ABORIGINAL HERITAGE IMPACT ASSESSMENT FOR THE FORMER CHANNEL 7 SITE, MOBBS LANE, EPPING

FOR

SYDNEY BROADCAST PROPERTY PTY LTD

Part of southern area identified as PAD

Final Report

April 2010

AHMS

ARCHAEOLOGICAL & HERITAGE MANAGEMENT SOLUTIONS

SYDNEY	MELBOURNE	PERTH
349 Annandale St, Annandale, NSW 2038	7/11 Merrifield Rd, Brunswick, VIC 3032	PO Box 9077, Nicholson Rd, Subiaco, WA 6008
P: (02) 9555 4000 F: (02) 9555 7005	P: (03) 9388 0622 F: (03) 9388 0677	P: (08) 9382 4657

W: www.ahms.com.au E: info@arksolutions.com.au ACN: 088 058 388 ABN: 45 088 058 388

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ABBREVIATIONS

AHC	Australian Heritage Council
AHIMS	Aboriginal Heritage Information Management System (NSW)
ATSIC	Aboriginal and Torres Strait Islander Commission
CHL	Commonwealth Heritage List (Commonwealth)
DAA	Department of Aboriginal Affairs (NSW)
DEH	Department of Environment and Heritage (Commonwealth)
DECC	Department of Environment and Climate Change (NSW)
EP& A	Environmental Planning and Assessment (NSW)
EPBC	Environment Protection and Biodiversity Conservation (Commonwealth)
GSV	Ground surface visibility
ICOMOS	International Council on Monuments and Sites
LALC	Local Aboriginal Land Council
LEP	Local Environmental Plan
LGA	Local Government Area
MGA	Map Grid of Australia – unless otherwise specified all coordinates are in MGA
NHL	National Heritage List (Commonwealth)
NNTT	National Native Title Tribunal
NPWS	National Parks and Wildlife Service (now part of DECC)
REP	Regional Environment Plan
RNE	Register of the National Estate
Lithic	Stone or stone artefact

EXECUTIVE SUMMARY

- This report has been undertaken by Archaeological and Heritage Management Solutions Pty Ltd (AHMS) on behalf of Sydney Broadcast Property, and presents the findings of an assessment (AHIA) undertaken on the former Channel 7 site, at 61 Mobbs Lane, Epping (Epping Park), prior to a proposed residential & open space development;

- The assessment was conducted in accordance with the Department of Environment and Climate Change (DECC) (2004) *Interim Community Consultation Requirements for Applicants,* and included ongoing consultation and involvement with the Metropolitan LALC and Parramatta City Council's Aboriginal & Torres Strait Islander Aboriginal Advisory Committee (A&TSIAAC);

- The assessment combined geo-technical information, historical research, local Aboriginal heritage investigations and a site visit to identify likely Aboriginal heritage constraints and issues within the Study Area. These analyses identified that much of the Study Area was significantly impacted by existing structures and landscape modification that included cutting and filling in excess of between 2 and 4 m. Only the western portion of the Study Area appeared to retain the potential for substantially intact and unmodified landforms and soil profiles due to combined evidence of limited historical use (for market gardening) and geotechnical information indicating topsoil is present in this area to a depth of 20cm below ground level;

- A map of archaeological sensitivity (i.e. archaeological potential when overlain by existing disturbance) has been developed (Figure 15), which identifies the western section of the Study Area as of moderate sensitivity – or a potential archaeological deposit (identified as Epping Park PAD 1) – and the remainder of the Study Area as of low to nil archaeological sensitivity;

- A significance assessment was attempted for Epping Park PAD 1, but given the absence of known Aboriginal objects or condition of the soil profile, it can only indicate the high research potential of the area;

- Currently, the proposed development design will require the establishment of a child care centre, associated landscaping, roads and services which equal between 25 and 30% impact of Epping Park PAD 1, and management recommendations below have been made accordingly; and

- Recommendations from this report are as follows:

1. Any construction impacts at surface in Epping Park PAD 1 (shaded orange in **Figure 16**), has the potential to impact Aboriginal objects and/or sites. Therefore, subsurface investigations to identify and characterise any Aboriginal archaeological deposits within the proposed impact zone (if present) should be undertaken prior to construction that would disturb the ground in that area (specific processes to this excavation are provided in **Section 10** of this report). Should Aboriginal objects and/or sites be identified during testing within the proposed impact zone, further archaeological investigation/salvage should take place to mitigate the impact of the development. Please note that in the event that human skeletal remains are identified, further management and mitigation measures would be required in line with recommendation 5 of this report ;

2. Aboriginal consultation should continue to be undertaken in accordance with *Guidelines for Aboriginal Cultural Heritage Impact Assessment and Community Consultation* (Department of Environment and Conservation, 2005), which themselves refer to the DECC's (2004) *Interim Community Consultation Requirements for Applicants* to discuss the appropriate management procedures to be incorporated during the EA process and specifically in relation to the Statement of Commitments; and

3. No further archaeological investigations are warranted, within the remainder of the subject land, i.e. areas of negligible Aboriginal archaeological potential (shaded blue) on **Figure 16**; and

4. Any archaeological test excavation should endeavour to include (where possible) student/s from the Local Aboriginal community under the supervision and insurances of at least one of the parties nominated in this assessment as a registered Aboriginal stakeholder during this work; and

5. If human skeletal remains are identified during development, work should cease in the area incorporating such finds and the site should be secured. The following tasks should be undertaken immediately:

    a. Contact the NSW Police and advise them of the situation. If the human remain/s prove to be archaeological, and the NSW Police release the site, County Property Pty Ltd should advise the development project consultant archaeologist, followed by liaison with DECCW, Mindaribba LALC, the relevant Aboriginal stakeholders and the Office of the NSW Coroner;

    b. Amendment of the design (if possible) to avoid the burial remains; and

    a) Discussion of appropriate management and mitigation measures with DECCW and the Aboriginal community. Ultimately, the management

of Aboriginal burials will be a matter for the DECCW in consultation with the local Aboriginal community. *In situ* conservation of any such burial(s) may be required; and

6. One copy of the report should be forwarded to the Metropolitan LALC and Parramatta City Council Aboriginal & Torres Strait Islander Aboriginal Advisory Committee at the following addresses:

Metropolitan LALC
Attn: Allen Madden
PO Box 1103
Strawberry Hills NSW 2016

Parramatta City Council Aboriginal & Torres Strait Islander Aboriginal Advisory Committee
Attn: Mr. Gil Saunders
59 Brand Street
CARLINGFORD, NSW 2118

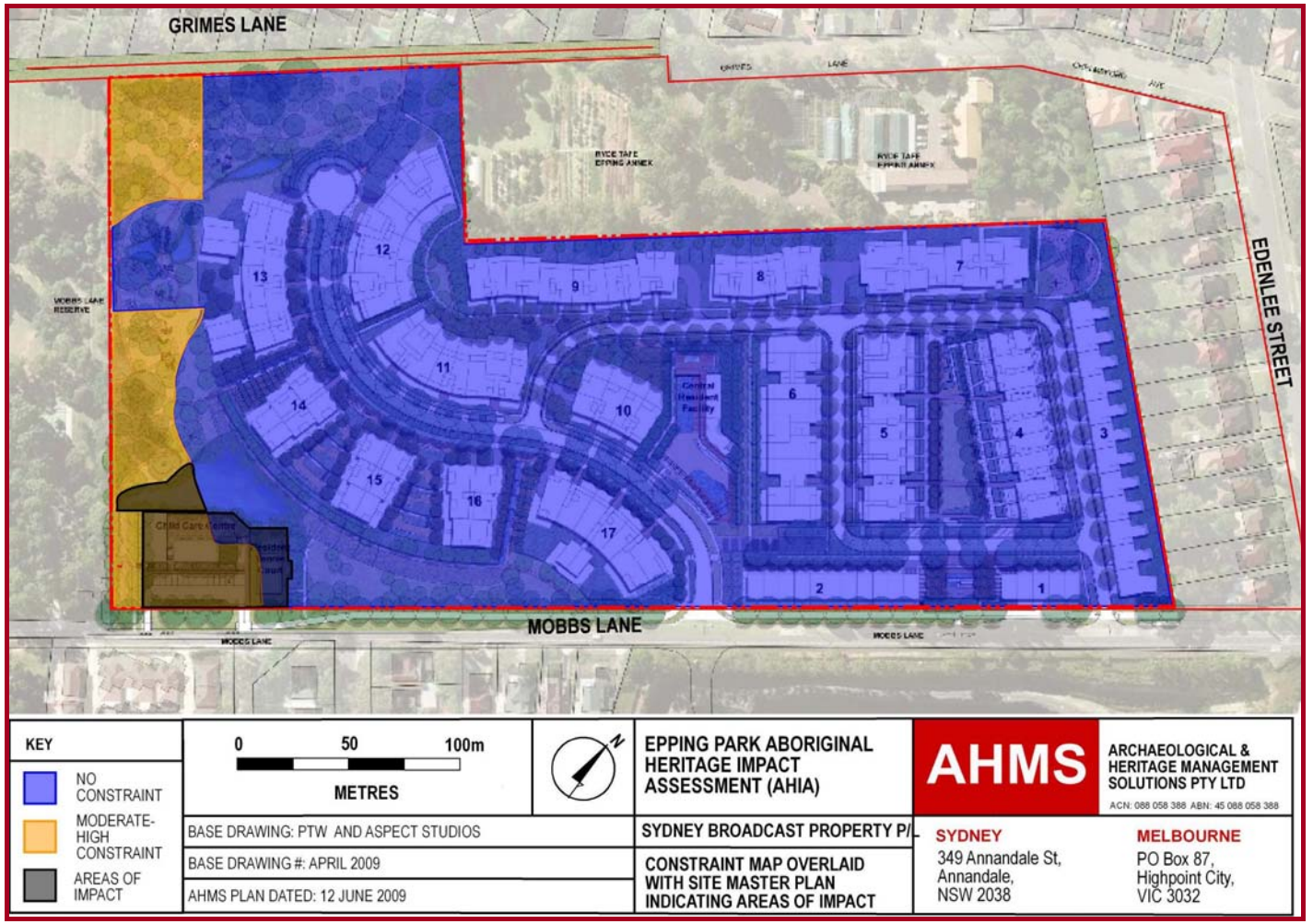

Figure 16. Overlay of Aboriginal Archaeological Constraints over the Site Masterplan indicating areas of impact to Epping PAD 1 (impact areas outlined in black)

1. INTRODUCTION

1.1 Background

Sydney Broadcast Property has engaged Archaeological & Heritage Management Solutions Pty Ltd (AHMS) to undertake an Aboriginal Heritage Impact Assessment (AHIA) of the former Channel 7 site, Mobbs Lane, Epping, NSW. This site is now known as 'Epping Park'.

This AHIA was recommended by a Preliminary Aboriginal Archaeological Assessment, prepared by AHMS on behalf of Sydney Broadcast Property in 2008[1], which identified an area of potential archaeological deposit (PAD) within the Study Area.

The purpose of this AHIA is to provide more detailed assessment of the archaeological potential and cultural heritage significance of any Aboriginal objects/sites and places within the Study Area, given the results of AHMS' previous study. The AHIA will also provide advice for the management of any identified sites and places during the future development of the subject land.

This report also documents the Aboriginal consultation process that AHMS undertook, and provides information and responses from the Aboriginal individuals and/or groups that are involved in the assessment.

Importantly, this document provides the required documentation to ensure appropriate compliance with the *National Parks and Wildlife Act, 1974* in accordance with requirements of Part 3A developments under the *Environmental Planning and Assessment Act, 1979*. Further, the document has been developed using the Department of Environment and Climate Change's (DECC) (1997) *Aboriginal Cultural Heritage Standards and Guidelines Kit* and (2004) *Interim Community Consultation Requirement for Applicants.*

1.2 Project Aims and Objectives

The principal objectives of the investigation were to:

1. Determine the nature and extent of Aboriginal sites and objects within the proposed development area;
2. Assess the archaeological (scientific), public and Aboriginal (social) significance of any Aboriginal sites or objects;
3. Develop a map of archaeological sensitivity of the Study Area based on the report findings;
4. Develop a constraints analysis to identify key Aboriginal heritage issues or *risks* within the proposed Study Area;

[1] *AHMS, 2008a*

5. Provide management recommendations that ensure development complies with the requirements of State and Federal heritage legislation; and
6. Undertake the study in close and ongoing consultation with the relevant Aboriginal communities.

The assessment was undertaken in accordance with the:

Legislative requirements of the NSW National Parks and Wildlife Act (1974) and Part 3A of the Environmental Planning and Assessment Act, (1979)
Procedures for Aboriginal heritage assessments and management outlined in the Aboriginal Cultural Heritage Standards and Guidelines Kit (National Parks and Wildlife Service, 1997);
Aboriginal consultation requirements as outlined in DECC's (2004) *Interim Community Consultation Requirements for Applicants;* and
Australia ICOMOS 'Burra' Charter for the conservation of culturally significant places and associated guidelines regarding significance assessment, conservation policy and processes.

1.3 Study Area

The Study Area is located at 61 Mobbs Lane, in the suburb of Epping (**Figures 1 and 2**). It is bounded on the east by a residential area fronting Edenlee Street, to the south by Mobbs Lane, on the west by a Reserve and to the north by both Grimes Lane and a former TAFE facility.

The Study Area is currently being used by Channel 7 as a studio, offices and a production facility. Therefore, the Study Area has extant buildings, other facilities such as roads, carparks, petrol bowsers a small array of satellite dishes, a tennis court facility and other associated services. These features cover approximately half of the site. The remainder of the site consists of open grassed land broadly located within the western half of the subject land. As will be discussed below, for drainage and levelling purposes, the Study Area appears to have been extensively built up in the centre of the site and truncated for drainage purposes towards the southern boundary.

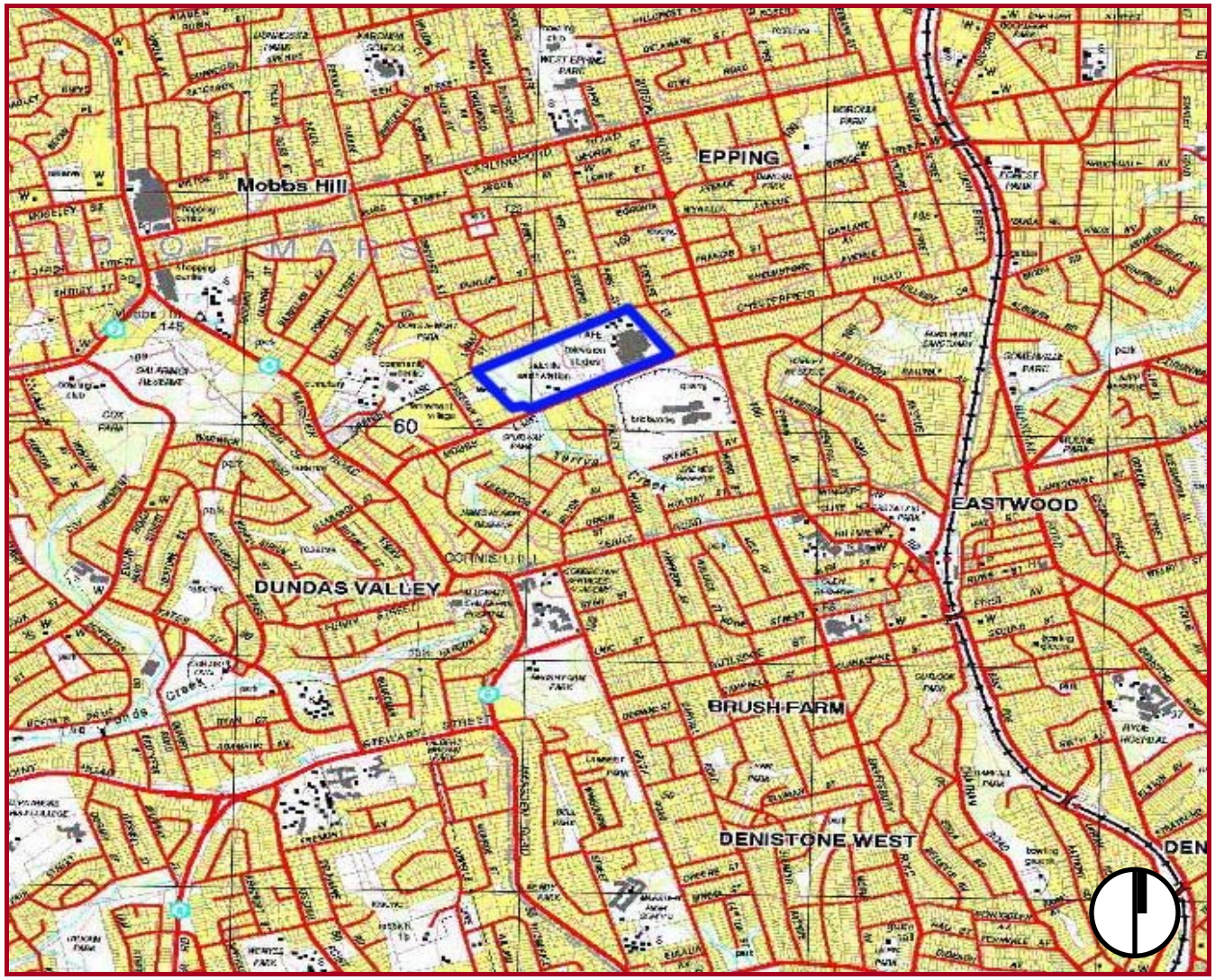

Figure 1. Location Plan (Study Area is outlined in blue). Source: Topoview 2006 Parramatta River

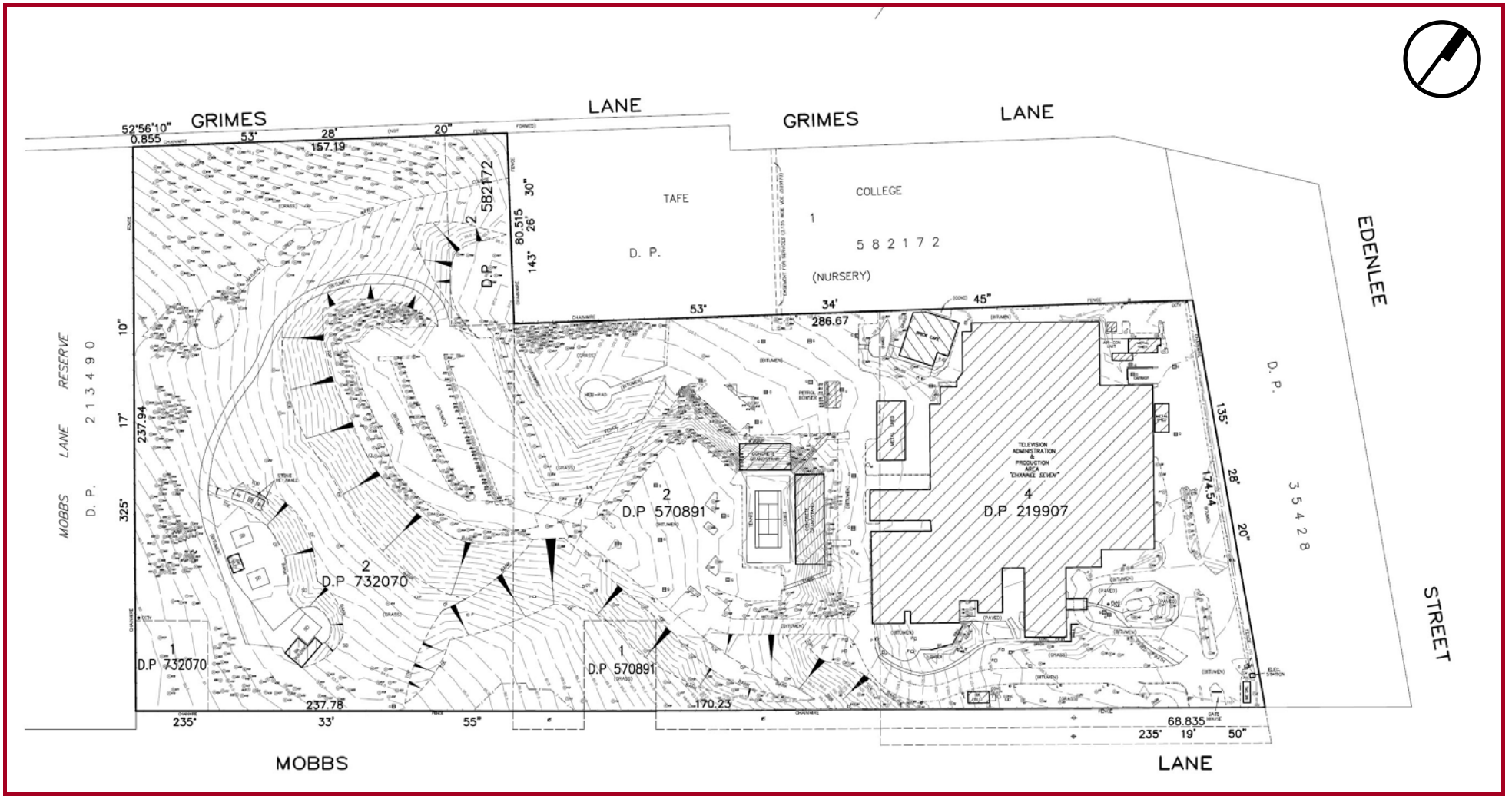

Figure 2. Current Site Survey of the Study Area (Study Area detail). Source: Higgins North Partners Surveyors and Property Consultants dated 15 March 2004

1.4 Report Structure

The remainder of the report is set out as follows:

Section 2: provides a brief description of the project and reason for undertaking this study;

Section 3: provides information on the applicable legislation and policies in relation to Aboriginal heritage in NSW;

Section 4: provides information upon the existing environment, including soils, geology, vegetation, regional and local archaeological context, previous land use and ethno-historical research;

Section 5: presents the results of the field survey and an indication of the archaeological sensitivity of the Study Area;

Section 6: presents a description of the Aboriginal community consultation that was undertaken as part of this project;

Section 7: provides a significance assessment of the sites identified;

Section 8: outlines the potential impacts that the development may cause to areas of archaeological sensitivity; and

Section 9: presents a management strategy and recommendations regarding management of Aboriginal heritage within the Study Area.

1.5 Authorship

This report was prepared by Felicity Barry, who also undertook the site survey with Alan Williams. Information regarding the historical occupation of the site was obtained from a report prepared by Graham Brooks and Associates (2005).

Alan Williams, Senior Archaeologist AHMS, undertook quality review of this report.

1.6 Acknowledgements

The authors acknowledge the valuable assistance of Allen Madden and Rebecca McHugh (Metropolitan LALC) and Gil Saunders (Parramatta City Council Aboriginal & Torres Strait Islander Advisory Committee Representative) for their participation and input into this study.

The additional assistance of Ms. Jacqui Smyth (McLachlan Lister Pty Ltd) and Mr. Alex Collins (Rebel Property Group) is also gratefully acknowledged.

2. PROJECT DESCRIPTION

Sydney Broadcast Property is seeking to establish a residential and open space development on the subject site as follows:

- A maximum of 650 dwellings and no more than 73 dwellings/ha;
- A child card centre; and
- 3.1ha of public open space.

This project received a Concept Plan approval under Part 3A of the Environmental Planning & Assessment Act, 1979 (EP&A Act) from the Minister for Planning on 22 August 2006.

A Masterplan was prepared for the site following the Concept plan approval. The Masterplan is generally in accordance with the approved Concept plan and reflects the planning and documents that accompany both Early Works and Stage 1 Residential project applications.

The-development of the Study Area is now proceeding under a full Part 3A environmental Assessment. The development, shown in the Masterplan and subject to this assessment, is presented in **Figure 3** below.

Figure 3. Proposed Development within the Study Area (Masterplan dated April 2009 prepared by PTW and Aspects Studios. (Study Area is outlined in red)

3. APPLICABLE POLICY & LEGISLATION

The *National Parks & Wildlife Act (1974)* (NPW Act) and the *Environmental Planning and Assessment Act (1979)* (EPA Act) provide the main statutory tools for management of Aboriginal cultural heritage in New South Wales. The *Aboriginal and Torres Strait Islander Heritage Protection Act* and the *Environmental Protection* and *Biodiversity Conservation (EPBC) Act 1999* also provide heritage protection at a Federal level.

The implications of these statutes for the proposed development are outlined below.

3.1 State Legislation

3.1.1 Environmental Planning & Assessment Act, 1979

The *EPA Act 1979* is the dominant piece of legislation that provides a statutory framework for planning processes required for development in NSW. This project falls under *Part 3A* of the Act.

Under *Part 3A* of the Act, projects undergo a streamlined development assessment and approval process. This means separate approvals, normally required under certain pieces of NSW heritage legislation (including the *National Parks & wildlife Act 1974*), are not required. The NSW Minister for Planning is the Consent authority and has ultimate responsibility for determining matters related to Aboriginal heritage.

Section 75U of the *EPA Act* specifically outlines sections of the *NPW Act 1974* that do not require separate approval for a 'Major Project' approved under Part 3A of the *EP&A Act*:

1. A permit by DECC under section 87 to disturb or excavate any land with the purpose of discovering Aboriginal object(s), or to move, remove or take possession of any Aboriginal object(s); and
2. Consent under section 90 to knowingly destroy, deface or damage to an Aboriginal object or place.

In addition, under Section 75U(4), subsurface investigations and preliminary investigations of Aboriginal objects and/or sites can be undertaken for an approved project if it is required as part of the Environmental Assessment. Specifically:

> *A reference in this section to an approved project includes a reference to any investigative or other activities that are required to be carried out for the purpose of complying with any environmental assessment requirements under this Part in connection with an application for approval to carry out the project or of a concept plan for the project.*

Instead of obtaining permits under the *NPW Act*, the proponent is required to prepare a *Statement of Commitments*, in accordance with the Director General's Environmental Assessment Requirements (EARs). Commitments of this report should be inserted into this Statement of Commitments.

Although it should be noted that 'Care and Control Agreements', which are required for ownership of recovered Aboriginal objects, are not encompassed under Section 75U of the EPA Act, and hence such an agreement may be required via DECC either prior to, during, or after the approval process.

Aboriginal community consultation is still required under the Part 3A process as outlined in *Guidelines for Aboriginal Cultural Heritage Impact Assessment and Community Consultation* (Department of Environment and Conservation, 2005), which themselves refer to the DECC's (2004) *Interim Community Consultation Requirements for Applicants* (see below).

3.1.2 National Parks & Wildlife Act, 1974

The *NP&W Act 1974* provides blanket protection for Aboriginal objects (material evidence of indigenous occupation) and Aboriginal places (areas of cultural significance to the Aboriginal community). Of particular importance are the following sections:

- Section 84 makes provision for protection of 'Aboriginal Places' or locations of special significance to Aboriginal culture;
- Section 86 and 87 state that it is an offence to collect or disturb objects or excavate, or in any way disturb land for the purpose of discovering objects without a permit authorised by the Director-General DECC;
- Section 89 permits the Director-General DECC to give ownership of certain Aboriginal objects to individuals/organisations/etc. Such ownership is currently permitted through the development and endorsement of a 'Care and Control Agreement';
- Section 90 states that it is an offence to destroy, deface, damage or desecrate, or cause or permit the destruction, defacement, damage or desecration of, an Aboriginal object or Aboriginal place; and
- Section 91 states that anyone who discovers an Aboriginal object is obliged to report the discovery to the DECC.

In practical terms, the provisions of the Act require archaeological assessment of any land where there is potential for Aboriginal objects to be disturbed by development. The *NPWS Guidelines for Archaeological Survey and Reporting (*DECC, 1997*)* define the format of Aboriginal archaeological assessments. These guidelines require full consultation with Aboriginal communities and relevant representative bodies such as Local Aboriginal Land Councils (LALC) and Traditional Owner's groups. Aboriginal community participation in all

archaeological survey and excavation work, and consideration of the Aboriginal cultural significance of sites and places is also required.

In December 2004 DECC released new *Interim Community Consultation Requirements for Applicants* that require a series of formal Aboriginal community consultation and notification procedures for assessments and sites that require applications under *Section 87* or *Section 90* of the NP & W Act 1974.

Importantly for this study, the project is being undertaken under Part 3A of the EP & A Act, and as such does not require section 87 or 90 permits (**Section 3.1.1**). However, should Aboriginal objects or sites be located and require investigation or impact, a similar process of archaeological investigation/salvage/analysis/etc should be outlined in the Statement of Commitments developed under the EPA Act.

3.2 Commonwealth Legislation

3.2.1 Aboriginal Torres Strait Islander Heritage Protection Act, 1984

The *Aboriginal and Torres Strait Islander Heritage Protection Act 1984* was enacted at a Federal level to preserve and protect areas (particularly sacred sites) and objects of particular significance to Aboriginal Australians from damage or desecration. Steps necessary for the protection of a threatened place are outlined in a gazetted *Ministerial Declaration* (Sections 9 and 10). This can include the prevention of development.

As well as providing protection to areas, it can also protect objects by *Declaration*, in particular Aboriginal skeletal remains (Section 12). Although this is a Federal Act, it can be invoked on a State level if the State is unwilling or unable to provide protection for such sites or objects.

No Aboriginal sites or places within the Study Area are currently subject to a Declaration.

3.3 Environment Protection & Biodiversity Conservation Act, 1999

The Environment Protection & Biodiversity Conservation Act 1999 (Commonwealth) provides protection of natural and cultural heritage places at a Federal level. The Act established three heritage registers; World heritage, Commonwealth heritage and National heritage. World heritage items are those listed for outstanding international heritage values. National heritage items are assessed as having natural or cultural significance at a national level. The World and National lists may include items on private or state crown land. The Commonwealth list only includes items on land owned by the Commonwealth.

Items on the registers described above are protected under the terms of the EPBC Act. The Act requires approval before any action takes place which has, will have, or is likely to have, a significant impact on the heritage values of a listed place. Proposals for actions which could affect such values are rigorously assessed. The EPBC Act is administered by the Australian Heritage Council.

No items within the Study Area are currently listed as items of National or World heritage.

4. ENVIRONMENTAL CONTEXT

4.1 Background

Archaeological heritage impact assessment reports include information about the environmental context of Study Areas because of the important role environmental characteristics play in influencing the types of archaeological sites that may be found in any given area. Physical environments influence both the type and availability of natural resources and the types of cultural activities that were carried out in the past. As a result, this also influenced the types of archaeological sites that may be found.

A determination of the former environmental context is essential to develop accurate models of cultural activity, site distribution patterns and the archaeological potential of any given area. The environmental setting of the Study Area is discussed below.

4.2 Landscape Characteristics

The Study Area is bounded by a residential area which is encompassed by Edenlee Street in the east, Mobbs Lane to the south, Mobbs Lane Reserve along the west and both Grimes Lane and a former TAFE facility to the north. Two former creeklines extend through the site, both run roughly east to west downhill. One is located within a grassed area in the northern portion of the site whereas the other has been converted into a drainage system which extends from the central carpark/tennis court area in a southerly direction towards the boundary of the property. A more permanent creekline, Terrys Creek, is situated within the nearby Mobbs Lane Reserve and is within 30 m of the western boundary of the Subject land.

The site is currently used as a facility for Channel 7 which includes existing buildings for studios, offices, production facilities, several car parks, roads, a helipad, refuelling facilities, small satellite communication array and tennis court and services. These developments have led to significant earth-working and ground disturbance to several areas of the Study Area. For example, the lower (or southernmost) carpark has clear evidence of cut and fill processes, whereby the northern sections of the carpark have been excavated to raise the southern sections.

The site slopes from the east to the west with the level dropping approximately 20 m AHD across this area. The landforms in the Study Area consist of a crest, upper, middle and lower slope.

4.3 Soils and Geology

The site is situated within the mid-northwest region of Sydney region which predominately comprises the Glenorie soil landscape. [2] This is the only soil landscape expected within the Study Area. These soils are underlain by the Wianamatta group (Ashfield and Bringelly) shale parent materials, which consists of laminate and dark grey shale as well as calcareous claystones, and fine to medium grained lithic-quartz. Rock outcrops are rare within this type of soil landscape.

The Glenorie soil landscape is typified by low rolling and steep hills with local relief between 50 m and 120 m with slope gradients that range between 5% and up to 20%.

Chapman and Murphy[3] describe the general pattern of soils in the Glenorie landscape as:

- Friable dark brown loam (silty loam or silty clay loam) A-horizon topsoil which occurs across parts of the landscape, except where it has been removed by erosion. The A horizon varies in depth depending on the landscape, and can be found to a depth of up to 100 cm along drainage lines, but generally between 10 and 60 cm on lower slopes with considerably less (up to 15 cm) on crests and upper/mid slopes, overlying;
- Hard-setting brown clay loam to fine sandy clay loam subsoil A2 horizon. The extent depends on landform from 30-100 cm (crest) to 5-30 cm (upper and middle slopes). This material is not identified as likely to occur on lower slopes and drainage lines. This material can be hard setting when dry and ranges from strongly to moderately acid; onto
- Whole coloured reddish-brown strongly pedal clay sub-soil (B-horizon). This horizon ranges from strongly to moderately acid and extends up to 100 cm in depth but again the extent of this deposit varies between landforms (i.e. 30-100 cm (crest), >100 cm (upper and middle slopes) and 100cm (lower slopes).

4.3.1 Geotechnical Information

The results of a recent geotechnical investigation[4] were reviewed, as well as supplementary data available from a soil and groundwater study, to provide further information on the local soil profiles.[5]

The bore-logs provide coverage of the majority of the site and confirm that large filling events have occurred over extensive portions of the centre and east of the Study Area. However topsoil is indicated to a depth of 20 cm within the southern and western portions of the Study Area. This is shown in **Figure 4**, where boreholes which displayed evidence of topsoil are shaded blue. The topsoil descriptions are fairly consistently described as 'dark

[2] *Chapman and Murphy, 1989: 68-71*
[3] *Chapman and Murphy, 1989: 68-71*
[4] *Douglas and Partners 2009*
[5] *CETEC 2008*

brown silty clay topsoil', as distinct from the identified areas containing 'fill' which vary markedly in colour, consistency and material.

Study Area. Fill starts between 20 cm and the surface and varies in depth from 50 cm to 4.6 m below ground level. The descriptions of the fill indicate that the materials described vary in colour, texture and constituents including grey sand, light brown gravely silty clay, sandy clay, and well compacted orange grey and red brown clay and gravels. Any fill material identified is situated on top of clay, suggesting the original topsoil, as well as much of the soil profile has been truncated or removed through the development of this site. No topsoil is identified beneath the fill material in any of the bore holes.

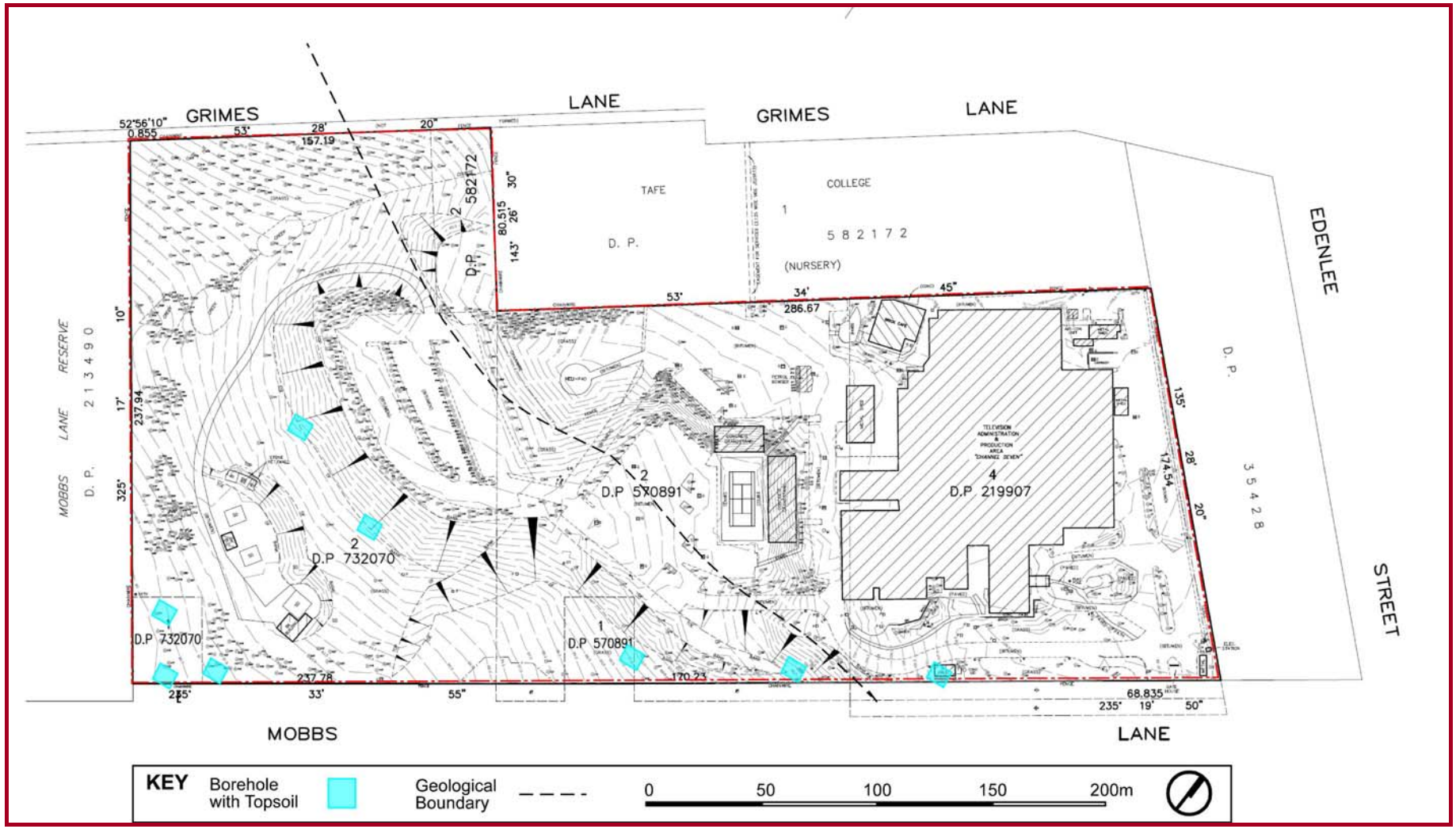

Figure 4. Geotechnical map showing areas with topsoil shaded light blue.

4.4 Vegetation

Prior to historical and more recent impacts, the Study Area is likely to have contained evidence of wet sclerophyll forest, which is associated with the Glenorie soil landscape. This has commonly included tree species such as Sydney blue-gum (*Eucalyptus saligna*) and blackbutt (*Eucalyptus pilularis*), turpentine (*Syncarpia glomulifera*), grey ironbark (*Eucalyptus paniculata*), white stringybark (*Eucalyptus globoidea*) and the rough-barked apple (*Angophora floribunda*).[6]

In addition to wet sclerophyll forest, the Study Area may have contained other species such as the spotted gum (*Eucalyptus maculata*), bangalay (*Eucalyptus botryodies*) and the forest oak (*Allocasuarina torulosa*).

Evidence from a 1943 RTA Aerial photograph of the site indicates that the western portions of the Study Area were cleared of vegetation, but that the eastern portion may contain some older trees. [7]

4.5 Previous Land Use

Historical research undertaken by Graham Brooks and Associates indicates that two main phases of occupation have taken place since the early 19th century when the land was granted to James Dunlop. [8] These phases included 1823-1951 and post 1951, when the site was acquired by Amalgamated Television Services (ATS).

Prior to the acquisition of the property in 1951, the site remained relatively undisturbed, with the exception of its likely historic use as an orchard and photographic evidence indicating a former use as a market garden (**Figure 5**). Such activities would have caused deforestation, which in turn would have likely led to soil destabilisation given the relief of the Study Area. The market gardens would also have required ploughing or other churning of the soil, which would have caused significant impacts to the upper parts of the soil profile in these areas.

Most of the development to the Study Area has occurred since 1951 when the site was acquired by the ATS. The construction of infrastructure later associated with channel 7 (mostly still extant today) has disturbed large portions of the site and in several places has caused the removal or truncation of the original soil profile. These activities have led to extensive earth works, most notably through levelling processes, in several areas of the Study Area. As the geotechnical information indicates above, such activities have led to some 4 m of fill occurring in several areas and conversely there is likely to have been the removal of this material from somewhere else within the Study Area.

Most of the disturbance to the subject land has focused on the eastern and central portions of the site, associated with a former residence off First Avenue, agriculture adjacent to

[6] *Chapman and Murphy, 1989: 69 and 41*
[7] *RTA 2005*
[8] *Graham Brooks and Associates 2005: 6-28*

Edenless Street (now outside the Study Area boundary), and the extant Channel 7 buildings and infrastructure.

The western section of the Study Area has largely remained intact with more limited impact, although some evidence of market gardening and modification to an existing creekline also in this area has caused some disturbance. [9]

Figures 5 and 6 demonstrate that most of the disturbance to the site has occurred since the purchase of the site by ATS/Channel 7 and its subsequent development.

[9] *Lands Department, NSW 1930 Aerial Photograph and Graham Brooks and Associates, 2005:15*

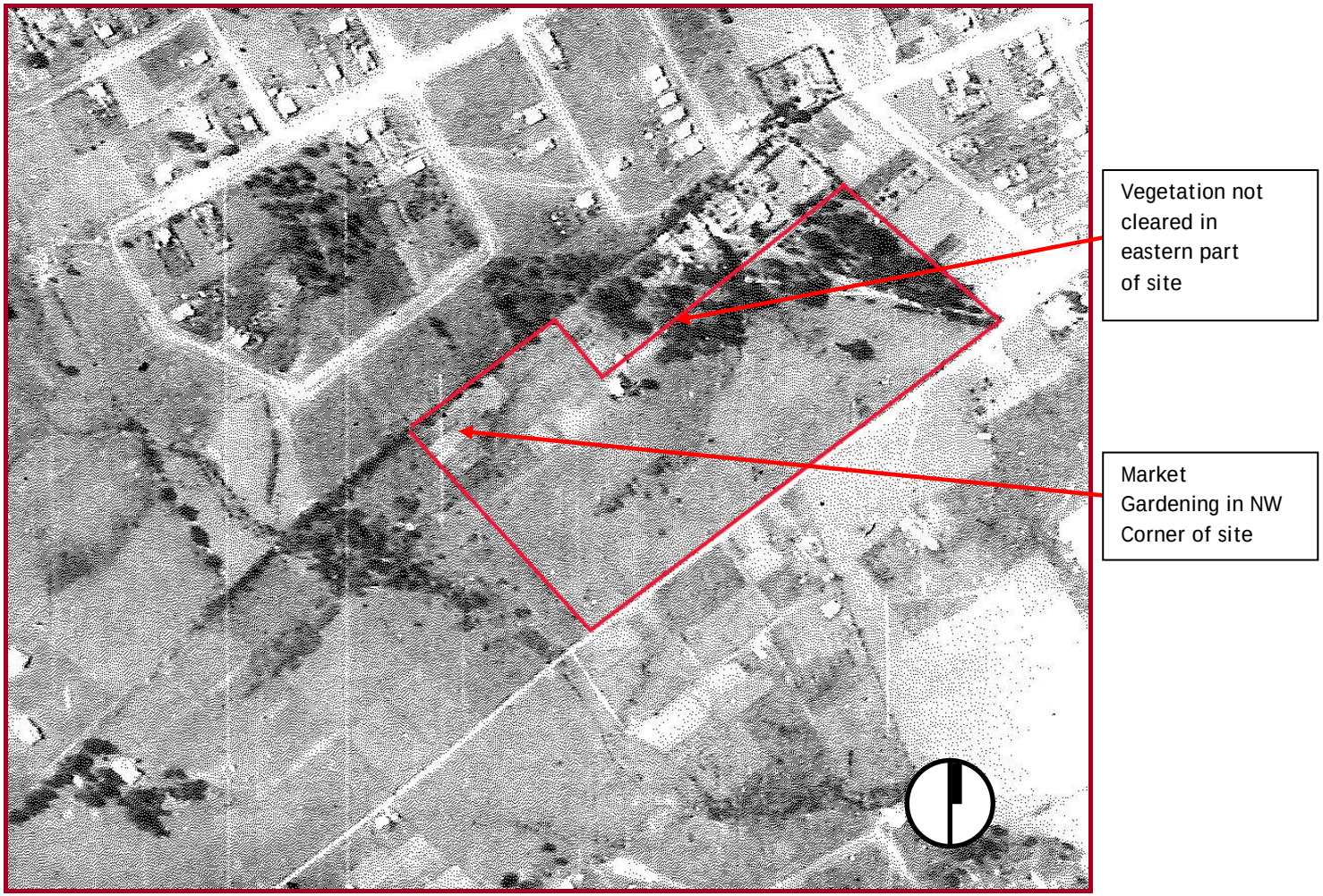

Figure 5. 1930 aerial photograph of the Study Area (outlined in red). Note market gardening visible in north-western corner of site is indicated. Source: NSW Department of Lands[10].

[10] *NSW Department of Lands, Run12, Frame 2171*

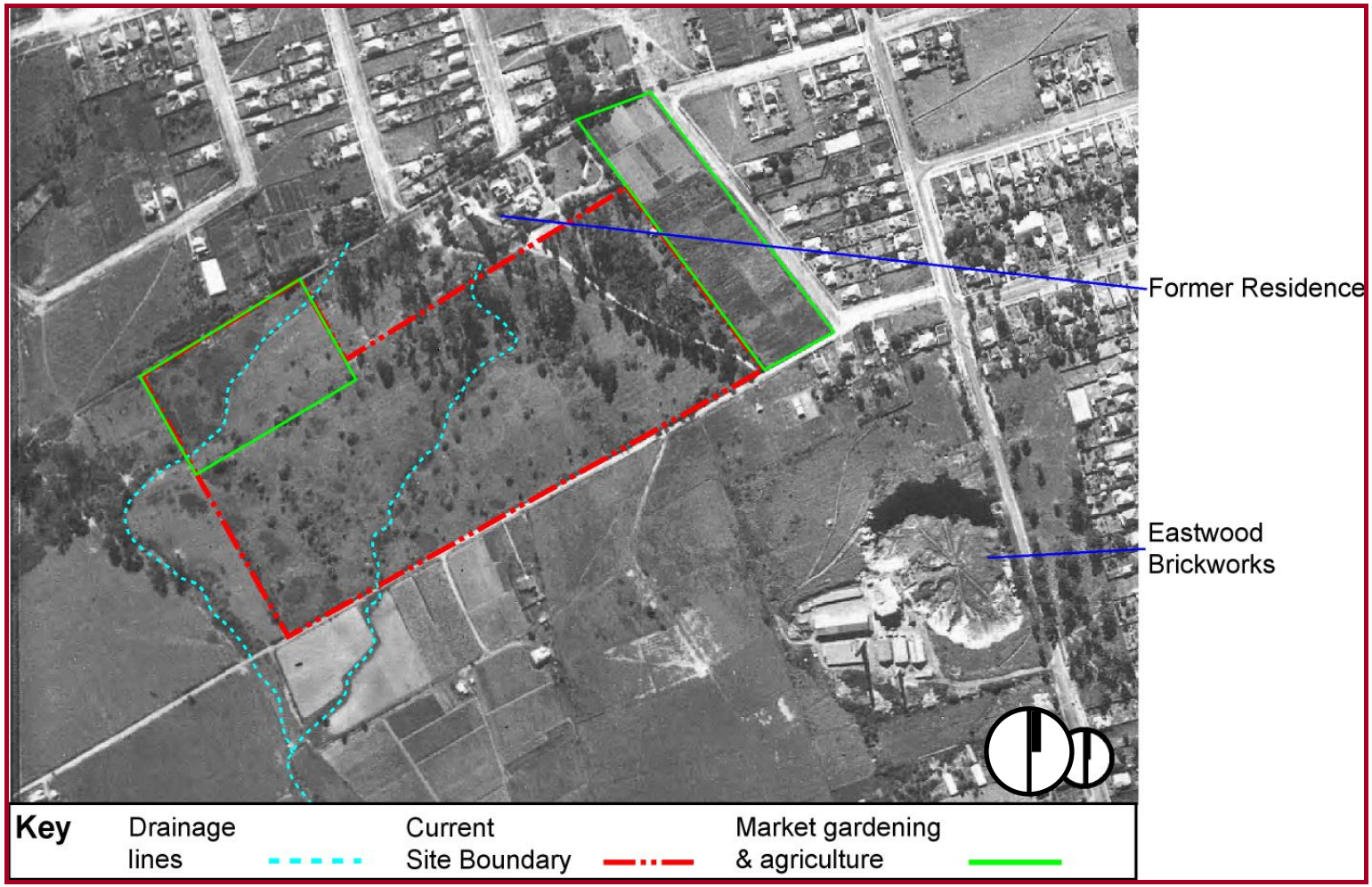

Figure 6. 1943 aerial photograph of the Study Area (outlined in red). Features indicative of previous disturbance within the site (i.e. market gardening shown in green) are also shown. Source: RTA 2005[11]

[11] *RTA Aerial Photograph Run BB08, Frame 397*

5. ARCHAEOLOGICAL CONTEXT

For the purposes of determining settlement and site location patterns, archaeologists examine regional and local trends in the distribution of known sites in relation to environment and topography. This provides evidence about economic and social systems in the past and also assists archaeologists in predicting likely site types, site locations and the nature of the archaeological resource in any given area.

5.1 Regional Archaeological Context

The archaeology of the Sydney region has been well documented through a large number of academic studies, regional management studies and impact assessment investigations over the past 30 years. More than 4,500 sites have been recorded and registered with the DECC Aboriginal Heritage Information Management System (AHIMS) for Sydney, reflecting both the wealth of archaeology in the region and the number of archaeological investigations undertaken. The Cumberland Plain is the most intensively investigated archaeological landscape in Australia.

The dominant site types in the Sydney region (in the 15 - 20 % frequency range) are rock shelters with midden deposit, rock shelters with art, rock art engravings and open artefact scatters[12]. Site types in the 5 - 15 % range include rock shelters with artefacts, grinding grooves and open middens[13]. The distribution, density and size of sites are largely dependent on environmental context. For instance, middens are found in close proximity to marine, estuarine and less often, freshwater bodies. Rock shelters are only found in areas of exposed sandstone escarpment and grinding grooves are found on areas of exposed flat bedded sandstone near a source of water.

5.1.1 Early Occupation

Aboriginal occupation in the region dates back well into the Pleistocene period (i.e. before 10,000 years ago). This evidence comes from radio carbon (C14) dates retrieved from excavated sites at Cranebrook Terrace (41,700 years before present [BP]), Shaw's Creek K2 (14,700 BP)[14] and George & Charles St Parramatta (c.25,000 – 30,000 BP)[15]. The dating of Cranebrook Terrace deposits have been revised and the identification of stones from the terrace as artefacts has also been challenged , so at this time the George and Charles Street site is considered as the oldest reliable date for Aboriginal occupation in the Sydney region. The oldest coastal site in the Sydney region is Prince of Wales Hospital (8,400BP), closely followed by Curracurrang Rockshelter in the Royal National Park (7,450BP)[16].

[12] *Attenbrow, 2002:49.*
[13] *Attenbrow, 2002:49.*
[14] *Shaws Creek and Cranebrook Terrace are both located in the Penrith LGA.*
[15] *As cited in Attenbrow, 2002:18-19; Cranebrook Terrace [41 700+3000±2000 ANU-4016]; Shaw's Creek [14700±250 Beta-12423] and JMcCHM 2005; [30,735±407 Wk-17435].*
[16] *Prince of Wales Hospital [8400±800 lacks a lab no. from source] and Curracurrang 1 [7 450±180 Gak-482].*

The early occupation sites dating to the late Pleistocene /early Holocene have been found in deep stratified rockshelter deposits and within alluvial deposits, particularly on the margins of large rivers such as the Hawkesbury-Nepean and Parramatta Rivers. Drawing on this evidence, McDonald has recently argued that early occupation of the Sydney basin was focused on these primary river systems and characterised by a high degree of 'residential mobility' between small numbers of sites. In our opinion it is unclear whether these patterns are real or biased by the exceptional preservation conditions found in deep alluvial deposits created by the large rivers. More work is required to test McDonald's model, specifically identifying and investigating landforms and deposits with potential to contain intact Pleistocene evidence, particularly those further away from the primary river systems.

5.1.2 Intensification during the Holocene Period

The vast majority of dated sites in the Sydney region are less than 5,000 years old (35 out of a total of 48 dated sites). It has been argued that this is a result of increased populations and 'intensification' of cultural activity during this period. The prevalence of sites dating to the last 5000 years may also be a result of the last significant rise in sea level, approximately 6000 years ago. The sea level rise would have submerged many of the older sites along the coastal fringe and forced Aboriginal groups westward to the current coastline.

In an attempt to better understand changes in use and occupation during the Holocene period, Val Attenbrow undertook a detailed study of the Upper Mangrove Creek catchment to the north of Sydney[17]. Attenbrow's study found significant changes in site patterning during the Holocene, notably, a gradual increase in habitation sites during the early Holocene followed by a dramatic increase after 2,000 BP. During the study, sites were classified as either base camps or activity locations/transit camps based on comparative millennial artefact accumulation rates.

Using these criteria Attenbrow found that:

- Very few base camps were established during the early Holocene. It was not until the 4th millennium B.P. that more base camps were established; at the same time as ground-edged implements were introduced into the assemblage;
- During the 3rd millennium BP base camps substantially increased with a reversal in the ratio of base camps to activity/transit camps; and
- During the last 2,000 years a dramatic increase in activity/transit camps occurred, but no new base camps were established - suggesting a dramatic increase in residential mobility.

Continually changing distribution patterns indicated a re-organisation of mobility patterns of occupation and use at frequent intervals, particularly during the last 4,000 years. Although more detailed studies are required, particularly in regard to the classification of 'base camps', the Mangrove Creek investigations demonstrate at a broad level that:

[17] *Attenbrow, 2004*

- The number of occupation sites increased over time, particularly after 2000 BP; and
- shifts in site patterning indicate periodic re-organisation of residential mobility.

5.1.3 Regional Site Patterns

A study of the regional archaeology of the Cumberland Plain by Dr Jim Kohen made a number of findings about site location patterns in the Sydney area. The study demonstrated that proximity to water was an important factor in site patterning. Kohen found that 65 % of open artefact scatter sites were located within 100 metres of permanent fresh water. Only 8 % of sites were found more than 500 metres away from permanent fresh water[18]. In short, Kohen argued that open artefact scatters are larger, more complex and more densely clustered along permanent creek and river lines. Kohen's study also found that Silcrete (51 %) and Chert (34 %) are the most common raw materials used to manufacture stone artefacts[19]. Other raw materials include quartz, basalt and quartzite.

Although the patterns described above have been generally supported by subsequent investigations, Kohen's study was limited by a reliance on surface evidence. Extensive excavation across the Cumberland Plain has since shown that areas with no surface evidence often contain sub-surface deposits buried beneath current ground surfaces. This is a critical consideration in aggrading soil landscapes, such as those commonly found across the Cumberland Plain and Woronora Ramp. In a 1997 study of the Cumberland Plain, McDonald[20] found that:

- 17 out of 61 excavated sites had no surface artefacts prior to excavation;
- The ratio of recorded surface to excavated material was 1:25; and
- None of the excavated sites could be properly characterised on the basis of surface evidence. In short, surface evidence (or the absence of surface evidence) does not necessarily indicate the potential, nature or density of sub-surface material.

The results of McDonald's study clearly highlight the limitations of surface survey in identifying archaeological deposits in this landscape. The study also shows the importance of test excavation in establishing the nature and density of archaeological material on the Cumberland Plain.

McDonald developed a predictive Aboriginal site location model based on previous archaeological studies across the Cumberland Plain and the results of archaeological survey and excavation across the Australian Defence Industries (ADI) site near St Marys. McDonald predicted that archaeological evidence is likely to occur across the entire landscape. Areas of archaeological potential were predicted wherever there has been limited prior surface disturbance[21]. It was predicted the size (density and complexity) of archaeological

[18] *Kohen, 1986: 229-275.*
[19] *Kohen, 1986: 280-281.*
[20] *McDonald, 1997.*
[21] *McDonald, 1997: 56.*

sites will vary according to permanence of water (stream order), landscape unit and proximity to stone sources as follows[22]:

- In the headwaters of upper tributaries (first order creeks) archaeological evidence will be sparse and represent little more than background scatter;
- In the middle reaches of minor tributaries (second order creeks), archaeological evidence will comprise sparse but focused activity (one-off camps, single event knapping etc);
- In the lower reaches of tributary creeks (third order) , there will be evidence of more frequent occupation including repeated occupation by small groups, knapping floors and evidence of more concentrated activities;
- On major creeks (fifth order), archaeological evidence will reflect more permanent or repeated occupation. Sites will be complex and may be stratified;
- Creek junctions may have been a particular focus of occupation;
- Ridge top locations between drainage lines will usually contain limited archaeological evidence although isolated knapping floors or other forms of one-off occupation may be present; and
- Sites in close proximity to an identified stone source will include stone artefacts with a range of size and cortex characteristics. The general size of artefacts and percentage of cortex will both decrease with distance from source.

Although the patterns described above may provide a useful general guide to site patterning and inferred cultural behaviour, there are always exceptions such as large waterholes or wetlands on upper tributaries that were important resource zones and attracted repeated and complex Aboriginal occupation. This point is illustrated by McDonald's recent work across the Rouse Hill Development Area (RHDA)[23] which found similarity in the composition of lithic assemblages across different landforms. Comparison of 'Marginal' sites (further away from permanent water) with those adjacent to Seconds Pond Creek (a 2nd order permanent water source) showed only subtle variations, such as slightly lower cortical lithics and higher frequencies of modified artefacts in marginal site assemblages. In short, although lithic assemblages decreased in scale and repetition further away from water, the composition of assemblages remained fairly consistent across the entire landscape.

McDonald concludes that classifying various landscape evidence according to site types (such as residential base camps, dinnertime camps etc) is not a useful framework for interpreting the archaeology of the Cumberland Plain.

5.1.4 Potential Archaeological Deposits (PAD)

Archaeologists use the term 'Potential Archaeological Deposit' (PAD) to describe areas that have potential to contain intact sub-surface Aboriginal objects or sites. Surface survey results, predictive modelling, and assessment of past site formation processes are commonly used to identify PAD.

[22] *McDonald, 1997: 56-57.*
[23] *McDonald, 2005b.*

The concept of PAD was developed during the 1980's, primarily as a response to mechanisms and procedure for protection of Aboriginal cultural heritage enshrined in the NSW NPW Act. While Section 90 of the NPW Act 1974 provides protection for known physical evidence of Aboriginal occupation (such as stone artefacts that may be identified on modern ground surfaces), areas that contained sub-surface archaeological deposits not visible on ground surfaces were often overlooked in consulting reports produced during the 1980's. This represented poor archaeological practice and potentially exposed development proponents to breaching the NPW Act by disturbing and/or destroying sub-surface Aboriginal deposits during site development works.

As a result, the concept of PAD was developed to identify potential sub-surface deposits during initial surface survey and assessment work. NPWS allowed for PADs to be recorded and registered on the NSW Aboriginal Sites Register (now the Aboriginal Heritage Information Management System – AHIMS). Even though PADs do not have any legally protected status under the NPW Act, they provide DECC (as the statutory authority) with information that Aboriginal deposits may be present in an area and provide development proponents with due warning that development works in areas of identified PAD may disturb Aboriginal deposits. PADs have therefore evolved to become an important and useful heritage management tool during the assessment process, particularly across landscapes that have little or no ground surface visibility.

5.1.5 Stone Artefacts

Aboriginal stone artefacts are an important source of archaeological information because stone is preserved for long periods of time whereas organic materials such as bone, shell, wood and plant fibres decay. Stone artefacts provide valuable information about technology, economy, cultural change through time and settlement patterning. Stone has also been used for 'relative' dating of sites where direct methods such as Carbon dating cannot be applied. A technological sequence for stone artefacts for the region was first described in the late 1940s by Fred McCarthy and has since been refined[24]. Known as the 'Eastern Regional Sequence' it was based on direct dating of excavated sequences. Some debate about the precise nature and significance of the technological changes described continues[25], therefore the ERS should be regarded only as a general guide to technological change. The ERS phases are as follows[26]:

Capertian – is distinguished by large uniface pebble tools, core tools, horsehoof cores, scrapers and hammerstones. Backed artefacts are occasionally present. Generally dates to before 5,000 years before present (BP).

Early Bondaian – Aspects of the Capertian assemblage continue, but backed artefacts and ground-edged artefacts increase. Artefacts during this period were predominantly made from fine-grained siliceous stone such as silcrete and tuff. Generally dated from 5,000 BP to 2,800 BP.

[24] *The ERS is currently being re-examined by Hiscock and Attenbrow.*
[25] *Hiscock and Attenbrow, 2002; Hiscock and Attenbrow, 1998; Hiscock and Attenbrow, 2005.*
[26] *Based on Attenbrow, 2002: 152-159.*

Middle Bondaian – Characterised by backed artefacts, particularly Bondi Points and ground-edged artefacts. Artefacts made from siliceous materials, however quartz becomes more frequent. Generally dated from 2,800 BP to 1,600 BP.

Late Bondaian – characterised by bipolar technology, eloueras, ground-edged artefacts, and bone and shell artefacts. Bondi points are virtually absent and artefacts are predominantly made from Quartz. Generally dated from 1,600 BP to contact.

5.2 AHIMS Search Results

A search of the DECC AHIMS database found 14 site recordings within a 3 km radius around the Study Area. No sites have been previously recorded within the Study Area (refer to **Figure 7**).[27]

The 14 sites can be broken down as nine open camp sites or artefact scatters, three rock shelters with deposit, one rock shelter with art and one isolated find. This information indicates most of sites in the local area (71.4%) contain evidence of stone artefacts (artefacts scatters and isolated finds).

With regard to distribution, **Figure 7** shows that the 14 sites are distributed along creeklines associated with Parramatta River in the Dundas/Telopea area. The greatest density of archaeological sites is found on the lower ground along Subiaco and the Ponds Creeklines.

Although no sites are situated in the immediate vicinity of the Study Area, several are located within 2 km of the Study Area. These sites include #35-6-2572; #45-6-2407 and #45-6-2571 and were all open camp sites (or stone artefacts scatters). #45-6-2572 is located in Telopea, south-west of the Study Area; #45-6-2407 is situated in Acacia Park, Dundas Valley, also south-west of the Study Area; and #45-6-2571 was within the site of a substation in Dundas Valley (but has since been destroyed). These three sites are located along a tributary of the Ponds Creek.

Of the 14 sites identified by the AHIMS search, nine were recorded by a private individual (Michael Guider), four were recorded through the Port Jackson Research Project and one through private consulting associated with the M2 motorway.

[27] *An AHIMS site search was undertaken by the DECC on 15 September 2008 (AHIMS # 23659)*

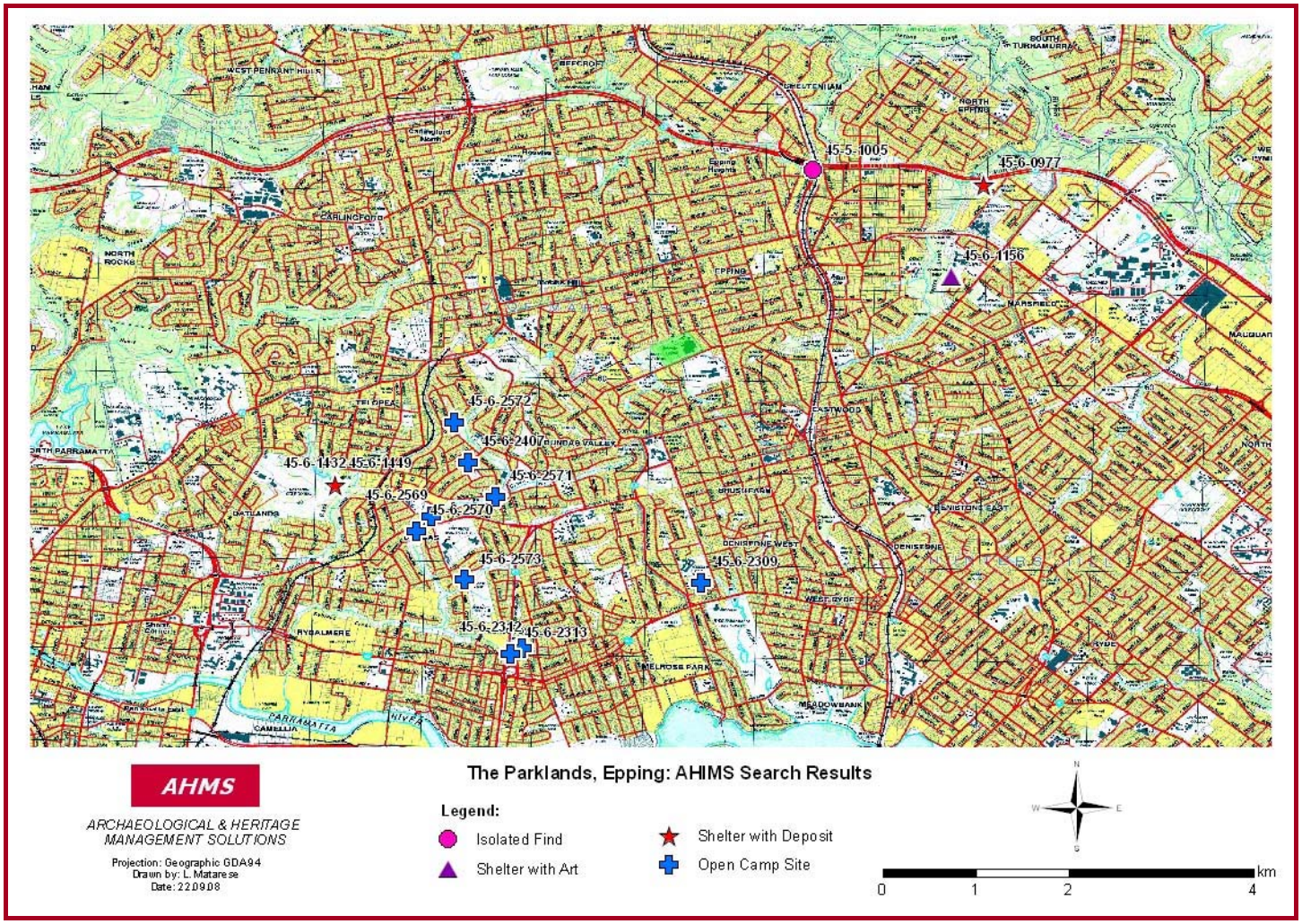

Figure 7. Topographic map showing Aboriginal sites recorded on the AHIMS database within 3km of the Study Area (marked green). Source: Topoview 2006 – CMA 1: 25,000 map sheet.

5.3 Local Archaeological Context

The following information outlined results of investigations into Aboriginal sites undertaken with the Epping area and the broader Parramatta Local Government Area.

5.3.1 Sites in the Parramatta LGA

In 2003, Mary Dallas Consulting undertook a strategic archaeological review and planning study for Parramatta City Council. It encompasses the entire Parramatta Local Government Area (LGA) and aimed at providing Council with management guidelines for known archaeological resources and assessment and management of areas with potential archaeological sensitivity.

The study found that open camp sites (stone artefact scatters) are the most common site type in the LGA. The low frequency of rock shelter and grinding groove sites was attributed to the dominant local shale soil landscape/geology where rock-shelters and sandstone outcrops are rare.

Dallas recommended that further investigation and assessment should be undertaken in advance of development within 100 m of creeklines and foreshores which have not been reclaimed[28]. Dallas also recommended that areas containing sandstone outcropping and platforms should also be investigated.

Based on the review of archaeological patterning, topography and past land use, Dallas prepared an archaeological zoning plan (AZP) for the LGA. The Study Area falls within two areas of sensitivity identified by the AZP. The western allotment of the Study Area has been identified as holding moderate sensitivity, whereas the central and eastern portions of the Epping Park site have been assessed as holding low sensitivity.[29]

Dallas and Irish's review of known Aboriginal sites in the Parramatta LGA in 2003 identified the highest proportion of sites within the LGA were open campsites (64%, n=25), followed by rockshelters with deposit only (13%, n=5), grinding grooves (8%, n=3). The remaining site types included scarred trees, open middens, rockshelters with art only and rockshelters with deposit and art, all of which consisted of 5% (n=2) or less (3%, n=1) of the overall site types recorded at that time in the LGA.[30]

Archaeological excavations undertaken during recent years in the Parramatta Central Business District (CBD) have revealed a number of important discoveries relevant to the use of the Parramatta area. Most of these sites have been identified in association with historical archaeological investigations, which have confirmed the presence of Aboriginal occupation both during and prior to European occupation of Parramatta.

The Parramatta CBD is situated over 6 km south-west of the current Study Area.

[28] *Dallas 2008: 125*
[29] *Based on a review of Dallas 2008, Figure 5.1 Aboriginal Heritage Study Sensitivity Map*
[30] *Dallas 2003: 95*

Most recently excavations undertaken by Jo McDonald Cultural Heritage Management (JMCHM) at two sites in Parramatta have uncovered archaeological assemblages within a deep alluvial sand unit.[31] These excavations recovered stone artefact types consistent with more recent occupation associated with the Bondaian period (i.e. within the past 6,000 years) in addition to earlier deposits associated with pre-Bondaian stone artefact technologies. The distinction between these technology types was identified through both the type of stone artefacts uncovered, the depth and the type of raw materials recovered.

5.3.2 Sites in the Epping Locality

Limited archaeological study has been undertaken in and around the Epping locality. The site cards identified through AHIMS and shown in **Figure 6** are based predominately on sites recorded by private individuals,[32] and were un-associated with development and comprise a number of open camp sites (i.e. artefact scatters). These sites were rarely accompanied by a report.[33]

The remaining sites were identified through the Port Jackson Research Project[34], which focused on rock shelters.

Nine of the sites identified as part of the AHIMS search for this project (**Section 5.2**) were originally identified by Michael Guider. These sites were located south-west of the Study Area in adjoining suburbs to Epping. These sites were subsequently re-investigated by Paul Irish and Mary Dallas in 2001 as part of the Parramatta Aboriginal Heritage Study (**Section 5.3.1**). Irish and Dallas reassessed the integrity of these sites and identified that most of them had been further disturbed since their initial recording in the 1980s and 1990s.

The sites consisted of stone artefact scatters, identified within public land, predominately public reserves along creeklines along landforms which are similar to the Epping Park Study Area. The site records indicate they consisted of surface scatters of stone artefacts of stone types such as silcrete, chert and quartz.

Port Jackson Archaeological Project

The Port Jackson Archaeological Project sought to investigate the nature and history of Aboriginal usage of the coast in the Port Jackson catchment. This encompassed Sydney Harbour, the Parramatta and its associated tributaries and was subdivided into a series of eight sub-catchment areas. Four of these areas were within the Parramatta LGA – Vineyard Creek, Darling Mills Creek, Upper Parramatta River and Duck Creek. The Vineyard Creek

[31] *These sites included 109-113 George Street and 180 George Street, Parramatta see JMCHM 2003 and 2005a*
[32] *E.g. Michael Guider*
[33] *DECC sites - #45-6-2309, #45-6-2312, #45-6-2313, #45-6-2407, #45-6-2569, #45-6-2570, #45-6-2571, #45-6-2572, #45-6-2573*
[34] *DECC sites - #45-6-0977, #45-6-1156, #45-6-1449, #45-6-1432*

and Upper Parramatta River sections of this project are most relevant to the Epping Park Study Area.

The project involved two stages, the first was based on quantifying existing data about middens and archaeological deposits in the Study Area, and confirming the locations of recorded sites and their research potential (if any). The second stage of the project involved excavation of a selection of middens and archaeological deposits to address the research questions previously identified.[35]

One site was excavated within the Parramatta LGA (and near the Study Area) during Stage 2, this was a rock shelter with associated archaeological deposit within John Curtin Reserve (DECC site #45-5-792).

This investigation recovered some 200 stone artefacts from a combined surface scatter and limited archaeological excavation. A radiocarbon date was obtained from charcoal deposits found during the excavation which enabled the initial occupation to be dated at around 5,600BP.[36] This site is located some 7 km west of the Epping Park Study Area.

5.4 Predictive Modelling

5.4.1 Site Types

Based upon information compiled within the DECC AHIMS, and background archaeological data reviewed above, the types of sites that may be expected to occur within the Study Area are as follows:

- Open artefact scatters;
- Isolated finds; and
- Potential archaeological deposits (PAD);

Open *artefact scatters* occur almost anywhere that Aborigines travelled in the past. The cultural activity represented by these sites may be associated with hunting or gathering activities, domestic camps, or the manufacture and maintenance of stone tools.

The density of artefacts present in these scatters can vary dramatically and may relate to either transient or short stay camps, or base camps of long term and/or repeated occupation. These types of sites are commonly referred to as 'open campsites'.

Similarly, *isolated finds* occur anywhere in the landscape and may represent the random loss, deliberate discard or abandonment of artefacts, or the remains of dispersed artefact scatters.

[35] *As cited by Dallas 2003: 76-77*
[36] *Attenbrow 1992:4-5*

PADs can occur anywhere that a partial or intact soil profile is present. They represent an area where archaeological deposits that retain Aboriginal objects or material may occur. PADs represent buried archaeological material, and can represent similar activities to artefact scatters and isolated finds above. In addition, PADs have the potential to provide temporal information in relation to a site.

5.4.2 Aboriginal Site Predictions

The topography and distribution of natural resources near the Study Area generally indicates a potential for:

- Open artefact scatter sites;
- Potential archaeological deposits within intact topsoils; and
- Isolated finds anywhere across the landscape.

Previous land clearance over much of the site and construction of the studio buildings for the ATS and later channel 7 studios and associated infrastructure are likely to have disturbed original topsoils within extensive parts of the Study Area. The integrity of stone artefacts and/or archaeological deposits will depend on the degree that topsoils were disturbed.

Based on the historical mapping (**Figures 5** and **6**) and geotechnical information (**Section 4.3.1**), there is potential for intact, or only partially disturbed, soil profiles to exist within the western section of the Study Area. Although a portion of this area was formerly used as a market garden during the early to mid 20th century, it is possible that intact topsoil may be present beneath the plough zone, which usually equates to 20-30cm below ground level. Given the lack of significant disturbance and generally undisturbed nature of the western section of the Study Area, we consider the potential for archaeological material that may have once related to occupation in association with Terrys Creek as high.

Open artefact scatters may be found buried below current ground surfaces in areas where intact A horizon soils remain. In areas where A horizon soils have been removed or substantially disturbed by erosion and other more invasive activities, it is unlikely that sub-surface deposits remain. Isolated finds may be found anywhere across the landscape, and represent the random loss, deliberate discard or abandonment of artefacts, or the remains of dispersed artefact scatters.

Only one portion of the Study Area is shown in the 1930 and 1943 aerial photographs as containing potentially mature age trees (**Figures 5 and 6**). This area is located in the central portion of the Study Area near a series of petrol bowsers and a helipad. There is limited potential for scarred and/or carved trees to be present in the Study Area. There is limited to nil potential for midden deposits, as middens are likely to be found in closer proximity to creeklines than a distance of 30 m.

No natural outcrops of rock such as sandstone are known within the local area and are not common in areas with dominant Wianamatta shale geology. This means there is no potential for axe grinding grooves, rock engravings or rockshelters across the Study Area.

From an archaeological resource perspective, the site is located immediately adjacent to a first order creekline that flows into Terrys Creek, which is situated in the Mobbs Lane Reserve (approximately 30 m away). Terrys Creek is a tributary of the Lane Cove River, which is located further to the north-east. The Study Area is also located within 700 m of the Ponds Creek, which is a tributary of the Parramatta River, south-west of the subject land. Hence, the Study Area is located within close proximity to two sources of semi-permanent to permanent fresh-water in addition to being 3 km away from the significant water sources of the Lane Cove and Parramatta Rivers. Given the Study Area's close proximity to these resources, it is likely that elevated areas adjacent to creeklines, such as Terry's Creek, are likely to retain high potential for archaeological material.

The lower slope landform across the western portion of the Study Area would have been an ideal location for Aboriginal use and settlement because its comprises slightly elevated gently sloping land immediately adjacent to water sources. Several previous archaeological studies outlined in the section 5 above have indicated the significance of these types of landform for archaeological evidence and distribution. For these reasons, there is moderate potential for archaeological material to occur within this area.

In summary, we predict that:

Areas in the east and centre of the Study Area, now a carpark and associated buildings for the current channel 7 studios are likely to have been significantly impacted by existing structures and their footings, in addition to extensive services, petrol storage facilities, and are unlikely to retain archaeological materials/remains. Geotechnical data indicates areas in the centre of the Study Area is likely to retain significant fill deposits (up to 2 m and 4.6 m);[37] and
Areas in the western portion of the Study Area have suffered the least disturbance, although some market gardening and also some drainage work is likely to have caused some impact to existing topsoil in this area. Generally this portion of the Study Area is likely to have a high probability of containing intact or partially disturbed soil profiles. However, based on previous sites recorded in the local area, these archaeological deposits are likely to contain low stone artefact densities in partially disturbed or minimal soil profiles.

[37] *Douglas Partners 2009 e.g. boreholes 8 and 4*

6. FIELD INVESTIGATION

6.1 General

Alan Williams and Felicity Barry (AHMS Archaeologists) carried out a field survey of the Study Area in partnership with Allen Madden (Metropolitan LALC) and Gil Saunders (PCCATSIAA) on 29 January 2009.

The objectives of the field survey were to review the Study Area with particular emphasis on an area of interest identified in the preliminary Aboriginal Archaeological Assessment for this site.[38] The field investigation also sought to identify any unknown Aboriginal archaeological sites, objects or places and to verify the results of the previous study in order to confirm areas of moderate and negligible archaeological sensitivity.

6.2 Survey Methodology and Coverage

The Study Area was traversed on foot, with the aim of locating and examining areas of ground surface visibility and identifying the potential for archaeological materials/deposits, as well as existing disturbances and their extent. Photographs and written documentation were used to document the site investigation.

The Study Area was split into three broad areas (**Figure 8**):

Transect 1 – Eastern portion of the Study Area. This encompassed the eastern carpark, the main administration building and southern road way leading to the central part of the site;

Transect 2 – Central portion of the Study Area – This included a carpark along the northern boundary, an adjacent helipad, a tennis court with recessed concrete grandstand and an associated carpark leading to the western-most carpark; and

Transect 3 – Western portion of the Study Area – This was predominately grassy land extending to the western boundaries of the site. It contains a creekline (with two ponding areas), a largely landscaped slope heading from the westernmost carpark (in Transect 2), a small satellite array and a gently vegetated lower slope leading towards the nearby Terry's Creek in Mobbs Lane Reserve.

[38] *AHMS 2008*

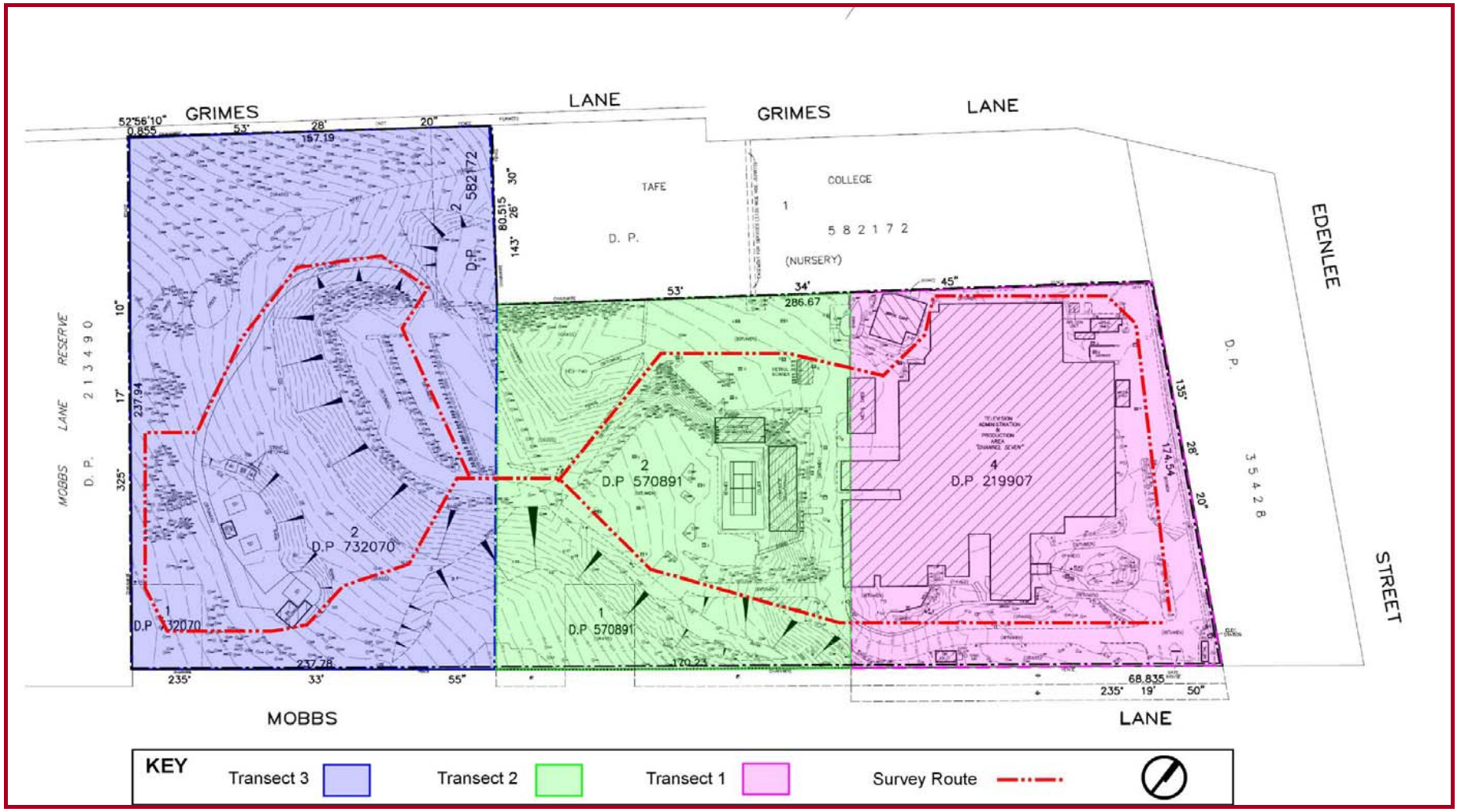

Figure 8. Survey Transects investigated across the Study Area (Shaded and route of transect route taken coloured red)

Investigation was undertaken on the area of previously identified PAD from the AHMS initial preliminary study of the site. This area was deemed likely to retain intact topsoils, although a difference in height between the Study Area and adjacent Mobbs Lane Reserve was noted along the western boundary fence. Subsequent geotechnical data indicates that this area contains up to 20 cm of dark brown, silty sandy to silty clay topsoil.[39] This confirms the likelihood of part of this area to contain soils which may contain potential archaeological deposits.

No areas of erosion and only isolated areas of ground exposure were observed to enable an examination for archaeological evidence such as stone artefacts, charcoal or shell. Ground visibility was generally poor in the area of PAD (generally less than 10%). However, ground disturbance in this area appeared to be relatively low with the exception of established services for a CCTV camera/lights in the south-west corner.

6.3 Survey Results

The following provides a summary of the transects that were investigated as part of this study. **Figure 13** provides a summary of some of the features and disturbances discussed in the text below.

Transect 1:

This portion of the Study Area had very low ground visibility (<5%), with most of the site covered by existing road paving and building footings. Small areas containing landscaped gardens were interspersed amongst the carpark located along the eastern property boundary and following the main road which heads west from the entry into the site towards the centre of the Study Area.

Vegetation observed within Transect 1 consisted of recent plantings (both native and non-native) and a few older trees (e.g. Eucalypts) which were spread out. However no evidence of scarring or carving was identified on these trees.

The inspection found that the structures present within the eastern portion of the Study Area (on the crest), had been cut into original ground surfaces, in some cases clearly into the B horizon subsoils and hence removing original topsoil (and any associated archaeological material) (**Figure 9**).

Survey of Transect 1 concluded on the basis of previous ground disturbance, it was unlikely that any intact topsoil deposits with associated archaeological deposits remain within this area. This area has negligible archaeological potential.

[39] Douglas partners 2009: bore no 101, 102, 103

Figure 9. View facing west at the top of Transect 1, showing extant landscaping, excavation indicated by the lower level of the extant building and impact of excavation for extant roads.

Transect 2:

Transect 2 also had low ground visibility (<10%), as most of the area comprised carparking space, a tennis court facility/arena and helipad.

Some isolated mature age Eucalypts were identified in the northern-most carpark, however most of the vegetation had been recently landscaped within this portion of the site, particularly along the southern and northern Study Area boundaries.

Heavy landscaping modifications were noted between the southern boundary and the road leading west within the Site to the tennis courts and westernmost carpark. This landscaping related to drainage modifications within the Study Area, which are likely to have been associated with development since the 1950s, as this change was not present in the 1943 aerial photograph. The landscaping involved large amounts of fill to sculpt the natural hillslope, to channel water, level the carpark and provide some privacy to the Channel 7 studios. The helipad area, located along the northern boundary within Transect 2 was similarly filled to create a level surface for helicopter access.

A petrol bowser for car re-fuelling is located in the northern-most carpark, and appears to retain extant sub-surface petrol tanks and the helipad also contains an extant re-fuelling facility within the helipad area.

The tennis court facility and associated concrete grandstand required a large cut into the existing hill-slope to enable its construction (**Figure 10**). This feature effectively creates a divide between the northern-most carpark and structures located on that level, to the lower carparks situated near the tennis courts.

Services identified as an extensive drainage system and electricity additionally extend through this area, with the drainage system heading in a south-westerly direction, apparently following the course of a former streamline.

These cutting and filling landscaping activities identified above have heavily modified the landscape within Transect 2 and indicate that original topsoils are likely to have been removed and/or heavily impacted by the installation of these features. Transect 2 has negligible potential to retain topsoils with intact archaeological deposit.

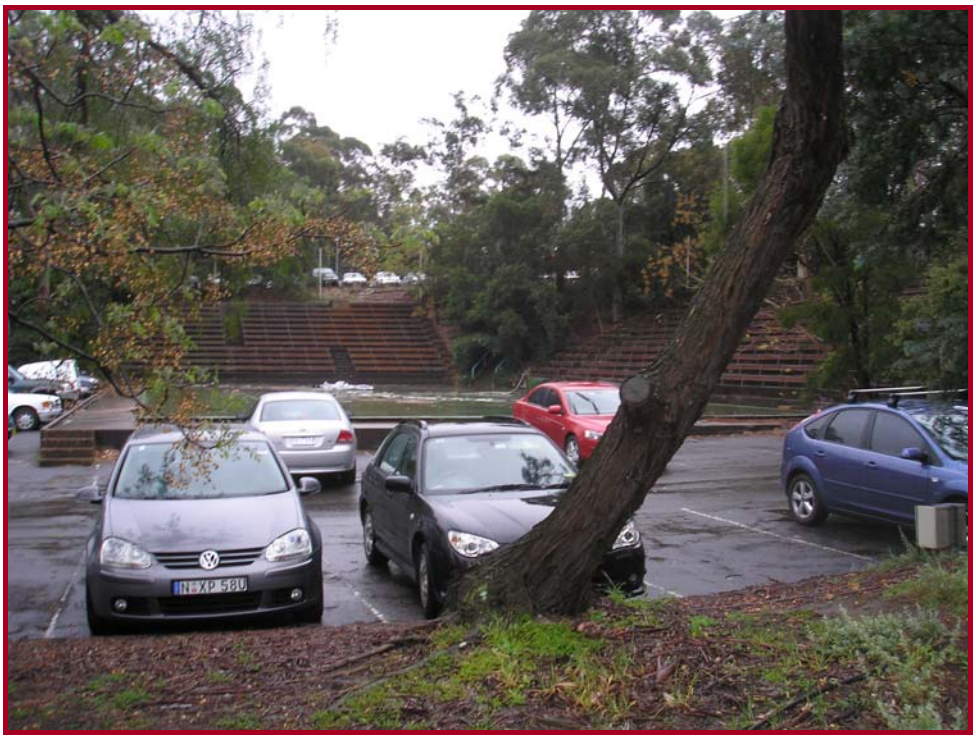

Figure 10. Transect 2 – view of the grandstand and tennis courts with the lower carpark. The northern-most carpark is just visible in the centre of the image at the top of the grandstand level. The natural hill slope prior to development is likely to have formed a gentle slope between the photographer and the cars in the background, and hence the depth of impact (>4 m) can clearly be discerned from this photograph.

Transect 3:

This portion of the Study Area was the main focus of the site investigation on 29 January. This area included a portion of land previous identified as 'PAD' (now Epping Park PAD 1).

Transect 3 included the site's western-most carpark, a creekline along the northern boundary, a road leading from the carppark to a small satellite array, and the continuation of a drainage detention basin along the southern boundary.

Transect 3 also had low ground visibility due to heavy grass cover (<10%). Most of transect 3 retained open grass land with some scattered trees (a mixture of native and non-native), which were recent regrowth.

A creekline running along the northern part of Transect 3 appeared relatively untouched (as it followed the line of the previous creekline shown in 1943), but two ponding areas observed during the survey on the western edge of the Study Area had clearly been added since that time. This would have caused some ground disturbance in association with this creekline.

Some evidence of cutting into the existing hillslope was observed for the establishment of both the satellite array and associated road in order to create a level surface and to grade the road. The drainage detention basin was a continuation of the feature identified in Transect 2, evidence of filling to sculpt the detention basin was clearly visible during the field survey, as was the filling required to level the western-most carpark. These features were identified by the sharp change in the hillslope gradient. This indicated that although original topsoils may be present underneath the fill, it is likely that heavy modifications of this nature would have disturbed any archaeological deposits in this area.

However, the western corner of Transect 3 (which contained the area of previously identified PAD), with the exception of services for a CCTV camera, appeared relatively untouched by previous land-use (**Figure 11**). The hill-slope (a lower slope landform) appeared to be natural with minimal modifications, and although revegetation had occurred fairly recently, topsoil was observed in scattered parts of this area.

The north-western corner of Transect 3 (and the Study Area) was also heavily grassed with some trees well spread out (**Figure 12**). The historic landuse had identified this area as being used for market-gardening, however the hill-slope also appeared to be unmodified, indicating there may be potential for only partially disturbed soil profiles (from ploughing etc) in this area. This would mean that there is still some potential for topsoil with potential archaeological deposit in this portion of Transect 3.

The western-most parts of Transect 3 have potential to contain topsoils with potential archaeological deposits. However it is possible that the north-western corner may have been disturbed by past land use activities (i.e. ploughing), whereas the south-western corner is more likely to remain intact. The western portion of the Study Area has the highest potential to contain intact topsoils with associated potential archaeological deposits.

Figure 11. Transect 3 - Area of Epping Park PAD 1 in the south-western corner of the Site

Figure 12. Transect 3 – view looking north-west towards the northern extent of Epping Park PAD 1

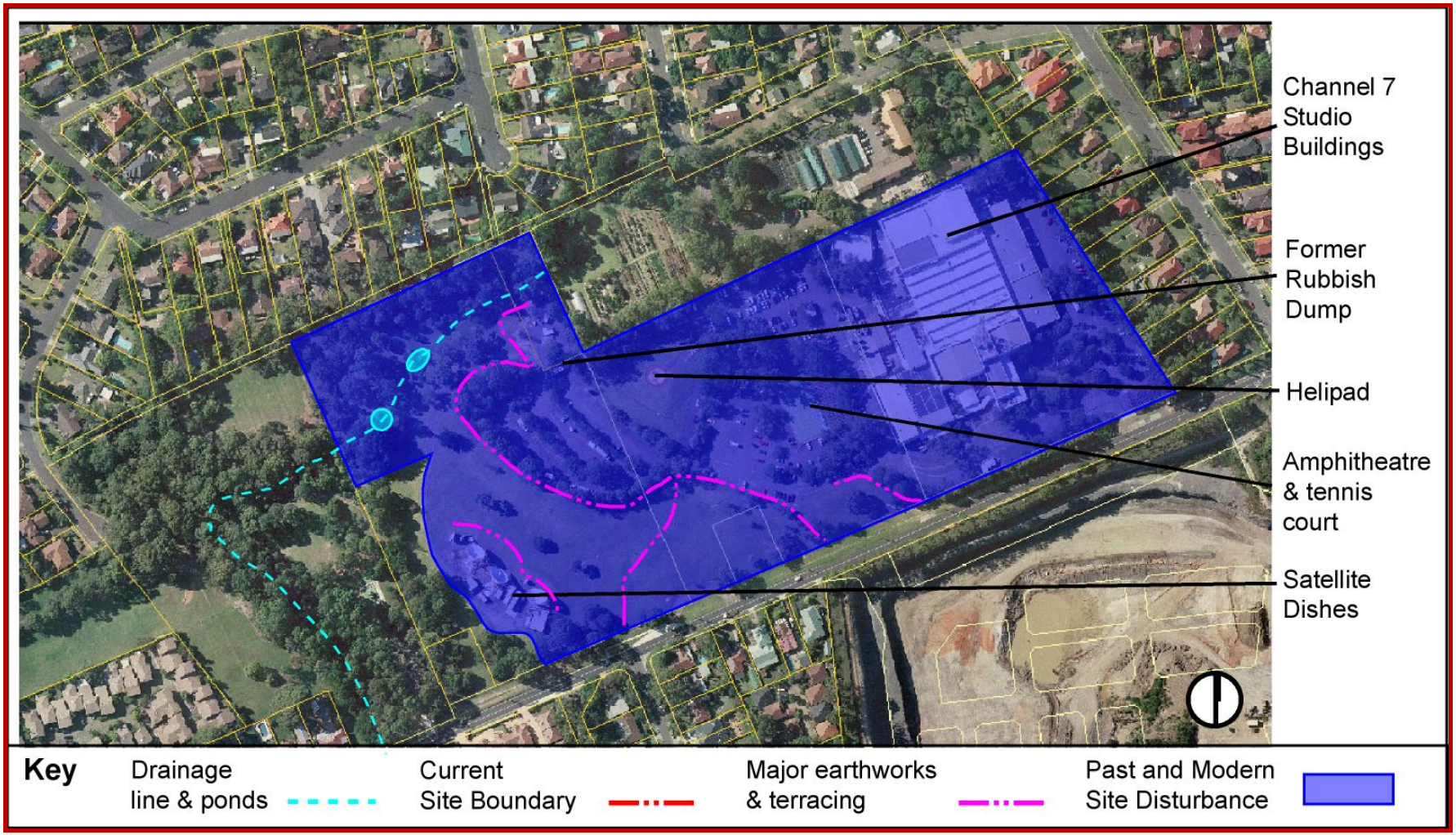

Figure 13. Aerial Photograph showing historic and observed impacts (in blue) occurring within the Study Area. Source: Spatial Information Exchange, NSW Department of Lands.

6.4 Archaeological Sensitivity

The assessment of archaeological sensitivity within the subject land is based on:

- an understanding of Aboriginal settlement patterning in the area (i.e. the pattern of site distribution across the landscape); and
- an assessment of landscape and soil disturbance (using the results of survey and analysis of historic aerial photographs).

Hence, the archaeological sensitivity of the Study Area is based on the existing disturbances overlying areas of assessed archaeological potential. Conclusions about settlement patterning and site disturbance are described below, as well as an identification of the sensitivity of the Study Area.

6.4.1 Aboriginal Settlement Patterns

The frequency, density and complexity of Aboriginal sites generally increase with proximity to water sources (particularly within 100 m of water). Sites generally reduce in size and frequency as associated stream order decreases, therefore on higher order streams (third order and above) sites are more common and larger. They often reflect more permanent or repeated occupation with evidence of more concentrated activities. Creek junctions, wetlands and resource intersection zones were a particular focus of Aboriginal occupation and use.

As discussed above, the Study Area contains one extant unnamed first order watercourse. In addition to which the site is situated within 30 m of Terrys Creek, another low order creekline which is a tributary of the Lane Cove River and within 700 m of the Ponds Creek, which is a tributary of the Parramatta River.

Both Terrys Creek and Ponds Creek would have provided water sources, including both freshwater and habitat for many aquatic and littoral species used for food and/or materials in traditional Aboriginal social and economic life.

Terrys and the Ponds Creeklines are freshwater creeklines, although they become tidal several kilometres south-east and south-west respectively of the Study Area. This suggests that more resources, possibly associated with a series of resource intersection zones (i.e. freshwater, freshwater/marine, and marine ecotones) would have been located several kilometres south of the Study Area. This indicates a potential for Aboriginal sites associated with use of those resources along the margins of Terrys Creek, particularly along the adjacent, slightly elevated locations, such as the lower slope identified within Transect 3.

6.4.2 Disturbance

As outlined above, historical data indicates that most of the Study Area has been significantly affected by past land use activities. Impacts include levelling and building up of the site, which involved cutting and filling for a major detention basin facility to the south (central and western) parts of the site (Transects 2 and 3) **(Figure 14**). It has also involved the cutting into the hill slope for the tennis court and grandstand in Transect 2 (centre of the site) and for construction of the extant buildings in Transect 1 (east of the site) (**Figures 9 and 10**).

Figure 14. Transects 2 and 3 Detention Basin view facing East.

Visual observations suggest that prior to the significant land modifications outlined above this site was once a gentle slope leading down to a lower slope just above Terrys Creek at the base of the Study Area.

Historic aerial photographs and details of more recent development indicate that transect 3 (the western portion of the Study Area) appears to have undergone some landscape modifications. These impacts have included both the construction of an extensive detention basin and an earth mound associated with the central carpark (which is part of Transects 2 and 3). In addition a series of two ponds have been created since 1943 to pool water from a natural creekline which runs westwards downslope to meet Terrys Creek. The formation of these ponds would have caused disturbance to topsoils for their formation.

Evidence suggests there were lesser impacts to the western portion of Transect 3, which was used in the past for market gardening activities. These impacts were not observed during the survey of the Study Area, however this disturbance is likely to have caused

disturbance and truncation of between 20 and 30 cm of topsoil with associated mixing of any potential archaeological deposits within that soil unit.

No evidence from historical data is available to suggest that topsoil within the remaining parts of the western portion of Transect 3 has been disturbed. Geotechnical information for this portion of the Study Area indicates that there is some topsoil present in this location. However no indication is provided within the geotechnical data as to whether the topsoil has been disturbed, only that it is there.

In summary, it appears that most of the Study Area has undergone extensive landscape modification and impact and the potential for *in situ* archaeological material over most of the site is Low to Nil. However the western portion of Transect 3 (separated by a pond) does retain potential for *in situ* archaeological material and is considered to have Moderate to High archaeological potential.

6.4.3 Conclusions

As outlined above, the effective coverage and extensive disturbance within the Study Area have removed the likelihood of identifying surface evidence of Aboriginal objects or sites that may be present in most parts of the site. However, our review of the geotechnical data and historical research undertaken for the site indicate that a small portion in the west of the Study Area has been subject to minimal impact.

Within the western part of the site (identified as Transect 3 above) there is evidence of market gardening (in the north-western corner). Market gardening is likely to have disturbed and mixed the soil profiles within this part of the Study Area. However the archaeological evidence may still be present. No geotechnical information is however available for this portion of the Study Area and at this stage there is no confirmation of a natural soil profile in this area.

Visual observations further indicate that the area has not been significantly truncated or levelled and appears to be relatively natural with regard to slope shape and landscape characteristics.

Review of the remaining western portion of the site (within Transect 3) has revealed no obvious indications for past land use disturbance, either through historic accounts or aerial photographs. Geotechnical information confirms the presence of topsoil within this area, although it cannot confirm the integrity of that soil profile and whether it has suffered disturbance in the past or not. However visual observation has not identified any significant truncation or disturbance to this area, with the exception of limited services for a CCTV camera to date.

For these reasons, we have identified two areas to the west of the Study Area, presented in **Figure 15,** as of moderate archaeological sensitivity – a PAD. To allow further discussion, the PAD has been identified as *Epping Park PAD 1.*

Based on the above observations and combining evidence drawn from our understanding of settlement patterns and assessment of site distribution, the Study Area is characterised in accordance with the following classes of archaeological sensitivity (with reference to **Figure 15**):

- **High to Moderate Archaeological Sensitivity**: A large part of the western section of the Study Area has been identified as of moderate archaeological sensitivity (or PAD) due to the potential presence of a partially and what is believed to be a substantially intact soil profile and lack of significant impact to this area historically; and

- **Low to nil Archaeological Sensitivity**: With the exception of those areas identified as having moderate archaeological sensitivity, the entire Study Area is considered to have low archaeological sensitivity. This assessment is based on the significant cutting and filling (between 0.5 and 4.6 m) that has occurred within the Study Area.

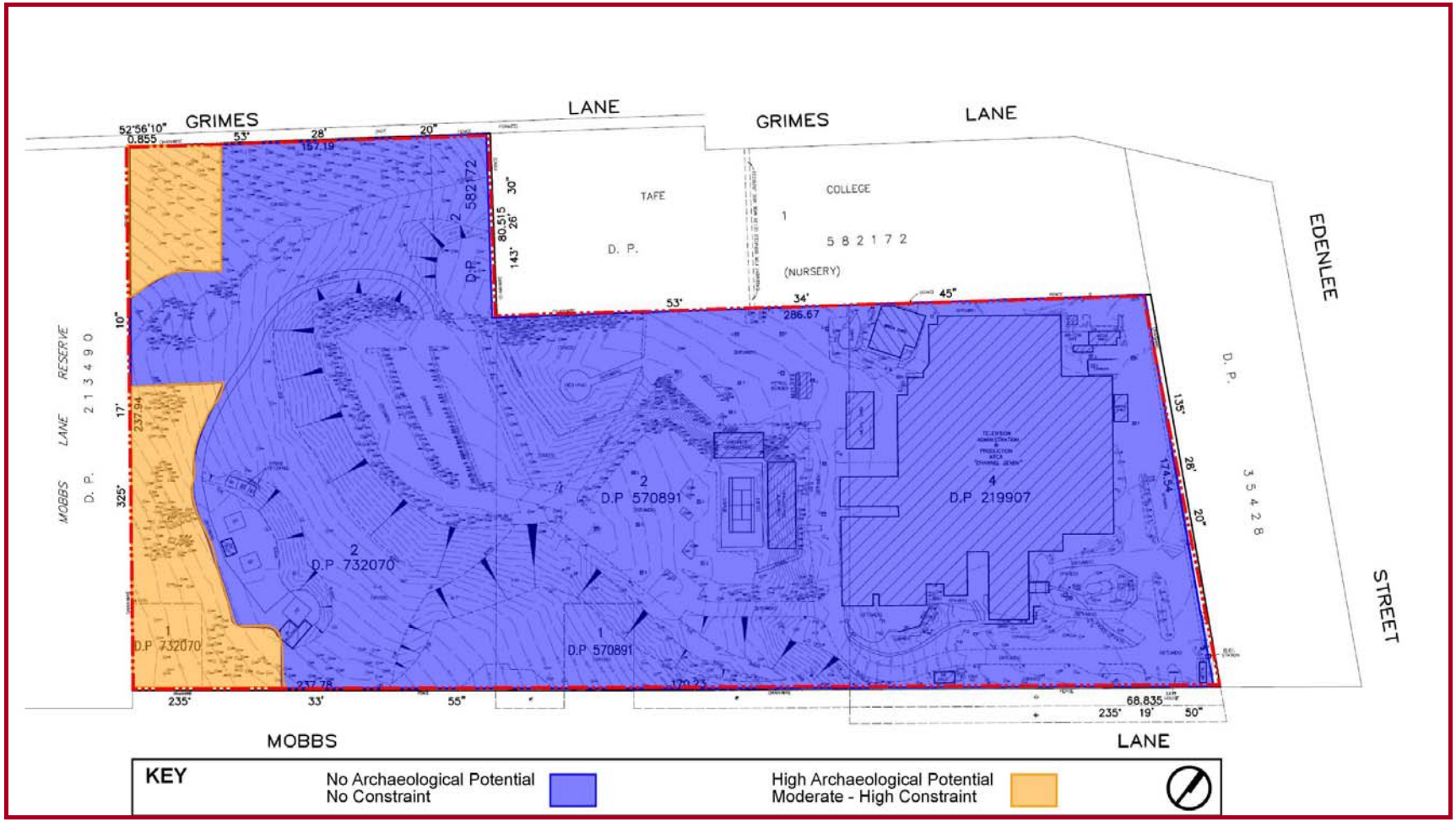

Figure 15. Map showing areas of no constraint (blue) and moderate archaeological constraint (orange). Source: Higgins North Partners Surveyors and Property Consultants dated 15 March 2004

7. ABORIGINAL COMMUNITY CONSULTATION

7.1 General

Consultation with the Aboriginal communities within the Study Area has been undertaken in accordance with procedures set out in *DECC's Interim Community consultation Requirements for Applicants 2004.* The following procedures were undertaken (a complete log of actions and correspondence regarding Aboriginal community consultation is present in **Appendix 1**).

The consultation process for this project has two aims. Firstly to comply with the DECC notification and consultation procedures to obtain input on our proposed assessment methodology and comment on our assessment report and management recommendations. Secondly, to identify cultural places and values that may be affected by the proposed future development of the site through consultation with knowledge holders.

7.2 Notification and Registration of Interest

Stakeholder groups were identified by:

1. placing an advertisement in the following local print media on 17 December 2008:

   Northern District Times

2. providing written notification on 16 December 2008 to the following organisations:

   a. Parramatta City Council;
   b. Executive Director Operations, DECC;
   c. Metropolitan LALC; and
   d. NSW Native Title Tribunal.

AHMS received responses registering Interest in this project from the following Aboriginal groups:

1. Metropolitan LALC; and
2. Parramatta City Council Aboriginal & Torres Strait Islander Aboriginal Advisory Committee.

7.3 Results of Notification and Consultation

Following the cessation of the notification period, a Metropolitan LALC (MLALC) and the Parramatta City Council Aboriginal & Torres Strait Islander Aboriginal Advisory Committee (PCCA&TSIAAC) were provided with a copy of the proposed survey methodology.

The methodology proposed to target the area identified in the preliminary Aboriginal assessment as having potential archaeological deposit, as well as a general investigation of the remainder of the site. Both groups were given 21 days to provide comments on the proposed methodology for the Epping Park survey. However comments were provided by both groups prior to the completion of the 21 days review period.

As a result agreement with representatives of both registered groups was obtained to attend a site inspection prior to the completion of the 21 day methodology review period.

A site inspection was undertaken with Allen Madden of the MLALC and Gil Saunders of the PCC A&TSIAAC on 29 January 2009.

7.4 Outcomes of Consultation

Comments from the registered Aboriginal community groups were sought following the distribution of the draft report. AHMS received two sets of written comments from both groups (i.e. the MLALC and the PCC A&TSIAAC). These comments confirmed that both groups supported the recommendations within the draft AHIA. Copies of the written correspondence are presented in **Appendix 2** and the main points are summarised below.

The MLALC provided the following advice:

- That the Metro Local Aboriginal Land Council wish to remain in consultation with the development of this site

The PCC A&TSIAAC did not provide an additional comments on the content of the Draft AHIA.

8. SIGNIFICANCE ASSESSMENT

This significance assessment is based on our current understanding of Study Area. This assessment may require revision following further investigation of the Study Area (should it be required) and characterisation of Epping Park PAD 1 identified in **Section 6**.

8.1 Basis for Assessment

The significance of Aboriginal archaeological sites is assessed using three criteria: Scientific archaeological (scientific), Cultural (Aboriginal) and Public Significance. These criteria recognise that Aboriginal sites are valuable in a number of ways. Namely:

- to the Aboriginal community as an aspect of their cultural heritage and as part of continuing traditions;
- to the broader community, for educational, historical and cultural enrichment values; and
- to the scientific community for potential research value.

The guidelines outlined in the NSW National Parks and Wildlife (now DECC) (1997) *Aboriginal Cultural Heritage: Standards and Guidelines Kit* provide the basis and background for the following evaluation of site significance.

8.2 Cultural Significance

This area of assessment concerns the relationship and importance of sites to the Aboriginal community. Aspects of cultural significance include people's traditional and contemporary links with a given site or landscape as well as an overall concern by Aboriginal people for sites and their continued protection.

Unmodified natural features in the landscape can signify sacred sites/places of significance. As such they are archaeologically invisible and can only be identified with the aid of Aboriginal interpretation. If such sites are known they hold particular cultural significance to contemporary Aboriginal people. Furthermore, sites of significance are not restricted to the period prior to contact with Europeans. Often events related to the Contact-period, and at times to the period since European settlement, may be so important to the local Aboriginal communities that they become significant. If these events relate to a specific place in the landscape, then that place (i.e. the site) may become sacred or highly significant to the local Aboriginal communities.

The perspectives of the Aboriginal community will be sought following the distribution of this report as a draft. Cultural values identified by the Aboriginal communities during this process will be incorporated into this section of the report, as well as comments presented in an **Appendix 2**.

8.3 Public Significance

This category of the assessment process concerns using a site or a site's potential to educate people about the past. It also relates to the heritage value of particular sites as being representative examples of past lifestyles, why they are important, and why they should be preserved.

The lack of any identified Aboriginal objects does not permit a definitive assessment of this criterion. Should Aboriginal objects be identified within Epping Park PAD 1, they may provide interest to the general public as an indication of Aboriginal occupation within the area. However, the extent, condition and integrity of these deposits will dictate the extent to which the site is of public significance or not.

At this stage, the presence of a PAD is of low public significance, since it cannot demonstrate the presence or absence of Aboriginal occupation within the area. The position of the PAD immediately adjacent to a public reserve may increase the public interest or significance of the site by enabling members of the public to view the site from the reserve.

8.4 Scientific Significance

Scientific value is assessed according to the research potential of a site. Rarity and representativeness are also related concepts taken into account. Research potential or demonstrated research importance is considered according to the contribution that a heritage site can make to present understanding of human society and the human past. Heritage sites, objects or places of high scientific significance are those which provide an uncommon opportunity to inform us about the specific age of human occupation in an area, or provide a rare glimpse of artistic endeavour or provide a rare chronological record of changing life through deep archaeological stratigraphy.

The comparative rarity of a site is a consideration in assessing scientific significance. A certain site type may be "one of a kind" in one region, but very common in another. Artefacts of a particular type may be common in one region, but outside the known distribution in another.

The integrity of a site is also a consideration in determining scientific significance. While disturbance of a topsoil deposit with artefacts does not entirely diminish research value, it may limit the types of questions that may be addressed. A heavily cultivated paddock may be unsuited to addressing research questions of small-scale site structure, but it may still be suitable for answering more general questions of implement distribution in a region and raw material logistics.

The capacity of a site to address research questions is predicated on a definition of what the key research issues are for a region. In this region the key research issues revolve around the chronology of Aboriginal occupation and variability in stone artefact

manufacturing technology. Sites with certain backed implements from the Holocene are very common, but sites with definite Pleistocene evidence are extremely rare, and hence of extremely high significance if found.

Our assessment of the scientific significance is set out below.

Research Potential

The presence of a potentially *in situ*, and intact soil profile in the south-western corner of the Study Area and an additional more disturbed area in the north-western corner of the site, provides potential for Aboriginal objects to be present, and hence its assignation as a PAD. The research potential of this site is therefore considered high until it can be proved otherwise.

Condition / Integrity

The condition and integrity of Aboriginal objects that may be present in Epping Park PAD 1 cannot be made at this time. Further characterisation of this site is required prior to an assessment based on this criterion.

There is no known (documented) evidence for disturbance in the south-western corner of the Study Area and geotechnical advice indicates the presence of 20 cm of topsoil. The north-western corner of the Site however is likely to have suffered truncation through ploughing, as indicated by historic land-use evidence which pre-date 1930.

Representativeness

An assessment of the representativeness of Aboriginal objects that may be present in Epping Park PAD 1 cannot be made at this time. Further characterisation of this site is required prior to an assessment based on this criterion.

Rarity

An assessment of the rarity of Aboriginal objects that may be present in Epping Park PAD 1 cannot be made at this time. Further characterisation of this site is required prior to an assessment based on this criterion.

The limited number of Aboriginal archaeological excavations within this portion of western Sydney, generally due to significant development, indicates that any Aboriginal objects recovered from this area may be considered rare.

Summary

At this stage the significance of Epping Park PAD 1 cannot be identified due to the lack of information on the presence/absence of Aboriginal objects and their condition. There is some potential that the PAD may retain research potential based on the presence of a potentially intact soil profile in the south-western corner of the Study Area.

However, a re-assessment of Epping Park PAD 1 would be required following subsurface investigation and this would be detailed in the associated excavation report.

With the exception of Epping Park PAD 1, the Study Area is not considered likely to retain any intact Aboriginal objects or archaeological deposits and is therefore not considered to have Aboriginal archaeological significance.

9. POTENTIAL IMPACTS

9.1 General

The results of the site survey identified one area, Epping Park PAD 1, as having potential to retain Aboriginal objects and/or sites.

This section provides consideration of the potential impacts of proposed development on Aboriginal sites and/or objects. The purpose of this report is to identify the location and significance (heritage values) of archaeological sites so that planning can proceed in a manner that minimises impact. Furthermore, this section provides guidance as to the definition and management of *impacts*. This section also assesses areas of potential and how they can best be investigated and managed prior to and during any future development of the site.

An *impact* is defined here as an action or activity that results in the disturbance, damage or destruction of an Aboriginal object or Aboriginal site. Not all actions or activities disturb, damage or destroy Aboriginal sites and therefore not all actions or activities may be considered as *impacts*.

For the purposes of this discussion an activity on, under or in the vicinity of an Aboriginal object or Aboriginal site may be classified as having no impact, low impact, moderate impact or high impact. These classes are described in **Table 1** below.

Table 1. Impact Ranking in Relation to Aboriginal Objects and/or Sites

Impact Rank	Definition	Management Action
No Impact	No change in heritage value e.g. no displacement of Aboriginal objects.	No action required.
Low Impact	Negligible displacement of individual objects, no disruption of archaeological deposit or spatial distribution of artefact assemblage and no negative affect on heritage value e.g. change in elevation via subsidence without vertical displacement.	No action required.
Moderate Impact	Partial loss of heritage value or potential for activating erosive effect which will degrade heritage values over time, e.g. activation of changed erosion regime through hydrological changes resulting in accelerated erosion of archaeological deposit. The Aboriginal site will remain after cessation of the impacting activity, but in a degraded state e.g. with an eroded and dispersed stone artefact assemblage instead of intact archaeological deposit.	Appropriate level of mitigation measures required to ensure the Aboriginal objects/sites are appropriately investigated and/or documented before impact, and potential monitoring to occur after impacts to ensure no further impact is occurring through environmental modification.

Impact Rank	Definition	Management Action
High Impact	Removal or displacement of an Aboriginal object or Aboriginal site resulting in the loss of Aboriginal heritage values	Detailed and comprehensive mitigation measures required to ensure the Aboriginal objects/sites are appropriately investigated and/or documented before impact, and potential monitoring to occur after impacts to ensure no further impact is occurring through environmental modification.

9.2 Impact Assessment

The proposed development will involve the construction of the following elements within the Study Area (Shown in **Figures 3 and 16**):

- Residential and open space development equated to a maximum of 650 dwellings and no more than 73 dwellings/ha;
- A child card centre; and
- 3.1ha of public open space.

Based on previous sections of this report, only one of the two areas of PAD will be impacted by the proposed development. This will involve the construction of a child care facility, associated landscaping, services and roads in the south-western portion of the Study Area. This would impact approximately 25-30 % of Epping Park PAD 1 (an area totalling of 50 m x 70 m). The proposed development to Epping Park PAD 1 (shaded orange in **Figures 16**) will have a moderate to high impact to Aboriginal archaeological evidence.

The remainder of the Study Area has been assessed as likely to contain negligible archaeological potential on the basis of previous site disturbances and landform, and on this basis the development will not impact any additional archaeological evidence. The proposed development to the majority of the Study Area shaded blue in **Figure 16** will have a low to nil impact on Aboriginal archaeological evidence.

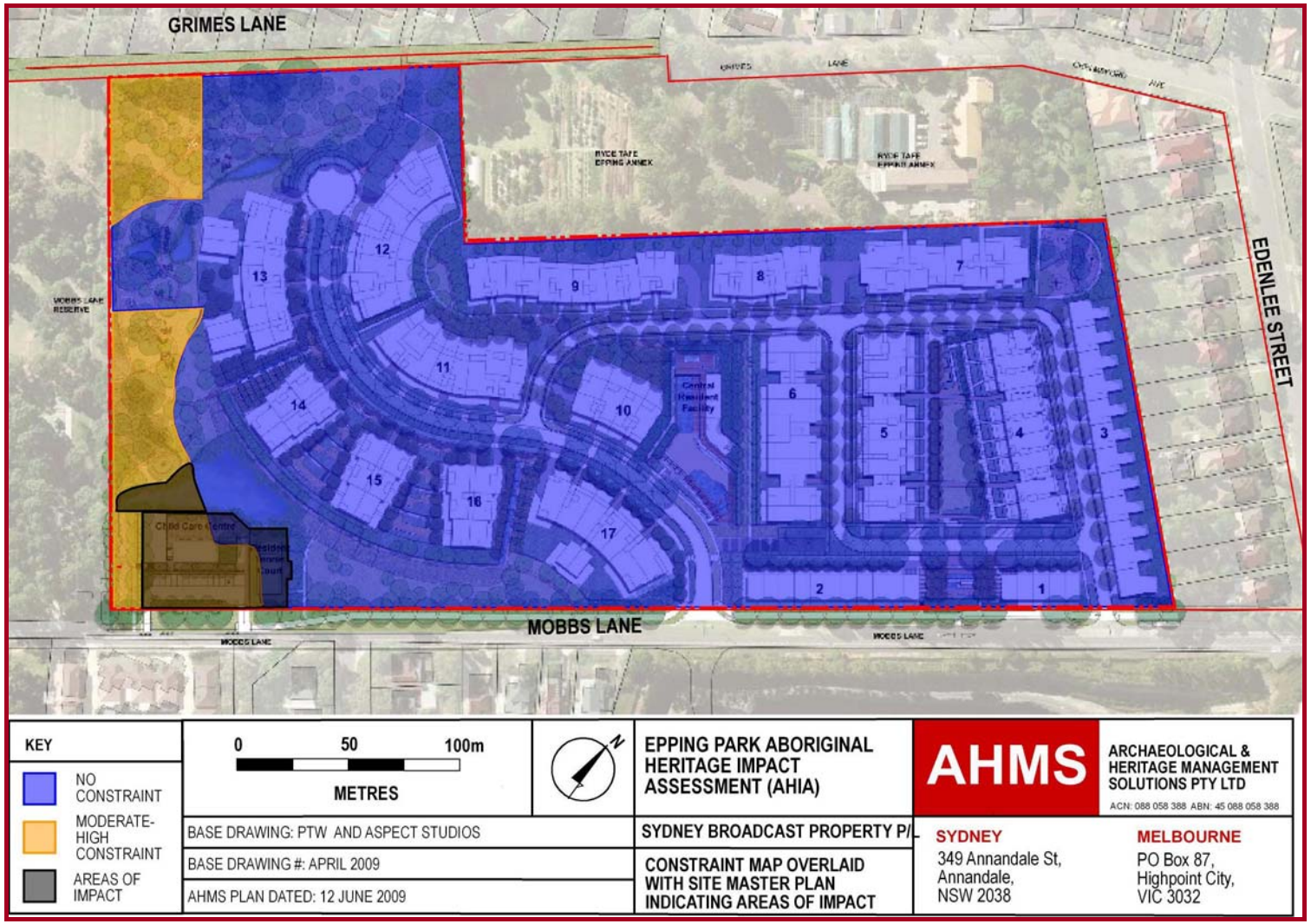

Figure 16. Overlay of Aboriginal Archaeological Constraints over the Site Masterplan indicating areas of impact to Epping PAD 1 (impact areas outlined in black)

10. MANAGEMENT STRATEGY

This section provides a summary of the assessment, the perceived impacts to any Aboriginal objects/sites that can be discerned, and a summary of recommendations to appropriately manage these impacts.

This assessment has identified one area of moderate Aboriginal archaeological sensitivity – a PAD - within the study area. This area, Epping Park PAD 1, is situated within the western section of the Study Area (**Figure 16**) and has been identified on the basis of historical evidence, geo-technical studies and visual observation. Our assessment concluded that this area has been subject to minimal impact historically and has potential to retain a partially intact soil profile. With the exception of Epping Park PAD 1, evidence indicates that the remainder of the Study Area has been cut, levelled, disturbed and truncated.

Significant impacts to the remainder of the study area indicate there is no potential for intact Aboriginal archaeological deposits to be found. Areas of the study area to the north, east and south have been extensively cut and filled by up to 4 m. There is also significant evidence of large scale infrastructure, earthworks and buildings across the Study Area, which further reduce the archaeological likelihood of the site.

Should impact be proposed in the vicinity of Epping Park PAD 1, subsurface investigations of this site area (shaded orange on **Figure 16**) will be required to identify and assess the significance of any Aboriginal objects that may be present. Given the generally disturbed nature of the site, AHMS would recommend that the subsurface investigations undertake a staged approach with preliminary testing to identify the presence or absence of a natural soil profile and/or archaeological material being undertaken prior to any significant excavation or development in this area. Such preliminary testing should investigate some 25 - 30 % of the proposed impact zone in a grid like pattern. Following this initial testing phase, additional archaeological excavation and/or salvage may be warranted, which may focus on specific archaeological features and/or sedimentological units of interest.

Since this project is being proposed under Part 3A of the *Environmental Planning and Assessment Act 1979*, these excavation and any subsequent mitigation measures can be undertaken without the need for Section 87 or 90 permits under the *National Parks and Wildlife Act 1974.* However, such investigations and/or mitigation measures could be incorporated into the Statement of Commitments or Conditions of Consent for the project. Alternatively, the initial investigations to characterise the archaeological resource may be undertaken prior to the lodgement of an Environmental Assessment under Section 75U (4) of the *Environmental Planning and Assessment Act*. This approach would remove the need to incorporate the investigations into the Statement of Commitments, but dependent on the findings of the investigation, mitigation measures (such as salvage) may still warrant inclusion.

Aboriginal consultation has been undertaken for this report. Given the potential for Aboriginal objects and/or sites, as well as the need for testing, consultation should

continue to be undertaken for the duration of this project. Aboriginal consultation should continue to be undertaken in accordance with the *Guidelines for Aboriginal Cultural Heritage Impact Assessment and Community Consultation* (Department of Environment and Conservation, 2005), which themselves refer to the DECC's (2004) *Interim Community Consultation Requirements for Applicants.*

No further Aboriginal archaeological constraints are present within areas of low Aboriginal archaeological sensitivity shaded blue on **Figure 16**. No further Aboriginal archaeological investigations are warranted in these areas.

Please note that Aboriginal skeletal remains are highly significant both archaeologically and culturally. Should such remains be identified at any time during the development and regardless of any permits or approvals in place, all work must cease and the NSW Coroners Office and DECC notified immediately.

It is also noted that historical issues for the Epping Park site have been dealt with in a separate report by Graham Brooks and Associates and have not been considered in the recommendations provided below.

10.1 Recommendations

The following recommendations are based upon:

- the legal requirements under Part 3A of the Environmental Planning & Assessment Act, 1979;
- the assessments of significance and potential heritage impacts which are presented in this report;
- the views expressed by the local Aboriginal community.

It is recommended that:

7. Any construction impacts at surface in Epping Park PAD 1 (shaded orange in **Figure 16**), has the potential to impact Aboriginal objects and/or sites. Therefore, subsurface investigations to identify and characterise any Aboriginal archaeological deposits within the proposed impact zone (if present) should be undertaken prior to construction that would disturb the ground in that area (specific processes to this excavation are provided in **Section 10** of this report). Should Aboriginal objects and/or sites be identified during testing within the proposed impact zone, further archaeological investigation/salvage should take place to mitigate the impact of the development. Please note that in the event that human skeletal remains are identified, further management and mitigation measures would be required in line with recommendation 5 of this report ; and

8. Aboriginal consultation should continue to be undertaken in accordance with *Guidelines for Aboriginal Cultural Heritage Impact Assessment and Community Consultation* (Department of Environment and Conservation, 2005), which themselves refer to the DECC's (2004) *Interim Community Consultation Requirements for Applicants* to discuss the appropriate management procedures to be incorporated during the EA process and specifically in relation to the Statement of Commitments; and
9. No further archaeological investigations are warranted, within the remainder of the subject land, i.e. areas of negligible Aboriginal archaeological potential (shaded blue) on **Figure 16**; and

10. Any archaeological test excavation should endeavour to include (where possible) student/s from the Local Aboriginal community under the supervision and insurances of at least one of the parties nominated in this assessment as a registered Aboriginal stakeholder during this work; and

11. If human skeletal remains are identified during development, work should cease in the area incorporating such finds and the site should be secured. The following tasks should be undertaken immediately:
    c. Contact the NSW Police and advise them of the situation. If the human remain/s prove to be archaeological, and the NSW Police release the site, County Property Pty Ltd should advise the development project consultant archaeologist, followed by liaison with DECCW, Mindaribba LALC, the relevant Aboriginal stakeholders and the Office of the NSW Coroner;
    d. Amendment of the design (if possible) to avoid the burial remains; and
    e. Discussion of appropriate management and mitigation measures with DECCW and the Aboriginal community. Ultimately, the management of Aboriginal burials will be a matter for the DECCW in consultation with the local Aboriginal community. *In situ* conservation of any such burial(s) may be required; and

12. One copy of the report should be forwarded to the Metropolitan LALC and Parramatta City Council Aboriginal & Torres Strait Islander Aboriginal Advisory Committee at the following addresses:

Metropolitan LALC
Attn: Allen Madden
PO Box 1103
Strawberry Hills NSW 2016

Parramatta City Council Aboriginal & Torres Strait Islander Aboriginal Advisory Committee
Attn: Mr. Gil Saunders

59 Brand Street
CARLINGFORD, NSW 2118

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Appendix 1: Aboriginal Community consultation Information

Aboriginal Community Consultation Information

Group	Representative Contacted	Date	Description /Comments	AHMS Contact
Northern District Times	Colin Kerr (Editor) Phoebe Cook	15.12.08	Confirmation of public advertisement to be placed in the public notices section of the Northern District Times on Wednesday 17 December 2008	Felicity Barry (FB)
Native Title Tribunal	NSW Native Title Services Ltd	16.12.08	Notification seeking registration of Aboriginal interest for AHIA sent	FB
DAA – Office of the Registrar Aboriginal Land Rights Act, 1983 (NSW)	Registrar (Mr. Steve Wright)	16.12.08	Notification seeking registration of Aboriginal interest for AHIA sent	FB
DECC	Executive Director of Operations	16.12.08	Notification seeking registration of Aboriginal interest for AHIA sent	FB
Parramatta City Council	General Manager	16.12.08	Notification seeking registration of Aboriginal interest for AHIA sent	FB
Metropolitan LALC	Allen Madden	16.12.08	Notification seeking registration of Aboriginal interest for AHIA sent	FB
Northern District Times	n/a	17.12.08	Advertisement in print media	FB
Metropolitan LALC	Allen Madden	19.12.08	Received written notification from Allen Madden MLAC registering an interest in this project	FB
Parramatta City Council – Aboriginal & Torres Strait Islander Advisory Committee (A&TSIAC)	Bruce Gale	05.01.09	Phone call from Mr. Gale advising that the Council representative from the ATSI Advisory Committee would be Mr. Gil Saunders and Mr. Gale will forward his contact details to AHMS via email shortly.	FB
PCC – A&TSIAC	Bruce Gale	05.01.09	Email advising details for Mr. Gil Saunders as representative of the ATSI Advisory Committee	FB
Notification Period ends		**13.01.09**	**2 groups registered – MLALC and PCC ATSIAC**	
Metropolitan LALC	Allen Madden	13.01.09	Letter outlining survey methodology with copy of the Preliminary Aboriginal Archaeological Assessment attached	FB
PCC – A&TSIAC	Gil Saunders	13.01.09	Letter outlining survey methodology with copy of the Preliminary Aboriginal Archaeological Assessment attached	FB
MLALC	Allen Madden	14.01.09	Letter to AHMS – advising MLALC have no issues with the survey methodology in the report and Allen would like to be involved in the field investigation	FB
DAA – Office of the Registrar Aboriginal Land Rights Act, 1983 (NSW)	Kylie McLeod	15.01.09	Faxed letter to AHMS – Office of Registrar advises a search of the Register of Aboriginal Owners revealed the subject land does not appear to have Registered Aboriginal Owners	FB

			pursuant to Division 3 of the Aboriginal Land Rights Act 1983 (NSW). Kylie recommends contacting the Deerubbin LALC. However noted by AHMS that prior to contacting any groups, the Land Council boundary was checked and the study area is within Metropolitan LALC boundary, not Deerubbin's, accordingly Deerubbin has not been contacted for this project.	
PCC – A&TSIAC	Gil Saunders	16.01.09	Phone Call to AHMS – Gil advised he has no problems with the proposed survey methodology and would like to participate in the site inspection. He wouldn't mind attending an earlier inspection on site.	FB
MLALC	Rebecca McHugh	23.01.09	Phone call from AHMS – arranged tentative booking for site visit on 29 January 2009 at 9am, AHMS will confirm prior to day	FB
PCC – A&TSIAC	Gil Saunders	23.01.09	Phone call from AHMS – arranged tentative booking for site visit on 29 January 2009 at 9am, confirmed rates for this investigation, AHMS will confirm prior to day	FB
MLALC	Allen Madden Rebecca McHugh	27.01.09	Email from AHMS – confirming site inspection for on 29 January	FB
PCC – A&TSIAC	Gil Saunders	28.01.09	Phone call from AHMS confirming site inspection on 29 January	FB
PCC – A&TSIAC MLALC	Gil Saunders Allen Madden	29.01.09	Site Inspection 9am – 11am	Felicity Barry Alan Williams
PCC – A&TSIAC	Gil Saunders	23.02.09	Phone call from Gil enquiring on status of the Draft AHIA, it will be submitted this week (to client) and FB will be in touch to provide an update shortly.	FB
PCC – A&TSIAC	Gil Saunders	9.03.09	Phone call – AHMS updated Gil on status of the AHIA (draft is with client) following from his request on 23 Feb 09	FB
MLALC	Allen Madden	12.06.2009	Left a message indicating that the draft AHIA will be sent out for the comment early next week	FB
PCC – A&TSIAC	Gil Saunders	12.06.2009	Spoke with Gil advising that the draft AHIA will be sent out for the comment early next week	FB
MLALC	Allen Madden	12.06.2009	Copy of draft assessment express posted today	FB
PCC – A&TSIAC	Gil Saunders	12.06.2009	Copy of draft assessment express posted today	FB
MLALC	Allen Madden	15.06.2009	Letter accompanying draft assessment outlining dates for response sent to accompany report end date for comments is 29 June	FB
PCC – A&TSIAC	Gil Saunders	15.06.2009	Letter accompanying draft assessment outlining dates for response sent to accompany report end date for comments is 29 June	FB

MLALC	Rebecca McHugh	24.06.2009	Followed up Assessment – it has been received, Rebecca will speak with Allen to ensure we receive some comments on the document	FB
PCC – A&TSIAC	Gil Saunders	24.06.2009	Left message about the draft assessment. Will follow up	FB
PCC – A&TSIAC	Gil Saunders	25.06.2009	Spoke with Gil, the draft report was provided to the PCC-– A&TSIAC at their last meeting and they raised no questions about this. They will provide a written response via email shortly.	FB
MLALC	Allen Madden	30.06.2009	Comments on the Draft AHIA Received	Sophie Brettell
PCC – A&TSIAC	Bruce Gale	1.07.2009	Comments on the Draft AHIA Received	Sophie Brettell

Appendix 2: Aboriginal Community Statements

METROPOLITAN LOCAL ABORIGINAL LAND COUNCIL

36-38 George Street, Redfern NSW 2016
P.O. Box 1103 Strawberry Hills, NSW 2012
Telephone: (02) 8394 9666 Fax: (02) 8394 9733
Email: metrolalc@metrolalc.org.au

17th December 2008

Felicity Barry
AHMS
349 Annandale St
ANNANDALE NSW 2038

'The Parklands Development' Epping NSW

Dear Felicity

I refer to the Notification & Registration of Aboriginal Interest for the above site.

The Metropolitan Local Aboriginal Land Council is interest in the development of this site would like to be included and consulted during the assessment.

If you require any further details please do not hesitate in contacting me on 02 8394 9666 or 0411 229 217.

Regards

Allen Madden
Acting CEO & Cultural Education Officer

METROPOLITAN LOCAL ABORIGINAL LAND COUNCIL

36-38 George Street, Redfern NSW 2016
P.O. Box 1103 Strawberry Hills, NSW 2012
Telephone: (02) 8394 9666 Fax: (02) 8394 9733
Email: metrolalc@metrolalc.org.au

RECEIVED
30/6

29th June 2009

Felicity Barry
Archaeologist & Heritage Consultant
AHMS
349 Annandale St
ANNANDALE NSW 2038

Re: Draft Aboriginal Heritage Impact Assessment (AHIA) for the Parklands (Epping Park)

Dear Felicity

I've reviewed the drafted AHIA for the Parklands (Epping Park) and have no issues or concerns with the management strategy and recommendations outlined on pages 62 & 63 of the report.

As mentioned in pervious correspondence Metro Local Aboriginal Land Council wish to remain in consultation with the development of this site.

If you need any further information do not hesitate to contact me 02 8394 9666 or 0411 229 217.

Regards

A. J. Madden.

Allen Madden
Cultural Education Officer

Felicity Barry

From: Sophie Brettell
Sent: Monday, 17 August 2009 5:05 PM
To: Felicity Barry
Subject: FW: Response to The Parklands, Epping

Sophie Brettell
Archaeologist

AHMS ARCHAEOLOGICAL & HERITAGE MANAGEMENT SOLUTIONS PTY LTD

Address: 349 Annandale St, Annandale, NSW 2038
Phone: (02) 9555 4000
Fax: (02) 9555 7005
Mobile: 0421 544 553

From: Bruce Gale [mailto:gale51@optusnet.com.au]
Sent: Wednesday, 1 July 2009 5:42 AM
To: Sophie Brettell
Subject: Re: Response to The Parklands, Epping

Hello Sophie we are happy with the AHIA and Gilson will provide any comments if need be to our commitee, but from my talks with Gilson he is happy with what has happened so far,
Bruce Gale

> ----- Original Message -----
> **From:** Sophie Brettell
> **To:** Bruce Gale
> **Sent:** Monday, June 29, 2009 7:36 PM
> **Subject:** RE: Response to The Parklands, Epping
>
> Hello Bruce,
>
> Thanks for your email earlier this morning.
> I understand from Felicity that she spoke to Gilson Saunders on Friday and he indicated that the committee had no problems with our AHIA but that you would provide further comments if there were any.
> Could I ask you to either confirm by return email that you are happy with the AHIA for the Epping Parklands or provide comments for inclusion within the final report?
>
> Thanks in advance,
> Sincerely,
> Sophie