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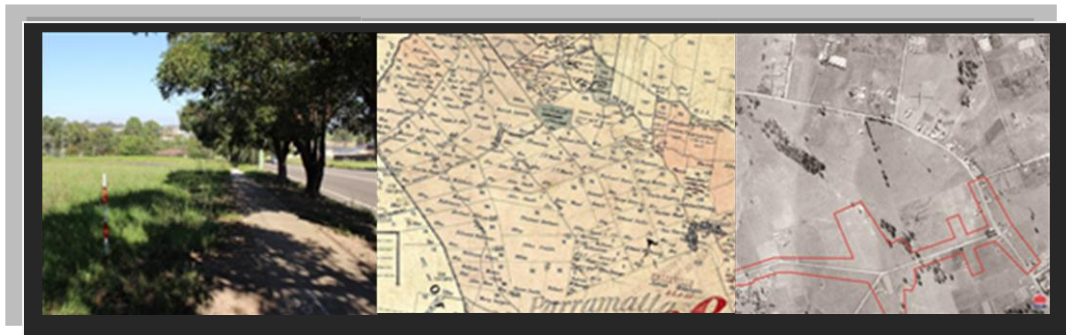
Non-Aboriginal Heritage Assessment and Statement of Heritage Impacts

Memorial Avenue Upgrade, Kellyville

Statement of Heritage Impacts and Non-Aboriginal Heritage Assessment

Report to Hyder Consulting Pty Ltd

October 2014



Artefact Heritage
ABN 73 144 973 526
Lvl 1/716 New South Head Rd
Rose Bay 2029
PO BOX 772 Rose Bay
NSW Australia 2029
+61 2 9025 3958

office@artefact.net.au
www.artefact.net.au



Executive Summary

Artefact Heritage has been engaged by Hyder Consulting Pty Ltd on behalf of the Roads and Maritime Services to provide a non-Indigenous heritage assessment and Statement of Heritage Impact (SoHI) for proposed upgrade works at Memorial Avenue, Kellyville (the study area). The study area centres on Memorial Avenue, between Old Windsor Road and Windsor Road, and includes approximately 700 metres of Old Windsor Road and approximately 550 metres of Windsor Road.

The proposed upgrade will involve the construction of two east bound and two west bound lanes, with one future lane allowed for in both directions. The upgrade will also include a footway on either side of the avenue and a large medium strip between the east and west bound lanes, as well as improvements to existing intersections.

This report presents the results of background research, searches of relevant heritage register databases, and the results of the site inspections.

Overview of findings

On the basis of the research described in this report, it was found that:

- Approximately 700 metres of the Old Windsor Road archaeological item (The Hills LEP) is within the study area. The works will consist of widening and upgrading works, and will have a minor impact on the significance of the heritage item by altering the footprint of the road. This section of the Old Windsor Road has been substantially modified, and the significance of the item in this location lies largely in its alignment, rather than in fabric. In addition, the level of disturbance suggests it is unlikely that archaeological relics of local or state significance would be encountered during the works. There is low potential that milestones identified by Godden Mackay Logan (GML) in 2012¹ remain buried located within the study area.
- Approximately 550 metres of the Windsor Road heritage item (The Hills LEP) is within the study area. The works in this location will consist of widening and upgrading works, and will have a minor impact on the significance of the heritage item by altering the footprint of the road. This section of the Old Windsor Road has been substantially modified, and the significance of the item in this location lies largely in its alignment, rather than in fabric.

¹ Godden Mackay Logan Pty Ltd, March 2012, North West Rail Link EIS-1 Major Civil Construction Works European Heritage Report, Report prepared for NWRL Planning Approvals Team.



There is a low potential for archaeological relics or works of local or state significance to be located in the section of the Windsor Road within the study area.

- A house at 9-11 Windsor Road is listed (The Hills LEP) approximately 15 metres north-east of the study area. The proposal will not directly impact the heritage item, although there may be temporary construction impacts on the property. These may include temporary visual impacts and vibration impacts due of the movement of heavy machinery.
- Old Windsor Road and Windsor Road Heritage Precincts are on the Roads and Maritime Services Section 170 heritage register. The proposal will have minor impacts on the significance of the item, as those parts of the roads within the study area have been subject to numerous modifications and upgrading in recent decades.
- Overall, the study area has limited potential to contain archaeological remains. With the exception of milestones within the Old Windsor Road precinct, any remains found are unlikely to reach the local significance threshold. Memorial Avenue has been subject to numerous impacts occurring throughout the 20th century, including upgrades and widening of Old Windsor Road and Windsor Road, and the establishment of the westernmost part of Memorial Avenue. It is likely that the intersection of Memorial Avenue with Windsor Road, Old Windsor Road and the tollway have been subject to substantial disturbance.

The following measures are recommended to adhere to statutory obligations and minimise potential impacts of the proposed works:

- Retain the form and alignment of Memorial Avenue and limit incursion into the lots fronting the road corridor where possible.
- As Old Windsor Road is listed as an archaeological heritage item on the Hills Shire Local Environmental Plan (LEP) 2012, and this document has identified that there is low potential that buried milestones identified by Godden Mackay Logan (GML) in 2012² remain buried in the study area. It is, therefore, recommended that subsurface impacts to the fabric of the road be avoided where possible. It is recommended that a Section 139(4) exception permit be obtained, prior to works commencing, for any sub-surface impacts within the curtilage of the listed heritage item. It is recommended that a condition of this permit be a program of intermittent archaeological monitoring of excavation works within the Old Windsor Road curtilage. This would identify the level of impact that already exists within the road corridor, and therefore assist in the identification of archaeological potential of the road.

² Godden Mackay Logan Pty Ltd, March 2012, North West Rail Link EIS-1 Major Civil Construction Works European Heritage Report, Report prepared for NWRL Planning Approvals Team.



- If any unanticipated archaeological deposits, such as structural remains, culverts, historic cuttings, retaining walls, or evidence of historic road surfaces, are identified within the study area during construction, the *(NSW) Roads and Maritime Unexpected Archaeological Finds Procedure* 2012 should be followed.³ These procedures are as follows:
 1. Contact and engage an archaeologist, and Aboriginal site officer where required
 2. Contact and engage an archaeologist, and Aboriginal site officer where required
 3. Formulate an archaeological management plan
 4. Formally notify the regulator by letter, if required
 5. Implement archaeological management plan
 6. Review CEMPs and approval conditions
- It is recommended that the curtilage of the House at 9-11 Windsor Road be avoided and any vibration impacts mitigated through the implementation of a vibration management.

³ RMS, July 2012. RMS Unexpected Archaeological Finds Procedure. Site accessed on 17/07/2014 at: http://www.rms.nsw.gov.au/environment/downloads/unexpected_archaeological_finds_procedure.pdf



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1.0 Introduction and Background

1.1 Background

Artefact Heritage has been engaged by Hyder Consulting Pty Ltd on behalf of the Roads and Maritime Services to provide a non-Indigenous heritage assessment and Statement of Heritage Impacts (SoHI) for proposed works at Memorial Avenue, Kellyville (the study area). This document provides an assessment of potential impacts to non-Indigenous heritage and provides advice regarding possible measures to mitigate impacts and fulfil the requirements of relevant legislation. This assessment has been undertaken within the context of the *NSW Heritage Act 1977* (as amended 1999) and the NSW Heritage Council Guidelines (1996).

Memorial Avenue is a state arterial road, which runs in an east-west direction connecting Old Windsor Road in the west to Windsor Road in the east. It links the Blacktown local government area (LGA) and some of its suburbs such as Glenwood, Stanhope Gardens and Parklea with the Hills Shire Council LGA and some of its suburbs such as Castle Hill and Kellyville.

Memorial Avenue is currently a two-lane two-way road and carries about 25,000 vehicles per day. The road currently operates at a poor level of service and has a volume over-capacity ratio exceeding 0.9 during peak periods. Traffic on Memorial Avenue is forecasted to increase by 40 per cent in the next 23 years.

Memorial Avenue forms part of the east-west route connecting Blacktown and Castle Hill and currently remains one of the last two-lane sections in the link; the other being Showground Road, which is in the process of being upgraded. Memorial Avenue is included in the NSW Transport Master Plan as one of the road upgrade projects to be undertaken in the short-term.

The overall objectives of the upgrade project are as follows:

- Improve road safety in line with the NSW Road Safety Strategy 2012-2021 Safe System Directions and Safer Road Key Focus.
- Improve liveability and sustainability and support economic growth and productivity by providing road capacity for projected traffic volumes on Memorial Avenue between Old Windsor Road and Windsor Road.
- Improve travel times.
- Improve quality of service, sustainability and liveability by providing facilities for walking and cycling and future public transport needs.
- Improve urban design and visual aspect.



- Improve drainage systems in the area.

1.2 The study area

The study area centres on Memorial Avenue, between Old Windsor Road and Windsor Road (Figure 1). It is approximately two kilometres in length. The study area also includes approximately 700 metres of Old Windsor Road (on the western end of Memorial Avenue) and approximately 550 metres of Windsor Road (on the eastern end of Memorial Avenue (Figure 1).

The study area is defined by the a red line in Figure 1, which is based on the footprint of the concept design as provided by Hyder Consulting on 28 July 2014 (Figure 25). The proposed design involves the widening of the entire length of Memorial Avenue and the establishment of three new junctions along Memorial Avenue and upgrades of the T-intersections at Windsor Road and Old Windsor Road (Figure 25).

The study area is situated within the suburb of Kellyville and is within The Hills Shire Council LGA and the Blacktown LGA.

Memorial Avenue Upgrade, Kellyville



Figure 1: Location of the study area (in red). (Base map © SIX Maps)



1.3 Statutory context

There are several items of state legislation that form the basis for managing non-Indigenous heritage in NSW. This section provides a summary of these items of legislation and associated statutory registers.

1.3.1 The NSW Heritage Act 1977

The *NSW Heritage Act 1977* (the Heritage Act) is the primary piece of state legislation affording protection to items of environmental heritage (natural and cultural) in New South Wales. Under the Heritage Act, 'items of environmental heritage' include places, buildings, works, relics, moveable objects and precincts identified as significant based on historical, scientific, cultural, social, archaeological, architectural, natural or aesthetic values. State significant items are listed on the NSW State Heritage Register (SHR) and are given protection under the Heritage Act against any activities that may damage an item or affect its heritage significance.

The Heritage Act also protects 'relics', which can include archaeological material, features and deposits. Section 4(1) of the Heritage Act (as amended 2009) defines 'relic' as follows:

“relic means any deposit, artefact, object or material evidence that:

- (a) relates to the settlement of the area that comprises New South Wales, not being Aboriginal settlement, and
- (b) is of State or local heritage significance.”

Section 139[1] of the Heritage Act states that:

“A person must not disturb or excavate any land knowingly or having reasonable cause to suspect that the disturbance or excavation will or is likely to result in a relic being discovered, exposed, damaged or destroyed unless the disturbance or excavation is carried out in accordance with an excavation permit.”

Permits to disturb or excavate 'relics' are issued by the NSW Heritage Council or a Delegate of the NSW Heritage Council under Section 140 (for relics not protected by an SHR listing) or Section 60 (for relics protected by an SHR listing) of the Heritage Act. Exemptions to these permits may be applicable under certain conditions.

The Heritage Act also requires all government agencies to identify and manage heritage assets in their ownership and control. Under Section 170 of the Heritage Act, government agencies must establish and keep a register which includes all items of environmental heritage listed on the SHR, an environmental planning instrument, or which may be subject to an interim heritage order that are owned, occupied or managed by that government body. Under Section 170A of the Heritage Act all government agencies



must also ensure that all items entered on its register are maintained with due diligence in accordance with State Owned Heritage Management Principles approved by the NSW Minister for Infrastructure & Planning on advice of the NSW Heritage Council.

The State Heritage Register (SHR)

The SHR was established under Section 22 of the Heritage Act and is a list of places and objects of particular importance to the people of NSW, including archaeological sites. The SHR is administered by the Heritage Division of the Office of Environment and Heritage (OEH) and includes a diverse range of over 1500 items, in both private and public ownership. To be listed, an item must be deemed to be of heritage significance for the whole of NSW.

No items within the vicinity of the study area are listed on the SHR.

Section 170 Registers

The Heritage Act requires all government agencies to identify and manage heritage assets in their ownership and control. Under Section 170 of the Heritage Act, government agencies must establish and keep a register which includes all items of environmental heritage listed on the SHR, an environmental planning instrument or which may be subject to an interim heritage order that are owned, occupied or managed by that government body.

A single item listed on the Roads and Maritime Services Section 170 Register is within the study area:

- **Item Number 4301011 - Old Windsor Road and Windsor Road Heritage Precinct.**

1.3.2 [The Environmental Planning and Assessment Act 1979](#)

The *Environmental Planning and Assessment Act 1979* (EP&A Act) establishes a framework for cultural heritage values to be formally assessed in the land use planning and development consent process. The EP&A Act requires that environmental impacts are considered prior to land development; this includes impacts on cultural heritage items and places as well as archaeological sites and deposits. The EP&A Act also requires that Local Governments prepare planning instruments (such as Local Environmental Plans [LEPs] and Development Control Plans [DCPs]) in accordance with the Act to provide guidance on the level of environmental assessment required. The current study area falls within the boundaries of the Blacktown LEP 2013 and Hills Shire Council LEP 2012.

As the proposed works would be undertaken by a state agency, Roads and Maritime Services, these LEPs are overridden by the State Environmental Planning Policy (Infrastructure) (ISEPP) 2007.



The Blacktown Local Environmental Plan (LEP) 2013

The westernmost portion of the study area falls within the Blacktown LGA.

There are no items listed on the Blacktown LEP 2013 within the study area.

The Hills Shire Council Local Environmental Plan (LEP) 2012

There are two items within the study area listed on The Hills LEP 2012 (Figure 2).

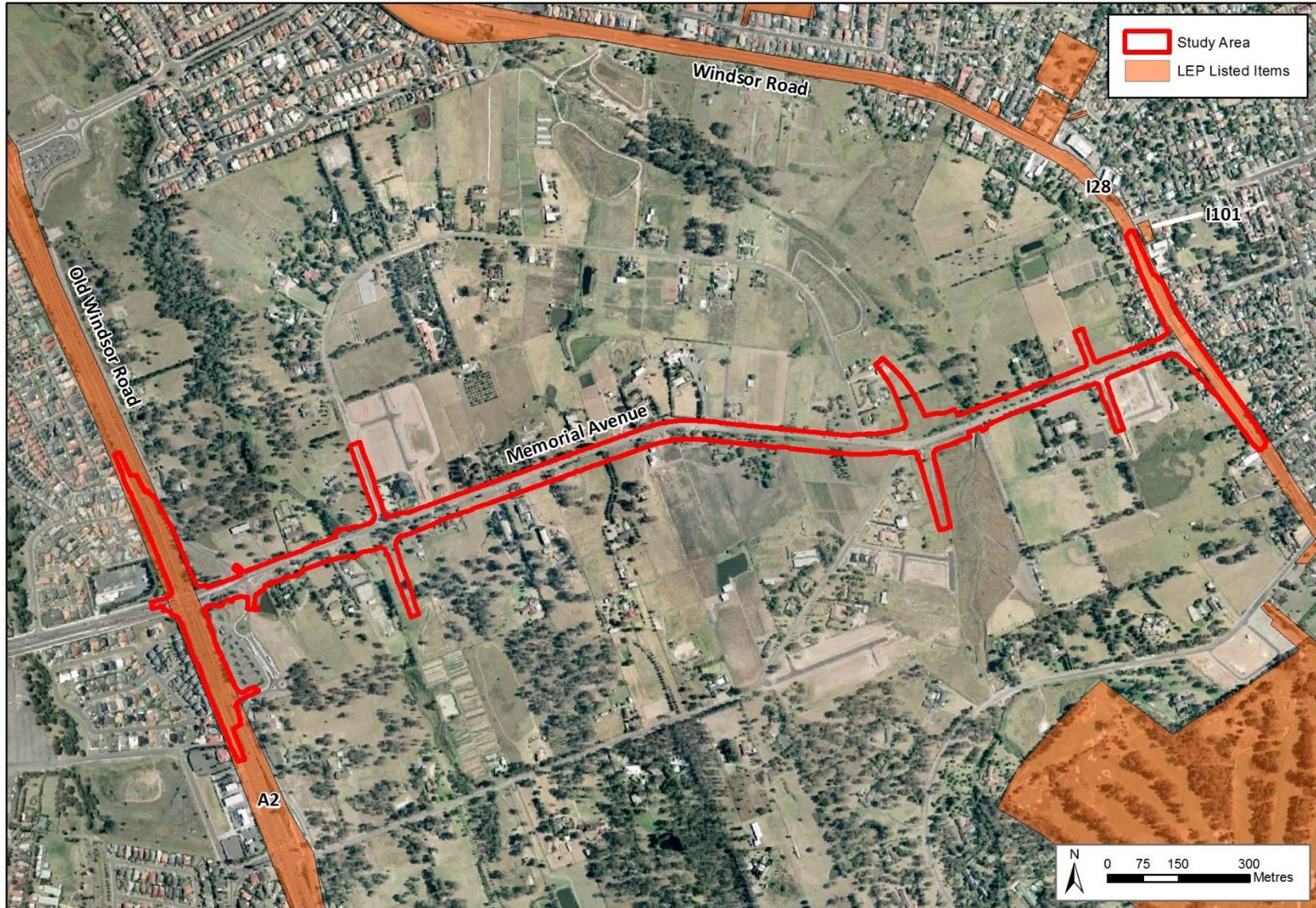
- **Archaeological heritage item A2 – Old Windsor Road**
- **Heritage Item I28 – Windsor Road**

A single item is listed in close proximity to the study area:

- **Heritage item I101 – House at 9-11 Windsor Road**



Figure 2: LEP Heritage Listing map, with the study area outlined in red.





State Environmental Planning Policy (Infrastructure) (ISEPP) 2007

In 2007, the ISEPP was introduced in order to streamline the development of infrastructure projects undertaken by state agencies, including Roads and Maritime Services. Generally, where there is conflict between the provisions of the ISEPP and other environmental planning instruments, the ISEPP prevails. Under the ISEPP, development for the purpose of road infrastructure may be carried out by a public authority without consent on any land. The ISEPP overrides the controls included in The Hills LEP 2012 and the Blacktown LEP 2013, and Roads and Maritime Services is only required to consult with Council when development “is likely to have an impact that is not minor or inconsequential on a local heritage item (other than a local heritage item that is also a State heritage item) or a heritage conservation area”.

1.3.3 *The Environment Protection and Biodiversity Conservation Act 1999*

The *Environment Protection and Biodiversity Conservation Act 1999* (the EPBC Act) provides a legal framework to protect and manage nationally and internationally important flora, fauna, ecological communities and heritage places. These are defined in the EPBC Act 1999 as matters of national environmental significance. Under the EPBC Act 1999, nationally significant heritage items are protected through listing on the Commonwealth Heritage List or the National Heritage List.

1.4 Non-statutory context

Australian Heritage Database (Formerly the Register of the National Estate)

The Australian Heritage Database holds listings of The National Heritage Register and the National Heritage List.

The Register of the National Estate is a list of natural, Indigenous and historic heritage places throughout Australia. It was originally established under the *Australian Heritage Commission Act 1975*. Under that Act, the Australian Heritage Commission entered more than 13,000 places onto the register. Following amendments to the *Australian Heritage Council Act 2003*, the Register of the National Estate was frozen on 19 February 2007, which means that no new places can be added, or removed. It was a statutory register until February 2012.

On 1 January 2004, a new national heritage system was established under the EPBC Act. This led to the introduction of the National Heritage List, which was designed to recognise and protect places of outstanding heritage value to the nation.

There is one item that passes through the study area listed on the Register of the National Estate.

- **Listing ID 2963: Old Windsor Road (from Seven Hills Road to Windsor Road)**



The National Trust of Australia

The National Trust of Australia is a community-based, non-government organisation committed to promoting and conserving Australia's Indigenous, natural and historic heritage. The Trust acts as custodian and manages over 300 heritage places.

There are no items within the study area on The National Trust of Australia.

1.5 Previous reports

The results of a previous investigation of the study area are contained within the following report:

- Godden Mackay Logan Pty Ltd, March 2012, *North West Rail Link EIS-1 Major Civil Construction Works European Heritage Report*, Report prepared for NWRL Planning Approvals Team.

Memorial Avenue, or Construction Site 10, was assessed as having the following archaeological potential:

A number of boundary stones along Old Windsor Road were identified in the Windsor Road and Old Windsor Road CMP (Clive Lucas, Stapleton & Partners, 2005) to the north of Memorial Avenue. These boundary stones were most likely buried during construction of the Northwest Transitway during the past decade.⁴

1.6 Report authorship

This report was written by Joshua Madden and Jenny Winnett (Heritage Consultants, Artefact Heritage) with management input by Dr Sandra Wallace, (Director, Artefact Heritage).

⁴ GML, March 2012, 34.

2.0 Historical Context

2.1 European settlement and the Cumberland Plain

The Cumberland Plain was home to the Darug language group which is thought to have extended from Appin in the south to the Hawkesbury River, west of the Georges River, Parramatta, the Lane Cove River and to Berowra Creek (Attenbrow 2010: 34). The Cumberland Plain was home to many Aboriginal tribal groups, with the current study area located within the *Bediagal* tribal boundaries.⁵

The development of European settlement within the local area was characterised by both government run properties and large privately run farms. Settlement within the region was primarily shaped by the construction of Old Windsor Road, Windsor Road, the Castle Hill Government Farm and the Field of Mars Common. Both Windsor and Old Windsor Roads enabled relatively reliable access between the newly developed agricultural areas and Parramatta and Sydney. Throughout the 19th century, the Castle Hill Government Farm and Field of Mars Common (located to the south-east of the current study area) inhibited residential and farming expansion in the area with The Field of Mars Common 'operational' until the early 1880s.

On arrival in Australia, Governor Phillip was instructed to immediately begin the cultivation of the land. He established a government farm at Rose Hill (later Parramatta) in November 1788 in an attempt to establish an agricultural convict community that would make the colony as self-sufficient as possible. As early as 1789, explorations west of Parramatta, which included the area around the current study area, were being undertaken. Settlement began to spread from Parramatta by the early 1790s with Governor Phillip establishing a government farm at Toongabbie in 1791, which was followed soon after by land grants in areas further west, including Kellyville in 1793. By 1794, 22 settlers were established in the Hawkesbury region. In 1794 Governor Hunter granted the first land parcel along the Hawkesbury Road (now Old Windsor Road) at Baulkham Hills to William Joyce, an emancipated convict. This began the settlement within the local area and the broader Baulkham Hills Shire Council area. The largest grant in the area, of approximately 980 hectares, was made jointly to Joseph Foveaux and Charles Grimes and fronted Old Windsor Road. Foveaux ran more than 1200 merino sheep on the farm which was later sold to the Macarthurs in 1815.

2.2 Windsor Road and Old Windsor Road

Old Windsor Road and Windsor Road were, and continue to be, major arterial roads between the western suburbs of Sydney and Parramatta. With the discovery of arable land in the west and north-

⁵ Attenbrow, 2010; 23



west of the Cumberland Plain, settlement was established in the vicinity of Windsor and Richmond on the Hawkesbury River. A track developed as an extension of the Sydney Road from Parramatta to Windsor to serve the agricultural community in the Hawkesbury area. The first improvements were ordered by Governor Hunter in 1797, and landholders undertook the widening of the road to 20 feet (6 metres). This is regarded as the date for the creation of the original Windsor Road as a carriageway. In 1805 Surveyor James Meehan surveyed an alignment between Parramatta and Kellyville, which became the basis for the new Windsor Road established in 1812-1813.

It has been over 200 years since the first Hawkesbury Road was constructed, and the routes of both the Windsor and Old Windsor Roads remain basically the same. Parts of the Old Hawkesbury Road survive in use partly as a sealed minor suburban road and partly as an unsealed rural lane giving access to adjacent properties.

Both Windsor Road and Old Windsor Road have been substantially modified to cater for modern traffic. Significant elements of the old road still remain as bypassed sections which retain original surfaces, boundary stones and alignment markers.⁶ These sections 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. The remaining historic road fabric demonstrates the methods of road construction and maintenance over two centuries.⁷ The longest stretch of original road is the Old Hawkesbury Road, which runs parallel to the Windsor Road at Vineyard but diverges to the north-east as it approaches the south.⁸

A section of Windsor Road between Meurants Lane and the proposed Castlereagh Freeway (300 metres southward from Caddies Creek) is listed on the Roads and Maritime Services Section 170 heritage register. A significant length of road north and south of the intersection with Sunnyholt Road is listed in the Draft Blacktown LEP 2013. The road closely follows the original horizontal and vertical alignment and retains substantial original vegetation on both verges.

2.3 Kellyville

European settlement was attracted to the area around Kellyville as early as the 1790s due to its arable soil and trees suitable for logging.⁹ Baulkham Hills, Castle Hill and West Pennant Hills are founded on a geological base of Wianamatta Shale, which gives rise to soils suitable for intensive agricultural development.¹⁰

⁶ Roads and Maritime Services Section 170: Old Windsor Road and Windsor Road Heritage Precincts.

⁷ Roads and Maritime Services Section 170: Old Windsor Road and Windsor Road Heritage Precincts.

⁸ Roads and Maritime Services Section 170: Old Windsor Road and Windsor Road Heritage Precincts.

⁹ Thorp 2004: 1

¹⁰ Thorp 2004: 8



One of the early settlers in the region, Humphrey Evans, was granted 135 acres to the east of the study area in 1803. It was a condition of the grant that Evans cleared and improved the land within five years. By March 1804, when the Irish convicts at Castle Hill rebelled and broke free from Government Farm, Evans had constructed a house and was making a living off his land.¹¹ Evans died unexpectedly in 1805 and his wife, Mary, inherited the property. Mary married a former convict, Hugh Kelly, and the property was used to run 200 head of cattle. In 1821 he acquired a licence to run the Half Way House, an inn located on the corner of Windsor Road and Wrights Road (immediately east of the study area). By 1829 the inn became known as the Bird in Hand. Kelly died in 1835. In 1836 the inn reverted to Kelly's third wife, Mary Ann, who had since remarried.¹² The property was then let out and was used at different times as a blacksmithing business and a general store.

In 1884 several former grants and properties were amalgamated to form the Kellyville estate.

During the 19th and the early part of the 20th century, the region was primarily rural and was dominated by farms. The region was dominated by sheep and cattle farms and crops such as wheat and maize during the early part of the 19th century. In the late 1800s crop farming diminished and a rise of orchard farms and vineyards began to establish a foothold in the area, which saw the area primarily used for farming citrus and rearing sheep for wool.

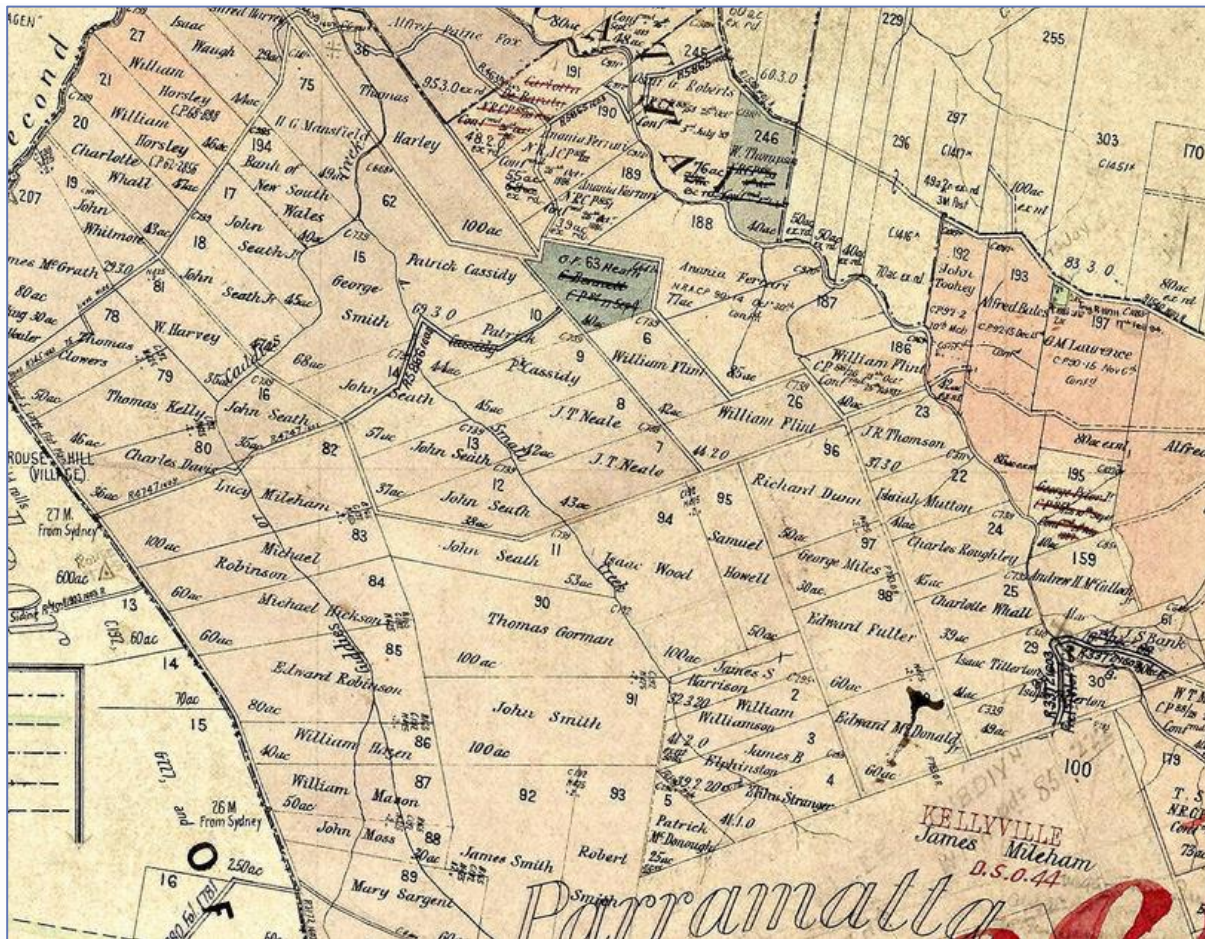
Figure 3: The location of Memorial Avenue as it currently exists (marked in red), running between the properties of Mr. J. Gibbon, and Thomas Bolton Senior, through the property of Thomas Boulton, and through the property of John Tibbet. Plan of 23 portions, 1860.



¹¹ Thorp 2004: 9.
¹² Thorp 2004: 12



Figure 4: Plan of the Parish of Castle Hill 1897.



By the 20th century, however, citrus farms and vineyards began to be replaced by stone fruit farming as well as poultry and dairy farms. The region saw a flourishing of market gardens after the Second World War due to the influx of European immigrants. This resulted in the sub-division of the larger farming properties into smaller farming lots. More recent developments within the region have resulted in a decline of agricultural activities, which are primarily reduced to occasional small market gardens and hobby farms.



Figure 5: Subdivision plan of 1932 showing Memorial Avenue (previously Balmoral Road).



2.4 The study area

By 1860, the bushland around the current study area was a series of five rural allotments located between Old Windsor Road and Windsor Road (Figure 3). Thomas Boulton Senior owned 100 acres bordering Old Windsor Road while M.J Gibbon owned 200 acres fronting Old Windsor Road. The boundary between the two properties is now the western alignment of Memorial Avenue. John Tibbett was granted 100 acres fronting Windsor Road while Thomas Boulton owned 100 acres, located between Thomas Boulton Senior and John Tibbett's properties. The eastern alignment of Memorial Avenue now traverses through the centre of these two properties (Figure 4).



It is likely that the land around Memorial Avenue followed patterns of development similar to that of the rest of Kellyville. Oral history described the use of the area as dairy farms and orchards.¹³ Analysis of the council rate books from the year 1907 reveals that the vast majority of occupants in the Kellyville district were fruit growers and orchardists. The remainder were commonly engaged in domestic employment and labour.

By the early 1930s, the area between Windsor Road and Old Windsor Road was steadily being sold off as smaller allotments. By this stage Balmoral Road, which would later be known as Memorial Avenue, had been constructed, which allowed for the sub-division of the larger farm allotments. In 1924, Kellyville Memorial Hall was opened on the corner of Windsor Road and Memorial Avenue to honour those who served in World War I.

Figure 6: The 1943 aerial of Sydney did not capture the complete study area, but the portion that was shows us that the area was largely rural at this time. Memorial Avenue is shaded in red



The study area has retained some of the small lot semi-rural character to the present day. The rural nature of the study area is still evident with numerous market garden plots. The Kellyville/Rouse Hill area has undergone major residential redevelopment over the last 20 years with the location of the current study area, although still semi-rural, becoming increasingly inundated by infrastructure to support the increasing residential development.

¹³ The Hills Voices Online Project.

3.0 Site Inspection

3.1 Background

An inspection of the study area was undertaken by Josh Madden and Lyndon Patterson (Heritage Consultants, Artefact Heritage) on 20 and 21 March 2014. An additional site visit was conducted on 17 July 2014 by Alyce Howard (Heritage Consultant, Artefact Heritage) to investigate the amended design.

3.2 Site Inspection

The inspections covered the entirety of the study area. The study area was found to be highly disturbed throughout. Severe disturbances included landscape modifications in the form of cuttings and redistribution of soils, the construction of houses, roads, footpaths and above ground and sub-surface services. The study area also contained the remains of previously demolished residences. Evidence of soil redistribution was noted and large amounts of bluestone metals were evident throughout the study area. The northern side of Memorial Avenue had evidence of cutting and benching.

Two creeks pass through the study area; Elizabeth Macarthur and Strangers Creeks. Memorial Avenue spans these watercourses via large concrete culverts.

The study area centres upon the road alignments of Memorial Avenue, Old Windsor Road and Windsor Road. As such, the study area is subject to major disturbances and modifications associated with the numerous phases of construction and maintenance to the roads. Intersections where Memorial Avenue meets Old Windsor Road and Windsor Road feature traffic lights. Extensive subsurface disturbances are likely to be associated with the installation of this infrastructure.

Figure 7: View east showing an undulating landform with zero visibility.



Figure 8: View east showing typical house frontage.





Figure 9: View west, southern side of Western Avenue.



Figure 10: View east of cut, road and service infrastructure.



3.3 Description of heritage items

3.3.1 Old Windsor Road

The westernmost section of the study area includes approximately 700 metres of Old Windsor Road, extending north and south of the intersection with Memorial Avenue. This section of the study area had been subject to severe disturbances including landscape modification in the form of cutting and benching, the construction of roads, footpaths above ground and underground services.

Figure 11: View north overlooking Northern T-Way.



Figure 12: View south overlooking Northern T-Way.





Figure 13: View south overlooking the southern T-Way.



Figure 14: View east overlooking southern T-Way entrance.



Figure 15: View south overlooking at the T-Intersection between Memorial Avenue and Old Windsor Road.



Figure 16: View west overlooking T-intersection showing soil benching and cutting.



Figure 17: View north, Intersection of Old Windsor Road and Memorial Avenue showing disturbance.



Figure 18: View south, Intersection of Old Windsor Road and Memorial Avenue showing disturbance.





3.3.2 Windsor Road

The easternmost section of the study area incorporates approximately 550 metres of Windsor Road, extending north and south from the intersection with Memorial Avenue. This area has been subject to severe disturbances which include landform alteration in the form of cutting and re-deposition of soils for a public park, a concrete slab (and a now demolished building) and above ground and sub-surface services.

Figure 19: View west overlooking Memorial Avenue.



Figure 20: View south toward T-Intersection of Memorial Avenue and Windsor Road.



Figure 21: View west overlooking Memorial Avenue at the T-intersection SU2.



Figure 22: View south overlooking SU2.



3.3.3 House at 9-11 Windsor Road

The House at 9-11 Windsor Road is immediately adjacent the north-eastern corner of the study area. The frontage of the property is largely shielded by a wooden paling fence and mature trees (Figure 23). The house appears to be constructed of brick foundations with more recent CFC sheeting (Figure 24). It is likely the house dates from the early to mid-20th century.



Figure 23: View east towards the heritage listed property from Windsor Road. Artefact Heritage 2014.



Figure 24: View south of the heritage listed property from President Avenue. Artefact Heritage 2014.



4.0 Archaeological Potential

4.1 Discussion of archaeological potential

Archaeological potential is defined as the potential of a site to contain archaeological relics, as classified under the *NSW Heritage Act 1977*. Archaeological potential is assessed by identifying former land uses and associated features through historical research, and evaluating whether subsequent actions (either natural or human) may have impacted on evidence for these former land uses.

The study area has associations with early European settlement of the Kellyville area. It has been continuously owned and used for pastoral and agricultural activities from the mid-19th century. The settlement of the area, however, is poorly documented. It is likely that the lots associated with the study area were used as market gardens or dairies throughout the late 19th century and into the early 20th century.

There is very limited potential for archaeological remains of structures associated with early 20th century occupation of the area to exist in the study area. Analysis of plans from the 19th century indicates that the study area was unlikely to have contained substantial structures prior to the early 1900s. Examination of the 1943 aerial photograph of Sydney also suggests that any structures that were located in the study area are further north and south, and therefore outside the study area. The study area has also been subject to numerous impacts, which are likely to have damaged or removed any archaeological remains. These impacts include upgrades to the Memorial Avenue road corridor and the establishment of footpaths and culverts, the installation of subsurface services, subdivision, the construction of residences and landscaping associated with these residences, and the demolition of early structures.

The westernmost extent of the study area includes approximately 700 metres of Old Windsor Road, which is listed on The Hills LEP as an archaeological item. The western extent of Memorial Avenue was not constructed until the 20th century and its construction would have impacted on any original fabric of Old Windsor Road in this location. Furthermore, this intersection would have been subject to extensive subsurface impacts associated with the installation of traffic light systems. As such, it is highly unlikely that intact archaeological remains associated with the earlier phases of Old Windsor Road would be retained within the study area.

A number of boundary stones along Old Windsor Road were identified to the north of Memorial Avenue in the Windsor Road and Old Windsor Road CMP.¹⁴ These boundary stones are located outside the study area and were most likely buried during construction of the Northwest Transitway during the past decade.

¹⁴ Clive Lucas, Stapleton & Partners, 2005



There is, therefore, limited potential to encounter archaeological remains associated with the early construction or use of Old Windsor Road within the study area.

Similarly, the approximately 550 metres of Windsor Road that is included in the study area is unlikely to retain any intact archaeological remains associated with the original road. Successive phases of construction and maintenance of Windsor Road have disturbed the eastern portion of the study area, particularly at the intersection of Windsor Road and Memorial Avenue where the installation of traffic light systems would have had extensive subsurface impacts. The 20th century house listed as heritage item I101 on the Hills LEP is located immediately adjacent the north-east corner of the study area. It is unlikely that the proposed development will impact upon heritage item I101.

Overall, the study area has limited to no potential to contain archaeological remains associated with occupation of the study area, or with the undisturbed remains of either Old Windsor Road or Windsor Road.

5.0 Assessment of Significance

5.1 NSW heritage assessment guidelines

Determining the significance of heritage items is undertaken by utilising a system of assessment centred on the *Burra Charter* of Australia ICOMOS. The principles of the charter are relevant to the assessment, conservation and management of sites and relics. The assessment of heritage significance is outlined through legislation in the NSW *Heritage Act* 1977 and implemented through the NSW Heritage Manual and the Archaeological Assessment Guidelines (NSW Heritage Office 1996: 25-27). If an item meets one of the seven heritage criteria, and retains the integrity of its key attributes, it can be considered to have heritage significance. The significance of an item or potential archaeological site can then be assessed as being of local or state significance, based on a series of criteria that have been developed for assessing significance relating to archaeological sites and their associated 'relics'. The criteria identify a series of questions that could be asked in relation to the item to assist in the identification of the appropriate level of significance to be applied. The criteria relevant to the assessment of the potential archaeological resource in the Memorial Avenue study area have been outlined in Section 5.2.

'State heritage significance', in relation to a place, building, work, relic, moveable object or precinct, means significance to the state in relation to the historical, scientific, cultural, social, archaeological, architectural, natural or aesthetic value of the item.

'Local heritage significance', in relation to a place, building, work, relic, moveable object or precinct, means significance to an area in relation to the historical, scientific, cultural, social, archaeological, architectural, natural or aesthetic value of the item.¹⁵

The overall aim of assessing archaeological significance is to identify whether an archaeological resource, deposit, site or feature is of cultural value. The assessment will result in a succinct statement of heritage significance that summarises the values of the place, site, resource, deposit or feature.

The heritage significance assessment criteria are as follows:

Table 1: NSW heritage assessment criteria

Criteria	Description
A – Historical Significance	An item is important in the course or pattern of the local area's cultural or natural history.

¹⁵ This section is an extract based on the Heritage Office Assessing Significance for Historical Archaeological Sites and Relics 2009:6.



Criteria	Description
B – Associative Significance	An item has strong or special associations with the life or works of a person, or group of persons, of importance in the local area's cultural or natural history.
C – Aesthetic Significance	An item is important in demonstrating aesthetic characteristics and/or a high degree of creative or technical achievement in the local area.
D – Social Significance	An item has strong or special association with a particular community or cultural group in the local area for social, cultural or spiritual reasons.
E – Research Potential	An item has potential to yield information that will contribute to an understanding of the local area's cultural or natural history.
F – Rarity	An item possesses uncommon, rare or endangered aspects of the local area's cultural or natural history.
G – Representative	An item is important in demonstrating the principal characteristics of a class of NSWs (or the local area's): <ul style="list-style-type: none"> - cultural or natural places; or - cultural or natural environments.

5.2 Fulfilment of the NSW heritage assessment criteria

The assessment of the significance of the potential archaeological resource contained within the study area against the NSW heritage assessment criteria is outlined in Table 2.

Table 2: Consideration against NSW heritage assessment criteria

Criteria	Description									
A – Historical Significance	<p>Identified NSW Historical Themes relevant to the study area include:</p> <table border="1"> <thead> <tr> <th>National theme</th> <th>State theme</th> <th>Demonstrated by:</th> </tr> </thead> <tbody> <tr> <td>Developing local, regional and national economies</td> <td>Agriculture</td> <td>Market gardens, orchards, dairies and plantations</td> </tr> <tr> <td>Building settlements, towns and cities</td> <td>Land tenure</td> <td>Subdivision pattern</td> </tr> </tbody> </table> <p>The pattern of subdivision along the alignment of Memorial Avenue demonstrates the pattern of development of the area from the mid-19th century. However, this pattern has been largely removed by modern subdivision and intensive residential occupation of areas surrounding and within the study area.</p> <p>Therefore, although the study area has some limited significance under this criterion, the study area does not meet the local significance threshold.</p>	National theme	State theme	Demonstrated by:	Developing local, regional and national economies	Agriculture	Market gardens, orchards, dairies and plantations	Building settlements, towns and cities	Land tenure	Subdivision pattern
National theme	State theme	Demonstrated by:								
Developing local, regional and national economies	Agriculture	Market gardens, orchards, dairies and plantations								
Building settlements, towns and cities	Land tenure	Subdivision pattern								



Criteria	Description
B – Associative Significance	<p>The study area does not have strong or special associations with the life or works of a person, or group of persons, of importance in the local area’s cultural or natural history. Historical owners of properties along Memorial Avenue do not appear to have been notable local personalities.</p> <p>The study area does not meet the local significance threshold under this criterion.</p>
C – Aesthetic Significance	<p>The study area retains some of the rural aesthetic that was once dominant in Kellyville, although this has also been retained in the large sub-division to the north and south of Memorial Avenue.</p> <p>The study area does not meet the local significance threshold under this criterion.</p>
D – Social Significance	<p>The study area is unlikely to have strong or special associations with a particular community or cultural group in the local area for social, cultural or spiritual reasons. The Hills Council has compiled an oral history record¹⁶, and an interview with a previous occupant of a dairy of Memorial Avenue indicates that the majority of landowners in the area throughout the early 20th century moved into the area from elsewhere. It is unlikely that members of the current community have a strong association with the study area.</p> <p>The study area does not meet the local significance threshold under this criterion.</p>
E – Research significance	<p>The study area is unlikely to meet this criterion as it holds limited potential to provide substantial archaeological or scientific information that cannot be gained from other sources. Whilst it is likely that some portions of the study area were used as market gardens or dairies throughout the late 19th and early 20th century, subsequent use and subdivision of the area, the widening of Memorial Avenue, and the creation of new roads indicates that there is limited potential for evidence of these activities to remain intact.</p> <p>The eastern and western extents of the study area are within the curtilages of Windsor Road and Old Windsor Road, both of which are heritage listed items. Old Windsor Road is listed as an archaeological item on The Hills LEP. The western extent of Memorial Avenue was not constructed until the 20th century and its construction would have impacted on any original fabric of Old Windsor Road in this location. Successive phases of construction and maintenance of both Old Windsor Road and Windsor Road would have extensively modified the original road features. Therefore, it is highly unlikely that archaeological remains associated with the earlier phases of Old Windsor Road would be retained within the study area.</p> <p>There is limited potential that the study area may contain archaeological remains that may reflect earlier land-use of the study area (structural remains associated with dairying, market gardening or 20th century residential occupation), although the majority of these types of structures would historically have been set back further from Memorial Avenue than the current study area. Overall, any archaeological remains within the study area are unlikely to meet the local significance threshold under this criterion, as they would not have the ability to add substantially to our understanding of the history of the study area, or of the wider area of Memorial Avenue.</p> <p>The study area does not meet the local significance threshold under this criterion.</p>

¹⁶ The Hills Voices Online Project



Criteria	Description
F – Rarity	The study area does not possess uncommon, rare or endangered aspects of the local area’s cultural or natural history. The study area does not meet the local significance threshold under this criterion.
G – Representativeness	The study area is not important in demonstrating the principal characteristics of a class of NSWs cultural or natural places or environments. The study area does not meet the local significance threshold under this criterion.

5.3 Statement of heritage significance of the study area

The study area does not meet the threshold for local significance under the NSW Heritage assessment criteria. Although the study area does have some historical value and partially retains an indication of earlier subdivision patterns, this has been largely removed by modern intensive residential occupation. The study area represents the historical relationship between three early road alignments; Old Windsor Road, Windsor Road and Memorial Avenue, although the westernmost intersection of Memorial Avenue and Old Windsor Road is a 20th century addition. Any archaeological remains found within the study area are unlikely to reach the local significance threshold.

The following section summarises the significance of heritage listed items within the study area.

5.3.1 Windsor Road and Old Windsor Road precincts¹⁷

Windsor Road and Old Windsor Road, 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.

Windsor Road and Old Windsor Road 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. However, successive phases of construction and maintenance of both roads have impacted upon the likelihood of intact archaeological evidence remaining.

Those sections of Old Windsor Road and Windsor Road, located within the study area, have been severely impacted by modern upgrading and maintenance. They do, however, have heritage

¹⁷ Statement taken from the Roads and Maritime Services Section 170 Register: Old Windsor Road and Windsor Road precincts.



significance on a local level, as they represent an original road alignment and are demonstrative of the evolution of an historic road corridor.

6.0 Heritage Impact Assessment

6.1 The Proposal

The study area encompasses the entire length of Memorial Avenue, Kellyville, and includes the portions of Old Windsor Road (approximately 700 metres) and Windsor Road (approximately 550 metres) that extend from their respective intersections with Memorial Avenue. Roads and Maritime Services propose to upgrade and widen Memorial Avenue. The proposed designs include the establishment of three new junctions along Memorial Avenue as well as upgrades of the T-intersection of Memorial Avenue and Windsor Road and the T-intersection of Memorial Avenue and Old Windsor Road (Figure 25).

The proposed upgrade will involve the construction of two east bound and two west bound lanes, with one future lane allowed for in both directions. The upgrade will also include a footway on either side of the avenue and a large median strip between the east and west bound lanes. The proposed works will also include the creation and widening of a four way crossroad at the existing western T-intersection of Arnold Avenue and Memorial Avenue. A four way crossroad will be constructed between Burns Road and Memorial Avenue, approximately 250 metres west of the T-intersection of Memorial Road and Windsor Road. A new four way crossroad will also be constructed between an as yet un-named road and Memorial Avenue directly east of the current intersection between Memorial Avenue and Hector Court (Figure 25).

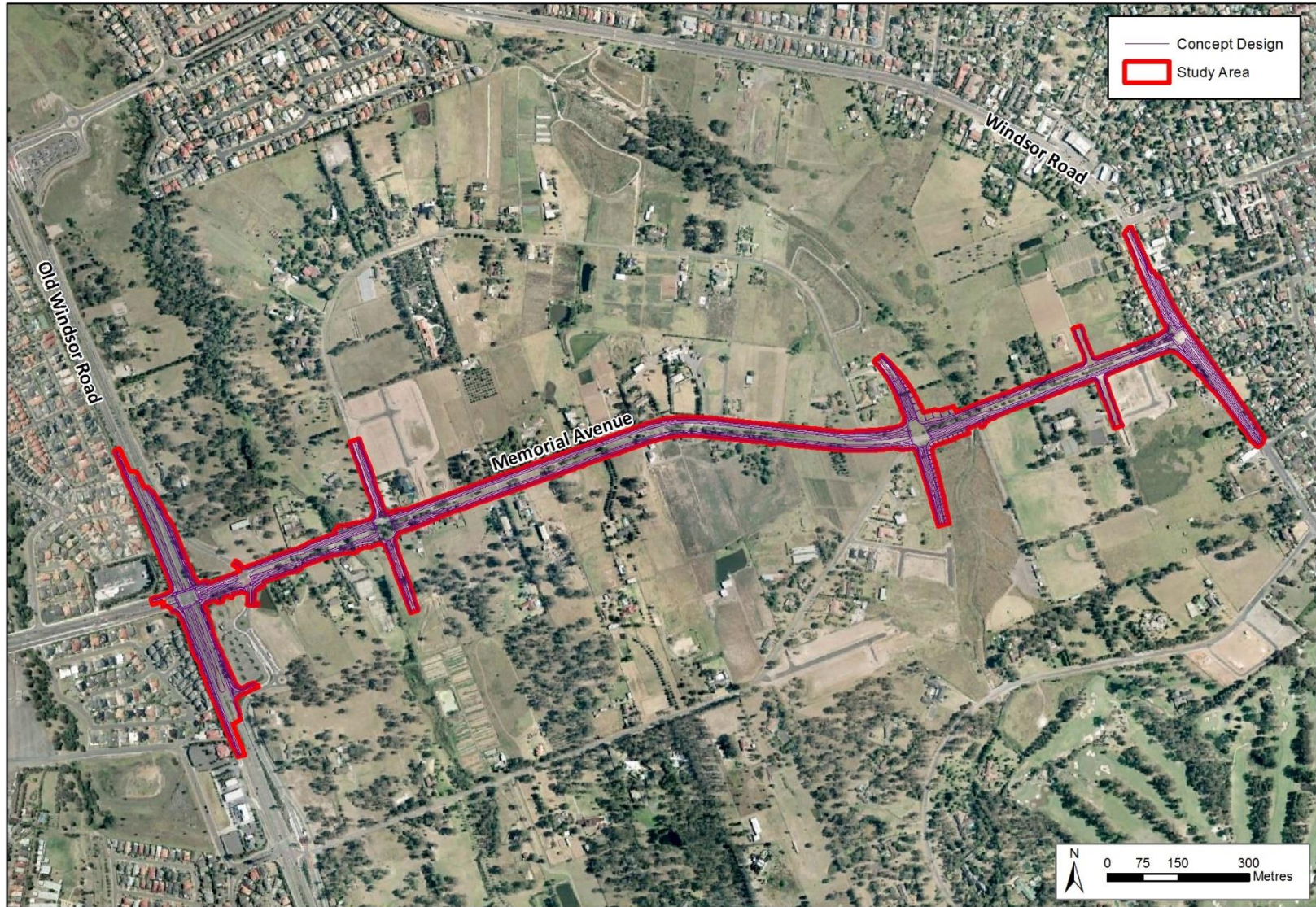
An overview of the scope of the project is as follows:

- Four lane dual carriageway with provision for upgrading to six lanes.
- Shared paths on both sides of the road.
- New signalised intersections – at Arnold Avenue and Severn Vale Drive.
- Upgrading of intersections at Old Windsor Road and Windsor Road.
- Arnold Avenue East (on the northern side) and Hector Court (on the southern side) to be made cul-de-sacs at Memorial Avenue.
- A new signalised intersection to be installed at Severn Vale Drive.
- Left in and left out access for Burns Road and Stone Mason Drive.

Memorial Avenue Upgrade, Kellyville



Figure 25: Plan showing the proposal impact area.



6.2 Potential impact of proposal on listed items

6.3.1 A2 – Old Windsor Road (*The Hills LEP 2012*)

The proposal will impact approximately 700 metres of Old Windsor Road, extending north and south of the intersection with Memorial Avenue. This work will involve widening to the east by approximately 15 metres, with substantial in-cutting and levelling expected. The road will also be widened to the west by approximately five metres. The majority of this work will be in areas of pre-existing impact, including the tollway and large parking areas to the east. The proposed works will also involve the upgrading of the existing intersection.

This section of Old Windsor Road has been subject to severe disturbances including landscape modification in the form of cutting and benching, the construction of roads and footpaths, and the installation of above ground and underground services. As discussed in the assessment of significance (Table 2) the fabric has been altered numerous times and is no longer classed as significant. The road alignment itself, however, continues to demonstrate the evolution of an historic road corridor, and represents an early and significant road alignment. It is expected that the proposal will impact on the modern fabric of the road, and will not alter its alignment. The proposal will therefore have a minor impact on the heritage significance of the road precinct.

There is low archaeological potential that buried milestones may be encountered during subsurface works within the road corridor.

6.3.2 I28 - Windsor Road (*The Hills LEP 2012*)

The proposal will impact approximately 550 metres of Windsor Road, extending north and south from the intersection with Memorial Avenue. This work will include the widening of Windsor Road by 15 metres to the west, and approximately five metres to the east. It is not expected that this work will require significant areas of in-cutting or in-filling, and the proposed road will be largely on the level of the existing. This work will include upgrading of the intersection with Memorial Avenue.

This section of Windsor Road has been subject to severe disturbances which include landform alteration in the form of cutting and re-deposition of soils for a public park, a concrete slab (and a now demolished building) and above ground and sub-surface services. As the fabric has been altered numerous times it is no longer classed as significant. As with Old Windsor Road, Windsor Road continues to demonstrate the evolution of an historic road corridor, and is representative of an early and significant road alignment. It is expected that the proposal will impact on the modern fabric of the road, and will not alter its alignment. The proposal will therefore have a minor impact on the heritage significance of the road precinct.



6.3.3 1101 - House at 9-11 Windsor Road (The Hills LEP 2012)

The House at 9-11 Windsor Road is approximately 15 metres to the north-east of the study area (Figure 26). The proposal will not directly impact the heritage listing. However, works associated with the proposal may involve temporary aesthetic impacts due to road works and the presence of machinery. This impact is mitigated as the property is largely shielded by a wooden paling fence and mature trees. There is also a potential for vibration from works to affect the property.

6.3.4 4301011 - Old Windsor Road and Windsor Road Heritage Precincts (Roads and Maritime Services Section 170 Register)

See sections 6.3.1 and 6.3.2 for the impacts within this heritage item. The proposal will impact approximately 550 metres of Windsor Road and 700 metres of Old Windsor Road, where the respective roads intersect Memorial Avenue. Road widening is proposed at both intersections to be in the region of five to 15 metres, and more intrusive impacts (excavation) will occur on the intersections themselves. As the fabric of these roads in these particular locations has been altered previously on numerous occasions, they are no longer of significance. However the alignment of the road is considered significant as it represents the original alignment of the road. It is expected that the proposal will impact the modern fabric of the road but will not alter its alignment.



Figure 26: Detail of House at 9-11 Windsor Road (I101).





6.3 Statement of heritage impact

Overall, the proposed works would not negatively impact on the limited heritage significance of the study area or on the heritage listed Old Windsor Road, Windsor Road or House at 9-11 Windsor Road. A statement of heritage impact is summarised in Table 3.

Table 3: SoHI

Development	Discussion
<p>What aspects of the proposal respect or enhance the heritage significance of the study area?</p>	<p>The limited heritage significance of the study area lies in its maintenance of the historic relationship between three road alignments: Old Windsor Road, Windsor Road and Memorial Avenue, and in its ability to partially represent the earlier pattern of large-lot rural subdivision in the Kellyville area. As the proposal will follow the alignment of Memorial Avenue, which has existed (with the exception of the intersection with Old Windsor Road) in this location since the mid-19th century, it will not significantly impact on lots aligned to the road, the proposal will not negatively impact on the limited historic significance of the study area.</p> <p>Overall the study area is unlikely to contain archaeological remains (due to 20th century disturbance in Old Windsor Road, Windsor Road and the existing level of disturbance throughout the Memorial Avenue road corridor), There is low potential that buried milestones may be located within the Old Windsor Road curtilage.</p> <p>As the area is currently dominated by substantial road corridors, the widening of Memorial Avenue would not have a negative visual impact on those heritage items within the study area (which are themselves road corridors). The nearest built heritage item, the House at 9-11 Windsor Road, is located outside the study area. There is a minor visual impact of the proposal, which is largely mitigated by the existing paling fence and large trees that screen the house from Windsor Road.</p> <p>Overall, the proposal respects the heritage significance of the study area.</p>
<p>What aspects of the proposal could have a detrimental impact on the heritage significance of the study area?</p>	<p>The study area has been assessed as having limited heritage significance. As the proposal would involve the widening of Old Windsor Road and Windsor Roads it would impact on the heritage listed road corridors. Those areas to be widened, however, have already undergone substantial modification, and retain few of the characteristics that make the road corridor historically significant (such as being evocative of the historical, rural character of the area). The heritage significance of the road corridors in these areas, therefore, is largely confined to their representation of an early road alignment, rather than historic fabric.</p> <p>Overall, the impact of the proposal is considered to be acceptable.</p> <p>There is a potential for temporary visual and vibration impacts to the House at 9-11 Windsor Road (I101), during the construction phase of the proposal.</p>
<p>Have more sympathetic options been considered and discounted?</p>	<p>n/a</p>

7.0 Conclusions and recommendations

On the basis of the research described in this report, it was found that:

- Approximately 700 metres of the Old Windsor Road archaeological item (The Hills LEP) is within the study area. The works will consist of widening and upgrading works, and will have a minor impact on the significance of the heritage item by altering the footprint of the road. However, this section of the Old Windsor Road has been substantially modified, and the significance of the item in this location lies largely in its alignment, rather than in fabric. In addition, the level of disturbance suggests it is unlikely that archaeological relics of local or state significance would be encountered during the works, although there is low potential that milestones identified by Godden Mackay Logan (GML) in 2012¹⁸ remain buried located within the study area.
- Approximately 550 metres of the Windsor Road heritage item (The Hills LEP) is within the study area. The works in this location will consist of widening and upgrading works, and will have a minor impact on the significance of the heritage item by altering the footprint of the road. However, this section of the Old Windsor Road has been substantially modified, and the significance of the item in this location lies largely in its alignment, rather than in fabric. There is a low potential for archaeological relics or works of local or state significance to be located in the section of the Windsor Road within the study area.
- A house at 9-11 Windsor Road is listed (The Hills LEP) approximately 15 metres north-east of the study area. The proposal will not directly impact the heritage item, although there may be temporary construction impacts on the property. These may include temporary visual impacts and vibration impacts due of the movement of heavy machinery.
- Old Windsor Road and Windsor Road Heritage Precincts are on the Roads and Maritime Services Section 170 heritage register. The proposal will have minor impacts on the significance of the item, as those parts of the roads within the study area have been subject to numerous modifications and upgrading in recent decades.
- Overall, the study area has limited potential to contain archaeological remains. With the exception of milestones within the Old Windsor Road precinct, any remains found are unlikely to reach the local significance threshold. Memorial Avenue has been subject to numerous impacts occurring throughout the 20th century, including upgrades and widening of Old Windsor Road and Windsor Road, and the establishment of the westernmost part of Memorial Avenue. It is likely that the

¹⁸ Godden Mackay Logan Pty Ltd, March 2012, North West Rail Link EIS-1 Major Civil Construction Works European Heritage Report, Report prepared for NWRL Planning Approvals Team.



intersection of Memorial Avenue with Windsor Road, Old Windsor Road and the tollway have been subject to substantial disturbance.

The following measures are recommended to adhere to statutory obligations and minimise potential impacts of the proposed works:

- Retain the form and alignment of Memorial Avenue and limit incursion into the lots fronting the road corridor where possible.
- As Old Windsor Road is listed as an archaeological heritage item on the Hills Shire Local Environmental Plan (LEP) 2012, and this document has identified that there is low potential that buried milestones identified by Godden Mackay Logan (GML) in 2012¹⁹ remain buried in the study area. It is, therefore, recommended that subsurface impacts to the fabric of the road be avoided where possible. It is recommended that a Section 139(4) exception permit be obtained, prior to works commencing, for any sub-surface impacts within the curtilage of the listed heritage item. It is recommended that a condition of this permit be a program of intermittent archaeological monitoring of excavation works within the Old Windsor Road curtilage. This would identify the level of impact that already exists within the road corridor, and therefore assist in the identification of archaeological potential of the road.
- It is recommended that the curtilage of the House at 9-11 Windsor Road be avoided and any vibration impacts mitigated through the implementation of a vibration management.
- If any unanticipated archaeological deposits, such as structural remains, culverts, historic cuttings, retaining walls, or evidence of historic road surfaces, are identified within the study area during construction, the *(NSW) Roads and Maritime Unexpected Archaeological Finds Procedure* 2012 should be followed.²⁰ These procedures are as follows:
 1. Contact and engage an archaeologist, and Aboriginal site officer where required
 2. Contact and engage an archaeologist, and Aboriginal site officer where required
 3. Formulate an archaeological management plan
 4. Formally notify the regulator by letter, if required
 5. Implement archaeological management plan
 6. Review CEMPs and approval conditions

¹⁹ Godden Mackay Logan Pty Ltd, March 2012, North West Rail Link EIS-1 Major Civil Construction Works European Heritage Report, Report prepared for NWRL Planning Approvals Team.

²⁰ RMS, July 2012. RMS Unexpected Archaeological Finds Procedure. Site accessed on 17/07/2014 at: http://www.rms.nsw.gov.au/environment/downloads/unexpected_archaeological_finds_procedure.pdf



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