Proposed Rezoning “Wilton Junction”

Wilton, Wollondilly Shire LGA, NSW

Aboriginal Cultural Heritage Assessment and Historic Heritage Assessment

Prepared on behalf of Wilton Junction Land Owners Consortium

June 2014

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FINAL REPORT

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Executive Summary

Kayandel Archaeological Services (KAS) has been commissioned by the Wilton Junction Landowners’ Group (The proponents) to undertake an Aboriginal Cultural Heritage Assessment and Historic Heritage Assessment to inform the proposed rezoning of the Wilton Junction area.

The aim of this study is to provide the Landowners’ Group with an assessment of the Aboriginal and Historic (non-Aboriginal) heritage considerations within the Subject Area. As indicated in Section 1.1 the NSW Department of Planning & Infrastructure has issued Study Requirements to guide planning investigations for a new town at Wilton Junction. The Study Requirements’ relevant to Heritage are to:

- Undertake an appropriate strategic assessment of Aboriginal and European cultural heritage significance and potential impacts in consultation with the Office of Environment and Heritage and Wollondilly Shire Council’s Aboriginal Engagement Officer.
- The Aboriginal cultural heritage assessment should provide sufficient basis for identification of Aboriginal heritage values to support their protection at a strategic level, including consultation, desktop studies, landscape assessment and relevant mapping of current conservation areas.¹

Principal Findings and Recommendations

In Section 1.6 of this report a number of aims and objectives where identified. This report has successfully achieved these aims and objectives. More specifically each of the specifications of the Study Requirements’ (including the areas identified in the letter from the Office of Environmental and Heritage dated 2 March 2013) has been addressed.

This report has reviewed the available existing documents including previous archaeological assessments conducted within the Subject Area and the surrounding region. An archaeological survey has been completed to identify any additional sites located within the Subject Area. The significance of Aboriginal and Historic heritage sites within the Subject Area have been identified in Table 13, Table 16, Figure 27 and Figure 28.

The appropriate registers relevant to Aboriginal and historic heritage have been consulted and the results have been presenting and this report. Locations with potential for intact Aboriginal archaeological deposits and historic archaeological remains have been identified.

The report has identified 35 previously unrecorded Indigenous and Non-Indigenous heritage items. 29 of these are exclusively attributable to Indigenous origins, 5 to Non-Indigenous origins, and 1 that contains material evidence relating to both Indigenous and Non-Indigenous origins.

Section 6.7 of this report made certain predications in relation to the location of Aboriginal sites and their likely site types that may be present across the Subject Area i.e. rock shelters are the most likely site type to be encountered within the Subject Area (see Section6.7). From the results presented in Section 7 and review of Figure 23, Figure 24 and Figure 25, it has been shown that the predictions made in relation to Aboriginal heritage hold true for the Subject Area. A more detailed presentation of the findings in relation to Aboriginal and Historic heritage is available in Section 10.

Items of significant Historic heritage where known to exist throughout and immediately adjacent to the Subject Area. There are locations in within the Subject Area likely to retain evidence of remains associated with the first occupation of the area by colonial settlers (see Section 12.1.1).

This assessment has identified a number of Aboriginal and Historic heritage items within the Subject Area. The Masterplan has been designed to minimise the impacts upon items that have been assessed to be of high significance. Impacts upon items of Aboriginal heritage or items of historic heritage are not sufficient as to prevent the rezoning application currently proposed (see Section 11).

The report details a level of investigation and enquiry sufficient to provide for an assessment of the rezoning proposal to be undertaken. The recommendations contained within the report provide clear guidance on the requirements of the Heritage Act and National Parks and Wildlife Act should the rezoning proposal be determined positively and development applications proceed to be lodged in the future.

**Indigenous Heritage**

KAS undertook consultation with Aboriginal stakeholders known to hold cultural knowledge relating to the Subject Area and who are generally accepted within the Aboriginal community as being the holder of a right to speak for the country in which the Subject Area is located. The purpose of community consultation is to understand the cultural values of the Subject Area and to understand their views and concerns about the proposed development.

49 Aboriginal sites had previously been identified within the Subject Area (see Section 6.5 for more details). As a result of the survey and assessment undertaken for this present study an additional 30 previously unknown Aboriginal sites have been identified. These additional sites consist of seven (n=7) artefact scatters, ten (n=10) isolated finds, eight (n=8) rock shelters with either PAD, art or artefacts and five (n=5) scarred trees that have been assessed to be the result of Aboriginal cultural practices (see Table 9, Figure 22 and Figure 23). It is expected that the overall number of Aboriginal sites will increase once additional survey is undertaken within the conservation areas associated with the Nepean River and Byrnes Creek. Based upon the incidence of Rock Shelters within Stringy Bark Creek and Allens Creek additional 30-50 sites would not be unexpected. The majority of these additional sites would likely be Rock Shelters with Art and/or artefacts and would be in location not subject to any direct development impacts and would not be disturbed but would be retained and conserved.

There are large portions of the Subject Area in which no evidence of Indigenous people use and occupation has been identified. Where this evidence does exist (principally as open context sites i.e. Artefact Scatters and Isolated Finds) they are in the main present within area currently proposed for direct impact from development should the rezoning proceed. These sites will require additional assessment in the form of sub-surface investigations prior to an AHIP being sought from the Office of Environment and Heritage. Excavation of Aboriginal sites in this area has been extremely limited. The most relevant was undertaken in 2006 within the Bingara Gorge Development.

With regard to the Scarred Trees currently located within the proposed development area it is preferable that where these items are in good condition that they be incorporated into public open space or conservation areas. Where the item is in poor condition (as 1 item is within the Wilton Junction Subject Area) the Aboriginal community would support the item being removed.
and conserved at an alternate location. The Masterplan concept has considered the above, and all scarred tree in good condition have been incorporated into open space areas (Table 17).

The occupation model proposed in our assessment identified that open sites are more likely to occur in flat elevated positions directly associated with creek lines (Figure 21 to Figure 23). Where visibility met industry standards this occupation model held true, where visibility was below industry standards no results to support the occupation model occurred. Given the low visibility in these locations (Table 10 and Figure 20) and the fact that the model was proven true where sufficient visibility was available these locations have been assessed to be archaeologically sensitive. Areas identified as being archaeologically sensitive (see Section 8.1 and Figure 24) will require additional assessment in the form of sub-surface investigations prior to an AHIP being sought from the Office of Environment and Heritage. This additional assessment this will be required as part of the specialist reports prepared to support a Development Application, therefore investigation works will be required to be completed with sufficient time for appropriate reporting prior to DA submission.

**Legislative Obligations and Recommendations in relation to Aboriginal Heritage**

Specific clauses within the National Parks and Wildlife Act 1974 (as amended) and the National Parks and Wildlife Regulations 2009 give rise to certain obligations with regard to Aboriginal heritage and are detailed below. Following on from obligations are Recommendations. These Recommendations are developed by applying industry standards and norms to the specific of this project. Where an activity or task must be undertaken to comply with relevant legislation it will be detailed as an Obligation, where a task or activity is recommended to be undertaken to meet the current industry standards it is presented as a Recommendation.

**Obligations**

A1 Site Cards to be prepared for all Aboriginal sites identified in this study that are not currently recorded in Aboriginal Heritage Information Management System maintained by the Office of Environment and Heritage.

A2 An Aboriginal Heritage Impact Permit under Part 6 of the National Parks and Wildlife Act 1974 for any impacts to Aboriginal objects.

**Recommendations**

The following management principles and recommendations are based on:

- The legal requirements of the National Parks and Wildlife Act 1974 (as amended), whereby it is illegal to damage, deface or destroy an Aboriginal relic without first obtaining the written consent of the Director General of National Parks & Wildlife Service;

- The requirements of the Code of Practice for Archaeological Investigation of Aboriginal Objects in NSW (DECCW 2010b);

- The requirements of the Guide to Investigating, Assessing and Reporting on Aboriginal Cultural Heritage in NSW (OEH 2011); and,

- The findings presented within this Aboriginal Cultural Heritage Assessment.

Recognition of the extended period of which development activities will occur within the Subject Area.

KAS recommends the following:
NOTE: All reference to further investigations and/or additional assessment or similar are written with the intention that the works will be undertaken to inform Development Applications that will follow on from the rezoning currently being considered. These works are not required to inform the current assessment.

A1 No further assessment of the Aboriginal heritage within the Subject Area is required to inform the rezoning proposal.

A2 Prior to Development Application Stage for an identified area, further Aboriginal archaeological investigations are required at all locations identified in Figure 24. See below for further considerations for these investigations.

A3 Any proposed impacts within the Conservation or Open Space area identified in Figure 3 (or any future version of the master plan) should be subject to separate assessment prior to the impact to assess the cumulative impact of the proposed works on Aboriginal heritage (Figure 22 and Figure 23).

A4 An Aboriginal Heritage Impact Permit under Part 6 of the National Parks and Wildlife Act 1974 should be sought for the extent of each Development Application area. The need for an Aboriginal Heritage Impact Permit will trigger the opportunity to undertake further consultation. This Aboriginal Heritage Impact Permit should be sought for all known and unknown Aboriginal objects within the Development Application area as a strategy to minimise the risk of delays during works that may result from unexpected finds.

A5 As a result of Recommendations 2 and 4 a process of further consultation with Aboriginal stakeholders will be required to be undertaken in accordance with the specifications of Aboriginal Cultural Heritage Consultation Requirements for Proponents (DECCW 2010a)

A6 Those portions of the Subject Area not previously affect by high levels of ground disturbance (See Figure 8 to Figure 13) and not being subject to survey during this investigation (Figure 4) will require additional survey and assessment prior to management strategies being proposed and implemented. This additional survey and assessment should be undertaken prior to a Development Application being submitted for the identified area.

A7 Further investigation and assessment will be required to identify appropriate strategies for long term management impacts of visitation to Aboriginal Rock shelter sites within conservation lands.

A8 Archival recording utilising measured drawing and digital capture techniques should be undertaken at each of the rock art and rock shelter sites.

**Non-Indigenous Heritage**

To establish a baseline for known Non-Indigenous heritage items KAS has consulted the:

- National Heritage List (NHL),
- Commonwealth Heritage List (CHL);
- Register of the National Estate (RNE);
- State Heritage Register (SHR);
These enquiries identified 6 heritage items within the Subject Area, five of which have previously been assessed as being of local heritage significance, and one of state heritage significance (see Table 8 and Figure 19). In additional two further state significant items previously identified abutting the boundary of Subject Area. One in the south west (Wilton Park Stables Group) and one to the north (St Mary’s Towers). During the review of previous assessments an additional locally significant heritage item was identified (Thornton’s Weir). As a result of the survey conducted for this assessment 3 further locations and 3 items of machinery have been identified that may be of heritage significance. In total there are 12 non-indigenous heritage items now identified within the Subject Area, these consist of 3 items of movable heritage and 10 locations at which relics have been located.

**Legislative Obligations and Recommendations in relation to Non-Indigenous Heritage**

There are three locations on the State Heritage Register (SHR) that are particularly relevant to the Wilton Junction Subject Area. These are:

1. Part of the Upper Nepean Catchment System that traverses the eastern portions of the Subject Area;
2. "Parkhall" or St Mary’s Towers which was the original Land Grant to Thomas Mitchell, Surveyor General; and,
3. The property of "Wilton Park" that is situated immediately west of the Subject Area.

As these are locations on the State Heritage Register it is important to consider the indirect impacts of the project i.e. the effect of development works upon the vistas both into and out from the particular item (Figure 25).

Within the Subject Area is also a number of Heritage Items that are on Schedule 5 of the LEP. These are within the existing township boundaries and consist of St Luke’s Church and a cottage on the southern alignment of Wilton Road opposite St Luke’s Church. Development in the immediate environs of Item from Schedule 5 of the LEP will require the preparation of a Statement of Heritage Impact that adequately identifies the effect the proposed development will have upon the Heritage Item.

Immediately abutting the Subject Area boundary are also a number of Heritage Items that are on Schedule 5 of the LEP (Figure 19). This is a small cottage on the northern alignment of Wilton Park Road at the western extent of the Subject Area. Development in the immediate environs of this Item will require the preparation of a Statement of Heritage Impact at the Development Application stage that adequately identifies the effect the proposed development will have upon the Heritage Item.

Previous studies have also identified a number of Historic Heritage items that do not appear on the Schedule 5 register. These include a small sandstone weir structure (Thornton’s Weir) in the southern extent of Allens Creek and the Homestead of “Condell Park”. These items should be included on the Schedule 5 Register and subject to the recommendations regarding additional assessment above.
Development resulting from this rezoning will have considerable impact upon historic heritage as the majority of the heritage items identified in the study are moveable and development works will result in the items being moved from their current location (see Table 16). However, a Statement of Heritage Impact for each of the heritage items at Development Application stage will provide detailed mitigation strategies. Therefore should not be considered as adversely affecting the rezoning proposal.

**Legislative Obligations and Recommendations – Historic Heritage**

Specific clauses within the Heritage Act 1977 (as amended) give rise to certain obligation with regard to historic heritage and are detailed below. Following on from obligations are Recommendations. These Recommendations are developed by applying industry standards and norms to the specific of this project. Where an activity or task **must** be undertaken to comply with relevant legislation it will be detailed as an Obligation, where a task or activity is recommended to be undertaken to meet the current industry standards it is presented as a Recommendation.

**Obligations**

- **H1** Any development likely to impact the heritage significance of the State Significant Heritage Item will require a permit under Section 60 of the Heritage Act 1977 prior to works being undertaken.
- **H2** An Excavation Permit Exception under Section 134(4) of the Heritage Act is necessary to authorise any disturbance or excavation of land known to or having reasonable cause to suspect that the disturbance or excavation will or is likely to result in a relic being discovered, exposed, moved, damaged or destroyed.
- **H3** In accordance with Clause 5.10 of the Wollondilly LEP 2011, Development Applications for heritage items, heritage conservation areas and in the vicinity of either will need either a Heritage Impact Statement or Heritage Impact Assessment to accompany the submission.

**Recommendations**

The following management principles and recommendations are based on:

- The legal requirements of the Heritage Act 1977, whereby it is illegal to disturb or excavate any land knowing or having reasonable cause to suspect that the disturbance or excavation will or is likely to result in a relic being discovered, exposed, moved, damaged or destroyed unless the disturbance or excavation is carried out in accordance with an excavation permit.
- The findings presented within this Historic Heritage Assessment.
- Recognition of the extended period of which development activities will occur within the Subject Area.

KAS recommends the following:

**NOTE:** All reference to further investigations and/or additional assessment or similar are written with the intention that the works will be undertaken to inform Development Applications that will follow on from the rezoning currently being considered. These works are not required to inform the current assessment.
H1 No further assessment of the historic heritage within the subject Area is required to inform the rezoning proposal.

H2 Historic heritage items identified in Table 16 assessed to have any level of significance should be included in Schedule 5 Register of the Wollondilly LEP 2011.

H3 Prior to Development Application Stage for an identified area, further heritage assessment would be required at all locations identified in Figure 26 to inform the preparation of detailed planning controls for the site. The further heritage assessment would include additional analysis to the significance of view, or historic views to and from the heritage site located in and around the Subject Area.

H4 Those portions of the Subject Area not previously affected by high levels of ground disturbance (See Figure 8 to Figure 13) and not being subject to survey during this investigation (Figure 4) will require additional survey and assessment prior to management strategies being proposed and implemented.

H5 Consideration is given to the installation of heritage interpretation material that highlights the major themes (historic heritage) evident in the Subjects Area i.e. the agricultural nature of both this site and the importance of it to the colonial era. The location(s) for the interpretation should be chosen to incorporate a vista that appropriately reflects the heritage of this area.

H6 Any future development impacts upon the Heritage Items listed in Table 8 and Table 11 and shown in Figure 19 and Figure 26 will require the relevant excavation or exemption notification under the Heritage Act 1977 (refer to Section 2.2.4) where they are present within the Subject Area.

Disclaimer: This archaeological assessment and the management recommendations contained herein, will be independently reviewed by the Planning & Aboriginal Heritage Section of the NSW Office of Environment & Heritage (OEH), and the relevant Aboriginal community. OEH and the Aboriginal community will make consideration of the findings of the consultant’s report and the recommendations in relation to the management of cultural heritage. Formal approval for all actions outlined should be sought from the relevant authority prior to the completion of any works. At no time should automatic approval of the management recommendations stated herein be assumed.
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ABBREVIATIONS

AACAI  Australian Association of Consulting Archaeologists Inc
ACH  Aboriginal Cultural Heritage
ACHA  Aboriginal Cultural Heritage Assessment
ACHMP  Aboriginal Cultural Heritage Management Plan
AHC  Australian Heritage Council
AHIMS  Aboriginal Heritage Information Management System
AHIP  Aboriginal Heritage Impact Permit
AMBS  Australian Museum Business Services
ANU  Australian National University
AS  Artefact Scatter
AWS  Automatic Weather Station
BOM  Bureau of Meteorology
BP  Before Present
CBD  Central Business District
CBNTCAC  Cubbitch Barta Native Title Claimants Aboriginal Corporation
CH  Connor Holmes
CHL  Commonwealth Heritage List
CHM  Cultural Heritage Management
CHMP  Cultural Heritage Management Plan
CMP  Conservation Management Plan
cm  Centimetres
Code of Practice  Code of Practice for Archaeological Investigation of Aboriginal Objects in New South Wales
DA  Development Application
DECC  NSW Department of Environment & Climate Change
DECCW  NSW Department of Environment, Climate Change & Water
DoPI  NSW Department of Planning & Infrastructure
EC  Elton Consulting
EIS  Environmental Impact Statement
EP&A Act  Environmental Planning & Assessment Act (1979)
GSV  Ground Service Visibility
### Proposed Rezoning “Wilton Junction”, Wilton, Wollondilly Shire LGA, NSW
Aboriginal Cultural Heritage Assessment and Historic Heritage Assessment

<table>
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<td>Heritage Act</td>
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<td>ICOMOS</td>
<td>Australian International Council on Monuments &amp; Sites</td>
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<td>IF</td>
<td>Isolated Find</td>
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<td>KAS</td>
<td>Kayandel Archaeological Services</td>
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<td>PAD</td>
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<td>Statement of Heritage Impact</td>
</tr>
<tr>
<td>ST</td>
<td>Scarred Tree</td>
</tr>
<tr>
<td>TLALC</td>
<td>Tharawal Local Aboriginal Land Council</td>
</tr>
<tr>
<td>VCA</td>
<td>Voluntary Conservation Agreement</td>
</tr>
<tr>
<td>WJ</td>
<td>Wilton Junction</td>
</tr>
<tr>
<td>WSC</td>
<td>Wollondilly Shire Council</td>
</tr>
</tbody>
</table>
1 INTRODUCTION

1.1 Project background

In November 2011, the NSW Government initiated the Potential Housing Opportunities Program and invited landowners with suitably located substantial landholdings to nominate sites which might be able to deliver additional housing to address Sydney’s housing supply shortfall. Walker Corporation, Governors Hill, Bradcorp and Lend Lease responded to the Program and nominated landholdings of more than 100ha in Wollondilly Shire, surrounding the Hume Highway-Picton Road intersection for consideration. This area has subsequently become known as Wilton Junction, and is the subject of this application.

Following a Wollondilly Shire Council resolution in May 2012, the four major landowners (collectively known as the Wilton Junction Landowners’ Group) signed an agreement to work cooperatively with Council to prepare a high level Master Plan for Wilton Junction to deliver high quality new housing, jobs close to homes, supporting social and utilities infrastructure and services, and a range of complementary land uses.

A high level Master Plan and a Preliminary Infrastructure Requirements Report were considered by the Council on 17 December 2012, with Council resolving to give in-principle support to the proposal. Council also resolved to request that the rezoning be a state-driven process.

Subsequently, the NSW Government decided to coordinate the statutory planning process, led by the Department of Planning and Infrastructure (now the Department of Planning and Environment, DP&E). The Minister for Planning and Infrastructure (now the Minister for Planning and Environment) proposed to prepare a State Environmental Planning Policy (SEPP), as per Section 24 of the Environmental Planning and Assessment Act 1979 (EP&A Act), which identifies that a SEPP is an Environmental Planning Instrument, and Section 37 of the EP&A Act, which relates to the making of a SEPP for State or regional significant development. This was done with a view to rezone the land through an amendment to the Wollondilly Local Environmental Plan 2011 (LEP) to facilitate the early delivery of housing and infrastructure, linked to an agreed Infrastructure, Servicing and Staging Plan.

The Department of Planning and Infrastructure issued Study Requirements to the Proponents (Walker Corporation, Bradcorp and Governors Hill) to guide the planning investigations for a new town at Wilton Junction. The Study Requirements set the criteria for carrying out environmental investigations across the Subject Area (excluding both Bingara Gorge and the existing Wilton village which will not be affected by any proposed amendments to their current zoning and planning provisions). The investigations examine the potential for the Wilton Junction Subject Area to be rezoned under a SEPP.

Kayandel Archaeological Services (KAS) has been commissioned by the Wilton Junction Landowners’ Group (The proponents) to undertake an Aboriginal Cultural Heritage Assessment and Historic Heritage Assessment to inform the proposed rezoning of the Wilton Junction area.

1.2 Subject Area

Wilton Junction is located within Wollondilly Shire Council (WSC) Local Government Area (LGA) and is approximately 80km from Sydney Central Business District, and 30km west of Wollongong. The Subject Area includes the existing village of Wilton and the recently approved suburb of Bingara Gorge (Figure 1).
The area is strategically located around the Hume Highway-Picton Road interchange, and represents the next potential major town along this transport corridor south of Campbelltown–Macarthur. Moreover, Wilton Junction has the distinct advantage of a consolidated land ownership of more than 2,700ha in the control of recognised developers, with the resources and capability to expedite housing delivery, roll out enabling infrastructure, deliver social services and provide local employment.
Proposed Rezoning “Wilton Junction”, Wilton, Wollondilly Shire LGA, NSW

Aboriginal Cultural Heritage Assessment and Historic Heritage Assessment

Figure 1: Project Location
1.3 Land Ownership

There are four major landowners within the Investigation Subject Area (see Figure 2):

- Bradcorp Pty Ltd (land at Wilton West)
- Walker Corporation (lands south of Picton Road and east of the Hume Highway)
- Governors Hill (land including the Wilton Aerodrome and lands on both sides of Picton Road west of the Hume Highway)
- Lend Lease (land to the north-west of the Hume Highway-Picton Road intersection; but is excluded from the Study Requirements)

The Investigation Subject Area also includes land by other private owners (excluding land in Bingara Gorge and Wilton village) as outlined in the table below; with a plan of the extent of ownership being provided below.

<table>
<thead>
<tr>
<th>Landowner</th>
<th>Gross area (ha)</th>
<th>Net developable area (ha)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lend Lease</td>
<td>455</td>
<td>240</td>
</tr>
<tr>
<td>Bradcorp</td>
<td>872.4</td>
<td>458.7</td>
</tr>
<tr>
<td>Governors Hill</td>
<td>175.3</td>
<td>123.5</td>
</tr>
<tr>
<td>Walker Corporation</td>
<td>405.2</td>
<td>230.3</td>
</tr>
<tr>
<td>Other landowners²</td>
<td>572.3</td>
<td>489.2</td>
</tr>
<tr>
<td>TOTALS</td>
<td>2480.2</td>
<td>1541.7</td>
</tr>
</tbody>
</table>

Table 1: Land Ownership

For the purposes of this rezoning application, the Proponents include Walker Corporation, Governors Hill and Bradcorp. Lend Lease will continue with the planning and delivery of its Bingara Gorge community in Wilton, which is already zoned for residential development. Lend Lease is working with the Proponents of this rezoning application to plan and deliver the new town at Wilton Junction and its associated infrastructure.

² This comprises 113 other private landowners, excluding the new Bingara Gorge estate and the existing Wilton village which will not be affected by any proposed amendments to the existing Wollondilly Shire Council planning provisions.
Proposed Rezoning “Wilton Junction”, Wilton, Wollondilly Shire LGA, NSW

Aboriginal Cultural Heritage Assessment and Historic Heritage Assessment

Figure 2: Land Ownership
1.4 Vision for Wilton Junction

The Proponents have a vision for the proposed rezoning of land at Wilton Junction, which is:

- Wilton Junction is a new community cradled in a unique landscape characterised by bushland, rivers, creeks, lakes and ridges set against the backdrop of the Razorback Range. By design, the place and the lives of its people are intertwined with the bush.
- The community respects the location’s rich bushland setting, engages with surrounding water features and embraces sustainability.
- Inclusive and welcoming of diversity, it’s a place to nurture relationships, grow a family - to put down roots.
- Founded on a 21st century interpretation of timeless “Garden City” principles, Wilton Junction combines the best features of our most loved country towns with the facilities, services and technologies found in Australia’s most successful, edgy, and vibrant town centres.
- A safe place to visit – a healthy place to live – a great place to learn - a rewarding place to work – the local community takes pride in the strength of its cultural and civic life and the role of their town in Wollondilly Shire and the region.

1.5 Delivering the Vision and Project Description

This vision will be delivered through the creation of a new town with between 11,000 and 13,000 new homes and 11,000 jobs. Residential neighbourhoods will be created around green spaces providing a range of housing choice and facilitating healthy lifestyles options for all new residents.

A new town, comprising of approximately 17ha, will be established within the north-west quadrant of the Subject Area and will be surrounded by employment generating uses for business, bulky goods and light industry, comprising of approximately 120 - 130ha of land. Smaller neighbourhood centres will be created within the residential neighbourhoods to cater for convenient daily shopping choices. Community facilities and physical infrastructure will be provided facilitating the creation of a self-sustaining community. Existing significant environmental features and heritage items will be preserved commemorating the natural and historical setting of the Subject Area (Figure 3).

This report forms part of the studies required to be undertaken to meet the Study Requirements outlined by the Department of Planning and Infrastructure as part of the investigations for the release and rezoning of land at the junction of the Hume Highway and Picton Road through a SEPP. The study outcomes and report has also informed the development and preparation of a Master Plan for Wilton Junction.

The proposed Master Plan will also be informed by the following key principles:

- **Employment and commercial drivers.** The delivery of approximately 11,000 jobs focused around a new town centre and in close proximity to the Hume Highway and Picton Road.
- **Housing.** Providing between 11,000 and 13,000 new dwellings across the precinct, inclusive of the 1,165 already approved at Bingara Gorge and the existing Wilton village.
- **Community facilities.** Provide a diverse range of high quality community facilities including a schools, library, community centre in a town centre and three neighbourhood centres across the precinct.
- **Environment.** Conserving ecological features and biodiversity and establishing a Trust to rehabilitate and manage approximately 614.5ha of bushland.
- **Place making.** Delivering high quality and connected network of streets, spaces and squares throughout the development.
- **Activity centres.** Focus on the delivery of a new town centre and three smaller neighbourhood centres with a diverse mix of retail, commerce, business and light industry.
- **Traffic and transport.** Providing strategic motorway and bus access to surrounding areas, legible movement throughout the development.
- **Infrastructure.** Integrated water, waste water and stormwater management systems and access to all other utilities including gas and NBN.
Proposed Rezoning "Wilton Junction", Wilton, Wollondilly Shire LGA, NSW

Aboriginal Cultural Heritage Assessment and Historic Heritage Assessment

Figure 3: High Level Master Plan
1.6 Study Aim and Objectives

The aim of this study is to the Landowners’ Group with an assessment of the Aboriginal and Historic (non-Aboriginal) heritage considerations within the Subject Area. As indicated in Section 1.1 the NSW Department of Planning & Infrastructure has issued Study Requirements to guide planning investigations for a new town at Wilton Junction. The DGR’s relevant to Heritage are to:

- Undertake an appropriate strategic assessment of Aboriginal and European cultural heritage significance and potential impacts in consultation with the Office of Environment and Heritage and Wollondilly Shire Council’s Aboriginal Engagement Officer.
- The Aboriginal cultural heritage assessment should provide sufficient basis for identification of Aboriginal heritage values to support their protection at a strategic level, including consultation, desktop studies, landscape assessment and relevant mapping of current conservation areas.\(^3\)

Specific details in relation to achieving these Study Requirements are available in the Office of Environment and Heritage comments on the Draft Study Requirements for the Wilton Junction Precinct SEPP. These have been provided in Table 2 (below). In addition to these specifically identified requirements KAS have also considered the following the industry standards and guidelines in preparing this assessment:

- Code of Practice for Archaeological Investigation of Aboriginal Objects in New South Wales (Code of Practice) (DECCW 2010b);
- The NSW Heritage Manual (NSW Heritage Office. 1996); and,

<table>
<thead>
<tr>
<th>Requirement</th>
<th>Section Reference</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>State and Non-Aboriginal Heritage</strong></td>
<td></td>
</tr>
<tr>
<td>The state or local heritage significance of the site and any impacts that future (residential commercial/enterprise, employment) development may have upon this significance should be assessed. This assessment should include natural areas and places of Aboriginal historic or archaeological significance. It should also include a consideration of wider heritage impacts in the area surrounding the site.</td>
<td>Sections 9 to 10.3</td>
</tr>
<tr>
<td>The Heritage Council maintain the State Heritage Inventory which lists some items protected under the Heritage Act 1977 and other statutory requirements. Potential State Heritage Register items should also be identified and any impacts of future development on their curtilage or setting.</td>
<td>Section 7</td>
</tr>
<tr>
<td>The study should consult lists maintained by the NSW National Parks and Wildlife Service. The National Trust of Australia (NSW), the Australian Government’s Environment Protection and Biodiversity Conservation Act 1999 and Wollondilly Shires Council in order to identify any identified items of</td>
<td>Section 7</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Requirement</th>
<th>Section Reference</th>
</tr>
</thead>
<tbody>
<tr>
<td>heritage significance in the area affects by the proposal.</td>
<td></td>
</tr>
<tr>
<td>Non-Aboriginal heritage items within the area affected by the proposal</td>
<td>Sections 9, 10.2 to 10.3</td>
</tr>
<tr>
<td>should be identified by field survey. This should include any buildings,</td>
<td></td>
</tr>
<tr>
<td>works, relics (including relics underwater), gardens, landscapes, views,</td>
<td></td>
</tr>
<tr>
<td>tress or places of non-Aboriginal heritage significance.</td>
<td></td>
</tr>
<tr>
<td>A statement of significance and an assessment of impact of the proposal in</td>
<td></td>
</tr>
<tr>
<td>the heritage significance of these items should be undertaken. Any</td>
<td></td>
</tr>
<tr>
<td>policies/Measures to conserve their heritage significance should be</td>
<td></td>
</tr>
<tr>
<td>identified. This assessment should be undertaken by a qualified</td>
<td></td>
</tr>
<tr>
<td>practitioner/consultant with historic sites experience.</td>
<td></td>
</tr>
<tr>
<td>The relic provisions in the <em>Heritage Act 1977</em> require an excavation</td>
<td>Section 12.2</td>
</tr>
<tr>
<td>permit to be obtained from the Heritage Council, or an exception to be</td>
<td></td>
</tr>
<tr>
<td>endorsed by the Heritage Council, prior to commencement of works if</td>
<td></td>
</tr>
<tr>
<td>disturbance to a site with known or potential archaeological relics is</td>
<td></td>
</tr>
<tr>
<td>proposed.</td>
<td></td>
</tr>
<tr>
<td>Include heritage as an opportunity to inform the master plan and the SEPP</td>
<td>See Figure 28</td>
</tr>
<tr>
<td>in relation to recreations or employment opportunities, tourism</td>
<td></td>
</tr>
<tr>
<td>attractions, place-making in new urban or suburban locations.</td>
<td></td>
</tr>
</tbody>
</table>
### Aboriginal Cultural Heritage

An assessment needs to provide sufficient basis for the identification of Aboriginal heritage values to support their protection at the strategic level. OEH recommends that the following approach would be of assistance for the strategic document:

- Consultation with the Aboriginal community groups is required to identify area of high cultural values.

  **Section 3**

- A desktop study of existing source material from previous surveys within the study area. A comprehensive review is required by the desktop study to ensure that recommendations for management are soundly based and appropriately targeted. These studies should be included to develop a robust predictive model for Aboriginal heritage within the study area.

  **Section 6**

- A landscape assessment would be feasible with the current data base (using the information from a more comprehensive desktop review) and existing landscape and soil maps.

  **Sections 5 and 6**

- Evaluation of cumulative impacts across the local region is required to provide a context for identification of conservation priorities within for Aboriginal heritage

  **Section 5.5**

- Mapping of current conservation areas (in particular) national parks and extensive regional park lands) - to provide an indication of existing conservation areas and assist in providing a context for identification of conservation priorities within the study area.

  **Section 11.1**

- A landscape based predictive model for Aboriginal settlement is required. The landscape based modelling would provide a clear framework for determining which landscape elements are already represented in existing conservation areas and again provide support for defining conservation priorities and other management options such as requirement for additional surveys. Mapping of the geomorphology, landscapes, Aboriginal sites and previous surveys across the study area are required to provide a basis for the identification of the most sensitive landscapes, past major impacts which will have seriously compromised the integrity of any Aboriginal sites, locations with high potential for conservation of heritage, justification for areas surveyed.

  **Sections 6.5 to 6.7**

The outcomes of the Aboriginal heritage assessment should be compiled into a single mapping of high, moderate or low Aboriginal cultural values. Options for conserving areas of Aboriginal heritage significance found within the study area should be fully explored in discussion with the Aboriginal community.

**Table 2: Office of Environment and Heritage Study Requirements for the Wilton Junction Precinct SEPP**
1.6.1 Aboriginal Cultural Heritage

This Aboriginal Cultural Heritage Assessment (ACHA) has been undertaken to identify Aboriginal cultural heritage constraints within the Subject Area which may affect the proposal.

To achieve this, the key objectives of this assessment were as follows:

- Review of available existing documents including previous archaeological assessments conducted within the Subject Area and the surrounding region
- Site survey to identify any additional sites located within the Subject Area
- Assessment of significance of all sites located within the Subject Area
- Development of recommendations to manage aboriginal heritage sites in the Subject Area
- Prepare a report suitable for inclusion in the re-zoning application
- Undertake consultation with Aboriginal stakeholders known to hold cultural knowledge relating to the Subject Area

1.6.2 Historic Heritage Assessment

This Historic Heritage Assessment (HHA) has been undertaken to determine the values and significance of historic heritage items within the Subject Area.

To achieve this, the key objectives of this assessment were as follows:

- Identification of Statutory requirements to be met by the study
- Review of relevant State and National Heritage Registers
- Review of available existing documents including previous archaeological assessments and local histories
- Review of Local and Regional Environmental Plans
- Site survey and assessment of historic archaeological values of the Subject Area
- Assessment of heritage significance of all identified heritage items, including potential archaeological values
- Identification of areas of historical archaeological value or sensitivity
- Development of management guidelines consistent with statutory heritage requirements and current industry best practice standards
- Prepare a report in accordance with the NSW Heritage Management System described in the NSW Heritage Manual (NSW Heritage Office 1996) and follows the procedures and approaches outlined within the Archaeological Assessments section and based on the principles of the Burra Charter of Australia ICOMOS (Marquis-Kyle and Walker 1992).

1.7 Structure of Report

Section 1 provides an introduction to the assessment;

Section 2 provides an outline of the relevant policy and legislation;

Section 3 outlines the Aboriginal Community Consultation undertaken in conjunction with the report;

Section 4 gives an overview of the methodology involved in the production of the report;

Section 5 provides contextual information of the local environmental conditions, and the land use history of the Subject Area and surrounds;

Section 6 describes the Aboriginal archaeological background;

Section 7 describes the historic archaeological background;
Section 8 describes the Aboriginal heritage results of field survey;
Section 9 describes the Historic heritage results of the field survey;
Section 10 describes the significance assessment for the Aboriginal and historic archaeology identified during the field survey;
Section 11 describes the potential impacts to identified Aboriginal and historic heritage items and sites by the Masterplan; and
Section 12 describes the recommendations based on legislative obligations and findings during the field survey for Aboriginal and historic archaeology.

1.8 Study Limitations

Limited visibility of the ground surface within the Subject Area was a constraint on the visual assessment conducted for this project. Thick, high grass covered most of the area surveyed, preventing inspection of the ground surface and subsurface soils. This limited the effectiveness of the survey. Limited areas of exposed ground throughout the Subject Area provided better visibility, but overall, visibility was between 5 and 10% throughout the Subject Area.

It needs to also be acknowledged that visual inspections have been completed only within the areas identified in Figure 4. Assessment of areas outside of the identified area has been made by reference to the levels of disturbance associated with previous land use and landforms and the desktop assessment.

This project represents the first broad scale Aboriginal archaeological assessment within the Woronora Plateau region that has sought to identify a broad range of Aboriginal heritage site types. Previous broad scale Aboriginal archaeological assessments have specifically focused on Aboriginal sites that might be affected by mining subsidence i.e., rock shelters; as a result, there is no readily available dataset for KAS to undertake an appropriate strategic assessment of Aboriginal Cultural significance of the Subject Area.

1.9 Personnel

The field survey was completed by Tom Knight, Veronica Zaghloul, Lance Syme and Bridget Walker. Background research was undertaken by Veronica Zaghloul, Bridget Walker and Lance Syme, mapping was completed by Lance Syme and Jason McWhirter. The report was prepared by Lance Syme and Ruth Longdin, with the review being undertaken by Glenys Moore. The process for identifying Registered Aboriginal Parties (RAPs) and community consultation was undertaken by Kristen Kerr under the supervision of Glenys Moore and Lance Syme. The qualifications of the KAS team are included on Table 3, as required by the Code of Practice.

<table>
<thead>
<tr>
<th>PERSON</th>
<th>QUALIFICATIONS</th>
<th>EXPERIENCE</th>
<th>TASKS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lance Syme</td>
<td>BArts (Arch/Palaeo), Grad Dip (Heritage Cons), MACCAI, M.ICOMOS</td>
<td>17 years</td>
<td>Project supervisor, report review</td>
</tr>
<tr>
<td>Glenys Moore</td>
<td>BComm.</td>
<td>2 years</td>
<td>RAP identification</td>
</tr>
<tr>
<td>Thomas Knight</td>
<td>MArts (Archaeology)</td>
<td>20 years</td>
<td>Survey</td>
</tr>
<tr>
<td>Veronica Zaghloul</td>
<td>BArts (Hons)</td>
<td>2 years</td>
<td>Survey</td>
</tr>
<tr>
<td>Bridget Walker</td>
<td>BArts (Arch/Palaeo)</td>
<td>8 years</td>
<td>Survey, Report writing</td>
</tr>
</tbody>
</table>

Table 3: KAS personnel involved in the archaeological assessment
Lance Syme, Principal Archaeologist, Kayandel Archaeological Services
BA (Arch/Palaeo), Grad Cert (Heritage Conservation), M.ICOMOS, Full Member AACAI

As principal archaeologist and director of Kayandel Archaeological Services, Lance has conducted projects that have variously included Aboriginal and non-Aboriginal community consultation, heritage management liaison, field survey, site recording, archaeological excavation, artefact analysis and interpretation, archival research, and report preparation detailing heritage assessment and recommendations for cultural management plans. Projects undertaken to date have been completed within a full range of statutory contexts ranging from principal roles carried out as part of the Master planning process, conservation management planning (CMP), preparation of environmental impact studies (EIS), locality specific review’s of environmental factors (REF), and the needs that develop as a consequence of ongoing Development Applications.

Lance is a Full Member of the Australian Association of Consulting Archaeologists Inc. (AACAI), a Full Member of the International Council on Monuments and Statues (ICOMOS), a Member of the Executive Committee of Australia ICOMOS and an Expert Member of the International Committee on Archaeological Heritage Management.
2 APPLICABLE POLICY AND LEGISLATION

Aboriginal and non-Aboriginal cultural heritage in Australia is protected and managed under a variety of legislation. The following section provides a brief summary of the Acts which are relevant to the management of cultural heritage in NSW. It is important to note that these Acts are presented as a guide and are not legal interpretations of legislation by the consultant.

2.1 Commonwealth Legislation

2.1.1 Aboriginal and Torres Strait Islander Heritage Protection Act 1984

The purpose of the Aboriginal and Torres Strait Islander Heritage Protection Act 1984 (Heritage Protection Act) is the preservation and protection from injury or desecration of areas and objects in Australia and in Australian waters that are of particular significance to Aboriginal people in accordance with Aboriginal tradition.

Under the Heritage Protection Act the responsible Minister can make temporary or long-term declarations to protect areas and objects of significance under threat of injury or desecration. The Act can, in certain circumstances, override state and territory provisions, or it can be implemented in circumstances where state or territory provisions are lacking or are not enforced. The Act must be invoked by or on behalf of an Aboriginal or Torres Strait Islander or organisation.

2.1.2 Environment Protection & Biodiversity Conservation Act 1999 (EPBC Act)

The Commonwealth Environment Protection and Biodiversity Conservation Act 1999 (EPBC Act) took effect on 16 July 2000. Under Part 9 of the EPBC Act, any action that has, or is likely to have, a significant impact on a matter of National Environmental Significance (known as a controlled action under the Act), may only progress with approval of the Commonwealth Minister for the Environment. An action is defined as a project, development, undertaking, activity (or series of activities), or alteration to any of these. Where an exception applies, an action will also require approval if:

1. It is undertaken on Commonwealth land and will have or is likely to have a significant impact;
2. It is undertaken outside Commonwealth land and will have or is likely to have a significant impact on the environment on Commonwealth land; and,
3. It is undertaken by the Commonwealth and will have or is likely to have a significant impact.

Under Section 28 subsection (1) “The Commonwealth or Commonwealth Agency must not take inside or outside Australian jurisdiction an action that has, will have, or is likely to have a significant impact on the environment inside or outside Australian jurisdiction.” The EPBC Act defines ‘environment’ as both natural and cultural environments and therefore Aboriginal and historic cultural heritage items included on the Register of the National Estate are regarded as part of the cultural environment.

Recently, Australia has changed legislation that protects its national heritage places. Three new laws came into effect in January 2004 and are essentially a combination of previous heritage system with a number of changes that include the establishment of a National Heritage List (NHL) and a Commonwealth Heritage List (CHL).

The National Heritage List records places with outstanding natural and cultural heritage values that contribute to Australia’s National identity. The Commonwealth Heritage List will comprise natural, Aboriginal and historic places owned or managed by the Commonwealth. The new laws provide changes that offer greater legal protection under the existing Environment Conservation and
Biodiversity Conservation Act 1999 (EPBC Act). Under the new system, National Heritage will join six other important ‘matters of national environmental significance’ (NES) already protected by the EPBC Act.

The three new Acts are:

- The Environment and Heritage Legislation Amendment Act (No.1) 2003
- The Australian Heritage Council Act 2003
- The Australian Heritage Council (Consequential and Transitional Provisions) Act 2003

Approval under the EPBC Act is required if you are proposing to take an action that will have, or is likely to have, a significant impact on the National Heritage values of a National Heritage place and/or any other NES matter. This action must be referred to the Australian Government Minister for the Environment and Heritage. The Minister will decide whether an action will, or is likely to, have a significant impact on a matter of national environmental significance.

The heritage provisions of the EPBC Act allow for a transition period whilst the National and Commonwealth Heritage Lists are finalised. During this transition period the Register of the National Estate acts in conjunction with the formative National and Commonwealth lists to provide full coverage for items already identified as having cultural heritage significance.

2.1.3 Native Title Act 1993 (Amended)
The Native Title Act of 1993, as amended, recognises and protects native title, and provides that native title cannot be extinguished contrary to the Act. The National Native Title Tribunal (NNTT) is a Commonwealth Government agency set up under this Act to mediate native title claims under the direction of the Federal Court of Australia.

The National Native Title Tribunal maintains the following registers:

- National Native Title Register
- Register of Native Title Claims
- Unregistered Claimant Applications
- Register of Indigenous Land Use Agreements.

The objective of a search of the NNTT registers is to identify possible Aboriginal Stakeholders that would not perhaps receive representation as part of the Local Aboriginal Land council or Elders groups.

2.2 New South Wales Legislation
The following New South Wales legislation protects aspects of cultural heritage and is relevant to development activities in the Subject Area.

2.2.1 Environmental Planning and Assessment Act 1979
The EP&A Act requires that consideration be given to environmental impacts as part of the land use planning process. In NSW environmental impacts are interpreted as including cultural heritage impact. Three parts of the EP&A Act are most relevant to Heritage. Part 3 relates to planning instruments, including those at local and regional levels; Part 4 controls development assessment processes; and Part 5 refers to approvals by determining authorities.

2.2.2 Environmental Planning and Assessment Act 1979
The Environmental Planning and Assessment Act 1979 ensures that environmental impacts are considered prior to development taking place. This includes impacts on Aboriginal and non-
Aboriginal cultural heritage items and places. The Act also requires that Local Government Areas (LGAs) prepare Local Environmental Plans (LEP) and Development Control Plans (DCP) in accordance with the Act to provide guidance on the level of environmental assessment required. LEPs often list locally significant heritage items.

2.2.3 National Parks and Wildlife Act 1974

The National Parks and Wildlife Act 1974 provides for protection of Aboriginal objects (sites, relics and cultural material) and Aboriginal places. Under the Act (Section 6), an Aboriginal object is defined as:

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

An Aboriginal place is defined under this Act as an area that has been declared by the Minister administering the National Parks and Wildlife Act as a place of special significance for Aboriginal culture. It may or may not contain physical Aboriginal objects.

Under Section 90 of the Act it is an offence to knowingly destroy, deface, damage or desecrate, or cause or permit the destruction, defacement, damage or desecration of, an Aboriginal object or Aboriginal place, without the prior written consent from the Chief Executive of the NSW Office of Environment and Heritage (OEH). In order to obtain such consent, a Section 90 Aboriginal Heritage Impact Permit (AHIP) application must be submitted and approved by the chief Executive of OEH. In considering whether to issue a permit under Section 90, OEH will take into account:

- The objectives and justifications for the proposed activity;
- The appropriateness of the methodology to achieve the objectives of the proposed activity;
- The significance of the Aboriginal object(s) or place(s) subject to the proposed impacts;
- The effect of the proposed impacts and the mitigation measures proposed;
- The alternatives to the proposed impacts;
- The conservation outcomes that will be achieved if impact is permitted;
- The outcomes of the Aboriginal community consultation regarding the proposed impact and conservation outcomes;
- The views of the Aboriginal community about the proposed activity; and,
- The knowledge, skills, and experience of the nominated person(s) to adequately undertake the proposed activity.

Under Section 89A of the Act it is a requirement to notify the OEH Director-General of the location of an Aboriginal object. Identified Aboriginal items and sites are registered with the NSW OEH on the Aboriginal Heritage Information Management System (AHIMS).

2.2.4 The Heritage Act 1977 (NSW) (Amended 1999)

The Heritage Act 1977 is the primary piece of State legislation affording protection to all items of environmental heritage (natural and cultural) in New South Wales. “Items of environmental heritage” include places, buildings, works, relics, moveable objects and precincts identified as significant based on historical, scientific, cultural, social, archaeological, architectural, natural or aesthetic values. A ‘Place’ is defined as an area of land, with or without improvements and a ‘Relic’ is defined as any deposit, object or material evidence that relates to the settlement of the
area that comprises New South Wales, not being Aboriginal settlement, and that is 50 years or more old. The Heritage Act 1977, established the Heritage Council of NSW, provides advice and recommendations to the Minister for Planning relating to conservation and management of items of environmental heritage. The Heritage Council is also required to maintain a database of items of State heritage significance: the State Heritage Register (SHR), a database of items of both State and local heritage significance and the State Heritage Inventory (SHI).

If the Heritage Council believes that a heritage item or place needs to be conserved, it can make a recommendation to the Minister, who decides whether to place protection on that item. There are two types of protection available: interim heritage orders and listing on the State Heritage Register. These forms of protection are ‘binding directions’, which means that the heritage item that is protected in one of these ways cannot be demolished, redeveloped or altered without permission from the Heritage Council.

Section 57 of the Act requires that no person cause harm to a State Heritage Register or an Interim Heritage Act listing without first obtaining an Excavation Permit from the Heritage Council of NSW (pursuant to Section 60 of the Act), unless there is an applicable exception (pursuant to Section 57).

Exceptions under Section 57(24) to the standard Section 60 process exist for applications that meet the appropriate criterion. An application for a permit is still required.

If an exception has been granted and, during the course of the development, substantial intact archaeological relics of State or local significance, not identified in the archaeological assessment or statement required by the exception, are unexpectedly discovered during excavation, work must cease in the affected area and the Heritage Council must be notified in writing in accordance with section 146 of the Act. Depending on the nature of the discovery, additional assessment and, possibly, an excavation permit maybe required prior to the recommencement of excavation in the affected area.

The Heritage Act 1977 does not apply to Aboriginal “relics” (any deposit, object or material evidence). These items are protected under the National Parks and Wildlife Act 1974; however, some aspects of Aboriginal cultural heritage management and protection are covered by provisions of the Heritage Act 1977.

The Director-General of the Department of Environment and Climate Change can recommend that the Minister of Planning make Interim Protection Orders (IPOs) to preserve areas of land that have natural, scientific or cultural significance that can include land with Aboriginal places or relics on it.

Particular Aboriginal places and items that the community has formally recognised as being of high cultural value can also be listed on the State Heritage Register. This provides an extra level of protection in addition to that provided by the National Parks and Wildlife Act 1974.

2.2.5 Wollondilly Local Environmental Plan (LEP) (2011)
Heritage items are protected under the provisions of the Wollondilly Local Environmental Plan (LEP) (2011) Section 5.10.

Section 5.10.2 of the LEP outlines consent requirements for undertaking activities within identified heritage conservation areas, such as within the curtilage of locally listed heritage items. Heritage items and archaeological sites are listed in Schedule 5 to the LEP. If a proposed development does not adversely affect the heritage significance of the heritage item the development consent is not
required. Therefore the LEP recommends a heritage document assessing the extent to which the carrying out of the proposed development would affect the heritage significance of the heritage item be created for the consent authority for all development to a heritage item.

Heritage items listed under Schedule 5, Part 1 of the LEP (Wollondilly Shire Council 2011) identified within or immediately adjacent to the Subject Area are identified in Section 7.

2.3 Non Statutory Listings

The National Trust of Australia (NSW) is a community-based organisation with independently constituted Trusts in each state and territory. The NSW National Trust compiles a heritage list primarily of historic places, but they also include some Aboriginal and natural places. Listing helps to provide recognition, and promote public appreciation and concern for local heritage.

The National Trust Register has no legal foundation or statutory power, but is recognised as an authoritative statement on the significance to the community of particular items, and is held in high esteem by the public.
PARTNERSHIP WITH INDIGENOUS COMMUNITIES

The Office of Environment and Heritage (OEH) recognises and values Aboriginal cultural heritage. Evidence of Aboriginal occupation is present as objects throughout the NSW landscape, and cultural heritage is present in the memories, stories and relations Aboriginal people have with their traditional land or Country. Aboriginal cultural heritage is an essential part of Aboriginal people’s cultural identity, connection and sense of belonging to Country. OEH recognises that Aboriginal people who hold cultural knowledge should be provided an opportunity to inform OEH of the cultural significance of objects or places, and have an input into the management of their cultural heritage. To this end, they produced the Aboriginal Cultural Heritage Consultation Requirements for Proponents 2010 (DECCW 2010a).

In recognising the rights and interests of Aboriginal people in their cultural heritage OEH acknowledges that Aboriginal people:

- Are the primary source of information about the value of their heritage and how this can be protected and conserved;
- Must have an active role in any Aboriginal cultural heritage planning process;
- Must have early input into the assessment of cultural significance of their heritage and its management so that they can continue to fulfill their obligations towards their heritage;
- Must control the way in which cultural knowledge and other information relating specifically to their heritage is used, as this may be an integral aspect of its heritage value (DECCW 2010a: 2).

OEH sets out a process for identifying Aboriginal parties who may have information on the cultural significance of objects or places, and providing Aboriginal people with opportunities to comment on the methods used to identify and assess objects or places, and opportunities to contribute to the development of management options and recommendations (DECCW 2010a:7).

The process to identify Aboriginal parties must be followed if an application is made to OEH under Part 6 of the National Parks and Wildlife Act, 1974 as amended. The proposal being considered in this report will not result in the need for an application under Part 6 of the NPW Act as it is for a rezoning. However, it should be recognised that if the rezoning application is successful that works that will flow on will likely require an approval under Part 6 of the National Parks and Wildlife Act and the requirements of the consultation process identified in Aboriginal Cultural Heritage Consultation Requirements for Proponents 2010 (DECCW 2010a) will be required to be complied with at that time.

This situation, along with recognising that further consultation would be required at Development Application stage, were the primary determinants of the scale of Aboriginal community consultation undertaken to date.

KAS undertook consultation with Aboriginal stakeholders known to hold cultural knowledge relating to the Subject Area and who are generally accepted within the Aboriginal community as being the holder of a right to speak for the country in which the Subject Area is located. The purpose of community consultation is to understand the cultural values of the Subject Area and to understand their views and concerns about the proposed development.

The objectives of Aboriginal community consultation were to:
Give Aboriginal people an opportunity to comment on the design of the field methods for identifying Aboriginal objects or places within the Subject Area;

Obtain information about the cultural significance and values of any Aboriginal objects or places within the Subject Area;

Give Aboriginal people an opportunity to contribute to the development of cultural heritage management options and recommendations;

Give Aboriginal people an opportunity to comment on any draft report.

KAS has worked extensively within the Wollondilly Shire LGA and are familiar with the Aboriginal community stakeholders that are typically involved in projects to determine the significance of Aboriginal cultural objects and landscapes. Throughout this project KAS has engaged and remained in contact with the Tharawal Local Aboriginal Land Council (TLALC) and the Cubbitch Barta Native Title Claimants Aboriginal Corporation (CBNTCAC). These two organisations are generally accepted as being the primary organisations that possess the right to speak for the location of the Subject Area.

3.1 Community Requests and Outcomes

During the process of completing the field survey the Aboriginal community representatives were provided with the opportunity to comment upon the level of survey coverage and to influence the specific locations at which survey was undertaken.

Throughout the completion of the assessment it has been necessary to consult with Aboriginal stakeholders on a number of separate occasions in order to receive their input on the proposed impacts, conservation and management outcomes for Aboriginal objects throughout the Subject Area.

Senior members of the Aboriginal stakeholders participated in most of the field survey and were able to provide regular input into the significance assessment of Aboriginal sites and landscapes.

Shortly after the conclusion of the field survey a meeting to discuss the specific management strategies and recommendations for the identified Aboriginal sites was completed. This meeting also included the completion of a field inspection to a number of sites to ensure that the full extent of proposed impacts was understood and the full extent of management recommendations and further investigation could be established.

See Section 9.1 for the cultural significance of the identified Aboriginal items as determined by the Aboriginal community. Section 10.1 outlines the suggested mitigation of impact on the identified Aboriginal sites, with sites identified as having exceptional significance by the Aboriginal community being conserved.
4 STUDY METHODS

The assessment reported here involved Aboriginal community consultation, background research, the completion of an archaeological pedestrian field survey and an assessment of the potential for the surveyed area to contain Aboriginal cultural objects and historic heritage relics. A breakdown of the various tasks that have been undertaken to achieve the objectives of this assessment is provided below. The process for Aboriginal community consultation is set out in Section 3 above.

4.1 Background Research

Prior to the field work, the following tasks were undertaken:

- A search of the Aboriginal Heritage Information Management System (AHIMS), maintained by the Office of Environment and Heritage (OEH), was obtained to determine whether any sites or areas of sensitivity had previously been recorded within or near the Subject Area. This search also assisted with the development of a local site distribution model;

- A search of the National Heritage List (NHL), The Commonwealth Heritage List (CHL) and the Register of the National Estate (RNE) maintained by the Australian Heritage Council (AHC).

- A search of the State Heritage Register (SHR) maintained by the NSW Heritage Branch and the s.170 Register maintained by Sydney Water, Roads and Maritime Services and State Rail.

- A search of Schedule 5 of the Wollondilly Local Environmental Plan 2011 and Schedule 1 and 7 of Wollondilly Local Environmental Plan 1991.

- A search of the State Heritage Inventory, maintained by the NSW Heritage Branch and the Register of the National Trust of Australia (NSW).

- A search of the AHIMS report catalogue was conducted to identify previous archaeological studies that had been carried out in and near the Subject Area. The reports identified were able to provide information on the local archaeological context and assisted with the development of predictions for site location within the Subject Area;

- Published archaeological texts regarding the Wilton area were consulted to assist with the development of regional and local archaeological contexts for the Subject Area;

- KAS holdings were searched and an internet search was carried out to identify any Aboriginal history, ethnography, environmental and climate information relevant to the Subject Area;

- A predictive model for the Subject Area was developed; and

- The topographic maps and aerial photography were examined to plan the field survey. Survey transects would target areas of disturbance which could have improved visibility as well as areas which appeared less disturbed with potential for intact Aboriginal sites. This information was also employed to identify locations at which early historic homes, outbuildings or their remains would occur.

4.2 Archaeological Survey and Data Collection

A field survey was conducted over 10 days, to record the characteristics of the Subject Area (including identification of landforms); any identification of any physical heritage remains relation to either Aboriginal occupation or historic actives and contraction within the Subject Area (Figure 4).
KAS recorded any physical evidence of Aboriginal land use and any information which could inform predictions about Aboriginal objects within the area.

Archaeologists, Thomas Knight and Veronica Zaghloul undertook the survey on the Subject Area between 22 April and 2 May 2013. During this phase of field works the Aboriginal community was represented by Neale Sampson (TLALC), Donna Whillock (TLALC), Glenda Chalker (CBNTCAC), Kirsty-Lee Chalker (CBNTCAC), Dwana Chalker (CBNTCAC) and Kiahni Chalker (CBNTCAC).

Additional field inspections and consultation were undertaken on 6 & 7 June 2013 and during this phase Neale Sampson (TLALC) and Glenda Chalker (CBNTCAC) represented the Aboriginal stakeholders and Lance Syme, Glenys Moore and Bridget Walker were present for KAS.

The Subject Area was divided into 38 survey units and pedestrian transects were completed in good weather with dry and bright conditions. Transects 37 and 38 were not completed due to time constraints, it should be noted however that these two transects are outside of the proposed development footprint (see Section 8.2).

The following tasks were carried out during the field survey:

- Landform units were inspected for any potential of archaeological sensitivity across the Subject Area; and,
- Surface exposures were inspected for archaeological material and large mature trees for signs of cultural modification.

Certain parts of the Subject Area were inspected which had been subject to heavy, moderate or light disturbance which may assist with an assessment of archaeological potential of the Subject Area.

The survey team walked transects across the survey units targeting exposures and mature trees for inspection. Visibility variables were recorded for all transects within the Subject Area. There are portions of the Subject Area that have not had detailed archaeological survey undertaken across them, primarily due to the multitude of landownership arrangements. In these cases, much of these areas were viewed from property boundaries. In addition, assessments made in relation to their previous land use, disturbance and landform characteristics, were made as part of the desktop assessment. These preliminary observations along with interpretation of the outcomes from the nearby Bingara Gorge development has been utilised to facilitate the assessment (see Section 6.7).
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Figure 4: Areas Surveyed as Part of this Assessment
5 LANDSCAPE CONTEXT

The natural environment of an area influences the availability of local resources such as food and raw materials for artefacts, rock platforms for engravings and axe sharpening, and rock outcrops that may provide shelter or surfaces suitable for pigment art. The landscape also provides the sediments which may bury objects and archaeological features, which might be exposed or dispersed by erosive processes. OEH requires a review of the landscape context to assist in the determination or prediction of the potential of a landscape to have accumulated or preserved objects, the ways Aboriginal people may have used the landscape in the past, and the likely distribution of the material traces of Aboriginal land use (DECCW 2010a:8).

Detailing the environmental context of a Subject Area is an integral procedure that is necessary for modelling potential past Aboriginal land-use practices and/or predicting site distribution patterns within any given landscape. The information that is outlined below is considered to be pertinent to the assessment of site potential and site visibility within the specific contexts of the current study.

5.1 Climate

The Subject Area lies within the Illawarra Region (BOM, 2013). The climate is mostly cool temperate. According to the recordings of the Automatic Weather Station (AWS) at the nearby Camden Airport (Station Number 068192), annual mean maximum temperatures have ranged between 17.2°C-29.5°C over the past 36 years, with the highest recorded temperature of 46.4°C in January 2013 and the lowest of -6.0°C in July 1983 (BOM, 2013a).

Rainfall data has been taken from the Cataract Dam Weather Station (Station Number 068016). Rainfall is spread fairly uniformly throughout the year but with a slight summer–autumn dominance for an annual average of 1,064.1mm. Lowest recorded rainfall is 0.00mm for January 2001 and a maximum of 702.8mm recorded in February 1956 (BOM, 2013b).

5.2 Geology

The underlying geology of the Subject Area is predominately Hawkesbury Sandstone (61.7%) (Rh) and Wianamatta Group Shales including Ashfield Shales (38.2%) (Rwa) and Bringelly Shales (0.1%) (Rwb), as shown in Figure 5.

Hawkesbury Sandstone

Incorporates medium to coarse-grained quartz sandstone, with very minor shale, claystone and laminite lenses (Stroud et al. 1985:32).

Wianamatta Group Shales

Includes the Ashfield and Bringelly geological units; these incorporate shale, sandstone, carbonaceous claystone, laminite, siltstone and rare coal (Stroud et al. 1985:40-50).

5.3 Topography and Hydrology

The topography within the Subject Area is predominately determined by the underlying geological formation. Broadly the Subject Area is situated on the sandstone plateaux above the river gorge of the Nepean and Cordeaux Rivers. The Subject Area is irregular in shape with the Nepean River forming part of the south western boundary in addition to the north and north western boundary.

Allens Creek defines the eastern boundary of the Subject Area. The highest location in the Subject Area is situated in the south eastern portion south of the township of Wilton. It is identified as
Thorntons Hill and has a height of 283m AHD. This hill is part of a small chain of rises that roughly align to Picton Road and establish the principal watershed within the Subject Area. This series of rises comprises approximately 6 crests ranging in height from 205m to 283m AHD.

The Subject Area can be divided into 3 catchments. The first is situated to the south of the ridge identified above and contains a series of relatively short unnamed ephemeral watercourses that drain directly into either the Cordeaux or Nepean Rivers. The second catchment drains to the west and north west directly into the Nepean. This catchment consists of a number of short ephemeral water courses in addition to Byrnes Creek. The third catchment drains to the east and northeast directly into Allens Creek. This is the largest of the 3 catchments and in addition to a number of unnamed ephemeral creek lines also includes Stringybark Creek.

All of the topographic and hydrological features identified above can be identified in Figure 6.

5.4 Soils

There are four soil landscapes present in the Subject Area according to the Soil Landscapes of the Wollongong – Port Hacking 1:100,000 Sheet (Figure 7) (Hazelton and Tille, 1990)

These are Blacktown (73%), Lucas Heights (15%), Hawkesbury (7.5%) and Luddenham (4.5%) soil landscapes.

Blacktown

The Blacktown soil landscape is characterised by gently undulating rises on the Wianamatta Group shales with slopes usually <5%. The soils are shallow to moderately deep (<100 cm) Red and Brown Podzolic Soils on crests, upper slopes and well drained areas, deep (150-300 cm) Yellow Podzolic Soils and Soloths on lower slopes and in areas of poor drainage. Soils are moderately reactive with low fertility, poor soil drainage and highly plastic subsoil (Hazelton and Tille, 1990:27).

Lucas Heights

The Lucas Heights soil landscape is characterised by interbedded shale, laminate and fine to medium grain quartz sandstone. Soils are generally of low fertility and nutrient availability, hard setting and stony. The subsoils are occasionally sodic and impermeable. When exposed they are of moderate erodibility (Hazelton and Tille, 1990:23).

Hawkesbury

The Hawkesbury soil landscape is characterised by steep rugged sandstone slopes and ridges of Hawkesbury sandstone which is a medium to coarse grained quartz sandstone with minor shale laminate lenses. Fertility of soils in this landscape is very low, strongly to extremely acidic, with low to very low nutrient availability. These soils are typically shallow and stony (Hazelton and Tille, 1990:45).

Luddenham

The Luddenham Soil Landscape is underlain by the Wianamatta Shale Group and is composed of Ashfield and Bringelly shale formations. This soil is of low to moderate fertility and is highly erodible (Hazelton and Tille, 1990:70).
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Figure 5: Geology
Figure 6: Topography
Proposed Rezoning “Wilton Junction”, Wilton, Wollondilly Shire LGA, NSW

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Figure 7: Soils Landscapes
5.5 Former Land Use and Disturbance

The Subject Area has undergone significant changes since European occupation began in the early–mid 19th Century. The majority of the broader changes/impacts observed have occurred primarily as a consequence of European land management strategies, but the Subject Area has also been affected by discrete developmental impacts in the past.

In order to establish those portions of the Subject Area that have been least affected by past land use and disturbance, an analysis and detailed review has been undertaken of the available historic aerial imagery, this includes the imagery from 1951, 1961, 1975, 1984, 1991, 2005 and 2010. A summary of each of these maps and the land use and developmental impacts to the Subject Area as evidence by them is provided below.

5.5.1 Interpretation of Aerial Photography

Interrogation of a series of aerial photography from 1955 to 2010 for the Subject Area shows that the majority of the currently cleared areas had already been undertaken by 1955. Areas of Low, Moderate and High level of disturbance associated with previous land uses have been identified upon each of the available historical aerial images (See Figure 8 to Figure 13). A general overview of these impacts is provided below.

1955

The 1955 aerial shows a large expanse of cleared land in the central part of the Subject Area. Those areas at the tops of creek lines and into the riparian zones have not been cleared. There appears to be little in the way of infrastructure, such as power lines, nor has the Hume Highway or Picton Road been constructed at this time. Additionally, there appears to be little in the way of rural infrastructure. While the small township of Wilton was well established by this time.

1961

The 1961 aerial shows a more defined farming setup, with the construction of several dams having occurred, as well as what appears to be numerous fence lines. There are also clearly defined access tracks, likely associated with the farming infrastructure. There has been additional clearing undertaken, in proximity to the creek lines, however the riparian vegetation is still present. Rows of trees have been left, likely to be utilised as windbreaks. The Hume Highway and Picton Road are yet to be constructed. There is a road running on an approximately east-west alignment.

1975

The 1975 aerial shows that only a small amount of additional clearing has taken place since the last aerial was taken. There are however now numerous access tracks, which may be an indication of subdivision of some of the larger blocks of land. The Hume Highway is still yet to be constructed, however a road heading on an approximately north-east-south west alignment coming off the east-west road has been constructed. The first airstrip has also been constructed, running approximately north to south.

The easement for the Moomba Sydney Gas Pipeline can be seen traversing the Subject Area.

1984

By 1984, both the Hume Highway and Picton Road have been constructed. Some additional clearing has likely been undertaken, though not in a significant amount. There is more
infrastructure associated with the airstrip with what appears to be an additional runway as well as buildings. Earthworks for the Maldon-Dombarton Railway are also apparent.

1991

By 1990, Picton Road has been realigned in a more southerly direction, to its current alignment. The footprint of the township of Wilton has expanded somewhat, however not in any significant way. Little additional clearing works appears to have been undertaken within the Subject Area.

2005 & 2010

Both the 2005 and 2010 aerials demonstrate the expansion of the township of Wilton, as well as the new estate of Bingara Gorge. The large open area of land which was once Condell Park does not seem to have undergone any additional vegetation clearance.

The aerials demonstrate that while certain portions of the Subject Area have undergone significant ground disturbance, for example, for the construction of roads, and within the footprint of the Maldon-Dombarton Railway, there are also areas which have undergone low ground disturbance. In particular, those areas around the creek lines appear to have been minimally disturbed in the past. Additionally, the large expanse of open land, in what was previously Condell Park, has likely undergone low to medium disturbance. While the vegetation has been cleared, there doesn’t appear to have been much in the way of intensive farming undertaken in this area. There are pockets which can be seen in the aerials, particularly the 1975 aerial, which may be cultivation, however these areas are limited.

While not observable in the aerials, there are also several underground services, such as the pipeline for the Sydney water supply, and gas lines.

Plate 1: Access track looking west
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Plate 2: Old Road Corridor looking east

Plate 3: Access track alongside runway looking northwest
Figure 8: Previous Disturbance from 1955 Aerial Imagery
Figure 9: Previous Disturbance from 1961 Aerial Imagery
Figure 10: Previous Disturbance from 1975 Aerial Imagery
Figure 11: Previous Disturbance from 1984 Aerial Imagery
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Figure 12: Previous Disturbance from 1990 Aerial Imagery

Legend
- Road/Track High Disturbance
- High
- Moderate
- Low
- Nil
- Bingera Gorge
- Subject Site 1-1 June 2014

Kilometres
Figure 13: Previous Disturbance from 2005 Aerial Imagery
6 ARCHAEOLOGICAL CONTEXT

6.1 Ethnohistory

At the time of initial European occupation of the Sydney region, systematic ethnographic study of Aboriginal society was not carried out, but various people made some observations which can be compiled to suggest something of Aboriginal lifeways at the time. Various observations have been compiled by Attenbrow (2010) and McDonald (2008). It is known that people lived in family groups, consisting of one or two adult males, their wives and their dependants (young and old). People also belonged to named groups which were tied to places, and that people in different areas spoke different dialects (McDonald 2008:17).

6.2 AHIMS Database Search

A search of the AHIMS database was carried out 21st January 2013 using the client service ID 89967, with the coordinates set out in Table 4 below.

<table>
<thead>
<tr>
<th></th>
<th>EASTING</th>
<th>NORTHING</th>
</tr>
</thead>
<tbody>
<tr>
<td>Minimum</td>
<td>283400</td>
<td>6206800</td>
</tr>
<tr>
<td>Maximum</td>
<td>291400</td>
<td>6214800</td>
</tr>
</tbody>
</table>

Table 4: AHIMS Database Search Criteria
(Zone 56 additional buffer 1kms)

The search area was a 10km by 10km square centred upon the Subject Area (Figure 15). The results of the AHIMS search as provided by the Office of Environment and Heritage (Appendix I).

It should be noted that the distribution of sites in the AHIMS database is a reflection of where site surveys have been conducted, where exposure and visibility conditions have enabled the detection of sites, and where sites have survived modern land disturbance. The distribution of sites from AHIMS may not be a true reflection of the existence Aboriginal sites in an area.

<table>
<thead>
<tr>
<th>Site Type</th>
<th>Frequency</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Axe Grinding Groove</td>
<td>1</td>
<td>1%</td>
</tr>
<tr>
<td>Burial/s</td>
<td>1</td>
<td>1%</td>
</tr>
<tr>
<td>Isolated Find</td>
<td>14</td>
<td>12%</td>
</tr>
<tr>
<td>Open Camp Site</td>
<td>17</td>
<td>15%</td>
</tr>
<tr>
<td>Potential Archaeological Deposit</td>
<td>4</td>
<td>3%</td>
</tr>
<tr>
<td>Scarred Tree</td>
<td>5</td>
<td>4%</td>
</tr>
<tr>
<td>Shelter with Art</td>
<td>38</td>
<td>33%</td>
</tr>
<tr>
<td>Shelter with Art, Shelter with Deposit</td>
<td>22</td>
<td>19%</td>
</tr>
<tr>
<td>Shelter with Art, Shelter with Midden</td>
<td>2</td>
<td>2%</td>
</tr>
<tr>
<td>Shelter with Deposit</td>
<td>11</td>
<td>10%</td>
</tr>
<tr>
<td><strong>Grand Total</strong></td>
<td><strong>115</strong></td>
<td><strong>100%</strong></td>
</tr>
</tbody>
</table>

Table 5: Site Types from AHIMS Search (ID 70213)

The AHIMS search indicates that 38 of the 115 sites within the search area are shelters with art, followed by shelters with art and deposits (22).

The results are indicative of the number of archaeological assessments that have occurred within the local region, as well as the nature of the landscape, containing numerous areas of outcropping sandstone, producing rock shelters. The prevalence of rock shelters will be discussed further in Section 6.6.
6.3 Regional Archaeological Context

Aboriginal people occupied the Sydney Basin area from the Late Pleistocene. Several Pleistocene occupation sites have been identified in the Blue Mountains and within the NSW coastal regions (Turbet 2001). Nanson excavated a site at Cranebrook Terrace near Penrith with radiocarbon dates of 41,700 +/- 2000-3000 (Attenbrow 2010, after Nanson et al 1987); and Stockton and Holland (1974) excavated sites in the Blue Mountains with radiocarbon dates of 22,000 years BP. However, the majority of open sites and rock shelters in the Sydney region are dated within the last 5,000 years (Navin 2002:9), possibly due in part to older sites being subject to erosion and other destructive processes for a longer period of time (Hiscock 2008). It is also possible that occupation of eastern NSW, including the Illawarra and Southern Highlands, increased substantially within the last few thousand years. Various sites such as artefact scatters, scarred trees, grinding grooves, and shelters with deposits and occasionally with art have been recorded in the wider area (Silcox 1988: 5). Rich (1993) documented the change in lithic assemblages over time on the Mount Flora excavation of RC-PAD site approximately 30km to the south. According to the results artefact density increased markedly during the last 4000 years with quartz being the highest percentage of the recovered artefacts.

6.4 Local Archaeology

The Wilton area and surrounding region has been subject to a high number of archaeological studies. The Table below (Table 6) contains the details of Aboriginal heritage assessments that have been undertaken in the general vicinity of the Subject Area. A brief outline of each report is also provided below.

<table>
<thead>
<tr>
<th>Reference</th>
<th>Locality</th>
<th>Comments</th>
<th>Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sim, I. 1964</td>
<td>Wilton</td>
<td>Rock art recording</td>
<td>Rock shelter with art</td>
</tr>
<tr>
<td>Haglund, L., 1982a</td>
<td>Wilton</td>
<td>Archaeological survey</td>
<td>Four shelters sites, 2 with art and artefacts, 1 with potential art, 1 with artefacts</td>
</tr>
<tr>
<td>Haglund, L., 1982b</td>
<td>Wilton</td>
<td>Archaeological survey</td>
<td>No sites identified</td>
</tr>
<tr>
<td>Sefton, C. 1989</td>
<td>Cordeaux Dam</td>
<td>Archaeological survey</td>
<td>37 art sites, 14 stone artefact sites, 2 rock engraving sites, 1 engraved groove channel site and 17 grinding groove sites</td>
</tr>
<tr>
<td>Rich, E. 1990</td>
<td>Wilton Bypass</td>
<td>Archaeological survey</td>
<td>One shelter with occupational deposit and 1 isolated stone artefact</td>
</tr>
<tr>
<td>AMBS 1996</td>
<td>Douglas Park</td>
<td>Archaeological survey</td>
<td>No sites identified</td>
</tr>
<tr>
<td>Navin, K and Officer, K. 1995</td>
<td>Tower – Appin</td>
<td>Archaeological survey</td>
<td>Open artefact scatter, 1 isolated find</td>
</tr>
<tr>
<td>Sefton, C., 1996</td>
<td>Appin</td>
<td>Archaeological investigation</td>
<td>Three sandstone overhangs with archaeological deposit, 2 sandstone overhangs with art, sandstone overhang with art and deposit</td>
</tr>
<tr>
<td>Sefton, C., 1998</td>
<td>Tower Colliery</td>
<td>Archaeological investigation</td>
<td>One sandstone overhang with archaeological deposit and three sandstone overhangs with art, seven PADs</td>
</tr>
<tr>
<td>Sefton, C., 1999</td>
<td>Tower Colliery</td>
<td>Archaeological investigation</td>
<td>One sandstone overhang with art, four sandstone overhangs with archaeological deposit, a scarred tree and three PADs</td>
</tr>
<tr>
<td>Conacher Travers,</td>
<td>Condell Park</td>
<td>Archaeological assessment</td>
<td>No sites identified</td>
</tr>
<tr>
<td>Reference</td>
<td>Locality</td>
<td>Comments</td>
<td>Results</td>
</tr>
<tr>
<td>-----------</td>
<td>----------</td>
<td>----------</td>
<td>---------</td>
</tr>
<tr>
<td>Navin Officer Heritage Consultants, 2003a</td>
<td>Wilton</td>
<td>Archaeological assessment</td>
<td>Seven shelters with Art and PAD, 1 shelter with stone artefacts, grinding grooves and PAD, 2 shelters with art, stone artefacts and PAD, 6 open artefact scatters and 1 shelter with art</td>
</tr>
<tr>
<td>Navin Officer Heritage Consultants, 2003b</td>
<td>Wilton</td>
<td>Archaeological assessment</td>
<td>One stone artefact</td>
</tr>
<tr>
<td>Austral Archaeology 2004</td>
<td>Maldon</td>
<td>Aboriginal heritage assessment</td>
<td>Two open artefact scatters, 5 isolated finds, a scar tree and area of archaeological sensitivity</td>
</tr>
<tr>
<td>KAS 2006</td>
<td>Wilton</td>
<td>Excavation report</td>
<td>174 artefacts</td>
</tr>
<tr>
<td>Heritage Concepts, 2007</td>
<td>Wilton</td>
<td>Aboriginal and Historical archaeological and cultural heritage assessment</td>
<td>One isolated find, one scar tree, one historical site comprising of a sandstone weir and post hole cuttings</td>
</tr>
<tr>
<td>Navin Officer Heritage Consultants 2008a</td>
<td>Wilton</td>
<td>Cultural heritage assessment</td>
<td>One rock shelter, one historic heritage artefact scatter, 7 sandstone piers, 3 concrete structures</td>
</tr>
<tr>
<td>Navin Officer Heritage Consultants 2008b</td>
<td>Wilton</td>
<td>Aboriginal and historical archaeological assessment</td>
<td>No sites identified</td>
</tr>
<tr>
<td>Biosis Research, 2009a</td>
<td>Bingara Gorge</td>
<td>Aboriginal archaeological assessment</td>
<td>Isolated flake</td>
</tr>
<tr>
<td>Biosis Research, 2009b</td>
<td>Bulli</td>
<td>Aboriginal cultural heritage assessment</td>
<td>Eleven sandstone platforms with grinding grooves/engravings, 19 sandstone shelters with art/grinding grooves/engraving/deposit, 2 sandstone shelters with deposit only, 12 artefact sites</td>
</tr>
<tr>
<td>KAS 2010</td>
<td>Bingara Gorge, Wilton</td>
<td>Recording of Aboriginal sites</td>
<td>132 artefacts</td>
</tr>
<tr>
<td>Niche Environment and Heritage, 2010</td>
<td>Appin Colliery</td>
<td>Aboriginal cultural heritage assessment</td>
<td>One scared tree</td>
</tr>
<tr>
<td>Aecom, 2010</td>
<td>Maldon</td>
<td>Aboriginal and historic heritage assessment</td>
<td>No sites located</td>
</tr>
<tr>
<td>Navin Officer 2012</td>
<td>Wilton</td>
<td>Aboriginal cultural heritage assessment</td>
<td>Edge ground axe</td>
</tr>
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<td>KAS 2013</td>
<td>Wilton</td>
<td>Aboriginal Heritage Assessment</td>
<td>5 Rock shelter sites associated with Allens Creek</td>
</tr>
</tbody>
</table>

**Table 6:** Cultural heritage investigations conducted in the Wilton region
Shaded entries represent reports that cover areas within the Subject Area (excluding Bingara Gorge)

**Sim (1964)**

Sim (1964) documented a rock shelter in Clements Creek near Wilton. The rock shelter is described as having a southern section and a northern section. The southern section contains the bulk of the drawings with a smaller number on the northern section of the shelter. The art consists predominantly of black charcoal drawings of anthropomorphs and macropods. The northern section of the rock shelter contains less art than the southern section, but it is still characterised by black charcoal drawings of anthropomorphs and macropods.

**Haglund (1982a)**
Haglund (1982a) undertook an archaeological survey on land at the headwaters of Allens Creek on behalf of Bellambi Coal Co Ltd, for a proposed emplacement for coal washery reject material and rail loop (Haglund, 1982:1). Haglund located four sites, three within Allens Creek gorge, and one in a tributary. Of these, two contain a small amount of art. One contains potential art that Haglund considered had been modified by later visitors. Artefacts were located within the two shelters that contain art and in a third shelter that had no art. Additionally, she noted two potential sites and several which may have archaeological potential (Haglund, 1982a:7)

Haglund (1982b)

Haglund (1982b) undertook a subsequent archaeological survey at a site between the Cordeaux River and Allens Creek, south of Wilton. This was in response to the previously mentioned survey, which sought an alternative site to avoid impacting Aboriginal cultural heritage. No sites were located during this subsequent survey (Haglund, 1982b:3).

Sefton (1989)

Sefton (1989) undertook an archaeological survey of the Cordeaux River and Woronora River as part of a grant received from the Australian Institute of Aboriginal Studies to financially support the Illawarra Prehistory Group in their survey of Heathcote National Park and Cordeaux Catchment Area (Sefton, 1989:6). The Cordeaux Catchment Area surveyed as part of this report includes the area south of Mt Keira Road, west from Kentish Creek and above the junction with the Nepean River (Sefton, 1989:10). The survey recorded a combination of new sites and sites that had previously been recorded. This included 37 art sites, 14 stone artefact sites, 2 rock engraving sites, 1 engraved groove channel site and 17 grinding groove sites (Sefton, 1989:25).

Rich (1990)

Rich (1990), for Brayshaw McDonald Pty Ltd undertook an archaeological survey for Aboriginal sites along Main Road 95 Mt Keira Road – Wilton Bypass on behalf of the Road and Traffic Authority. One shelter with occupational deposit and an isolated stone artefact were located during the survey (Rich, 1990:10). The shelter deposit consisted of 41 stone artefacts, predominantly flaked pieces made on quartz (Rich, 1990:16).

AMBS (1996)

AMBS (1996) undertook an archaeological survey of longwall mining applications 14 and 15, Tower Colliery, Douglas Park. The survey was undertaken on behalf of BHP Collieries Division. The survey was in response to BHP requesting to undertake longwall mining. The assessment was to determine the impact to cultural heritage as a result of subsidence. The study area comprised the plateau between the Nepean and Cataract Rivers, including their junction, associated gorges and three minor drainage lines that begin on the plateau and drain into these two rivers. Despite there being a predictively high chance of sites being located within the Subject Area, none were located. This was attributed to a lack of suitable surfaces to produce art on as well as significant disturbance from vegetation clearance on the plateau and the ephemeral nature of the watercourses (AMBS, 1996:14). One potential scar tree was recorded, however could not be confirmed as being cultural (AMBS, 1996:13).

Navin Officer (1995)

Navin Officer (1995) undertook an archaeological survey for the proposed Tower-Appin coal gas line. The pipeline was to run from Tower Colliery to Appin colliery, a distance of approximately 7.6
km, in a 30m wide corridor. One artefact scatter comprising of in excess of 30 stone artefacts was located approximately 15m north of Rocky Ponds Creek. A range of artefacts were located including flakes, blades, microliths, cores, microblade cores and a scraper. They were predominantly made from silcrete (70%), followed by quartz (20%) and chert (10%). It was considered there was a good potential for in situ subsurface material, due to the relatively undisturbed nature of the site. One isolated find (pink silcrete flake) was located on an exposure. This same exposure also had a piece of grey chert, however there were no diagnostic features to determine it to be artefactual (Navin Officer, 1995:11).

Sefton (1996)

Sefton (1996) undertook an archaeological investigation of Area 4, Appin Colliery, on behalf of BHP Australia Coal. The study area was situated on the Cataract River at Brooks Point, near the junction with the Nepean River. This survey located one shelter with archaeological deposit, two shelters with archaeological deposit and grinding grooves and three shelters with art and deposit (Sefton, 1996:22).

Sefton (1998)

Sefton (1998) undertook an archaeological investigation of longwalls 16 and 17 and future mining extensions for Tower Colliery on behalf of BHP Australia Coal. The survey area encompassed the east and west side of the Nepean River. One site from the previously described report was relocated and one sandstone overhang with archaeological deposit and three sandstone overhangs with art were located (Sefton, 1998:23). Seven PAD sites were also located (Sefton, 1998:27).

Sefton (1999)

Sefton (1999) undertook an archaeological investigation of longwalls 18 to 24 for Tower Colliery on behalf of BHP Coal – Illawarra Collieries. The study area is located on the Nepean River, one kilometre north of the east junction with the Cataract River and extends to within 250 meters of Ousedale Creek. Several additional sites were located during this survey including a sandstone overhang with art, four sandstone overhangs with archaeological deposit, a scarred tree and three PADs.

Navin Officer (2003a)

Navin Officer (2003a) undertook an archaeological assessment of the proposed ‘Wilton Park’ residential development, now the Bingara Gorge development. The study area is approximately 400 ha and is bounded to the south by an existing residential area, bushland and the rural residential land of Wilton, to the west by the Hume Highway and to the north and east by Allens Creek (Navin Officer 2003:3).

A total of fourteen previously unrecorded sites were located during the survey. Additionally three new PADS were recorded in shelters where no artefacts were located, however the nature of the shelter indicated there may be potentially be archaeological deposit.

Navin Officer (2003b)

Navin Officer (2003b) undertook an archaeological assessment for a proposed residential development at Hornby Street DP836296 (Lot 6). The assessment was undertaken on behalf of Bradcorp Holdings Pty Ltd (Navin Officer 2003b:2).
One artefact found during the survey – WiFi – a yellow mudstone/tuff flake. The artefact was located on bank of a dam, close to the northern boundary fence. Ground surface visibility in the vicinity of the artefact was rated as very high (approximately 85%), as a result of low dam levels and numerous areas of exposure. As such, it was considered there is a low to moderate potential for additional artefacts and low potential for in situ sub-surface deposits (Navin Officer 2003b:9). Additionally, it was considered that given the artefact was a common type, made of commonly used stone, and located in a disturbed context, it had minimal archaeological significance (Navin Officer 2003:12). Finally, from a predictability perspective, there is a general lack of permanent water in the study area, the location is in the upper catchment, and there is no sandstone topography (Navin Officer 2003b:16).

**Austral Archaeology (2004)**

Austral Archaeology (2004) undertook an Aboriginal heritage assessment for the proposed Allied Mills Flour Mills at Picton. The study area is bounded by Picton Road to the north, and the Main Southern Railway Line to its south and west. During the survey, particular attention was paid to the tributaries of Carriage Creek. Five isolated finds, two artefact scatters and a scarred tree were located during the survey (Austral Archaeology, 2004:24).

**Kayandel Archaeological Services (KAS) (2006)**

Kayandel Archaeological Services (KAS) (2006) undertook an Aboriginal excavation at Wilton Park as part of the Wilton Parklands Estate Development, on behalf of Delfin Lend Lease Limited. Excavation was undertaken through a series of transects with individual 1 meter by 1 meter test pits spaced at 20 meter intervals, feature pits and open area excavation. The majority of excavation was undertaken mechanically, however some hand excavation was done for deposits containing a greater density of artefacts (KAS, 2006:22-24). The excavation recovered 174 stone artefacts, just over half (58%) being made from silcrete. Nine tools were recovered, 7 of these being backed blades or backed blade fragments, 1 hammer stone and 1 fragment with use wear. Seven cores and 1 flake core were also found with the remainder of artefacts being debitage, 81 of these being complete flakes (KAS, 2006:45). It was inferred from the artefact types present that the site had a broad date range of late Holocene i.e. the last 5000 years. Additionally, the low number of artefacts retaining cortex and complete flakes suggest that late stage manufacturing was undertaken at the site (KAS, 2006:63).

**Navin Officer (2008a)**

Navin Officer (2008a) undertook a cultural heritage assessment for the Wilton substation 66kV feeder works on behalf of Integral Energy. These feeder works were undertaken in response to the new Bingara Gorge estate. The proposed feeder line preferred option was a 6km long, 60m wide corridor running from the Wilton Zone Substation on Condell Park Road to Douglas Park Road. This particular study covers a 3 km distance. The line was to be above ground on existing poles within the Nepean Tunnel easement to Peel Street, then running underground to Almond Street. The trench would be 1 meter wide and 2 meters deep (Navin Officer, 2008a:1). The survey located one rock shelter which was considered to have low archaeological potential. As such, it was not recorded as a PAD (Navin Officer, 2008a:18). Structures from the Nepean Tunnel were also located during the survey, including 4 single sandstone piers, 2 pairs of sandstone piers and a concrete structure over a shaft (Navin Officer, 200a:19). A historic artefact scatter was located, consisting of broken glass, ceramic and metal buttons. It was interpreted as potentially being a nineteenth century work camp from the construction of the Nepean Tunnel, although a 1950s/1960s “Frosty’s”
soft drink bottle was also located (Navin Officer, 2008a:20). It was considered to be of little heritage significance and did not meet either local or state heritage criteria (Navin Officer 2008a:26).

**Navin Officer (2008b)**

Navin Officer (2008b) undertook an Aboriginal and historical archaeological assessment for the Wilton substation 66kV feeder works on behalf of Integral Energy. The line is approximately 7 km long and 20 meters wide, running from Maldon Zone Substation on the southern side of Picton Road, to the proposed Wilton Zone Substation. It bisects the current study area. No Aboriginal or historical cultural heritage sites were located during the survey (Navin Officer, 2008b:22).

**Biosis Research (2009a)**

Biosis Research (2009a) undertook an Aboriginal archaeological assessment for the Bingara Gorge new public school for the NSW Department of Commerce on behalf of NSW Department of Education and Training. One quartzite flake was located during the survey. It was considered that there was low archaeological potential within the study area as a result of previous disturbance (Biosis Research 2009a:27).

**Biosis Research (2009b)**

Biosis Research (2009b) undertook an Aboriginal cultural heritage assessment on behalf of BHP Billiton Illawarra Coal. The study area is in the vicinity of Appin, Wilton, Douglas Park, Picton and Menangle. It encompasses the northern portion of the current Subject Area, particularly the former Condell Park area. The study was undertaken to support an approval application under Part 3A of the EP&A Act with a view to extending the life of the mine. There were 588 known sites already within the study area, with an additional 44 located as part of the project described here. Of the new sites located, close to half (n=19, 43%) were described as sandstone shelter with art/grinding groove/engraving/deposit (Biosis Research, 2009b:52).

**KAS (2010)**

KAS (2010) undertook a recording of Aboriginal sites WP10-12 at Bingara Gorge on behalf of Delfin Lend Lease Wilton Pty Ltd. A detailed surface recording was undertaken of three registered sites prior to the sites being covered to allow for construction of a golf course. The sites were covered as part of the management strategy to conserve the Aboriginal cultural heritage (KAS 2010:1). Three sites were initially recorded (WP10 – 2 artefacts, WP11 – 10 artefacts and WP12 – 17 artefacts). On further detailed recording by KAS additional artefacts were located (WP10 – 27, WP11 – 32, WP12 – 73).

**Niche Environment and Heritage (2010)**

Niche Environment and Heritage (2010) undertook an Aboriginal cultural heritage assessment for Appin Colliery, Ventilation Shaft No.6 on behalf of BHP Billiton Illawarra Coal. The site is near Douglas Park. While there were four previously recorded sites within this project area including scar trees and artefacts scatter, an additional scar tree was identified during this survey. It was considered to be of some antiquity, as the regrowth over the scar was approximately 20 cm thick (Niche Environment and Heritage, 2010:34).

**Aecom (2010)**
Aecom (2010) undertook an Aboriginal and historical heritage assessment for the Maldon rail terminal on behalf of Boral Resources (NSW) Pty Ltd. The study area was near Picton, to the west of the current Subject Area. No sites of Aboriginal or historical cultural heritage were located during the study. This is not unexpected, as the study area had undergone significant disturbance in the past (Aecom, 2010:24).

**Navin Officer (2012)**

Navin Officer (2012) undertook an Aboriginal cultural heritage assessment in response to an unanticipated discovery during construction of Wilton substation. Works were undertaken on behalf of Endeavour Energy. The Wilton substation falls within the current Subject Area. An edge ground axe was located during works and an assessment was undertaken to support an AHIP application, in order for works to proceed (Navin Officer, 2012:3).

### 6.5 Previous Assessment within the Subject Area

As identified in Section 5.5 the Subject Area has been affected by a number of previously development activities. This has resulted in a large portion of the Subject Area having been subject to previous archaeological and heritage assessments. Four (4) reports have identified that relate specifically to development activities within the current Subject Area. These are:

**Rosen (1995)**

Rosen (1995) undertook a survey for the Nepean Tunnel amplification project on behalf of Sydney Water. The study area was in the vicinity of Pheasant’s Nest Weir. This assessment located one open artefact scatter in a disturbed area in the vicinity of Pheasant’s Nest Weir access road (Rosen, 1995:9). The scatter consisted of three small stone artefacts, each made from chert (Rosen, 1995:63).

**Conacher Travers (2000)**

Conacher Travers (2000), undertook a Preliminary Archaeological Assessment for a proposed subdivision of Lots 2, 4 and 11 on DP 702024, Condell Park, Wilton, into 40 ha sized rural residential blocks.

The NPWS Aboriginal Site Register was searched using the coordinates of minimum easting 283000, maximum easting 290 000 and the minimum northing of 6208 000 and maximum northing of 6215 000 on the Picton 9029 -4-S 1:25 000 Map Sheet. This covered 49km² of land. Seventeen sites were recorded in the search area. They consisted of 14 Shelters with Art, 2 Shelters with Art and deposit and one open camp site (Conacher Travers 2000:3).

All sites are located within close proximity to a major watercourse, either the Nepean River or Allens Creek. Except for the open campsite, all sites are located in areas where Hawkesbury Sandstone outcrops or underlies the Wianamatta Shale (Conacher Travers 2000:3).

The preliminary site survey was undertaken to determine the likelihood of sites being in the development area. Ground Surface Visibility (GSV) was less than 5% as a result of grass cover and bushland. This resulted in the survey focusing on access tracks and other areas of exposure (Conacher Travers 2000:5-6).

Areas surveyed included the location of a proposed roadway and surface inspection of cleared grassland that was proposed to be used for residences (Conacher Travers 2000:6).
An additional survey was conducted on 11 January, 2000 along the eastern boundary of the survey area within Allens Creek. The intent was to relocate previously recorded art sites and confirm if they were within the property boundaries. The survey began at the south eastern corner of the property and followed Allens Creek for approximately 1km (Conacher Travers 2000:6).

The survey relocated the registered sites of 52-2-1313, 52-2-1314, 52-2-1315 and 52-2-1316.

**Heritage Concepts (2007)**

Heritage Concepts (2007) undertook an Aboriginal and Historical Archaeological and Cultural Heritage Assessment in October, 2007. The purpose was to identify Aboriginal and non-Aboriginal archaeological and cultural heritage values and areas of potential archaeological constraints.

The study area covered 365 hectares and was divided into three separate areas. Only two are of specific relevance to the current Subject Area. The first is referred to by Heritage Concepts as Area A and is situated south of Picton Road in the vicinity of Janderra Lane, the second is referred to by Heritage Concepts as Area C and is situated west of Allens Creek to the north and south of Picton Road (See Figure 14 and look specifically for the year 2007).

**Area A**

One Aboriginal scar tree was found in open pasture in PW025 (Site Name: Wilton 01). This site was assessed as having moderate scientific value for its demonstration of traditional Aboriginal procurement strategies, as well as the relatively rare nature of scar trees as a result of vegetation clearance (Heritage Concepts 2007:68).

There were several areas of exposures, however no further cultural heritage was observed. It was concluded that as a result of vegetation clearance, and ongoing agricultural use, Area A held little archaeological potential (Heritage Concepts 2007:43).

**Area C**

One isolated find was found on a dirt track in W001 (Site Name: Wilton 02) (Heritage Concepts 2007:51). The isolated find consisted of an orange chert broken flake (52). It was found along a dirt track, and was considered to be of low archaeological significance as it was likely in a secondary context in an area of active erosion (Heritage Concepts 2007:52).

One historical archaeological site was located. A sandstone weir and post hole cuttings were found along the southern end of Allens Creek in W002 (Site Name: Wilton 03) (Heritage Concepts 2007:51). This site was considered to be of local significance (Heritage Concepts 2007:61).

52-2-1325 (also registered as 52-20985), 52-2-1067 and 52-2-1063 were relocated during this survey. These three rock shelters were assessed as having low scientific value. They are of a common type, found both locally and regionally. They were, however, attributed moderate to high aesthetic value (Heritage Concepts 2007:68).

Two registered sites (52-2-1326, 52-2-1340) were not relocated. These two rock shelters were assessed as having moderate to high scientific value as a result of their research potential which may provide information about occupation and utilisation of the landscape by Aboriginal people. Additionally, they are close to the riparian zone which would have supported local Aboriginal people (Heritage Concepts 2007:68).
Proposed Rezoning “Wilton Junction”, Wilton, Wollondilly Shire LGA, NSW
Aboriginal Cultural Heritage Assessment and Historic Heritage Assessment

KAS 2013

Kayandel undertook a survey of a property of the southern end of Peel Street in Wilton in June 2013. This assessment identified 5 previously un-recorded rock shelters.

6.5.1 Overview
As indicated in Section 6.2 the AHIMS search identified 115 previously recorded site surrounding the Subject Area. Of these of these 47 (excluding the 5 sites identified in KAS (in prep)) are within the boundary of the Subject Area. This group of 52 (47 + 5) sites, 26 occur within the boundary of the Bingara Gorge area and the remaining 26 occur within the balance of the Subject Area. See Table 7 for details of this separation.

6.6 Previous Predictive Models

In terms of a broader regional context the Subject Area sits at the western margins of the Waronora Plateaux, as discussed in Section 6.4 there have been a significant number of previous archaeological studies undertaken in the region surrounding the Subject Area. Review of this work also shows that it is almost exclusively focused upon archaeological survey, only one archaeological excavation has been undertaken within 15km of the Subject Area. Acknowledging this limitation and recognising that the surrounding regions (Cumberland Plain to the north and Southern Highlands to the south) have had significant levels archaeological excavations to develop robust models of Aboriginal occupation it is appropriate to review the models for the surrounding regions and assess their relevance in determining an accurate model for Aboriginal occupation and predictions for site types and locations within the Subject Area.

The various models of past Aboriginal occupation which have been developed for the wider region and similar landscape contexts, i.e. Koettig & Lance (1986), may be extended to tableland environments, McDonald (2004) is pertinent to open plain contexts and Attenbrow (2004) within the region of the central coast. These models indicate that sources of permanent or seasonally reliable water were not just a focus of past Aboriginal occupation but were a necessity for occupation to occur. Therefore, it is expected that the greatest evidence of occupation would be found in association with reliable water sources such as creeks, and rivers where they occur. Further, the presence of suitable landforms was also extremely important for occupation to occur. Landform often determines the type of archaeological evidence that will be found or, in many instances, whether any evidence at all can be expected to occur. Below information relating to the occupation models for the Cumberland Plain and for the Southern Highlands is presented.
<table>
<thead>
<tr>
<th>AHIMS #</th>
<th>Site Name</th>
<th>Features</th>
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<tbody>
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<td>48-2-0005</td>
<td>Wilton Park PAD 1</td>
<td>Habitation Structure : 1</td>
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<td>Wilton Park BC 6</td>
<td>Habitation Structure : 1</td>
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<td>52-2-1063</td>
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<td>Potential Archaeological Deposit (PAD) : -, Habitation Structure : -</td>
</tr>
<tr>
<td>52-2-3038</td>
<td>Area of Assessed Archaeological</td>
<td>Potential Archaeological Deposit (PAD) : -</td>
</tr>
<tr>
<td>52-2-3039</td>
<td>Sensitivity 1</td>
<td>Potential Archaeological Deposit (PAD) : -</td>
</tr>
<tr>
<td>52-2-3040</td>
<td>Area of Archaeological Sensitivity 2</td>
<td>Potential Archaeological Deposit (PAD) : -</td>
</tr>
<tr>
<td>52-2-3070</td>
<td>BC14, Bradcorp</td>
<td>Art [Pigment or Engraved] : 4</td>
</tr>
<tr>
<td>52-2-3071</td>
<td>BC13, Bradcorp</td>
<td>Art [Pigment or Engraved] : 6</td>
</tr>
<tr>
<td>52-2-3072</td>
<td>BC1, Bradcorp</td>
<td>Art [Pigment or Engraved] : 4</td>
</tr>
<tr>
<td>52-2-3302</td>
<td>Wilton Park WiFi1</td>
<td>Artefact : -</td>
</tr>
<tr>
<td>52-2-3586</td>
<td>Wilton 2 (W2)</td>
<td>Potential Archaeological Deposit (PAD) : -</td>
</tr>
<tr>
<td>52-2-3587</td>
<td>Wilton 3 (W3)</td>
<td>Artefact : 5</td>
</tr>
<tr>
<td>52-2-3588</td>
<td>Wilton 4 (W4)</td>
<td>Potential Archaeological Deposit (PAD) : -</td>
</tr>
<tr>
<td>52-2-3590</td>
<td>Wilton 01</td>
<td>Modified Tree [Carved or Scarred] : 1</td>
</tr>
<tr>
<td>52-2-3591</td>
<td>Wilton 02</td>
<td>Artefact : 1</td>
</tr>
<tr>
<td>52-2-3679</td>
<td>BGIA1</td>
<td>Artefact : 1</td>
</tr>
<tr>
<td>52-2-3830</td>
<td>Bradcorp 1</td>
<td>Art [Pigment or Engraved] : -, Potential Archaeological Deposit (PAD) :</td>
</tr>
<tr>
<td>52-2-3880</td>
<td>Wilton Zone Substation</td>
<td>Artefact : 1</td>
</tr>
<tr>
<td>52-2-4065</td>
<td>PS-RS-01</td>
<td>Rock Shelter with PAD</td>
</tr>
<tr>
<td>52-2-4066</td>
<td>PS-RS-02</td>
<td>Rock Shelter with PAD and Artefact : 1</td>
</tr>
<tr>
<td>52-2-4067</td>
<td>PS-RS-03</td>
<td>Rock Shelter with Artefacts</td>
</tr>
<tr>
<td>52-2-4063</td>
<td>PS-RS-04</td>
<td>Rock Shelter with PAD</td>
</tr>
<tr>
<td>52-2-4064</td>
<td>PS-RS-05</td>
<td>Rock Shelter with Art and PAD</td>
</tr>
</tbody>
</table>
Table 7: Aboriginal Sites known to exist in the Subject Area prior to this study

Shaded entries relate to sites that are within the Bingara Gorge Development Area.

**Cumberland Plain Aboriginal Occupation Model**

McDonald (2004) found that the Sydney Basin had a complex archaeological record despite modern disturbances, and occupation appears to be older than the recent Holocene. Sites located closer to permanent water sources are generally more complex than sites on ephemeral or temporary water courses, and most sites have subsurface archaeological deposits, in some cases a high density of artefacts, even where no surface manifestations exist. It was also found that fields previously ploughed to a depth of 30 cm may still contain intact deposits such as knapping floors. Deep and shallow alluvial sites were found to possess stratigraphic potential.

**Southern Highlands Aboriginal Occupation Model**

Several predictive models have been developed for the Southern Highlands of NSW or more specifically the Mittagong-Braemar Area (Koettig 1981; Rich 1988a; Navin Officer 2002).

Koettig (1981) developed a site distribution model for the area on the basis of the linear survey along the upgraded route of the Hume Highway west of Mittagong. She suggested that Aboriginal sites would be most likely to occur:

- Along the banks of water courses;
- On small elevated areas associated with confluences of water courses;
- On level areas of low spurs or ridges, or on the level areas attached to them;
- Flat areas associated with water courses.

On one occasion an artefact scatter was located on the top of the sandstone ridge. Koettig stated that:

…”almost anywhere that a level area is located near a water course, one can expect to find evidence of Aboriginal occupation. (Koettig 1981:45)

Rich (1988a) carried out an extensive survey along the Wingecarribee River from Wingecarribee Swamp downstream to Black Springs Creek, south-west of Mittagong. In her predictive model she stated that open sites are occur alongside rivers but not exactly on the river bank. She cited Flood (1980) who found that sites were located near watercourses, and mostly within 100m of streams, lakes and springs; but sites were not found on stream banks. Contributing factors influencing site location could potentially have been:

- Avoidance of damp ground;
- Avoidance of flash floods;
- Avoidance of lower night temperatures caused by cold air drainage
- Defence (good views of approaches);
- Shelter (on low spurs or rises facing north to east);
- Presence of resources such as firewood, bark for hut construction, etc.
As a result of the Wingecarribee project Rich (1988a:74-76) revisited information on site location. She found that:

- Most of the sites were within 100m of the River, but not right on the river banks;
- Most of the sites occurred above flood level;
- Sites tended to face north-west to north-east, but some faced in other directions;
- There was a preference for sandstone bedrock rather than shale, sandstone geology being better timbered, and better drained.

She suggested that landscapes associated with minor streams may have had some advantage over landscapes associated with major rivers. The ground associated with minor streams may not have been as damp as along major rivers, flash floods would not have been as severe, cold air drainage may not have been as pronounced, streams could be crossed more easily in winter when water was very cold.

Navin Officer (2002:11-12) suggested that
- Open artefact scatters would be most likely to occur on level, well-drained ground adjacent to fresh water sources. Artefacts could occur in an open landscape as a sparse background scatter, with higher densities on elevated land;
- Isolated finds could be a component of a background scatter;
- Burials could occur in landforms with deep soft sediments such as aeolian sand and alluvium;
- Potential archaeological deposits (PADs) are deposits that are assessed as having a high likelihood of containing buried artefacts, usually in aggrading landforms or contexts;
- Scarred or carved trees may occur in areas with remnant vegetation with contains trees of sufficient age.

### 6.7 Aboriginal Heritage Predictions for the Subject Area

One of the earliest surveys undertaken in the general vicinity of the Subject Area was by Liela Haglund (1982). During this study Haglund made the following statement in relation to predicting the location of Aboriginal sites.

The available archaeological information suggests that shelter sites were likely to be present along the sandstone gorges of Allens Creek and its tributary creek. However, these were expected to be in the form of shelters with potential archaeological deposit, since shelter sites (particularly those with art) had already been searched for (Haglund 1982).

Axe grinding grooves might have occurred along creeks. Engraving sites had not been previously recorded in the Wilton Area and are not expected.

Open camp sites were expected to occur along the ridge tops and plateau above the sandstone gorges. Although open sites had not been previously recorded in the Wilton area they are quite common on the Wianamatta shales on the Cumberland Plain to the north, and around Mittagong to the south.
While Hagtund comments that no rock shelters containing are likely to be identified as they have most likely already been recorded, there is at least one rock shelter, PS-RS-05 (AHIMS No 52-2-4064) (KAS 2013), recently identified as containing art.

The current project represents the first broad scale Aboriginal archaeological assessment within the Woronora Plateau region that has sought to identify a broad range of Aboriginal heritage site types. Previous broad scale Aboriginal archaeological assessments have specifically focused on Aboriginal sites that might be affected by mining subsidence i.e., rock shelters; as a result, there is no readily available dataset for KAS to undertake an appropriate strategic assessment of Aboriginal Cultural significance of the Subject Area.

The following predictions for Aboriginal sites to be present within the Subject Area are based on the landforms present:

- Both surface and subsurface artefacts may occur across the entire Subject Area.
- The size, density and significance of sites will vary, although it is anticipated that any sites will be considerably less complex and less dense than those within 250m of major water sources such as Allens Creek, or along ridges and elevated positions overlooking water courses.
- No lithic raw material outcrops have been identified in the Subject Area. As such, any archaeological material present within the Subject Area may provide additional understanding to raw material selection in the surrounding region (Woronora Plateaux).
- Most sites in the surrounding region date to the last 3,000 years although evidence exists of Aboriginal occupation in this region dating to perhaps the last 20,000 years.
- As past land use disturbance increases in intensity, the ability for Aboriginal objects to provide spatial and chronological information about past Aboriginal land use will decrease.
- Burials would not be expected due to the limited depth of soil deposits.
- Rock Shelters are likely to be the most prevalent type of site encountered within the Subject Area. Analysis of the data from AHIMS (See Table 5) indicates that rock shelters constitute 64% of the population of known Aboriginal sites in the area.

There is potential for the following Indigenous heritage constraints to exist within the Subject Area:

- Areas of Potential Archaeological Deposits (PADs) in locations with minimal previous land disturbance.
Figure 14: Previous Studies
Proposed Rezoning “Wilton Junction”, Wilton, Wollondilly Shire LGA, NSW

Aboriginal Cultural Heritage Assessment and Historic Heritage Assessment

Figure 15: Distribution of AHIMS Sites Regional Scale
Figure 16: Aboriginal Sites Known to Exist in Subject Area prior to this Study
7 HISTORIC HERITAGE CONTEXT

7.1 Register Searches

As it was not known what historic heritage items were located surrounding and within the Subject Area, KAS consulted with the following to establish a baseline for known Non-Indigenous heritage items surrounding and within the Subject Area. The results of the search are detailed in Table 8 and Figure 19.

- National Heritage List (NHL);
- The Commonwealth Heritage List (CHL);
- Register of the National Estate (RNE) maintained by the Australian Heritage Council (AHC);
- State Heritage Register (SHR) maintained by the NSW Heritage Branch;
- S.170 Register maintained by Sydney Water, Roads and Maritime Services and State Rail;
- Schedule 5 of the Wollondilly Local Environmental Plan 2011; and,
- State Heritage Inventory, maintained by the NSW Heritage Branch and the Register of the National Trust of Australia (NSW).

<table>
<thead>
<tr>
<th>Register</th>
<th>Properties and/or Items</th>
</tr>
</thead>
</table>
| Register of the National Estate | St Mary’s Towers  
Indigenous Place - Wilton Art Site (AHIMS 52-2-0011)  
Wilton Park Stables Group |
| Australian Heritage Places Inventory | Wilton Park  
Wilton Park Stables Group |
| National Heritage List | There are no items within or immediately adjacent to the Subject Area listed on the National Heritage List. |
| Commonwealth Heritage | There are no items within or immediately adjacent to the Subject Area listed on the Commonwealth Heritage List. |
| NSW State Heritage Register | Upper Canal System (Pheasants Nest Weir to Prospect Reservoir)  
Wilton Park |
| Wollondilly Shire Local Environmental Plan 1991 (Schedule 1 and Schedule 7) | Cordeaux Dam  
Pheasants Nest Weir (Nepean River)  
St Luke’s Anglican Church  
Wilton Park Stables Group  
Aboriginal Shelter Site Lot 101 DP 1045369  
“Upper Canal” Water Supply System – Appin  
Malden Suspension Bridge  
Wilton Condell Park Road, Part of Lot 101, DP 1045369, known as “Wilton Park” |
| Wollondilly Shire LEP 2011 | Cordeaux Dam  
Cottage 1090 Argyle St  
St Luke’s Anglican Church  
Aboriginal Shelter Sites Lot 1 DP 270536  
Upper Nepean Scheme - Pheasants Nest Weir (Nepean River)  
Cottage 180 Wilton Park Road  
“Kedron” 305 Wilton Park Road  
Wilton Park - Stables, coach house water tanks, boxes, covered yards (State).  
Suspension Bridge over Nepean River – Maldon  
Maldon Weir |
| National Trust of Australia (NSW) | There are no items within the study area listed on the National Trust of Australia (NSW). |
Table 8: Overview of Results from Register Searches relation to Historic Heritage Items

In addition to the above searches, KAS has also consulted a number of heritage assessments specific to the Subject Area that have also sought to identify the historic (non-Aboriginal) heritage items and assign a significance value towards these items.

These reports include the Heritage Assessment for the Nepean Tunnel Amplification Project (Rosen 1995), the Aboriginal and Historical Archaeological and Cultural Heritage Assessment prepared for Walker Corporation by Heritage Concepts (2007) and the Cultural Heritage Assessment prepared for Navin Officer (2008) for the Wilton Substation 66kV Feeder Works.

7.2 Expansion and Exploration

The first European contact with the Subject Area was in the form of a series of expeditions carried out from the end of the eighteenth century into the first decades of the nineteenth century. One of the first expeditions was in 1798, being comprised of John Wilson, John Price, Mr A Roe and a servant (Heritage Concepts 2007:23). This exploration was one of the first to discover coal in the region. The next expedition to go through the area was in 1802 and which included George Francis Barralier and George Caley, a servant of Joseph Banks (Whitaker 2005:3). Caley collected specimens of the local flora and fauna for Sir Joseph Banks.

In 1812 George William Evans, the surveyor who went on to survey the crossing of the Blue Mountains the following year, made the first overland journey from the Shoalhaven and Illawarra to Appin and back to Sydney (Whitaker 2005:13). This trip may well have included the area of interest for this study.

During the early decades of the nineteenth century a number of local landowners from the Appin area launched exploration expeditions into the region that now encompasses the area of interest for this study. Some of these expeditions were official and some were not. Hamilton Hume, a well-known local born in the colony, journeyed across the valleys south of the Appin Plateau and went as far south as Bungonia. Charles Throsby had come near the Subject Area exploring the Illawarra area in 1818 with Hamilton Hume and James Meehan (Proudfoot in Broadbent, Hughes 1992:68).

A system of land grants was instigated early in the colony’s development in order to stimulate agricultural activity, self-sufficiency and to open up outer settlements. ‘By 1821 the number of land grants that had been approved appear to have totalled approximately 570 000 acres, of which, for administrative reasons the titles to 340 000 were still to be executed’ (Steven in Broadbent, Hughes 1992:49). A good number of the earliest settlers to this area were recipients of this land grants system and they took up land with a view to developing agricultural activities.

7.3 Early Settlement

NOTE: Throughout this Section the phrase “Cumberland Plain” has been utilised. This phrase is being used in its historic context. It should not be confused with the use of the same phrase that may be used in reference to vegetation communities.

Two floods had destroyed grain crops for the colony during the early years of the nineteenth century and in 1809, the decision was taken by Lieutenant-Governor Paterson to expand agricultural development into the Cumberland Plain (Morris, Britton 2000:14). Whilst the Subject
Area could be considered to be separate from the Cumberland Plains, as it is now currently defined, its development as part of the colony is intrinsically linked to period of agricultural expansion into the Cumberland Plain. Serious agricultural activity commenced within the Subject Area slightly later than other areas within the “Cumberland Plain” (as it was then refereed to). Agriculture did not reach the Campbelltown area until the mid 1820s, by which time it was well established in other portions of the “Cumberland Plain” to the north and west (IBID).

Despite initial enthusiasm for the new development the Cumberland Plains presented its own issues. The soil was fertile but properties that did not have their own water supply suffered as a result of the area being one of the driest in Sydney (IBID). What this meant was that in order for a property to be viable it had to be large. These conditions applied to the farming settlements that developed in the Subject Area.

7.3.1 Early Landholdings
Sir Thomas Mitchell was granted 2 560 acres in 1834 to which he later added, through purchase, 1, 250 acres. (Morris, Britton 2000:94) Interestingly a sketch map exists from 1827 (Figure 17) of a proposed road through Thomas’ land grant to the Illawarra (please refer to the back of this section for further information). This suggests that the plans were some time in the making and indeed, it was not until the 1842 that the homestead, known as Park Hall, was actually constructed. (IBID)

Mitchells’ plans for his property are indicative of the speculative nature of such landholdings during this era. His initial plans, which included a highway passing directly through his land also involved the development of a private village, which in and of itself was not unusual at this time. Whilst the highway did eventually pass through his land (some 140 years later), initially an easier route was established to the west. The village did develop and remains today as the village of Wilton.

7.3.2 Park Hall
Park Hall was based on the large estate properties that Mitchell had known from his homeland. The National Estate has recorded this property and the following comes from this listing:

A two-storey Gothic Revival sandstone house (c 1842-4) built for the Surveyor General Sir Thomas Mitchell, to a design from Francis Goodwin’s Rural Architecture and supervised by James Hume. There is a fine geometrical stone stair with cast-iron balusters, several original chimney pieces and Mitchell arms on the eastern gable. An arcade tower and chapel were added sometime after 1860, Blackett being commissioned to add the arcade. Apart from its importance as Mitchell’s country residence.. “Park Hall” is one of the last stylistically significant houses built before the depression of the early 1840s.’ (Franzmann, Dives 2004: PXII)

Indeed Park Hall remains an impressive building resembling a church more than a residential estate. A good number of large estates developed through the Cumberland Plains resulting from the agricultural expansion throughout this period. Houses like Edinglassie at Emu Plains and Bungarribee at Eastern creek are described as ‘... in the manner of the picturesque ...’ and this became the fashion in the nineteenth century. (Morris, Britton: P16). Houses were placed on the slope of a hill to provide some protection from the elements but to also to command a view worthy of the owners. This was adopted widely through the publication of various landscape design books that were relied on heavily such as the one mentioned in the above listing.

The Missionaries of the Sacred Heart purchased 1700 acres of the Park Hall property, including the building, in 1904 and it was then modified to become a monastery known as St Mary’s Towers. The
remainder of the property was purchased by the Nepean Estate Company Limited and further subdivided and offered for sale (SMH 13 January 1906:5).

Other early landholders of properties with the current Subject Area include by Ouseley Condell and Randolf John Want, see Figure 18 for a landholdings map from between 1843 and 1846). Ouseley Condell named his landholding Condell Park. Ouseley Condell is also known for his other property of the same name in Bankstown. The remainder of the area was broken into smaller lots, generally between 330 – 60 acres. Landowners included William Bradbury, William Lovegrove, Thomas Jones, Roderick McDonald, Owen Tierney, Thomas, Dwyer and Thomas Arkell.

7.3.3 The Village of Wilton
The township of Wilton slowly grew, despite the highway not passing through it and was officially declared a town in 1885. In 1871 a public school was built followed by a post office in 1872. Several other schools were also built, but were short lived due to insufficient number of pupils. The public school was eventually closed in 1948 (Navin Officer, 2008:14).

Within the township of Wilton are three heritage items. These are St Luke’s Church, a Cottage directly opposite the church at 1090 Argyle Street and the alignment of the Nepean Tunnel.

7.4 Agriculture and Pastoralism
The European settlement and development of the Subject Area, at the time that it did, resulted from the colony’s need for self-sustaining agriculture. The crops that were harvested were the main food supply for the early colony. Up to the 1880s the principal produce of the Campbelltown – Appin district was wheat, but included maize, barley and oats as supplemental crops.

The experience of farming over the Cumberland Plains was largely universal in the sense that the smaller holdings struggled and were often consolidated into larger ones over time. The success of agriculture generally was affected by both access to water and the fertility of the soil. Due to the nature of the climate in Australia up to 2-3 crops a year were being planted in the same soil. This led to diminishing crops over time as the soil lost fertility and this threatened the long term sustainability of various estates and smallholdings. When the Airds, Appin, Bringelly areas were opened up they experienced the same problems of low yield as elsewhere and it is safe to assume that this also applied to the farms in the Subject Area (Morris, Britton 2000:22).

Whilst references to the area of interest in this study are few there is enough evidence from the broader region to extrapolate sufficient information in order to gain an understanding of the experience locally. Small farms on the Cumberland Plains averaged about 55 acres of which about 20 would be cultivated (Morris, Britton 2000:19). Much time and energy was dedicated to clearing all land of any native bush. Small farms were established in the Minto, Airds and Appin districts and often along creeks as those smaller holdings without water were quickly absorbed into larger estates being economically unviable. (IBID). No doubt the geology, geography and soils of the Subject Area influenced the nature of agriculture that was practiced.

Details remain of some of the larger estates including The Broughton Parks Estate of William Wonson. This following extract comes from Sue Rosen’s study of the Nepean Tunnel Capacity Amplification Project. It is included here to provide a snapshot of an estate in the Wilton area during the early years of the colony. The family had built a sandstone residence at Broughton Park on the hill to the south of Wilton Township:
In 1856 William Wonson purchased his Broughton Park property which he had been leasing since 1850. This was an original grant of 800 acres to William Broughton of Appin, promised by Governor Lachlan Macquarie in 1819. The deeds were officially granted to his son JA Broughton in 1855.

William Wonson and his large family of sons and daughters ... raised cattle and owned a few horses and pigs. Sheep were less popular. Like the farmers or nearby Condell Park they would have sown grain crops and had vegetable gardens and fruit trees for their own use. ... Mrs Elizabeth Wonson was an experience dairy woman. The family have also been known for trapping quail and breeding rabbits. ... The 1885 parliamentary list of landholders shows William Wonson Jr holding 300 acres at Wilton with 7 horses, 39 cattle and 4 pigs. His brother Joseph held 260 acres, 6 horses, 33 cattle, 10 sheep and 17 pigs. Three more brothers and two brother-in-law held similar holdings, ranging from 146 acres to 290 acres (Rosen 1995:32).

There are significant remnants where the estate originally stood still today and the foundations of both the home and the dairy are still visible. (IBID) This is an interesting documentation of what would appear to have been a relatively common experience of these original land grants and is reflective of the broader experience of estates of similar size throughout the region.

By the 1820s cereal farming was well established in the Campbelltown area and was second only to the Hawkesbury in terms of grain production. (Whitaker 2005:22). Rust disease reached the Appin region by 1856 and within twenty years had halted grain production in the area entirely. (IBID: P29) Whilst generally stock animals such as cattle, sheep and pigs gradually replaced wheat production after the 1880s evidence of twentieth century pastoralism exists in the Subject Area in the form of agricultural technology which has been recorded as part of this study.

7.5 Water Infrastructure

The pressure for a reliable water supply for the new colony was significant. As water supplies became contaminated through pollution other supplies and infrastructure were utilised and examined. The ever increasing population, and need for sanitation and the development of both agriculture and technology, such as the steam rail system, further exacerbated what was already a tenuous link to water.

To his end a series of water related infrastructures were devised and constructed. The first of these was the Nepean Tunnel, for which construction started in 1880 and was completed in 1884. The tunnel was constructed though a series of shafts which had a pair of sandstone piers constructed above ground to assist with hoisting spoil and materials in and out of the tunnels. Construction was by hand undertaken by labour gangs and at the time that it was completed it was the fourth longest tunnel in the world (Rosen 1995:18).

Pheasants Nest Weir has no records pertaining to its construction but in 1880 it was described as a 10ft high dam, built in the channel of the Nepean River (Rosen 1995:24). The Upper Canal System (Pheasants Nest Weir to Prospect Reservoir), Cordeaux Dam, Pheasants Nest Weir, and the Upper Nepean Water Supply System all have heritage listings with different bodies. Please refer to the following section for further information regarding these listings.

Workers contracted on these various different projects would live on site during the construction phase and the camp at Cataract Dam is described by Whitaker:
...by early 1903 there were 320 labourers and 80 tradesmen on site. Single men lived in two-man cubicles in barracks with corrugated iron roofs and canvas walls. Married workers brought their wives and children to the camp, and at first 60 children used to walk into Appin to attend school every day. On pay day shopkeepers from Appin would travel to ‘Cataract City’ to sell food and general merchandise and collect the money for goods which had been booked up since the last pay day. There were six boarding houses in the camp which provided meals and two soft-drink shops (Whiteaker 2005:45).

Upon completion of the project the camp would be packed up and workers and their families would be moved on to the next job. The camps would be dismantled and reassembled at the next project, any structures that were not moved on were sold for demolition. (NSW Heritage Office in Heritage Concepts 2007:28).

There is no evidence of camps or occupation at any of the sites listed here (Rosen 1995).

7.6 Transport Networks

7.6.1 Roads
Roads were initially the most efficient mode of transportation. James Meehan surveyed the main road from Liverpool to Appin in 1815. The road from Sydney to Illawarra passed through Appin in the 1800s, for approximately 50 years, which contributed to the growth of that town (Whitaker 2005 in Heritage Concepts 2007:30).

William Harper surveyed a road to the Nepean via Campbelltown in 1825 and convict gangs commenced its construction later that same year. Further roads throughout the region and wider colony were established as the population increased (Casey and Lowe 2003: HLA 2003 in Heritage Concepts 2007:30).

The Sydney to Bulli route was discovered in 1836. This route took 20 miles of the Wollongong to Sydney journey. Construction of this road, however, did not occur until 1868. Even with this new route, the trip would still require a ferry crossing at the Woronora River (Whitaker 2005 in Heritage Concepts 2007:30). By the 1860s a coach service from Campbelltown to Wollongong was provided by James Waterworth six days a week (Whitaker 2005 in Heritage Concepts 2007:29).

7.6.2 The Great Southern Rail Line
The construction of the Upper Nepean Dams led to the demand for additional transport to be developed in the region. Of the four dams, rail transport was utilised for three of them, with Avon Dam relying on road transportation. The original roadway into Avon Dam was constructed by veterans of World War 1. The veterans were based at a nearby rehabilitation camp. Light railway lines and narrow gauge rail lines connected the other dams to the main line of the Great Southern Railway. Other forms of transport were also utilised in the sometimes difficult terrain. For example, Cordeaux Dam construction supplies including metal and cement were transported part of the way via a five kilometre long steam operated aerial ropeway which crossed the Nepean Gorge (Heritage Concepts 2007:29).

The introduction of rail assisted some of the smaller, struggling settlement. Picton underwent a rapid change with the development of the Southern Line. The rail line was extended to Picton, Mittagong and Moss Vale in 1867 and on to Goulburn in 1869. As the train line developed to meet the needs of development alterations to the alignment were undertaken. There was a realignment in 1919 taking the main lain from Picton to the South. The Picton Mainline Railway Loop and Tunnel
were built in 1918 and 1919. The Picton Station Group and Viaduct at Stonequarry Creek are parts of an early terminus station system built within eight years of the first railway in NSW on the Great Southern Line (NSW Heritage Office in Heritage Concepts 2007:29).

7.7 Recent Assessment Reports

Rosen 1995

Remains associated with the original residence and outbuildings for the “Broughton Park” property are documented to still be visible in 1992 (Rosen 1995:32). The “Broughton Park” property is identifiable on Figure 18. Rosen makes the following statement in relation to the remains:

The hill on which the Wonson family lived has some significant remains. The foundations for the home and dairy are still visible. In 1992 there was evidence of tree planting, both fruit and ornamental. The original well and dam were nearby and a few sandstone blocks were scattered about the site. Earlier remains, relating to the period before the Wonson family occupied the hill, are also evident (Rosen 1995:32).

Heritage Concepts 2007

Site Name: Wilton 03 Site Type: Sandstone Weir and post hole cuttings.

Wilton 03 comprises a sandstone weir located along the southern end of Allens Creek in W002, Area C (refer to Figure 6.1.) The weir crosses the creek at a point where the creek banks still slope gently towards the creek (Plate 4). Approximately 100m downstream of the weir the creek line has developed into deep sandstone gorge like terrain.

The weir is approximately 7m long, 0.7m high and 0.4m wide. The weir has been constructed with hammer dressed sandstone blocks, which are bonded together with a fine aggregate cement. Some of the sandstone blocks display evidence of sparrow picking (Plate 5).

Approximately 2m downstream of the weir are four post hole cuttings in the sandstone bed of the creek line. The post hole cuttings have a maximum diameter of 18cm and a maximum depth of 20cm (Plate 6). The post hole cuttings are on average cited 2 m apart.

Three post holes are aligned in a row traversing the creek from west to east, while a fourth post hole cut is cited north of the first row in the centre of the creek line and is aligned with the centre post cut of the row to the south, forming the apex of a triangular shape. The post holes once held wooden posts as evidenced by the remains of one wooden post in the post hole cut forming the apex of the footing layout. The function of these post holes is not known and neither is its association with the weir.

The triangular shape of the footings precludes its use as a crossing and the fact that it is located 2m downstream of the weir negates its use as a type of platform associated with water maintenance/extraction practices. It is possible that the footings are the remains of an earlier water management system.
This assessment identified a number of discrete surface features associated with the Nepean Tunnel. These consist of:

a. Concrete structure over a tunnel shaft (GDA 287912, 6209011)
b. Lone sandstone pier (GDA 288294, 6209127)
c. Set of sandstone piers and tunnel shaft structure (GDA 288452, 6209176)
d. Lone sandstone pier (GDA 289239, 62091398)
e. Set of sandstone piers and tunnel shaft structure (GDA 289718, 6209556)
f. Lone sandstone pier (GDA 289973, 6209628)
g. Sandstone pier, evidence in this area for an additional pier and filled in shaft (GDA 290403, 6209737)
The Wilton Feeder Historic site 1 (WFH1) was also identified in this assessment. However a description of the location of the site situates in outside for the boundary of the Subject Area for this current assessment.

WFH1 is a scatter of 19th century European artefacts is located within the Nepean Tunnel easement approximately 125 m east of Clements Creek and approximately 80 m east of one of the sandstone piers (g). The scatter extends for approximately 50 to 100 m upslope.

Artefacts include glass, ceramics and metal buttons. A 1960s/50s “Frosty” soft drink bottle was also located. A pile of metal pieces is also located in the area - these may have come from a wooden structure that has been destroyed.

This site is interpreted as the location of a possible camp/workman’s hut for the construction of the Nepean Tunnel and appears to date from this period.

7.8 Predictions for Historic Heritage

Within the Subject Area are a number of locations that have potential to contain unrecorded historic remains and features of heritage significance. These features are likely to include:

- Historic sites and features associated with Upper Nepean Water Supply System, such as workers camps, mullock heaps, survey columns etc.;
- Traces of agricultural and industrial processing or extractive sites such as dairies, factories, and quarries; these may be found throughout agricultural lands on valley floors and adjacent low ranges;
- Sites associated with early roads; these will be closely associated with early cadastral road reserves, watershed ridgelines, and related to early river and creek crossing points;
- Nineteenth-century structures, such as farm dwellings, outbuildings, selector’s and timber getters huts; these may survive as standing buildings, ruins or archaeological deposits and are most likely to survive on less developed rural properties, on early portion numbers, and in or near established farm building complexes;
- Archaeological sites such as the occupation remains of former dwellings including homesteads, houses and huts these will be distributed in close association with land settlement patterns, and correlated with favourable agricultural lands, trading nodes and transport corridors;
- Transport and access routes such as bridle paths, stock routes, and roads of varying forms and ages; these may survive as abandoned remnants adjacent to modern transport routes, or as alignments now followed by more modern or upgraded road and track infrastructure; and,
- Old fence lines (such as post and rail fencing); these may occur along road easement boundaries and farmlands. Other indications of field systems, such as drainage channels and ridge and furrow plough lands, are likely to survive in low lying agricultural ground, especially in areas that are now used for grazing, rather than cropping.
- Structures of historical interest and heritage significance may be standing, ruined, buried, abandoned or still in use.
Figure 17: Sketch Map of proposed line to Illawarra c.1827
Proposed Rezoning “Wilton Junction”, Wilton, Wollondilly Shire LGA, NSW

Aboriginal Cultural Heritage Assessment and Historic Heritage Assessment

Figure 18: Baker’s Australian Country Atlas c1843-1846
Proposed Rezoning "Wilton Junction", Wilton, Wollondilly Shire LGA, NSW

Aboriginal Cultural Heritage Assessment and Historic Heritage Assessment

Figure 19: Historic Heritage Items from LEP
8 RESULTS – ABORIGINAL HERITAGE

8.1 Identified sites

As identified in Section 6.5 there have been 49 Aboriginal sites identified previously within the Subject Area.

As a result of the survey and assessment undertaken for this present study an additional 30 previously unknown Aboriginal sites have been identified. These additional sites consist of seven (n=7) artefact scatters, ten (n=10) isolated finds, eight (n=8) rock shelters with either PAD, art or artefacts and five (n=5) scarred trees that have been assessed to be the result of Aboriginal cultural practices (see Table 9, Figure 22 and Figure 23).

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Table 9: Summary of Aboriginal Sites identified in the study

8.1.1 Artefact Scatters

During the course of the study seven (7) previously unknown Aboriginal artefacts scatters were identified (see Table 9). A brief description of each of these is provided below. Further more specific details are available from the AHIMS site card for each site which have been included as Appendix III.
WJ-AS-01 (AHIMS #52-2-4097)

Two stone artefacts approximately 4 meters apart on eroding surface. The deposit is gravels and clayey soil. The artefacts located are:

- One quartzite flake,
- One quartz flake piece.

WJ-AS-02 (AHIMS #52-2-4098)

Scatter of 10 artefacts exposed on bedrock (sandstone) surfaces where soil has eroded away. Topographic setting is a low gradient slope adjacent to a gully head. Site location is approximately 80 meters south of a dam in close proximity to the tree line at the gully edge. The artefacts located are:

- Brown chert flake
- Grey chert flake
- Quartz flake
- Grey chert flaked piece with use wear on margin
- Quartz flake
- Grey tuff blade segment
- Grey tuff flaked piece
- Quartz flake
- Red silcrete flake
- Grey tuff flaked piece

WJ-AS-03 (AHIMS #52-2-4099)

Two artefacts exposed on top of a dam wall, approximately 12 meters south of a breach in the wall. They artefacts are located in a disturbed context. The original position of the artefacts may have been associated with the first order drainage line just above the gully adjacent to the dam wall. The artefacts located are:

- Brown silcrete flake
- Brown quartzite core.

WJ-AS-04 (AHIMS #52-2-4100)

Four artefacts on the eroding surface of track to the northeast of the gully. The artefacts located are:

- Three grey silcrete flakes
- One grey silcrete proximal fragment.

WJ-AS-05 (AHIMS #52-2-4094)

Scatter of four stone artefacts exposed on bare sandstone platform overlooking gully tributary. Three artefacts are on an upslope exposure with an additional artefact on an adjacent slab approximately two meters downslope. This scatter occurs directly above WJ-RS-01. The artefacts located are:

- Red chert flake/debitage
- Red chert flake
- White tuff/mudstone
- White/yellow mudstone/tuff flake
**WJ-AS-06 (AHIMS #52-2-4095)**

Scatter of six artefact scatter on exposure on an eroded surface upslope (west) of a dam. The dam has been constructed at the head of a sandstone gully and is next to the entrance road to the skydiving centre. The artefacts located are:

- Brown silcrete scraper
- Red silcrete flake
- Red/cream silcrete flake
- Brown silcrete flake
- Quartz flake
- Brown silcrete flake

**WJ-AS-07 (AHIMS #52-2-4096)**

Three artefacts exposed on bare surface in an area approximately 3 meters by 5 meters to north of the parachute landing ground and to the east of northern end of airstrip. The artefacts located are:

- Yellow tuff Bondi point,
- Blade flake,
- Flaked piece.

### 8.1.2 Isolated Finds

The study identified the location of ten (10) previously unidentified Aboriginal artefacts scatters. A brief description of each of these is provided below. Further more specific details are available from the AHIMS Sitecard for each site which have been included as Appendix III.

**WJ-IF-01 (AHIMS #52-2-4091)**

One artefact was located on a sandstone outcrop/bare surface on spur toe, approximately 50m upslope from timbered gully. The artefact is:

- Red silcrete Bondi point/asymmetric backed blade

**WJ-IF-02 (AHIMS #52-2-4092)**

Stone flake exposed on the northern flank of a dam. The artefact is directly associated with a disturbed context. The artefact is a:

- Yellow brown tuff flake.

**WJ-IF-03 (AHIMS #52-2-4093)**

A flake was located on an eroding surface at the edge of an artificial drainage line. The local deposit is a gravely silty soil. Surface visibility in the exposure is approximately 60% within a very low visibility background. The artefact is a:

- Red chert flake fragment (proximal segment).

**WJ-IF-04 (AHIMS #52-2-4088)**

Artefact exposed in eroded edge of embankment to south of runway, southern end of runway in skydiving centre. Setting is a well grassed open field between the runway and the entrance road to establishment. A fenced compound containing numerous caravans is located to the north. The artefact is a:
- Silcrete core

**WJ-IF-05 (AHIMS #52-2-4089)**

The artefact is a quartz flake.

**WJ-IF-06 (AHIMS #52-2-4090)**

The artefact is a quartz flaked piece located on an exposed sandstone slab to the east of the gully.

**WJ-IF-07 (AHIMS #52-2-4086)**

Isolated flake on bare exposure beneath a stringybark tree on level terrace, approximately 60 meters from the edge of a sandstone gully. The associated sandy soil has moderate to high potential to contain additional archaeological material.

**WJ-IF-08 (AHIMS #52-2-4087)**

The artefact is a brown tuff flake/end scraper exposed on a graded/eroded surface.

**WJ-IF-09 (AHIMS #52-2-4084)**

An artefact was located on an exposure. The artefact is a:
- light brown tuff flake/scraper with use-wear on end and margin.

**WJ-IF-10 (AHIMS #52-2-4085)**

An isolated flake was located on an exposure on a dam wall in a heavily grassed paddock. The artefact is a:
- quartz flake

### 8.1.3 Rock Shelters with either PAD, art or artefacts

The study identified the location of eight (8) previously unidentified Aboriginal artefacts scatters. A brief description of each of these is provided below. Further details are available from the AHIMS Sitecard for each site which have been included as Appendix III.

**WJ-RS-01 (AHIMS #52-2-4077)**

WJ-RS-01 is a rockshelter formed by wind and water erosion. The rockshelter is located to the west of Byrne’s Creek with an eastern aspect. It was noted to have a single stone artefact and an area of PAD. The artefact was identified as a ground edge hatchet, and was located in the dripline of the shelter. The shelter measures 6m x 2m x 2m.
WJ-RS-02 (AHIMS #52-2-4078)

WJ-RS-02 is a medium sized sandstone shelter with a north easterly aspect on the south west side of Byrnes Creek. The shelter contains an area of potential archaeological deposit as well as a scatter of over 20 artefacts exposed along the drip line. The artefact materials included silcrete, chert and quartz flakes. There is also evidence of indeterminate black charcoal art near the southern end of the shelter. The rock shelter is 5m x 2.5m x 3m.

WJ-RS-03 (AHIMS #52-2-4075)

WJ-RS-03 is located on the south east side of an unnamed tributary of Byrnes Creek, approximately 30 metres upstream from the confluence point. Located within the shelter are a number of fish motifs in addition to indeterminate charcoal motifs. The rock shelter is 4m x 2.5m x 3m.

This shelter also contains evidence of European occupation and is discussed further in Section 9.1.
WJ-RS-04 (AHIMS #52-2-4076)

WJ-RS-04 is located on the northern side of the tributary to Byrnes Creek. The rock shelter contains art, and an area of PAD. The arts consist of red hand stencils and charcoal indeterminate. Raw materials consistent with artefacts were noted in the drip line but have not presently been recorded. The dimensions of the rock shelter are 6m x 2.5m x 2m.

WJ-RS-05 (AHIMS #52-2-4071)

WJ-RS-05 is a rock shelter formed by block fall, and wind and water erosion. The rock shelter is located to the northeast of Byrnes Creek with a southwestern aspect. It was noted to have an area of PAD. The rock shelter is 12m x 3m x 2.5m.

WJ-RS-06 (AHIMS #52-2-4072)

WJ-RS-06 is a rock shelter formed by block fall, and wind and water erosion. The rock shelter is located to the southwest of Byrnes Creek with a northeastern aspect. It was noted to have an area of PAD. The rock shelter is 3m x 1.8m x 1.5m.
WJ-RS-07 (AHIMS #52-2-4073)

WJ-RS-07 is an isolated tor. The rock shelter is located to the west of Byrnes Creek with a eastern aspect. It was noted to have an area of PAD and indeterminate charcoal motifs. The rock shelter is 6m x 1.5cm x 2m.

WJ-RS-08 (AHIMS #52-2-4074)

WJ-RS-08 is a rock shelter formed by wind and water erosion. The rock shelter is located to the west of Byrnes Creek with a northern aspect. It was noted to have an area of PAD. The rock shelter is 6m x 2.4m x 2m.
8.1.4 Scarred Trees (Culturally Modified Trees)

The study identified the location of five (5) previously unidentified Aboriginal artefacts scatters. As brief description of each of these is provided below. Further more specific details are available from the AHIMS Sitecard for each site which have been included as Appendix III.

**WJ-ST-01 (AHIMS #52-2-4081)**

Mature red gum with scar on north west face of trunk. Tree height is approximately 20 meters and the tree is in good health. The girth and breast height is approximately 3 meters. The scar is approximately 90 cm long and 16 cm wide. The depth of regrowth is approximately 10 cm. The base of the scar to ground level is approximately 80 cm. The scar is in good condition.

**WJ-ST-02 (AHIMS #52-2-4082)**

Tree stump, snapped off approximately 10 meters high. Scar is on the north facing trunk. The girth at breast height is approximately 2.7 meters. The scar is approximately 103 cm long and 7 cm wide. The depth of regrowth is approximately 18 cm. There is evidence of termite activity, and the scar surface has almost rotted or been eaten away by termites. There is an additional scar on the south side of the trunk, which appears to extend to base level.

**WJ-ST-03 (AHIMS #52-2-4083)**

Scar on low North side of trunk. The tree is a mature grey box, approximately 20 meters tall and in good health. The girth at breast height is 3 meters. The scar is approximately 1.38 meters high and 15-20 cm wide. The depth of regrowth is approximately 12 cm. The surface of the scar shows some cracking and insect bore holes. The base of the scar is approximately 10 cm above ground level. The tree is approximately 50 meters upslope from the head of a drainage line.

**WJ-ST-04 (AHIMS #52-2-4079)**

Scar on mature stringybark tree. The tree is approximately 30 meters high and in good health. Girth at breast height is 4.5 meters. The scar is on the south west face of the trunk. The scar dimensions are 3.5 – 4 meters long, 0.6 meters wide. The depth of regrowth is 15-20 cm. The height of the scar above ground is 1.25 meters. The scar is old, cracked and rotting, and the tree is hollowing out.

**WJ-ST-05 (AHIMS #52-2-4080)**
Scar tree with scar on north side of the trunk. The tree is a narrow leaf iron bark. The scar is approximately 1.3 meters long, 20 cm wide and 30 cm deep regrowth. The tree has been tagged SLR32. The scar is hollow and the tree has been burnt in the past.

8.2 Survey units

The Subject Area was divided into thirty eight (38) units for ease of recording. The survey unit divisions were identified by a combination of existing property boundaries, internal fences and vegetation boundaries.

Survey Unit 1

Survey unit 1 was surveyed on 22 April, 2013 by Tom Knight. The unit is thickly vegetated making ground surface visibility low. An artefact scatter consisting of two artefacts was located and is described as WJ-AS-01. Two rock shelters were located and are described as WJ-RS-02 and WJ-RS-08.

Survey Unit 2

Survey unit 2 was surveyed on 1 May, 2013 by Tom Knight, Veronica Zaghloul, Glenda Chalker and Neale Sampson. The survey unit is heavily vegetated open woodland. One scar tree was located. It is described as WJ-ST-05. An exposure was observed. A portion of the survey unit has been cleared and the ground surface covered in woodchips.

Survey Unit 3

Survey unit 3 was surveyed on 1 May, 2013 by Tom Knight, Veronica Zaghloul, Glenda Chalker and Neale Sampson. One artefact scatter was located. The scatter is described as WJ-AS-06. There was a small area of exposure adjacent to the dam which measured 15 meters by 3 meters and approximately 75% visibility. WJ-AS-05.

Survey Unit 4

Survey unit 4 was surveyed on 30 April, 2013 by Tom Knight, Veronica Zaghloul, Glenda Chalker and Neale Sampson. Approximately one third of the survey unit is occupied by a dam. There is one small area of trees, but the remainder of the survey unit has been cleared, and is covered in thick grass. No Aboriginal cultural heritage was located in survey unit 4.

Survey Unit 5

Survey unit 5 was surveyed on 30 April, 2013 by Tom Knight, Veronica Zaghloul, Glenda Chalker and Neale Sampson. It is a large open paddock that has been extensively cleared. There is a small stand of open woodland. A portion of Wilton Park Road runs through the survey unit. One stone artefact was located in the survey unit and is described as WJ-IF-05. One scar tree was observed in close proximity to the Hume Highway and in association with the remaining woodland. It is described WJ-ST-04.

Survey Unit 6

Survey unit 6 was surveyed on 30 April, 2013 by Tom Knight, Veronica Zaghloul, Glenda Chalker and Neale Sampson. Approximately one quarter of this survey unit is occupied by the infrastructure associated with the airstrip, such as offices and accommodation. It has been completely cleared and is covered in thick grass. There are patches of exposures around some buildings and visibility is approximately 75%. One stone artefact was located during the survey. It is described as WJ-IF-04.
Survey Unit 7
Survey unit 7 was surveyed on 30 April, 2013 by Tom Knight, Veronica Zaghloul, Glenda Chalker and Neale Sampson. Survey unit 7 is a large open paddock that has been extensively cleared in the past. Two sites of Aboriginal cultural heritage were located during the survey. An artefact scatter described as WH-AS-04 and an isolated flake described as WJ-IF-06.

Survey Unit 8
Survey unit 8 was surveyed on 30 April, 2013 by Tom Knight, Veronica Zaghloul, Glenda Chalker and Neale Sampson. Survey unit 8 is a large paddock cleared of all vegetation. It has a thick cover of grass, obscuring the ground surface. There is a small exposure of approximately 5 meters by 2 meters. An artefact scatter consisting of three artefacts was located in this exposure and is described as WJ-AS-07.

Survey Unit 9
Survey unit 9 was surveyed on 30 April, 2013 by Tom Knight, Veronica Zaghloul, Glenda Chalker and Neale Sampson. It has been completely cleared and is open paddocks with thick grass cover. There are several exposures. No Aboriginal cultural heritage was observed.

Survey Unit 10
Survey unit 10 was surveyed on 1 May, 2013 by Tom Knight, Veronica Zaghloul, Glenda Chalker and Neale Sampson. Several new sites of Aboriginal cultural heritage were located during the survey. Several rock shelters were located and are described as WJ-RS-03, WJ-RS-07, WJ-RS-04, WJ-RS-06, WJ-RS-05. An artefact scatter was located in an exposure measuring 10 x 4 meter exposure. The exposure had approximately 50% visibility. The artefact scatter is described as WJ-AS-01.

Survey Unit 11
Survey unit 11 was surveyed on 30 April, 2013 by Tom Knight, Veronica Zaghloul, Kirsty Chalker, Dwana Chalker and Neale Sampson. It has been completely cleared and is open paddocks with thick grass cover. There are several exposures. No Aboriginal cultural heritage was observed.

Survey Unit 12
Survey unit 12 was surveyed on 26 April, 2013 by Tom Knight, Veronica Zaghloul, Kirsty Chalker, Dwana Chalker and Neale Sampson. It has been completely cleared and is open paddocks with thick grass cover. There are several exposures. No Aboriginal cultural heritage was observed.

Survey Unit 13
Survey unit 13 was surveyed on 26 April, 2013 by Tom Knight, Veronica Zaghloul, Kirsty Chalker, Dwana Chalker and Neale Sampson. Survey unit 13 has been extensively cleared with trees now growing sporadically across the paddock. The survey unit is open paddock with thick grass, obscuring ground surface visibility. A stone artefact was located and is described as WJ-ST-01.

Survey Unit 14
Survey unit 14 was surveyed on 24 April, 2013 by Tom Knight, Neale Sampson, Glenda Chalker, Kiahni Chalker and Veronica Zaghloul. Survey unit 14 has been extensively cleared with trees now growing sporadically across the paddock. The survey unit is open paddock with thick grass, obscuring ground surface visibility. There was an area of exposure in which a stone artefact was located and is described as WJ-IF-03.
Survey Unit 15
Survey unit 15 was surveyed on 24 April, 2013 by Tom Knight, Neale Sampson, Glenda Chalker, Kiahni Chalker and Veronica Zaghloul. An artefact scatter consisting of 10 artefacts was located and is described as WJ-AS-02. An artefact scatter consisting of two artefacts was located and is described as WJ-AS-03. An isolated flake was located and is described as WJ-IF-02.

Survey Unit 16
Survey unit 16 was surveyed on 23 April, by Tom Knight, Neale Sampson, Kirsty Chalker, Kiahni Chalker and Veronica Zaghloul. An isolated flake was located and described as WJ-IF-01.

Survey Unit 17
Survey unit 17 was surveyed on 23 April, by Tom Knight, Neale Sampson, Kirsty Chalker, Kiahni Chalker and Veronica Zaghloul. No Aboriginal cultural heritage was located during the survey.

Survey Unit 18
Survey unit 18 was surveyed on 23 April, by Tom Knight, Neale Sampson, Kirsty Chalker, Kiahni Chalker and Veronica Zaghloul. No Aboriginal cultural heritage was located during the survey.

Survey Unit 19
Survey unit 19 was surveyed on 23 April, by Tom Knight, Neale Sampson, Kirsty Chalker, Kiahni Chalker and Veronica Zaghloul. No Aboriginal cultural heritage was located during the survey.

Survey Unit 20
Survey unit 20 was surveyed on 23 April, by Tom Knight, Neale Sampson, Kirsty Chalker, Kiahni Chalker and Veronica Zaghloul. No Aboriginal cultural heritage was located during the survey.

Survey Unit 21
Survey unit 21 was surveyed on 23 April, by Tom Knight, Neale Sampson, Kirsty Chalker, Kiahni Chalker and Veronica Zaghloul. No Aboriginal cultural heritage was located during the survey.

Survey Unit 22
Survey unit 22 was surveyed on 23 April, by Tom Knight, Neale Sampson, Kirsty Chalker, Kiahni Chalker and Veronica Zaghloul. No Aboriginal cultural heritage was located during the survey.

Survey Unit 23
Survey unit 23 was surveyed on 24 April, 2013 by Tom Knight, Neale Sampson, Glenda Chalker, Kiahni Chalker and Veronica Zaghloul. No Aboriginal cultural heritage was located during the survey.

Survey Unit 24
Survey unit 24 was surveyed on 26 April, 2013 by Tom Knight, Veronica Zaghloul, Kirsty Chalker, Dwana Chalker and Neale Sampson. Survey unit 25 has been extensively cleared. There are patches of open woodland remaining. There is thick grass cover, obscuring ground surface visibility. One scar tree was located during the survey. It is described as WJ-ST-03.

Survey Unit 25
Survey unit 25 was surveyed on 29 April, 2013 by Tom Knight, Veronica Zaghloul and Donna Whillock. Survey unit 25 has been extensively cleared. There are patches of open woodland remaining.
remaining. There is thick grass cover, obscuring ground surface visibility. No Aboriginal cultural heritage was located during the survey.

Survey Unit 26
Survey unit 26 was surveyed on 29 April, 2013 by Tom Knight, Veronica Zaghloul and Donna Whillock. There are patches of open woodland remaining. There is thick grass cover, obscuring ground surface visibility. No Aboriginal cultural heritage was located during the survey.

Survey Unit 27
Survey unit 27 was surveyed on 29 April, 2013 by Tom Knight, Veronica Zaghloul and Donna Whillock. There are patches of open woodland remaining. There are two small dams at the south boundary of the survey unit. There is thick grass cover, obscuring ground surface visibility. No Aboriginal cultural heritage was located during the survey.

Survey Unit 28
Survey unit 28 was surveyed on 29 April, 2013 by Tom Knight, Veronica Zaghloul and Donna Whillock. There are patches of open woodland remaining. There is thick grass cover, obscuring ground surface visibility. No Aboriginal cultural heritage was located during the survey.

Survey Unit 29
Survey unit 29 was surveyed on 29 April, 2013 by Tom Knight, Veronica Zaghloul and Donna Whillock. There are patches of open woodland remaining. There is thick grass cover, obscuring ground surface visibility. No Aboriginal cultural heritage was located during the survey.

Survey Unit 30
Survey unit 30 was surveyed on 1 May, 2013 by Tom Knight, Veronica Zaghloul, Glenda Chalker and Neale Sampson. No Aboriginal cultural heritage was located during the survey.

Survey Unit 31
Survey unit 31 was surveyed on 1 May, 2013 by Tom Knight, Veronica Zaghloul, Glenda Chalker and Neale Sampson. No Aboriginal cultural heritage was located during the survey.

Survey Unit 32
Survey unit 32 was surveyed on 2 May, 2013 by Tom Knight and Glenda Chalker. An old road corridor was observed with some ground surface visibility. No Aboriginal cultural heritage was observed.

Survey Unit 33
Survey unit 33 was surveyed on 2 May, 2013 by Tom Knight and Glenda Chalker. It has been completely cleared and is open paddocks with thick grass cover. There is an oval shaped training track and associated infrastructure. One isolated flake was observed. It is recorded as WJ-IF-09.

Survey Unit 34
Survey unit 34 was surveyed on 2 May, 2013 by Tom Knight and Glenda Chalker. It has been completely cleared and is open paddocks with thick grass cover. One isolated flake was observed. It is recorded as WJ-IF-10.

Survey Unit 35
Survey unit 35 was surveyed on 2 May, 2013 by Tom Knight and Glenda Chalker. It has been completely cleared and is open paddocks with thick grass cover. There is a small farm complex. There are several exposures. No Aboriginal cultural heritage was observed.

**Survey Unit 36**

Survey unit 36 was surveyed on 1 May, 2013 by Tom Knight, Veronica Zaghloul, Glenda Chalker and Neale Sampson. It has been completely cleared and is open paddocks with thick grass cover. There are several exposures. No Aboriginal cultural heritage was observed.

**Survey Unit 37 and 38**

Unable to be completed within scheduled field survey provisions.
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Figure 20: Survey Units
Plate 7: Survey unit 2, looking north

Plate 8: Survey unit 5, looking south
Plate 9: Survey unit 5, looking southeast

Plate 10: Survey unit 6, looking southwest
8.3 Survey Coverage and Visibility Variables

The effectiveness of an archaeological field survey is heavily reliant upon the obtrusiveness of the Aboriginal site being looked for, the incidence and quality of ground surface exposure, and the extent of previous disturbance to an area. Visibility variables have been estimated for all transects within the Subject Area. This data provides a measurement with which to assess the level of sampling conducted. They may also be utilised to determine the numbers and types of sites that may be present but not identified by the survey due to poor ground exposure/visibility.

Ground surface visibility is a measure of the bare ground visible to the archaeologist during the field survey. There are two variables used to assess ground surface visibility.

- The frequency and extent of exposures encountered by the survey team; and,
- The quality of visibility within those exposures.

The major factors affecting the quality of ground surface visibility within an area of exposure are the extent of vegetation and ground litter, the depth and origin of the exposure, the extent of recent sedimentary deposition and the level of visual interference from surface gravels. Two variables of ground surface visibility were estimated during the survey. These being:

- A percentage estimate of the total area of ground inspected which contained useable exposures of bare ground; and
- A percentage estimate of the average levels of ground surface visibility within those exposures. This is a net estimate and accounts for all visual and physical variables that have affected the visibility including the archaeological potential of any sediment or rock exposed.

Various Aboriginal site types exhibit different levels of prominence within the landscape. This is an important factor to consider when assessing the impact on visibility levels. Sites present upon or within rock exposures, such as grinding grooves, engravings and rock shelters, are more likely to be encountered than sites which are located on or within sedimentary contexts with little or no ground surface relief. A common factor affecting visibility is the presence of small rocks, pebbles and gravels in the exposure. If these particular raw materials are also suitable for stone artefact manufacture it may make stone artefact identification more difficult.

Areas of intact archaeological deposit can occur where the existing soil profiles have been minimally disturbed. A number of high and moderate impact disturbances were noted across the Subject Area (see Figure 8 to Figure 13). The significant levels of prior disturbances equate to approximately 50% of the Subject Area and include past agricultural activity, drainage, infrastructure and built structures. Many of these areas have reduced archaeological potential, compared to those areas where less disturbance has occurred. Areas of lower levels of disturbance were identified and as such these areas may contain less disturbed surface and/or subsurface archaeological materials (see Figure 24).

Visibility was poor over approximately two-thirds of the Subject Area, with thick grass coverage. Low levels of visibility present an impediment to accurate archaeological survey and assessment.
<table>
<thead>
<tr>
<th>Survey Unit</th>
<th>Landform</th>
<th>Survey Unit Area (Ha.)</th>
<th>Length And Width Of Transects</th>
<th>Visibility</th>
<th>Exposure</th>
<th>Effective Coverage Area (Sq M)</th>
<th>Effective Coverage % Of Survey Unit</th>
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**Table 10: Coverage analysis**
8.4 Discussion

The findings of the field survey were in keeping with the predictive model for the Subject Area as detailed in Section 6.7.

Aboriginal sites in the area have been shown to occur below ridge tops and/or within 150m of watercourses, so it is reasonable to expect in-situ or disturbed open artefact scatters, as well as sub-surface deposits of archaeological material in areas where limited ground disturbance has taken place. Rock shelters and open artefact scatters are the predominant site type, and have been noted in all other archaeological investigations in the vicinity of the Subject Area.

Of particular interest is WJ-RS-03, the rock shelter that contains both Indigenous art and the potential depression era occupation.
Figure 21: Landforms within the Subject Area
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Figure 22: Distribution of Sites within the Northwest of the Subject Area
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Figure 23: Distribution of Sites within the Southeast of the Subject Area
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Figure 24: Areas of Sensitivity and/or Potential Archaeological Deposit
9 RESULTS – HISTORIC HERITAGE

In Section 7.8 it was identified that there was potential for unidentified historic heritage items and remains to be present within the Subject Area. Below are detailed heritage items that have been identified as a result of the survey.

9.1 Identified Historic Heritage Items

Several new historic heritage sites were located during the survey. These have been assigned the codes WJ-HH-01 to WJ-HH-05 (see Table 11 and Figure 26); a brief description of each of these is provided below. In addition to these items that are exclusively related to historic heritage, the Aboriginal rock shelter site of WJ-RS-03 also need to be considered for its historical heritage values.

<table>
<thead>
<tr>
<th>Name</th>
<th>Description</th>
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<td>WJ-HH-01</td>
<td>Black bottle glass fragment x 2, Ceramic, blue and white</td>
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<tr>
<td>WJ-HH-02</td>
<td>Farm machinery – disc plough</td>
</tr>
<tr>
<td>WJ-HH-03</td>
<td>Farm machinery – disc plough</td>
</tr>
<tr>
<td>WJ-HH-04</td>
<td>Farm machinery – seeder</td>
</tr>
<tr>
<td>WJ-HH-05</td>
<td>Bottle</td>
</tr>
<tr>
<td>WJ-RS-03</td>
<td>Habitation rock shelter</td>
</tr>
</tbody>
</table>

Table 11: Historic Sites identified during this study

**WJ-HH-01**

At this location where two small fragments of black bottle glass, neither prices had diagnostic features to accurately identify typology with any certainty. The colour is indicative of mid to late nineteenth century to early twentieth century. The location also contain a small fragment of white ceramic with blue pattern. No other discernible diagnostic features.

Plate 11: Historic Relics identified in WJ-HH-01
WJ-HH-02
Typical of farm machinery between 1935 up to current time dependent upon level of maintenance. This implement is an 8 furrow disc plough. Manufacturer is still being determined.

Plate 12: Heritage Item present at WJ-HH-02

WJ-HH-03
Similar to the implement identified at WJ-HH-02, this implement has potential to be from a slightly earlier period. Construction is slightly less robust than WJ-HH-02 and this plough has a 6 farrow disc capacity. Manufacturer is still being determined.

Plate 13: Heritage Item present at WJ-HH-02
WJ-HH-04

The implement in this instance is a Combine seeder. Manufacture is still being determined but it is likely to be a produced by Sunshine. This implement is more likely to relate to the period from 1950.

Plate 14: Implement present at WJ-HH-04

WJ-HH-05

The bottle is contained in the base of a large eucalypt, indicating the tree has grown around the bottle. The base of the bottle is visible and bears the makers mark for the Australian Glass Manufacturing Company. It appears to be amber, with the makers mark AGM (capital A with the G and M within the A) 1963. The figure 1963 is not a reference to the year of manufacturer it is a reference to the bottle type.

Plate 15: Glass Bottle at WJ-HH-04
WJ-RS-03

This shelter has both Aboriginal and historic cultural values. Contained within the rock shelter are two cast iron bed frame and an assougment of other tin and metal implements and vessels such as a billy can. At the time of identification Glenda Chalker identified that she was aware that large numbers of people used to live in the bush in rock shelters during the depression as they couldn’t afford to live anywhere else. The rock shelter contains a number of charcoal fish motifs and a white anthropomorph motif.

Plate 16: View of Rock Shelter. Location of Cast Iron beds indicated by arrows

Plate 17: Storage pole and billy situated in WJ-RS-03

9.2 Views

Prior to the completion of the survey the potential for significant visual corridors and vistas to be present within the Subject Area was identified. When considering views in relation to significance heritage items it is important to not only consider the views out from the heritage items but to also consider views into the heritage item. Each of these is important in preserving elements that may make a large contribution to the overall significance of the heritage item itself.

Within the Subject Area, two areas of high elevation have been identified. The views from these elevated areas into and out of the Subject Area been identified in Figure 25. There is also the need to consider the views to and from the St Mary’s Towers and the Wilton Park Stable Complex. Both of these items are on the State Heritage Register and impacts upon their visual setting needs to be considered in any historic assessment undertaken for developments in the future.

During the field survey it was observed that the view sheds to and from the identified heritage Items to the west of the Subject Area (“Wilton Park” “Kedron” and “Lindale”) were all naturally truncated by the ridge along the western boundary of the Subject Area. None of the three properties identified possess views that extend into the Subject Area (Figure 26).

View sheds that will require consideration as those to and from “Parkhall” and “Condell Park”. The views to “Parkhall” will only be affected in the immediate foreground as the vegetative buffer associated with Allens Creek will be retained. There are also significant land holdings surrounding “Parkhall” that are not affected by this current proposal and not subject to any future development proposal, and as such we anticipate will be retained in its current usage. Views from “Parkhall” will not be affected at ground level by the current proposal, the vegetative buffer along Allens Creek ensure that only 1 high point within the Subject Area is visible and no development is proposed at that location.
9.3 Discussion

The findings of the field survey were in keeping with the predictive model for the Subject Area as detailed in Section 7.8.

As has been previously noted, the views to and from the identified heritage Items to the west of the Subject Area (“Wilton Park,” “Kedron,” and “Lindale”) are naturally truncated by the ridge along the western boundary of the Subject Area (Figure 26).

Historic heritage items identified as part of the survey (Figure 26) are indicative of past agricultural practices within the landscape during the twentieth century.
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Figure 25: Historic Vista relevant to the Subject Area
Figure 26: Historic Heritage Items identified from this Study
10 SIGNIFICANCE ASSESSMENT

10.1 Aboriginal Heritage

10.1.1 Aboriginal Cultural Significance Assessment

Cultural significance indicates the importance of a site or feature to Aboriginal communities. This category may include sites, items and landscapes that people may have traditional ties with, as well as areas that may have contemporary importance to Aboriginal communities. Places of cultural value may have social significance to Aboriginal communities, they may have historic value through association with historic themes (e.g. missions or massacres), or they may take on value because of their rarity or because a place may be able to contribute new information about the past. Places may have aesthetic significance, being natural features with symbolic values, dramatic presence or tranquil qualities. Cultural significance may not be in accord with the interpretations made by archaeologists – a site may have low archaeological significance but high Aboriginal significance, or vice versa.

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<tr>
<td>Moderate</td>
<td>Wilton; Allens Creek; Allen’s Creek No 3 Wilton; Allen’s Creek No 4; Wilton; Wilton AC1; Allens Creek; Allen’s Creek No 2; Wilton; Allen’s Creek No 1; Wilton; Wilton Bypass 1 Wilton; Allens Creek Bridge; Allens Crk.; Allen Crk.; WFRS1; WJ-AS-06; WJ-AS-07; WJ-AS-05; WJ-AS-04; WJ-RS-01; WJ-RS-04; WJ-RS-05; WJ-RS-07; WJ-RS-08; WJ-AS-01; WJ-AS-02; WJ-AS-03; Bradcorp 1</td>
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<tr>
<td>Low</td>
<td>Wilton 02; WJ-IF-02; WJ-IF-01; WJ-IF-10; WJ-IF-08; WJ-IF-09; WJ-IF-05; WJ-IF-04; WJ-IF-06; WJ-IF-07; WJ-RS-06; WJ-IF-03</td>
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</table>

Table 12: Cultural Significance Ranks for Aboriginal sites within Subject Area

10.1.2 Archaeological Significance Assessment

Scientific or archaeological significance may be assessed by placing a site, feature or landscape in a broader regional context and by assessing its individual merits in the context of current archaeological discourse. This type of significance relates to the ability of a site to answer current and future research questions, which may be influenced by physical condition (integrity), information potential, rarity and/or representativeness.

Rarity and Representativeness is an assessment of how rare or common a site or landscape is. In theory, heritage items may be determined to be significant because they are rare forms, or they may be considered to be very good typical forms. Whether items are of rare or common forms will depend to some extent on the variables used to distinguish them. Open sites, for example, may be distinguished from grinding grooves or scarred trees according to the general type of evidence present (e.g. stone artefacts distinguishable from trees with marks or grooves on rock platforms). To assess rarity and representativeness, site type can be used initially, and then this category subdivided until a satisfactory level of (dis)similarity is achieved. Within the general group “open artefact scatters”, sites may be distinguished according to other variables, such as their content, or their landscape setting. Technically, an assessment of representativeness should identify both what is typical or common as well as what is rare.

Research potential is an assessment of the ability of a site or landscape to provide information to answer questions about the past. Several criteria may be considered:
Physical condition. Sites or landscapes in good physical condition are generally able to provide information on spatial relationships between (for example) stone artefacts, other remains, chronological units if present, and landscape settings;

The connectedness of individual sites or landscapes – is the content, site or landscape part of a complex of related sites or landscapes?

The potential of a site or landscape to provide a relative or absolute chronology extending back into the past; i.e. stratified sequences of cultural materials and/or dateable materials such as organic remains (radiocarbon dating), or sealed or cultural deposits (optical or thermo luminescence);

The ability of the site or landscape to provide a large sample size (large numbers of stone artefacts, art motifs, grinding grooves etc.) about which statistically significant statements can be made.

10.1.3 Archaeological Assessment of the Subject Area
Within the Subject Area are a range of Aboriginal sites with varying levels of archaeological and Cultural significance. Based upon the assessment a large proportion of the Subject Area is assessed to be of low archaeological significance, however there are other locations within the Subject Area that have been assessed as possessing high archaeological significance. In addition to the archaeological significance of known sites (Table 13 and Figure 27) there is also archaeological potential to be considered. Locations at which there is a high likelihood for intact subsurface archaeological deposits to be present have been identified in Figure 24. Due to the highly disturbed nature of the surface over much of the Subject Area, the archaeological significance of the Subject Area is considered to be low to moderate in the plateau area, and moderate in the rock shelter areas, given they are more likely to have been preserved and may therefore contain in situ deposit (see Figure 24).

Rarity and Representativeness

Open artefact scatters are a common occurrence across the Cumberland Plain, particularly in lower-lying areas close to a major watercourse. Any artefacts found to be present within the Subject Area are therefore likely to be contemporaneous with other open artefact scatters found in the vicinity.

The unusual, and potentially unique, depiction of the white ochre figure is considered to be a rare example of contact art.

Research potential

Physical condition. Given that the former land use has been identified as pastoral, surface artefacts are expected to be in good condition. Tillage farming has a tendency to cause wear and breakage to artefacts as they are repeatedly displaced and redistributed throughout the upper soil horizon.

Connectedness. Any previously undiscovered site in the Subject Area would be expected to be connected to similar sites along the Allens and Byrnes Creeks, and form part of a pattern of settlement and transient activity through the area.

Potential for a Chronological Sequence. The stylistic dating of lithics (stone tools) is imprecise, given the length of time over which various stone-working (knapping) techniques were used, and also the time it took for any new techniques to be adopted. Dating can be more closely estimated if there
is a strong relation with a site which has sequences of radiocarbon dates, or if the lithics are buried under dateable deposits.

*Ability to produce statistically useful samples of objects.* Most reported sites in the vicinity of the Subject Area have produced less than 100 individual artefacts. Such sites in the Subject Area would add greatly to the overall knowledge of lithic technologies employed in the Wilton area, and to assist in the identification of any types or styles of artefacts that may be geographically-specific. Artefact densities consistent with surrounding sites would also help to understand the extent and pattern of pre-contact Aboriginal land use in the area.

<table>
<thead>
<tr>
<th>AHIMS #</th>
<th>Site Name</th>
<th>Archaeological Significance</th>
</tr>
</thead>
<tbody>
<tr>
<td>52-2-1318</td>
<td>Allen Crk;</td>
<td>Moderate</td>
</tr>
<tr>
<td>52-2-0985</td>
<td>Allen’s Creek No 3 Wilton</td>
<td>Moderate</td>
</tr>
<tr>
<td>52-2-1062</td>
<td>Allen’s Creek No 4;Wilton;</td>
<td>Moderate</td>
</tr>
<tr>
<td>52-2-1067</td>
<td>Allen’s Creek No 1;Wilton;</td>
<td>Moderate</td>
</tr>
<tr>
<td>52-2-1080</td>
<td>Allens Creek No 2;Wilton;</td>
<td>Moderate</td>
</tr>
<tr>
<td>52-2-1319</td>
<td>Allens Crk.;</td>
<td>Moderate</td>
</tr>
<tr>
<td>52-2-3830</td>
<td>Bradcorp 1</td>
<td>Moderate</td>
</tr>
<tr>
<td>WFRS1</td>
<td>WFRS1</td>
<td>Moderate</td>
</tr>
<tr>
<td>52-2-3590</td>
<td>Wilton 01</td>
<td>High</td>
</tr>
<tr>
<td>52-2-3591</td>
<td>Wilton 02</td>
<td>Low</td>
</tr>
<tr>
<td>52-2-1676</td>
<td>Wilton AC1;Allens Creek;</td>
<td>Moderate</td>
</tr>
<tr>
<td>52-2-1340</td>
<td>Wilton Bypass 1</td>
<td>Moderate</td>
</tr>
<tr>
<td>52-2-1063</td>
<td>Wilton; Allens Creek Bridge</td>
<td>Moderate</td>
</tr>
<tr>
<td>52-2-1325</td>
<td>Wilton; Allens Creek.;</td>
<td>Moderate</td>
</tr>
<tr>
<td>52-2-4097</td>
<td>WJ-AS-01</td>
<td>Moderate</td>
</tr>
<tr>
<td>52-2-4098</td>
<td>WJ-AS-02</td>
<td>Moderate</td>
</tr>
<tr>
<td>52-2-4099</td>
<td>WJ-AS-03</td>
<td>Moderate</td>
</tr>
<tr>
<td>52-2-4100</td>
<td>WJ-AS-04</td>
<td>Moderate</td>
</tr>
<tr>
<td>52-2-4094</td>
<td>WJ-AS-05</td>
<td>Moderate</td>
</tr>
<tr>
<td>52-2-4095</td>
<td>WJ-AS-06</td>
<td>Moderate</td>
</tr>
<tr>
<td>52-2-4096</td>
<td>WJ-AS-07</td>
<td>Moderate</td>
</tr>
<tr>
<td>52-2-4091</td>
<td>WJ-IF-01</td>
<td>Low</td>
</tr>
<tr>
<td>52-2-4092</td>
<td>WJ-IF-02</td>
<td>Low</td>
</tr>
<tr>
<td>52-2-4093</td>
<td>WJ-IF-03</td>
<td>Low</td>
</tr>
<tr>
<td>52-2-4088</td>
<td>WJ-IF-04</td>
<td>Low</td>
</tr>
<tr>
<td>52-2-4089</td>
<td>WJ-IF-05</td>
<td>Low</td>
</tr>
<tr>
<td>52-2-4090</td>
<td>WJ-IF-06</td>
<td>Low</td>
</tr>
<tr>
<td>52-2-4086</td>
<td>WJ-IF-07</td>
<td>Low</td>
</tr>
<tr>
<td>52-2-4087</td>
<td>WJ-IF-08</td>
<td>Low</td>
</tr>
<tr>
<td>52-2-4084</td>
<td>WJ-IF-09</td>
<td>Low</td>
</tr>
<tr>
<td>52-2-4085</td>
<td>WJ-IF-10</td>
<td>Low</td>
</tr>
<tr>
<td>52-2-4077</td>
<td>WJ-RS-01</td>
<td>Moderate</td>
</tr>
<tr>
<td>52-2-4078</td>
<td>WJ-RS-02</td>
<td>Moderate</td>
</tr>
<tr>
<td>52-2-4075</td>
<td>WJ-RS-03</td>
<td>High</td>
</tr>
<tr>
<td>52-2-4076</td>
<td>WJ-RS-04</td>
<td>Moderate</td>
</tr>
</tbody>
</table>
Table 13: Archaeological Significance Rankings of Aboriginal Sites identified in this study

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
<th>Ranking</th>
</tr>
</thead>
<tbody>
<tr>
<td>52-2-4071</td>
<td>WJ-RS-05</td>
<td>Low</td>
</tr>
<tr>
<td>52-2-4072</td>
<td>WJ-RS-06</td>
<td>Low</td>
</tr>
<tr>
<td>52-2-4073</td>
<td>WJ-RS-07</td>
<td>Low</td>
</tr>
<tr>
<td>52-2-4074</td>
<td>WJ-RS-08</td>
<td>Low</td>
</tr>
<tr>
<td>52-2-4081</td>
<td>WJ-ST-01</td>
<td>High</td>
</tr>
<tr>
<td>52-2-4082</td>
<td>WJ-ST-02</td>
<td>High</td>
</tr>
<tr>
<td>52-2-4083</td>
<td>WJ-ST-03</td>
<td>High</td>
</tr>
<tr>
<td>52-2-4079</td>
<td>WJ-ST-04</td>
<td>High</td>
</tr>
<tr>
<td>52-2-4080</td>
<td>WJ-ST-05</td>
<td>High</td>
</tr>
</tbody>
</table>

10.1.4 Statement of Archaeological Potential and Significance

The potential for Aboriginal cultural material to be present within the Subject Area is considered to be high, and in areas where there has been limited or no ground disturbance in the past, the potential for sub-surface archaeological material (Figure 24) to be present is assessed to be moderate to high. Areas that conform to this assessment have been identified in Figure 27.

The rock shelters identified are a common type of Aboriginal site (see Table 4 and Table 13). Their archaeological significance is identified in Figure 27. Two of the identified rock shelters were identified as containing art. The predictive model for the Subject Area (see Section 6.7) indicated it was highly unlikely for any identified rock shelters to contain art, since these shelter sites had already been searched for, while all shelter sites would contain areas of PAD.
Figure 27: Significance of Aboriginal Heritage Items within the Subject Area
10.2 Historic Heritage

10.2.1 Assessment of Significance
The Burra Charter defines cultural heritage significance as follows:

_Cultural significance means aesthetic, historic, scientific, social or spiritual value for past, present or future generations. Cultural significance is embodied in the place itself, its fabric, setting, use, associations, meanings, records, related places and related objects. Places may have a range of values for different individuals or groups._4

The NSW Heritage Office has developed a series of criteria used to assess the significance of a heritage item(s). These are listed below:

<table>
<thead>
<tr>
<th>Criterion</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>(a)</td>
<td>An item is important in the course, or pattern, of NSW’s cultural or natural history (or the cultural or natural history of the local area).</td>
</tr>
<tr>
<td>(b)</td>
<td>An item has strong or special association with the life or works of a person, or group of persons, of importance in NSW’s cultural or natural history (or the cultural or natural history of the local area).</td>
</tr>
<tr>
<td>(c)</td>
<td>An item is important in demonstrating aesthetic characteristics and/or a high degree of creative or technical achievement in NSW (or the local area).</td>
</tr>
<tr>
<td>(d)</td>
<td>An item has a strong or special association with a particular community or cultural group in NSW (or the local area) for social, cultural or spiritual reasons.</td>
</tr>
<tr>
<td>(e)</td>
<td>An item has potential to yield information that will contribute to an understanding of NSW’s cultural or natural history (or the cultural or natural history of the local area).</td>
</tr>
<tr>
<td>(f)</td>
<td>An item possesses uncommon, rare or endangered aspects of NSW’s cultural or natural history (or the cultural or natural history of the local area).</td>
</tr>
<tr>
<td>(g)</td>
<td>An item is important in demonstrating the principal characteristics of a class of NSW’s cultural or natural places; or cultural or natural environments (or a class of the local area’s cultural or natural places; or cultural or natural environments).</td>
</tr>
</tbody>
</table>

| Table 14: Assessment against Heritage significance Criterion |

The significance of an item, once it has been established, is then graded to reflect the degree of significance:

<table>
<thead>
<tr>
<th>Grading</th>
<th>Justification</th>
<th>Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>Exceptional</td>
<td>Rare or outstanding item of local or State significance. High degree of intactness. Item can be interpreted relatively easily.</td>
<td>Fulfils criteria for local or State listing.</td>
</tr>
<tr>
<td>High</td>
<td>High degree of original fabric. Demonstrates a key element of the item’s significance. Alterations do not detract from significance.</td>
<td>Fulfils criteria for local or State listing.</td>
</tr>
<tr>
<td>Moderate</td>
<td>Altered or modified elements. Elements with little heritage value, but which will contribute to the overall significance of the item.</td>
<td>Fulfils criteria for local or State listing.</td>
</tr>
<tr>
<td>Little</td>
<td>Alterations detract from significance. Difficult to interpret.</td>
<td>Does not fulfil criteria for local or State listing.</td>
</tr>
<tr>
<td>Intrusive</td>
<td>Damaging to the item’s heritage significance.</td>
<td>Does not fulfil criteria for local or State listing.</td>
</tr>
</tbody>
</table>

Table 15: Grading of Significance to reflect Assessment of Significance

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4 Australia ICOMOS, 2000 The Burra Charter. Article 1.2
10.2.2 Historic Heritage Assessment of the Subject Area

Within the Subject Area are a range of historic heritage items with varying levels of archaeological significance (see Table 16 and Figure 28). Based upon the assessment a large proportion of the Subject Area is assessed to be of low historic heritage archaeological significance, however there are other locations within the Subject Area that have been assessed as possessing either moderate or high archaeological significance (see Table 16).

The heritage impact assessment addressed in Table 16 is based on the effect that future impacts may have on historic sites should the rezoning application that is current being investigated be subsequently approved. Figure 19 and Figure 28 shows the historic vistas and items that are identified in Table 16.

A recommended management strategy or mitigation action for the historic heritage within and adjacent to the Subject Area is outline in Table 17.

<table>
<thead>
<tr>
<th>Heritage Item</th>
<th>Significance</th>
<th>Heritage Impact Assessment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wilton Park Stable Complex</td>
<td>High</td>
<td>Little or no direct heritage impact. Possible indirect heritage impact</td>
</tr>
<tr>
<td>Parkhall</td>
<td>Moderate</td>
<td>Little or no direct heritage impact. Possible indirect heritage impact</td>
</tr>
<tr>
<td>WJ-HH-01</td>
<td>Low</td>
<td>Whole - possibly move object</td>
</tr>
<tr>
<td>WJ-HH-02</td>
<td>Low</td>
<td>Whole - possibly move object</td>
</tr>
<tr>
<td>WJ-HH-03</td>
<td>Low</td>
<td>Whole - possibly move object</td>
</tr>
<tr>
<td>WJ-HH-04</td>
<td>Low</td>
<td>Whole - possibly move object</td>
</tr>
<tr>
<td>WJ-HH-05</td>
<td>Low</td>
<td>Whole - possibly move object</td>
</tr>
<tr>
<td>WJ-RS-03</td>
<td>High</td>
<td>No heritage impact.</td>
</tr>
<tr>
<td>Condell Park</td>
<td>Moderate</td>
<td>Little or no heritage impact.</td>
</tr>
<tr>
<td>St Mary’S Tower</td>
<td>High</td>
<td>Little or no heritage impact.</td>
</tr>
<tr>
<td>Wilton Park</td>
<td>Moderate</td>
<td>Little or no heritage impact.</td>
</tr>
<tr>
<td>“Kedron”</td>
<td>Moderate</td>
<td>Little or no heritage impact.</td>
</tr>
<tr>
<td>“Lindale”</td>
<td>Moderate</td>
<td>Little or no heritage impact.</td>
</tr>
<tr>
<td>Thomtons Weir</td>
<td>Low</td>
<td>No heritage impact.</td>
</tr>
<tr>
<td>Upper Nepean System Turned</td>
<td>High</td>
<td>No heritage impact.</td>
</tr>
<tr>
<td>Cottage</td>
<td>Low</td>
<td>No heritage impact.</td>
</tr>
<tr>
<td>St Luke’s Church</td>
<td>Moderate</td>
<td>No heritage impact.</td>
</tr>
</tbody>
</table>

Table 16: Assessment of Significance of Historic Sites identified in this study and heritage impact

10.3 Statement of Significance for the Subject Area

This is a brief statement, based on the assessment of significance that best reflects the reasons for the significance of the item or place. The statement of significance for the Subject Area is based on the criterion provided by the Heritage Office (and Table 15).

The water infrastructure is considered to be of high level of significance and Sue Rosen’s Statement of Significance is attached to this document to reflect this assessment (Rosen 2005:75). The below statement of significance pertains to the Subject Area more generally and the recommendations that come out of this study reflect this statement.

The development of agriculture in colonial NSW was critical to the success of the new colony. To this end a variety of strategies were implemented to stimulate agricultural activity. Macquarie’s
Land Grant system and the opening up of the “Cumberland Plains” to the west of Sydney, to further settlement are two of the main examples of these attempts, which were largely successful, to stimulate food production and sustainable development of the colony itself.

Both of these strategies stimulated settlement in the Subject Area. Settlers arrived into the area from the 1820s onwards and proceeded to undertake agricultural activities to various degrees of success. It is an activity that has been conducted in this area since colonial times and includes Mitchell’s Estate Park Hall which reflected the aspirational nature of colonial New South Wales.

**Criterion A**

The Subject Area reflects the development of colonial agriculture to the west and south of Sydney throughout the “Cumberland Plain”. Much of the area was used continuously for this purpose throughout the nineteenth and twentieth centuries. This is considered to be of regional significance.

**Criterion B**

The area has associations with people considered to significant to the colonial era including George Caley, Thomas Mitchell, and Ouseley Condell.

**Criterion D**

People of local significance include the Broughton, Kennedy and Hume families.

**Relevant Historic Themes**

The NSW Heritage office provides practitioners with a series of historical themes that are considered to be significant in Australian History. These themes are used to help in the assessment of the significance of an item. Based upon the historic context of the Subject Area and the historic finds identified during completion of the survey the Subject Area the regional theme of “Developing local, regional and national economies: Agriculture” applies to the Subject Area.

Regional themes provide an excellent starting point for the development of historic heritage interpretation strategies. This theme should be incorporated into any future interpretation strategy implemented for the Subject Area.
Proposed Rezoning “Wilton Junction”, Wilton, Wollondilly Shire LGA, NSW

Aboriginal Cultural Heritage Assessment and Historic Heritage Assessment

For Figure 28: Significance of Historic Heritage Items within the Subject Area
11 ASSESSMENT OF THE MASTERPLAN

The location of Aboriginal sites throughout the Subject Area has resulted in a number of amendments to the Masterplan as various challenges were encountered and responded to. Overall attempts have been made to minimise the impact the proposal will have upon Aboriginal and Historic Heritage Items. The table below (Table 17) details the anticipated impacts and management/other recommendations for the identified Aboriginal and Historic heritage items and sites, should the development proceed as shown in the current Masterplan.

Where possible, Aboriginal sites have been incorporated into proposed conservation areas, riparian corridors or parks; this effectively ensures they are not directly impacted by the future development footprint. However, the long term conservation of these sites should be ensured from future direct or indirect impacts as a result of the development of the Precinct. In addition, some impacts will still occur at a number of identified sites and PADS (see Table 17). The significance of each of the heritage sites are identified in Table 13 and Table 16.

<table>
<thead>
<tr>
<th>Zoning Areas within Masterplan</th>
<th>Site Name</th>
<th>Management/Other Recommendation</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>WJ-ST-01, WJ-ST-02</td>
<td>Conservation</td>
</tr>
<tr>
<td></td>
<td>WJ-HH-01, WJ-HH-02, WJ-HH-03, WJ-HH-04, WJ-HH-05</td>
<td>Further archaeological assessment for relevant permit</td>
</tr>
<tr>
<td>Existing Vegetation</td>
<td>WJ-AS-01</td>
<td>AHIP</td>
</tr>
<tr>
<td></td>
<td>WJ-RS-03</td>
<td>Conservation and further investigation</td>
</tr>
<tr>
<td>Open Space</td>
<td>WJ-IF-06, WJ-AS-04, WJ-AS-05, WJ-AS-06</td>
<td>AHIP</td>
</tr>
<tr>
<td></td>
<td>WJ-ST-03, 52-2-3590</td>
<td>Conservation</td>
</tr>
</tbody>
</table>

Table 17: Likely Impacts to Aboriginal and Heritage Sites and Management Strategies for Proposed Masterplan

11.1 Suggested mitigation of impact

As part of the precinct planning and Step 3 of the Aboriginal heritage assessment process, the results of the Step 1 background review and Step 2 assessment were provided to the project team for consideration into the Masterplan. This allowed for consideration of Aboriginal heritage in the development of the current Masterplan or development footprint for the Subject Area. The cultural heritage sites and values for both Aboriginal and historic heritage items have been incorporated into the Masterplan on the basis of the significance rankings discussed in Section 10 above.

In addition to the mapping of Aboriginal and Historic heritage within the Precinct, some preliminary management options were provided for consideration if the site would or would not be impacted (refer to ). While these options were provided, it was recommended that the areas identified as having exceptional significance to the local Aboriginal community should be conserved, with longterm management ensuring that there are no future direct or indirect impacts as a result of the development of the Precinct or neighbouring properties.
Recommended management options for each of the assessed Aboriginal cultural heritage significance rankings within Wilton Junction are provided in Table 18.

<table>
<thead>
<tr>
<th>Significance Ranking</th>
<th>Management Options</th>
<th>Impact</th>
</tr>
</thead>
<tbody>
<tr>
<td>Exceptional</td>
<td>Conservation management plan should be prepared. Decisions regarding the long-term management and conservation of this area should be made in consultation with the local Aboriginal community.</td>
<td>This area is of exceptional significance and should not be impacted.</td>
</tr>
<tr>
<td>High</td>
<td>These sites should be conserved where possible. Conservation management plan should be prepared. Decisions regarding the long-term management and conservation of this area should be made in consultation with the local Aboriginal community.</td>
<td>Salvage excavation should be undertaken under a Section 90 consent to mitigate against the loss of information. DECCW (2010a) Aboriginal Cultural Heritage Consultation Requirements for Proponents would be implemented.</td>
</tr>
<tr>
<td>Moderate</td>
<td>These sites or PADs should be conserved where possible. Conservation management plan should be prepared. Where these sites are conserved, decisions regarding the long-term management and conservation of this area should be made in consultation with the local Aboriginal community.</td>
<td>Test/salvage excavation should be undertaken at some of the impacted sites under a to mitigate against the loss of information. Strategy for test/salvage excavation would depend upon the layout of the Master Plan. (Note: test excavation may or may not be associated with the section 90 consent). Aboriginal Cultural Heritage Consultation Requirements for Proponents would be implemented.</td>
</tr>
<tr>
<td>Low</td>
<td>These sites should be conserved where possible. Site locations included in Conservation management plan. Where these sites are conserved, decisions regarding the long-term management and conservation of this area should be made in consultation with the local Aboriginal community.</td>
<td>Section 90 consent should be obtained prior to the commencement of works affecting these sites. Aboriginal Cultural Heritage Consultation Requirements for Proponents (DECCW 2010a) would be implemented.</td>
</tr>
</tbody>
</table>

Table 18: Significance ranking and preliminary management options

The best way to mitigate the impact of the development on the identified PAD sites is to conduct a programme of intrusive investigation, through test pitting. Archaeological testing would assist in the determination of the presence or absence of Aboriginal cultural heritage items and/or deposits in lieu of surface visibility, and would also assess the nature and extent of such deposits. Typically these investigatory works will occur in support of a Development Application over the relevant area.

Large portions of the Subject Area will remain unaffected by the development from the proposed rezoning over an extended period. It may be worthwhile considering the implementation of an Aboriginal Cultural Heritage Management Plan (ACHMP) for the effective long term management of the archaeological resource within the Subject Area.
12 PRINCIPAL FINDINGS AND RECOMMENDATIONS

In Section 1.6 of this report a number of aims and objectives were identified. This report has successfully achieved these aims and objectives. More specifically each of the specifications of the Study Requirements’ (including the areas identified in the letter from the Office of Environmental and Heritage dated 2 March 2013) has been addressed.

The report has identified a number of previously unrecorded Aboriginal and historic heritage items. This report has reviewed the available existing documents including previous archaeological assessments conducted within the Subject Area and the surrounding region. An archaeological survey has been completed to identify any additional sites located within the Subject Area. The significance of Aboriginal and Historic heritage sites within the Subject Area has been identified.

The appropriate registers relevant to Aboriginal and historic heritage have been consulted and the results have been presenting and this report. Locations with potential for intact Aboriginal archaeological deposits and historic archaeological remains have been identified.

Section 6.7 of this report made certain predications in relation to the location of Aboriginal sites and their likely site types that may be present across the Subject Area i.e. rock shelters are the most likely site type to be encountered within the Subject Area (See Section 6.7). From the results presented in Section 8 and review of Figure 22, Figure 23 and Figure 24 it has been shown that the predictions made in relation to Aboriginal heritage hold true for the Subject Area. A more detailed presentation of the findings in relation to Aboriginal Heritage is available in Section 12.1.

Items of significant Historic heritage where known to exist throughout and immediately adjacent to the Subject Area. There are locations in within the Subject Area likely to retain evidence of remains associated with the first occupation of the area by colonial settlers. See below (Section 12.1.1)

This assessment has identified a number of Aboriginal and Historic heritage items within the Subject Area. The Masterplan has been designed to minimise the impacts upon items that have been assessed to be of high significance. The proposed impacts upon items of Aboriginal heritage or items of historic heritage are not sufficient as to prevent the rezoning application currently proposed.

12.1 Aboriginal Heritage

49 Aboriginal sites had previously been identified within the Subject Area (See Section 6.5 for more details). As a result of the survey and assessment undertaken for this present study an additional 30 previously unknown Aboriginal sites have been identified. These additional sites consist of seven (n=7) artefact scatters, ten (n=10) isolated finds, eight (n=8) rock shelters with either PAD, art or artefacts and five (n=5) scarred trees that have been assessed to be the result of Aboriginal cultural practices (see Table 9, Figure 22 and Figure 23). It is expected that the overall number of Aboriginal sites will increase once additional survey is undertaken within the conservation areas associated with the Nepean River and Byrnes Creek. Based upon the incidence of Rock Shelters within Stringy Bark Creek and Allens Creek additional 30-50 sites would not be unexpected. The majority of these additional sites would likely be Rock Shelters with Art and/or artefacts and would be in location not subject to any direct development impacts and would not be disturbed but would be retained and conserved.

There are large portions of the Subject Area in which no evidence of Indigenous people use and occupation has been identified. Where this evidence does exist (principally as open context sites
i.e. Artefact Scatters and Isolated Finds) they are in the main present within area currently proposed for direct impact from development should the rezoning proceed. These sites will require additional assessment in the form of sub-surface investigations prior to an AHIP being sought from the Office of Environment and Heritage. Excavation of Aboriginal sites in this area has been extremely limited. The most relevant was undertaken in 2006 within the Bingara Gorge Development.

With regard to the Scarred Trees currently located within the proposed development area it is preferable that where these items are in good condition that they be incorporated into public open space or conservation areas. Where the item is in poor condition (as 1 item is within the Wilton Junction Subject Area) the Aboriginal community would support the item being removed and conserved at an alternate location. The Masterplan concept has considered the above, and all scarred tree in good condition have been incorporated into open space areas (Table 17).

The occupation model proposed in our assessment identified that open sites are more likely to occur in flat elevated positions directly associated with creek lines (Figure 21 to Figure 23). Where visibility met industry standards this occupation model held true, where visibility was below industry standards no results to support the occupation model occurred. Given the low visibility in these locations (Table 10 and Figure 20) and the fact that the model was proven true where sufficient visibility was available these locations have been assessed to be archaeologically sensitive. Areas identified as being archaeologically sensitive (see Section 8.1 and Figure 24) will require additional assessment in the form of sub-surface investigations prior to an AHIP being sought from the Office of Environment and Heritage. Additional assessment this will be required as part of the specialist reports prepared to support a Development Application, therefore investigation works will be required to be completed with sufficient time for appropriate reporting prior to DA submission.

### 12.1.1 Legislative Obligations and Recommendations relation of Aboriginal Heritage

Specific clauses within the National Parks and Wildlife Act 1974 (as amended) and the National Parks and Wildlife Regulations 2009 give rise to certain obligations with regard to Aboriginal heritage and are detailed below. Following on from obligations are Recommendations. These Recommendations are developed by applying industry standards and norms to the specific of this project. Where an activity or task must be undertaken to comply with relevant legislation it will be detailed as an Obligation, where a task or activity is recommended to be undertaken to meet the current industry standards it is presented as a Recommendation.

#### Obligations

A1 Site Cards to be prepared for all Aboriginal sites identified in this study that are not currently recorded in Aboriginal Heritage Information Management System maintained by the Office of Environment and Heritage.

A2 An Aboriginal Heritage Impact Permit under Part 6 of the National Parks and Wildlife Act 1974 for any impacts to Aboriginal objects.

#### Recommendations

NOTE: All reference to further investigations and/or additional assessment or similar are written with the intention that the works will be undertaken to inform Development Applications that will follow on from the rezoning currently being considered. These works are not required to inform the current assessment.

The management principles and recommendations are based on:
The legal requirements of the National Parks and Wildlife Act 1974 (as amended), whereby it is illegal to damage, deface or destroy an Aboriginal relic without first obtaining the written consent of the Director General of National Parks & Wildlife Service;

The requirements of the Code of Practice for Archaeological Investigation of Aboriginal Objects in NSW (DECCW 2010b);

The requirements of the Guide to Investigating, Assessing and Reporting on Aboriginal Cultural Heritage in NSW (OEH 2011);

The findings presented within this Aboriginal Cultural Heritage Assessment; and,

Recognition of the extended period of which development activities will occur within the Subject Area.

KAS recommends the following:

A1 No further assessment of the Aboriginal heritage within the Subject Area is required to inform the rezoning proposal.

A2 Prior to Development Application Stage for an identified area, further Aboriginal archaeological investigations are required at all locations identified in Figure 24. See below for further considerations for these investigations.

A3 Any proposed impacts within the Conservation or Open Space area identified in Figure 3 (or any future version of the master plan) should be subject to separate assessment prior to the impact to assess the cumulative impact of the proposed works on Aboriginal heritage (Figure 22 and Figure 23).

A4 An Aboriginal Heritage Impact Permit under Part 6 of the National Parks and Wildlife Act 1974 should be sought for the extent of each Development Application area. The need for an Aboriginal Heritage Impact Permit will trigger the opportunity to undertake further consultation. This Aboriginal Heritage Impact Permit should be sought for all known and unknown Aboriginal objects within the Development Application area as a strategy to minimise the risk of delays during works that may result from unexpected finds.

A5 As a result of Recommendations 2 and 4 a process of further consultation with Aboriginal stakeholders will be required to be undertaken in accordance with the specifications of Aboriginal Cultural Heritage Consultation Requirements for Proponents (DECCW 2010a).

A6 Those portions of the Subject Area not previously affect by high levels of ground disturbance (See Figure 8 to Figure 13) and not being subject to survey during this investigation (Figure 4) will require additional survey and assessment prior to management strategies being proposed and implemented. This additional survey and assessment should be undertaken prior to a Development Application being submitted for the identified area.

A7 Further investigation and assessment will be required to identify appropriate strategies for long term management impacts of visitation to Aboriginal Rock shelter sites within conservation lands.

A8 Archival recording utilising measured drawing and digital capture techniques should be undertaken at each of the rock art and rock shelter sites.

A9 Report distribution:
A copy of the final report should be sent to each of the following organisations and individuals:

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<thead>
<tr>
<th>ORGANISATION NAME</th>
<th>CONTACT</th>
<th>ADDRESS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tharawal Local Aboriginal Land Council</td>
<td>Neale Sampson</td>
<td>PO Box 168 PICTON NSW 2571</td>
</tr>
<tr>
<td>Cubbitch Barta Native Title Claimants Aboriginal Corporation</td>
<td>Glenda Chalker</td>
<td>55 Nightingale Road PHEASANTS NEST NSW 2574</td>
</tr>
</tbody>
</table>

Table 19: Recommended distribution of Final report

**Statutory constraints on archaeological testing for Aboriginal Sites**

Further Archaeological investigations of Aboriginal sites prior to Development Application has been recommended in this assessment. According to Requirement 16a of the Code of Practice (DECCW 2010b, p. 26), test pits must:

- be located on a grid of a scale appropriate to the size of the area being tested;
- be separated by at least 5m;
- generally be no larger than 50cm x 50cm (with minor exceptions);
- constitute less than 0.5% of the total area of the site being tested;
- be excavated in 10cm spits to at least the base of artefact-bearing soil units;
- be excavated using hand tools only;
- have all of the excavated material sieved through a 5mm aperture wire mesh; and,
- be documented by way of drawn, photographic and written record.

The test excavation should be sufficiently comprehensive to allow characterisation of the Aboriginal objects present without having a significant impact on the archaeological value of the Subject Area (DECCW 2010b:27).

Notification of intention to carry out archaeological testing, including the methodology, must be submitted to the RAPs and OEH not later than 14 days prior to commencement of the testing programme (DECCW 2010b:25).

**12.2 Historic Heritage**

There are three locations on the State Heritage Register (SHR) that are particularly relevant to the Wilton Junction Subject Area. These are:

1. Part of the Upper Nepean Catchment System that traverses the eastern portions of the Subject Area;
2. "Parkhall" or St Mary's Towers which was the original Land Grant to Thomas Mitchell, Surveyor General; and
3. The property of "Wilton Park" that is situated immediately west of the Subject Area.

As these locations are on the State Heritage Register it is important to consider the indirect impacts of the project i.e. the effect of development works upon the vistas both into and out from the particular item.

Immediately abutting the Subject Area boundary are also a number of Heritage Items that are on Schedule 5 of the LEP (Figure 19). This is a small cottage on the northern alignment of Wilton Park Road at the western extent of the Subject Area. Development in the immediate environs of this Item will require the preparation of a Statement of Heritage Impact at the Development Application stage that adequately identifies the effect the proposed development will have upon the Heritage Item.
Immediately abutting the Subject Area boundary are a number of Heritage Items that are on Schedule 5 of the LEP (Figure 19). This is a small cottage on the northern alignment of Wilton Park Road at the western extent of the Subject Area. Development in the immediate environs of this Item will require the preparation of a Statement of Heritage Impact that adequately identifies the effect the proposed development will have upon the Heritage Item.

Previous studies have also identified a number of Historic Heritage items do not appear on the Schedule 5 register of the LEP. These include a small sandstone weir structure (Thornton’s Weir) in the southern extent of Allens Creek and the Homestead of “Condell Park”. These items should be included on the Schedule 5 Register and subject to the recommendations regarding additional assessment above.

Development resulting from this rezoning will have considerable impact upon historic heritage as the majority of the heritage items identified in the study are moveable and development works will result in the items being moved from their current location (see Table 16). However a Statement of Heritage Impact for each of the heritage items at Development Application stage will provide detailed mitigation strategies. Therefore should not be considered as adversely affecting the rezoning proposal.

12.2.1 Legislative Obligations and Recommendations – Historic Heritage

Specific clauses within the Heritage Act 1977 (as amended) give rise to certain obligation with regard to historic heritage and are detailed below. Following on from obligations are Recommendations. These Recommendations are developed by applying industry standards and norms to the specific of this project. Where an activity or task must be undertaken to comply with relevant legislation it will be detailed as an Obligation, where a task or activity is recommended to be undertaken to meet the current industry standards it is presented as a Recommendation.

Obligations

H1 Any development likely to impact the heritage significance of the State Significant Heritage Item will require a permit under Section 60 of the Heritage Act 1977 prior to works being undertaken.

H2 An Excavation Permit Exception under Section 134(4) of the Heritage Act is necessary to authorise any disturbance or excavation of land known to or having reasonable cause to suspect that the disturbance or excavation will or is likely to result in a relic being discovered, exposed, moved, damaged or destroyed.

H3 In accordance with Clause 5.10 of the Wollondilly LEP 2011, Development Applications for heritage items, heritage conservation areas and in the vicinity of either will need either a Heritage Impact Statement or Heritage Impact Assessment to accompany the submission.

Recommendations

NOTE: All reference to further investigations and/or additional assessment or similar are written with the intention that the works will be undertaken to inform Development Applications that will follow on from the rezoning currently being considered. These works are not required to inform the current assessment.

The following management principles and recommendations are based on:
The legal requirements of the Heritage Act 1977, whereby it is illegal to disturb or excavate any land knowing or having reasonable cause to suspect that the disturbance or excavation will or is likely to result in a relic being discovered, exposed, moved, damaged or destroyed unless the disturbance or excavation is carried out in accordance with an excavation permit;

The findings presented within this Historic Heritage Assessment; and,

Recognition of the extended period of which development activities will occur within the Subject Area.

KAS recommends the following:

**H1** No further assessment of the historic heritage within the Subject Area is required to inform the rezoning proposal;

**H2** Historic heritage items identified in Table 16 assessed to have any level of significance should be included in Schedule 5 Register of the Wollondilly LEP 2011.

**H3** Prior to Development Application Stage for an identified area, further heritage assessment would be required at all locations identified in Figure 26 to inform the preparation of detailed planning controls, such as DCPs for the site.

**H4** Those portions of the Subject Area not previously affect by high levels of ground disturbance (see Figure 8 to Figure 13) and not being subject to survey during this investigation (Figure 4) will require additional survey and assessment prior to management strategies being proposed and implemented.

**H5** Consideration is given to the installation heritage interpretation material that highlights the major themes (historic heritage) evident in the Subjects Areas i.e. the agricultural nature of both this site and the importance of it to the colonial era. This location(s) for the interpretation should be selected to incorporate a vista that appropriately reflects the heritage of this area.

**H6** Any future development impacts upon the Heritage Items listed in Table 8 and Table 11 and shown in Figure 19 and Figure 26 will require the relevant excavation or exemption notification under the Heritage Act 1977 (refer to Section 2.2.4) where they are present within the Subject Area.
13 REFERENCES

Aecom, 2010 Aboriginal & Historic Heritage Assessment Maldon Rail Terminal, report prepared for Boral Resources (NSW) Pty Ltd.

AMBS 1996 Archaeological Survey of Longwall Mining Applications 14 & 15, Tower Colliery, Douglas Park. Report for BHP Collieries Division (Cat Number 3500)


Austral Archaeology (2003a) Victoria Bridge over Stonequarry Creek, Picton Conservation Management Plan. Prepared for RTA NSW.

Australia ICOMOS 1999, Australia ICOMOS Charter for the Conservation of Places of Cultural Significance (the Burra Charter), revised edition, Australia ICOMOS, Canberra.


Conacher Travers, 2000, Archaeological Assessment Proposed Subdivision Lots 2, 4 and 11 DP 702024 Condell Park Wilton.

DECCW 2010a, Aboriginal Cultural Heritage Consultation Requirements for Proponents, Department of Environment, Climate Change and Water NSW, Sydney South, April 2010.

DECCW 2010b, Code of Practice for Archaeological Investigation of Aboriginal Objects in New South Wales, Department of Environment, Climate Change and Water NSW, Sydney South, 24 September 2010.

Haglund, L., 1982, Archaeological Investigations in the Wilton Area, N.S.W. Report to Longworth and McKenzie for inclusion in the EIS

Hazelton, PA & Tille, PJ 1990, Soil landscapes of the Wollongong-Port Hacking 1:100 000 Sheet, Soil Conservation Service of NSW, Sydney.


Jo McDonald CHM 2006, Aboriginal Archaeological Assessment: Western Sydney Parklands – Phase 1, Bungarribee Precinct and Interface Lands. Report prepared for APP on behalf of Landcom and DiPNR.

KAS 2005 Proposed rezoning for residential purpose Isedale Road and Kamilaroi Crescent, Braemar (north of Mittagong), NSW. Report to Feldkirchen Pty Ltd.


KAS 2010, Recording of Aboriginal Sites WP10-12 (AHIMS # 52-2-3034, -3035 and -3036), Bingara Gorge, Wilton, NSW. Prepared for Delfin Lend Lease Wilton Pty Ltd

KAS, 2013, Aboriginal Cultural Heritage Assessment of Lot XX DP XXXX, Peel Street, Wilton NSW. A report to Treebay Pty Limited.

Koettig, M 1981 Hoddles Crossing to Alpine. Archaeological survey of the proposed F5 extension. Report to the Department of Main Roads.


Nanson, G.C. et al. 1987. Chronology and paleoenvironment of the Cranebrook Terrace (near Sydney) containing artefacts more than 40,000 years old. In Archaeology and Physical Anthropology in Oceania. 22[2]:72-78.


Navin Officer Heritage Consultants, 2003b, Proposed Residential Development DP 836296 (Lot 6) on Hornby Street, Wilton, NSW. A Report to Bradcorp Holdings Pty Limited


Officer, N. 2002 Proposed Renwick Sustainable Village Mittagong, NSW. Archaeological assessment. A report to GHD.

Sefton, C., 1996. Archaeological Investigations of Area 4, Appin Colliery. Report for Collieries Division, BHP Australia Coal. (Cat Number 3655)

Silcox, R. 1988 Archaeological Investigation of HCA 22 and HCA 23, near Mittagong, NSW. Report to the Department of Main Roads, NSW.


Rich, E. 1990 Main Road No. 95, Mount Keira Road – Wilton Bypass: Archaeological Survey for Aboriginal Sites, Report prepared for the Roads and Traffic Authority by Brayshaw MacDonald. (Catalogue Number 1724)


Rosen, S. 1995 Heritage Assessment for Nepean Tunnel Amplification Project, prepared for Sydney Water. (cat Number 3160)

Sefton, C. 1989 Archaeological Survey of the Cordeaux River and Woronora River by the Illawarra Prehistory Group (Cat Number 1853)

Sefton, C., 1998, Archaeological Investigation of Longwalls 16 and 17 and Future Mining Extensions, Tower Colliery. Report for Collieries Division, BHP Australia Coal. (Cat Number 4213)


Stockton, ED and Holland WN, 1974, ‘Cultural sites and their environment in the Blue Mountains’ in *Archaeology and Physical Anthropology in Oceania* Vol. 9, pp. 36-64.


APPENDIX I. AHIMS RESULTS 21ST JANUARY 2013

AHIMS Web Services (AWS)
Search Result

Kayandel Archaeological Services
Suite 2.15, 4 Hyde Parade
Campbelltown New South Wales 2560
Attention: Lance Syne
Email: lance.syne@kayandel.com.au

Dear Sir or Madam:

AHIMS Web Service search for the following area at Datum: GDA, Zone: 56, Eastings: 2933400 - 2914400,
Northings: 6206800 - 6215800 with a Buffer of 1000 meters, conducted by Lance Syne on 21 January 2013.

The extent area of your search is shown in the map below. Please note that the map does not accurately display the exact boundaries of the search as defined in the paragraph above. The map is to be used for general reference purposes only.

A search of the Office of the Environment and Heritage AHIMS Web Services (Aboriginal Heritage Information Management System) has shown that:

- 0 Aboriginal sites are recorded in or near the above location.
- 0 Aboriginal places have been declared in or near the above location.
If your search shows Aboriginal sites or places what should you do?

- You must do an extensive search if AHIMS has shown that there are Aboriginal sites or places recorded in the search area.
- If you are checking AHIMS as a part of your due diligence, refer to the next steps of the Due Diligence Code of Practice.
- You can get further information about Aboriginal places by looking at the gazetted notice that declared it.
  Aboriginal places gazetted after 2001 are available on the NSW Government Gazette (http://www.nsw.gov.au/gazette) website. Gazetted notices published prior to 2001 can be obtained from Office of Environment and Heritage's Aboriginal Heritage Information Unit upon request.

Important information about your AHIMS search

- The information derived from the AHIMS search is only to be used for the purpose for which it was requested. It is not to be made available to the public.
- AHIMS records information about Aboriginal sites that have been provided to Office of Environment and Heritage and Aboriginal places that have been declared by the Minister.
- Information recorded on AHIMS may vary in its accuracy and may not be up to date. Location details are recorded as grid references and it is important to note that there may be errors or omissions in these recordings.
- Some parts of New South Wales have not been investigated in detail and there may be fewer records of Aboriginal sites in these areas. These areas may contain Aboriginal sites which are not recorded on AHIMS.
- Aboriginal objects are protected under the National Parks and Wildlife Act 1974 even if they are not recorded as a site on AHIMS.
- This search can form part of your due diligence and remains valid for 12 months.
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This information is not guaranteed to be free from error. NSW Office of Environment and Heritage (NSW) and its employees disclaim liability for any act done or omission made on the information and consequences of such act or omission.
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Report generated by AHIMS WebServices on 21/01/2013 for Lance Sano for the following areas at Datum GDA, Zone: 56; Eastings: 2093400 - 219400, Northings: 6200400 - 6214000 with a Buffer of 1000 meters. Additional Info: Archaeological Assessment. Number of Aboriginal sites and Aboriginal objects from site 115.

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### Proposed Rezoning “Wilton Junction”, Wilton, Wollondilly Shire LGA, NSW

### Aboriginal Cultural Heritage Assessment and Historic Heritage Assessment

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Report generated by AHIMS WebService on 21/01/2013 for Lance Synco for the following areas at Datum GDA Zone 56: Eastings 203460 291460, Northing 6204000 6214000 with a Buffer of 1000 metres. Additional Info/Archaeological Assessment. Number of Aboriginal sites and Aboriginal objects is 115.

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Report generated by AHMS Web Services on 21/01/2013 for Lance Syne for the following areas at Datum: GDA, E: 56, E: 287960 - 287956, N: 6214363 - 6214220 with a Buffer of 1000 metres. Additional Info: Archaeological Assessment. Number of Aboriginal sites: 11.5. This information is not guaranteed to be free from error. Office of Environment and Heritage (NSW) and its employees do not assume liability for any act, omission or error made on the information and consequences of such error or omission.
### Proposed Rezoning “Wilton Junction”, Wilton, Wollondilly Shire LGA, NSW
Aboriginal Cultural Heritage Assessment and Historic Heritage Assessment

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*Report generated by AHIMs Web Services on 21/01/2013 for Lance Syne for the following areas at Datum GDA, Zone: 56, Eastings: 2073460 - 291460, Northings: 6206400 - 6214000 with a Buffer of 1800 metres. Additional Info: Aboriginal Assessment Number of Aboriginal sites and Aboriginal objects form stack 115.*

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## Proposed Rezoning “Wilton Junction”, Wilton, Wollondilly Shire LGA, NSW
Aboriginal Cultural Heritage Assessment and Historic Heritage Assessment

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Report generated by AHIMS Web Services on 21/01/2017 for Land Use for the following area of Datum: GDA, Zone: 56, Easting: 283400, 291400, Northing: 620600, 6214000 with a Buffer of 1000 meters. Additional Info: Aboriginal Assessment, Number of Aboriginal sites and Aboriginal objects found is 115.

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Report generated by AHIMS Web Services on 21/01/2013 for Lance Syne for the following areas at Batam: GDA, Zoning: 56, Latitudes: 2803400, 2803400, Longitudes: 2815500, 2815500 with a Buffer of 1500 meters. Additional Info: Archaeological Assessment. Number of Aboriginal sites: 0. Number of Aboriginal objects: 0.

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APPENDIX II. SITE CARDS

RESTRICTED SECTION