

# **Proposed Rezoning of “Wilton Town Centre Precinct”, Wilton Wollondilly Shire LGA, NSW**

Aboriginal and European Survey Report

Prepared for Macarthur Development on behalf of the  
NSW Department of Planning and Environment

September 2018

Lance Syme and Natalie Stiles

**KAYANDEL**  
ARCHAEOLOGICAL SERVICES



☎ 02 4627 8622

📠 02 4605 0815

✉ [Info@kayandel.com.au](mailto:Info@kayandel.com.au)

#### Document Status

Version No.	Purpose of Document	Orig	Review	Review Date	Approval for Issue	Date Issued
1.0	Internal review	NS	LS	7/9/2018	LS	7/9/2018
1.1	Draft for Client Comment	NS	SM	10/9/2018	LS	20/9/2018
2.0	Final to Client	NS	LS	20/9/2018	LS	21/9/2018

© 2018 Kayandel Archaeological Services

This document is and shall remain the property of Kayandel Archaeological Services. The document may only be used for the purposes for which it was commissioned and in accordance with the Terms of Engagement for the commission. Unauthorised use of this document in any form whatsoever is prohibited.

## Executive Summary

Kayandel Archaeological Services (KAS) has been commissioned by Macarthur Developments on behalf of the NSW Department of Planning and Environment (the Proponent) to prepare an Aboriginal and European Survey Report in relation to Aboriginal and European heritage within the properties of Lot 13 DP702024, Lots 2, 4 & 5 DP 253922 and Lot 200 DP1195273, Wilton, NSW.

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.

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) was commissioned by the Wilton Junction Landowners' Group to undertake an Aboriginal Cultural Heritage Assessment and Historic Heritage Assessment to inform the proposed rezoning of the Wilton Junction area.

This report has been prepared to be an update to the report prepared by Kayandel to provide an Aboriginal and European Survey Report to inform the indicative layout plan for the proposed for the Wilton Town Centre Precinct.

The proposed rezoning gives effect to the potential development of the site for a range of uses including residential (low and medium density), a town centre, employment lands, associated road works, open spaces and services infrastructure, and a large area to be preserved for environmental conservation encompassing Byrne's Creek in the centre and north of the site. A draft Indicative Layout Plan (ILP) is presented in Figure 3.

Consultation in accordance with the Consultation Requirements (DECCW, 2010b) was not undertaken as part of preparing this report.

As a result of the field survey, a total of sixteen (16) previously unrecorded Aboriginal sites were identified.

One new historic heritage site was located during the survey. The Aboriginal rock shelter site of WJ-RS-03 was identified for its historical heritage values.

### Aboriginal Heritage - 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 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 requirements of the *Code of Practice for Archaeological Investigation of Aboriginal Objects in NSW* (DECCW, 2010a);
- ✦ The requirements of the *Guide to Investigating, Assessing and Reporting on Aboriginal Cultural Heritage in NSW* (OEH, 2011);
- ✦ The findings presented within this Aboriginal and European Survey Report; and,
- ✦ Recognition of the extended period of which development activities will occur within the Subject Area (refer to Section 1.2 and Figure 3).

KAS recommends the following:

1. No further assessment of the Aboriginal heritage within the Subject Area is required to inform the rezoning proposal;
2. Prior to Development Application Stage for an identified area, further Aboriginal archaeological investigations are required at all locations identified in Figure 19. See below for further considerations for these investigations;
3. 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 results from unexpected finds;
4. As a result of Recommendations 2 and 3, 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, 2010b);
5. 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; and,

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

## European Heritage - 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; and,
- ✦ Recognition of the extended period of which development activities will occur within the Subject Area.

KAS recommends the following:

1. No further assessment of the historic heritage within the Subject Area is required to inform the rezoning proposal;
2. Historic heritage items identified in Table 12 assessed to have any level of significance should be included in Schedule 5 Register of the Wollondilly LEP 2011;
3. Prior to Development Application Stage for an identified area, further heritage assessment would be required at all locations identified in Figure 20 to inform the preparation of detailed planning controls, such as DCPs for the site;
4. 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; and,
5. Any future development impacts upon the Heritage Items listed in Table 12 and shown in Figure 22 will require the relevant excavation or exemption notification under the *Heritage Act 1977* (refer to Section 2.2.3) 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.

## CONTENTS

Aboriginal Heritage - Recommendations .....	III
European Heritage - Recommendations .....	IV
<b>1 Introduction .....</b>	<b>1</b>
1.1 Location of the Subject Area .....	2
1.2 Proposed Works .....	2
1.3 Study Aim and Objectives .....	2
1.3.1 Aboriginal Heritage .....	2
1.3.2 European Heritage .....	2
1.4 Limitations .....	3
1.5 Personnel .....	4
<b>2 Applicable Policy and Legislation .....</b>	<b>8</b>
2.1 Commonwealth Legislation .....	8
2.1.1 Aboriginal and Torres Strait Islander Heritage Protection Act 1984 .....	8
2.1.2 Environment Protection & Biodiversity Conservation Act 1999 (EPBC Act) .....	8
2.1.3 Native Title Act 1993 (Amended) .....	9
2.2 New South Wales Legislation .....	9
2.2.1 Environmental Planning and Assessment Act 1979 .....	9
2.2.2 National Parks and Wildlife Act 1974 .....	10
2.2.3 The Heritage Act 1977 (NSW) (Amended 1999) .....	10
2.2.3.1 State Heritage Register Search .....	11
2.2.3.2 State Heritage Inventory Search .....	11
2.3 Local Government Controls .....	11
2.3.1 Wollondilly Local Environmental Plan (LEP) (2011) .....	11
2.3.1.1 Wollondilly LEP (2011) Schedule 5 Search .....	12
2.3.2 Wollondilly Development Control Plan (DCP) (2016) .....	12
2.3.2.1 Aboriginal Heritage .....	12
2.3.2.2 European Heritage .....	12
2.4 Non-Statutory Listings .....	13
2.4.1 Register of the National Estate Search .....	13
<b>3 Partnership with Indigenous Communities .....</b>	<b>14</b>
3.1 Informal Consultation Process .....	15
<b>4 Study Methods .....</b>	<b>16</b>

4.1	Background Research.....	16
4.1.1	Field Inspection.....	16
<b>5</b>	<b>Landscape Context.....</b>	<b>18</b>
5.1	Climate.....	18
5.2	Geology .....	19
5.3	Soil Landscape.....	19
5.4	Topography and Hydrology .....	20
5.5	Nepean Ramp ‘Transitional’ Zone .....	21
5.6	Former Land Use and Disturbance .....	25
5.6.1	Interpretation of Aerial Photography .....	25
<b>6</b>	<b>Aboriginal Archaeological Context .....</b>	<b>33</b>
6.1	Ethnohistory.....	33
6.2	AHIMS Results.....	34
6.3	Regional Archaeological Context.....	35
6.4	Local Archaeology .....	35
6.5	Previous Assessment within the Subject Area .....	37
6.6	Previous Predictive Models.....	38
6.7	Aboriginal Heritage Predictions for the Subject Area .....	41
<b>7</b>	<b>European Archaeological Context.....</b>	<b>46</b>
7.1	Historical Context .....	46
7.1.1	Expansion and Exploration .....	46
7.1.2	Early Settlement.....	46
7.1.2.1	Early Landholdings.....	47
7.1.2.2	Park Hall .....	47
7.1.2.3	The Village of Wilton.....	48
7.1.3	Agriculture and Pastoralism .....	48
7.1.4	Transport Networks.....	49
7.1.4.1	Roads .....	49
7.1.4.2	The Great Southern Rail Line.....	49
7.2	Recent Assessment Reports.....	50
7.3	Predictions for Historic Heritage.....	51
<b>8</b>	<b>Results – Aboriginal Heritage.....</b>	<b>55</b>
8.1	Field Survey .....	55
8.1.1	Survey Coverage and Visibility Variables .....	55

8.1.2	Survey Units .....	55
8.2	Survey Coverage Data .....	61
8.3	Identified Sites .....	62
<b>9</b>	<b>Results – Historic Heritage .....</b>	<b>69</b>
9.1	Identified Historic Heritage Items.....	69
9.2	Views .....	69
<b>10</b>	<b>Discussion .....</b>	<b>72</b>
10.1	Aboriginal Heritage .....	72
10.2	Discussion .....	72
<b>11</b>	<b>Significance Assessment .....</b>	<b>73</b>
11.1	Aboriginal Heritage .....	73
11.1.1	Aboriginal Cultural Significance Assessment .....	73
11.1.2	Archaeological Significance Assessment .....	73
11.1.3	Archaeological Assessment of the Subject Area .....	74
11.1.4	Statement of Archaeological Potential and Significance .....	75
11.2	Aboriginal Heritage .....	77
11.2.1	Assessment of Significance .....	77
11.2.2	Historic Heritage Assessment of the Subject Area .....	78
11.2.3	Statement of Significance for the Subject Area .....	78
<b>12</b>	<b>Assessment of the Masterplan.....</b>	<b>81</b>
12.1	Suggested mitigation of impact.....	81
<b>13</b>	<b>Principal Findings and Recomendations.....</b>	<b>83</b>
13.1	Aboriginal Heritage .....	83
13.1.1	Obligations .....	84
13.1.2	Recommendations .....	84
13.1.3	Distribution of Report .....	85
13.2	European Heritage .....	85
13.2.1	Obligations .....	85
13.2.2	Recommendations .....	85
<b>14</b>	<b>References .....</b>	<b>87</b>
<b>Appendix I.</b>	<b>Commonwealth Heritage List Search Results .....</b>	<b>91</b>
<b>Appendix II.</b>	<b>National Heritage List Search Results .....</b>	<b>92</b>
<b>Appendix III.</b>	<b>State Heritage Register Search Results .....</b>	<b>93</b>



<b>Appendix IV. State Heritage Inventory Search Results (Including Local Environmental Plan Schedule/s) .....</b>	<b>94</b>
<b>Appendix V. Wollondilly LEP 2011 Heritage MaPs .....</b>	<b>95</b>
<b>Appendix VI. Register of the National Estate Search Results.....</b>	<b>97</b>
<b>Appendix VII. AHIMS Results .....</b>	<b>98</b>

## LIST OF TABLES

Table 1: KAS Personnel involved in the Archaeological Assessment .....	4
Table 2: AHIMS Database Search Criteria.....	34
Table 3: Site Types from AHIMS Search (Client Service ID 362091) .....	34
Table 4: Cultural heritage investigations conducted in the Wilton region .....	37
Table 5: Survey Coverage Data .....	61
Table 6: Landform Summary .....	61
Table 7: Historic Sites identified during this study .....	69
Table 8: Cultural Significance Ranks for Aboriginal sites within Subject Area .....	73
Table 9: Archaeological Significance Rankings of Aboriginal Sites identified in this study .....	75
Table 10: Assessment against Heritage significance Criterion .....	77
Table 11: Grading of Significance to reflect Assessment of Significance.....	77
Table 12: Assessment of Significance of Historic Sites identified in this study and heritage impact ....	78
Table 13: Likely Impacts to Aboriginal and Heritage Sites and Management Strategies for Proposed Masterplan .....	81
Table 14: Significance ranking and preliminary management options .....	82

## LIST OF FIGURES

Figure 1: Project Location.....	5
Figure 2: Subject Area .....	6
Figure 3: DRAFT Indicative Layout Plan.....	7
Figure 4: 1:250,000 Geological Map.....	22
Figure 5: 1:250,000 Soil Map .....	23
Figure 6: 1:25,000 Topographic Map.....	24
Figure 7: Previous Disturbance from 1955 Aerial .....	27
Figure 8: Previous Disturbance from 1961 Aerial .....	28
Figure 9: Previous Disturbance from 1975 Aerial .....	29
Figure 10: Previous Disturbance from 1984 Aerial .....	30

Figure 11: Previous Disturbance from 1990 Aerial .....	31
Figure 12: Previous Disturbance from 2005 Aerial .....	32
Figure 13: AHIMS Sites from Search Data.....	44
Figure 14: AHIMS Sites in Proximity to Subject Area .....	45
Figure 15: Sketch Map of proposed line to Illawarra c.1827 .....	53
Figure 16: Baker's Australian Country Atlas c1843-1846 .....	54
Figure 17: Survey Units .....	56
Figure 18: Aboriginal Sites identified from this study .....	67
Figure 19: Areas of Sensitivity and/or PAD.....	68
Figure 20: Historic Heritage Items Identified from this Study .....	71
Figure 21: Significance of Aboriginal Heritage Items within Subject Area .....	76
Figure 22: Significance of Historic Heritage Items within Subject Area.....	80

## LIST OF PLATES

Plate 1: View facing south of historic weir, located along the southern end of Allens Creek.....	51
Plate 2: View facing south of sandstone weir crossing Allens Creek. Note the sandstone hammer dressed blocks display sparrow picking .....	51
Plate 3: Detail of post hole cutting in sandstone bedrock of Allens Creek .....	51
Plate 4: General view of SU2 looking north.....	57
Plate 5: General view of SU3 looking north.....	57
Plate 6: General view of SU4 looking southeast.....	58
Plate 7: General view of SU5 looking south.....	58
Plate 8: General view of SU6 looking southwest .....	58
Plate 9: General view of SU7 looking south-west .....	59
Plate 10: General view of SU8 looking northwest .....	59
Plate 11: General view of SU9 looking northeast .....	59
Plate 12: General view of SU10 looking northeast.....	60
Plate 13: General view of SU36 looking west.....	60
Plate 14: View of Rock Shelter. Location of Cast Iron beds indicated by arrows .....	69
Plate 15: Storage pole and billy situated in WJ-RS-03.....	69

*This Page is intentionally left Blank*

# 1 INTRODUCTION

Kayandel Archaeological Services (KAS) has been commissioned by Macarthur Developments on behalf of the NSW Department of Planning and Environment (the Proponent) to prepare an Aboriginal and European Survey Report in relation to Aboriginal and European heritage within the properties of Lot 13 DP702024, Lots 2, 4 & 5 DP 253922 and Lot 200 DP1195273, Wilton, NSW.

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) was commissioned by the Wilton Junction Landowners' Group to undertake an Aboriginal Cultural Heritage Assessment and Historic Heritage Assessment to inform the proposed rezoning of the Wilton Junction area.

This report has been prepared to be an update to the report prepared by Kayandel to provide an Aboriginal and European Survey Report to inform the indicative layout plan for the proposed for the Wilton Town Centre Precinct.

## 1.1 Location of the Subject Area

The Subject Area is situated within the Wollondilly Shire Council (WSC) Local Government Area (LGA) and is located on the north-western side of the Hume Highway (see Figure 1).

The Subject Area incorporates the following lots and covers approximately 192.7ha (see Figure 2):

- ✦ Lot 13 DP702024;
- ✦ Lots 2, 4 & 5 DP 253922; and,
- ✦ Lot 200 DP1195273.

## 1.2 Proposed Works

The proposed rezoning gives effect to the potential development of the site for a range of uses including residential (low and medium density), a town centre, employment lands, associated road works, open spaces and services infrastructure, and a large area to be preserved for environmental conservation encompassing Byrne's Creek in the centre and north of the site. A draft Indicative Layout Plan (ILP) is presented in Figure 3.

## 1.3 Study Aim and Objectives

### 1.3.1 Aboriginal Heritage

The objective of this study is to produce a report that details the Aboriginal heritage within the Subject Area; and presents sufficient information to facilitate an informed decision regarding the potential impact to known and unknown Aboriginal heritage within the Subject Area. The report has been prepared in accordance with the *Code of Practice for Archaeological Investigations of Aboriginal Objects in NSW (Code of Practice)* (DECCW, 2010a), and *The Guide for Investigating, Assessing, and Reporting on Aboriginal Cultural Heritage in NSW* (OEH, 2011).

The following tasks were undertaken to achieve these objectives:

- ✦ A review of background information, including landscape and ethnographic history;
- ✦ A review of archaeological context, including identification of known Aboriginal sites in the Subject Area through a search of Aboriginal Heritage Information Management System (AHIMS) and an analysis of existing archaeological reports relating to the Subject Area and its immediate environs;
- ✦ 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; and,
- ✦ Undertake consultation with Aboriginal stakeholders known to hold cultural knowledge relating to the Subject Area.

### 1.3.2 European Heritage

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; and,
- ✦ Prepare a report in accordance with the NSW Heritage Management System described in the *NSW Heritage Manual* (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).

## 1.4 Limitations

This report is based on a review of available Aboriginal and European archaeological assessments (sourced from AHIMS, grey literature and KAS' report library) and the field investigations. The background research did not include any independent verification of the results and interpretations of externally sourced existing reports (except where the fieldwork indicated inconsistencies).

It is possible that further Aboriginal archaeological assessments or the emergence of new analysis of the Aboriginal archaeological landscape within the Wilton area may support different interpretations of the evidence in this report.

The results from the 'AHIMS Database Search' (Section 6.2) are valid for 12 months (from the date of the search). If the report has not been finalised and/or it is necessary to update the report, and the previous AHIMS database search is over 12 months old, it will be necessary to undertake another search of AHIMS again to ensure the information is still current. If the AHIMS search results identify additional Aboriginal sites which will result in significant changes to the assessment, it will be necessary to update the report to consider these results.

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.

The 'Statement of Archaeological Potential and Significance' (Section 11.1.4) made in this report is a combination of both facts and interpretation of those facts in accordance with a standard set of assessment criteria. It is possible that another professional may interpret the Aboriginal archaeological landscape within the Katoomba area and physical evidence in a different way.

A summary of the statutory requirements regarding heritage is provided in Section 2. This is made on the basis of our experience of working with the NSW Aboriginal heritage and European heritage systems and does not purport to be legal advice. It should be noted that legislation, regulations, and guidelines change over time and users of this report should satisfy themselves that the statutory requirements have not changed since the report was written.

## 1.5 Personnel

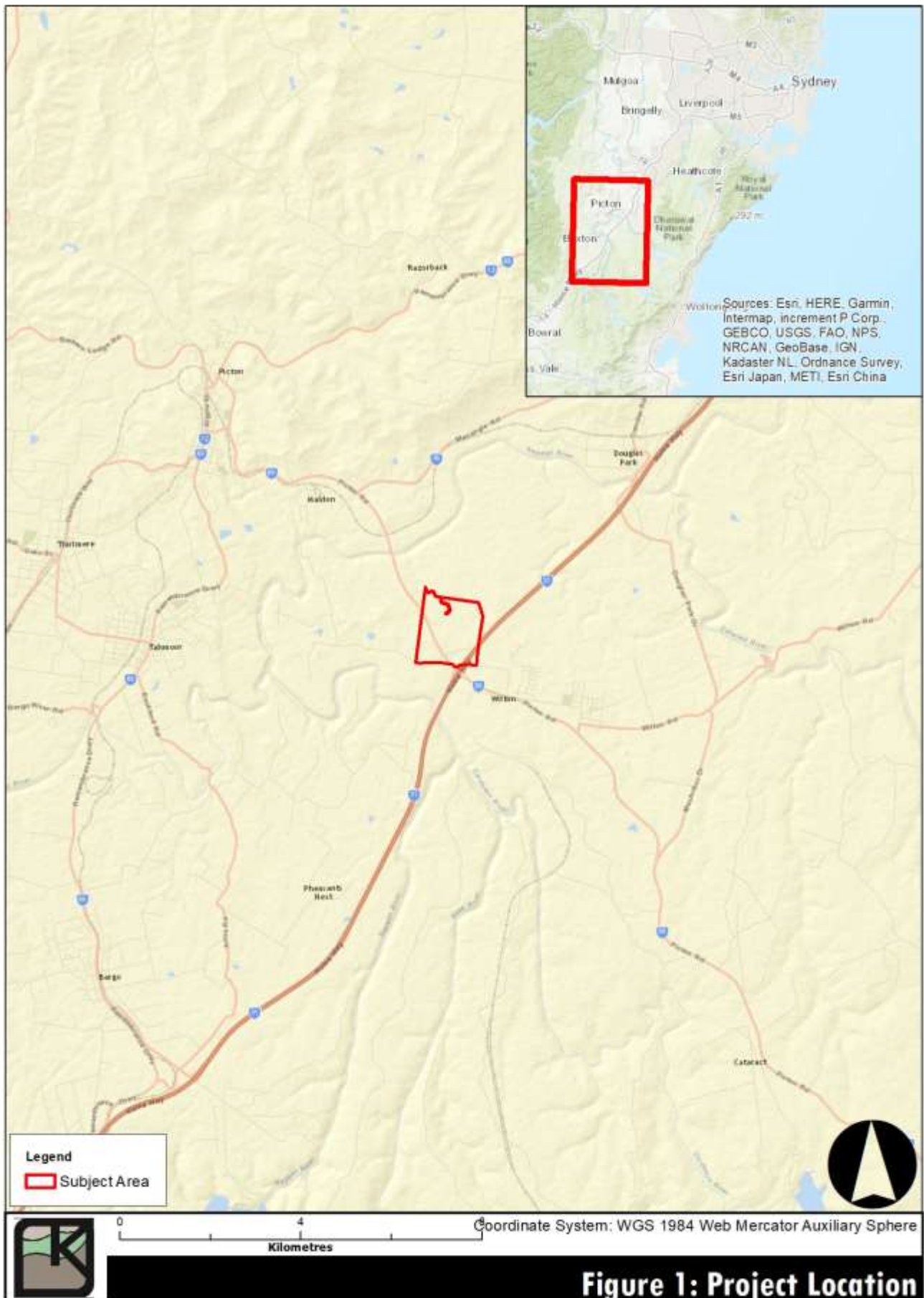
This study was carried out by Kayandel Archaeological Services (KAS). Background research was undertaken by Natalie Stiles. Mapping was completed by Lance Syme and Natalie Stiles. Natalie Stiles drafted the report, which was reviewed by Meggan Walker and Lance Syme.

The qualifications of the KAS team are included on Table 1, as required by the *Code of Practice* (DECCW, 2010a).

Person	Qualifications	Experience	Tasks
Lance Syme	B. Arts (Arch/Palaeo), Grad. Dip. (Heritage Cons.), M. ICOMOS	20 years	Project supervisor, mapping, report review
Natalie Stiles	B. Arts (Arch/Palaeo), Grad Cert. Arts (Arch), MGIS&RemoteSens	6 years	Background research, report drafting, mapping
Meggan Walker	Bachelor of Arts (Arch/Ancient) (Hons)	<1 year	Report review

**Table 1:** KAS Personnel involved in the Archaeological Assessment

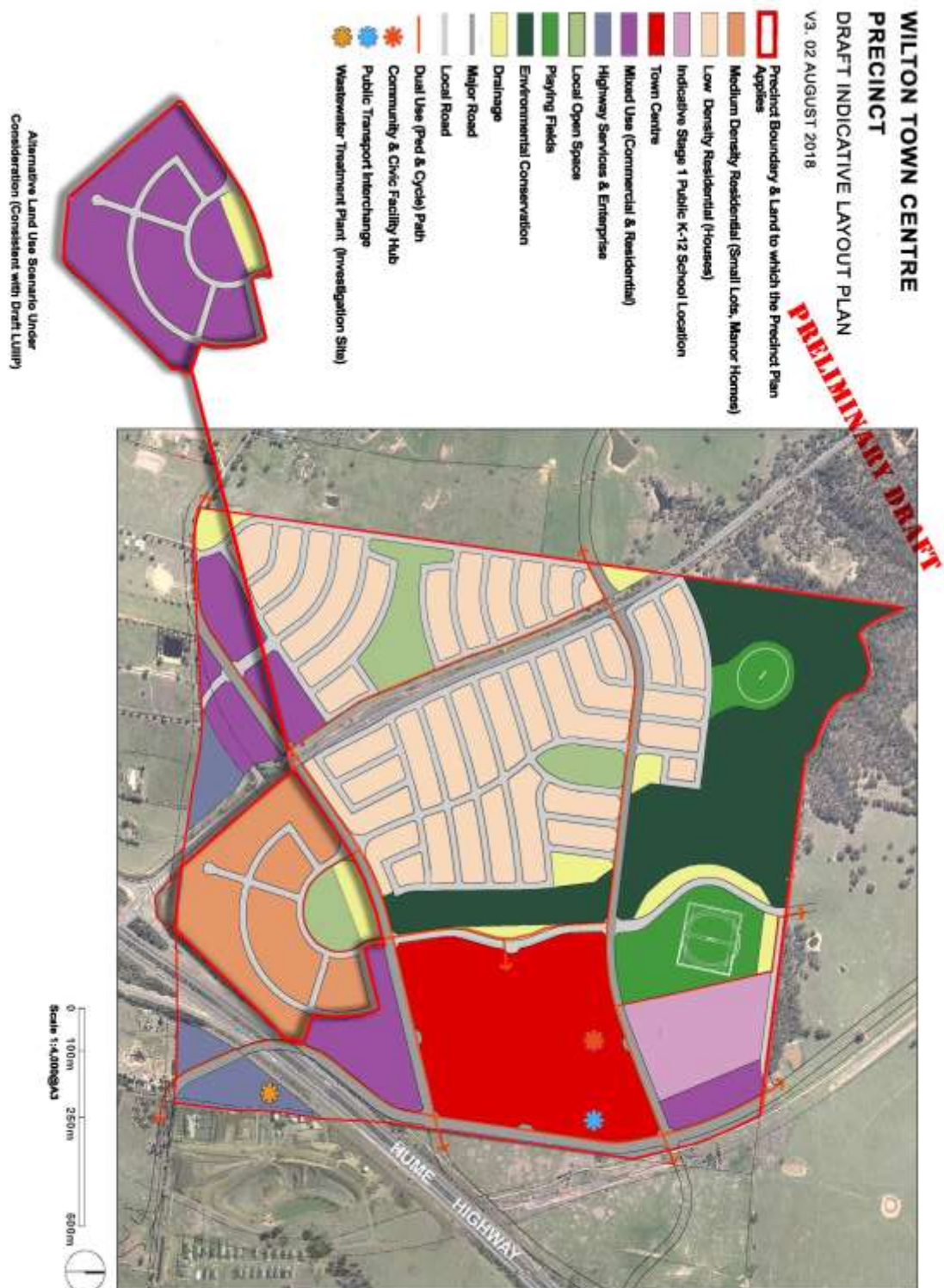












**Figure 3:** DRAFT Indicative Layout Plan

## 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 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:

It is undertaken on Commonwealth land and will have or is likely to have a significant impact;

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

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 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; and,*
- ✦ *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; and,
- ✦ 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. This includes impacts on Aboriginal and non-Aboriginal cultural heritage items and places. The Act also requires that 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. 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 Division 5.1 refers to approvals by determining authorities.

### 2.2.2 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 5), 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, 1974* as a place of special significance for Aboriginal culture. It may or may not contain physical Aboriginal objects.

Under Section 86 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 Director-General 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 OEH Director-General. 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 *National Parks and Wildlife Act, 1974* 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 AHIMS.

### 2.2.3 The Heritage Act 1977 (NSW) (Amended 1999)

The *NSW Heritage Act 1977* (Heritage Act) provides protection for items of 'environmental heritage' in NSW. 'Environmental heritage' includes places, buildings, works, relics, movable objects or precincts considered significant based on historical, scientific, cultural, social, archaeological, architectural, natural or aesthetic values. Items considered to be significant to the State are listed on the State Heritage Register and cannot be demolished, altered, moved or damaged, or their significance altered without approval from the Heritage Council of NSW.

Items listed on the State Heritage Register (SHR) require consent of the Heritage Council to undertake work or development which alters, moves, deposits or damages any part of the heritage item, place, precinct, land, its relics or any vegetation.

Relics are afforded automatic protection under Section 139 of the *NSW Heritage Act 1977* which applies generally to all land in New South Wales. Under Section 41(1) of the *NSW Heritage Act 1977* and the *Heritage Amendment Act 2009* (No. 34) a 'relic' is defined as:

*Any deposit artefact, object or material evidence that:*

*(a) Relates to the settlement of the area that comprises New South Wales, not being Aboriginal settlement, and*

*(b) Is of State or local significance.*

Section 146 of the *NSW Heritage Act* requires that the accidental discovery of relics should be reported in writing to the Heritage Council of NSW. Depending on the nature of the discovery, additional assessment and possibly an excavation permit may be required prior to the recommencement of excavation in the affected area. Alternatively, an applicable gazetted 'exception' might apply.

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.

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*.

#### **2.2.3.1 State Heritage Register Search**

A search of the State Heritage Register for Wilton was undertaken as part of preparing this assessment (refer to Appendix III). No items listed on the State Heritage Register were identified within or abutting the Subject Area.

#### **2.2.3.2 State Heritage Inventory Search**

A search of the State Heritage Inventory for Wilton was undertaken as part of preparing this assessment (refer to Appendix IV). No items listed on the State Heritage Inventory were identified within or abutting the Subject Area.

### **2.3 Local Government Controls**

#### **2.3.1 Wollondilly Local Environmental Plan (LEP) (2011)**

Heritage is dealt with under Section 5.10 and Schedule 5 of the Wollondilly Local Environmental Plan (LEP) 2011. Section 5.10 (1) outlines the objectives of the clause, including:

*(d) to conserve Aboriginal objects and Aboriginal places of heritage significance.*

The clause states that development consent is for the following activities:

- a) Demolishing or moving a heritage item, Aboriginal Object, or building within a conservation area;
- b) Altering a heritage item that is a building;
- c) Disturbing or excavating an archaeological site;
- d) Disturbing or excavating an Aboriginal place of heritage significance;



- e) Erecting a building on land on which an Aboriginal object is located, or that is within an Aboriginal place of significance;
- f) Subdividing land on land on which an Aboriginal object is located, or that is within an Aboriginal place of significance.

Section 5.10 (8) Specifically applies to *Aboriginal Places of Heritage Significance*, and outlines the level of assessment and notification which needs to be undertaken for development affecting Aboriginal places, prior to granting development consents.

*Schedule 5 – Environmental Heritage* lists places of heritage significance registered on the local listing. These items are primarily European and post-contact sites, however occasionally Aboriginal places are listed at the local level.

#### **2.3.1.1 Wollondilly LEP (2011) Schedule 5 Search**

A search of the Schedule 5 for Wilton was undertaken as part of preparing this assessment (refer to Appendix V). There were no heritage items listed under Schedule 5, Part 1 of the LEP (Wollondilly Shire Council, 2011) identified within and/or abutting the Subject Area.

#### **2.3.2 Wollondilly Development Control Plan (DCP) (2016)**

##### **2.3.2.1 Aboriginal Heritage**

Part 7 'Aboriginal Heritage' of the *Wollondilly Development Control Plan 2016* identifies the criteria that Council uses to determine if an Aboriginal heritage impact assessment is required in accordance with Section 5.10 of the LEP. Under Section 7.2 of the DCP, a report prepared in accordance with the *Code of Practice* (DECCW, 2010a) may be required at the discretion of the assessing officer where:

- ✎ There is impact or disturbance to the content, or within the immediate vicinity (100 metres) of a known Aboriginal object or Aboriginal place of heritage significance;
- ✎ There is impact or disturbance to, or within the immediate vicinity (100 metres) of a previously recorded or known Aboriginal object or Aboriginal place of heritage significance and can include a cultural landscape, an existing or former ceremonial ground, a burial ground or cemetery, a story place or mythological site, a former Aboriginal reserve or historic encampment, or an archaeological site of high significance; and,
- ✎ A proposal (including subdivision) which affects primarily undeveloped land (irrespective of land size) and has the following site features:
  - ✎ River frontage;
  - ✎ Creek line;
  - ✎ Sandstone exposures at ground level larger than 5m<sup>2</sup>;
  - ✎ Sandstone cliff line or isolated boulder higher than 2m; and,
  - ✎ Disturbance to the roots, trunk, branches, of old growth trees, which are native to the Wollondilly Shire and greater than 150 years of age.

##### **2.3.2.2 European Heritage**

Part 5 'Colonial Heritage (General)' of the *Wollondilly Development Control Plan 2016* identifies general conditions relating to developments with regards to heritage. The objectives of heritage conservation are to establish good design principals to guide development to and around heritage items, to ensure development is sympathetic to the overall heritage values and characteristics of the area, to identify local heritage character and heritage elements of the built

environment, and to ensure the retention and management of heritage values identified for each conservation area and specific precinct.

The specific controls as outlined in the *Wollondilly Development Control Plan 2016* that should be considered during the proposed development are outlined below.

**Subdivision of land containing a heritage item and/or land within a heritage conservation area or a Landscape Conservation Area.**

1. Must not compromise or adversely affect any historic layout of the subject lot and heritage significance of the original lot pattern.
2. Must not compromise the curtilage of any heritage item or significant complimentary building, garden, driveway or other relic.
3. Where a heritage impact assessment is required, it must consider the likely location of future buildings and/or building envelopes.

## **2.4 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 are held in high esteem by the public.

### **2.4.1 Register of the National Estate Search**

A search of the Register of the National Estate was undertaken as part of preparing this assessment.

The Register of the National Estate (RNE) was closed in 2007 and is no longer a statutory list.

The RNE is maintained on a non-statutory basis as a publicly available archive and educational resource.

Items entered in the RNE prior to its closure in 2007 are identified as "registered". The existence of an entry for a place in the RNE does not in itself create a requirement to protect the place under Commonwealth law. Nevertheless, information in the register may continue to be current and may be relevant to statutory decisions about protection.

No item were identified as being located in and/or abutting the Subject Area (refer to Appendix VI).



### 3 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, 2010b).

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 fulfil their obligations towards their heritage; and,
- ✦ 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, 2010b, p. 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, 2010b, p. 7).

The process must be followed if an application is made to OEH under Part 6 of the *National Parks and Wildlife Act, 1974* as amended. Consultation for the current study was carried out in accordance with the specified requirements (DECCW, 2010b).

KAS undertook consultation with the identified Aboriginal stakeholders known to hold cultural knowledge relating to the Subject Area and who were 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 this community consultation was to understand the cultural values of the Subject Area and to understand the community's 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; and,
- ✦ 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 Informal Consultation Process**

During the preparation of KAS (2014a), Aboriginal community representatives were provided 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 several separate occasions in order to receive their input on the proposed impacts, conservation and management outcomes for Aboriginal objects throughout the Subject Area.

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.

It was always acknowledged by both the Client, KAS and the Aboriginal community that a formal consultation process would be undertaken as part of the next stage of the investigation process.

Consultation in accordance with the Consultation Requirements (DECCW, 2010b) was not undertaken as part of preparing this report.

## 4 STUDY METHODS

The assessment reported here involved Aboriginal community consultation, background research, the completion of the field survey. 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 fieldwork, the following tasks were undertaken:

- ✦ A search of the AHIMS maintained by 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;
- ✦ A search of the State Heritage Inventory (SHI), 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 and grey literature regarding the Wilton area were consulted to assist with the development of regional and local archaeological contexts for the Subject Area;
- ✦ KAS library was searched and an internet search was carried out to identify any Aboriginal and European history, ethnography, environmental and climate information relevant to the Subject Area;
- ✦ A predictive model for the Subject Area was prepared; and,
- ✦ The topographic map and air photos were examined to plan the field survey. It was intended that pedestrian survey (transects) would target areas of exposure which could have improved ground surface visibility (GSV), as well as areas which appeared less disturbed and had potential for intact Aboriginal sites. This information was also employed to identify locations at which early historic homes, outbuildings or their remains would occur.

#### 4.1.1 Field Inspection

A field survey was conducted over 4 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 activities and contraction within the Subject Area.

KAS recorded any physical evidence of Aboriginal land use and any information which could inform predictions about Aboriginal objects within the area.

The Subject Area was divided into thirteen survey units and pedestrian transects were completed in good weather with dry and bright conditions (see Section 8.1).

The survey transects were identified in field and utilised readily identifiable features to establish their limits. The transects were assessed using pedestrian survey, which was undertaken in accordance with the specification for archaeological survey contained within Burke and Smith (2004).

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 6.76.7).

Details and results of the site inspection are outlined in Section 8.1.

## 5 LANDSCAPE CONTEXT

The natural environment of an area influences not only the availability of local resources such as food and raw materials for artefacts but also determines the likely presence and/or absence of various archaeological site types that may be encountered during a field investigation. Landforms, soil types, and soil depths in combination with the underlying geology have implications for subsurface archaeological deposits in a study such as this.

Resource distribution and availability (such as the presence of drinking water, plant and animal foods, raw materials of stone, wood and vegetable fibre used for tool production and maintenance) is strongly influenced by the nature of soils, the composition of vegetation cover and the climatic characteristics of a given region.

The location of different site-types (such as open campsites, culturally modified trees, rock-shelters, middens, grinding grooves, engravings etc.) are strongly influenced by factors such as these along with a range of other associated features which are specific to different land systems and bedrock geology.

The environmental background is important in order to give a context to the archaeological record. With respect to Aboriginal archaeology, land formation processes may impact upon the type and frequency of archaeological remains encountered. Past climatic conditions may also impact upon the location and types of resources available, which in turn would impact upon settlement and mobility patterns of past Aboriginal groups in the area.

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, p. 8).

Detailing the environmental context of a study region is an integral procedure 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 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 Camden Region (BOM, 2018). The climate is a 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, 2018).

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, 2018). Overall, the climatic conditions in the Subject Area can be characterised as very mild and would have been suitable for year-round hunter-gatherer occupation of all parts of the Subject Area.

## 5.2 Geology

Geological information can contribute to archaeological studies by providing information on the nature of rock resources, as well as informing soils and landforms.

The Sydney Basin Bioregion consists of a geological basin filled with near horizontal sandstones and shales of Permian to Triassic age that overlie older basement rocks of the Lachlan Fold Belt. The sedimentary rocks have been subject to uplift with gentle folding and minor faulting during the formation of the Great Dividing Range. Erosion by coastal streams has created a landscape of deep cliff gorges and remnant plateaus (OEH, 2012).

Wilton is located in the southern portion of the Sydney Basin Bioregion. The larger scale geology of the Sydney Basin Bioregion is characterised by marine deposition events from the Carboniferous to the early Permian. Numerous coal deposits accumulated before large river systems covered the region in quartz sandstone, known as the Hawkesbury sandstone. The Hawkesbury sandstone, which forms the bedrock for all of the Sydney Basin, dates to the mid Triassic. This bedrock of sandstone is then capped by a thin layer of shale (OEH, 2012).

The underlying geology of the Subject Area is predominately the Wianamatta Group Shales including Ashfield Shales and Bringelly Shales, and Hawkesbury Sandstone (see Figure 4). Hawkesbury sandstone comprises primarily of medium to coarse-grained quartz sandstone with minor shale or laminate bands (Branagan & Packham, 2000). Hawkesbury sandstone is located along the gorges and many of the tributaries across the Plateaux.

## 5.3 Soil Landscape

Murphy (2000, p. 9) suggested that most Australian soils might be of great antiquity. The Last Glacial Maximum, a very cold phase between 30,000-21,000 BP, may have rejuvenated extensive soil erosion and deposition in the eastern highlands and many of today's soils in this region may date from that time (Petherick, McGowan, & Moss, 2008; Hope, 2005). Climate change between 1,500 and 4,000 years ago and may have led to a new series of small but significant alluvial deposits on the landscape and a new round of soil formation (Murphy, 2000, p. 9). The antiquity of soils and details of soil development are relevant to the survival of Aboriginal archaeological materials.

In general, soils consist of A, B and C horizons. The A and B horizon soils are layers that have been modified by weathering and soil development, and the C horizon is weathering parent material. The A<sub>1</sub> horizon is usually referred to as top soil and includes an accumulation of organic matter, is darker in colour and has more biological activity than other horizons. The A<sub>2</sub> horizon is usually paler in colour than the A<sub>1</sub> and B horizons with less organic matter. It is often the zone of maximum leaching, clay translocation and weathering. When those processes are particularly strong, the horizon is white or grey and may be referred to as bleached. The underlying B horizon is usually more clayey, denser, and stronger in colour (Murphy & Murphy, 2000, pp. 71-73). In open landscape settings (open sites), Aboriginal artefacts are most commonly found in A-horizon soils, and especially the A<sub>2</sub> horizon.

There are three (3) soil landscapes identified within the Subject Area. These are the Blacktown (bt), the Hawkesbury (ha) and the Luddenham (lu) soil landscapes (Hazelton & Tille, 1990) (see Figure 5).

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 & Tille, 1990). Due to their age and slow accumulation residual soil landscapes have reasonable potential to contain archaeological deposits in an open context, such as stone artefacts derived from occupation sites. Other occupation evidence might include scarred trees where remnant vegetation survives. However, the slow accumulation and high impact of extensive land clearing (usually associated with pastoral and housing development) during more recent times often results in poor preservation of archaeological material.

The Hawkesbury soil landscape is characterised by scarps and benches within hills on Hawkesbury Sandstone with slopes usually between 20% to 70% and rock outcrop usually >50%. The soils are Lentic and Orphic Tensors and Ruidoso's (Lithosols, Siliceous Sands, Earthy Sands), Yellow Kandosols (Yellow Earths), and Yellow, Red and Grey Kurosols (Yellow, Red and Grey Podzolic Soils). The soils are subject to severe sheet erosion which often occurs during storms and after ground cover is destroyed by bushfires, with minor gully erosion occurring along unpaved tracks and fire trails (Hazelton & Tille, 1990). The Hawkesbury soils are good markers for archaeological sites, with almost 20% of sites in the region occurring within this landscape. Typically, these sites consist of sandstone overhangs with art and/or archaeological cultural deposit.

The Luddenham soil landscape is characterised by undulating rolling hillslopes and may include tors, benches and areas of rock outcrop. The soil consists of shallow sandy clay on crests, and loamy sand on lower slopes and along drainage features (Hazelton & Tille, 1990, p. 72). In many instances, subsoils have formed in situ while topsoils have formed from materials washed from further up-slope. It is highly likely therefore that the lower, accumulated deposits that have not been subject to erosion may contain archaeological material. Other sites include scarred trees where remnant vegetation survive.

## 5.4 Topography and Hydrology

The topography within the Subject Area is predominately determined by the underlying geological formation.

The Sydney Basin Bioregion consists of a geological basin filled with near horizontal sandstones and shales of Permian to Triassic age that overlie older basement rocks of the Lachlan Fold Belt. The sedimentary rocks have been subject to uplift with gentle folding and minor faulting during the formation of the Great Dividing Range. Erosion by coastal streams has created a landscape of deep cliffed gorges and remnant plateaus (OEH, 2012).

Broadly the area that the Subject Area is situated on is a plateau above the gorges of Allens and Stringybark Creeks and the Nepean River. Certain characteristics of plateau environments need to be highlighted at this point as they (plateau environments) are markedly different in characteristics to the other nearby areas that have been more intensively investigated for Aboriginal occupation.

The plateau upon which the Subject Area is situated has less than 60m of vertical relief from its highest point to the top of the gorge/escarpment. Most creek lines on the plateau fit within the definition of a first order stream under the Strahler system of stream orders. These streams, when they have a southerly orientation tend to drain directly into the Nepean and/or Cordeaux Rivers. Where the stream drains in a northerly direction they do combine to create a small number of 3rd and 4th order streams.



The Subject Area consist of the flat immediately behind the escarpment, and an undulating plan that extends away from the escarpment (see Figure 6).

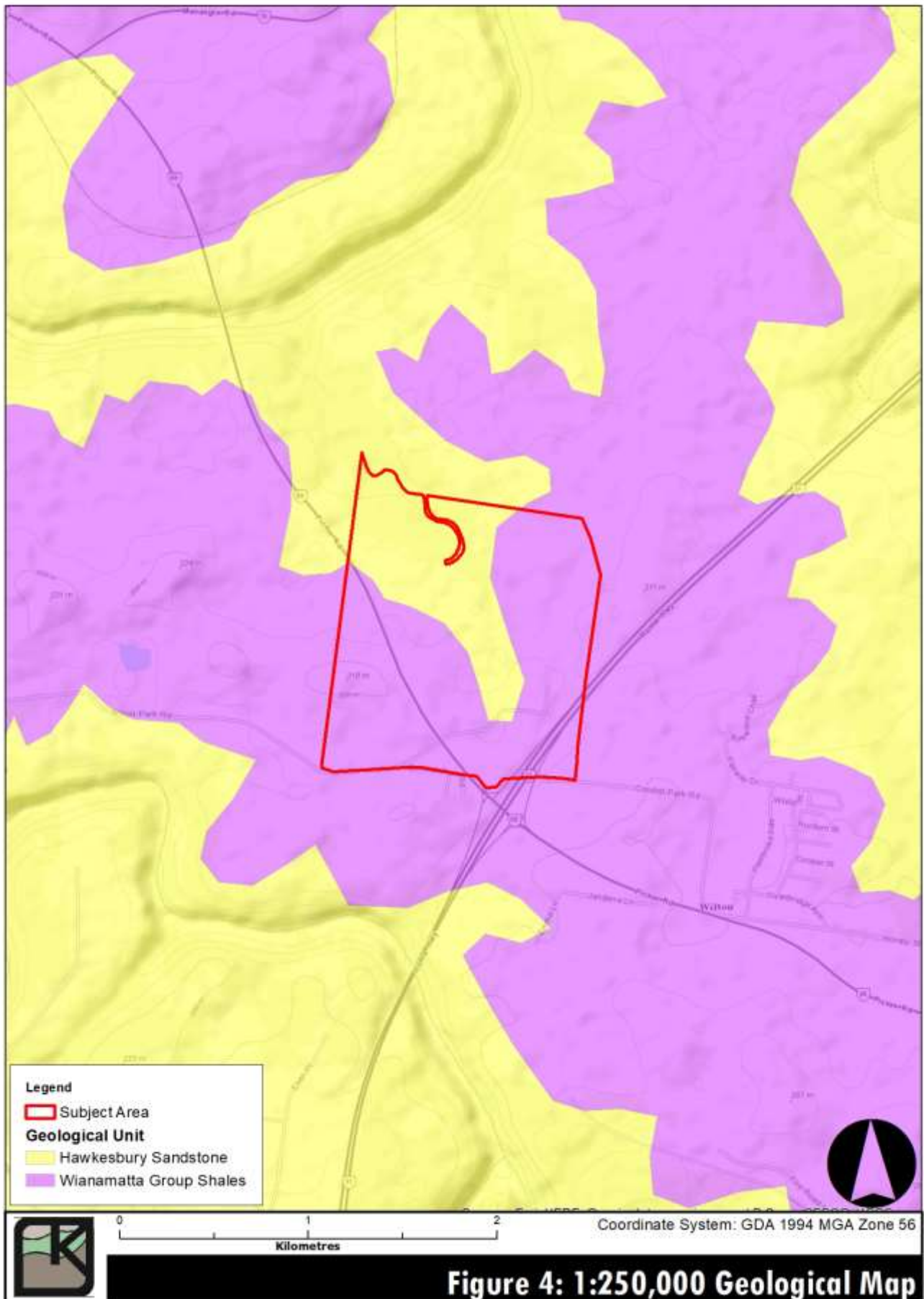
The Subject Area is bisected by six (6) 1<sup>st</sup> order streams (as identified under the Strahler model). There are two confluences of 1<sup>st</sup> order streams which become 2<sup>nd</sup> order streams, which then meet at a confluence to become a 3<sup>rd</sup> order stream (Byrnes Creek) which flows northwest into the Nepean River (see Figure 6).

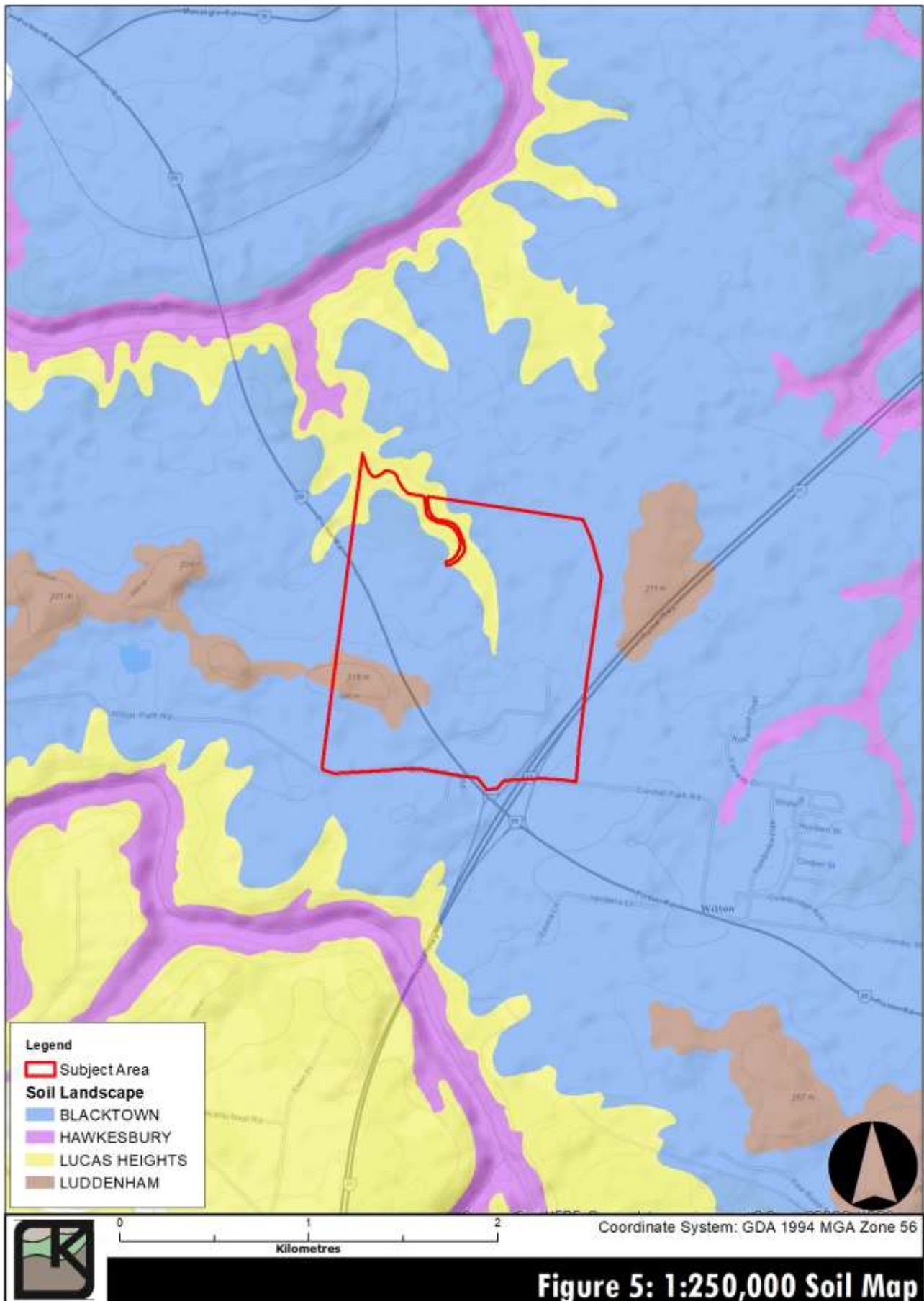
### **5.5 Nepean Ramp 'Transitional' Zone**

The Subject Area is situated in a transitional zone between the Woronora Plateau and the Cumberland Plain physiographic regions. The Plateau and the Plain grade into each other across a relatively narrow zone, in this instance the landscape takes on features of both of the landscape units. Navin Officer (2003a)) point out that from a geological perspective, the incised sandstone terrain west of the Georges River, represents a transitional zone due to the presence of Wianamatta shales on the remnant plateau and ridgeline crests. Moving further west, these areas become larger and coalesce, while the incised drainage lines typical of the sandstone bedrock become shallower and develop into open and moderately graded valleys formed on the shale bedrock.

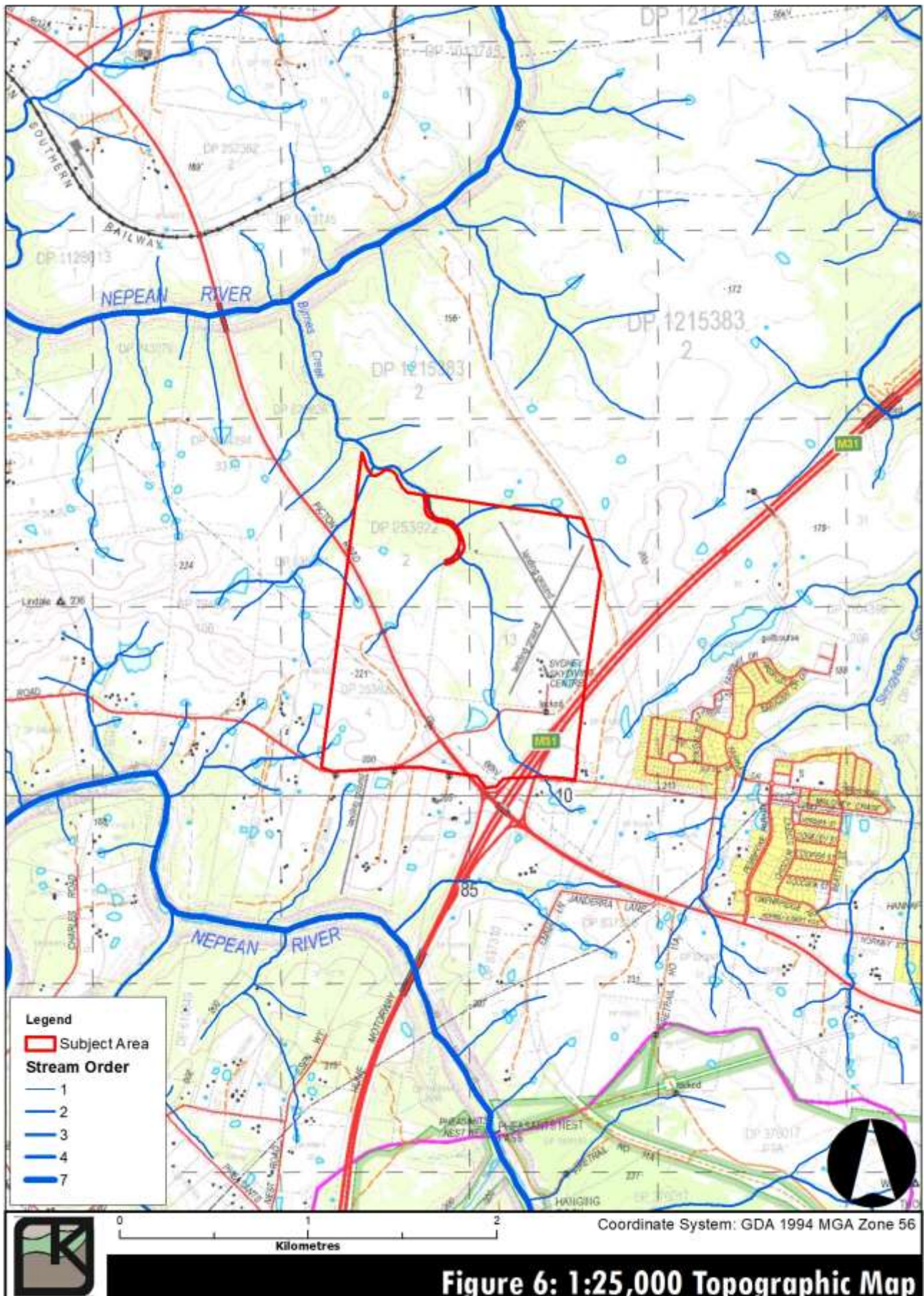
Morphological factors which define the transition zone are the change between sandstone and shale bedrock in creek beds, the change in valley morphology from steeply graded sandstone valleys to wide open shale based low gradient slopes, and the change in ridgeline topography from flat plateau land surfaces to broad gently graded or rounded crests. The Subject Area is situated within the transitional zone, with Wianamatta shales on the remnant plateau areas, and Hawkesbury sandstone ridge lines grading into sandstone gully terrain along the creek lines.











## 5.6 Former Land Use and Disturbance

The Subject Area has undergone significant changes since European occupation began in the early-mid 19th Century. Most 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, 1990, 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.

### 5.6.1 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 7 to Figure 12). 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.

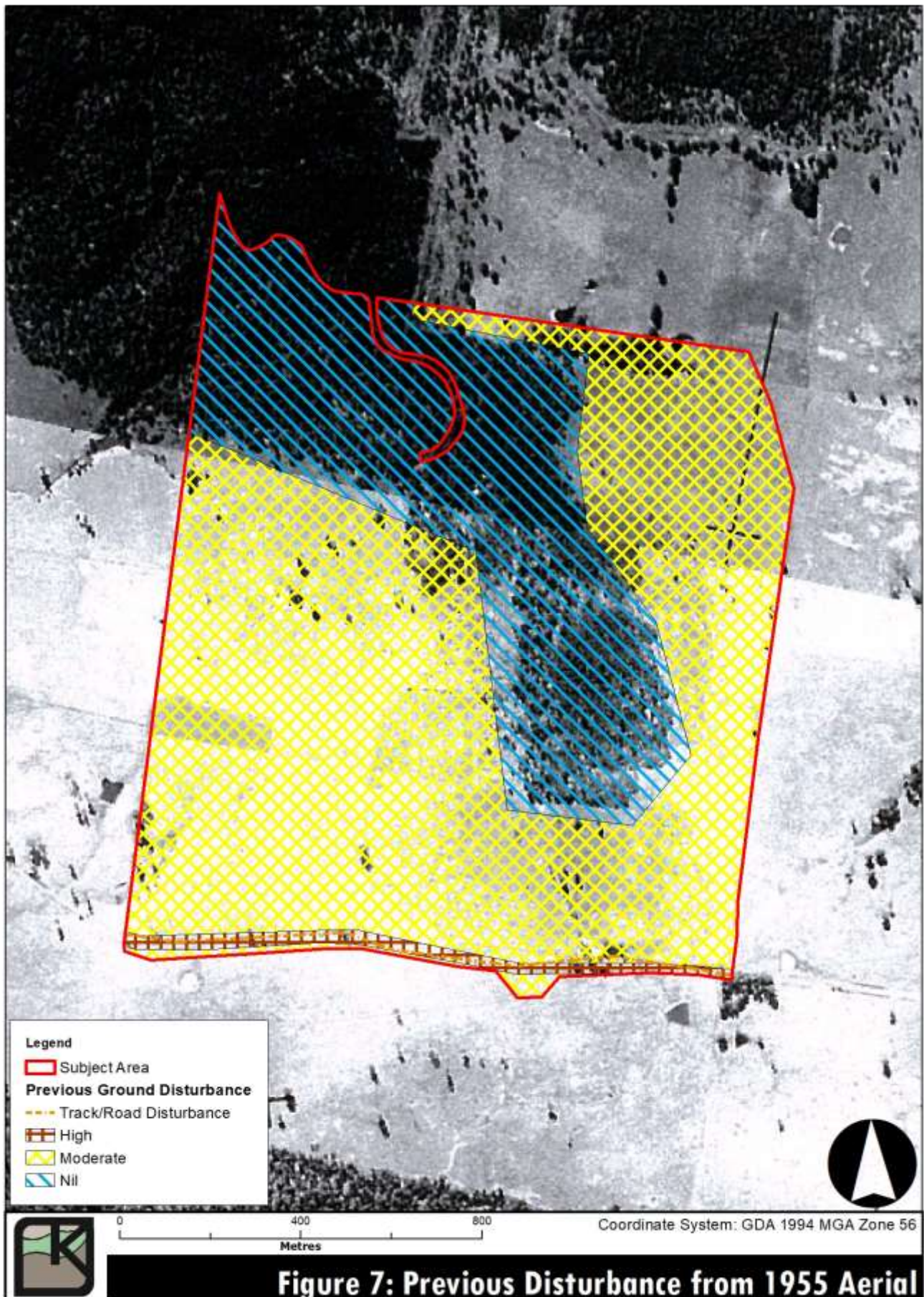
## **1990**

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.

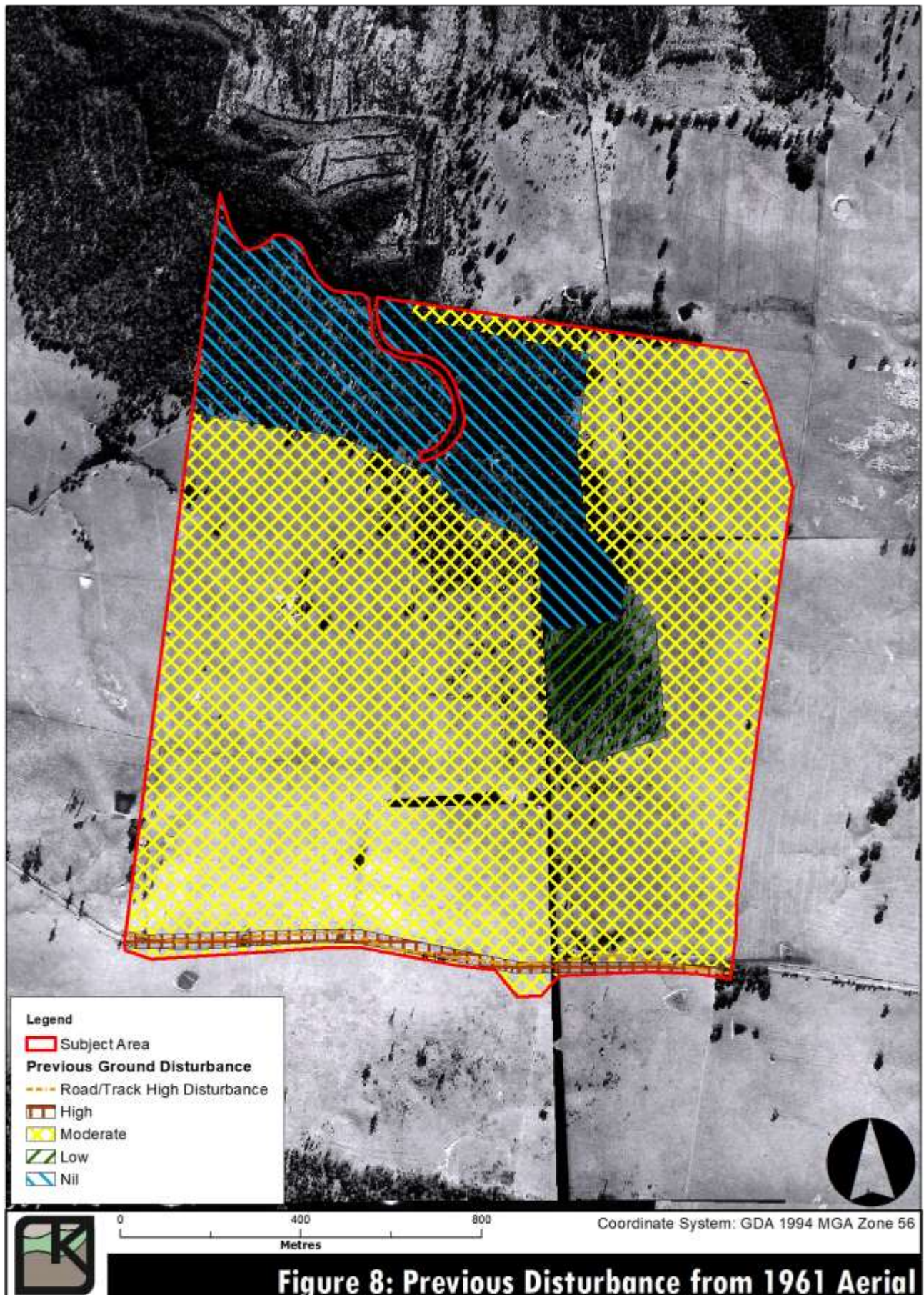
## **2005**

The 2005 aerial demonstrates 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.

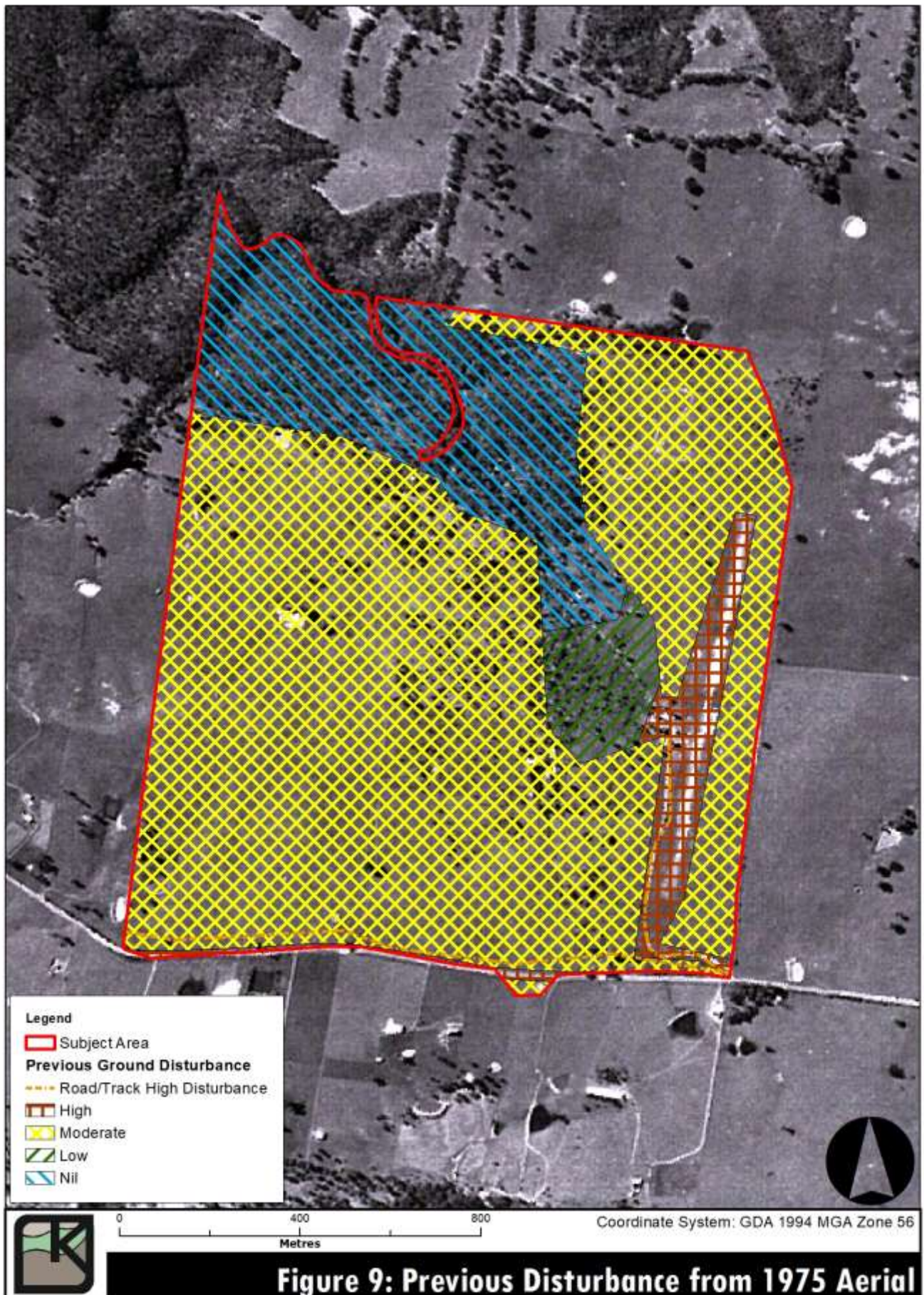




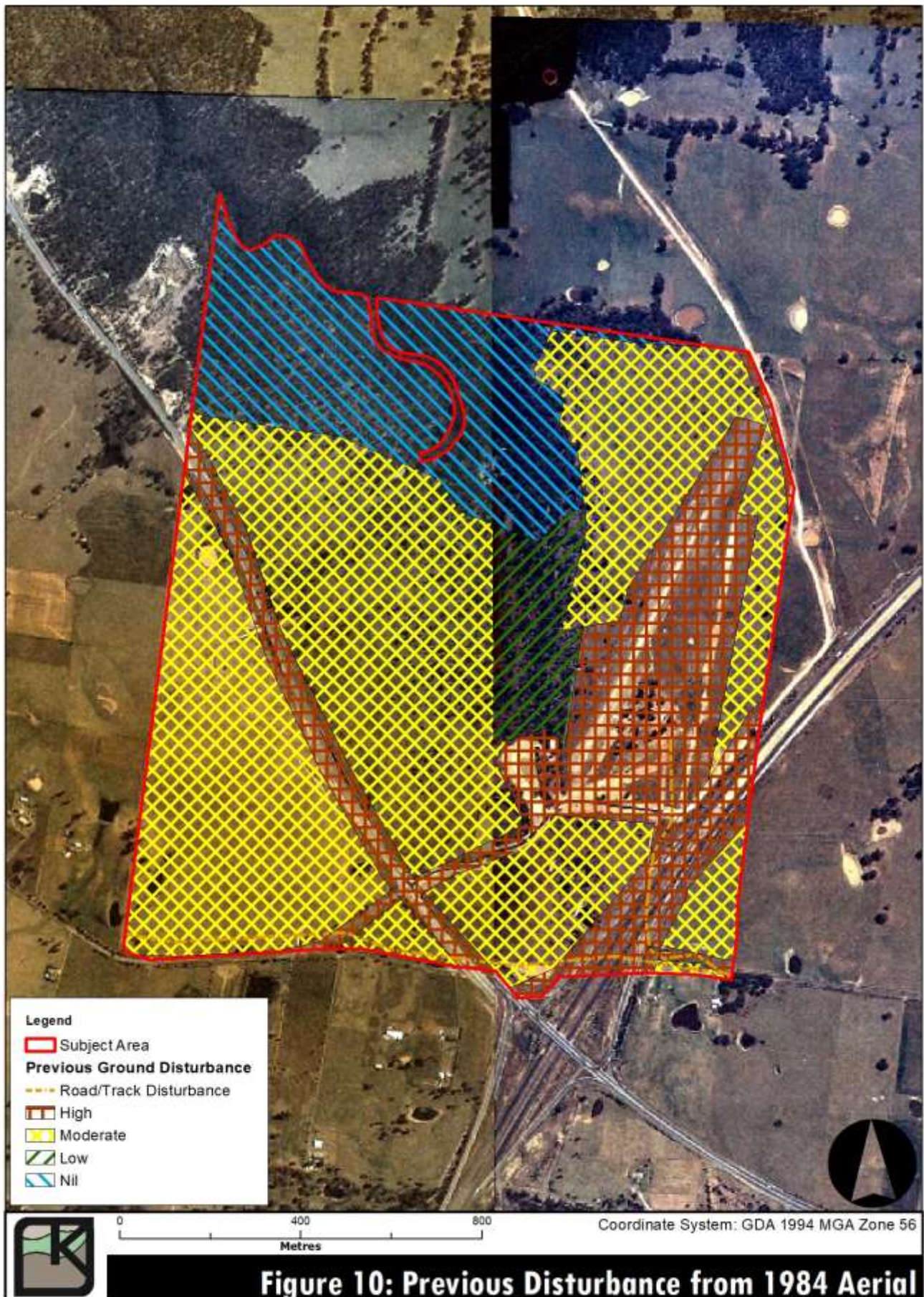




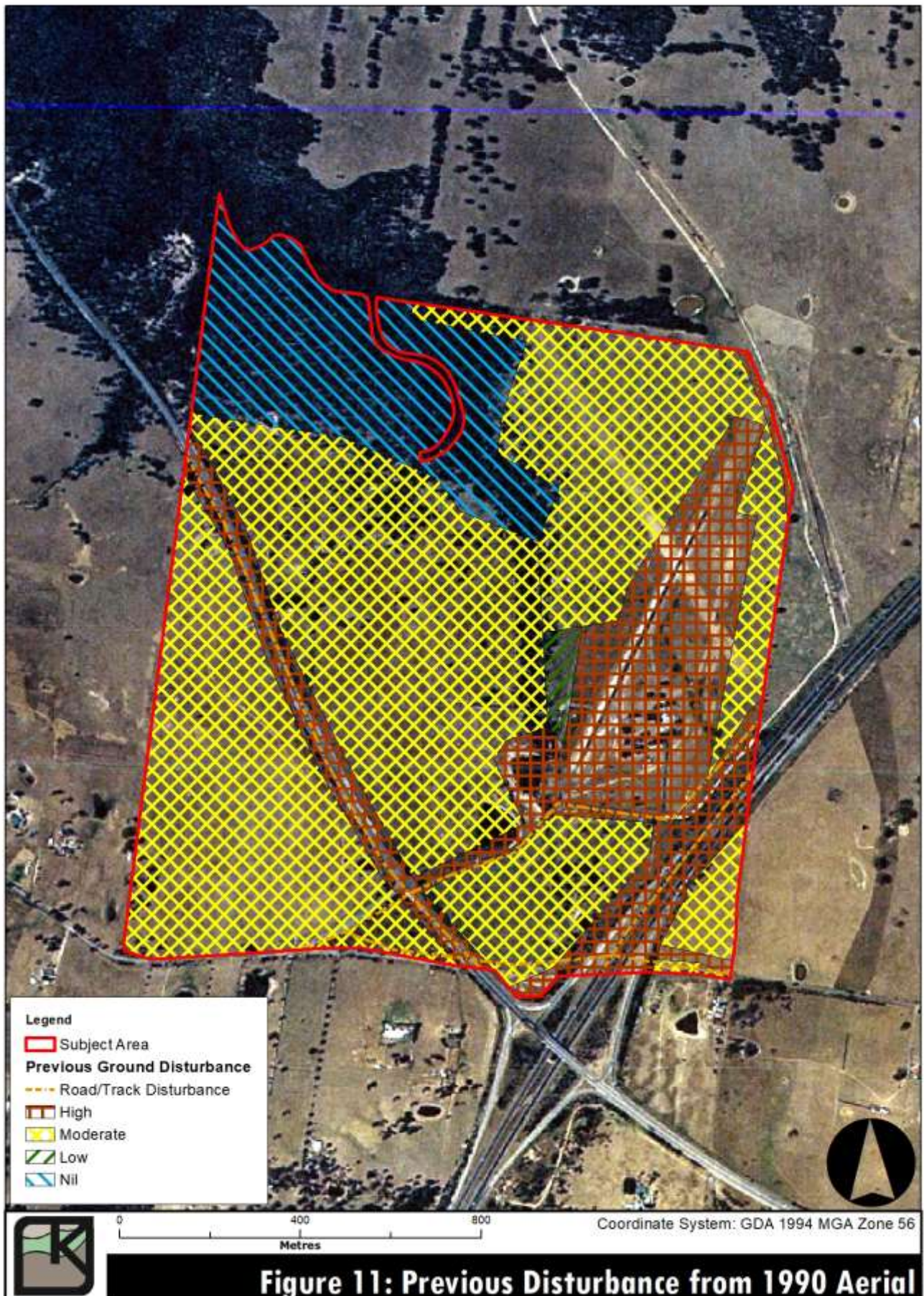




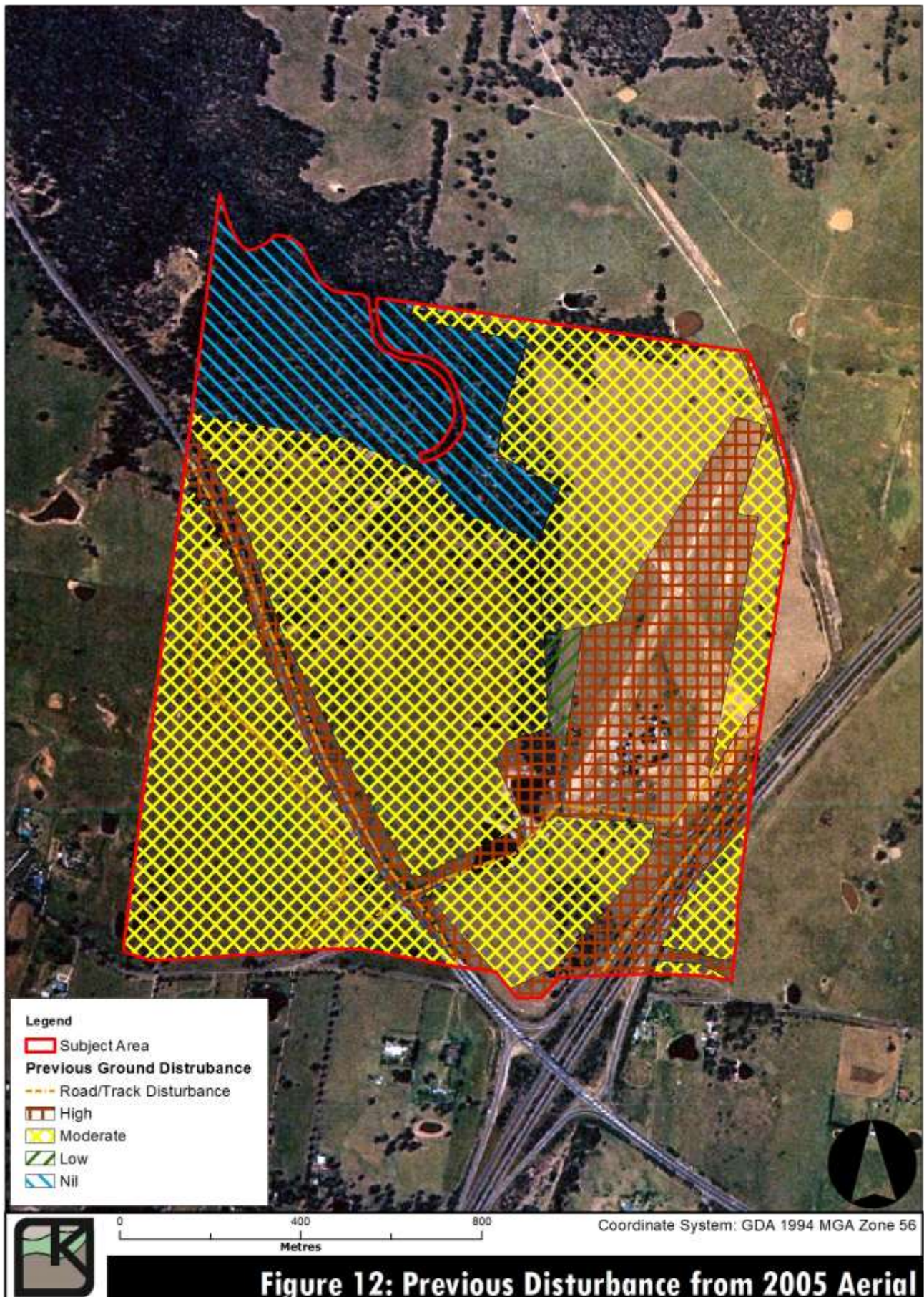














## 6 ABORIGINAL ARCHAEOLOGICAL CONTEXT

### 6.1 Ethnohistory

It is generally accepted that Aboriginal peoples have inhabited Australia for the last 50,000 years (Allen & O'Connell, 2003) (Hamm, et al., 2016). Dates of the earliest occupation of the continent by Aboriginal people are subject to continued revision as more research is undertaken. The timing for the human occupation of the Sydney Basin is still uncertain. The radiocarbon date obtained from the RTA site in George Street, Parramatta indicates that the Sydney region has been inhabited by Aboriginal people for at least 30,000 years, and possibly longer (Jo McDonald CHM, 2007). Archaeological sites from the Blue Mountains and Hawkesbury/Nepean River System have provided other evidence of early occupation within the region. Stockton and Holland (1974) produced a radiocarbon date of c.22,000 years BP from a site at Kings Tableland in the Blue Mountains. Excavation of the Greaves Creek rock shelter site of Walls Cave near Medlow Bath has produced a date of c.12,000 years BP (ibid). At Shaws Creek KII, a rock shelter on the west bank of the Nepean north of Penrith, a date of c.13,000 years BP is recorded (Kohen, Stockton, & Williams, 1984).

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 life ways 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). It is also known that people belonged to named groups which were tied to places, and that people in different areas spoke different dialects (McDonald, Dreamtime Superhighway: Sydney Basin Rock Art and Prehistoric Information exchange. Terra Australis 27, 2008, p. 17).

Due to unreliable sources of the time, exact pre-contact and contact boundaries of Aboriginal territories which existed prior to 1788 in the Sydney region are difficult to reconstruct. However, early written observations of Aboriginal people in the Picton/Wilton area have been collated by Tindale (1974). The Subject Area is located in proximity to a north-south trending boundary. The Gandangara people occupied country to the west, and the Tharawal and Wodi Wodi people lived in the land to the northeast and east of the region (Tindale, 1974).

While information about Aboriginal life in Wilton is scarce, some generalisations can be made from available writings and research that discusses Aboriginal Australia more broadly. Aboriginal people moved across the land in small family groups likely subsisting on plant food and the aquatic resources of creeks and rivers. In the Subject Area, this would include the resources of Byrnes Creek. A variety of local terrestrial resources, including possum, kangaroo, snakes and lizards, would also have been exploited.

The arrival of settlers in the region and new competition for resources began to restrict the freedom of movement of Aboriginal hunter-gatherer inhabitants from the early 1800's. European expansion along the Cumberland Plain was swift and soon there had been considerable loss of traditional lands to agriculture. This led to violence and conflict between Europeans and Aboriginal people as both groups sought to compete for the same resources. In the Cowpastures region, it began following the murder of an Aboriginal woman and her children, which resulted in violent clashes between several Aboriginal men and European settlers between 1814 and 1816 (Liston, 1988, p. 50). The violence had escalated by 1816 following the outlaw proclamation by Macquarie, resulting in the massacre of 14 Aboriginal people hiding at Appin (Liston, 1988, p. 54). This event is known as the

'Appin Massacre' and is regarded as a pivotal part of the history of the destruction of the Aboriginal people in the region.

## 6.2 AHIMS Results

A search of the AHIMS database was carried out 3rd August 2018 using the Client Service ID 362091, with the coordinates set out in Table 3 below.

	Easting	Northing
Minimum	283044	6208897
Maximum	287044	6212897

**Table 2:** AHIMS Database Search Criteria

(Zone 56 additional buffer 1kms)

The search area was a 4km by 4km square centred upon the Subject Area, with a 1km buffer (see Figure 13). The results of the AHIMS search are presented in Appendix VII and Figure 13. A total of 109 Aboriginal sites have been registered within the search area.

It should be noted that the distribution of sites in the AHIMS database is a reflection of where site surveys have been conducted (see Figure 14), 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 existing Aboriginal sites in an area.

Site types	Total	%
Isolated Find	23	21%
Shelter with Art	14	13%
Open Camp Site	11	10%
Scarred Tree	10	9%
Potential Archaeological Deposit	10	9%
Open Camp Site with PAD	10	9%
Shelter with PAD	8	7%
Shelter with possible habitation	7	6%
Shelter with Art and PAD	4	4%
Duplicate Entry on AHIMS	4	4%
Shelter with Artefact and PAD	2	2%
Shelter with Art, Artefact and PAD	2	2%
Shelter with Artefact, Grinding Groove and PAD	1	1%
Shelter with Artefact	1	1%
Shelter with Art and Artefact	1	1%
Axe Grinding Groove	1	1%
<b>Total</b>	<b>109</b>	<b>100%</b>

**Table 3:** Site Types from AHIMS Search (Client Service ID 362091)

The AHIMS search indicates that 23 of the 109 (21%) sites within the search area are Isolated Finds, and another 14 of the sites are Shelter with Art (see Table 3). A further eleven (11) sites are classified as Open Camp Sites.

There has been a progressive increase in the frequency of Open Camp Sites and areas of Potential Archaeological Deposit (PAD) being identified in recent years as the type of development works being assessed has shift from Longwall Mining towards residential land development.

### 6.3 Regional Archaeological Context

Archaeological investigations generally fall into three categories - large projects that have been carried out within a research-orientated academic framework and broad management context; archaeological surveys carried out by interested amateurs; and, archaeological investigations which have been carried out within a commercial contracting framework and deal with specific localities subject to development or redevelopment.

The spread of new urban development across the Wilton region is discrete, which has meant that the need for archaeological investigations has increased in recent times. Most archaeological investigations conducted within the Wilton region have been restricted to small study areas, on the boundary of the region. These small studies are defined by individual developments, and with limited project briefs. As a result, the understanding of Aboriginal utilisation and occupation of the Wilton region is constantly being developed and refined as archaeological data becomes available for the area (see Table 4).

While there has been limited archaeological assessments undertaken within the Wilton area, so far regional trends within the area indicates that Aboriginal sites are likely to be located in close proximity to permanent watercourses, along ridges and elevated positions overlooking water courses, or on flats immediately behind the escarpment, and within range of food resources and the raw materials for tool making.

### 6.4 Local Archaeology

The majority of archaeological studies in the Wilton region have been confined to the treatment of specific study areas. The table below (Table 4) contains the details of Aboriginal heritage assessments that have been undertaken in the general vicinity of the Subject Area (Table 4). A brief outline of each report is also provided below.

Reference	Locality	Comments	Results
Sim, I. (1964)	Wilton	Rock art recording	Rock shelter with art
Sefton, C. (1989)	Heathcote National Park	Archaeological survey	37 art sites, 14 stone artefact sites, 2 rock engraving sites, 1 engraved groove channel site and 17 grinding groove sites
Rich, E. (1990)	Wilton Bypass	Archaeological survey	One shelter with occupational deposit and 1 isolated stone artefact
Navin, K and Officer, K. (1995)	Tower – Appin	Archaeological survey	Open artefact scatter, 1 isolated find
Rosen, S. (1995)	Pheasants Nest Weir	Heritage assessment	One surface scatter of stone artefacts
AMBS (1996)	Douglas Park	Archaeological survey	No sites identified
Sefton, C. (1996)	Appin	Archaeological investigation	Three sandstone overhangs with archaeological deposit, 2 sandstone overhangs with art, sandstone overhang with art and deposit
Sefton, C. (1998)	Tower Colliery	Archaeological investigation	One sandstone overhang with archaeological deposit and three sandstone overhangs with art, seven PADs
Jo McDonald CHM (1999a)	Nangarin Estate	Archaeological investigation	A total of nine (9) sites were identified: two open artefact scatters, three isolated finds, a rock shelter with archaeological deposit, two rock shelters with potential archaeological

			deposit, and an area with archaeological potential.
Jo McDonald CHM (1999b)	Nangarin Estate	Excavation report	A total of nineteen (19) artefacts were identified.
Sefton, C. (1999)	Tower Colliery	Archaeological investigation	One sandstone overhang with art, four sandstone overhangs with archaeological deposit, a scarred tree and three PADs
Conacher Travers (2000)	Condell Park, Wilton	Archaeological assessment	No sites identified
Navin Officer Heritage Consultants (2003a)	Wilton	Archaeological assessment	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
Navin Officer Heritage Consultants (2003b)	Wilton	Archaeological assessment	One stone artefact
Austral Archaeology (2004)	Maldon	Aboriginal heritage assessment	Two open artefact scatters, 5 isolated finds, a scar tree and area of archaeological sensitivity
KAS (2006)	Bingara Gorge, Wilton	Excavation report	173 artefacts
Heritage Concepts (2007)	Wilton	Aboriginal and Historical archaeological and cultural heritage assessment	One isolated find, one scar tree, one historical site comprising of a sandstone weir and post hole cuttings
Biosis Research (2009a)	Bingara Gorge	Aboriginal archaeological assessment	Isolated flake
Aecom (2010)	Maldon	Aboriginal and historic heritage assessment	No sites located
KAS (2010)	Bingara Gorge, Wilton	Recording of Aboriginal sites	132 artefacts
Niche Environment and Heritage (2010)	Appin Colliery	Aboriginal cultural heritage assessment	One scarred tree
Navin Officer (2012)	Wilton	Aboriginal cultural heritage assessment	Edge ground axe
KAS (2013a)	Bingara Gorge, Wilton	Statement of Heritage Impact	One open artefact scatter was identified: CT-AS-01. Three PADs were identified: CT-PAD-01, CT-PAD-02, and CT-PAD-03
KAS (2013b)	Bingara Gorge, Wilton	Statement of Heritage Impact	One PAD was identified: FE-PAD-01
Biosis (2014)	Bingara Gorge, Wilton	Aboriginal Archaeological Due Diligence Assessment	One isolated artefact was identified
KAS (2014a)	Wilton	Aboriginal Cultural Heritage Assessment and Historic Heritage Assessment	A total of 30 sites were identified: Seven (7) artefact scatters; Ten (10) isolated finds; Eight (8) rock shelter; and Five (5) scarred Trees.
KAS (2014c)	Bingara Gorge, Wilton	Aboriginal Cultural Heritage Assessment and Test Excavation Report	A total of 53 artefacts were recovered from 11 pits during the test excavation of BG-AS-001.
KAS (2015a)	Bingara Gorge, Wilton	Cultural Heritage Assessment Report	Two isolated artefacts were recorded: BG-IF-01 and BG-IF-02. Six PADs were identified: BG-PAD-01, BG-PAD-02, BG-PAD-03, BG-PAD-04, BG-PAD-05, BG-PAD-06
KAS (2015b)	Bingara Gorge, Wilton	Aboriginal Cultural Heritage Assessment and Test Excavation Report	Four (4) Aboriginal artefacts were identified during the test excavation at FE-PAD-01. However, no subsurface

			deposit was identified. One (1) Aboriginal artefact was identified at WILIF01, in an area of high ground disturbance.
KAS (2015d)	Bingara Gorge, Wilton	Aboriginal cultural heritage assessment	Eight (8) previously unrecorded Aboriginal sites were identified.
AHMS (2017)	Greater Macarthur Investigation Area	Aboriginal and Historic Heritage Gap Analysis	
KAS (2017a)	Bingara Gorge, Wilton	Aboriginal Cultural Heritage Assessment and Test Excavation Report	A total of nine (9) artefacts were recovered from 35 pits during the test excavation.

Shading indicates those reports that have specifically considered the Subject Area in this report

**Table 4:** Cultural heritage investigations conducted in the Wilton region

## 6.5 Previous Assessment within the Subject Area

Kayandel is aware of two Aboriginal archaeological assessment that has specifically considered the Subject Area.

### 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.

#### 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, p. 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, p. 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, p. 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, p. 61). AHIMS #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, p. 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, p. 68).

### **KAS (2014a)**

Kayandel Archaeological Services (KAS) (2014a) was 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 was to provide the Landowners' Group with an assessment of the Aboriginal and Historic (non-Aboriginal) heritage considerations within the study area. NSW Department of Planning & Infrastructure issued Study Requirements to guide planning investigations for a new town at Wilton Junction. The Study Requirements' relevant to Heritage were:

- ✦ 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.

The report identified 35 previously unrecorded Indigenous and Non-Indigenous heritage items. Twenty-nine (29) of these were exclusively attributable to Indigenous origins, five (5) to Non-Indigenous origins, and one (1) site that contained material evidence relating to both Indigenous and Non-Indigenous origins.

KAS (2014a) assessed that the potential for Aboriginal cultural material to be present within the study area was 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 to be present is assessed to be moderate to high.

## **6.6 Previous Predictive Models**

### **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 30cm may still contain intact deposits such as knapping floors. Deep and shallow alluvial sites were found to possess stratigraphic potential.

### KAS (2014a)

- ✦ 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 indicates that rock shelters constitute 64% of the population of known Aboriginal sites in the area; and,
- ✦ Areas of Potential Archaeological Deposits (PADs) in locations with minimal previous land disturbance.

### Biosis (2016)

Biosis (2016) formulated a broad predictive model about the type and character of Aboriginal cultural heritage sites likely to exist throughout the study area and where they are more likely to be located:

- ✦ Stone artefact sites have been previously recorded in the region on level, well-drained topographies near reliable sources of fresh water. Due to the distance to permanent fresh water resources, the potential for artefacts to be present within the study area is assessed as moderate;
- ✦ Shell midden sites have not been recorded within the vicinity of the study area. There is a very low potential for shell middens to be present within the study area as the first order drainage line is not permanent water source;
- ✦ There is no record of any quarries being within or surrounding the study area;
- ✦ PADs have been previously recorded in the region across a wide range of landforms. PADs are likely to be present within areas adjacent to water courses or on high points in undisturbed landforms;
- ✦ Due to extensive vegetation clearance only, a small number of mature native trees have survived. There is one previously recorded scarred tree within the study area;
- ✦ Aboriginal burial sites are generally situated within deep, soft sediments, caves or hollow trees. Areas of deep sandy deposits will have the potential for Aboriginal burials. The soil profiles associated with the study area are not commonly associated with burials;

- ✦ Rock shelters with art are the most common sites recorded in the region. The sites will only occur where suitable sandstone exposures or overhangs possessing sufficient sheltered space exist, which are present within the study area; and,
- ✦ There are no post-contact sites previously recorded in the study area and historical sources do not identify one.

### **AHMS (2017)**

AMHS (2017) formulated a predictive model about the type and character of Aboriginal cultural heritage sites likely to exist throughout the Sydney Cataract Sub-region portion of the Greater Macarthur Investigation Area:

- ✦ Archaeological investigation of the Sydney Cataract sub-bioregion is limited. Few site surveys and excavations have been completed in the area due to limited development in the area. Most of the work in the area has been primarily focused in the Holsworthy Defence base to the east of the study area;
- ✦ Unlike the Cumberland Plain subregion, archaeological site patterning is not strictly related to stream order;
- ✦ Studies across this region have tended to focus on the individual characteristics of sites, rather than on site patterning across the area. This is because sites will tend to occur in the area in relation to sandstone formations rather than water sources or other variables. Patterning tends to not be as effective in relation to this due to the relatively random and isolated occurrence of shelter formations;
- ✦ The main site types across the subregion are shelters with deposits, rock art and grinding grooves;
- ✦ On the Hawkesbury sandstone formations along the river and its feeder creeks the most common site types were Aboriginal art and occupation sites. These were located within sandstone overhangs or shelters. Sheltered, painted art/occupation sites tend to occur more frequently above valley floors or below ridge tops. There appears a general preference for northerly or north-westerly aspects;
- ✦ In other similar parts of the Sydney Basin, Attenbrow (2010) found that any overhang or rock shelter with reasonable head room, a level dry floor and a depth offering protection from extremes of sun, wind and rain could have been occupied by Aboriginal people in the past. Attenbrow (2010) also demonstrated that 70% of potential archaeological deposits (PAD) recorded within shelters are Aboriginal site;
- ✦ Open artefact scatters are less common due to the lack of open flat areas in the steep sandstone country. However, these site types may still occur and are most likely to be situated on flat terraces adjacent to higher order streams (as in the Cumberland subregion);
- ✦ Axe grinding grooves are commonly found in creek beds, at the tops of valleys, above or along watercourses and around rock pools or ridge tops near aquifers; and,
- ✦ Aboriginal burial sites may be located in rock shelter occupation deposits or within soft dry deposits such as sand bodies.

## KAS (2018)

In recent years, KAS has developed a Utilisation Model for Aboriginal occupation within the Nepean Ramp Transitional Zone, which aims to predict and explain the presence of sites within proximity to the watercourses and escarpments (KAS, 2015b; KAS, 2017a; KAS, 2018; KAS, 2015d). These utilisation zones are identified as follows:

- ✦ Zone 1 extends from the creek to the top of the escarpment, is believed to have been the main habitation area for the Wilton area, due to the large number of sandstone outcrops that have been identified as rock shelters suitable for habitation.
- ✦ Zone 2 extends from the top of the escarpment to the back of the flat behind the escarpment. Based discussion with the Aboriginal community registered for the project in regarding land-use practices, the fact that the majority of Aboriginal sites identified within Bingara Gorge and the Wilton area have been recorded in this landform (refer to Figure 13 and Figure 14), it is believed that artefact production may have been undertaken in Zone 2. It is also thought that game retrieved from Zone 3 may have been processed into more manageable sizes in this area.
- ✦ Zone 3 is located between the flat behind the escarpment and the highest point in the section. It is thought that Zone 3 may have been utilised as either for hunting and gathering purposes, before heading back down to the rock shelters in the gorge, or as an access point to the main ridge line. This utilisation zone is based on the low level of sites identified in this area within Bingara Gorge (FE-PAD-01 is one of the few Aboriginal sites within this Zone which has been identified as well as subject to subsurface investigations), as well as distance to permanent water sources (KAS, 2018), and the understanding based on discussions with the Aboriginal community that this area would have been too open to be occupied long term.
- ✦ Zone 4 is identified as the highest point along the section and may have been utilised for strategic landscape visibility purposes.

The Subject Area is in a location identified as extending across Zones 2 to 4. The Subject Area extends from top of the escarpment to the back of the flat behind the escarpment to the highest point on the landscape and has few easy access points into the incised gorge below.

Considering these utilisation zones and acknowledging that previous predictive models for the Cumberland Plain and Southern Highlands are not suitable for the landform environment found in the Subject Area, the following predictive model has been developed (refer to Section 6.7).

### 6.7 Aboriginal Heritage Predictions for the Subject Area

In terms of a broader regional context, Wilton is located on the Nepean Ramp which sits at the western margins of the Woronora Plateau (see Section 5.5). 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 shows that it is almost exclusively focused upon archaeological survey; seven (7) archaeological excavations having been undertaken within 15km of the Subject Area, and predominantly they have been undertaken within the Bingara Gorge development. Acknowledging this limitation and recognising that the surrounding regions (Cumberland Plain to the north and Southern Highlands to the south) have had significant levels of 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.

Based on the previous predictive model, previous archaeological results, past land use history, and the environmental descriptions, the following predictions for Aboriginal sites to be present within the Bingara Gorge development area have been made by KAS:

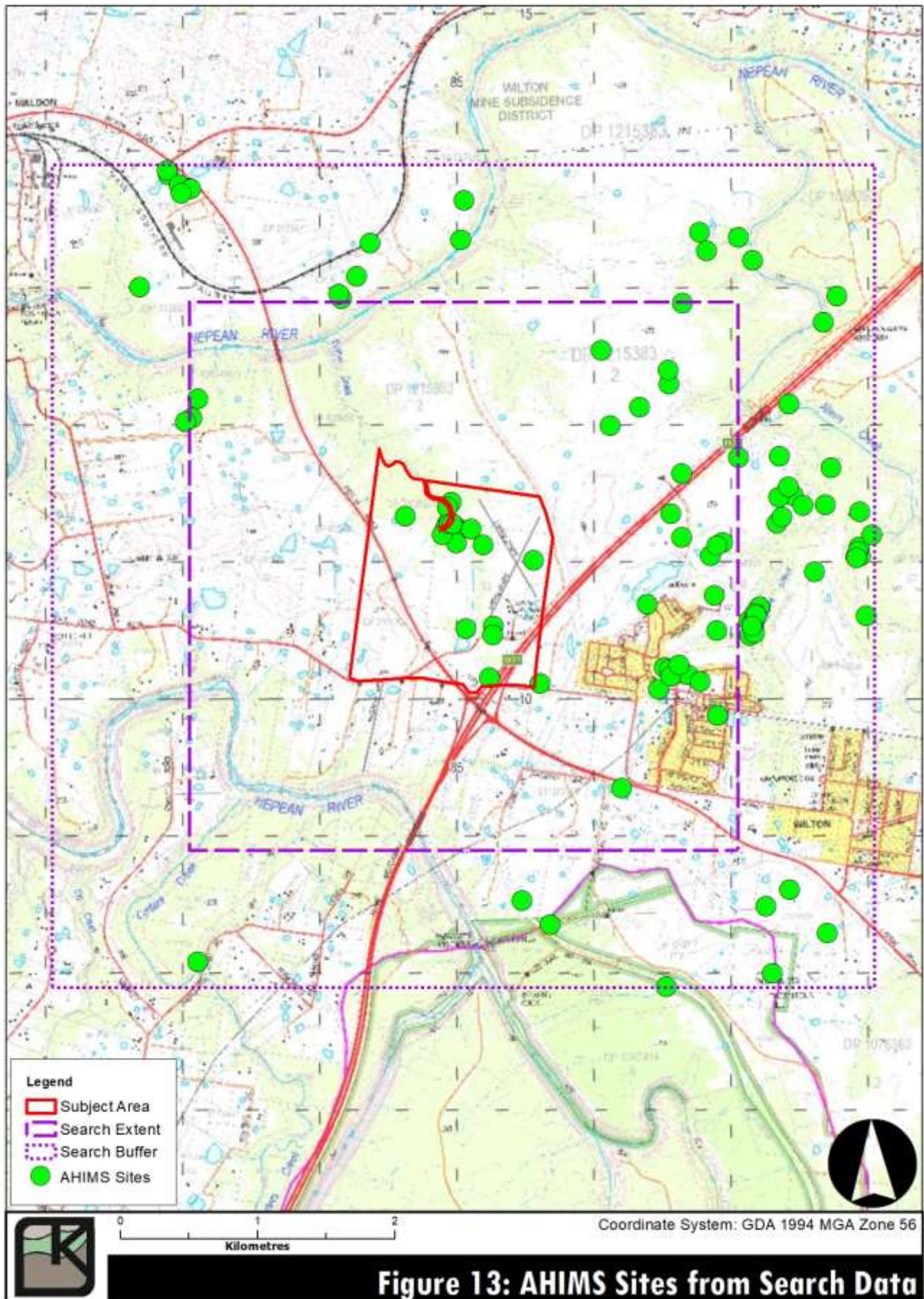
- ✦ Both surface and subsurface artefacts may occur across the entire Subject Area. This is supported by the range and location of Aboriginal sites identified across the Wilton region (see Figure 13 and Figure 14), and reinforced by the results of recent test excavations undertaken within Bingara Gorge (refer to Section 6.4);
- ✦ Surface and subsurface artefacts are most likely to occur on the flat behind escarpments, where there is easy access into the gorge. This is supported by the fact that the majority of Aboriginal sites (Open Camp Sites and Isolated Find) are typically identified within this landform, as well as the results of BG-AS-001 (refer to (KAS, 2018; KAS, 2014c);
- ✦ Subsurface archaeological deposits may be present in areas where no visible surface archaeological remains are evident (refer to (KAS, 2018; KAS, 2014c; KAS, 2015c; KAS, 2017a);
- ✦ The size, density and significance of sites will vary, although it is anticipated that any sites will be considerably less complex and less dense at distances greater than 250m from major water sources such as the Nepean River or Byrnes Creek, or along ridges and elevated positions overlooking watercourses. This is supported by the identification of isolated finds at distance of greater than 250m from major water sources, while artefact scatters have been identified on the flat immediately behind the escarpment (refer to Figure 13 and Figure 14);
- ✦ It is likely that there is an increased number of closed habitation sites at the confluences of higher order streams, relating to the sandstone outcrops present in these locations;
- ✦ Habitation sites will have associated open production and hunting/gathering sites, which will be present in close proximity, along the length of the flat behind the escarpment. The associated open production and hunting/gathering sites will occur in areas where the terrain allows for easy access into the gorge where the habitation sites occur;
- ✦ Open occupation is likely to have occurred where the ground surface is softer and rich in soils rather than on the flat at the edge of the escarpment that is known to obtain high amounts of rock surfaces;
- ✦ No lithic raw material outcrops have been identified in Bingara Gorge. As such, any archaeological material present within the Subject Area may provide additional understanding to raw material selection in the Wilton region;
- ✦ Burials would not be expected due to the limited depth of soil deposits;
- ✦ Areas of PADs in locations with minimal previous land disturbance; and,
- ✦ 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.

Based on test excavations that have been undertaken within the Bingara Gorge development it is currently thought that the flat immediately behind the escarpment is likely to contain Aboriginal archaeology. This is supported by the archaeological excavation undertaken at WP8 (AHIMS # 52-2-3032), which was 27m from the unnamed western 1<sup>st</sup> order tributary of Stringybark Creek, where 171 artefacts were identified, and BG-AS-001 (AHIMS #52-2-4153) (KAS, 2014c), which was 5m from unnamed 1<sup>st</sup> order stream, where 53 artefacts were identified, compared to the 4 artefacts recovered from FE-PAD-01 (AHIMS #52-2-4020), which is 370m from Stringybark Creek (KAS, 2015b).

The potential for subsurface archaeological deposits to be present within this landform is assessed as being low to moderate, as the location was considered to meet the predictive model outlined in KAS (2015b). Due to the large number of Aboriginal sites in the immediate vicinity, it is considered unlikely that the Subject Area would have been avoided and not utilised in the general occupation of the area by Aboriginal people in the past (KAS, 2015b). Additional subsurface investigations, in different landforms, would be necessary to begin assessing how the plateau landscape may have been utilised.

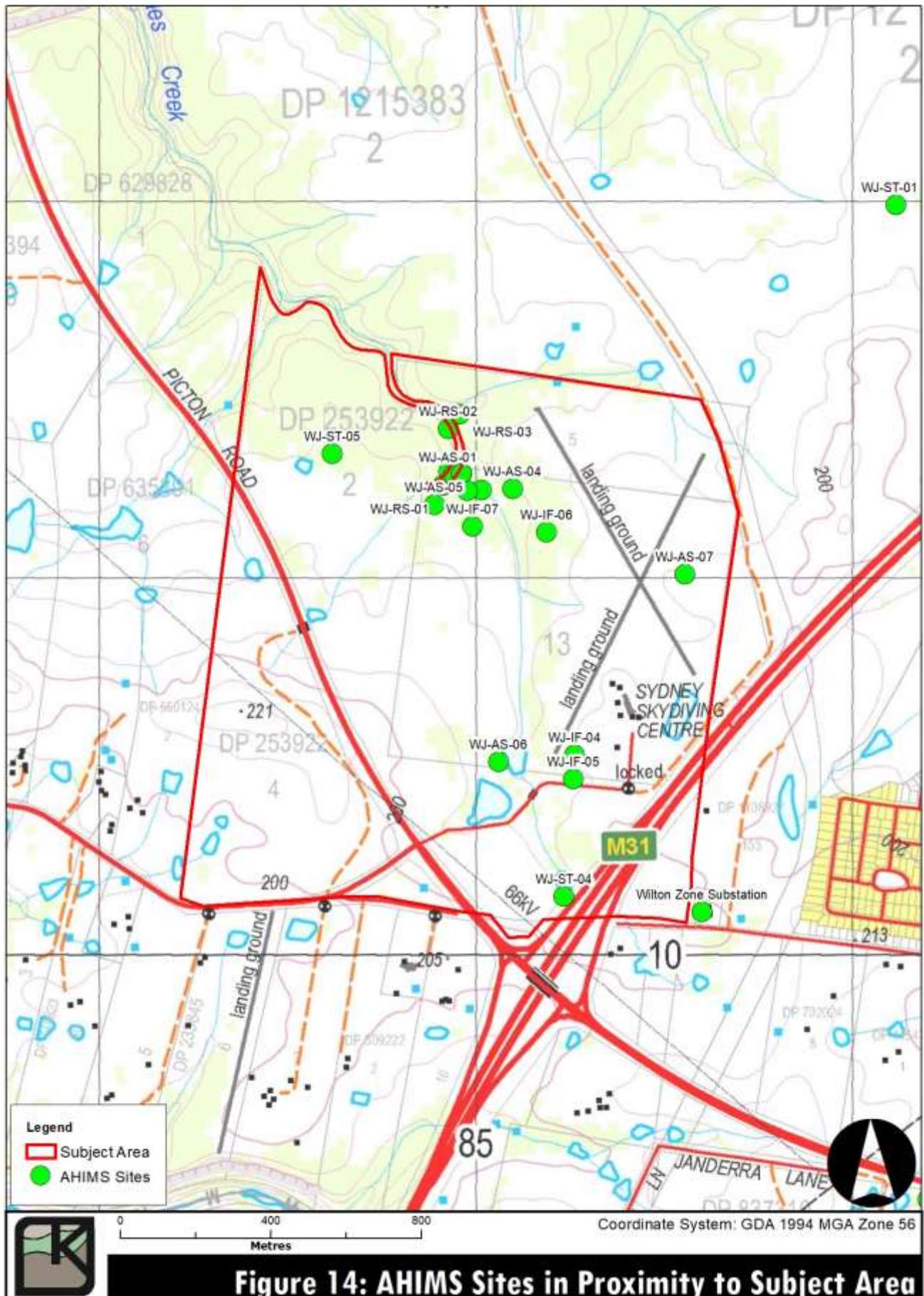
Based on previous test excavations that been undertaken within the Bingara Gorge development it would not be unreasonable to make predictions based on geomorphology and soil landscape rather than making predictions based on typical landscape features. In order for these predictions to be supported, more test excavations of the wider Wilton area would need to be undertaken.





**Figure 13: AHIMS Sites from Search Data**







## 7 EUROPEAN ARCHAEOLOGICAL CONTEXT

### 7.1 Historical Context

#### 7.1.1 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, p. 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 Brallier and George Caley, a servant of Joseph Banks (Whitaker, 2005, p. 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, p. 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 (Broadbent & Hughes, 1992, p. 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' (Broadbent & Hughes, 1992, p. 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.

#### 7.1.2 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 (Britton & Morris, 2000, p. 14). Whilst the Subject Area could 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.

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.

#### 7.1.2.1 Early Landholdings

Sir Thomas Mitchell was granted 2 560 acres in 1834 to which he later added, through purchase, 1, 250 acres (Britton & Morris, 2000, p. 94). Interestingly a sketch map exists from 1827 (refer to Figure 15) 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.

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.

#### 7.1.2.2 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 Bungarabee at Eastern creek are described as '... in the manner of the picturesque ...' and this became the fashion in the nineteenth century (Britton & Morris, 2000, p. 16). 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 Randolph John Want (see Figure 16 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.

### 7.1.2.3 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 Heritage Consultants, 2008, p. 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.

### 7.1.3 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 (Britton & Morris, 2000, p. 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 (Britton & Morris, 2000, p. 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. 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. 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, p. 22). Rust disease reached the Appin region by 1856 and within twenty years had halted grain production in the area entirely. 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.

#### **7.1.4 Transport Networks**

##### **7.1.4.1 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, p. 22; Heritage Concepts, 2007).

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 & Lowe Pty Ltd, 2003; HLA-Envirosciences Pty Ltd, 2003; Heritage Concepts, 2007).

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; Heritage Concepts, 2007, p. 30). By the 1860s a coach service from Campbelltown to Wollongong was provided by James Waterworth six days a week (Whitaker, 2005; Heritage Concepts, 2007, p. 29).

##### **7.1.4.2 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 5km long steam operated aerial ropeway which crossed the Nepean Gorge (Heritage Concepts, 2007, p. 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 line 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 (Heritage Concepts, 2007, p. 29).

## 7.2 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, p. 32). Rosen (1995, p. 32) 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.*

### 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 (refer to Plate 1). 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 (refer to Plate 2).

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 (refer to Plate 3). The post hole cuttings are on average cited 2m 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.





**Plate 1:** View facing south of historic weir, located along the southern end of Allens Creek



**Plate 2:** View facing south of sandstone weir crossing Allens Creek. Note the sandstone hammer dressed blocks display sparrow picking



**Plate 3:** Detail of post hole cutting in sandstone bedrock of Allens Creek

### 7.3 Predictions for Historic Heritage

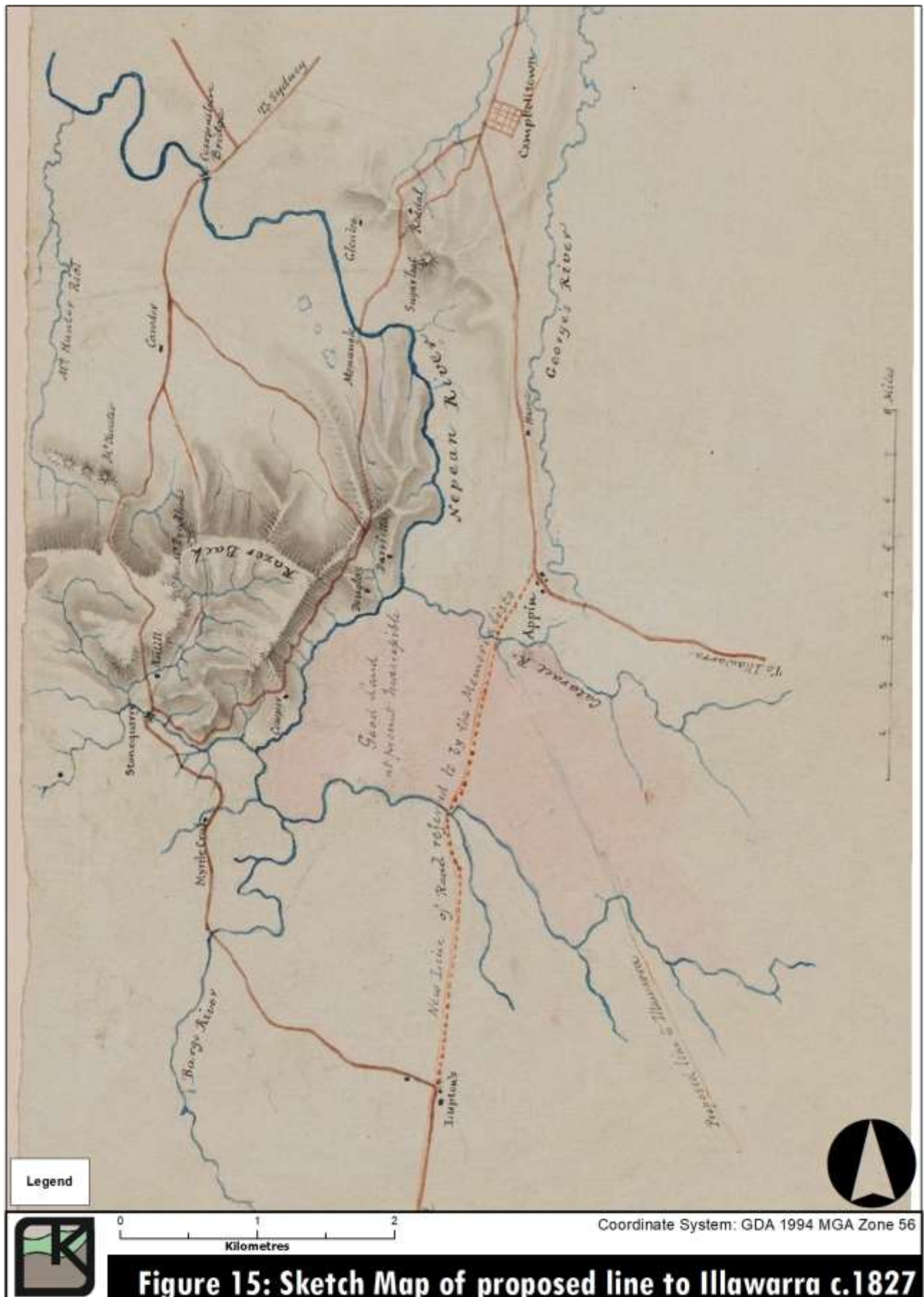
Within the Subject Area are a number of locations that have potential to contain unrecorded historic remains and features of heritage significance. These features are likely to include:

- ✦ 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;
- ✦ 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;
- ✦ 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; and,

- Structures of historical interest and heritage significance may be standing, ruined, buried, abandoned or still in use.





## 8 RESULTS – ABORIGINAL HERITAGE

### 8.1 Field Survey

#### 8.1.1 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, and the incidence and quality of ground surface exposure. Visibility variables have been estimated for all areas where a comprehensive survey was carried out in the Subject Area. This data provides a measurement with which to gauge and compare the effectiveness of the survey and the level of sampling conducted. It may also be utilised to determine the numbers and types of sites that may be present, but which could not be identified by the survey due to poor ground visibility and exposure.

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

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

The major factors affecting the quality of GSV 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 GSV were estimated during the survey:

- ✦ 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 GSV 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 that 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.

#### 8.1.2 Survey Units

The Subject Area was divided into thirteen (13) survey units for ease of recording. The survey units were assessed using pedestrian survey (transects). The boundaries of the survey units were identified by changes in vegetation, internal fences and landforms (refer to Figure 17).







### **SU1**

SU1 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.

### **SU2**

SU2 was surveyed on 1 May 2013 by Tom Knight, Veronica Zaghloul, Glenda Chalker and Neale Sampson. The survey unit is heavily vegetated open woodland.

An exposure was observed.

A portion of the survey unit has been cleared and the ground surface covered in woodchips.

One scar tree was located. It is described as WJ-ST-05.



**Plate 4:** General view of SU2 looking north

### **SU3**

SU3 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.



**Plate 5:** General view of SU3 looking north

#### **SU4**

SU4 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 SU4.



**Plate 6:** General view of SU4 looking southeast

#### **SU5**

SU5 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.



**Plate 7:** General view of SU5 looking south

#### **SU6**

SU6 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.



**Plate 8:** General view of SU6 looking southwest

### **SU7**

SU7 was surveyed on 30 April 2013 by Tom Knight, Veronica Zaghloul, Glenda Chalker and Neale Sampson.

SU7 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.



**Plate 9:** General view of SU7 looking south-west

### **SU8**

SU8 was surveyed on 30 April 2013 by Tom Knight, Veronica Zaghloul, Glenda Chalker and Neale Sampson.

SU8 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.



**Plate 10:** General view of SU8 looking northwest

### **SU9**

SU9 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.



**Plate 11:** General view of SU9 looking northeast



### **SU10**

SU10 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.



**Plate 12:** General view of SU10 looking northeast

### **SU36**

SU36 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.



**Plate 13:** General view of SU36 looking west

### **SU37**

SU37 was survey on 1 May 2013 by Lance Syme.

The paddock was heavily grassed, and no areas of exposure were encountered.

No Aboriginal cultural heritage was observed.

### **SU38**

SU38 was survey on 1 May 2013 by Lance Syme.

The paddock was heavily grassed, and no areas of exposure were encountered.

No Aboriginal cultural heritage was observed.

## 8.2 Survey Coverage Data

The Subject Area was divided up into survey units for ease of recording (refer to Table 5). All landforms were sampled during the survey (refer to Table 6). The main areas that were focused upon were the exposures with low levels of disturbance as these areas would be more likely to yield intact Aboriginal artefacts and deposits.

Survey Units	Landform	Survey Unit Area (ha)	Visibility %	Exposure %	Effective Coverage Area (ha)	Effective Coverage %
1	Mid slope/Lower Slope	12.69	5%	1%	0.006345	0.050%
2	Mid slope	26.14	5%	5%	0.06535	0.250%
3	Lower slope/mid slope/upper slope	1.91	5%	5%	0.004775	0.250%
4	Mid slope	6.28	5%	5%	0.0157	0.250%
5	Lower slope/upper slope/ridge	13.11	10%	5%	0.06555	0.500%
6	Lower slope	11.94	10%	10%	0.1194	1.000%
7	Lower slope	17.37	5%	10%	0.08685	0.500%
8	Lower slope	8.19	10%	10%	0.0819	1.000%
9	Lower slope	16.25	5%	10%	0.08125	0.500%
10	Creek	10.41	5%	5%	0.026025	0.250%
36	Upper slope/ridge	32.86	5%	5%	0.08215	0.250%
37	Upper slope/ridge	1.65	5%	5%	0.004125	0.250%
38	Mid slope	3.39	5%	5%	0.008475	0.250%

**Table 5:** Survey Coverage Data

Landform	Landform Area (ha)	Area Effectively Surveyed (ha)	% of Landform Effectively Surveyed	Number of Sites	Number of Artefacts or Features
Creek	10.41	0.026025	0.250%	7	2
Lower slope	53.75	0.3694	0.687%	4	9
Lower slope/mid slope/upper slope	1.91	0.004775	0.250%	1	6
Lower slope/upper slope/ridge	13.11	0.06555	0.500%	2	1
Mid slope	35.81	0.089525	0.250%	1	0
Mid slope/Lower Slope	12.69	0.006345	0.050%	4	2
Upper slope/ridge	34.51	0.086275	0.250%	0	0

**Table 6:** Landform Summary

### 8.3 Identified Sites

As a result of the field survey, a total of sixteen (16) previously unrecorded Aboriginal sites were identified. These sites are identified below:

#### **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-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.



**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-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.



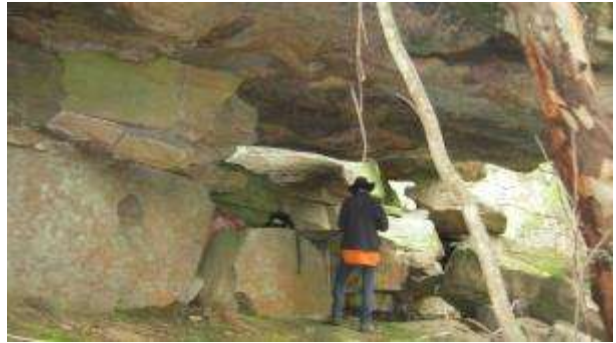
**WJ-RS-04 (AHIMS #52-2-4076)**

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 as 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 north-eastern 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 an 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-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.











## 9 RESULTS – HISTORIC HERITAGE

In Section 7.3, 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

One new historic heritage site was located during the survey. The Aboriginal rock shelter site of WJ-RS-03 was identified for its historical heritage values.

Name	Description
WJ-RS-03	Habitation rock shelter

**Table 7:** Historic Sites identified during this study

#### 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 assortment 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 anthropomorphic motif.



**Plate 14:** View of Rock Shelter. Location of Cast Iron beds indicated by arrows



**Plate 15:** 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.

While the Subject Area does not have areas of high elevation; there are two areas of high elevation have been identified immediately east of the Subject Area. The views from these elevated areas into and out of the Subject Area been identified in . 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 (refer to Figure 20).





## 10 DISCUSSION

### 10.1 Aboriginal Heritage

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 interest is WJ-RS-03, the rock shelter that contains both Indigenous art and the potential depression era occupation.

### 10.2 Discussion

The findings of the field survey were in keeping with the predictive model for the Subject Area as detailed in Section 7.3.

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 (refer to ).

Historic heritage items identified as part of the survey (refer to Figure 20) are indicative of past agricultural practices within the landscape during the twentieth century.

## 11 SIGNIFICANCE ASSESSMENT

### 11.1 Aboriginal Heritage

#### 11.1.1 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.

Cultural Significance Ranking	Site Name
High	WJ-ST-04; WJ-ST-05; WJ-RS-03
Moderate	WJ-AS-06; WJ-AS-07; WJ-AS-05; WJ-AS-04; WJ-RS-04; WJ-RS-05; WJ-RS-07; WJ-RS-02
Low	WJ-IF-05; WJ-IF-04; WJ-IF-06; WJ-IF-07; WJ-RS-06

**Table 8:** Cultural Significance Ranks for Aboriginal sites within Subject Area

#### 11.1.2 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.

### 11.1.3 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 9 and Figure 21) 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 19. 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 19).

#### 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.

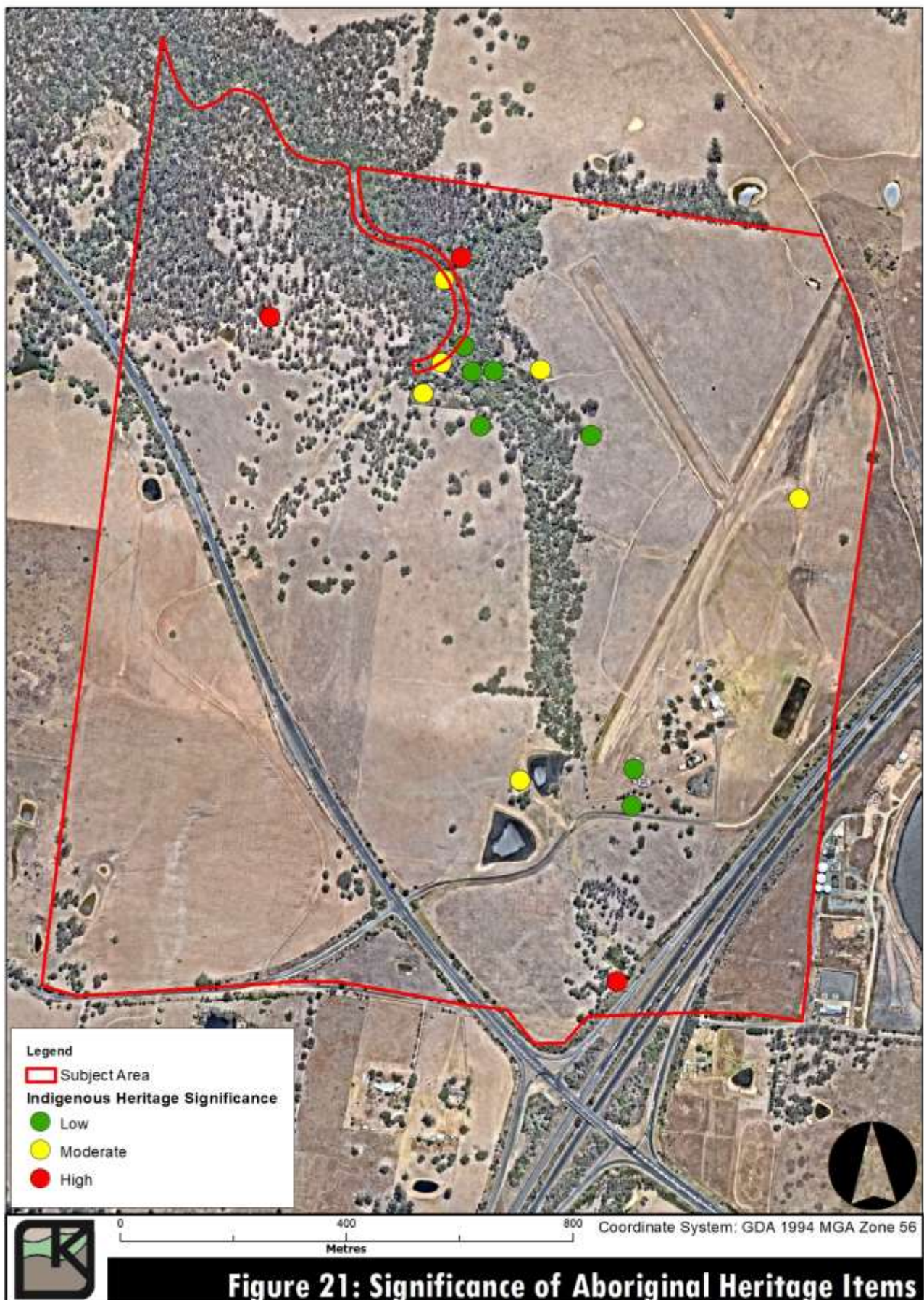
AHIMS #	Site Name	Archaeological Significance
52-2-4100	WJ-AS-04	Moderate
52-2-4094	WJ-AS-05	Moderate
52-2-4095	WJ-AS-06	Moderate
52-2-4096	WJ-AS-07	Moderate
52-2-4088	WJ-IF-04	Low
52-2-4089	WJ-IF-05	Low
52-2-4090	WJ-IF-06	Low
52-2-4086	WJ-IF-07	Low
52-2-4078	WJ-RS-02	Moderate
52-2-4075	WJ-RS-03	High
52-2-4076	WJ-RS-04	Moderate
52-2-4071	WJ-RS-05	Low
52-2-4072	WJ-RS-06	Low
52-2-4073	WJ-RS-07	Low
52-2-4079	WJ-ST-04	High
52-2-4080	WJ-ST-05	High

**Table 9:** Archaeological Significance Rankings of Aboriginal Sites identified in this study

#### 11.1.4 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 19) to be present is assessed to be moderate to high. Areas that conform to this assessment have been identified in Figure 21.

The rock shelters identified are a common type of Aboriginal site (see Table 3 and Table 9). Their archaeological significance is identified in Figure 21. 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.





## 11.2 Aboriginal Heritage

### 11.2.1 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.<sup>1</sup>*

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

Criterion (a)	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). <sup>455</sup>
Criterion (b)	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).
Criterion (c)	An item is important in demonstrating aesthetic characteristics and/or a high degree of creative or technical achievement in NSW (or the local area).
Criterion (d)	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.
Criterion (e)	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).
Criterion (f)	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).
Criterion (g)	An item is important in demonstrating the principal characteristics of a class of NSW's <ul style="list-style-type: none"> <li>• Cultural or natural places; or</li> <li>• Cultural or natural environments (or a class of the local area's</li> <li>• Cultural or natural places; or</li> <li>• Cultural or natural environments.)</li> </ul>

**Table 10:** Assessment against Heritage significance Criterion

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

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

**Table 11:** Grading of Significance to reflect Assessment of Significance

<sup>1</sup> Australia ICOMOS, 2000 *The Burra Charter. Article 1.2*

### 11.2.2 Historic Heritage Assessment of the Subject Area

Within the Subject Area there are a limited range of historic heritage items with varying levels of archaeological significance (see Table 12 and Figure 22).

The heritage impact assessment addressed in Table 12 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.

A recommended management strategy or mitigation action for the historic heritage within and adjacent to the Subject Area is outline in Table 13.

Heritage Item	Significance	Heritage Impact Assessment
WJ-RS-03	High	No heritage impact

**Table 12:** Assessment of Significance of Historic Sites identified in this study and heritage impact

### 11.2.3 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 (refer to Table 10 and Table 11).

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 Ousley 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.





## 12 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 13) 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 13). The significance of each of the heritage sites are identified in Table 9 and Table 12.

Zoning Areas within Masterplan	Site Name	Management/Other Recommendation
Developable Lands	WJ-AS-07, WJ-IF-04, WJ-IF-05, WJ-IF-07, WJ-ST-04, WJ-ST-05	AHIP
Existing Vegetation	WJ-RS-02, WJ-RS-04, WJ-RS-05, WJ-RS-06, WJ-RS-07,	Conservation
	WJ-RS-03	Conservation and further investigation
Open Space	WJ-IF-06, WJ-AS-04, WJ-AS-05, WJ-AS-06	AHIP

**Table 13:** Likely Impacts to Aboriginal and Heritage Sites and Management Strategies for Proposed Masterplan

### 12.1 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 11 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 Table 13). 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 long-term 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 14.



Significance Ranking	Management Options	
	Ni Impact	Impact
Exceptional	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.	This area is of exceptional significance and should not be impacted.
High	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.	Salvage excavation should be undertaken under a Section 90 consent to mitigate against the loss of information. <i>DECCW's (2010b) Aboriginal Cultural Heritage Consultation Requirements for Proponents</i> would be implemented
Moderate	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.	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.
Low	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.	Section 90 consent should be obtained prior to the commencement of works affecting these sites. <i>Aboriginal Cultural Heritage Consultation Requirements for Proponents (DECCW, 2010b)</i> would be implemented.

**Table 14:** 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 subsurface investigation, through undertaking an archaeological testing. 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.



## 13 PRINCIPAL FINDINGS AND RECOMENDATIONS

In Section 1.3 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 presented in 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 predictions 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 19 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 13.1.

Items of significant Historic heritage were known to exist throughout and immediately adjacent to the Subject Area. There are locations within the Subject Area likely to retain evidence of remains associated with the first occupation of the area by colonial settlers (refer to Section 13.1.1)

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.

### 13.1 Aboriginal Heritage

As a result of the survey and assessment undertaken for this present study an additional sixteen (16) previously unknown Aboriginal sites have been identified. These additional sites consist of four (n=4) artefact scatters, four (n=4) isolated finds, six (n=6) rock shelters with either PAD, art or artefacts, and two (n=2) scarred trees that have been assessed to be the result of Aboriginal cultural practices (refer to Section 8). 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. 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.

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 (refer to Figure 18). 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 5 and Figure 17) 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 8.3 and Figure 18) 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.

#### 13.1.1 Obligations

1. An Aboriginal Heritage Impact Permit under Part 6 of the *National Parks and Wildlife Act, 1974* for any impacts to Aboriginal objects within the Subject Area.

#### 13.1.2 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 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 requirements of the *Code of Practice for Archaeological Investigation of Aboriginal Objects in NSW* (DECCW, 2010a);
- ✦ The requirements of the *Guide to Investigating, Assessing and Reporting on Aboriginal Cultural Heritage in NSW* (OEH, 2011);
- ✦ The findings presented within this Aboriginal and European Survey Report; and,
- ✦ Recognition of the extended period of which development activities will occur within the Subject Area (refer to Section 1.2 and Figure 3).

KAS recommends the following:

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

2. Prior to Development Application Stage for an identified area, further Aboriginal archaeological investigations are required at all locations identified in Figure 19. See below for further considerations for these investigations;
3. 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 results from unexpected finds;
4. As a result of Recommendations 2 and 3, 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, 2010b);
5. 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; and,
6. Archival recording utilising measured drawing and digital capture techniques should be undertaken at each of the rock art and rock shelter sites.

### 13.1.3 Distribution of Report

One hard copy and one digital copy of the finalised report should be sent to:

#### **Aboriginal Heritage Information Management System (AHIMS)**

Office of Environment and Heritage,  
PO Box 1967, Hurstville NSW 1481.

## 13.2 European Heritage

There are no heritage items recorded on the State Heritage Register (SHR) that are present within the Subject Area.

### 13.2.1 Obligations

1. 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.
2. 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.
3. 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.

### 13.2.2 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; and,
- ✶ Recognition of the extended period of which development activities will occur within the Subject Area.

KAS recommends the following:

1. No further assessment of the historic heritage within the Subject Area is required to inform the rezoning proposal;
2. Historic heritage items identified in Table 12 assessed to have any level of significance should be included in Schedule 5 Register of the Wollondilly LEP 2011;
3. Prior to Development Application Stage for an identified area, further heritage assessment would be required at all locations identified in Figure 20 to inform the preparation of detailed planning controls, such as DCPs for the site;
4. 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; and,
5. Any future development impacts upon the Heritage Items listed in Table 12 and shown in Figure 22 will require the relevant excavation or exemption notification under the *Heritage Act 1977* (refer to Section 2.2.3) where they are present within the Subject Area.

## 14 REFERENCES

- Aecom. (2010). *Aboriginal & Historic Heritage Assessment Maldon Rail Terminal*. Report prepared for Boral Resources (NSW) Pty Ltd.
- Allen, J., & O'Connell, J. (2003). the Long and the Short of it: Archaeological Approaches to Determining when Humans Colonised Australia and New Guinea. *Australian Archaeology*, Vol 57, 5-19.
- AMBS. (1996). *Archaeological Survey of Longwall Mining Applications 14 & 15, Tower Colliery, Douglas Park*. Report for BHP Collieries Division.
- AMHS. (2017). *Greater Macarthur Investigation Area: Aboriginal and Historic Heritage - Gap Analysis and Future Direction*. Department of Planning & Environment.
- Attenbrow. (2010). *Sydney's Aboriginal Past. Investigating the Archaeological and Historical Records* (2nd ed.). Sydney: UNSW Press.
- Austral Archaeology. (2004). *Proposed Allied Mills Flour Mill, Picton NSW, Aboriginal Heritage Assessment*. Report prepared for KBR Pty Ltd on behalf of Allied Mills Pty Ltd.
- Biosis. (2014). *Due Diligence Advice for Aboriginal archaeological heritage for Bingara Gorge Services Reviews of Environmental Factors (REFs)*. Prepared for Cardno.
- Biosis. (2016). *Wilton West Master Plan Project, Wilton Aboriginal and Historic Cultural Heritage Due Diligence Assessment*. Prepared for Country Garden.
- Biosis Research. (2009a). *Bingara Gorge New Public School, Wilton: Aboriginal Archaeological Assessment*. Report for the NSW Department of Commerce on behalf of the NSW Department of Education & Training.
- BOM. (2018, August 30). *Bureau of Meteorology*. Retrieved September 4, 2018, from Climate statistics for Australian Locations, monthly climate statistics (Camden): [http://www.bom.gov.au/climate/averages/tables/cw\\_068192.shtml](http://www.bom.gov.au/climate/averages/tables/cw_068192.shtml)
- Branagan, D., & Packham, G. (2000). *Field Geology of New South Wales*. Sydney: Department of Mineral Resources New South Wales.
- Britton, G., & Morris, C. (2000). *Colonial Landscapes of the Cumberland Plain and Camden: A Survey of selected pre-1860 Cultural Landscapes from Wollondilly to Hawkesbury LGAs* (Vol. 2). Unpublished report for the National Trust of Australia.
- Broadbent, J., & Hughes, J. (1992). *The Age of Macquarie*. Carlton: Melbourne University Press.
- Burke, H., & Smith, C. (2004). *The Archaeologist's Field Handbook*. Crow's Nest, NSW: Allen & Unwin.
- Casey & Lowe Pty Ltd. (2003). *Non-Indigenous Heritage Study Menangle Park, NSW*. Report prepared for APP on behalf of Campbelltown City Council & Landcom.
- Conacher Travers. (2000). *Archaeological Assessment Proposed Subdivision Lots 2, 4 and 11 DP 702024 Condell Park Wilton*.
- DECCW. (2010a). *Code of Practice for Archaeological Investigation of Aboriginal Objects in New South Wales*. Sydney South: Department of Environment, Climate Change and Water NSW. Retrieved September 24, 2010

- DECCW. (2010b). *Aboriginal Cultural Heritage Consultation Requirements for Proponents*. Sydney South: Department of Environment, Climate Change and Water NSW.
- Hamm, G., Mitchell, P., Prideaux, G. J., Arnold, L. J., Questiaux, D., Johnston, D., . . . Wilton, S. (2016). Cultural Innovation and Megafauna Interaction in the Early Settlement of Arid Australia. *Nature*, 539, 280-283.
- Hazelton, P., & Tille, P. (1990). *Soil landscapes of the Wollongong-Port Hacking 1:100 000 Sheet*. Sydney: Soil Conservation Service of NSW.
- Heritage Concepts. (2007). *Aboriginal and Historical Archaeological and Cultural Heritage Assessment, Wilton, Wollondilly Shire, NSW*. Report prepared for Walker Corporation Pty Limited.
- Heritage Office. (1996). *NSW Heritage Manual*. Department of Urban Affairs & Planning .
- HLA-Envirosciences Pty Ltd. (2003). *Non-Indigenous Heritage Assessment Edmondson Park, NSW*. Prepared for Liverpool City Council.
- Hope, P. (2005). *The weather and climate of Australia at the Last Glacial Maximum*. School of Earth Sciences. The University of Melbourne.
- Jo McDonald CHM. (1999a). *Archaeological Survey Of The Proposed "Nangarin Estate" Agricultural/Rural Residential Subdivision, At Picton, NSW*. Report prepared for Vinnicombe & Associates on behalf of Bradman Corporation.
- Jo McDonald CHM. (1999b). *Archaeological Test Excavation Of NG/PAD1 (NG/OC3): Proposed "Nangarin Estate" Agricultural/Rural Residential Subdivision, At Picton, NSW*. . Report prepared for Vinnicombe & Associates on behalf of Bradman Nangarin Pty Ltd.
- Jo McDonald CHM. (2007). *Indigenous Heritage Impact Statement, Western Sydney Parklands: Bungaribee Precinct Project*. Prepared for APP on behalf of Landcom and DoP.
- KAS. (2006). *Wilton Park 8, Wilton Parklands Estate, NSW, Aboriginal Heritage Excavation Report*. Report prepared for Delfin Lend Lease.
- 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. (2013a). *Development Application "Country Town" Bingara Gorge, Wilton, Statement of Heritage Impact*. Prepared for Lend Lease Wilton Pty Ltd.
- KAS. (2013b). *Development Application "Fairways East" Bingara Gorge, Wilton, Statement of Heritage Impact*. Prepared for Lend Lease Wilton Pty Ltd.
- KAS. (2014a). *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.
- KAS. (2014c). *BG-AS-001 (AHIMS #52-2-4153) Bingara Gorge, Wilton, Wollondilly Shire LGA, NSW, Cultural Heritage Assessment and Test Excavation Report*. Prepared for Lend Lease Wilton Pty Ltd.
- KAS. (2015a). *Development Application "Balance of Site" Bingara Gorge, Wilton, Wollondilly Shire LGA, NSW, Cultural Heritage Assessment Report* . Prepared on behalf of Lend Lease Wilton Pty Ltd.



- KAS. (2015b). *FE-PAD-01 (AHIMS #52-2-4020), Bingara Gorge, Wilton, Wollondilly Shire LGA, NSW: Cultural Heritage Assessment and Test Excavation Report*. Prepared for Lend Lease Wilton Pty Ltd.
- KAS. (2015c). *"Stage 5D" Precinct, Bingara Gorge, Wilton, Wollondilly Shire LGA, NSW: Cultural Heritage Assessment and Test Excavation Report*. Prepared on behalf of Lend Lease Wilton Pty Ltd.
- KAS. (2015d). *Proposed Construction of Fire Trails Bingara Gorge Wilton, Wollondilly Shire LGA, NSW: Cultural Heritage Assessment Report*. Prepared on behalf of Lend Lease Communities (Wilton) Pty Ltd.
- KAS. (2017a). *"Stage 5D" Precinct, Bingara Gorge, Wilton, Wollondilly Shire LGA, NSW: Addendum Cultural Heritage Assessment and Test Excavation Report*. Prepared on behalf of Lend Lease Communities (Wilton) Pty Ltd.
- KAS. (2018). *"Fairways North" and "Golf Town" Precincts, Bingara Gorge, Wilton, Wollondilly Shire LGA, NSW: Cultural Heritage Assessment and Test Excavation Report*. Prepared on behalf of Lend Lease Communities (Wilton) Pty Ltd.
- Kohen, J., Stockton, E., & Williams, M. (1984). Shaws Creek KII Rockshelter: A Prehistoric Occupation Site in the Blue Mountains Piedmont, Eastern New South Wales. *Archaeology in Oceania*, 91, 53-73.
- Liston, C. (1988). The Dharawal and Gandangara in Colonial Campbelltown, New South Wales, 1788-1830. *Aboriginal History*, 12(1), 48-62.
- McDonald, J. (2004). *Archaeological Heritage Management Plan for Archaeological Sites in the Caddies Creek Precinct Rouse Hill Regional Centre, NSW*. Report prepared for Lend Lease Pty Ltd.
- McDonald, J. (2008). *Dreamtime Superhighway: Sydney Basin Rock Art and Prehistoric Information exchange*. *Terra Australis* 27. ANU E-Press.
- Murphy. (2000). The Nature of Soil. In P. Charman, & B. Murphy, *Soils: Their Properties And Management* (2nd ed., pp. 1-12). Oxford: Oxford University Press.
- Murphy, B. W., & Murphy, C. L. (2000). The Soil Profile. In P. Charman, & B. W. Murphy, *Soils: their properties and management* (2nd ed., pp. 70-82). Oxford: Oxford University Press.
- Navin Officer. (2012). *Unanticipated Discovery Wilton Substation, NSW: Aboriginal Cultural Heritage Assessment*. Prepared for Endeavour Energy.
- Navin Officer Heritage Consultants. (2003a). *Proposed "Wilton Park" Residential Development, Wilton, NSW*. A Report to Bradcorp Holdings Pty Limited.
- Navin Officer Heritage Consultants. (2003b). *Proposed Residential Development DP 836296 (Lot 6) on Hornby Street, Wilton, NSW*. A Report to Bradcorp Holdings Pty Limited.
- Navin Officer Heritage Consultants. (2008). *Wilton Substations 66kV Feeder Works, Wilton NSW, Cultural Heritage Assessment*. Report to Integral Energy.
- Navin, K., & Officer, K. (1995). *Archaeological Survey Proposed Tower-Appin Coal Gas Pipeline*. Report to CMPS&F.

- Niche Environment and Heritage. (2010). *Heritage Impact Statement, Appin Colliery Vent Shaft No. 6*. Report to BHP Billiton Illawarra Coal.
- OEH. (2011). *Guide to Investigating, Assessing and Report on Aboriginal Cultural Heritage in NSW*. South Sydney: Office of Environment and Heritage.
- OEH. (2012). *Sydney Basin Bioregion*. Retrieved July 1, 2018, from <http://www.environment.nsw.gov.au/resources/nature/sydneyBasin.pdf>
- Petherick, L., McGowan, H., & Moss, P. (2008). Climate variability during the Last Glacial Maximum in eastern Australia: evidence of two stadials? *Journal of Quaternary Science*, 23, 787-802.
- 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.
- Rosen, S. (1995). *Heritage Assessment for Nepean Tunnel Amplification Project*. Prepared for Sydney Water.
- Sefton, C. (1989). *Archaeological Survey of the Cordeaux River and Woronora River*. Illawarra Prehistory Group.
- Sefton, C. (1996). *Archaeological Investigations of Area 4, Appin Colliery*. Report for Collieries Division, BHP Australia Coal.
- Sefton, C. (1998). *Archaeological Investigation of Longwalls 16 and 17 and Future Mining Extensions, Tower Colliery*. Report for Collieries Division, BHP Australia Coal.
- Sefton, C. (1999). *Archaeological Investigation of Longwalls 18-24 Tower Colliery*. Report for BHP Coal - Illawarra Collieries.
- Sim, I. (1964). Aboriginal Drawings near Wilton. *Oceania*, 35(1), 58-65.
- Stockton, E., & Holland, W. (1974). Cultural sites and their Environment in the Blue Mountains. *Archaeology and Physical Anthropology. Oceania*, 9, 36-65.
- Tindale, N. B. (1974). *Tribal Boundaries in Aboriginal Australia*. Canberra: Australian National University Press.
- Whitaker, A. M. (2005). *Appin: The Story of a Macquarie Town*. Alexandria: Kingsclear Books.

## APPENDIX I. COMMONWEALTH HERITAGE LIST SEARCH RESULTS

**Search Results**

[new search](#)

No results found.

Enter at least one search criterion.  
[Search hints](#)

**Search** **Reset form**

Place name

Street name

Town or suburb  
Wilton

State  
New South Wales

Country

**Advanced search options**

List  
Commonwealth Heritage List

Different lists will provide different status and class options

Local Government Area  
Wollondilly

Place ID number

Legal status  
--All--

Class  
--All--

Keyword Search

☒ Description ☐ Statement of Significance ☐ Place history

[Latitude/longitude](#)

N  
Latitude 1  
Longitude 1 S Longitude 2  
W E Latitude 2 S E E  
S



## APPENDIX II. NATIONAL HERITAGE LIST SEARCH RESULTS

The screenshot shows the Australian Heritage Database search results for the 'Warrumbungle National Park'. The page header includes the Australian Government logo and the Department of the Environment and Energy. The search results section shows one result found: 'Warrumbungle National Park - 1986 Mount Kiera Rd'. The location is listed as 'Wollongong, NSW, Australia'. A note indicates that the park is not included in the National Heritage List. The report was produced on Fri Aug 22 11:51:40 2015.

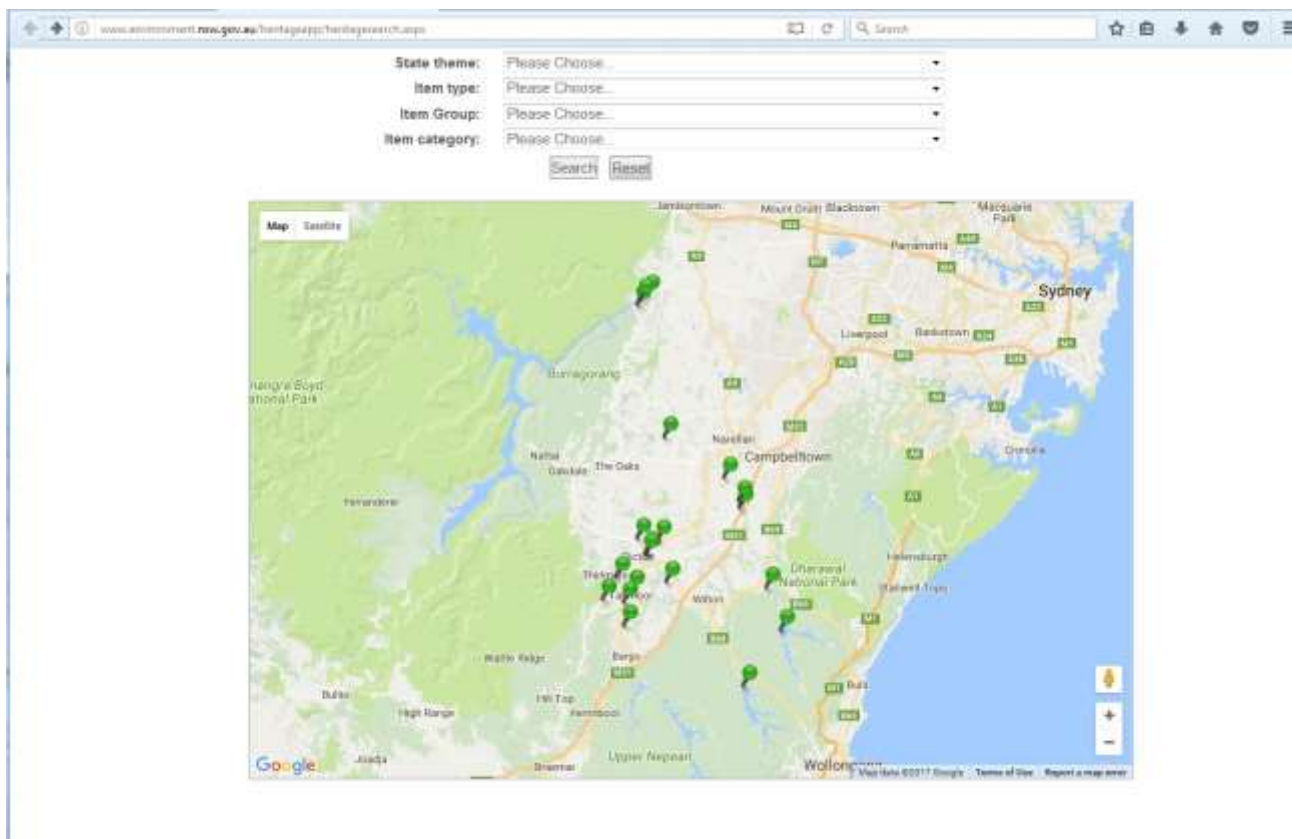
**Search Results**

1 result found.

<a href="#">Warrumbungle National Park - 1986 Mount Kiera Rd</a>	Wollongong, NSW, Australia	(Place not included in 1915 National Heritage List)
--	----------------------------	---

Report Produced: Fri Aug 22 11:51:40 2015

## APPENDIX III. STATE HERITAGE REGISTER SEARCH RESULTS



## APPENDIX IV. STATE HERITAGE INVENTORY SEARCH RESULTS (INCLUDING LOCAL ENVIRONMENTAL PLAN SCHEDULE/S)

Search for NSW heritage | NSW Environment & Heritage

<http://www.environment.nsw.gov.au/heritageapp/heritagesearch.aspx>



[Home](#) > [Topics](#) > [Heritage places and items](#) > [Search for heritage](#)

### Search for NSW heritage

[Return to search page where you can refine/broaden your search.](#)

#### Statutory listed Items

Information and items listed in the State Heritage Inventory come from a number of sources. This means that there may be several entries for the same heritage item in the database. For clarity, the search results have been divided into three sections.

- **Section 1** - contains Aboriginal Places declared by the **Minister for the Environment** under the National Parks and Wildlife Act. This information is provided by the Heritage Division.
- **Section 2** - contains heritage items listed by the **Heritage Council of NSW** under the NSW Heritage Act. This includes listing on the State Heritage Register, an Interim Heritage Order or protected under section 136 of the NSW Heritage Act. This information is provided by the Heritage Division.
- **Section 3** - contains items listed by **local councils** on Local Environmental Plans under the Environmental Planning and Assessment Act, 1979 and **State government agencies** under s.170 of the Heritage Act. This information is provided by local councils and State government agencies.

#### Section 1. Aboriginal Places listed under the National Parks and Wildlife Act.

Your search did not return any matching results.

#### Section 2. Items listed under the NSW Heritage Act.

Your search returned 2 records.

Item name	Address	Suburb	LGA	SHR
<a href="#">Upper Canal System (Pheasants Nest Weir to Prospect Reservoir)</a>		Prospect	Blacktown	01373
<a href="#">Wilton Park</a>	Wilton Park Road	Wilton	Wollondilly	00257

#### Section 3. Items listed by Local Government and State Agencies.

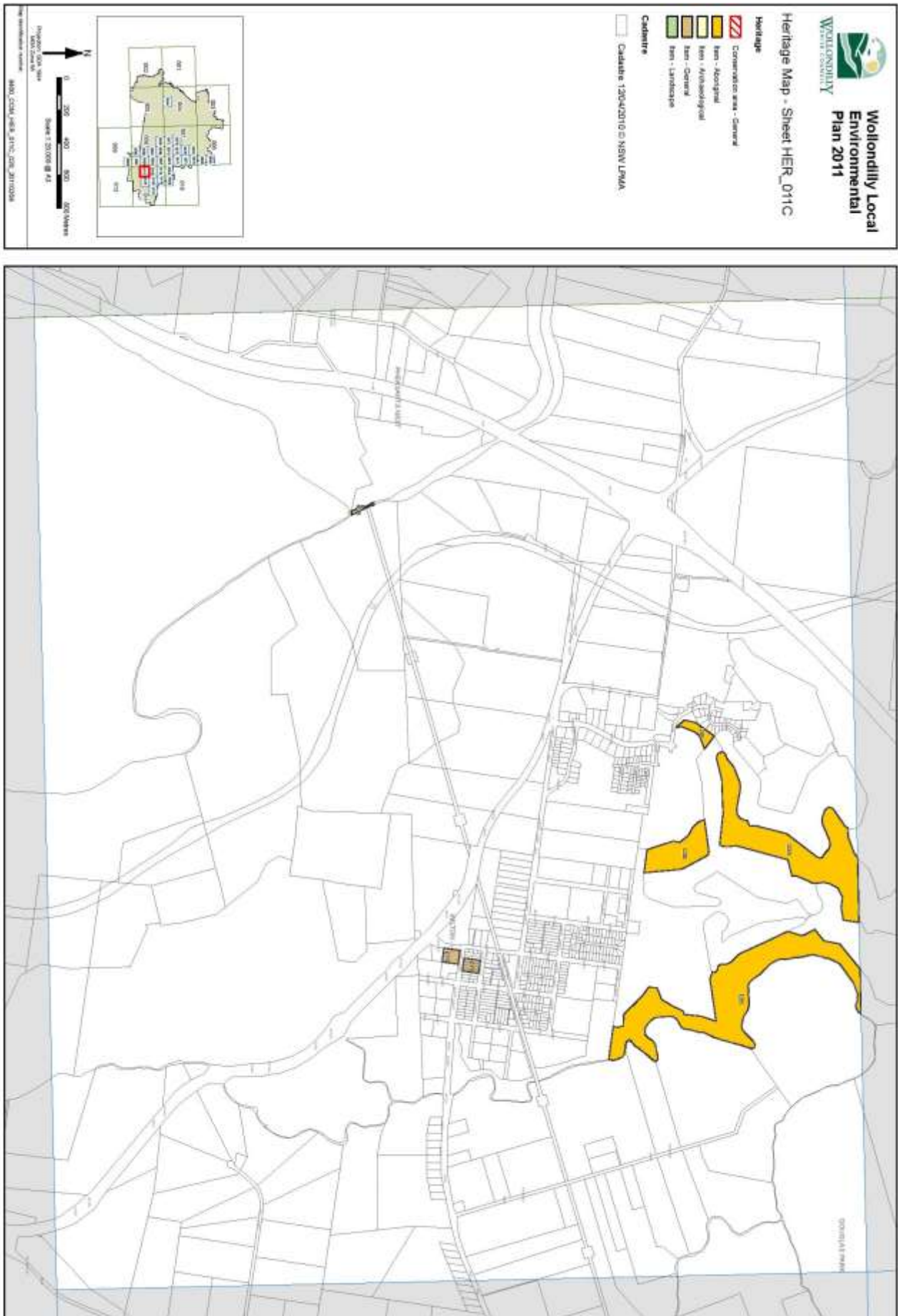
Your search returned 9 records.

Item name	Address	Suburb	LGA	Information source
<a href="#">Aboriginal Shelter Sites (Wilton Park)</a>	80 Condell Park Rd	Wilton	Wollondilly	LGOV
<a href="#">Cordeaux Dam and Pumping Station</a>	Cordeaux River	Wilton	Wollondilly	LGOV
<a href="#">Cottage</a>	1090 Argyle Street	Wilton	Wollondilly	LGOV
<a href="#">Cottage</a>	180 Wilton Park Road	Wilton	Wollondilly	LGOV
<a href="#">Kedron</a>	305 Wilton Park Road	Wilton	Wollondilly	LGOV
<a href="#">Pheasants Nest Weir (Nepean River)</a>	Nepean River	Wilton	Wollondilly	LGOV
<a href="#">St Luke's Anglican Church and Cemetery</a>	1095 Argyle Street	Wilton	Wollondilly	LGOV
<a href="#">Upper Canal System (Broughton Weir to Prospect Reservoir)</a>		Appin & Wilton	Wollondilly	LGOV
<a href="#">Wilton Park: Stables, Coachhouse, Water Tanks, Stallion Boxes, Covered Yards</a>	370 Wilton Park Road	Wilton	Wollondilly	LGOV

## APPENDIX V. WOLLONDILLY LEP 2011 HERITAGE MAPS







## APPENDIX VI. REGISTER OF THE NATIONAL ESTATE SEARCH RESULTS

**Australian Government**  
Department of the Environment and Energy

**Heritage**  
Australian Heritage Database

You are here: [Environment home](#) > [Heritage](#) > [Australian Heritage Database](#)

**Search Results**

[new search](#) [edit search](#)

2 results found.

<a href="#">Indigenous Place</a>	Wilton, NSW, Australia	<a href="#">(Registered)</a> Register of the National Estate (Non-statutory archive)
<a href="#">St Marys Towers</a> Douglas Park Rd	Douglas Park, NSW, Australia	<a href="#">(Registered)</a> Register of the National Estate (Non-statutory archive)

Report Produced: Fri Aug 31 11:47:16 2018

[Accessibility](#) | [Disclaimer](#) | [Privacy](#) | [© Commonwealth of Australia](#)



**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 gazettal notice that declared it. Aboriginal places gazetted after 2001 are available on the [NSW Government Gazette](http://www.nsw.gov.au/gazette) (<http://www.nsw.gov.au/gazette>) website. Gazettal 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 those 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.





Proposed Rezoning of "Wilton Town Centre Precinct", Wilton, Wollondilly Shire LGA  
Aboriginal and European Survey Report



Office of  
Environment  
& Heritage

## AHIMS Web Services (AWS)

Extensive search - Site list report

Your Ref/PO Number : Wilton\_Junction\_Town

Client Service ID : 362091

SiteID	SiteName	Datum	Zone	Easting	Northing	Context	Site Status	SiteFeatures	SiteTypes	Reports
52-2-1379	Shingle hill;	AGD	56	283000	6212000	Closed site	Valid	Art (Pigment or Engraved) :-	Shelter with Art	1333,103104,103105
	<a href="#">Contact</a>							<a href="#">Permits</a>		
52-2-0967	Nepean River Gully;Maldon;	AGD	56	284050	6212730	Closed site	Valid	Art (Pigment or Engraved) :-	Shelter with Art	103104,103105
	<a href="#">Contact</a>							<a href="#">Permits</a>		
52-2-1518	James's Find;	AGD	56	282960	6211860	Closed site	Valid	Art (Pigment or Engraved) :-	Shelter with Art	1333,103104,103105
	<a href="#">Contact</a>							<a href="#">Permits</a>		
52-2-1541	Carters Creek;	AGD	56	283000	6207890	Closed site	Valid	Art (Pigment or Engraved) :-	Shelter with Art	1333
	<a href="#">Contact</a>							<a href="#">Permits</a>		
52-2-3572	Maldon 01	GDA	56	285023	6213349	Open site	Valid	Modified Tree (Carved or Scarred) : 1		103104,103105
	<a href="#">Contact</a>							<a href="#">Permits</a>		
52-2-3573	Maldon 02	GDA	56	285045	6213637	Closed site	Valid	Art (Pigment or Engraved) : 1		103104,103105
	<a href="#">Contact</a>							<a href="#">Permits</a>		
52-2-3574	Maldon 03	GDA	56	284135	6212954	Open site	Valid	Artefact : 1		103104,103105
	<a href="#">Contact</a>							<a href="#">Permits</a>		
52-2-3590	Wilton 01	GDA	56	286199	6209350	Open site	Valid	Modified Tree (Carved or Scarred) : 1		103104
	<a href="#">Contact</a>							<a href="#">Permits</a>		
52-2-1519	Julian's Find;	AGD	56	282910	6211830	Closed site	Valid	Art (Pigment or Engraved) :-	Shelter with Art	1333,103104,103105
	<a href="#">Contact</a>							<a href="#">Permits</a>		
52-2-1873	Pheasant's Nest Weir 1;	AGD	56	285570	6208160	Open site	Valid	Artefact :-	Open Camp Site	3160
	<a href="#">Contact</a>							<a href="#">Permits</a>		
52-2-0227	Wilton;	AGD	56	286420	6207710	Open site	Valid	Grinding Groove :-	Axe Grinding Groove	
	<a href="#">Contact</a>							<a href="#">Permits</a>		
52-2-3026	Wilton Park 2, BC2	GDA	56	287134	6210462	Closed site	Valid	Potential Archaeological Deposit (PAD) :- , Habitation Structure :- , Grinding Groove :- , Artefact :-		103104

Report generated by AHIMS Web Service on 03/08/2018 for Lance Syme for the following area at Datum :GDA, Zone : 56, Eastings : 283044 - 287044, Northings : 6208897 - 6212897 with a Buffer of 1000 meters. Additional Info : archaeological assessment. Number of Aboriginal sites and Aboriginal objects found is 109

This information is not guaranteed to be free from error omission. 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 acts or omission.



Office of  
Environment  
& Heritage

## AHIMS Web Services (AWS)

Extensive search - Site list report

Your Ref/PO Number : Wilton\_Junction\_Town

Client Service ID : 362091

SiteID	SiteName	Datum	Zone	Eastings	Northings	Context	Site Status	SiteFeatures	SiteTypes	Reports
	<u>Contact</u>	<u>Recorders</u>	Doctor Julie Dibden,Kayandel Archaeological Services,Mr Lance Syme					<u>Permits</u>	1965	
52-2-3027	Wilton Park 3	GDA	56	287146	6210552	Closed site	Valid	Habitation Structure :-, Art (Pigment or Engraved) :-, Artefact :-, Potential Archaeological Deposit (PAD) :-		103104
	<u>Contact</u>	<u>Recorders</u>	Doctor Julie Dibden,Kayandel Archaeological Services,Mr Lance Syme					<u>Permits</u>	1965	
52-2-3028	Wilton Park 4 (Unavailable) duplicate of 48-2-0008	GDA	56	287168	6210574	Closed site	Valid	Habitation Structure :-, Art (Pigment or Engraved) :-, Potential Archaeological Deposit (PAD) :-		
	<u>Contact</u>	<u>Recorders</u>	Unknown Author,Kayandel Archaeological Services,Mr Lance Syme					<u>Permits</u>	1965	
52-2-3029	Wilton Park 5 (Unavailable) duplicate of 48-2-0009	GDA	56	287169	6210625	Closed site	Valid	Habitation Structure :-, Art (Pigment or Engraved) :-, Potential Archaeological Deposit (PAD) :-		
	<u>Contact</u>	<u>Recorders</u>	Unknown Author,Kayandel Archaeological Services,Mr Lance Syme					<u>Permits</u>	1965	
52-2-3030	Wilton Park 6 (Unavailable)	AGD	56	287100	6210480	Closed site	Valid	Habitation Structure :-, Potential Archaeological Deposit (PAD) :-		
	<u>Contact</u>	<u>Recorders</u>	Unknown Author					<u>Permits</u>	1965	
52-2-3031	Wilton Park 7 (Unavailable)	AGD	56	286403	6210037	Open site	Valid	Potential Archaeological Deposit (PAD) :-, Artefact :-		103104
	<u>Contact</u>	<u>Recorders</u>	Unknown Author					<u>Permits</u>	1965	
52-2-3032	Wilton Park 8, BC8	AGD	56	286361	6209882	Open site	Valid	Artefact :-, Potential Archaeological Deposit (PAD) :-		103104
	<u>Contact</u>	<u>Recorders</u>	Doctor Julie Dibden					<u>Permits</u>	1965,2193	
52-2-3033	Wilton Park 9, BC9	AGD	56	286572	6209988	Open site	Valid	Artefact :-, Potential Archaeological Deposit (PAD) :-		103104
	<u>Contact</u>	<u>Recorders</u>	Doctor Julie Dibden					<u>Permits</u>	1965,2580	

Report generated by AHIMS Web Service on 03/08/2018 for Lance Syme for the following area at Datum :GDA, Zone : 56, Eastings : 283044 - 287044, Northings : 6208897 - 6212897 with a Buffer of 1000 meters. Additional Info : archaeological assessment. Number of Aboriginal sites and Aboriginal objects found is 109

This information is not guaranteed to be free from error omission. 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 acts or omission.



Office of  
Environment  
& Heritage

## AHIMS Web Services (AWS)

### Extensive search - Site list report

Your Ref/PO Number : Wilton\_Junction\_Town

Client Service ID : 362091

SiteID	SiteName	Datum	Zone	Easting	Northing	Context	Site Status	SiteFeatures	SiteTypes	Reports
52-2-3034	Wilton Park 10, BC10	AGD	56	286740	6210853	Open site	Valid	Artefact :-, Potential Archaeological Deposit (PAD) :-	1965,3190	103104
	<b>Contact</b>							<b>Recorders</b> Doctor Julie Dibden		
52-2-3035	Wilton Park 11, BC11	AGD	56	286788	6210309	Open site	Valid	Artefact :-, Potential Archaeological Deposit (PAD) :-	1965,3191	103104
	<b>Contact</b>							<b>Recorders</b> Doctor Julie Dibden		
52-2-3036	Wilton Park 12, BC12	AGD	56	286827	6210950	Open site	Valid	Artefact :-, Potential Archaeological Deposit (PAD) :-	1965,3190	103104
	<b>Contact</b>							<b>Recorders</b> Doctor Julie Dibden		
52-2-3037	Wilton Park PAD2 duplicate of 48-2-0006	GDA	56	287182	6210610	Closed site	Valid	Potential Archaeological Deposit (PAD) :-	1965	
	<b>Contact</b>							<b>Recorders</b> Unknown Author,Kayandel Archaeological Services,Mr.Lance Syme		
52-2-3038	Area of Assessed Archaeological Sensitivity 1 (Unavailable)	AGD	56	286440	6210015	Open site	Valid	Potential Archaeological Deposit (PAD) :-	1965	103104
	<b>Contact</b>							<b>Recorders</b> Unknown Author		
52-2-3039	Area of Archaeological Sensitivity 2 (Unavailable)	AGD	56	287500	6210735	Open site	Valid	Potential Archaeological Deposit (PAD) :-	1965	
	<b>Contact</b>							<b>Recorders</b> Unknown Author		
52-2-3706	Bulli Site 26	AGD	56	284159	6212893	Closed site	Valid	Art (Pigment or Engraved) :-	1965	103104,103105
	<b>Contact</b>							<b>Recorders</b> Ms.Renee Regal		
52-2-3679	BGIA1	GDA	56	286771	6210124	Open site	Destroyed	Artefact : 1	3281	103104
	<b>Contact</b>							<b>Recorders</b> Miss Melanie Thomson,Ms Jenni Bate		
52-2-3684	Bulli Site 2	AGD	56	287664	6212748	Closed site	Valid	Art (Pigment or Engraved) :-		
	<b>Contact</b>							<b>Recorders</b> Mr.Dominic Brady		
52-2-3685	Bulli Site 5	AGD	56	284258	6213135	Open site	Valid	Artefact : 1		103104,103105
	<b>Contact</b>							<b>Recorders</b> Ms.Renee Regal		
52-2-3692	Bulli Site 12	AGD	56	282574	6212816	Closed site	Valid	Art (Pigment or Engraved) :-		103104,103105
	<b>Contact</b>							<b>Recorders</b> Mr.Jamie Reeves		

Report generated by AHIMS Web Service on 03/08/2018 for Lance Syme for the following area at Datum :GDA, Zone : 56, Eastings : 283044 - 287044, Northings : 6208897 - 6212897 with a Buffer of 1000 meters. Additional Info : archaeological assessment. Number of Aboriginal sites and Aboriginal objects found is 109

This information is not guaranteed to be free from error omission. 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 acts or omission.





Office of  
Environment  
& Heritage

## AHIMS Web Services (AWS)

### Extensive search - Site list report

Your Ref/PO Number : Wilton\_Junction\_Town

Client Service ID : 362091

SiteID	SiteName	Datum	Zone	Easting	Northing	Context	Site Status	SiteFeatures	SiteTypes	Reports
52-2-4020	FE-PAD-01	GDA	56	286874	6210756	Open site	Valid	Artefact :-, Potential Archaeological Deposit (PAD) :-		103104
	<a href="#">Contact</a>	<a href="#">Recorders</a>	Kayandel Archaeological Services, Mr. Lance Syme, A Still							
52-2-4026	BG-IF-01	GDA	56	286557	6211349	Open site	Valid	Artefact : 1	3878	103104
	<a href="#">Contact</a>	<a href="#">Recorders</a>	Kayandel Archaeological Services							
52-2-4027	BG-IF-02	GDA	56	286634	6211180	Open site	Valid	Artefact :-		103104
	<a href="#">Contact</a>	<a href="#">Recorders</a>	Kayandel Archaeological Services							
52-2-4028	BG-PAD-01	GDA	56	287050	6211759	Open site	Valid	Potential Archaeological Deposit (PAD) : 1		103104
	<a href="#">Contact</a>	<a href="#">Recorders</a>	Kayandel Archaeological Services							
52-2-4029	BG-PAD-02	GDA	56	287346	6211768	Open site	Valid	Potential Archaeological Deposit (PAD) : 1		
	<a href="#">Contact</a>	<a href="#">Recorders</a>	Kayandel Archaeological Services							
52-2-4030	BG-PAD-03	GDA	56	287365	6211329	Open site	Valid	Potential Archaeological Deposit (PAD) : 1		
	<a href="#">Contact</a>	<a href="#">Recorders</a>	Kayandel Archaeological Services							
52-2-4032	BG-PAD-05	GDA	56	287933	6211366	Open site	Valid	Potential Archaeological Deposit (PAD) : 1		
	<a href="#">Contact</a>	<a href="#">Recorders</a>	Kayandel Archaeological Services							
52-2-4033	BG-PAD-06	GDA	56	287724	6211688	Open site	Valid	Stone Arrangement : 1		
	<a href="#">Contact</a>	<a href="#">Recorders</a>	Kayandel Archaeological Services							
52-2-3954	MZD PAD 1	GDA	56	285469	6208528	Open site	Valid	Potential Archaeological Deposit (PAD) : 1		
	<a href="#">Contact</a>	<a href="#">Recorders</a>	Navin Officer Heritage Consultants Pty Ltd							
52-2-3880	Wilton Zone Substation	GDA	56	285599	6210114	Open site	Valid	Artefact : 1		103104
	<a href="#">Contact</a>	<a href="#">Recorders</a>	Miss Deirdre Lewis-Cook							
52-2-4186	Wilton trig TR01	GDA	56	287296	6207995	Open site	Valid	Modified Tree (Carved or Scarred) : -	3497	
	<a href="#">Contact</a>	<a href="#">Recorders</a>	Mr. Mark Simon							

Report generated by AHIMS Web Service on 03/08/2018 for Lance Syme for the following area at Datum :GDA, Zone : 56, Eastings : 283044 - 287044, Northings : 6208897 - 6212897 with a Buffer of 1000 meters. Additional Info : archaeological assessment. Number of Aboriginal sites and Aboriginal objects found is 109

This information is not guaranteed to be free from error omission. Office of Environment and Heritage (RSEW) and its employees disclaim liability for any act done or omission made on the information and consequences of such acts or omission.



Office of  
Environment  
& Heritage

## AHIMS Web Services (AWS)

### Extensive search - Site list report

Your Ref/PO Number : Wilton\_Junction\_Town

Client Service ID : 362091

SiteID	SiteName	Datum	Zone	Easting	Northing	Context	Site Status	SiteFeatures	SiteTypes	Reports
52-2-4201	WP7 Eastern PAD	GDA	56	286547	6210215	Open site	Valid	Potential Archaeological Deposit (PAD) :-		
	<a href="#">Contact</a>	<a href="#">Recorders</a>	Mr.Jakub Crastka							
52-2-4192	BG-AS-002	GDA	56	286557	6210161	Open site	Valid	Artefact :-		
	<a href="#">Contact</a>	<a href="#">Recorders</a>	Mr.Lance Syme							
52-2-4193	BG-AS-003	GDA	56	286616	6210247	Open site	Partially Destroyed	Artefact :-, Potential Archaeological Deposit (PAD) :-		4149
	<a href="#">Contact</a>	<a href="#">Recorders</a>	Mr.Lance Syme							
52-2-4453	RAPHAEL 29	GDA	56	287982	6210604	Closed site	Valid	Art (Pigment or Engraved) :-		
	<a href="#">Contact</a>	<a href="#">Recorders</a>	Illawarra Prehistory Group,Mr.Bruce Howell							
52-2-4454	RAPHAEL 30	GDA	56	287670	6212750	Closed site	Valid	Art (Pigment or Engraved) :-		
	<a href="#">Contact</a>	<a href="#">Recorders</a>	Illawarra Prehistory Group,Mr.Bruce Howell							
52-2-4455	RAPHAEL 31	GDA	56	287150	6213200	Closed site	Valid	Art (Pigment or Engraved) :-		
	<a href="#">Contact</a>	<a href="#">Recorders</a>	Illawarra Prehistory Group,Mr.Bruce Howell							
52-2-4456	RAPHAEL 32	GDA	56	286816	6213269	Closed site	Valid	Art (Pigment or Engraved) :-, Artefact :-		
	<a href="#">Contact</a>	<a href="#">Recorders</a>	Illawarra Prehistory Group,Mr.Bruce Howell							
52-2-4457	RAPHAEL 33	GDA	56	287050	6213365	Closed site	Valid	Artefact :-		
	<a href="#">Contact</a>	<a href="#">Recorders</a>	Illawarra Prehistory Group,Mr.Bruce Howell							
48-2-0006	Wilton Park PAD 2 duplicate of 52-2-3037	AGD	56	287050	6210360	Closed site	Deleted	Habitation Structure : 1		
	<a href="#">Contact</a>	<a href="#">Recorders</a>	Doctor Julie Dibden							
48-2-0008	Wilton Park BC 4 duplicate of 52-2-3028	AGD	56	287050	6210330	Closed site	Deleted	Habitation Structure : 1		
	<a href="#">Contact</a>	<a href="#">Recorders</a>	Doctor Julie Dibden							
48-2-0009	Wilton Park BC 5 duplicate of 52-2-3029	AGD	56	287020	6210380	Closed site	Deleted	Habitation Structure : 1		103104
	<a href="#">Contact</a>	<a href="#">Recorders</a>	Doctor Julie Dibden							
48-2-0010	Wilton Park BC 6	AGD	56	287100	6210480	Closed site	Valid	Habitation Structure : 1		
	<a href="#">Contact</a>	<a href="#">Recorders</a>	Doctor Julie Dibden							
48-2-0011	Wilton Park BC 7	AGD	56	286403	6210037	Open site	Valid	Artefact : 2, Potential Archaeological Deposit (PAD) :-		103104

Report generated by AHIMS Web Service on 03/08/2018 for Lance Syme for the following area at Datum :GDA, Zone : 56, Eastings : 283044 - 287044, Northings : 6208897 - 6212897 with a Buffer of 1000 meters. Additional Info : archaeological assessment. Number of Aboriginal sites and Aboriginal objects found is 109

This information is not guaranteed to be free from error omission. 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 acts or omission.



Office of  
Environment  
& Heritage

## AHIMS Web Services (AWS)

### Extensive search - Site list report

Your Ref/PO Number : Wilton\_Junction\_Town

Client Service ID : 362091

SiteID	SiteName	Datum	Zone	Easting	Northing	Context	Site Status	SiteFeatures	SiteTypes	Reports
	<a href="#">Contact</a>	<a href="#">Recorders</a>						<a href="#">Permits</a>		
52-2-3070	BC14, Bradcorp	AGD	56	287311	6211962	Closed site	Valid	Art (Pigment or Engraved) : 4		
	<a href="#">Contact</a> T Russell	<a href="#">Recorders</a>						<a href="#">Permits</a>		
52-2-3071	BC13, Bradcorp	AGD	56	287225	6211090	Closed site	Valid	Art (Pigment or Engraved) : 6		
	<a href="#">Contact</a> T Russell	<a href="#">Recorders</a>						<a href="#">Permits</a>		
52-2-3213	AMP IF 2	AGD	56	282787	6213633	Open site	Valid	Artefact : 1		103104,103105
	<a href="#">Contact</a> T Russell	<a href="#">Recorders</a>						<a href="#">Permits</a>		
52-2-3214	AMP IF 3	AGD	56	282776	6213668	Open site	Valid	Artefact : 1		103104,103105
	<a href="#">Contact</a> T Russell	<a href="#">Recorders</a>						<a href="#">Permits</a>		
52-2-3215	AMP IF 4	AGD	56	282935	6213534	Open site	Valid	Artefact : 1		103104,103105
	<a href="#">Contact</a> T Russell	<a href="#">Recorders</a>						<a href="#">Permits</a>	2508	
52-2-3217	AMP OCS 1	AGD	56	282866	6213557	Open site	Valid	Artefact : 3		103104,103105
	<a href="#">Contact</a> T Russell	<a href="#">Recorders</a>						<a href="#">Permits</a>	2508	
52-2-3219	AMP ST 1	AGD	56	282948	6213533	Open site	Valid	Modified Tree (Carved or Scarred) : 1		103104,103105
	<a href="#">Contact</a> T Russell	<a href="#">Recorders</a>						<a href="#">Permits</a>		
52-2-3220	AMP PAD 1	AGD	56	282880	6213500	Open site	Valid	Potential Archaeological Deposit (PAD) : -		103104,103105
	<a href="#">Contact</a> T Russell	<a href="#">Recorders</a>						<a href="#">Permits</a>	2508	
52-2-3302	Wilton Park WIF1 (Unavailable)	AGD	56	286790	6209690	Open site	Valid	Artefact : -		103104
	<a href="#">Contact</a>	<a href="#">Recorders</a>						<a href="#">Permits</a>	2581	
52-2-4153	BG-AS-001	GDA	56	286893	6211117	Open site	Valid	Artefact : -, Potential Archaeological Deposit (PAD) : -		
	<a href="#">Contact</a>	<a href="#">Recorders</a>						<a href="#">Permits</a>		
52-2-4071	WJ-RS-05	GDA	56	285014	6211234	Closed site	Valid	Potential Archaeological Deposit (PAD) : 1		
	<a href="#">Contact</a>	<a href="#">Recorders</a>						<a href="#">Permits</a>		
52-2-4072	WJ-RS-06	GDA	56	284976	6211232	Closed site	Valid	Potential Archaeological Deposit (PAD) : 1		

Report generated by AHIMS Web Service on 03/08/2018 for Lance Syme for the following area at Datum :GDA, Zone : 56, Eastings : 283044 - 287044, Northings : 6208897 - 6212897 with a Buffer of 1000 meters. Additional Info : archaeological assessment. Number of Aboriginal sites and Aboriginal objects found is 109

This information is not guaranteed to be free from error omission. 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 acts or omission.



Office of  
Environment  
& Heritage

## AHIMS Web Services (AWS)

### Extensive search - Site list report

Your Ref/PO Number : Wilton\_Junction\_Town

Client Service ID : 362091

SiteID	SiteName	Datum	Zone	Eastings	Northings	Context	Site Status	SiteFeatures	SiteTypes	Reports
	<a href="#">Contact</a>	<a href="#">Recorders</a>	Kayandel Archaeological Services							
52-2-4073	WJ-RS-07 duplicate of 52-2-4070	GDA	56	284961	6211278	Closed site	Valid	Potential Archaeological Deposit (PAD) : 1		
	<a href="#">Contact</a>	<a href="#">Recorders</a>	Kayandel Archaeological Services							
52-2-4074	WJ-RS-08	GDA	56	284928	6211282	Closed site	Valid	Potential Archaeological Deposit (PAD) : 1		
	<a href="#">Contact</a>	<a href="#">Recorders</a>	Kayandel Archaeological Services							
52-2-4075	WJ-RS-03	GDA	56	284956	6211435	Closed site	Valid	Art (Pigment or Engraved) : 1, Potential Archaeological Deposit (PAD) : 1		
	<a href="#">Contact</a>	<a href="#">Recorders</a>	Kayandel Archaeological Services, Mr. Tom Knight							
52-2-4076	WJ-RS-04	GDA	56	284920	6211249	Closed site	Valid	Art (Pigment or Engraved) : 1, Potential Archaeological Deposit (PAD) : 1		
	<a href="#">Contact</a>	<a href="#">Recorders</a>	Kayandel Archaeological Services							
52-2-4077	WJ-RS-01	GDA	56	284910	6211245	Closed site	Valid	Artefact : 1, Potential Archaeological Deposit (PAD) : 1		
	<a href="#">Contact</a>	<a href="#">Recorders</a>	Kayandel Archaeological Services, Mr. Tom Knight							
52-2-4078	WJ-RS-02	GDA	56	284926	6211396	Closed site	Valid	Art (Pigment or Engraved) : 1, Artefact : 1, Potential Archaeological Deposit (PAD) : 1		
	<a href="#">Contact</a>	<a href="#">Recorders</a>	Kayandel Archaeological Services, Mr. Tom Knight							
52-2-4079	WJ-ST-04	GDA	56	285232	6210155	Open site	Valid	Modified Tree (Carved or Scarred) : 1		
	<a href="#">Contact</a>	<a href="#">Recorders</a>	Kayandel Archaeological Services, Mr. Tom Knight							
52-2-4080	WJ-ST-05	GDA	56	284618	6211330	Open site	Valid	Modified Tree (Carved or Scarred) : 1		
	<a href="#">Contact</a>	<a href="#">Recorders</a>	Kayandel Archaeological Services							

Report generated by AHIMS Web Service on 03/08/2018 for Lance Syme for the following area at Datum :GDA, Zone : 56, Eastings : 283044 - 287044, Northings : 6208897 - 6212897 with a Buffer of 1000 meters. Additional Info : archaeological assessment. Number of Aboriginal sites and Aboriginal objects found is 109

This information is not guaranteed to be free from error omission. 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 acts or omission.





Office of  
Environment  
& Heritage

## AHIMS Web Services (AWS)

Extensive search - Site list report

Your Ref/PO Number : Wilton\_Junction\_Town

Client Service ID : 362091

SiteID	SiteName	Datum	Zone	Easting	Northing	Context	Site Status	SiteFeatures	SiteTypes	Remarks
52-2-4081	WJ-ST-01	GDA	56	286115	6211991	Open site	Valid	Modified Tree (Carved or Scarred) : 1		
	<a href="#">Contact</a>	<a href="#">Recorders</a>	Kayandel Archaeological Services,Mr.Tom Knight							
52-2-4082	WJ-ST-02	GDA	56	286330	6212128	Open site	Valid	Modified Tree (Carved or Scarred) : 1		
	<a href="#">Contact</a>	<a href="#">Recorders</a>	Kayandel Archaeological Services,Mr.Tom Knight							
52-2-4083	WJ-ST-03	GDA	56	286048	6212542	Open site	Valid	Modified Tree (Carved or Scarred) : 1		
	<a href="#">Contact</a>	<a href="#">Recorders</a>	Mr.Tom Knight							
52-2-4084	WJ-IF-09	GDA	56	287423	6208606	Open site	Valid	Artefact : 1		
	<a href="#">Contact</a>	<a href="#">Recorders</a>	Kayandel Archaeological Services,Mr.Tom Knight							
52-2-4085	WJ-IF-10	GDA	56	287698	6208290	Open site	Valid	Artefact : 1		
	<a href="#">Contact</a>	<a href="#">Recorders</a>	Kayandel Archaeological Services,Mr.Tom Knight							
52-2-4086	WJ-IF-07	GDA	56	284990	6211137	Open site	Valid	Artefact : 1		
	<a href="#">Contact</a>	<a href="#">Recorders</a>	Kayandel Archaeological Services							
52-2-4087	WJ-IF-08	GDA	56	287248	6208486	Open site	Valid	Artefact : 1		
	<a href="#">Contact</a>	<a href="#">Recorders</a>	Mr.Tom Knight							
52-2-4088	WJ-IF-04	GDA	56	285261	6210531	Open site	Valid	Artefact : 1		
	<a href="#">Contact</a>	<a href="#">Recorders</a>	Kayandel Archaeological Services,Mr.Tom Knight							
52-2-4089	WJ-IF-05	GDA	56	285258	6210466	Open site	Valid	Artefact : 1		
	<a href="#">Contact</a>	<a href="#">Recorders</a>	Kayandel Archaeological Services,Mr.Tom Knight							
52-2-4090	WJ-IF-06	GDA	56	285186	6211121	Open site	Valid	Artefact : 1		
	<a href="#">Contact</a>	<a href="#">Recorders</a>	Kayandel Archaeological Services,Mr.Tom Knight							
52-2-4091	WJ-IF-01	GDA	56	286767	6213404	Open site	Valid	Artefact : 1		
	<a href="#">Contact</a>	<a href="#">Recorders</a>	Kayandel Archaeological Services,Mr.Tom Knight							
52-2-4092	WJ-IF-02	GDA	56	286641	6212886	Open site	Valid	Artefact : 1		
	<a href="#">Contact</a>	<a href="#">Recorders</a>	Kayandel Archaeological Services,Mr.Tom Knight							
52-2-4093	WJ-IF-03	GDA	56	286635	6211643	Open site	Valid	Artefact : 1		
	<a href="#">Contact</a>	<a href="#">Recorders</a>	Kayandel Archaeological Services,Mr.Tom Knight							
52-2-4094	WJ-AS-05	GDA	56	284889	6211195	Open site	Valid	Artefact : 1		
	<a href="#">Contact</a>	<a href="#">Recorders</a>	Kayandel Archaeological Services							
52-2-4095	WJ-AS-06	GDA	56	285060	6210511	Open site	Valid	Artefact : 1		
	<a href="#">Contact</a>	<a href="#">Recorders</a>	Kayandel Archaeological Services,Mr.Tom Knight							

Report generated by AHIMS Web Service on 03/08/2018 for Lance Syme for the following area at Datum :GDA, Zone : 56, Eastings : 283044 - 287044, Northings : 6208897 - 6212897 with a Buffer of 1000 meters. Additional Info : archaeological assessment. Number of Aboriginal sites and Aboriginal objects found is 109

This information is not guaranteed to be free from error omission. 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 acts or omission.



Office of  
Environment  
& Heritage

## AHIMS Web Services (AWS)

### Extensive search - Site list report

Your Ref/PO Number : Wilton\_Junction\_Town

Client Service ID : 362091

SiteID	SiteName	Datum	Zone	Easting	Northing	Context	Site Status	SiteFeatures	SiteTypes	Reports
52-2-4096	WJ-AS-07	GDA	56	285554	6211009	Open site	Valid	Artefact : 1		
	<a href="#">Contact</a>					<a href="#">Recorders</a>	Kayandel Archaeological Services, Mr. Tom Knight	<a href="#">Permits</a>		
52-2-4097	WJ-AS-01	GDA	56	284939	6211274	Open site	Valid	Artefact : 1		
	<a href="#">Contact</a>					<a href="#">Recorders</a>	Kayandel Archaeological Services, Mr. Tom Knight	<a href="#">Permits</a>		
52-2-4098	WJ-AS-02	GDA	56	286544	6212296	Open site	Valid	Artefact : 1		
	<a href="#">Contact</a>					<a href="#">Recorders</a>	Kayandel Archaeological Services, Mr. Tom Knight	<a href="#">Permits</a>		
52-2-4099	WJ-AS-03	GDA	56	286539	6212398	Open site	Valid	Artefact : 1		
	<a href="#">Contact</a>					<a href="#">Recorders</a>	Kayandel Archaeological Services, Mr. Tom Knight	<a href="#">Permits</a>		
52-2-4100	WJ-AS-04	GDA	56	285096	6211237	Open site	Valid	Artefact : 1		
	<a href="#">Contact</a>					<a href="#">Recorders</a>	Kayandel Archaeological Services, Mr. Tom Knight	<a href="#">Permits</a>		
52-2-4101	WILIF01	GDA	56	286386	6210690	Open site	Destroyed	Artefact : 1		
	<a href="#">Contact</a>					<a href="#">Recorders</a>	Biosis Pty Ltd - Wollongong	<a href="#">Permits</a>	3878	
52-2-4070	WJ-RS-07 duplicate of 52-2-4073	GDA	56	284961	6211278	Open site	Deleted	Potential Archaeological Deposit (PAD) : 1		
	<a href="#">Contact</a>					<a href="#">Recorders</a>	Kayandel Archaeological Services	<a href="#">Permits</a>		
52-2-4151	BG-RS-01	GDA	56	287168	6210479	Closed site	Valid	Artefact : -, Potential Archaeological Deposit (PAD) : -		
	<a href="#">Contact</a>					<a href="#">Recorders</a>	Kayandel Archaeological Services	<a href="#">Permits</a>		
52-2-4152	BG-RS-02	GDA	56	287147	6210531	Closed site	Valid	Potential Archaeological Deposit (PAD) : -		
	<a href="#">Contact</a>					<a href="#">Recorders</a>	Kayandel Archaeological Services	<a href="#">Permits</a>		
52-2-4334	BG-RS-09	GDA	56	287940	6211042	Closed site	Valid	Habitation Structure : 1		
	<a href="#">Contact</a>					<a href="#">Recorders</a>	Kayandel Archaeological Services	<a href="#">Permits</a>		
52-2-4335	BG-RS-05	GDA	56	287907	6211036	Closed site	Valid	Habitation Structure : 1		
	<a href="#">Contact</a>					<a href="#">Recorders</a>	Kayandel Archaeological Services	<a href="#">Permits</a>		
52-2-4336	BG-RS-03	GDA	56	287928	6211107	Closed site	Valid	Habitation Structure : 1		
	<a href="#">Contact</a>					<a href="#">Recorders</a>	Kayandel Archaeological Services	<a href="#">Permits</a>		
52-2-4337	BG-RS-04	GDA	56	287919	6211076	Closed site	Valid	Habitation Structure : 1		
	<a href="#">Contact</a>					<a href="#">Recorders</a>	Kayandel Archaeological Services	<a href="#">Permits</a>		

Report generated by AHIMS Web Service on 03/08/2018 for Lance Syme for the following area at Datum :GDA, Zone : 56, Eastings : 283044 - 287044, Northings : 6208897 - 6212897 with a Buffer of 1000 meters. Additional Info : archaeological assessment. Number of Aboriginal sites and Aboriginal objects found is 109

This information is not guaranteed to be free from error omission. 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 acts or omission.



Office of  
Environment  
& Heritage

## AHIMS Web Services (AWS)

### Extensive search - Site list report

Your Ref/PO Number : Wilton\_Junction\_Town

Client Service ID : 362091

SiteID	SiteName	Datum	Zone	Eastings	Northings	Context	Site Status	SiteFeatures	SiteTypes	Reports
52-2-4338	BG-ST-01	GDA	56	287448	6211483	Open site	Valid	Modified Tree (Carved or Scarred) : 1		
	<a href="#">Contact</a>									
	<a href="#">Recorders</a>									
52-2-4339	BG-RS-06	GDA	56	287912	6211029	Closed site	Valid	Habitation Structure : 1		
	<a href="#">Contact</a>									
	<a href="#">Recorders</a>									
52-2-4340	BG-RS-07	GDA	56	287683	6211417	Closed site	Valid	Habitation Structure : 1, Potential Archaeological Deposit (PAD) : 1		
	<a href="#">Contact</a>									
	<a href="#">Recorders</a>									
52-2-4341	BG-RS-08	GDA	56	288025	6211198	Closed site	Valid	Habitation Structure : 1		
	<a href="#">Contact</a>									
	<a href="#">Recorders</a>									
52-2-4432	BG-IF-04	GDA	56	287519	6211412	Open site	Valid	Artefact : 1		
	<a href="#">Contact</a>									
	<a href="#">Recorders</a>									
52-2-4433	BG-AS-004	GDA	56	287344	6211472	Open site	Valid	Artefact : 1		
	<a href="#">Contact</a>									
	<a href="#">Recorders</a>									
52-2-4434	BG-IF-03	GDA	56	287411	6211546	Open site	Valid	Artefact : 1		
	<a href="#">Contact</a>									
	<a href="#">Recorders</a>									

Report generated by AHIMS Web Service on 03/08/2018 for Lance Syme for the following area at Datum :GDA, Zone : 56, Eastings : 283044 - 287044, Northings : 6208897 - 6212897 with a Buffer of 1000 meters. Additional Info : archaeological assessment. Number of Aboriginal sites and Aboriginal objects found is 109

This information is not guaranteed to be free from error omission. 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 acts or omission.