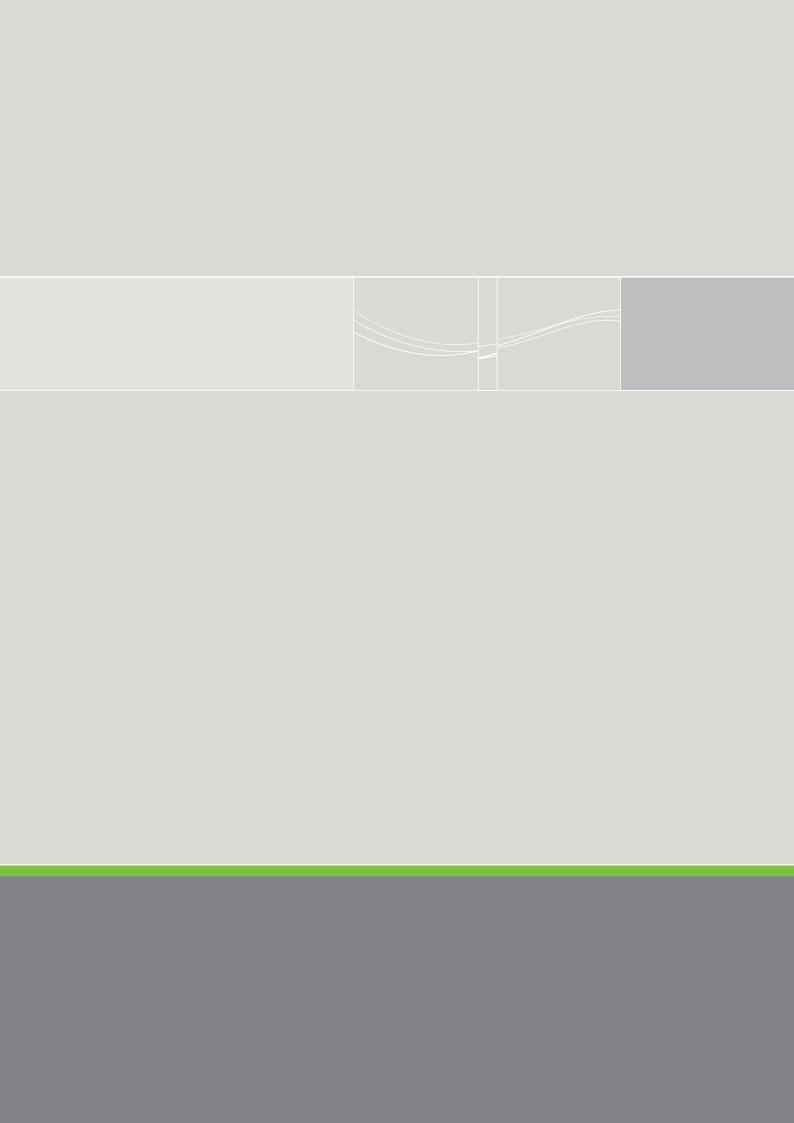
Appendix L

Technical working paper: Non-Aboriginal heritage



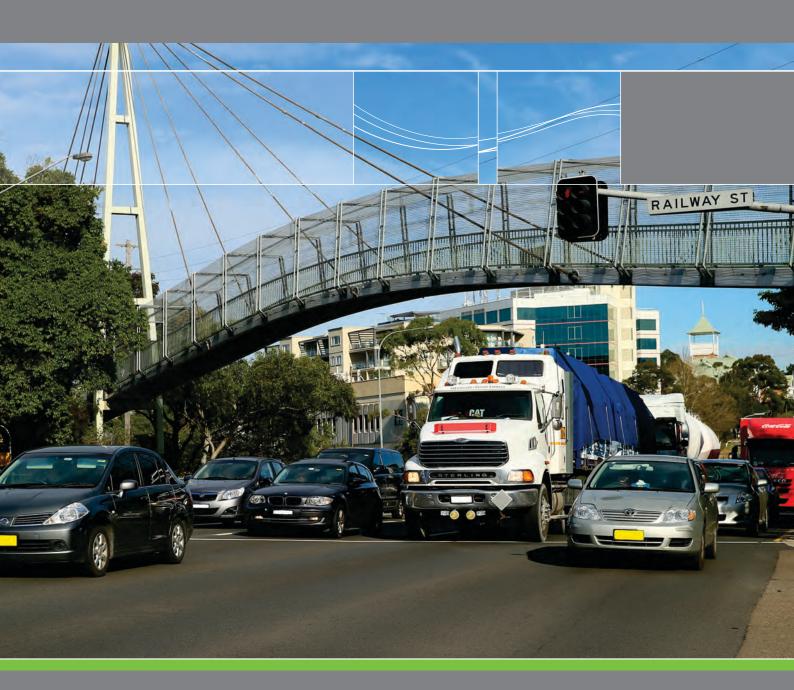
NorthConnex

Building for the future

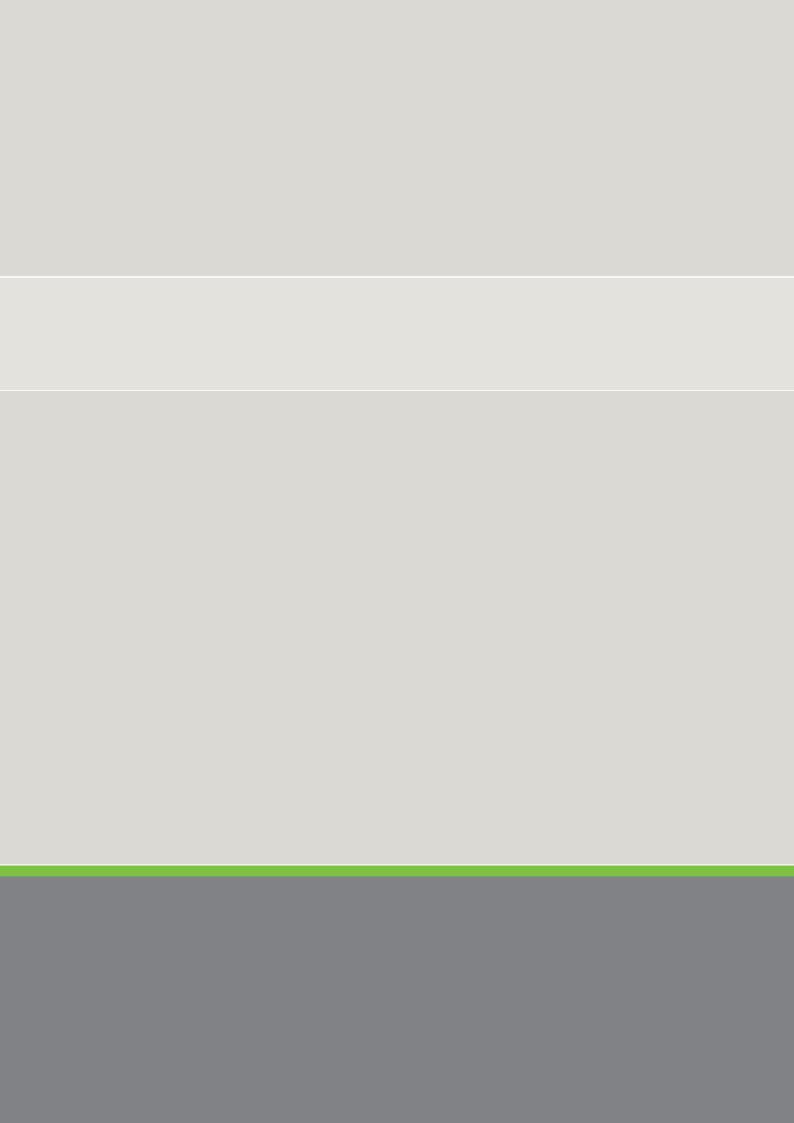








Technical working paper: Non-Aboriginal heritage



Technical Working Paper: Non-Aboriginal Heritage Assessment

NorthConnex

Client: Roads and Maritime Services

ABN: 76 236 371 088

Prepared by

AECOM Australia Pty Ltd

Level 21, 420 George Street, Sydney NSW 2000, PO Box Q410, QVB Post Office NSW 1230, Australia T +61 2 8934 0000 F +61 2 8934 0001 www.aecom.com

ABN 20 093 846 925

15-May-2014

Job No.: 60300684

AECOM in Australia and New Zealand is certified to the latest version of ISO9001, ISO14001, AS/NZS4801 and OHSAS18001.

© AECOM Australia Pty Ltd (AECOM). All rights reserved.

AECOM has prepared this document for the sole use of the Client and for a specific purpose, each as expressly stated in the document. No other party should rely on this document without the prior written consent of AECOM. AECOM undertakes no duty, nor accepts any responsibility, to any third party who may rely upon or use this document. This document has been prepared based on the Client's description of its requirements and AECOM's experience, having regard to assumptions that AECOM can reasonably be expected to make in accordance with sound professional principles. AECOM may also have relied upon information provided by the Client and other third parties to prepare this document, some of which may not have been verified. Subject to the above conditions, this document may be transmitted, reproduced or disseminated only in its entirety.

Quality Information

Document Technical Working Paper: Non-Aboriginal Heritage Assessment

Ref 60300684

Date 15-May-2014

Prepared by Dr Darran Jordan

Reviewed by Luke Kirkwood

Revision History

Revision	Revision Date	Details	Authorised	
			Name/Position	Signature
1	16-Apr-2014	Final for Issue	Scott Jeffries Associate Director - Environment	Signed
2	15-May- 2014	Final	Scott Jeffries Associate Director - Environment	A Partie

Table of Contents

-		and abbreviations	i
	e Summan		iii
1.0	Introduct		1
	1.1	Project description	1
	1.2	Purpose of this report	3
	1.3	Study area	3
	1.4	Limitations	3
2.0		l context	5
	2.1	Aboriginal history	5
	2.2	Settlement	5
	2.3	Early 20th Century	5
	2.4	Post World War II	6
	2.5	Present Day	6
3.0	-	/ controls	7
	3.1	Environment Protection and Biodiversity Conservation Act 1999	7
	3.2	Environmental Planning and Assessment Act 1979	7
	3.3	Heritage Act 1977	7
4.0	Methodo		9
5.0	•	inventory results	11
6.0	Site insp		15
	6.1	Inspection results	15
	6.2	Hornsby Local Environmental Plan 2013	16
	6.3	Ku-ring-gai Planning Scheme Ordinance 1971	64
	6.4	Draft Ku-ring-gai Local Environmental Plan 2013	69
	6.5	The Hills Local Environmental Plan 2012	72
	6.6	Heritage Conservation Areas	74
	6.7	Non-listed heritage items	76
	6.8	Archaeological heritage	76
7.0	-	nce Assessment	77
	7.1	Significance Assessment Criteria	77
8.0		nd potential impacts	85
	8.1	Potential impact areas	85
	8.2	Potential impact types	97
		8.2.1 Vibration	98
		8.2.2 Ground settlement	99
		8.2.3 Acoustic treatment	99
	8.3	Assessment of potential impacts	99
	8.4	Identified impacts to listed heritage items	100
9.0		n and management	137
10.0		nt of heritage impact	139
11.0	-	ngs and recommendations	151
12.0	Reference	ces	153
Appendi	хА		
	Maps		Α
	-		
Appendi			_
	Former N	Maltworks, Thornleigh report	В
List of T	ables		
Table 1		Non-Aboriginal heritage items identified in heritage databases, registers and lists	11
Table 2		NSW Heritage significance criteria	77
Table 3		Summary significance assessment of listed heritage items	79
Table 4	, ,,		97
Table 5		Structural damage vibration limits relevant to heritage structures	98

Table 6	Non-Aboriginal heritage impact criteria	99
Table 7	Potential impact summary	103
Table 8	Recommended mitigation and management measures	137
Table 9	Statement of Heritage Impacts	139
List of Figures		
Figure 1	The project	1
Figure 2	Heritage inventory results within the study area and srrounds	13
Figure 3	Impact area – Hills M2 Motorway integration works	87
Figure 4	Impact area – Southern interchange	89
Figure 5	Impact area – Wilson Road compound and tunnels	91
Figure 6	Impact area – Trelawney Street and Pioneer Avenue compounds, and tunnels	93
Figure 7	Impact area – Northern interchange	95
List of Plates		
Plate 1	Ludovic Blackwood Memorial Sanctuary / North Road Culvert c.1992 (Hornsby Shire	
	Council, 2014)	16
Plate 2	Ludovic Blackwood Memorial Sanctuary / North Road Culvert c.2013	16
Plate 3	Main Malting Complex circa 1917-1930.	17
Plate 4	Photo showing the original kilns and the germination building covered in ivy	17
Plate 5	Cardinal Avenue Street Trees c.2007 (Hornsby Shire Council, 2014)	18
Plate 6	Cardinal Avenue Street Trees c.2013	18
Plate 7	Hannah Street c.2007 (Hornsby Shire Council, 2014)	19
Plate 8	Hannah Street c.2013	19
Plate 9	Hull Road c.2007 (Hornsby Shire Council, 2014)	20
Plate 10	Hull Road c.2013	20
Plate 11	Pennant Hills Golf Club c.1993 (Hornsby Shire Council, 2014)	21
Plate 12	Pennant Hills Golf Club c.2013	21
Plate 13	Edgeworth David Avenue c.2007 (Hornsby Shire Council, 2014)	22
Plate 14	Edgeworth David Avenue c.2013	22
Plate 15	Campbell Avenue c.2007 (Hornsby Shire Council, 2014)	23
Plate 16	Campbell Avenue c.2013	23
Plate 17	1-7 Frith Avenue Wahroonga Campbell Avenue c.2013 (Hornsby Shire Council, 2014)	24
Plate 18	1-7 Frith Avenue, Wahroonga c. 2013	24
Plate 19	4 Mount Pleasant Avenue c.1992 (Hornsby Shire Council, 2014)	25
Plate 20	4 Mount Pleasant Avenue c.2013	25
Plate 21	St Agatha's Primary School c.1993 (Hornsby Shire Council, 2014)	26
Plate 22	St Agatha's Primary School from the front grate c.2013	26
Plate 23	Loretto [sic] Convent group c.1992 (Hornsby Shire Council, 2014)	27
Plate 24	Loretto [sic] Convent group c.2013	27
Plate 25	Queen Anne Federation Style House – 27 Boundary Road c.2013	28
Plate 26	Vernacular Stables - 27 Boundary Road c.2013	28
Plate 27	7 Fulbourne Avenue c.1992 (Hornsby Shire Council, 2014)	29
Plate 28	7 Fulbourne Avenue c.2013	29
Plate 29	17 Greycliffe Avenue c.1992 (Hornsby Shire Council, 2014)	30
Plate 30	17 Greycliffe Avenue c.2013	30
Plate 31	418 Pennant Hills Road c.1992 (Hornsby Shire Council, 2014)	31
Plate 32	418 Pennant Hills Road c.2013	31
Plate 33	Mt St. Benedict's Convent c.1992 (Hornsby Shire Council, 2014)	32
Plate 34	Mount St. Benedict's Convent c.2013	32
Plate 35	Observatory Park c.1992 (Hornsby Shire Council, 2014)	33
Plate 36	Observatory Park showing the Observatory memorial and plaque c.2013	33
Plate 37	34 Ramsay Road c.1992 (Hornsby Shire Council, 2014)	34
Plate 38	34 Ramsay Road showing the fence and house c.2013	34
Plate 39	35 Ramsay Road c.1992 (Hornsby Shire Council, 2014)	35
Plate 40	35 Ramsay Road c.2013	35
	•	

Plate 41	37 Ramsay Street c.1992 (Hornsby Shire Council, 2014)	36
Plate 42	37 Ramsay Road c.2013	36
Plate 43	25-27 Stevens Street c.2003 (Hornsby Shire Council, 2014)	37
Plate 44	25-27 Stevens Street c.2013	37
Plate 45	20 Warne Street c.1992 (Hornsby Shire Council, 2014)	38
Plate 46	20 Warne Street c.2013	38
Plate 47	24 Warne Street c.1992 (Hornsby Shire Council, 2014)	39
Plate 48	24 Warne Street c.2013	39
Plate 49	9 Weemala Road c.1992 (Hornsby Shire Council, 2014)	40
Plate 50	9 Weemala Road c.2013	40
Plate 51	9 Werona Street c.2003 (Hornsby Shire Council, 2014)	41
Plate 52	9 Werona Road c.2013	41
Plate 53	14 Werona Street c.2003 (Hornsby Shire Council, 2014)	42
Plate 54	14 Werona Road c.2013	42
Plate 55	4 Yarrara Road c.1992 (Hornsby Shire Council, 2014)	43
Plate 56	4 Yarrara Road c.2013	43
Plate 57	6 Yarrara Road c.1992 (Hornsby Shire Council, 2014)	44
Plate 58	6 Yarrara Road c.2013	44
Plate 59	18 Yarrara Road c.1992 (Hornsby Shire Council, 2014)	45
Plate 60	18 Yarrara Road c.2013	45
Plate 61	Loch Maree Avenue Street Trees c.2007 (Hornsby Shire Council, 2014)	46
Plate 62	Loch Maree Avenue Street Trees c.2013	46
Plate 63	237 Pennant Hills Road c.1992 (Hornsby Shire Council, 2014)	47
Plate 64	237 Pennant Hills Road c.2013	47
Plate 65	3 Pritchard Street c.2012 (Hornsby Shire Council, 2014)	48
Plate 66	3 Pritchard Street c.2013	48
Plate 67	80 The Esplanade c.1992 (Hornsby Shire Council, 2014)	49
Plate 68	80 The Esplanade c.2013	49
Plate 69	17-23A Trelawney Street c.1992 (Hornsby Shire Council, 2014)	50
Plate 70	17-23A Trelawney Street c.2013	50
Plate 71	17 Wells Street c.1997 (Hornsby Shire Council, 2014)	51
Plate 72	17 Wells Street c.2013	51
Plate 73	45 Bundarra Avenue c.1993 (Hornsby Shire Council, 2014)	52
Plate 74	45 Bundarra Avenue c.2013	52
Plate 75	Edwards Road c.2007 (Hornsby Shire Council, 2014)	53
Plate 76	Edwards Road c.2013	53
Plate 77	Ingram Street Trees c.2007 (Hornsby Shire Council, 2014)	54
Plate 78	Ingram Street Trees c.2013	54
Plate 79	6 John Hughes Place c.1992 (Hornsby Shire Council, 2014)	55
Plate 80	6 John Hughes Place c.2013	55
Plate 81	1 Pacific Highway c.1992 (Hornsby Shire Council, 2014)	56
Plate 82	1 Pacific Highway c.2013	56
Plate 83	St Pauls Church c.1992 (Hornsby Shire Council, 2014)	57
Plate 84	St Pauls Church c.2013	57
Plate 85	Russell Avenue c.2007 (Hornsby Shire Council, 2014)	58
Plate 86	Russell Avenue c.2013	58
Plate 87	Woonona Avenue Street Trees c.2007 (Hornsby Shire Council, 2014)	59
Plate 88	Woonona Avenue Street Trees c.2013	59
Plate 89	42 Woonona Avenue c.1993 (Hornsby Shire Council, 2014)	60
Plate 90	42 Woonona Avenue c.2013	60
Plate 91	46 Woonona Avenue c.1992 (Hornsby Shire Council, 2014)	61
Plate 92	46 Woonona Avenue c.2013	61
Plate 93	Alexandria Parade c.2007 (Hornsby Shire Council, 2014)	62
Plate 94	Alexandria Parade c.2013	62
Plate 95	587 Pennant Hills Road c.1993 (Hornsby Shire Council, 2014)	63
Plate 96	587 Pennant Hills Road c.2013	63
Plate 97	126 Coonanbarra Drive c.2013	64
Plate 98	128 Coonanbarra Drive c.2013	64

Plate 99	21-23 Lucinda Avenue (Bolton Grange) c.1987 (NSW Office of Environment & Her	ritage,
	2014)	65
Plate 100	21-23 Lucinda Avenue (Bolton Grange) c.2013	65
Plate 101	28 Lucinda Avenue c.2013	66
Plate 102	33 Lucinda Avenue c.2013	67
Plate 103	26 Woonona Avenue c.1987 (NSW Office of Environment & Heritage, 2014)	68
Plate 104	26 Woonona Avenue c.2013	68
Plate 105	4 Burns Road c.2010	69
Plate 106	4 Burns Road c.2013	69
Plate 107	24 Lucinda Avenue c.2013	70
Plate 108	41 Lucinda Avenue c.2013	70
Plate 109	11A Lucinda Avenue c.2013	71
Plate 110	37A Lucinda Avenue c.2013	72

Glossary of terms and abbreviations

Term	Meaning
Bullnosed	A rounded edge or corner.
Construction footprint	The extent of surface disturbance required for construction of the project.
EIS	Environmental impact statement.
Federation	Australian Federation architecture, dating predominantly between 1890 and 1915.
Heritage Branch	NSW Heritage Branch within the NSW Office of Environment and Heritage.
Hills M2 Motorway integration works	The works to join the project to the Hills M2 Motorway extending from the southern interchange to Windsor Road.
LEP	Local Environmental Plan.
Main alignment tunnels	The two underground tunnels forming the principal carriageways of the project.
Northern interchange	The connections of the project with the M1 Pacific Motorway (formerly known as the F3 Freeway), Pennant Hills Road and the Pacific Highway. For the purpose of this report, the term also captures the M1 Pacific Motorway tie-in works, and the construction compounds that would support the construction of the northern interchange.
OEH	NSW Office of Environment and Heritage.
Off-ramp	A section of road which allows vehicles to exit the motorway or project.
On-ramp	A section of road which allows vehicles to enter the motorway or project.
Portal	Where a tunnel emerges to the surface, being the entrance or exit of the main alignment tunnels, off-ramps or on-ramps.
(The) project	NorthConnex
Preferred project corridor	A zone on the surface equal to a distance of 50 metres from the outer edge of the underground tunnels.
Roads and Maritime	Roads and Maritime Services.
SEPP	State Environmental Planning Policy.
Site establishment works	Preliminary works carried out prior to the commencement of construction, including: - installation of environmental controls; - demolition of existing structures; - vegetation clearing; and - establishment of temporary construction facilities.

Term	Meaning
Southern interchange	The connections of the project with the Hills M2 Motorway and Pennant Hills Road. For the purpose of this report, the term also captures the construction compounds that would support the construction of the southern interchange.
Study area	As defined in Section 1.3 of this report the study area for this assessment consists of:
	 The preferred tender design, as summarised in Section 1.1 of this report, and as detailed further in Chapter 5 of the environmental impact statement for the project. The preferred project corridor. The construction footprint of the project and properties within 50 metres from the construction footprint.
Tie-in works	The works to join the project to existing roads, such as the M1 Pacific Motorway.
Ventilation facilities	Facilities for the mechanical removal of air from the main alignment tunnels, or mechanical introduction of air into the tunnels.

Executive Summary

Roads and Maritime Services (Roads and Maritime) is seeking approval under Part 5.1 of the *Environmental Planning and Assessment Act 1979* (EP&A Act) to construct and operate a tolled motorway linking the M1 Pacific Motorway at Wahroonga to the Hills M2 Motorway at West Pennant Hills in northern Sydney (the project).

This report is an assessment of possible heritage impacts (both direct and indirect) on listed heritage items within proximity of the proposed works. This assessment has been undertaken in response to the Director-General's environmental assessment requirements. The study area for this assessment has been informed by the operational and construction footprint of the project, the preferred project corridor, ancillary facilities associated with construction and operation, and the location and construction methodology of underground infrastructure (such as the main alignment tunnels).

Within the study area, 62 heritage items would be directly or indirectly impacted by the project. In some instances, an item would be directly and indirectly impacted by the project. Of the 62 heritage items:

- One item would be fully and directly impacted with the removal of two Canary Island Palms (Hornsby LEP reference: I762) located within a property that would be partially acquired. Feasible and reasonable options would be investigated during detailed design to relocate the two Canary Island Palms, however, the impacts to this item are likely to be significant
- Two items would be partially and directly impacted with
 - The demolition of structures associated with the Thornleigh Maltworks site (Hornsby LEP reference: A66). Feasible and reasonable options have been investigated during design of the project to date with the aim of retaining the original industrial structure associated with this site, however, the impacts to the overall site complex are likely to be significant.
 - Impacts to the curtilage of heritage listed street trees at Woonona Avenue, Wahroonga (Hornsby LEP reference: I769). Feasible and reasonable options would be investigated to avoid or minimise the impact. If it is necessary to remove the trees, this would have some impact to the heritage value of the item. This impact could be mitigated through sympathetic plantings of similar species through revegetation efforts.
- Two heritage conservation areas would be partially and directly impacted, being the North Wahroonga heritage conservation area (Hornsby LEP reference: C2), and the Beecroft-Cheltenham heritage conservation area (Hornsby LEP reference: C8). Landscaping of the project within these areas would minimise the potential impacts. The overall heritage value of the heritage conservation areas would not be significantly impacted by the project.
- Eleven items would be potentially directly impacted due to construction vibration from surface works. These impacts are anticipated to have a negligible to minor risk of affecting the value of the heritage items (*Ku-ring-gai Planning Scheme Ordinance 1971* reference: I897, I898, I900, I901 and I902¹, *Draft Ku-ring-gai Local Environmental Plan 2013* reference: I855, and Hornsby LEP reference: I767, I750, I770, I771, and I791). The degree of impact to these items is anticipated to be minor to negligible. The overall heritage value of the heritage items would not be significantly impacted by the project.
- Forty-four items would be potentially directly impacted due to vibration, settlement and groundwater drawdown as a result of tunnelling works. These items are primarily located within the preferred project corridor and include items consisting of houses of local significance. Impacts to these items are anticipated to be minor to negligible. Two of these items would also be potentially directly impacted by construction vibration due to surface works. The overall heritage value of the heritage items would not be significantly impacted by the project.

Of the 62 heritage items, 21 items may also be indirectly impacted by the project, due to temporary and / or permanent visual impacts. Of the 21 items, 19 items would also be directly impacted as outlined above. Impacts to the heritage items as a result of visual effects are anticipated to be minor to negligible. The overall heritage value of the heritage items would not be significantly impacted by the project.

¹ For the purpose of this report, heritage item identification numbers for listed items in Ku-ring-gai local government area have been referred to using the identification numbers assigned to the items under *Draft Ku-ring-gai Local Environmental Plan 2013* because the *Ku-ring-gai Planning Scheme Ordinance 1971* does not include equivalent identification numbers.

There is also the potential for direct impacts due to potential eligibility for at-property acoustic treatment. Three of the 62 items have also been identified as being potentially eligible for acoustic treatment. This would be confirmed during detailed design, in consultation with landowners, and with consideration of potential impacts to heritage values.

The cumulative impact of the project to heritage values would be minimal owing to the majority of the heritage items only being potentially impacted by the project. These potential impacts are to be managed to reduce the risk of actual impacts to the identified items.

The potential impacts on heritage items due to ground movement and construction vibration would be confirmed during detailed design. If required, mitigation and management measures to minimise impacts would be investigated, and monitoring would be carried out at properties identified as being above recommended criteria. Property dilapidation surveys would also be carried out for all heritage items located within the preferred project corridor or properties within recommended safe working setbacks (in the case of potential vibration impacts).

Detailed mitigation and management measures would be developed for each heritage item directly impacted by the project once final disturbance areas have been identified through detailed design. These mitigation and management measures would be included in the construction environmental management plan(s) for the project.

1

1.0 Introduction

1.1 Project description

Roads and Maritime Services (Roads and Maritime), is seeking approval under Part 5.1 of the *Environmental Planning and Assessment Act 1979* (EP&A Act) to construct and operate a tolled motorway linking the M1 Pacific Motorway at Wahroonga to the Hills M2 Motorway at West Pennant Hills in northern Sydney (the project) (refer to **Figure 1**). The project would be located within the Hornsby, Ku-ring-gai and Hills local government areas.

Key features of the project would include:

- Twin motorway tunnels up to around nine kilometres in length with two lanes in each direction. The tunnels would be constructed with provision for a possible third lane in each direction if required in the future.
- A northern interchange with the M1 Pacific Motorway and Pennant Hills Road, including sections of tunnel for on-ramps and off-ramps, which also facilitate access to and from the Pacific Highway.
- A southern interchange with the Hills M2 Motorway and Pennant Hills Road, including sections of tunnel for on-ramps and off-ramps.
- Integration works with the Hills M2 Motorway including alterations to the eastbound carriageway to
 accommodate traffic leaving the Hills M2 Motorway to connect to the project travelling northbound, and the
 provision of a new westbound lane on the Hills M2 Motorway extending through to the Windsor Road offramp.
- Tie-in works with the M1 Pacific Motorway extending to the north of Edgeworth David Avenue.
- A motorway operations complex located near the southern interchange on the corner of Eaton Road and Pennant Hills Road that includes operation and maintenance facilities.
- Two tunnel support facilities incorporating emergency smoke extraction outlets and substations.
- Ancillary facilities for motorway operation, such as electronic tolling facilities, signage, ventilation systems and fire and life safety systems including emergency evacuation infrastructure.
- Modifications to service utilities and associated works at surface roads near the two interchanges and operational ancillary facilities.
- Modifications to local roads, including widening of Eaton Road near the southern interchange and repositioning of the Hewitt Avenue cul-de-sac near the northern interchange.
- Ancillary temporary construction facilities and temporary works to facilitate the construction of the project.

Construction of the project is anticipated to commence in early 2015 and is expected to take around four years to complete.

On 18 October 2013, the project was declared by the Minister for Planning and Infrastructure to be State significant infrastructure and Critical state significant infrastructure.

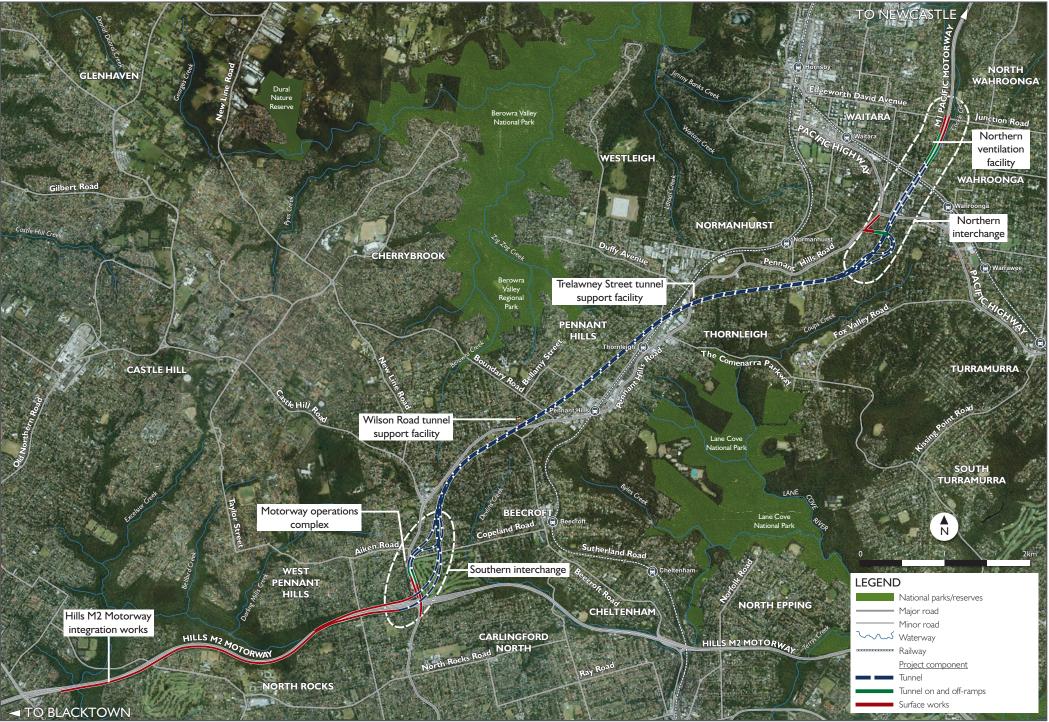


Figure 1 The project

2

1.2 Purpose of this report

The Director-General's environmental assessment requirements (DGRs) for the project were issued on 29 October 2013 and re-issued with amendments on 11 April 2014, which has informed the preparation of the environmental impact statement. The DGRs include the following requirement specific to potential impacts on historic cultural heritage:

An assessment of direct and/or indirect impacts to state and local heritage. Where impacts to State or locally significant historic heritage is identified, the assessment shall:

- Outline the proposed mitigation and management measures (including measures to avoid significant impacts and an evaluation of the effectiveness of the mitigation measures) generally consistent with the guidelines in the NSW Heritage Manual (Heritage Office and Department of Urban Affairs and Planning 1996).
- A statement of heritage impact for all heritage items/areas to be impacted (including significance assessment); and
- Consider the impacts from vibration, demolition, altered historic arrangements and access and architectural noise treatment.

This technical report presents the assessment of the potential impacts on historic heritage as a result of the project, as part of the environmental impact statement for the project.

1.3 Study area

The study area for this assessment has been informed by:

- The preferred tender design, as summarised in **Section 1.1** of this report, and as detailed further in Chapter 5 of the environmental impact statement for the project.
- The preferred project corridor, which represents a zone on the surface equal to a distance of 50 metres from the outer edge of excavations for the main alignment tunnels (underground).
- The construction footprint of the project at the surface and properties within 50 metres from the construction footprint. The construction footprint represents the area that would be physically impacted by construction works, including construction ancillary facilities.
- The construction methodology.

1.4 Limitations

This assessment targeted individual listed heritage items as indicated through maps and location data provided in relevant heritage databases and registers. Potential impacts on heritage items have been identified through an initial, conservative evaluation of potential construction and operational impacts.

Access to properties and internal assessments of each listed heritage items was not possible at the time of the assessment. Where possible, heritage items were inspected from the nearest publicly-accessible location(s). Visual inspections were limited in some cases where elements such as gates, fences and vegetation obscured the item.

Mitigation and management measures recommended within this report include the completion of a ground settlement assessment during detailed design to confirm the predicted impacts on heritage structures and to identify additional feasible and reasonable mitigation measures, Existing condition surveys would also be completed prior to the commencement of construction for heritage items within the preferred project corridor or that have been identified during detailed design to be within recommended safe working distances to surface works. At that time, internal condition assessments would also be undertaken. These are discussed further in **Chapter 9.0**

AECOM

2.0 Historical context

This chapter provides a brief overview of the area to contextualise the assessment of potential heritage impacts associated with the project. It is not intended to be a detailed history of the north western Sydney region.

2.1 Aboriginal history

Archaeological research at Parramatta (around five kilometres south of the study area) suggests that Aboriginal occupation of this part of Sydney commenced at least 35,000 years Before Present (B.P.) (Attenbrow, 2010). Like other areas across the continent, the Aboriginal economy of this region was probably based on the exploitation of a range of terrestrial and riverine food resources, and the use of local stone, wood and other plant materials for the manufacture of tools and other items (Attenbrow, 2010).

From 18,000 B.P. rising sea levels significantly reduced land area in the Sydney region, and likely prompted a general westward movement of peoples, along with changes in group organisation and economic strategies. It is at this time that the study area first appears to have been occupied, with a living site in the Bidjigal Reserve (SF2) dated to at least 11,800 B.P. (Attenbrow, 2010). Evidence from this and similar sites suggests the use of local volcanic tuff for stone tools and, from 5,000 B.P., the development of new tool technologies, including backed artefacts used primarily for working bone and wood (Attenbrow, 2010).

Stone tool kits continued to expand over the subsequent millennia, suggesting a growing emphasis on wood and bone working, while the use of new, imported raw materials point to the establishment of long distance trade networks. By 1,500 B.P. there is evidence of growing territoriality and regional differences, with coastal dwellers favouring tools of bone and shell, while groups in and around the study area continued to exploit their abundant stone resources for tool manufacture (Attenbrow, 2010).

When the first colonists arrived in the Sydney region in 1788, they found a land occupied by some 5,000 Aboriginal people and they met with increasing resistance as they pushed inland. Pemulwuy, an important leader in the Aboriginal resistance movement, orchestrated a series of raids in and around the study area in the late 18th century, and is reputed to have based himself in what is now the Bidjigal Reserve that abuts the southern extent of the study area. While there were fatalities on both sides of this frontier conflict, Aboriginal deaths far outnumbered those of settlers. This, added to the impact of introduced diseases and the environmental changes associated with land clearing, saw Aboriginal life change drastically by the 1820s (Attenbrow, 2010).

2.2 Settlement

Colonial settlement of the study area was driven principally by convict timber-getters seeking out the blue gums, iron barks, cedar and mahogany available in the Western Sydney forests (Kass, 1993). Seeking to support this industry, Governor Macquarie established a government sawmill on the northern edges of the Field of Mars Common (present day Pennant Hills) in 1816. The bullock road established to link this sawmill with Ermington Wharf to the south became the Pennant Hills Road that lies within the study area (Kass, 1993).

Agriculturalists and other primary producers followed in the wake of the timber getters, establishing small holdings on the cleared land. The area was soon discovered to be excellent for the production of stone and citrus fruit, and became Sydney's main orcharding district. Small villages were subsequently established at Pennant Hills, Hornsby and Wahroonga to support the farmers and their workers (Kass, 1993).

2.3 Early 20th Century

The trajectory for the study area's 20th century history was set when Homebush to Waratah railway line was established in 1886. This railway line linked the study area to the centre of Sydney, and what had once been an isolated rural area suddenly became an easy commute from the city. The elevated, picturesque nature of the study area added to its attractions, and it was soon a popular residential retreat. Orchards were quickly replaced by the grand houses of the colonial elite, as well as more modest housing estates for workers, including the Bundarra Estate which straddles the study area (Kass, 1993) (Davies, 2010).

The progress of the railway and the associated population increase was accompanied by industrial development, and a number of industries were established in the study area in the early 20th century. This included the building of sawmills, brickworks and maltworks, as well as the establishment of quarries to service the railway and, from the 1920s, the road builders (Kass, 1993). Travelling overland by horse or bullock wagon was a slow and laborious process in colonial NSW and, as a consequence, river and rail transport was used by preference and road networks were limited. This changed with the introduction of the motorcar in the early 20th century and, by the 1920s, there was growing demand for an improved road system. One of the main priorities was a road linking Sydney with its northern regions, and the first stage of this road was constructed between Pennant Hills Road in Hornsby and Peat's Ferry. Opened in the late 1920s, the road was originally called the Great North Road, but was soon renamed the Pacific Highway (Kass, 1993). Both Pennant Hills Road and the Pacific Highway were repeatedly upgraded in the ensuing years to cater for the ever increasing traffic load (Kass, 1993).

2.4 Post World War II

Building and development in and around the study area had slowed during the depression and the ensuing war years but, in 1945, work resumed apace. Remaining rural land and larger residential estates were further subdivided to provide more housing, with both private enterprise and Housing Commission of NSW developing new estates (Kass, 1993). With the increasing population came a growing number of service and commercial enterprises, including one of the first major shopping malls in suburban Sydney, constructed at Hornsby by the Westfield Group in 1961.

Increasing pressure on the road system between Sydney and Newcastle saw the establishment of a new freeway through the second half of the 20th century. Beginning with an upgrade of a section of the Pacific Highway, the 'F3 Freeway' gradually expanded to link the road systems of Sydney and Newcastle, with the section through the study area in Wahroonga opening in 1989. Now renamed the 'M1 Pacific Motorway', the road has been continually upgraded and widened.

2.5 Present Day

The study area covers a populous residential and commercial area in north western Sydney, and supports the main road infrastructure linking Sydney to the Central Coast, Newcastle and Hunter region.

3.0 Statutory controls

A number of planning and legislative documents govern how heritage is managed in NSW and Australia. The following section provides an overview of the requirements under each as they apply to the project.

3.1 Environment Protection and Biodiversity Conservation Act 1999

The Environment Protection and Biodiversity Conservation Act 1999 (EPBC Act) (Cth) took effect on 16 July 2000.

Under Part 9 of the EPBC Act, any action that 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. An action will also require approval if:

- it is undertaken on Commonwealth land and will have or is likely to have a significant impact on the environment on Commonwealth land; or
- it is undertaken by the Commonwealth and will have or is likely to have a significant impact.

The EPBC Act defines 'environment' as both natural and cultural environments and therefore includes Aboriginal and non-Aboriginal historic cultural heritage items. Under the EPBC Act, protected heritage items are listed on the National Heritage List (items of significance to the nation) or the Commonwealth Heritage List (items belonging to the Commonwealth or its agencies). These two lists replaced the Register of the National Estate (RNE). While the RNE has been suspended and is no longer a statutory list, it remains available as an archive.

The heritage registers mandated by the EPBC Act have been consulted and there are no heritage items listed on these registers within the study area.

3.2 Environmental Planning and Assessment Act 1979

The Environmental Planning and Assessment Act 1979 (EP&A Act) and the Environmental Planning and Assessment Regulation 2000 (EP&A Regulation) provide the framework for environmental planning in NSW. They include provisions to ensure that developments and activities that have the potential to impact on the environment are subject to detailed assessment and provide opportunity for public involvement. In NSW, environmental impacts are interpreted as including impacts on cultural heritage.

Roads and Maritime is seeking approval for the project under Part 5.1 of the EP&A Act. The project has been declared to be State significant infrastructure and critical State significant infrastructure.

The following Local Environmental Plans (LEPs), Planning Scheme Ordinances and draft LEPs apply to the preferred project corridor:

- Hornsby Local Environment Plan 2013 (Hornsby LEP).
- The Hills Local Environmental Plan 2012 (The Hills LEP).
- Ku-ring-gai Planning Scheme Ordinance 1971, as amended (Ku-ring-gai Planning Ordinance).
- Draft Ku-ring-gai Local Environmental Plan 2013 (Draft Ku-ring-gai LEP)

These instruments set out objectives for conservation and protection of historic heritage within each local government area. Each instrument also provides a list of heritage items in each local government area.

3.3 Heritage Act 1977

The *Heritage Act 1977* was enacted to conserve the environmental heritage of NSW. Under section 32 of the *Heritage Act 1977*, places, buildings, works, relics, moveable objects or precincts of heritage significance are protected by means of either Interim Heritage Orders (IHO) or by listing on the State Heritage Register (SHR). Items that are assessed as having State heritage significance can be listed on the SHR by the Minister for the Environment on the recommendation of the Heritage Council.

Archaeological relics (any relics that are buried) are protected by the provisions of section 139 of the *Heritage Act* 1977. Under this section it is illegal to disturb or excavate any land knowing or suspecting that the disturbance or excavation will or is likely to result in a relic being discovered, exposed, moved, damaged or destroyed. In such cases, an excavation permit under section 140 of the *Heritage Act* 1977 is required. No formal listing is required for archaeological relics; they are automatically protected if they are of local significance or higher.

Approvals under section 139 of the *Heritage Act 1977* are not required for a State Significant Infrastructure project approved under Part 5.1 of the EP&A Act by virtue of section 115ZG of the EP&A Act. However, the impact on heritage items as a result of the project has been addressed through this assessment report.

Proposals to alter, damage, move or destroy places, buildings, works, relics, moveable objects or precincts protected by an IHO or listed on the SHR require an approval under section 60 of the *Heritage Act 1977*. Demolition of whole buildings will not normally be approved except under certain conditions (section 63). Some of the sites listed on the SHR or on LEPs may either be 'relics' or have relics associated with them. In such cases, a section 60 approval is also required for any disturbance to relics associated with a listed item.

Under section 170 of the *Heritage Act 1977*, NSW government agencies are required to maintain a register of heritage assets. The register places obligations on the agencies, but not on non-government proponents, beyond their responsibility to assess the impact on surrounding heritage items.

4.0 Methodology

This assessment has followed the NSW Heritage Office publications Assessing Historical Significance, Assessing Significance for Historical Archaeological Sites and Relics (NSW Heritage Branch, 2009) and *Statements of Heritage Impact* (NSW Heritage Office, 2002). Further guidance and requirements for this assessment have been detailed in the DGRs.

The assessment of non-Aboriginal heritage has included the following tasks to address relevant aspects of the NSW Heritage Branch guidelines:

- A search of relevant historic heritage registers has been conducted, including:
 - World Heritage List (World Heritage Committee, UNESCO).
 - National Heritage List (Australian Heritage Council).
 - Commonwealth Heritage List (Australian Heritage Council).
 - NSW State Heritage Register (NSW Heritage Branch, OEH).
 - NSW State Heritage Inventory (NSW Heritage Branch, OEH).
 - NSW section 170 Heritage and Conservation Registers compiled by Roads and Maritime, Sydney Water, Sydney Trains and Transport for NSW.
 - Hornsby LEP, The Hills LEP, Ku-ring-gai Planning Scheme Ordinance, and the Draft Ku-ring-gai LEP.
 - National Trust Listings.
 - Register of the National Estate (Australian Heritage Council) (non-statutory).
- A review of historical parish maps and plans to determine any potential for archaeological heritage items.
- Mapped historic heritage listings have been assessed to ascertain properties within the study area with possible direct and indirect impacts during construction and operation of the project:
 - for construction, it is anticipated that direct impacts may include surface works and/ or land acquisition, and indirect impacts may include vibration or settlement generated by construction activity at the surface or underground.
 - for operation, it is anticipated that direct impacts may include acoustic treatments at affected properties and indirect impacts may include the visual presence of adjoining permanent features of the project, for example, interchanges, ventilation infrastructure and/or noise walls.
- Available heritage listing information has been compiled of the potentially impacted listings, including past inspection photographs. This data has been compiled to provide a point of comparison.
- Field surveys of the identified properties have been carried out, recording the current condition each site, with each listed heritage item photographed and compared to past description/photos.
- During the surveys, areas of potential heritage value have been investigated to look for historic heritage outside the recorded listing locations that may be impacted by the proposed works.
- Existing background information has been updated with field survey results.
- Statements of Heritage Impact (SOHIs) have been produced for the identified heritage sites considering potential direct and indirect impacts during construction and operation.
- Results of the non-Aboriginal heritage investigations and assessment have been documented in this report, including identification of mitigation and management measures to address potential direct and indirect impact on heritage items.

5.0 Heritage inventory results

Relevant heritage databases, registers and lists were searched on 2 December 2013 to identify non-Aboriginal heritage items within the study area. The results of these searches are summarised in **Table 1** and shown in **Figure 2**.

Appendix A provides maps illustrating the curtilage of the heritage items relative to the key features of the project.

Table 1 Non-Aboriginal heritage items identified in heritage databases, registers and lists

Register	Jurisdiction	Items within the study area
World Heritage List	Commonwealth	No listed items
National Heritage List	Commonwealth	No listed items
Commonwealth Heritage List	Commonwealth	No listed items
Register of the National Estate (non-statutory)	Commonwealth	No listed items
NSW State Heritage Register	State	No listed items
NSW State Heritage Inventory	State	No listed items
Section 170 Registers (Roads and Maritime, Transport for NSW, Sydney Water, Sydney Trains)	State	One item – Windsor Road and Old Windsor Road (Roads and Maritime)
The Hills LEP	Local	One listed item – Windsor Road from Baulkham Hills to Box Hill.
Hornsby LEP	Local	Fifty-three heritage listed items, including four archaeological items and three heritage conservation areas.
Ku-ring-gai Planning Ordinance	Local	Ten heritage listed items, including two heritage conservation areas.
Draft Ku-ring-gai LEP	Local	Five additional items are included in the draft Ku-ring-gai LEP that are not already listed on the Ku-ring-gai Planning Ordinance.
National Trust of Australia (non- statutory)	Voluntary	One item – Blackwood Memorial Sanctuary.

Two sites have been listed under more than one register, list or database being:

- The Windsor Road and Old Windsor Road site is listed under the section 170 register maintained by Roads and Maritime and The Hills LEP.
- The Blackwood Memorial Sanctuary is listed under the Hornsby LEP 2013 and the non-statutory National Trust of Australia register.

For the purpose of this report, these have been carried forward with the listings under the Local Environmental Plans only to avoid duplication.

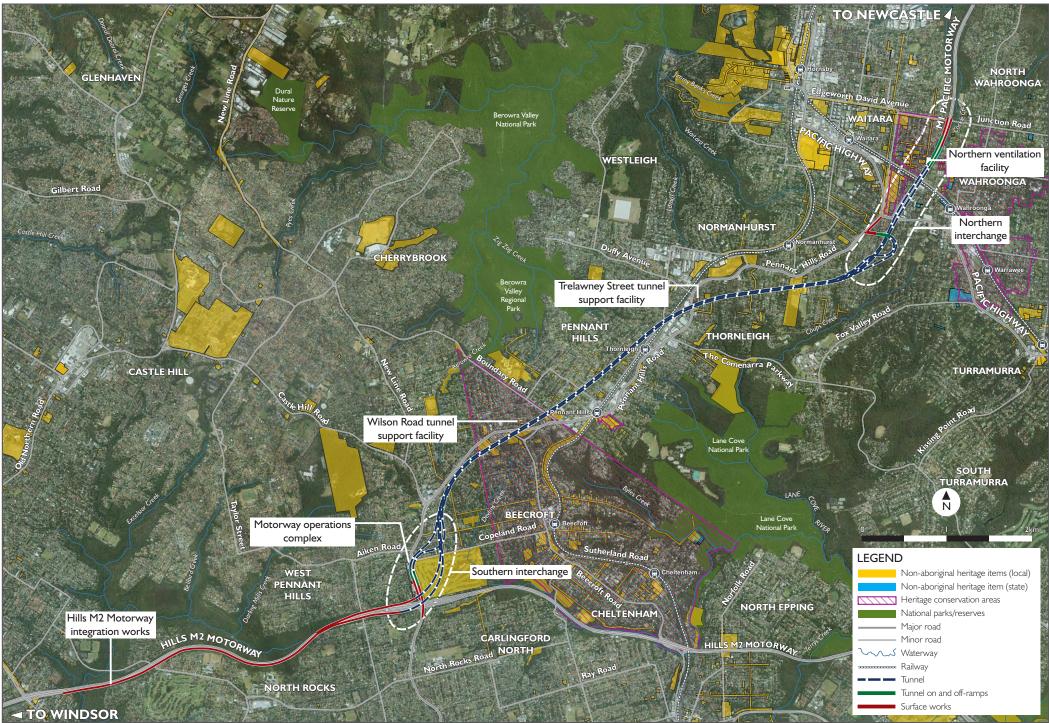


Figure 2 Heritage inventory results within the study area and surrounds

15

6.0 Site inspection

6.1 Inspection results

A targeted inspection of listed heritage items was carried out by heritage specialists Dr Darran Jordan and Rochelle Coxon on 11, 13 and 19 December 2013. During the field inspections, listed heritage properties identified as having the potential to be impacted (either directly or indirectly) were inspected for current condition to inform an assessment of potential impacts to heritage values. A follow up survey was conducted for the Thornleigh Maltworks (Hornsby LEP item #A66) on 27 March 2014 by heritage specialists Luke Kirkwood and Karyn Virgin.

At the time, properties could not be accessed and assessments were undertaken from the property boundary or other publicly-accessible locations. Interior features or condition of the interior, if relevant to the listing, were based on the details provided within the specific database listing.

The following descriptions of heritage items are the result of a combination of research and the visual inspections for all properties identified as listed heritage items located within the bounds of, or in proximity to, areas of project works. These listed heritage items were assessed for current condition in comparison to photographs from past inspections (where available) and the descriptions contained in the heritage listing details. Statements of significance included here are quoted verbatim (where available), having been sourced from the published listings for these properties. Quoted items are referenced accordingly.

6.2 Hornsby Local Environmental Plan 2013

Item A61 - Blackwood Memorial Sanctuary including North Road Culvert

Address: Beecroft Road, Pennant Hills Lot and DP: Lot 6 DP 828179

Significance: Local Additional Heritage Listings: National Trust

LEP Statement of Significance:

"An important and highly visible site, conserving a rare stand of the high Bluegum Forest with intact understorey. Site exhibits the successful bushland regeneration methods of the National Trust. Of regional significance (but endorsed significance only Local). Donated to the National Trust by the Blackwood family, this site has been managed since about the 1970's by the Trust, using a method of bush regeneration developed from the pioneering work of Joan Bradley.

Site in small sloping valley conserving remnant of the high Bluegum/ Blackbutt forest that once dominated this area of the Shire. Also conserves embankment of the New North Road, opened in 1829. The vegetation is dominated by ancient tall Blue Gums and Blackbutts to 35m high. Other species include Turpentines, Smooth Bark Angophoras and Grey Ironbark, with a lower strata of native shrubs, vines and grasses. The area presumably functions as a sanctuary for small native creatures. Some exotic Lemon Scented Gums still exist in the reserve, and were probably planted c1950/60 period" (Hornsby Shire Council, 2014).

Archaeological site (North Road Culvert) circa 1829 - Part of the road system linking Sydney with the Hunter Valley, this section (New Line Road 1829) cut distance by 15 miles. Culvert - Important survival of crucial phase in the European settlement of NSW and Hornsby Shire.

AECOM 2013 Inspection: The listed item was found to correspond to its past recording description and photographs. The item remains in comparable condition with its local heritage significance unchanged.



Plate 1 Ludovic Blackwood Memorial Sanctuary / North Road Culvert c.1992 (Hornsby Shire Council, 2014) Plate 2

Ludovic Blackwood Memorial Sanctuary / North Road Culvert c.2013

Item A66 - Remains of Maltworks

Address: 1 Pioneer Avenue, Thornleigh Lot and DP: Lot 12 DP 235680

Significance: Local

LEP Statement of Significance:

"Unusual industry which continues to use an older building layout and style though the present buildings date to the late 1960s. Important industry for the region and employer in the locality."

AECOM 2014 Inspection: The listed item was found to have been subject to substantial change to the site particular since the late 1960s. Original structures include the germination house and the Manager's House.



Plate 3 Main Malting Complex circa 1917-1930.

This photo shows the main germination building in the mid ground, with the kilns for drying behind. View from storage shed looking east along rail siding.

Plate 4

Photo showing the original kilns and the germination building covered in ivy

Item I68 - Street Trees

Address: Cardinal Avenue, West Pennant Hills Lot and DP: Road Reserve

Significance: Local

LEP Statement of Significance:

This large group of native trees are remnant components (canopy trees) of the Blue Gum High Forest (BGHF) community.....The BGHF community is typically defined by a mixed age structure and diverse floristic composition. This remnant group is dominated by mature Sydney Blue Gums (*Eucalyptus saligna*), Blackbutts (*Eucalyptus pilularis*) and Turpentine (*Syncarpia glomulifera*).

Although fragmented and reduced to only scattered remnant canopy trees, the group is considered to be significant in terms of its natural, representative, rarity, ecological/ biodiversity, genetic, visual and aesthetic values. The dramatic size and scale of these mature trees create a distinctive sense of place and bushland aesthetic quality to this suburban streetscape. These native trees are part of a larger, albeit highly fragmented and modified BGHF remnant community, which is confined to the surrounding shale-capped ridges and slopes (see listings for Hannah Street, Chapman Avenue, Hull Road and Lyndon Way).

The Cardinal Avenue group contains some exceptional old growth specimen trees in the public verges and large private gardens. Two massive old growth Sydney Blue Gums (Eucalyptus saligna), located on the verges adjacent to No.11 and No.26 Cardinal Avenue, are amongst the largest known specimens in the Hornsby Shire. These trees measure approximately 30 metres high / 25 metres canopy diameter/ 2000mm DBH and 25 metres high/ 30 metres canopy diameter/ 1700mm DBH respectively. Remnant native trees of this age structure, size and scale are now rare. They provide essential habitat for a range of tree-dependent fauna and are of individual significance" (Hornsby Shire Council, 2014).

AECOM 2013 Inspection: The listed item was found to correspond to its past recording description and photographs. The item remains in comparable condition with its local heritage significance unchanged.



Plate 5 Cardinal Avenue Street Trees c.2007 (Hornsby Shire Council, 2014)

Plate 6

Cardinal Avenue Street Trees c.2013

Item 198 - Street Trees

Address: Hannah Street, Beecroft Lot and DP: Road Reserve

Significance: Local

LEP Statement of Significance:

"Hannah Street is comprised of two fragmented groups (i.e. Western group between Pennant Hills Road and Hull Road and an eastern group between York Street and Beecroft Road). Both groups contain remnant native components of the Blue Gum High Forest (BGHF) community. The eastern group (i.e. Between York Street and Beecroft Road) was not listed in the HSLEP 1994. Both groups are of significance in terms of their natural, representative, rarity, ecological/biodiversity, genetic, visual and aesthetic values......

The BGHF community is typically defined by a mixed age structure and diverse floristic composition. The western group, adjoining Fearnley Park and the Devlin's Creek corridor (adjacent to Burns Road North), provides an important linkage with remnant BGHF in Cardinal Avenue, Chapman Avenue and Hull Road (refer to listings). Fearnley Park, a core BGHF protected area (1.94Ha) and the upper Devlin's Creek corridor are under a current bush regeneration/restoration strategy.

The western group also retains a small but very diverse native understorey and ground stratum within a road cutting. Road-side examples of BGHF with understorey components, particularly along ridge-tops, are now rare in the Hornsby Shire. The eastern group is highly fragmented and largely confined to a number of old growth specimens including White Mahogany (*Eucalyptus acmenoides*), Sydney Blue Gum (*E. saligna*) and Blackbutt (*E. pilularis*). Old growth specimens of *E. acmenoides* are now rare in the Sydney metropolitan area" (Hornsby Shire Council, 2014).

AECOM 2013 Inspection: The listed item was found to correspond to its past recording description and photographs. The item remains in comparable condition with its local heritage significance unchanged.



Plate 7 Hanna

Hannah Street c.2007 (Hornsby Shire Council, 2014)

Plate 8

Hannah Street c.2013

Item I111 - Street Trees

Address: Hull Road, Beecroft Lot and DP: Road Reserve

Significance: Local

LEP Statement of Significance:

This group of native trees, of mixed age and floristic structure, are remnant components (canopy trees) of the Blue Gum High Forest (BGHF) communityThe BGHF community has a highly restricted geographic distribution and is further threatened by urban development. Although highly fragmented and reduced to only scattered remnant canopy trees (particularly in the section north of Pennant Hills Road), the group is considered to be significant in terms of its natural, representative, rarity, ecological/biodiversity, genetic, visual and aesthetic values.

The dramatic size and scale of these mature trees create a distinctive sense of place and bushland aesthetic quality to this suburban streetscape. Notably, most of this remnant group occurs within adjoining large private gardens surrounding the Devlin's Creek corridor (north of Chapman Avenue). This group provides a high level of connectivity with Fearnley Park, a core BGHF protected area (1.94Ha) and other remnant BGHF groups in Hannah Street, Chapman Avenue and Cardinal Avenue (see listings). Furthermore, a number of old growth specimen trees, occurring within the Devlin's Creek Corridor, are of individual significance" (Hornsby Shire Council, 2014).

AECOM 2013 Inspection: The listed item was found to correspond to its past recording description and photographs. The item remains in comparable condition with its local heritage significance unchanged.



Plate 9 Hull Road c.2007 (Hornsby Shire Council, 2014)

late 10 Hull Road c.2013

Item I138 - Pennant Hills Golf Club - Grounds

Address: 589 Pennant Hills Road, Beecroft Lot and DP: Lot 10 DP 801176

Significance: Local

LEP Statement of Significance:

"Golf course conserving significant Blackbutt and Bluegums. Remnant forest above Devlins Creek in a naturalistic landscape and intact landscape elements and cultural planting from c1960#s. Of regional significance. Not specified Golf course sited on undulating topography above Devlins Creek which runs through site. Conserving large stands of mature indigenous Eucalypts particularly Blackbutts Bluegums and Stringybarks (to 30 metres) between fairways. Also indigenous trees around boundary and on nature strips including Blackbutt Smoothbark Angophora Stringybarks and Turpentines to 25m high.

"Clubhouse and entry area developed c1950/60. Entry stonework of yellow sandstone in rough-face and capped style intact from this period including Pencil and Golden Cypresses in car park zone with characteristic low plants such as Fish Fern Strelitzias and Annuals as border plants and extending to edge of course. More recently a line of Brush Box Trees to 14m on north boundary exists from c1960. Additional ornamental tree planting has been added to fairways since c1960's.

Course is generally well maintained but parking could be controlled along eastern nature strip to protect indigenous trees. Weed in bushland zones not assessed but probably require regeneration by qualified workers. Landscape on course could be simplified and enhanced if more emphasis was placed on indigenous Eucalypt forest and its regeneration and replanting rather than on additional introduction of exotic species. However the exotic planting around the parking area has significance as an important period landscape" (Hornsby Shire Council, 2014; NSW Office of Environment & Heritage, 2014).

AECOM 2013 Inspection: The listed item was found to correspond to its past recording description and photographs. The item remains in comparable condition with its local heritage significance unchanged.



Plate 11 Pennant Hills Golf Club c.1993 (Hornsby Shire Council, 2014)

Plate 12 Pennant Hills Golf Club c.2013

Item I475 - Street Trees

Address: Edgeworth David Avenue, Hornsby Lot and DP: Road Reserve

Significance: Local

LEP Statement of Significance:

"Ground A: this small group of native trees location between Newcastle Expressway and Myra Street are remnant components (canopy trees) of the Blue Gum High Forest (BGHF) community. This community has a highly restricted geographic distribution and is typically associated with soils derived from Wianamatta Shale (Tozer 2003). Blue Gum High Forest has been highly fragmented and modified by urban development, particularly small-scale clearing and alterations associated with residential subdivision, roads and service easement upgrades.

This group has significance in terms of its natural, representative, rarity, ecological/biodiversity, genetic, visual and aesthetic values. Old growth specimens in the group are of individual significance. Together the trees create a memorable sense of place in this suburban streetscape and are evocative of the original bushland character. This BGHF group is contiguous with the Woonona Avenue northern group (see listing) and has a broader association with other remnant tree groups in the local area further reinforcing the significance of this cluster (refer to similar listings for Bundarra Avenue and Fern Avenue, Wahroonga).

Group B: The formal single species avenue/ row plantation of Brush Box (*Lophostemon confertus*) located between the Pacific Highway and Myra Street is believed to date from the mid to late Post War period (c. 1950s-1960s). This plantation has local group significance in terms of its historic, cultural visual/ aesthetic and representative values. This species has been used extensively in street tree planting schemes throughout Sydney since the early twentieth century. Brush Box has been used in local planting programs associated with new subdivisions, the rail corridor and railway stations since the Post War period (refer to listings)" (Hornsby Shire Council, 2014).

AECOM 2013 Inspection: The listed item was found to correspond to its past recording description and photographs. The item remains in comparable condition with its local heritage significance unchanged.



Plate 13 Edgeworth David Avenue c.2007 (Hornsby Shire Council. 2014)

Plate 14 Edgeworth David Avenue c.2013

Item I590 - Street trees

Address: Campbell Avenue, Normanhurst Lot and DP: Road Reserve

Significance: Local

LEP Statement of Significance:

"This large but highly fragmented group of native trees are components (canopy trees) of the Blue Gum High Forest (BGHF) community. Blue Gum High Forest (BGHF) has a highly restricted geographic distribution and is typically associated with soils derived from Wianamatta Shale (Tozer 2003). This community has been highly fragmented and modified by urban development, particularly small-scale clearing and alterations associated with residential subdivision, roads and service easement upgrades.

This group, dominated by Sydney Blue Gums (*Eucalyptus saligna*), is considered to be significant in terms of its natural, representative, rarity, ecological/biodiversity, genetic, visual and aesthetic values. The dramatic size and scale of these trees defines a special sense of place and bushland aesthetic to this suburban streetscape. Some old growth specimen trees are of individual significance. Furthermore, these trees are part of a larger, albeit highly fragmented BGHF community, now scattered throughout local road verges and private gardens (refer to Calga Avenue and other local listings)" (Hornsby Shire Council, 2014).

AECOM 2013 Inspection: The listed item was found to correspond to its past recording description and photographs. The item remains in comparable condition with its local heritage significance unchanged.



Plate 15 Campbell Avenue c.2007 (Hornsby Shire Council, 2014)

Plate 16 Campbell Avenue c.2013

Item I596 - Garden

Address: 1-7 Frith Avenue, Wahroonga Lot and DP: Lot 3 DP 1077836

Significance: Local

LEP Statement of Significance:

"Significance has been reduced by the loss of the house and much of its original planting but a number of significant trees survive on the site. Notable among these are mature specimens of *Cryptomeria japonica* (Japanese Cedar), *Araucaria heterophylla* (Norfolk Island Pine), *Araucaria cunninghamii* (Hoop Pine), Brachychiton acerifolius (Illawarra Flame Tree), *Magnolia grandiflora* (Bull Bay), *Lagerstroemia indica* (Crepe Myrtle), *Macadamia tetraphylla* (Australian Nut), *Camellia japonica cultivars*. These remnants interpret the previous use of the place and contribute to the aesthetic values of the site" (Hornsby Shire Council, 2014).

AECOM 2013 Inspection:

As noted in the listing for the site, the 1920s house has been replaced by retirement units and the garden area impacted as a result. It is noted that the Hornsby Shire Council Heritage Register states that Hornsby Shire Council endorsed the removal of the heritage item from the Hornsby LEP 2013 on 20 November 2013.

The visible vegetation at the time of the 2013 AECOM inspection appeared to correspond to its past recording and photographs, but its position behind a walled area meant that only a limited inspection of the garden's extant extent was possible. The item remains in comparable condition with its local heritage significance unchanged.

Hornsby Shire Council endorsed the removal of the heritage item from the Hornsby LEP 2013 on 20 November 2013 and endorsed the use of tree preservation orders to provide an alternative protection mechanism for selected trees. According to Hornsby Shire Council's website, Council is anticipating the amendment to the LEP will be made in early 2014.



Plate 17 1-7 Frith Avenue Wahroonga Campbell Avenue c.2013 (Hornsby Shire Council, 2014)

ate 18 1-7 Frith Avenue, Wahroonga c. 2013

Item I603 - House

Address: 4 Mount Pleasant Avenue, Normanhurst Lot and DP: Lot D DP 366271

Significance: Local

LEP Statement of Significance:

"Grand example of a late Federation style house. Set in generous landscaped grounds. Excellent condition and virtually unaltered. Distinctive half-timbered gable. Excellent quality leadlight windows" (Hornsby Shire Council, 2014).

AECOM 2013 Inspection: The listed item was found to correspond to its past recording description and photographs. During the current inspection, it was noted that the fence had fallen over on the left hand side of the property and that the elements of the garden had been modified.



Plate 19 4 Mount Pleasant Avenue c.1992 (Hornsby Shire Council, 2014)

Plate 20 4 Mount Pleasant Avenue c.2013

Item I618 – St Agatha's Primary School – Grounds (Excluding Buildings)

Address: 18-26 Boundary Road, Pennant Hills Lot and DP: Lot 1 DP 1040701

Significance: Local

LEP Statement of Significance:

"School grounds conserving indigenous trees and cultural planting from c. 1940s" (Hornsby Shire Council, 2014).

AECOM 2013 Inspection: Limited access was available to the school grounds, with inspection undertaken from outside the school gates. As far as visibly possible to assess, the listed item was found to correspond to its past recording description and photographs. The item remains in comparable condition with its local heritage significance unchanged.



Plate 22

Plate 21 St Agatha's Primary School c.1993 (Hornsby Shire Council, 2014)

St Agatha's Primary School from the front grate c.2013

Item I607, A60 - Loretto [sic] Convent Group - Ground, Gates and Cemetery

Address: 91-93 Pennant Hills Road and 16-22 Mount Pleasant Avenue, Normanhurst

Lot and DP: Lot 1 DP 734965; Lot 15 DP 6612, Lot 16 DP 6612

Significance: Local

LEP Statement of Significance:

"Group of early Federation period brick school buildings, including grounds and early unified character created by consistent use of gothic style in face brick and sandstone. Buildings generally in good condition. Retain most of their original character despite some unsympathetic modern additions. Social and historical significance as a local centre of education."

"Entrance to a major educational establishment, symbolising the importance of Hornsby Shire as an educational centre. The imposing style is typical of a time during which the battle for private education as waged with particular firmness by the Catholic church. The inscription on the gate identifies the order."

"Well maintained ground of college and former convent displaying characteristic elements from late Victorian/Federation period. This includes sandstone and cast iron gateway and fence period layout with notable period trees and conserving a band of indigenous forest a burial ground while forming a visual element in the surrounding landscape and a highly visible landmark on Pennant Hills Road."

"Example of an enclosed religious order which buries its dead within the grounds of the institution. Reflects the importance of one religious denomination within the Shire and the ethnic (Celtic) origins of many members of the order" (Hornsby Shire Council, 2014).

AECOM 2013 Inspection: The inspection was undertaken from outside the school gates. As far as visibly possible to assess, the listed item was found to correspond to its past recording description and photographs. The item remains in comparable condition with its local heritage significance unchanged.



Plate 23 Loretto [sic] Convent group c.1992 (Hornsby Shire Council, 2014)

Plate 24 Loretto [sic] Convent group c.2013

Item I619 - "Cheddington" and Stables (Formerly "Niara")

Address: 27 Boundary Road, Pennant Hills Lot and DP: Lot 5, DP 16057; Lot 4, DP 622198

Significance: Local

LEP Statement of Significance:

"Example of a large early Queen Anne Federation style house. Cheddington is of social historic significance for its association with Chief Commissioner of Railways, Charles Oliver. It is a significant suburban estate with prominent position on the corner of a major road junction".

"A rare existing example of a vernacular stable. Good piece of functional architecture. The grouping and siting of the buildings is indicative of late Victorian site planning and subdivision related to a major road junction. Local significance" (Hornsby Shire Council, 2014).

AECOM 2013 Inspection: Currently the location for the Pennant Hills branch of White Lady Funerals who have operated at this location since mid-1999. The main structure (the Queen Anne Federation style house) has been substantially renovated and modified. It now includes a chapel with seating capacity for 30 people, a coffin show room, catering area, reception and arrangement room. A garden area has been landscaped adjacent to the main building, with a fountain, garden benches and a gazebo in a lawn area with trees around the periphery and a brick wall separating the garden area from view of Pennant Hills road. Other additions include a covered entryway/ driveway to the house typical of other White Lady Funeral homes.

The second structure is the vernacular stables, accessed from Boundary Road (where the primary entrance to White Lady Funerals is now located). The stables have a hipped corrugated iron roof with rafters, brick walls, timber joinery and timber plank stable doors. While the Federation style house has been significantly modified, the stables themselves are a highly intact structure with only minor modifications noted including addition of a skylight and maintenance.



Plate 25 Queen Anne Federation Style House – 27 Boundary Road c.2013 Plate 26

Vernacular Stables - 27 Boundary Road c.2013

Item I626 - House

Address: 7 Fulbourne Avenue Pennant Hills Lot and DP: Lot 14 DP 10203

Significance: Local

LEP Statement of Significance:

"Good example of fully restored weatherboard cottage from Inter-War period. Much original detail. Circa Date: 1935. Style: Inter-War California Bungalow. Small weatherboard cottage. Simple gabled form with symmetrical facade. Projecting central porch with shingled gable. Leadlight casement windows and original glass doors. Terracotta tiled roof. Good symmetrical picket fence. Sympathetic colour scheme. Well planted garden. Modifications: Recently extensively restored (1992)" (Hornsby Shire Council, 2014).

AECOM 2013 Inspection: The listed item was found to correspond to its past recording description and photographs. The item remains in comparable condition with its local heritage significance unchanged.



Plate 27 7 Fulbourne Avenue c.1992 (Hornsby Shire Council, 2014)

Plate 28 7 Fulbourne Avenue c.2013

Item I630 - House

Address: 17 Greycliffe Avenue, Pennant Hills Lot and DP: Lot 87 DP 11134

Significance: Local

LEP Statement of Significance:

"Good example of an Inter-War period house. In excellent condition and virtually unaltered. Fine quality original detail, including liver brickwork and casement windows. The work of innovative architect George Sydney Jones. Local significance. Circa Date: 1920.

"Inter-War period house. Hipped terracotta tile roof with boxed eaves. Cast iron chimney pot. Symmetrical design with projecting central porch opening. Liver brick walls with top course brick on end. Casement windows in groups of three sashes with diamond pattern leadlight flat hoods and shingles skirts. Original fence. Modifications: Fence partly rendered" (Hornsby Shire Council, 2014).

AECOM 2013 Inspection: The listed item was found to correspond to its past recording description and photographs. The main difference was in the vegetation growth of shaped hedging in the front garden area. The item remains in comparable condition with its local heritage significance unchanged. A new fence appears to have been added to the item.



Plate 29 17 Greycliffe Avenue c.1992 (Hornsby Shire Council, 2014)

Plate 30 17 Greycliffe Avenue c.2013

Item I652 - "Camira"

Address: 418 Pennant Hills Road, Pennant Hills Lot and DP: Lot 102 DP 263746

Significance: Local

LEP Statement of Significance:

"Good example of a large, Federation period, two storey bungalow. Notable for large areas of shingling. Good condition. Built for Charles N.J. Oliver, Chief Railway Commissioner until 1907" (Hornsby Shire Council, 2014).

AECOM 2013 Inspection: The listed item was found to correspond to its past recording description and photographs. The item remains in comparable condition with its local heritage significance unchanged. The main difference was in the vegetation growth of shaped hedging in the front garden area providing a screen against Pennant Hills Road.



Plate 31 418 Pennant Hills Road c.1992 (Hornsby Shire Council, 2014)

Plate 32 418 Pennant Hills Road c.2013

Item 1653 - Mount St. Benedict's Convent and Grounds

Address: 449D Pennant Hills Road, Pennant Hills Lot and DP: Lot 2 DP 1042630

Significance: Local

LEP Statement of Significance:

"The original building is an outstanding example of a Federation Free style building, designed by George Sydney Jones. It retains most of its original exterior and interior features. The later group of large Inter-War period buildings is notable for its polychrome brickwork. It has high integrity due to consistent use of materials and closely matching styles. Sympathetically altered in the Post-War period. Social and historical significance as a centre of education in the area" (Hornsby Shire Council, 2014).

AECOM 2013 Inspection: The inspection was undertaken from outside the school gates. As far as possible to visually assess, the listed item was found to correspond to its past recording description and photographs. The item remains in comparable condition with its local heritage significance unchanged.



Plate 33 Mt St. Benedict's Convent c.1992 (Hornsby Shire

Plate 34 Mount St. Benedict's Convent c.2013

Item I654, A62 – Observatory Park – Observatory Site and Park

Address: 449X Pennant Hills Road, Pennant Hills Lot and DP: Lot 7 DP 828179

Significance: Local

LEP Statement of Significance:

"Outstanding small example of remnant high Blue Gum and Blackbutt. Native forest conserved on shale derived soils, originally logged in the colonial period. Significant in surrounding landscape, and seen from as far as the city. Located in prominent road junction" (Hornsby Shire Council, 2014).

AECOM 2013 Inspection: The listed item was found to correspond to its past recording description and photographs. A memorial and plaque have been established on the northern part of the park to commemorate the location of the original Pennant Hills Observatory. The item remains in comparable condition with its local heritage significance unchanged.



Plate 35 Observatory Park c.1992 (Hornsby Shire Council, 2014)	Plate 36 Observatory Park showing the Observatory memorial and plaque c.2013
--	--

Item I660 - Fence

Address: 34 Ramsay Road, Pennant Hills Lot and DP: Lot 78 DP 11134

Significance: Local

LEP Statement of Significance:

"Excellent example of an Inter-War period brick fence. Good condition and virtually unaltered. Local significance. House of some architectural interest. Circa Date: 1925. Style: Inter-War. Original brick boundary fence to both streets. Approximately six courses high. Crenellated parapet of alternate headers and soldiers. Square piers to corner and gate with soldier course capping. Steel gates. Good Inter-War period Bungalow. Complements No. 37 opposite. Double-fronted with two battened gables facing street. Terracotta tile roof" (Hornsby Shire Council, 2014).

AECOM 2013 Inspection: The listed item was found to correspond to its past recording description and photographs. The item remains in comparable condition with its local heritage significance unchanged The exterior of the house has been painted since the last inspection, with brown highlights added to the eaves and windows.



Plate 37	34 Ramsay Road c.1992 (Hornsby Shire Council, 2014)	Plate 38	34 Ramsay Road showing the fence and house c.2013
	•		

Item I661 - Fence

Address: 35 Ramsay Road, Pennant Hills Lot and DP: Lot 1 DP 317985

Significance: Local

LEP Statement of Significance:

"Excellent example of an Inter-War period brick and chain wire fence. Good condition and virtually unaltered. Local significance. House of some architectural interest good support building for No 37. Circa Date: 1930. Style: Inter-War. Original brick and wire mesh fence. Brick walling approximately four courses high with soldier course capping. Wire mesh with steel pipe framing painted. Square brick piers with corbelled capping and top course rendered and painted. Simple brick house circa 1930" (Hornsby Shire Council, 2014).

AECOM 2013 Inspection: The listed item was found to correspond to its past recording description and photographs. Vegetation growth is currently obscuring the front fence, which is present behind shrubs and hedging. It was unclear if gate currently associated with fence is a recent addition. The item ultimately remains in comparable condition with its local heritage significance unchanged.



Plate 39	35 Ramsay Road c.1992 (Hornsby Shire Council, 2014)	Plate 40	35 Ramsay Road c.2013	

Item I662 - House and Fence

Address: 37 Ramsay Street, Pennant Hills Lot and DP: Lot A DP 364826

Significance: Local

LEP Statement of Significance:

"Excellent example of an Inter-War Bungalow. Good condition and virtually unaltered. Exterior features much original fine detail throughout. Original fence of note. Local significance. Single Storey Residence Circa Date: 1920. Very good Inter-War Bungalow circa 1930. Tuck-pointed face brick with terracotta tiled roof. Designed for corner site with hipped verandah on both frontages. Half-timbered gables with shingled apexes. Solid verandah piers with stub posts infill and brackets. Simple timber balustrade. Exposed rafter eaves. Excellent leadlight windows mostly double-hung. Original brick and timber fence to match verandah. Good garden" (Hornsby Shire Council, 2014).

AECOM 2013 Inspection: The listed item was found to correspond to its past recording description and photographs. The exterior of the building has been painted since the previous inspection, with blue paint utilised in highlights on the eaves, railings and windows. The garden visible in 1992 has also since been replaced with lawn in addition to upgrades of the footpath. The overall item remains in comparable condition with its local heritage significance unchanged.



Plate 41 37 Ramsay Street c.1992 (Hornsby Shire Council, 2014)

Plate 42

37 Ramsay Road c.2013

Item I666 - "Bushloe"

Address: 25-27 Stevens Street, Pennant Hills Lot and DP: Lot A DP 401750

Significance: Local

LEP Statement of Significance:

"Good representative example of an early 20th Century Federation bungalow style house, altered in parts. House however remains as evidence of historical development in the area.

"Towards the turn of the Twentieth Century, industry (such as maltworks, pultry and various growers) began to proliferate in the Thornleigh and Pennant Hills area, taking advantage of the railway line construction (completed 1886 and linking St Leonards to Hornsby) to freight goods to Sydney. The subsequent suburbanisation of the area saw large land portions being subdivided and sold. In 1910 Lot 25 of the 'Nyors Estate', comprising of one acre, was purchased by William Clarke. It was on this site that Bushloe was built. Stone recovered from the excavation of the block was used in foundations and the Stevens Street fence. Subdivisions of one house block each were made in 1923 and 1945.

"Single storey Federation brick bungalow style house. Prominent tiled roof with addition of eave lining evident. Deep verandah with possible alterations to timber posts and handrail detailing. Face brickwork remains exposed on Stevens Street facade. Despite some modification the house retains the essence of its Federation styling" (Hornsby Shire Council, 2014).

AECOM 2013 Inspection: The listed item was found to correspond to its past recording description and photographs. The item remains in comparable condition with its local heritage significance unchanged.



Plate 43 25-27 Stevens Street c.2003 (Hornsby Shire Council, 2014)

Plate 44

25-27 Stevens Street c.2013

Item I680 - House

Address: 20 Warne Street, Pennant Hills Lot and DP: Lot 16 DP 5158

Significance: Local

LEP Statement of Significance:

"Good example of an Inter-War period house. Unusual masonry verandah. Good condition. Local significance. Circa Date: 1925. Style: Inter War. Federation Bungalow design. Hipped slate roof. Exposed rafters. Single large gable at front, half timbered and roughcast. Unusual hipped roof verandah with roughcast arches. Good roughcast chimneys. Sandstone basecourse. Sympathetic well planted garden. Modifications: Modern brick fence. Weatherboard extension at rear" (Hornsby Shire Council, 2014).

AECOM 2013 Inspection: The listed item was found to correspond to its past recording description and photographs. The item remains in comparable condition with its local heritage significance unchanged.



Plate 45	20 Warne Street c.1992 (Hornsby Shire Council, 2014)	Plate 46	20 Warne Street c.2013	
----------	--	----------	------------------------	--

Item I681 - House

Address: 24 Warne Street, Pennant Hills Lot and DP: Lot 2 DP 501154

Significance: Local

LEP Statement of Significance:

"Good example of an early Federation period cottage in traditional Georgian form. Best of a row of three. Good condition. Little integrity lost through generally sympathetic modifications. Local significance. Circa Date: 1910. Style: Federation Georgian.

"Weatherboard cottage with slate roof. Traditional form with hipped roof and symmetrical facade. Original double-hung windows of special note with moulded architraves. Good brick chimney. Modifications: Verandah is sympathetic replacement. Unsympathetic security door. Sympathetic picket fence" (Hornsby Shire Council, 2014).

AECOM 2013 Inspection: The listed item was found to correspond to its past recording description and photographs. The exterior of the house had been repainted since the last inspection, with the window edges changed from brown to green and the front porch surface changed from green to brown. The garden has also been modified. The item remains in comparable condition with its local heritage significance unchanged.



Plate 47 24 Warne Street c.1992 (Hornsby Shire Council, 2014)

Plate 48 24 Warne Street c.2013

Item I682 - House

Address: 9 Weemala Road, Pennant Hills Lot and DP: Lot 60 DP 11134

Significance: Local

LEP Statement of Significance:

"Good example of an Inter-War period house. Fine quality original materials in good condition, including extensive use of shingling. Local significance. Circa Date: 1935. Inter-War brick house, probably 1930's. Liver coloured brick walls. Decorative use of unusual rock-faced brick. Gabled terracotta tiled roof with hipped all round verandah. Solid brick piers with scalloped brick balustrading. Unusual informal shingling to gable. Excellent leadlight casement windows" (Hornsby Shire Council, 2014).

AECOM 2013 Inspection: The listed item was found to correspond to its past recording description and photographs. The roof has been reshingled. The item remains in comparable condition with its local heritage significance unchanged.



Plate 49	9 Weemala Road c.1992 (Hornsby Shire Council, 2014)	Plate 50	9 Weemala Road c.2013

Item I683 - "Hillcourt"

Address: 9 Werona Street, Pennant Hills Lot and DP: Lot 1 DP 524506

Significance: Local

LEP Statement of Significance:

"Good representative example of early 20th Century Federation bungalow style, suitably sited on a large block. House remains as evidence of historical development in the area. Examples of this age and level of intactness in the Pennant Hills area appear to be uncommon.

"Towards the turn of the twentieth Century, Orchadists in the Pennant Hills, Thornleigh and surrounding areas took advantage of the recently constructed railway line (completed 1886 and linking St Leonards to Hornsby) to freight fruit to Sydney. The subsequent proliferation of this and other industries would prompt the start of suburbanisation of the area, with large land portions being subdivided and sold. 1901 saw subdivision of the area known as 'Mellidays Land' into residential and orchard sites mostly between 1 and 2 acres. Lots 35 & 36, an area of 2 acres, were purchased in 1903 by Eliza Sherman, wife of Christopher Sherman of Goolma, farmer. It would appear soon after the house 'Hillcourt' was constructed on lot 35.

"Early 20th Century Federation brick bungalow with a pitched roof, broken over the encircling verandah, sections of which have been enclosed at various times to create an ensuite, dressing room and study. Brickwork has been painted and original tiles replaced with profile roof cladding. Chimney stacks appear to be original. Modifications: Rear addition" (Hornsby Shire Council, 2014).

AECOM 2013 Inspection: The listed item was found to correspond to its past recording description and photographs. The item remains in comparable condition with its local heritage significance unchanged.



Plate 51 9 Werona Street c.2003 (Hornsby Shire Council,

Plate 52

9 Werona Road c.2013

Item I684 - "Karoola"

Address: 14 Werona Street, Pennant Hills Lot and DP: Lot 1 DP 533036

Significance: Local

LEP Statement of Significance:

"Good intact representative example of an early 20th Century timber framed Federation bungalow style house in extensive gardens. House remains as evidence of historical development in the area. Towards the turn of the Twentieth Century, Orchadists in the Pennant Hills, Thornleigh and surrounding areas took advantage of the recently constructed railway line (completed 1886 and linking St Leonards to Hornsby) to freight fruit to Sydney.

"The subsequent proliferation of this and other industries would prompt the start of suburbanisation of the area, with large land portions being subdivided and sold. In 1904, Lot 4 of the 'Nyora Estate' was purchased by Dorcas P Pollard. It was on this site that Karoola was built, research revealing the site originally contained a fur tree lined creek and tennis court, among other features. Early timber framed 20th Century Federation bungalow style house with hipped corrugated steel profile roof, deep timber posted verandah and weatherboard cladding. Set back deeply on generously proportioned block with extensive ornate garden features. Largely intact, however evidence of alteration (particularly to verandah timbers) exists" (Hornsby Shire Council, 2014).

AECOM 2013 Inspection: The listed item was found to correspond to its past recording description and photographs. The item remains in comparable condition with its local heritage significance unchanged.



Plate 53 14 Werona Street c.2003 (Hornsby Shire Council, 2014)

Plate 54

14 Werona Road c.2013

Item I689 - House

Address: 4 Yarrara Road, Pennant Hills Lot and DP: Lot 3 Section 15 DP 2097

Significance: Local

LEP Statement of Significance:

"Good example of an early Federation period weatherboard cottage in traditional Georgian style. Good condition. Integrity little affected by generally sympathetic alterations. Original fence and gate. Local significance. Circa Date: 1900. Style: Federation Georgian. Old weatherboard house. Traditional Georgian form. Corrugated iron hip roof with close eaves. Separate skillion roof verandah supported on four square timber posts. Double-hung windows. Half-glazed door with toplight. Good fence and gate. Modifications: Weatherboards to side elevation replaced. Skillion roof addition to rear" (Hornsby Shire Council, 2014).

AECOM 2013 Inspection: The listed item was found to correspond to its past recording description and photographs. The item remains in comparable condition with its local heritage significance unchanged.



Plate 55 4 Yarrara Road c.1992 (Hornsby Shire Council, 2014) Plate 56 4 Yarrara Road c.2013

Item I690 - House

Address: 6 Yarrara Road, Pennant Hills Lot and DP: Lot 4 Section 15 DP 2097

Significance: Local

LEP Statement of Significance:

"Excellent timber example of an Inter-War Bungalow. Has much in common with the original Californian model, with suggested Japanese influence. Unusual double-gabled design. Good condition. Fine quality original timber detail, including windows and gables. Local significance. Circa Date: 1930. Style: Inter-War California Bungalow.

"Inter-War period weatherboard house with iron roof. Symmetrical design with low pitched all gabled roof. Long wide gable over verandah. Casement windows at front. Good timberwork to front gable. Window hoods at sides. Modifications: Roof recently replaced. Otherwise appears original. Fence replaced" (Hornsby Shire Council, 2014).

AECOM 2013 Inspection: The listed item was found to correspond to its past recording description and photographs. The item remains in comparable condition with its local heritage significance unchanged.



Plate 57	6 Yarrara Road c.1992 (Hornsby Shire Council, 2014)	Plate 58	6 Yarrara Road c.2013
----------	--	----------	-----------------------

Item I691 - The Maze

Address: 18-20 Yarrara Road, Pennant Hills Lot and DP: Lot 1 DP 10203

Significance: Local

LEP Statement of Significance:

"Good example of an early Federation brick house with traditional wrap-around verandah. Integrity partly compromised by painting of brickwork. Local significance. Home and surgery of Dr Cuthbert and Richard Geeves (1927-60).

"Traditional Georgian style brick house with hipped terracotta tiled roof. Symmetrical facade. Long bullnosed verandah returns to sides. Turned timber posts with scalloped valence panels. Double-hung windows. Original style door with sidelights and toplight. Brick chimneys with terracotta pots. Low picket fence, probably original. Well planted garden area. Modifications: Bricks now painted. Double-hung windows shuttered at front" (Hornsby Shire Council, 2014).

AECOM 2013 Inspection: The listed item was found to correspond to its past recording description and photographs. The exterior of the building has been repainted since the last inspection. The item remains in comparable condition with its local heritage significance unchanged.



Plate 59 18 Yarrara Road c.1992 (Hornsby Shire Council, 2014)

Plate 60

18 Yarrara Road c.2013

Item I710 - Street Trees

Address: Loch Maree Avenue, Thornleigh Lot and DP: Road Reserve

Significance: Local

LEP Statement of Significance:

"This small group of native trees, dominated by old growth specimens, are remnant components (canopy trees) of the Blue Gum High Forest (BGHF) community........ The BGHF community has a highly restricted geographical distribution and is typically associated with local shale-derived soils of the ridge tops. In the past, the community was largely cleared for agriculture and is now threatened by urban development. Less than 5% of the original distribution of BGHF community still exists... Although highly fragmented and reduced to only scattered remnant canopy trees, the group is considered to be significant in terms of its natural, representative, rarity, ecological/biodiversity, genetic, visual and aesthetic values.

"The dramatic size and scale of these trees, particularly old growth specimens, creates a memorable sense of place and bushland aesthetic to this suburban streetscape. A number of large specimen trees are conserved in rear gardens (eastern side) near the creek-line. Furthermore, these trees are part of a much larger, albeit highly fragmented (BGHF) community (refer to Calga Avenue and Campbell Avenue and other local listings). Notably, Trelawney Street (linking to Loch-Maree Avenue) conserves a small but impressive group of remnant Blue Gum High Forest, including old growth specimens, which is currently not heritage listed. All items of natural occurrence [ie. not cultivated]. Resident of No.27 Loch-Maree Avenue has requested removal of old growth specimen (*E. saligna*) in verge following recent branch fall (Council corro. date unknown/ pers. comm. 18/07/2007). These native trees (BGHF community) have been retained/ protected within the western public verge and adjoining private gardens, particularly within and adjacent to Nos.25, 27 and 31 Loch-Maree Avenue. Native tree species include the following:- Common Name(s): Botanical Name(s): Rough-barked Apple (*Angophora floribunda*); Blackbutt (*Eucalyptus pilularis*); Sydney Blue Gum (*Eucalyptus saligna*)" (Hornsby Shire Council, 2014).

AECOM 2013 Inspection: The listed item was found to correspond to its past recording description and photographs. The item remains in comparable condition with its local heritage significance unchanged.



Plate 61 Loch Maree Avenue Street Trees c.2007 (Hornsby Shire Council, 2014)

Plate 62

Loch Maree Avenue Street Trees c.2013

Item I714 - "Loch Maree House" and Garden

Address: 237 Pennant Hills Road, Thornleigh Lot and DP: Lot 1 DP 245272

Significance: Local

LEP Statement of Significance:

"Outstanding Federation house. Finely crafted detail in a variety of materials. Excellent condition. One of the best quality houses in the area. Outbuilding at the rear also of interest. Local significance. Reconstructed federation garden including original tall Canary Island Pine and Camphorlaurels from c1950's notable period element on major road. Of local significance. Loch Maree' was built for Herbert Garratt licensee of the Cambridge Hotel Castlereagh Street Sydney as well as the Pennant Hills Hotel. Construction commenced in 1898 and Mr Garrett had moved in by 1 April 1899. The original garden had a formal layout with a gravelled driveway flower beds tennis court. There was also an orchard piggery and a swimming pool with a separate dressing room building. In 1910 it was sold to Robert Tulloch the owner of a heavy engineering works in Pyrmont. He expanded the size of the farm to 60 acres. The Tulloch family lived in 'Loch Maree' until 1954.

"Outstanding Federation house. Red face brick walls. Complex terracotta tiled roof. Castellated tower and original style shingled dormer. Roughcast gable to front with porthole window. Large arched window below with stained glass and leadlight. Verandah returns to one side. Lattice valence. but roof remains visible above. Fine ridge capping and Norman Shaw style chimney near towers. Outbuilding at the rear. Second dormer is probably of a later date. Unsympathetic high front fence. Reconstructed garden to fine federation house including probably original tall Canary Island Pine from c1920 and line of Camphorlaurels to 13m on south side from c1950's. Fine reconstructed curved brown gravel drive (brick edge). Border planting of Strap Lillies, Roses and Cannas and corner Jacaranda 8m high. Stylish reconstructed H.W. fence in sympathy with period. Modifications: Second dormer is probably of a later date. Unsympathetic high front fence" (Hornsby Shire Council, 2014).

AECOM 2013 Inspection: The listed item was found to correspond to its past recording description and photographs. The item remains in comparable condition with its local heritage significance unchanged.



Plate 63 237 Pennant Hills Road c.1992 (Hornsby Shire Council, 2014)

Plate 64

237 Pennant Hills Road c.2013

Item I716 - House

Address: 3 Pritchard Street, Thornleigh Lot and DP: Lot 5 Section 14 DP 2097

Significance: Local

LEP Statement of Significance:

"Good example of a late Federation style Bungalow. Interesting design variation with symmetrical facade and central porch. Fine quality original detail. Inter-War period weatherboard house. Symmetrical design with central projecting gabled porch. Hipped terracotta tile roof with exposed rafters. Pair of brick chimneys. Good leadlight casement windows. Porch gable is faced with battened asbestos cement has spindle valence timber posts supported on brick piers.

"Physical Description: Originally a single-storey circa 1920s weatherboard cottage with a terracotta tiled roof. Now greatly extended and modified with the addition of an upper level, side wing and corrugated steel roofing. Chimney extended vertically.

"Historical Notes: The property at 3 Pritchard Street, Thornleigh was built c1922 for William Ritchie Morris, engineer, on Lot 5, Section 14 of the Third Subdivision of the Thornleigh Township (DP 2097). It lies on land that was originally part of a grant of 640 acres to George Henry Thorn in 1840 the whole of which was sold to James Bellamy in 1856. Bellamy divided his farm in 1873 among his four married daughters and his son James jnr. In 1888 around 94 acres of this land was subdivided by the Haymarket Permanent Land Building and Investment Company as the Third Subdivision of the Thornleigh Township (DP 2097). Lots 4 and 5, Section 14 of this subdivision were purchased in 1891 by Frederick Shettle but a mortgagee sale in 1905 saw the land revert back to the Haymarket Permanent Land Building and Investment Company. In 1918 the lots were sold to Mary Pettit and in 1921 Lot 5, containing 32 ½ perches, was sold to William Ritchie Morris. Morris owned the land until 1949 and was responsible for the construction of the subject house. The house was sold to Patience and John Peter and their daughter, Patience Joan Peter, in 1949 and the family owned the property until 1980. It was purchased by John and Angela Haysom in 1980. The house remains on its original allotment. The house has had a second-storey added in similar style, with open car port and side wing extension" (Hornsby Shire Council, 2014).

AECOM 2013 Inspection: The listed item was found to correspond to its past recording description and photographs. The item remains in comparable condition with its local heritage significance unchanged.

It is noted that Hornsby Shire Council endorsed the removal of the heritage item from the Hornsby LEP 2013 on 20 November 2013 following the exhibition of a planning proposal in 2013. This was on the basis that it has been extended and modified, and its significance has been reviewed as a result. According to Hornsby Shire Council's website, Council is anticipating the amendment to the LEP will be made in early 2014.



Plate 65 3 Pritchard Street c.2012 (Hornsby Shire Council, 2014)

Plate 66

3 Pritchard Street c.2013

Item I723 - House

Address: 80 The Esplanade, Thornleigh Lot and DP: Lot 12 DP 1008101

Significance: Local

LEP Statement of Significance:

"Good example of an Inter-War period weatherboard house. Unusual verandah column brackets. Much good quality original detail. Local significance. Circa Date: 1925. Style: Inter-War Traditional.

"1920's style weatherboard house. Corrugated iron roof bellcast over verandah. Central gablet over verandah entry. Unusual curved verandah post brackets. Original door with sidelights and toplight. French doors. Good moulded architraves to openings. Well planted in front with hedge. Modifications: New roofing. Side enclosure to verandah in asbestos cement. Verandah posts partly replaced" (Hornsby Shire Council, 2014).

AECOM 2013 Inspection: The listed item was found to correspond to its past recording description and photographs. The exterior of the house has been repainted since the previous inspection. The item remains in comparable condition with its local heritage significance unchanged.



Plate 67 80 The Esplanade c.1992 (Hornsby Shire Council, 2014)

Plate 68 80 The Esplanade c.2013

Item I724 - Gardens

Lot and DP: Lot K, DP 389092, Lots A and B, DP 373698, Lots 1 and 2, DP 1034977

Address: 17, 19, 21, 23 and 23A Trelawney Street Thornleigh

Significance: Local

LEP Statement of Significance:

"Remnants of original indigenous Sydney Blue Gum High Forest ecological community which is listed as endangered under the Threatened Species Conservation (TSC) Act 1995. Although only isolated trees and possibly regrowth after early logging in the area, these specimens have local historical, aesthetic and scientific/research significance and are representative of the original dominant tree species in the area.

"Remnant of original plant community of area or regrowth thereof. Remnant indigenous eucalypts, mainly Eucalyptus saligna (Sydney Blue Gum), surviving on nature strip and in several gardens on the north side of Trelawney Street, providing evidence of original Sydney Blue Gum High Forest ecological community. Two very large blue gums on nature strip outside No.17 and one outside No.19, both of which are single-storey fibro houses with tile-clad hipped roofs. There is another tall blue gum in the rear garden of No.17 and another in the rear garden of No.19 is forked approximately 8 metres above ground level. A recent battle-axe subdivision at rear of No.21 has produced No.21A Trelawney Street, with a shared right-of-way between No. 19 and 21 (No. 21 and 21A had 'sold' signs at front at time of inspection).

"There is a very large blue gum beside the new drive and another, not quite as large, in the front garden, with a forked blue gum at the far end of the new driveway. No.21 is a refurbished weatherboard clad single-storey house with tiled roof and garage under a concrete deck. No.23A is a recent (c1990s) 1½ storey house with two blue gums in the front garden and another in the rear garden. No.23, on the curve in the road, has six younger blue gums along its north-eastern boundary. Exotic ornamental trees and shrubs in gardens add to local amenity but are not considered of heritage significance. Modifications: No. 19 Trelawney - Tree Application 2003, No. 23 Trelawney - Construction Certificate for carport 2001, DA for two lot of Torrens Title 1998, Section 96(2) DA for modification to boundary 2001, Section 96(2) modification to approved subdivision to amend location of common boundary 2000, DA for carport 2001, two tree applications 2011. No. 23A Trelawney - DA and Construction Certificate for dwelling 2001" (Hornsby Shire Council, 2014).

AECOM 2013 Inspection: The listed item was found to correspond to its past recording description and photographs. The item remains in comparable condition with its local heritage significance unchanged.

It is noted that Hornsby Shire Council endorsed the removal of the heritage item from the Hornsby LEP 2013 on 20 November 2013, and endorsed the use of tree preservation orders to provide an alternative protection mechanism for selected trees. According to Hornsby Shire Council's website, Council is anticipating the amendment to the LEP will be made in 2014.



Plate 69 17-23A Trelawney Street c.1992 (Hornsby Shire Council, 2014)

Plate 70

17-23A Trelawney Street c.2013

Item I725 - House

Address: 17 Wells Street, Thornleigh Lot and DP: Lot 14 Section 15 DP 2097

Significance: Local

LEP Statement of Significance:

"Example of a Federation period Arts and Crafts weatherboard cottage with standard asymmetrical plan. Only in fair condition and has unsympathetic new work. Unusual hood design and fine quality original detail. Local significance. Circa Date: c1915. Style: Federation Arts and Crafts.

"Federation period painted weatherboard cottage. Terracotta tiled hip roof with front and side shingled gable and belcast verandah. Exposed rafters. Decorative timber brackets to paired verandah posts supported on masonry piers. Roughcast render to piers and basecourse. Timber casement windows with toplights. Cement steps.

Modifications: Front and side verandah enclosed with narrower weatherboards and aluminium sliding doors. Weatherboard extension to rear, with fibro lean-to supported on rear. Unsympathetic 3-4 level which brick block of flats next door. Integrity/Intactness: Much integrity has been lost due to substantial unsympathetic alterations" (Hornsby Shire Council, 2014).

AECOM 2013 Inspection: The listed item was found to correspond to its past recording description and photographs. The item remains in comparable condition with its local heritage significance unchanged.



Plate 71 17 Wells Street c.1997 (Hornsby Shire Council, 2014)

Plate 72 17 Wells Street c.2013

Item I731 - Garden

Address: 45 Bundarra Avenue, Wahroonga Lot and DP: Lot 9 DP 667410

Significance: Local

LEP Statement of Significance:

"Garden conserving cultural trees from c1950 period forming Bundarra Ave precinct of high local landscape significance. Of local significance" (Hornsby Shire Council, 2014).

AECOM 2013 Inspection: The listed item was found to correspond to its past recording description and photographs. The growth of trees has increased since the last inspection, which has led to the lower branches of the cypress being stressed by close crowding from the surrounding vegetation. Otherwise the item remains in comparable condition with its local heritage significance unchanged.



Plate 73 45 Bundarra Avenue c.1993 (Hornsby Shire Council, 2014)

Plate 74 45 Bundarra Avenue c.2013

Item I743 - Street trees

Address: Edwards Road, Wahroonga Lot and DP: Road Reserve

Significance: Local

LEP Statement of Significance:

"This group of native trees are remnant components (canopy trees) of the Blue Gum High Forest (BGHF) community. Clearing for agriculture and more recently, urban development, has significantly reduced the size of this community....... Although highly fragmented and reduced to only scattered remnant canopy trees, the group in Edwards Road is considered to have significance in terms of its natural, representative, rarity, ecological/biodiversity, genetic, visual and aesthetic values. This group is dominated by mature Sydney Blue Gums (Eucalyptus saligna), Blackbutts (Eucalyptus pilularis) and Smooth-barked Apple (Angophora costata).

The dramatic size and scale of these mature trees create a distinctive sense of place and bushland aesthetic to this suburban streetscape. Some old growth specimen trees are of individual significance (eg. *Eucalyptus pilularis* in No.2 Edwards Road, *E. saligna* in No.13 Edwards Road and *Angophora costata* on verge adjacent to No.19 Edwards Road). Furthermore, these trees are part of a larger, albeit highly fragmented community (BGHF) on local shale-capped ridges (see listings for Fraser Road and Russell Avenue)" (Hornsby Shire Council, 2014).

AECOM 2013 Inspection: The listed item was found to correspond to its past recording description and photographs. The item remains in comparable condition with its local heritage significance unchanged.



Plate 75 Edwards Road c.2007 (Hornsby Shire Council, 2014)

Plate 76

Edwards Road c.2013

Item I750 - Street trees

Address: Ingram Road, Wahroonga Lot and DP: Road Reserve

Significance: Local

LEP Statement of Significance:

"The formal avenue plantation along Ingram Road is a fine example of late Post War period (c.1960s) public planting. The avenue is significant in terms of its historic/cultural associations, visual/aesthetic and representative values. The use of a single native species, Brush Box (*Lophostemon confertus*), continues an important local thematic approach typical of this period (e.g. Myra Street plantation linking to Ingram Road, Edgeworth David Avenue, Wahroonga and Jersey Street, Hornsby). The original design intent of a single species avenue has been retained. Furthermore, overall integrity, balance and continuity of this avenue has been maintained with minimal pruning of canopies. This species has been used extensively in street tree plantations throughout Sydney since the early twentieth century and Hornsby Shire retains significant plantations associated with the Post War period" (Hornsby Shire Council, 2014).

AECOM 2013 Inspection: The listed item was found to correspond to its past recording description and photographs. The item remains in comparable condition with its local heritage significance unchanged.



Plate 77 Ingram Street Trees c.2007 (Hornsby Shire Council, 2014)

Plate 78 Ingram Street Trees c.2013

Item I755 - House

Address: 6 John Hughes Place, Wahroonga Lot and DP: Lot 26 DP 703961

Significance: Local

LEP Statement of Significance:

"Good example of Post War Spanish Mission Style house. Features typical of the style include rendered walls with exaggerated texture and verandah logia. Good condition and little altered" (Hornsby Shire Council, 2014).

AECOM 2013 Inspection: The listed item was found to correspond to its past recording description and photographs. Vegetation growth (ivy) that was previously growing on the structure has been removed and the front garden has increased with new plantings. The item remains in comparable condition with its local heritage significance unchanged.



Plate 79 6 John Hughes Place c.1992 (Hornsby Shire Council, 2014)

Plate 80 6 John Hughes Place c.2013

Item I762 - Garden

Address: 1 Pacific Highway, Wahroonga Lot and DP: Part Lot A DP 9921

Significance: Local

LEP Statement of Significance:

"Domestic garden with period palm trees, forming a prominent landscape element on busy main road corner. Of local significance. Circa Date: 1930 Two mature Canary Island Palms (to 3m) in front garden of circa 1960's house. 1930s period brick and steel pipe fence, with privet hedge. (Possible that the Palms were part of a larger garden, which was subdivided from the adjacent 1930s residence)" (Hornsby Shire Council, 2014).

AECOM 2013 Inspection: The listed item was found to correspond to its past recording description and photographs. Both palms are still present and appear to be in good condition. The item remains in comparable condition with its local heritage significance unchanged.



Plate 81 1 Pacific Highway c.1992 (Hornsby Shire Council, 2014)

Plate 82

1 Pacific Highway c.2013

Item 1767 - St Pauls Church - Pearces Corner

Address: 1711 Pacific Highway Wahroonga Lot and DP: Lot B DP323414

Significance: Local

LEP Statement of Significance:

"Neat stone church. One of very few nineteenth century churches to survive in the Shire, reasonably unaltered. A good example of Victorian Gothic styling. Prominently sited at Pearces Corner and closely associated with its long history. Constructed in 1881. Foundation stone laid by Bishop Barker in 1879. Replaced by an earlier wooden building from c1865. First church services were conducted from Aaron Pearce's cottage nearby. An embryonic settlement grew up at Pearces Corner where the old sawyers' track from Lane Cove branched to Pennant Hills and Peats Ferry. Prior to the railway was known as Hornsby. Name later changed to Wahroonga.

Stone fence to the street boundary was constructed in early Post-war period. The foundation stone for the hall is dated 10 July 1960. The flat roofed addition on the northern side of the church was unveiled on 20 August, 1967. Bas relief design and executed by Donald R. Begbie (the rector) was completed at the same time. Old stone church in the ecclesiastical Gothic style. Coursed, rock faced sandstone. Gabled porch to one side. Distinguished by fine bellvedere. Lancet windows and Gothic arched doors. Stone buttresses. Good lych-gate.

Stone fence. Brick hall on same site, dating from Post-war period. Now with concrete tiled roof. Flat roofed addition on northern side is reasonably unobtrusive on views from the road. Bronze bas relief beside northern addition. Otherwise little altered" (Hornsby Shire Council, 2014).

AECOM 2013 Inspection: At the 2013 AECOM inspection the site was found to correspond to its past recording description and photographs. The item remains in comparable condition with its local heritage significance unchanged.



Plate 83 St Pauls Church c.1992 (Hornsby Shire Council, 2014)

Plate 84

St Pauls Church c.2013

Technical Working Paper: Non-Aboriginal Heritage Assessment

Item I768 - Street trees

Address: Russell Avenue, Wahroonga Lot and DP: Road Reserve

NorthConnex

Significance: Local

LEP Statement of Significance:

"This group of native trees are remnant components (canopy trees) of the Blue Gum High Forest (BGHF) community. Clearing for agriculture and more recently, urban development has significantly reduced the size of this community.......The impressive stand of trees in Russell Avenue is dominated by Sydney Blue Gums (*Eucalyptus saligna*) of varying age structure. A large number of old growth specimen trees are each of individual significance. The dramatic size and scale of the trees creates a memorable sense of place and bushland character to this suburban streetscape. The group has significance in terms of its natural, representative rarity, ecological/biodiversity, genetic, visual and aesthetic values. Furthermore, these trees are part of a larger, albeit highly fragmented community (BGHF) (see listings for Edwards Road, Fraser Road, Malsbury Road and other listings)" (Hornsby Shire Council, 2014).

AECOM 2013 Inspection: The listed item was found to correspond to its past recording description and photographs. The item remains in comparable condition with its local heritage significance unchanged.



Plate 85 Russell Avenue c.2007 (Hornsby Shire Council, 2014)

Plate 86

Russell Avenue c.2013

Item I769 - Street Trees

Address: Woonona Avenue, Wahroonga Lot and DP: Road Reserve

Significance: Local

LEP Statement of Significance:

"These native trees are remnant components (canopy trees) of the Blue Gum High Forest (BGHF) community.....This community is typically associated with soils derived from Wianamatta Shale. At the far northern end of Woonona Avenue this community grades to Peppermint-Angophora Forest associated with Hawkesbury Sandstone. Although highly fragmented and reduced to remnant groups of canopy species (north and south of Edgeworth David Avenue), these trees are considered to have significance in terms of natural, representative, rarity, ecological/ biodiversity, genetic, visual and aesthetic values. The groups display a typical mixed species composition dominated by Blackbutt (*Eucalyptus pilularis*), Sydney Peppermint (*E. piperita*) and Smooth-barked Apple (*Angophora costata*).

Old growth specimens are of individual significance. Together the trees define a memorable sense of place to this suburban streetscape and are evocative of the original bushland character. Notably, the southern group (south of Edgeworth David Avenue) merges with the Fern Avenue, Ingalara Avenue and Churchill Avenue groups. These groups conserve an impressive number of heritage trees including many old growth specimens. Ingalara Avenue and Churchill Avenue groups are not currently heritage listed. It is important to recognise the combined significance of this cluster of trees in the Wahroonga local area (see listings for Alexandria Parade, Edgeworth David Avenue, Bundarra Avenue and Fern Avenue). All items of natural occurrence (ie. not cultivated). These remnant native trees have been retained within the road reserve, particularly along the wide western verges and extend to adjoining private gardens on both sides of the road. The mixed native species include:- Common Name(s): Botanical Name(s): Smooth-barked Apple (*Angophora costata*); Rough-barked Apple (*Angophora floribunda*); Red Bloodwood (*Corymbia gummifera*); Blackbutt (*Eucalyptus pilularis*); Sydney Peppermint (*Eucalyptus piperita*); Sydney Blue Gum (*Eucalyptus saligna*); Red Mahogany (*Eucalyptus resinifera* subsp. *resinifera*); Turpentine (*Syncarpia glomulifera*)" (Hornsby Shire Council, 2014).

AECOM 2013 Inspection: The listed item was found to correspond to its past recording description and photographs. The item remains in comparable condition with its local heritage significance unchanged.



Plate 87 Woonona Avenue Street Trees c.2007 (Hornsby Shire Council, 2014)

Plate 88 Woonona Avenue Street Trees c.2013

Item I770 - "Cherrygarth" and Garden

Address: 42 Woonona Avenue, Wahroonga Lot and DP: Lot 11 DP 563185

Significance: Local

LEP Statement of Significance:

"Outstanding Federation mansion. Let down by painted brick but little altered otherwise. One of the better examples in the Shire and one of only a handful retaining their original landscaped grounds. Local significance. c.1897-98. Federation mansion set in generous landscaped grounds. Two storeys. Constructed of brick with slate roof. Complex plan and roof form. Double verandah on either side of gabled front projection. Turned timber posts with iron lace decoration. Full length double hung windows to upper verandah. Corbelled brick chimneys and terracotta ridge capping. Interiors feature Wunderlich ceilings, marble fireplaces and cedar joinery. Face brick now painted. Otherwise minor alterations only. Unsympathetic modern tubular metal fence" (Hornsby Shire Council, 2014).

AECOM 2013 Inspection: The listed item was found to correspond to its past recording description and photographs. The item has been repainted since the last inspection. The item remains in comparable condition with its local heritage significance unchanged.



Plate 89 42 Woonona Avenue c.1993 (Hornsby Shire Council, 2014) Plate 90 42 Woonona Avenue c.2013

Item I771 - "Neringala" and Garden

Address: 46 Woonona Avenue, Wahroonga Lot and DP: Lot 1 DP 563185

Significance: Local

LEP Statement of Significance:

"Period trees remaining in grounds of Federation residence. Of local significance. Notable Federation mansion. Spoiled by some unsympathetic alterations and additions but seems easily capable of reconstruction. Local significance. Garden c.1910 - 1920; House constructed in 1895. Trees underscoring character of two storeyed Federation period brick house. Include two fine Deodars (to 22m), Ponderosa Pine (to 19m), Cypress (to 12m) and Camphor Laurel (to 16m). Planting of Photinia and Camellias recent but sympathetic. Unsympathetic modern reproduction metal fence. Two storey Federation Queen Anne mansion built c.1895. Dichromatic face brick with terracotta tiled roof. Complex asymmetrical design. Large octagonal projection to front. Balcony to one side, supported by solid, decorative, timber bracket. Front steps back again to double verandah. Turned timber posts with lacework balustrading. Long upper balcony runs along north side. Recessed porch to front below. Casement windows to projection feature multiple upper panes and skylights. Other windows double hung. Well planted grounds, including front garden area. Major alterations, mostly reversible. These include some very unsympathetic balcony and verandah enclosures. Lacework trim and balustrading does not appear original. Carport at side. Unsympathetic modern fencing" (Hornsby Shire Council, 2014).

AECOM 2013 Inspection: The listed item was found to correspond to its past recording description and photographs. A front fence has been added to the front of this property including brick and metal bars in its structure. The item remains in comparable condition with its local heritage significance unchanged.



Plate 91 46 Woonona Avenue c.1992 (Hornsby Shire Council,

Plate 92 46 Woonona Avenue c.2013

Item I772 - Street Trees and Bushland

Address: Alexandria Parade, Waitara Lot and DP: Road Reserve

Significance: Local

LEP Statement of Significance:

"Group A: The road reserve adjacent to the railway easement conserves a significant linear group of Blue Gum High Forest (BGHF). This community has a highly restricted geographic distribution and is typically associated with soils derived from Wianamatta Shale (Tozer 2003). Blue Gum High Forest has been highly fragmented and modified by urban development, particularly small-scale clearing and alterations associated with residential subdivision, roads and service easement upgrades.

This group has significance in terms of its natural, representative, rarity, ecological/biodiversity, genetic, visual and aesthetic values. The group displays a typical mixed species composition dominated by Blackbutt (*Eucalyptus pilularis*), Sydney Blue Gum (*E. saligna*) and Smooth-barked Apple (*Angophora costata*). The dramatic scale of these trees define a memorable sense of place and provide an important visual buffer to the railway corridor. Notably, this group retains a native understorey, albeit highly modified by past clearing and weed invasion. Furthermore, the group is part of a significant cluster of fragmented remnant native trees (BGHF) in local streets (refer to listings for Woonona Avenue, Fern Avenue, Bundarra Avenue and Edgeworth David Avenue).

Group B: A formal row plantation of Brush Box (*Lophostemon confertus*), located in the western portion of Alexandria Parade, is believed to date from c. 1950s period. The plantation has local group significance in terms of its historic, cultural, visual/ aesthetic and representative values. Brush Box has been used extensively in street tree planting schemes throughout Sydney since the early twentieth century. Locally, this plantation is part of a broader thematic planting program associated with upgrades and embellishment of railway stations and the rail corridor during the Post War period (refer to listings for Jersey Street, Hornsby and Denman Parade, Normanhurst)" (Hornsby Shire Council, 2014).

AECOM 2013 Inspection: The listed item was found to correspond to its past recording description and photographs. The item remains in comparable condition with its local heritage significance unchanged.



Plate 93 Alexandria Parade c.2007 (Hornsby Shire Council, 2014)

Plate 94

Alexandria Parade c.2013

63

Item I791 - House

Address: 587 Pennant Hills Road, West Pennant Hills Lot and DP: Lot 5 DP 801996

Significance: Local

LEP Statement of Significance:

"The original cottage is one of the oldest structures in the Shire, possibly the oldest. Despite subsequent alteration most of the original fabric is retained. Much is also revealed internally. Rare example of an early surviving primitive cottage. Regional significance. The original two rooms are believed to be pre-1830. Known locally as 'Marsden's Shepherd's Cottage'. Built on the southeastern corner of the 40 hectare 1799 grant to Samuel Marsden. Marsden sold the property 'Mt Wilberforce' in 1818. It is not known if the cottage was built during his ownership or sometime after. Rendered brick house. Built in several stages around the two original rooms of sandstock brick. Original section has a hipped iron roof and skillion verandah, pitching to the rear. Now supported by solid masonry columns. Original fireplace and chimney at northern end. More recent extensions in the form of intersecting wings. These form an attractive entry courtyard with verandahs along two sides. Several modifications over the years, most of which are now part of the history of the building. The original two rooms are believed to be pre-1830. Known locally as 'Marsden's Shepherd's Cottage'. Built on the southeastern corner of the 40 hectare 1799 grant to Samuel Marsden. Marsden sold the property 'Mt Wilberforce' in 1818. It is not known if the cottage was built during his ownership or sometime after" (Hornsby Shire Council, 2014).

AECOM 2013 Inspection: At the time of inspection view-lines to the item were blocked by a high wall, fence and closed gate. Where visible, the listed item was found to correspond to its past recording description and photographs. The item remains in comparable condition with its local heritage significance unchanged.



Plate 95 587 Pennant Hills Road c.1993 (Hornsby Shire Council, 2014)

Plate 96 587 Pennant Hills Road c.2013

6.3 Ku-ring-gai Planning Scheme Ordinance 1971

For the purpose of this report, heritage item identification numbers for listed items in Ku-ring-gai local government area have been referred to using the identification numbers assigned to the items under *Draft Ku-ring-gai Local Environmental Plan 2013* because the *Ku-ring-gai Planning Scheme Ordinance 1971* does not include equivalent identification numbers.

Item 1897, 1898, 1900, 1901, 1902 - Coonanbarra Road Timber Cottages Group

Address: 120, 122, 126, 128 and 130 Coonanbarra Road, Wahroonga

Lot and DP: Lot A DP 321310, Lot 1 DP 966050, Lot 1 DP 365320 and Lot 8 DP 263707

Significance: Local

LEP Statement of Significance:

The listed statement of significance, historic background and description for this site states these are residential buildings (private) that are examples of timber cottages (NSW Office of Environment & Heritage, 2014).

AECOM 2013 Inspection: The listed item was found to mostly correspond to its past description for numbers 120, 122, 126 and 128 Coonanbarra Drive. The item local heritage significance is unchanged for numbers 120, 122, 126 and 128, which are well maintained and in good condition.

Although the register listing includes 130 Coonanbarra Drive, that property does not contain a timber cottage but instead is a two storey house of relatively recent construction. It is noted that Ku-ring-gai Municipal Council resolved to recommend its removal from Schedule 5 of the Draft Ku-ring-gai LEP to the Department of Planning and Infrastructure (Minutes of Ordinary Meeting of Council 26 November 2013). Once made, this the Draft Ku-ring-gai LEP will supersede the current Ku-ring-gai Planning Scheme Ordinance.



Plate 97	126 Coonanbarra Drive c.2013	Plate 98	128 Coonanbarra Drive c.2013	
----------	------------------------------	----------	------------------------------	--

Technical Working Paper: Non-Aboriginal Heritage Assessment

Item 1953 - "Bolton Grange", Dwelling House

Address: 21 Lucinda Avenue, Wahroonga Lot and DP: Lot 92 DP 534261

NorthConnex

Significance: Local

LEP Statement of Significance:

"Reasons for listing; cultural, architectural, municipal significance. Historical period: 1921-1940. Substantially intact" (NSW Office of Environment & Heritage, 2014).

AECOM 2013 Inspection: The listed item was found to correspond to its past recording description and photographs. The item remains in comparable condition with its local heritage significance unchanged.



Plate 99 21-23 Lucinda Avenue (Bolton Grange) c.1987 (NSW Office of Environment & Heritage, 2014)

Plate 100 21-23 Lucinda Avenue (Bolton Grange) c.2013

Item 1955 - "Matakana" Dwelling House

Address: 28 Lucinda Avenue, Wahroonga Lot and DP: Lot 1 DP 500695

Significance: Local

LEP Statement of Significance:

No statement of significance is contained within the Ku-ring-gai Planning Ordinance. The reasons for listing this item are due to its cultural, architectural and municipal significance.



Plate 101 28 Lucinda Avenue c.2013

Item I956 - "Cullingral" Dwelling House

Address: 33 Lucinda Avenue, Wahroonga Lot and DP: Lot 1 DP 549844

NorthConnex

Technical Working Paper: Non-Aboriginal Heritage Assessment

Significance: Local

LEP Statement of Significance:

No statement of significance is contained within the Ku-ring-gai Planning Ordinance. The reasons for listing this item are due to its cultural, architectural and municipal significance.



Plate 102 33 Lucinda Avenue c.2013

Item I1012 - "Poole House", Dwelling House

Address: 24 Woonona Avenue, Wahroonga Lot and DP: Lot 14 DP 2870 & Lot 1 DP 1004733

Significance: Local

LEP Statement of Significance:

"Reasons for listing; architectural, municipal significance. Historical period: 1901-1920. The oldest building on the Junior Campus. Altered or extended unsympathetically" (NSW Office of Environment & Heritage, 2014).

AECOM 2013 Inspection: The listed item was found to correspond to its past recording description and photographs. The item remains in comparable condition with its local heritage significance unchanged.





Plate 103 26 Woonona Avenue c.1987 (NSW Office of Environment & Heritage, 2014)

Plate 104 26 Woonona Avenue c.2013

6.4 Draft Ku-ring-gai Local Environmental Plan 2013

This section considers heritage items identified under the *Draft Ku-ring-gai Local Environmental Plan 2013* which are not otherwise already listed under the *Ku-ring-gai Planning Scheme Ordinance 1971*.

Item 1855 - Dwelling House

Address: 4 Burns Road, Wahroonga Lot and DP: Lot 2 DP 548275

Significance: Local

LEP Statement of Significance:

No statement of significance has been prepared for this item. The reasons for listing this item in the *Draft Ku-ring-gai Local Environmental Plan 2013* is due to its cultural, architectural and municipal significance.

AECOM 2013 Inspection: The listed item was found to be in good condition with its local heritage significance unchanged.



Plate 105 4 Burns Road c.2010 Plate 106 4 Burns Road c.2013

Item 1954 - Dwelling House

Address: 24 Lucinda Avenue, Wahroonga Lot and DP: Lot A DP 367553

Significance: Local

LEP Statement of Significance:

No statement of significance is contained within the Ku-ring-gai Planning Ordinance. The reasons for listing this item are due to its cultural, architectural and municipal significance.

AECOM 2013 Inspection: The listed item was found to be in good condition with its local heritage significance unchanged.



Plate 107 24 Lucinda Avenue c.2013

Item 1957 - "Mansfield" Dwelling House

Address: 41 Lucinda Avenue, Wahroonga Lot and DP: Lot 1 DP 16374

Significance: Local

LEP Statement of Significance:

No statement of significance is contained within the Ku-ring-gai Planning Ordinance. The reasons for listing this item are due to its cultural, architectural and municipal significance.



Plate 108 41 Lucinda Avenue c.2013

Item 1959 - "Hindfell" Dwelling House

Address: 11A Lucinda Avenue, Wahroonga Lot and DP: Lot 4 DP 624660

Significance: Local

LEP Statement of Significance:

No statement of significance is contained within the Ku-ring-gai Planning Ordinance. The reasons for listing this item are due to its cultural, architectural and municipal significance.



Plate 109 11A Lucinda Avenue c.2013

Item 1960 - Dwelling House

Address: 37A Lucinda Avenue, Wahroonga Lot and DP: Lot 22 DP 561089

Significance: Local

LEP Statement of Significance:

"Excellent timber example of an Inter-War Bungalow. Has much in common with the original Californian model, with suggested Japanese influence. Unusual double-gabled design. Good condition. Fine quality original timber detail, including windows and gables" (NSW Office of Environment & Heritage, 2014).

AECOM 2013 Inspection: The listed item was found to be in good condition with its local heritage significance unchanged.



Plate 110 37A Lucinda Avenue c.2013

6.5 The Hills Local Environmental Plan 2012

Item I28 - Windsor Road from Baulkham Hills and Box Hill

Address: Windsor Road from Baulkham Hills to Box Hill

Lot and DP: Road reserve

Significance: Local

Additional Heritage Listings: Section 170 Heritage and Conservation Register (Roads and Maritime)

Statement of Significance:

"The Windsor and Old Windsor Roads, as first laid out in 1794 and re-aligned in 1812-1813, are of State and national significance. They incorporate the second road to be laid out in the colony and played an important role in the settlement of the Hawkesbury region and the development of the colony of NSW. The Windsor and Old Windsor Roads retain characteristics evocative of the historic, rural character of the Cumberland plain, both within the current road reserve and in redundant sections outside the reserve. Together they are vital in understanding the cultural landscapes of the region. Remaining historic road fabric, both inside and outside the current road reserve, demonstrates the methods of road construction and maintenance over two centuries." (NSW Office of Environment & Heritage, 2014).

The Windsor Road and Old Windsor Road Conservation Management Plan (Clive Lucas Stapleton, 2005) provides details of the grades of significance, significant features and heritage precincts relating to the listed roads. While the Conservation Management Plan identifies the earliest alignments as being of state historical significant, its statutory listing was restricted to sections that had been bypassed or have retained elements of their original roadside setting. These are as follows:

- McGraths Hill Archaeological Site and Cemetery;
- Old Hawkesbury Road WR6: Vineyard Alignment;
- First Ponds Creek Alignment;
- Box Hill Vergescape;
- Rouse Hill Road Cutting;
- Caddies Creek Alignment;
- Strangers Creek Alignment;
- Excelsior Way Alignment;
- Stanhope Farm Alignment; and
- Meurant's Lane Alignment.

None of the listed items are close to the Hills M2 Motorway or Windsor Road interchange.

AECOM 2013 Inspection: This section of Windsor Road within the study area has been impacted by the construction and subsequent upgrade of the Hills M2 Motorway. More recently, as part of the Hills M2 Motorway Upgrade project, this section of road has been impacted by the construction of the additional westbound on-ramps and eastbound off-ramps at the Windsor Road interchange. The previous construction activities have required substantial works to the road at this location, and the alignment appears to have been altered at the time of constructing the interchange as sections on either side of the interchange are reasonably sinuous whereas the interchange has been design to meet contemporary road design requirements.