (ILALC) regarding employment opportunities created throughout this project.

If you require any further information regarding this report, please don't hesitate to contact me on the numbers listed below.

Yours in UNITY

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