Appendix H Non-Aboriginal heritage assessment			

The Northern Road/ Bringelly Road Grade Separated Interchange

Statement of Heritage Impacts

Report to GHD

November 2015



EXECUTIVE SUMMARY

Roads and Maritime Services (Roads and Maritime) is proposing a new grade separated interchange at The Northern Road and Bringelly Road, Bringelly (referred to as 'the proposal' for the purposes of this report). The proposal is located within the Western Sydney Priority Growth Area (formerly known as the South West Growth Centre), about 45 km south-west of the Sydney central business district and 12 km west of Liverpool.

The proposal would tie into The Northern Road Upgrade Stage 2A (Peter Brock Drive to Belmore Road) to the south, The Northern Road Upgrade Stage 2C (Thames Road to Mersey Road) to the north, and the Bringelly Road Upgrade Stage 2 (King Street to The Northern Road) to the east.

Artefact Heritage has been engaged by GHD on behalf of Roads and Maritime to prepare a Statement of Heritage Impact (SoHI), including a non-Aboriginal archaeological assessment for the proposal. This report forms part of the Review of Environmental Factors (REF) in preparation by GHD in accordance with the requirements of Part 5 of the NSW *Environmental Planning and Assessment Act 1979* (EP&A Act).

The aims of this report are to identify any Non-Indigenous (historic) heritage items which may be present within or adjacent to the proposal site boundary, assess the potential for as yet unidentified historical archaeology to be present within the proposal site boundary, and to identify any constraints or impacts that may potentially arise from the proposal.

Overview of findings

- There are two listed heritage items located within 50 metres of the proposal site boundary. These are:
 - The Bringelly Public School Group (Liverpool LEP)
 - Cottage, 1186 The Northern Road (Camden LEP)
- The Bringelly Public School Group and Cottage, 1186 The Northern Road have been assessed as being significant at a local level.
- The Bringelly Public School Group and Cottage, 1186 The Northern Road would not be physically impacted by the project. These items would be subject to minor visual impacts only.
- The Bringelly/Greendale rural cultural landscape is listed in the Camden Council DCP and located within the proposal site boundary. This landscape has been assessed as being significant at a local level.
- The Northern Road and Bringelly Road are unlisted items assessed as being significant at a local level.
- There is nil to low potential that archaeological remains associated with former road surfaces of The Northern Road and Bringelly Road would be located within the proposal site boundary.
- The remains of the Bringelly Church are located outside the proposal site boundary. There is low
 potential for associated archaeological relics to extend into the proposal site boundary.
- The remainder of the proposal area has been assessed as having nil-low archaeological potential.



Recommendations

- The ten properties not accessible for the current investigation would be investigated once access
 is available. The survey and assessment of these properties would be undertaken prior to works
 commencing on site.
- An exclusion zone would be set up around the location of the former Bringelly Church during construction. A map showing the location of the former Bringelly Church remains should be included in the CEMP and the site induction. All impacts to the site should be avoided including driving over the site, storing materials within the site and ground surface disturbances. If the project site boundaries are extended and the site of the former Bringelly Church is to be impacted further archaeological investigation will be required under an excavation permit obtained from the NSW Heritage Division.
- Impacts to views and vistas to and from LEP items (The Bringelly Public School Group and the Cottage at 1186 The Northern Road) and DCP item Bringelly/Greendale Road cultural and visual landscape would be mitigated by:
 - Retention of a buffer of vegetation between the cottage and school and the proposal site boundary. If any trees are proposed for removal these should be replaced with plantings of similar type and maturity.
 - Consideration of sympathetic colours and materials where appropriate in the construction of noise walls and bunds in the vicinity of the cottage and school.
 - Where possible the utilisation of earth walls and mounds as opposed to concrete structures to soften the visual impact and tie the works into the surrounding rural landscape in the vicinity of the cottage and school.
- Roads and Maritime should consult with the Camden and Liverpool Councils regarding impacts to items on their respective LEPs.
- The CEMP should include the locations of heritage items and potential archaeological sites within 50 metres of the proposal site boundary. This includes The Bringelly Public School Group, the Cottage at 1186 The Northern Road and remains of the former church.
- If unexpected archaeological finds are discovered during the proposed works, the Roads and Maritime Standard Management Procedure: Unexpected Heritage Items (2015) would be followed.
 The NSW Heritage Division would be notified of the discovery of a relic in accordance with Section 146 of the NSW Heritage Act 1977.
- A heritage induction would be provided to workers before construction begins informing them of the location of heritage items, and guidelines to follow if unexpected heritage items or potential relics are located during works.

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1.0 INTRODUCTION AND BACKGROUND

1.1 Introduction

Roads and Maritime Services (Roads and Maritime) is proposing a new grade separated interchange at The Northern Road and Bringelly Road, Bringelly (referred to as 'the proposal' for the purposes of this report). The proposal is located within the Western Sydney Priority Growth Area (formerly known as the South West Growth Centre), about 45 km south-west of the Sydney central business district and 12 km west of Liverpool (Figure 1).

The proposal would tie into The Northern Road Upgrade Stage 2A (Peter Brock Drive to Belmore Road) to the south, The Northern Road Upgrade Stage 2C (Thames Road to Mersey Road) to the north, and the Bringelly Road Upgrade Stage 2 (King Street to The Northern Road) to the east.

Artefact Heritage has been engaged by GHD on behalf of Roads and Maritime to prepare a Statement of Heritage Impact (SoHI), including a non-Aboriginal archaeological assessment for the proposal. This report forms part of the Review of Environmental Factors (REF) in preparation by GHD in accordance with the requirements of Part 5 of the NSW *Environmental Planning and Assessment Act 1979* (EP&A Act).

This report assesses and documents potential non-Aboriginal heritage impacts of the proposal.

1.2 Proposal site boundary

The proposal site boundary supplied by GHD is shown in Figure 1. It is understood that the proposal site boundary represents the likely maximum extent of the road design and associated stockpile and compound areas. For the purposes of this SoHI, heritage items within 50 metres of the proposal site boundary have been included in the assessment.

1.3 The proposal

The grade separated interchange, which would involve The Northern Road passing under Bringelly Road, would be located about 300 m east of the existing intersection of The Northern Road, Bringelly Road and Greendale Road. The proposal also involves modifications to the existing intersection. The key features of the proposal are shown in Figure 1 and include:

- Widening and upgrading about 400 m of Bringelly Road, between Kelvin Park Drive and Greendale Road, to provide:
 - Two 3.5 m wide traffic lanes in each direction between Kelvin Park Drive and The Northern Road/Bringelly Road interchange, with wide central medians to allow for a future third traffic lane in each direction
 - Two 3.5 m wide traffic lanes in each direction on the western side of the interchange, transitioning to one lane in each direction to tie in to the existing intersection and Greendale Road
 - Two metre wide shoulders in each direction
- Constructing a new section of The Northern Road, to the east of the existing alignment, between about 200 m south of Robinson Road and the southern abutment of the bridge over Thompsons Creek. The new section, which would pass beneath Bringelly Road, would be about one kilometre long and about 50 m wide (including embankments), and would include:



- Two 3.5 m wide traffic lanes in each direction
- Four metre wide shoulders connecting to the on and off ramps of the interchange, allowing for the future provision of bus lanes
- An underpass about 60 m long beneath the upgraded section of Bringelly Road
- 2.5 m wide shoulders along The Northern Road under the interchange for a length of about one kilometre
- A wide central median to allow construction of a future third traffic lane in each direction
- Providing a new signalised intersection on Bringelly Road over The Northern Road, with turning movements provided in all directions
- Providing dual right turn movements in all directions to and from The Northern Road and Bringelly Road, and dedicated left turn lanes in all directions
- Providing bus service facilities by:
 - Retaining the bus stops on the existing The Northern Road
 - Relocating bus stops on Bringelly Road to suit the interchange
 - Providing two new bus stops on The Northern Road northbound and southbound interchange on ramps
 - Providing a bus only lane for buses travelling north and south along The Northern Road at the traffic lights on Bringelly Road
- Providing three metre wide shared paths for pedestrians and cyclists
- Providing a new road connection between Robinson Road and The Northern Road via an extension of the realigned Belmore Road intersection, and building a cul-de-sac at the western end of Robinson Road
- Converting the existing section of The Northern Road (to the west of the new section) to a 'no through road', by providing cul-de-sacs at both the northern (at Thames Road) and southern ends (near Robinson Road).

It is anticipated that construction of the proposal would commence in late 2016 / early 2017 and would be open to traffic by the end of 2019.

1.4 Scope of this assessment

The purpose of this report is to document the results of the assessment of the potential non-Aboriginal heritage impacts of the operation and construction of the proposal. The report supports the REF for the proposal. The scope of assessment included:

- An overview of the historical development of the proposal site boundary
- Identification of heritage items and potential archaeological sites within the proposal site boundary
- A site inspection
- Assessment of historical archaeological potential and significance within the proposal site boundary
- Conclusions and recommendations including proposed mitigation strategies for the management of significant archaeological resources and statutory requirements.



1.5 Report structure

- Section 2 Legislative context: outlines relevant legislation for this assessment and provides information on heritage inventory searches
- Section 3 Historical context: provides a succinct historical overview of the proposal site
- Section 4 Site inspection: describes the site inspection conducted for this assessment
- Section 5 Heritage assessment: provides an assessment of listed heritage items, cultural and visual landscapes and unlisted heritage items relevant to the proposal site
- Section 6 Archaeological potential: assesses the archaeological potential of the proposal site
- Section 7 Impact assessment: assesses potential impacts to identified heritage items, visual and cultural landscapes and unlisted heritage items
- Section 8 Mitigation measures: outlines relevant mitigation measures for the proposal
- Section 9: Conclusions and recommendations

1.6 Limitations and constraints

Ten properties that were not accessible for the current investigation would be investigated once the access is available and would be undertaken prior to works commencing on site (see Figure 2).

1.7 Report authorship and acknowledgements

This report was prepared by Claire Rayner, Archaeologist at Artefact Heritage, with contributions by Josh Symons, Senior Archaeologist. Dr Sandra Wallace, Principal Archaeologist at Artefact Heritage, provided review, management input and advice.

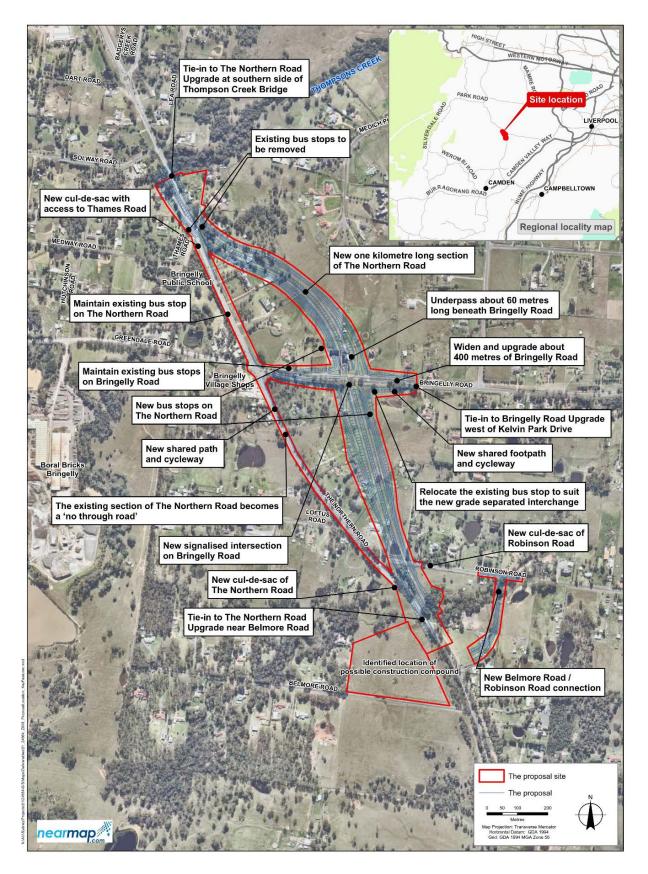


Figure 1: The proposal site boundary key features map (image provided by GHD)

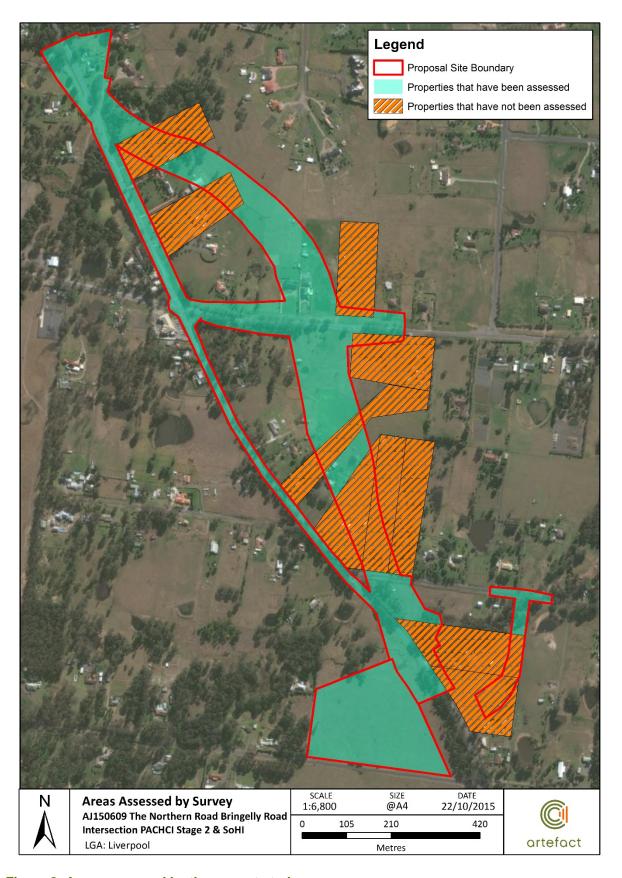


Figure 2: Areas assessed by the current study

2.0 LEGISLATIVE CONTEXT

2.1 Introduction

There are several items of State legislation that are relevant to the current study. A summary of these Acts and the potential legislative implications for the proposed development follow.

2.2 Heritage Act 1977

The NSW *Heritage Act 1977* (Heritage Act) is the primary item of State legislation affording protection to items of environmental heritage in NSW. The Heritage Act is designed to protect both listed heritage items, such as standing structures, and potential archaeological remains or relics. 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 automatic protection under the Heritage Act against any activities that may damage or affect its heritage significance.

State Heritage Register

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). This 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.

There are no items listed on the SHR located within the proposal site boundary.

Section 170 Registers

Under the Heritage Act all government agencies are required to identify, conserve and manage heritage items in their ownership or control. Section 170 requires all government agencies to maintain a Heritage and Conservation Register that lists all heritage assets and an assessment of the significance of each asset. They must ensure that all items inscribed on its list are maintained with due diligence in accordance with State Owned Heritage Management Principles approved by the Government on advice of the NSW Heritage Council. These principles serve to protect and conserve the heritage significance of items and are based on NSW heritage legislation and guidelines.

The Bringelly Public School Group is listed on the s170 Register of the Department of Education and Communities. It is located outside the proposal site boundary.

Archaeological relics

Part 6 Division 9 of the Heritage Act protects archaeological 'relics' from being exposed, moved, damaged or destroyed. This protection extends to situations where a person has reasonable cause to suspect that archaeological remains may be affected by the disturbance or excavation of the land. It applies to all land in NSW that is not included in the SHR. 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





Sections 139-145 of the Heritage Act prevent the excavation or disturbance of land known or likely to contain relics, unless in accordance with an excavation permit. Excavation permits are issued under Section 140 of the Heritage Act, or Section 60 for sites listed on the SHR. Excavation Permit Applications must be supported by an Archaeological Research Design. Section 146 of the Heritage Act requires that any discovery or location of a 'relic' is reported to the Heritage Council.

If the proposed works are minor and would have minimal impact on the heritage significance of the place or site, they may be granted an exception or exemption under Section 139 (4) of the Heritage Act.

Section 146 of the Heritage Act requires any person who is aware or believes that they have discovered or located a relic must notify the Heritage Council of NSW providing details of the location and other information required.

Works

The Heritage Act identified 'works' as being in a separate category to archaeological 'relics.' 'Works' refer to past evidence of infrastructure. 'Works' may be buried, and therefore archaeological in nature, however, exposure of a 'work' does not trigger reporting obligations under the Heritage Act. 'Works', as items of environmental heritage, have the potential to provide information that contributes to our knowledge of past practices, and good environmental practice recognises this. Roads and Maritime, for example, uses its *Standard Management Procedure: Unexpected Heritage Items*^[1] to manage the discovery of such items.

Built Heritage

Built heritage includes those items and objects that are located above the ground surface. These items can include buildings such as factories, houses, hotels and churches as well as structures such as fences. Built heritage may also have a subsurface component such as basements and cemeteries. Built heritage includes areas, precincts and streetscapes.

2.3 Environmental Planning and Assessment Act 1979

The Environmental Planning and Assessment Act 1979 (EP&A Act) establishes the 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 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 proposal site boundary falls within the boundaries of the Liverpool and Camden LGA and is subject to the Liverpool LEP 2008 and Camden LEP 2010. This includes a schedule of local heritage items and planning controls related to development in the vicinity of heritage items.

^[1] Roads and Maritime July 2015: http://www.rms.nsw.gov.au/documents/about/environment/protecting-heritage/managing-development/unexpected-archaeological-finds-procedure.pdf



[1

Liverpool LEP 2008 and Camden LEP 2010

The proposal site falls within the Liverpool and Camden LEPs. The Liverpool and Camden LEPs aim to conserve the heritage significance of heritage items and heritage conservation areas, including associated fabric, settings and views; and to protect archaeological sites. The LEPs stipulates development controls in relation to development proposed on or near heritage listed properties, archaeological sites, or Aboriginal places of heritage significance.

There are two items listed on the LEPs that are located near the proposal site boundary. These are summarised in the table below and illustrated in Figure 3 and Figure 4.

Table 1: LEP items near the proposal site boundary.

ltem	Name	Location	LEP	Distance from proposal site boundary
17	Bringelly Public School Group	1205 The Northern Road	Liverpool 2008	Northern boundary of item adjacent to proposal site boundary
12	Cottage	1186 The Northern Road	Camden 2010	40 m

The Camden DCP 2011 also includes a list of Potential Heritage Items, including a sub-category of Cultural and Visual Landscapes. One cultural landscape located within the study is listed in the DCP as an item of potential heritage significance. This is the Bringelly Road/Greendale Road with its associated rural cultural landscape. The DCP states that "development should optimise the preservation and interpretation of the identified significant Cultural and Visual Landscapes" (page B55).

2.4 Environmental Protection and Biodiversity Conservation Act 1999

The *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act) provides a legislative framework for the protection and management of matters of national environmental significance, that is, flora, fauna, ecological communities and heritage places of national and international importance. Heritage items are protected through their inscription on the World Heritage List, Commonwealth Heritage List or the National Heritage List.

The EPBC Act stipulates that a person who has proposed an action that will, or is likely to, have a significant impact on a World, National or Commonwealth Heritage site must refer the action to the Minister for Sustainability, Environment, Water, Population and Communities (hereafter Minister). The Minister will then determine if the action requires approval under the EPBC Act. If approval is required, an environmental assessment would need to be prepared. The Minister would approve or decline the action based on this assessment.

A significant impact is defined as "an impact which is important, notable, or of consequence, having regarded to its context or intensity." The significance of the action is based on the sensitivity, value and quality of the environment that is to be impacted, and the duration, magnitude and geographic extent of the impact. If the action is to be undertaken in accordance with an accredited management plan, approval is not needed and the matter not need be referred to the Minister.

Commonwealth Heritage List

The Commonwealth Heritage List has been established to list heritage places that are either entirely within a Commonwealth area, or outside the Australian jurisdiction and owned or leased by the Commonwealth or a Commonwealth Authority. The Commonwealth Heritage List includes natural, Indigenous and historic heritage places which the Minister for Sustainability, Environment, Water, Population and Communities is satisfied have one or more Commonwealth Heritage values.

No sites within or near the proposal site boundary are included on the Commonwealth Heritage List.

National Heritage List

The National Heritage List has been established to list places of outstanding heritage significance to Australia. It includes natural, historic and Indigenous places that are of outstanding national heritage value to the Australian nation.

No sites within or near the proposal site boundary are included on the National Heritage List.

2.5 State Environmental Planning Policy (Infrastructure) [ISEPP] 2007

State Environmental Planning Policy (Infrastructure) 2007 (ISEPP) aims to facilitate the effective delivery of infrastructure across the State. ISEPP clarifies the consent arrangements for certain infrastructure projects.

Clause 94(1) of ISEPP permits development for the purpose of a road or road infrastructure facilities to be carried out, by or on behalf of a public authority, without consent on any land (except for land reserved under the *National Parks and Wildlife Act 1974* where it can only be carried out if it meets certain requirements).

As the proposal meets the definitions of 'road infrastructure facilities' provided for by clauses 93 and 94(2), and is being carried out by Roads and Maritime, it is permissible without consent under ISEPP. As a result, it can be assessed under Part 5 of the EP&A Act. Development consent from Liverpool and Camden councils is not required.

The proposal is not located on land reserved under the *National Parks and Wildlife Act 1974* and does not affect land or development regulated by *State Environmental Planning Policy No. 14 - Coastal Wetlands, State Environmental Planning Policy No. 26 - Littoral Rainforests, State Environmental Planning Policy (State and Regional Development) 2011 or State Environmental Planning Policy (<i>Transitional Major Projects*) 2005.

Part 2 of the ISEPP contains provisions for public authorities to consult with local councils and other public authorities before the commencement of certain types of development.





Figure 3: Liverpool LEP 2008 Heritage Map with proposal site boundary shown in red

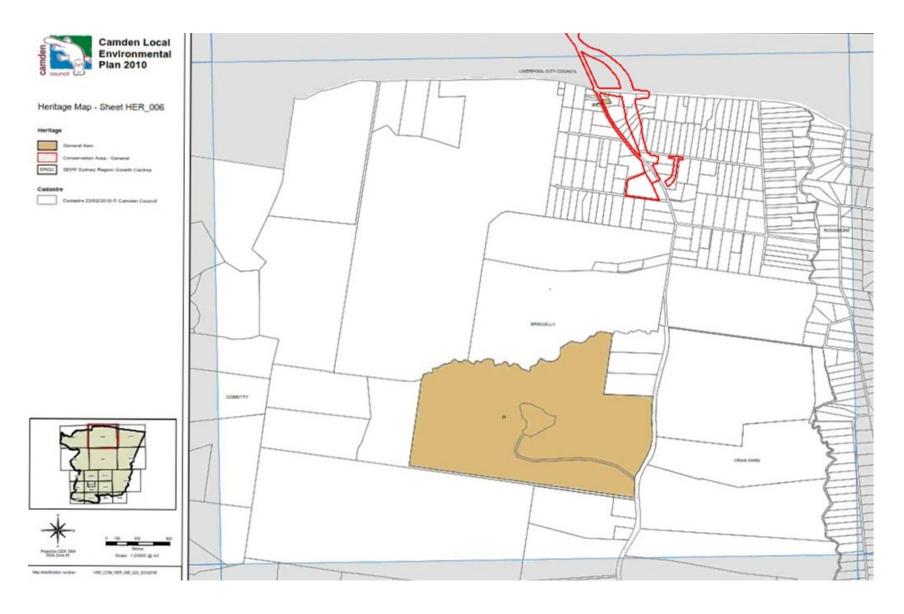


Figure 4: Camden LEP 2010 Heritage Map with the proposal site boundary shown in red

3.0 HISTORICAL CONTEXT

3.1 Aboriginal histories of the locality

Aboriginal people traditionally lived in small family or clan groups that were associated with particular territories or places. The language group spoken in the Bringelly area is thought to have been Dharawal¹. The Dharawal language group is thought to have extended from the Shoalhaven River, north to Botany Bay and then inland to Camden. Some sources also describe the Narellan area as being home to the Muringong people, speakers of the Darug language group².

There is some evidence that Aboriginal people around Narellan spoke a distinctly separate language and their tribal area was known as Cubbitch-Barta after its white pipe clay³. Government records from the 1830s and 1840s identify an Aboriginal group known as the Cobbiti Barta as associated with the Camden area⁴.

Historical records show that Gandangara people visited the Bringelly area. It is not known whether these visitations represented recent displacement patterns as a result of European colonisation or were part of a longer term interaction with the Dharawal⁵.

Laila Haglund has suggested that at contact the area would have been near the border of the Dharawal, Darug and Gandangara territories and that the Narellan Valley may have been part of a 'travel corridor' facilitating movement between the northern Cumberland Plain and the Illawarra⁶.

Historical observations suggest that Aboriginal people lived in the Bringelly area in relatively large numbers. Lieutenant Dawes observed that a number of bark huts, about 70 in all, located close to the river between the farms of Mr Wentworth and Mr Campbell at Narellan⁷.

British colonisation had a profound and devastating effect on the Aboriginal population of the Sydney region, including Dharawal, Darug and Gandangara speakers. However, into the nineteenth, twentieth and twenty-first century's descendants of Darug language speakers have continued to live in Western Sydney along with Aboriginal people from other areas of NSW.

3.2 Early colonial history

Exploration to the west of Sydney Cove began soon after initial colonisation, as it was found that the sandstone soils of coastal Sydney were unsuited for cultivation⁸. The Cumberland Plain, with its rich alluvial soils, offered better conditions for farming and land was cleared in the Cumberland Plain as early as the 1790s⁹. Settlement at first focused on the well-watered areas around the Hawkesbury and Georges Rivers, but soon began to spread further west and south.

The incentive for European exploration in the Camden district was the presence of a herd of wild cattle descended from two bulls and four cows that had escaped the first settlement in Sydney in 1788¹⁰. Thirteen years later, Governor Hunter explored the region personally after learning of the



¹ Tindale 1974

² Mathews and Everitt 1900:265

³ Russell 1914

⁴ JMcDCHM 2007:21

⁵ Karskens 2010:496

⁶ JMcDCHM 2007:21 after Haglund 1989

⁷ Barton 1996

⁸ FORM 2006 in Austral 2011

⁹ FORM 2006 in Austral 2011

¹⁰ Wrigley 2001

cattle from other colonists, and named the district the Cowpastures¹¹. The southern limit of the Cowpastures was Stonequarry Creek at Picton and the district extended beyond Narellan to the north, though its northern boundary was never formally defined¹². Attempts to preserve the cattle were made by Governor King who established a series of government outposts throughout the region from 1802¹³.

3.3 Early land grants

As favourable land was discovered, the successive governors of the colony issued land grants as a way to encourage settlers to become self-sufficient and to produce food for the colony. Large areas of land were initially granted to the retired officers of the NSW corps, and by 1800 to members of the colony's elite. Within four years of colonisation, land grants were becoming a source of increasing wealth and status for many colonists.

No land grants were made in the Cowpastures district until 1805, when John Macarthur was granted 5000 acres in the region to breed sheep, and his associate, Walter Davidson, was granted a neighbouring property of 2000 acres ¹⁴. By 1808, small settlements had begun to gather along the Sydney side of the Nepean River. This increasing interest in the district was the result of the failure of the colony's main agricultural frontier, the Upper Hawkesbury, which was suffering from flooding and exhausted soils. However, King's successor, Governor Bligh, continued to restrict settlement in the Cowpastures district and therefore most Crown grants in the area were not made until after 1810, when Lachlan Macquarie succeeded him ¹⁵.

Macquarie supported a policy of land settlement based on small grants, as he believed small farming maximised productivity. In the Parish of Narellan between 1810 and 1818, Macquarie made 18 small grants of 100 acres or less, along with 10 larger grants of 150 to 3000 acres. In the southern part of the Parish of Cook (near Cobbitty), he made 25 small grants of between 20 and 100 acres, and 10 larger grants. Several large grants were also made in the Parish of Bringelly after 1815.

The proposal site intersects two of these grants made in the Parish of Bringelly and the Parish of Cook. The first of these consisted of 600 acres granted to Charles Reid in 1818¹⁶. Reid later sold the grant to Thomas Laycock who had obtained the neighbouring property¹⁷. The second grant located in the Parish of Cook was obtained by William Hutchinson also in 1818¹⁸. Hutchinson owned land to the north and south of Bringelly road named "Cow Pastures". These land grants are summarised below.

William Hutchinson – Cowpasture Farms

The Northern Road passes through four grants made to William Hutchinson, two south of Bringelly Road and two north of it (Figure 5). Those to the south were granted in 1816 (600 acres) and 1817 (250 acres), and were known as the Cowpasture Farms¹⁹ (Figure 5). The northern grants, of 200 and 700 acres, were granted in 1818 and subsequently became the site of the Bringelly Township²⁰. Hutchinson's properties were separated into separate titles which were then sub-divided again to be let to tenant farmers²¹. A homestead was therefore never built on his holdings.

²¹ Perumal Murphy in Austral 2011



¹¹ Mylrea 2002:6

¹² Atkinson 1988:8-9

¹³ GML 2008

¹⁴ Atkinson 1988:9-10

¹⁵ Ibid 11

¹⁶ Bringelly Fact Sheet n.d

¹⁷ Bringelly Fact Sheet n.d

¹⁸ Bringelly Fact Sheet n.d

¹⁹ AMAC 2008

²⁰ Liverpool City Council n. d.

Hutchinson arrived in the colony as a convict in 1799. Following an offence after his arrival in Australia, Hutchinson was sent to Norfolk Island. He went on to become Superintendent of convicts in 1809 and assisted in the evacuation of the island in 1813-1814. On his return to Sydney in 1814, he was appointed principal superintendent of convicts and public works and later became principal wharf finger²². Hutchinson is credited as the colony's first banker as he took care of other people's money in large wooden chests²³. He later became director of the Bank of New South Wales, the Australian Wheat and Flour Co., and two insurance companies, as well as being involved with prominent Sydney schools.

Hutchinson married Mary Cooper in 1801 with whom he had eight children. He married again in 1825 to Jane Roberts²⁴. The 1828 Census listed his and Roberts address as George Street, Sydney²⁵. By this time Hutchinson and one of his sons had come to own 1915 acres of land of which 250 were cleared and 80 were cultivated, 103 horses and 873 cattle.²⁶

Charles Reid - Cottage Grove

In 1818, Charles Reid was granted 600 acres at the intersection between Bringelly Road and The Northern Road (Figure 5). He named this land Cottage Grove and sold it to Thomas Laycock, who already owned the adjoining Cottage Vale property to the north²⁷. Laycock had arrived in Australia in 1791, joining the NSW Corps four years after his arrival²⁸. Laycock was granted 600 acres in 1818 after serving in the American war. Cottage Vale later became known as the Retreat and then Kelvin²⁹. The homestead was built in 1820. Laycock died in 1823 at the age of 37.

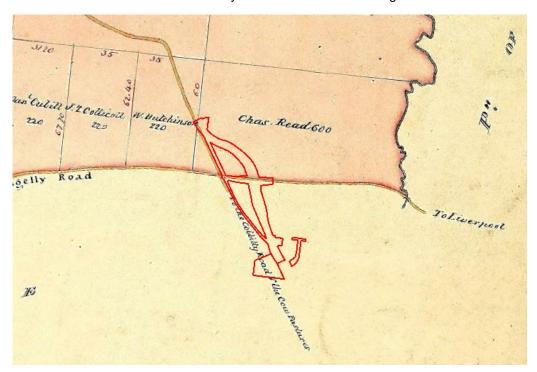


Figure 5: Bringelly parish map showing the proposal site boundary (red outline) in relation to Hutchinson, Reid and Laycock's land grants³⁰

³⁰ Note the misspelling of Charles Reids last name as Read in the Parish Map



artefact.net.au

²² Le Roy 1966

²³ Wrigley 2001

²⁴ AMĂC 2008

²⁵ AMAC 2008 26 AMAC 2008

²⁷ Prospect Trust 1985

²⁸ FORM 2006 in Austral 2011

²⁹ Austral 2011

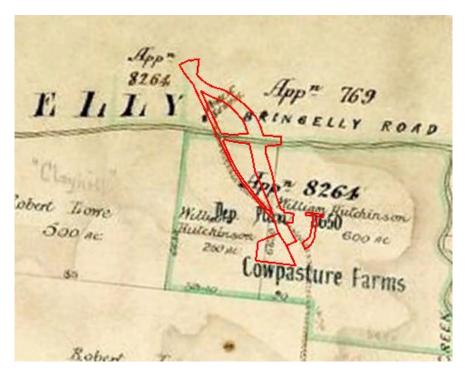


Figure 6: Cook parish map showing Cowpasture Farms in relation to the proposal site boundary (red outline)

3.4 Patterns of land ownership and subdivision

The accumulation of land

The government of the colony favoured the idea of small farms as it was believed they would maximise productivity, allow the working-classes to become self-sufficient, and encourage an ideal way of life 31. Throughout the nineteenth century, various initiatives were introduced to try to regulate the size of farms and limit the amount of land that individuals could be granted. However, these initiatives tended to be unsuccessful as land was often unsuitable for intensive agriculture and many blocks were too small to generate a sufficient income to live on. It was common for wealthy landowners to accumulate further land adjoining or near to their initial grant, either through further land grants or purchase. Consequently, when grantees sold part or all of their land, it was often bought by other local landowners, many of whom also acquired land elsewhere in NSW. This trend is clearly evident in the histories of the early land grants and their owners.

Within the proposal site boundary, William Hutchinson is recorded in the 1828 census as living on George Street in Sydney. He would eventually acquire considerable property throughout the state, including land near Moss Vale, Bargo, Mittagong, Sutton Forest and Bong Bong, as well as a Waterloo flour mill. Charles Reid sold his property Cottage Grove to Thomas Laycock, another local landowner in the Bringelly area.

Leasing land

Those who owned large areas of land often raised further revenue by leasing portions of their land to farmers, and these portions frequently became the first parts of a grant to be sold. Generally, leasing occurred on a fairly ad hoc basis as it became necessary or beneficial for the owner of the land. However, William Hutchinson's land grants in Bringelly, known as the Cowpasture Farms, were systematically leased in their entirety. The Cowpasture Farms was a speculative venture which involved the separation of the property into smaller tenancies from the beginning, to be let to tenant

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³¹ Davison 2005

farmers. Hutchinson's land was later subdivided into separate titles, which were then further subdivided ³².

Subdivision

Until relatively recently, subdivision was minimal over most of the land in the vicinity of the proposal site. The main township of Bringelly is situated on land that was subdivided from William Hutchinson's Cowpasture Farms. Early subdivision of Thomas Laycock's land occurred in 1896 when part of the property was resumed for urban development for the school, Bringelly Post Office and construction of Bringelly Road³³.

Generally, the land in the vicinity of the proposal site has remained predominately rural. The district is currently part of the Sydney South West Growth Centre, and it is expected that the urbanisation of the area will continue to intensify.

3.5 The growth of villages and towns

The development of villages and townships in the Cowpastures District began at Cawdor, where a Government station with a cottage and stockyard was built in 1815. It was hoped that the wild cattle of the Cowpastures could be captured and tamed there. In 1820, Governor Macquarie visited the station and named it 'Cawdor'³⁴. Cawdor developed into the centre of the district for a few years, however the lack of a reliable water supply and the development of the village of Camden in the early 1840s meant that the village soon declined³⁵.

3.5.1 Bringelly

The area of Bringelly was first visited by Europeans in 1802 when the explorer William Caley first travelled through the area ³⁶. Governor Macquarie visited the area in 1810 and recognised its potential for grazing especially since the colony's runaway cattle had been found in the area ³⁷. The first land grant in the area was submitted to Robert Lowe in 1812 to the south east of the proposal site boundary. The name "Bringelly" is possibly derived from an Aboriginal word meaning "unobtainable" or the Welsh name meaning "hill in the meadow" or "meadow hill" By 1826 there was a solid network of roads in the district including Bringelly Road and The Northern Road between Camden and Richmond and the Old Cowpasture Road ⁴⁰. The settlement of Bringelly was established in 1891 with the subdivision of grants in the area. Although the wider area was known as the Parish of Bringelly, the town officially became Bringelly when the post office, opened in 1857, was named Bringelly Post Office in 1863 ⁴¹.

Bringelly Public School was established in 1878 to replace an earlier and dilapidated school at Cabramatta. Initially the school property consisted of 10 acres of land, a farmhouse and a detached slab kitchen, sold to the Council of Education by George Stanfield⁴². This portion of land is located within the south western portion of Cottage Grove originally submitted to Charles Reid. Formerly functioning as the local post office, the house was built of brick and was converted into a combined

⁴² SRNSW[5/15090.1] Letter from George Stanfield to Council of Education, 16th Aug 1877'



³² Austral 2011

³³ AMAC 2008

³⁴ Mylrea 2002

³⁵ Mylrea 2002

³⁶ Form 2006 in Austral 2011

³⁷ Perumal Murphy 1990 in Austral 2011

³⁸ Tan 1978 in Austral 2011

³⁹ Adams 1978 in Austral 2011

⁴⁰ Kass 2004 in Austral 2011

⁴¹ Bringelly Fact Sheet n.d

classroom with attached accommodation for a teacher⁴³. In 1894, a new teacher's residence was built, and the old residence/classroom was converted entirely into a classroom. By 1897, the classroom building was in poor repair and it was replaced by a new building, which is still standing⁴⁴.

The Bringelly post office, opened in 1857 and originally named Luddenham post office, was located to the north of the current location of the Bringelly Public School (Figure 7). George Standfield later took over the operations of the post office in 1874 and moved it to his house that he would then sell to the Council of Education for the site of Bringelly Public School ⁴⁵. The post office was moved in 1895 to the south of Bringelly Road, adjacent to the Nepean Shire Council building.

During the twentieth century, further community services were established around the post office. In 1914, an agency of the Commonwealth Bank opened, and by 1925 a grocery business was being conducted in conjunction with the post office. The Camden LEP listed cottage at 1186 The Northern Road was built in 1923 to house the Nepean Shire Clerk, the offices of which were located across the road at 1185 The Northern Road 46. A Methodist/Wesleyan Church was erected in the village at 991 Bringelly Road in the early 1900s. However, it was destroyed by fire on 31 December 1963 and not restored. These buildings are all visible on the 1947 aerial photographs of the region shown in Figure 7.

In the 1960s, the post office was moved into the new complex of shops built on the corner of The Northern Road and Greendale Road⁴⁷. The population of Bringelly increased rapidly in the late 1950s, with the school's enrolment growing by 20 between 1957 and 1960⁴⁸.

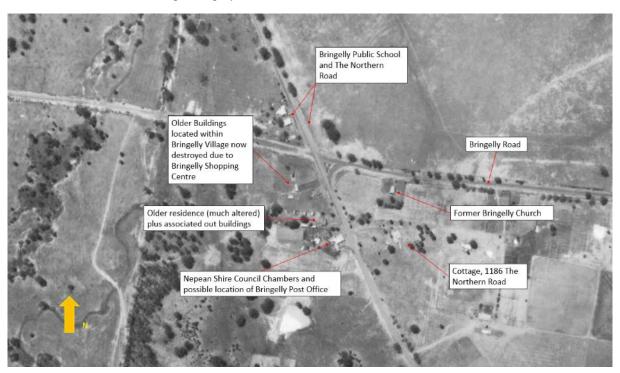


Figure 7: 1947 Aerial photograph of Bringelly Village and immediate surrounds showing early buildings in the village 49

⁴⁹ Source: Austral Archaeology 2011



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⁴³ SRNSW [5/15090.1] Memo to District Inspector, 28th June 1889

⁴⁴ Bringelly Public School 1978

⁴⁵ Austral 2011

⁴⁶ Austral 2011

⁴⁷ Austral Archaeology 2011

⁴⁸ Bringelly Public School 1978

3.6 Agriculture

The Camden and Bringelly area was predominately an agricultural district until recently, and even now agricultural activities play a role in the local area. During the 1840s, wheat cultivation was a major industry in the district and several flour mills were established to process this wheat, including Perry's flour mill at Orielton⁵⁰ south of the proposal site boundary. However, in the early 1860s, an outbreak of rust destroyed the wheat industry and landholders diversified into other avenues of agricultural production⁵¹. These included sheep, cattle, dairying, crops such as oats, and fruit and vegetable cultivation. During the 1930s depression, many of the large properties in the area were subdivided and smaller farms for orchards or poultry became more common⁵².





⁵⁰ Atkinson 1988 51 Atkinson 1988 52 Willis n. d.

4.0 SITE INSPECTION

4.1 Background

A site inspection of the proposal site was conducted on 15 July and 24 July 2015 by Josh Symons (Senior Archaeologist) and Claire Rayner (Archaeologist). The aim of the inspection was to identify and assess any areas of archaeological potential, unlisted heritage items or heritage views and vistas within the proposal site. The inspection was undertaken on foot and a photographic record was made.

4.2 Site Inspection Results

The proposal site is generally comprised of cleared fields and residential properties (Plate 1). Disturbance related to agricultural and residential development is apparent throughout the proposal site. The construction of dams, houses, sheds, sealed driveways and roads can be observed within all of the properties inspected during the site visit (Plate 2). These disturbances are generally limited to the portion of the properties closest to The Northern Road, Bringelly Road and Medich Place.

During the site inspection three concrete footings were identified within property 1160 The Northern Road (Plate 3-Plate 6). Observations of the Bringelly Public School Group and Cottage, and 1186 The Northern Road were also made from the proposal site area. GPS coordinates were taken for the footings and the locations were compared with historical aerial images (Figure 7). The footings appear to be associated with three sheds that are visible on the 1947 and 1955 aerial images.

No other items of unlisted heritage or archaeological potential were identified during the site visit.

Photographs of views and vistas were taken throughout the site inspection.





Plate 1: Cleared fields, typical of the proposal site
Plate 2: Ground disturbance associated with residential construction





Plate 3: Concrete footing, 70 centimetre scale Plate 4: Concrete footing, 70 centimetre scale







Plate 6: Close up of concrete footing

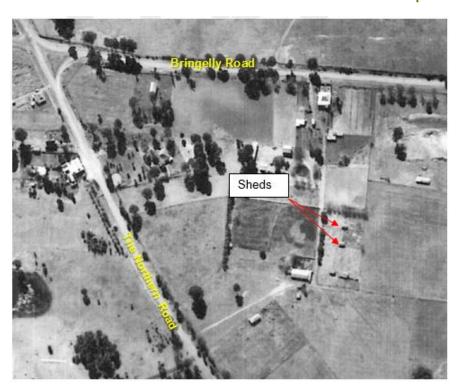


Figure 8: 1955 Aerial showing Bringelly Road, The Northern Road and sheds

5.0 HERITAGE ASSESSMENT

5.1 Listed heritage items

There are two heritage items listed on the Liverpool or Camden LEPs located within 50 m of the proposal site boundary.

5.1.1 Bringelly Public School

The Bringelly Public School Group, including the entire school property, is listed on the Liverpool LEP. Located at the corner of Bringelly Road and The Northern Road, the school block fronts The Northern Road along its western side. The item is also listed on the s170 Register of the Department of Education and Communities. The heritage listing includes everything within the heritage curtilage shown in Figure 9. The northern portion of the curtilage is immediately adjacent to the proposal site boundary.

Table 2: Register listing for Bringelly Public School group

Register	Area included in listing	Individual elements named in listing
Liverpool LEP 2008	Lot 50, DP 746911	School houseFormer headmaster's residence
s170 register	Lot 50, DP 746911	School houseFormer headmaster's residence

History

The school was established in 1878 to replace an earlier and dilapidated school at Cabramatta. Initially the school property consisted of 10 acres of land, a farmhouse, and a detached slab kitchen, sold to the Council of Education by George Stanfield⁵³. Formerly functioning as the local post office, the house was built of brick and was converted into a combined classroom with attached accommodation for a teacher⁵⁴. In 1894, a new teacher's residence was built, and the old residence/classroom was converted entirely into a classroom. By 1897, the classroom building was in poor repair and it was replaced by a new building, which is still standing⁵⁵.

The school included an area for a garden in the corner of the grounds near the existing intersection of The Northern Road and Bringelly Road, as well as grazing land for the pupils' horses. The children maintained the garden and there is reference⁵⁶ from one former student to finding old bricks, foundation material, clinkers, and cinders while digging in the garden during his attendance at the school in around 1915. It is thought that the clinkers were associated with the blacksmith's forge once located on the south-western corner of The Northern Road and Bringelly Road existing intersection, while the structural material is likely to have been the remains of the original classroom building formerly owned by George Stanfield⁵⁷.

The initial attendance of the school was 20 children, which increased to 50 in the early 1890s as settlement in the area increased⁵⁸.

⁵⁸ Bringelly Public School 1978



⁵³ SRNSW [5/15090.1] Letter from George Stanfield to Council of Education, 16th Aug 1877'

⁵⁴ SRNSW [5/15090.1] Memo to District Inspector, 28th June 1889

⁵⁵ Bringelly Public School 1978

⁵⁶ Bringelly Public School 1978

⁵⁷ Austral Archaeology 2011



Figure 9: Bringelly Public School group - heritage curtilage and locations of historic buildings (blue arrows)⁵⁹ Proposal site boundary outlined in red.

Description

Both the teacher's residence and the school building constructed in 1897 are still present at the site (Figure 8). The teacher's residence is a single storey building, oriented to the east, with a verandah on the eastern side (refer to Plate 7and Plate 8). It had been in use as the administration centre for the school but was recently vacated due to safety concerns over large cracks in the walls⁶⁰. The schoolroom is also a single storey building, oriented to the east. It is currently used as a classroom, while the in-filled verandah on the northern side is used by the Bringelly Baby Clinic and the Hoxton Park Community Health Centre⁶¹.

Both buildings front The Northern Road and are located about 350 m south of the proposal site boundary.

⁶¹ Office of Environment and Heritage n. d. "Bringelly Public School Group, Primary School"



⁵⁹ Liverpool LEP 2008 heritage curtilage in pink; (Background image from www.nearmap.com)

⁶⁰ Office of Environment and Heritage n. d. "Bringelly Public School Group, Residence"



Plate 7: Former teacher's residence, facing north-west 62



Plate 8: Former teacher's residence in relation to The Northern Road, facing south-east 63

5.1.2 Cottage 1186 The Northern Road, Bringelly

1186 The Northern Road, Bringelly is listed on the Camden LEP 2010 (see Table 3 below). It is located close to the existing intersection of The Northern Road and Bringelly Road and fronts The Northern Road on the east. The heritage curtilage includes the entire property (see Figure 9). The eastern boundary of the item is located about 40 m south-west of the proposal site boundary.

Table 3: Register listing for 1186 The Northern Road, Bringelly

Register	Area included in listing	Individual elements named in listing
Camden LEP 2010	Lot 4, DP 173593	Cottage

History

The cottage at 1186 The Northern Road, Bringelly is around 140 m to the south of the corner of The Northern Road and Bringelly Road (Lot 4 DP 173593). The property was originally part of 250 acres granted to William Hutchinson in 1818 and remained part of a larger block on the corner of Bringelly Road and The Northern Road until at least 1911. During the late nineteenth century this block was

⁶² Artefact Heritage 2011 ⁶³ ibid

owned by Robert Watson, the Bringelly store keeper, and the store was located on its northern edge⁶⁴. By 1923, the larger block had been subdivided to create the current lot, which was then in the possession of the Council of the Shire of Nepean⁶⁵. The cottage was constructed in 1923, opposite the Nepean Shire Council Chambers, and was originally the Shire Clerk's residence. Figure 10 shows the locations of the cottage and the former council chambers. The house has been occupied by the current owners, Mr and Mrs Rogers, since 1950.



Figure 10: Location of former council chambers and cottage 66 Proposal site boundary outlined in red.

Description

The cottage is Edwardian in style and is set back 40 m from The Northern Road and 100 m from Bringelly Road, with the space around it vegetated with scrubby regrowth (refer to Plate 9 and Plate 10). The cottage is intact and in excellent condition.

⁶⁶ 1186 The Northern Road heritage curtilage in pink; blue arrows indicate cottage and former council chambers. (Background image from LPI)



 ⁶⁴ Certificate of Title Vol. 1044 Fol. 171
 ⁶⁵ Certificate of Title Vol. 3429 Fol. 151



Plate 9: Cottage at 1186 The Northern Road, from the north-west⁶⁷



Plate 10: Cottage from driveway, facing south-east

5.2 Cultural and visual landscapes

One cultural and visual landscape is listed on the Camden DCP (2011) as an item of potential heritage significance. This includes the Bringelly Road/Greendale Road corridor with its associated rural cultural landscape.

History

The cultural and visual landscape of the proposal site incorporates the history of the region and the local history of land grants, subdivision and pastoral activity. The Northern Road and Bringelly Road alignments through the proposal site are key features of the cultural and visual landscape. They are visual focal points from neighbouring properties, as well as distinctive features and alignments on maps and aerial photographs. The road corridors are also the focus of transport and access to local properties and the region as a whole.

The current alignments of The Northern Road and Bringelly Road were in place prior to 1826, with the surrounding area opened to pastoral activities from that period onwards. The large land grants in the

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area began to be subdivided from 1891 onwards. The current landscape is made up of numerous semi-rural properties. Land-use across the properties varies greatly, with pastoral activities still practiced on several properties. Other land-use activities include market gardening, bushland regeneration, and use for recreational purposes.

Description

The rural nature of the proposal site that was established with the first land grants is still visible across the proposal site (see Plate 11 to Plate 14). This includes ongoing use of the land for pastoral and market gardening activities, and wide sweeping visual references to the rural nature of the area. Existing farm structures, including sheds, and evidence of former structures, such as concrete pads, support the visual reference to the rural landscape. The rolling terrain and local highpoints through the proposal site add to visual amenity.



Plate 11: View north from a local highpoint north of Bringelly Road.



Plate 12: View north across rolling rural land south of Bringelly Road.



Plate 13: View southwest towards a farm shed located immediately outside the proposal site boundary.



Plate 14: View northwest across cleared, grassy land typical of the rural landscape within the proposal site.

5.3 Unlisted Heritage Items

5.3.1 The Northern Road and Bringelly Road

History

Bringelly Road and the section of The Northern Road between Cobbitty Road and Bringelly Road has been in existence since at least 1826. A plan from this time named it the "Northern Road from Camden" and showed it running straight down from Bringelly Road to Cobbitty Road, crossing Lowes Creek (Figure 11). This route differed vastly from plans made in the following years and seemed to ignore all topographic obstacles. Therefore it is safe to assume that this was a simplified, schematic illustration rather than an accurate plan. This drawing also showed the road continuing from Cobbitty Road to meet The Cowpasture Road (now Camden Valley Way) in Narellan.

A plan from 1834 shows the intersection of The Northern Road and Bringelly Road (Figure 12). The map also shows a more accurate alignment of the road than the 1826 plan.

Aerial photographs from 1947 and 1955 (1955 aerial shown in Figure 13) show that the current alignment of The Northern Road and Bringelly Road has not changed in the intermediate period.

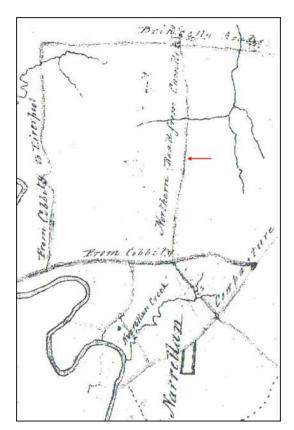


Figure 11: 1826 plan showing The Northern Road and Bringelly Road (Bringelly Road running across the top of the map)⁶⁸

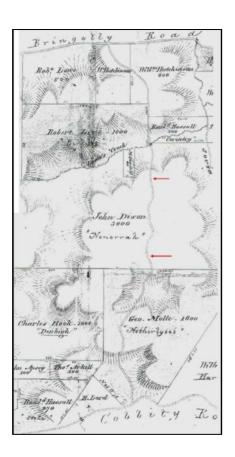


Figure 12: 1834 plan showing The Northern Road and Bringelly Road (Bringelly Road running across the top of the map)⁶

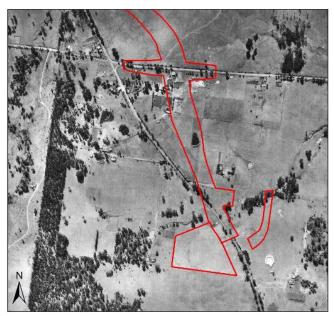


Figure 13: 1955 aerial with the proposal site boundary indicated in red.

⁶⁹ Red arrows indicate The Northern Road. Anon. (1834) "Cook, Cobbitty District" Mitchell Library Z M2 811.1133/1834/1(Source: AMAC 2008:70-1)



 $^{^{68}}$ Red arrow indicated The Northern Road. "Plan of Roads in District of Cook" Mitchell Library Z M2 811.112/1826/1

Description

The current alignment of Bringelly Road and The Northern Road within the proposal site boundary matches that shown in the 1955 aerial photograph (Figure 15). No former alignments of either road have been identified within the proposal site boundary. The current surface of both roads is bitumen, whilst the margins of each road comprises a mix of regrowth and old growth trees, and olive bushes.

5.4 Significance Assessment

Determining the significance of archaeological items or items of heritage significance is carried out 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 significance is outlined through legislation in the Heritage Act and implemented through the NSW Heritage Manual and the Archaeological Assessment Guidelines. 70 If an item meets one of the seven heritage criteria, and retains the integrity of its key attributes, it can be considered to have 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.

- '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. 71

The heritage significance assessment criteria are outlined in Table 4.

Table 4: 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.			
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.			

⁷⁰ NSW Heritage Office 1996: 25-27

⁷¹ This section is an extract based on the Heritage Office Assessing Significance for Historical Archaeological Sites and Relics 2009:6.



Criteria	Description				
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): cultural or natural places; or cultural or natural environments.				

The NSW Heritage Office publication 'Assessing Heritage Significance' (2001) has outlined standard grades of significance for items of heritage significance (though not for archaeological relics). These are outlined in Table 5. Items to be impacted by the proposal have been assessed using these criteria.

Table 5: Standard grades of significance.

Grading	Justification	Status	
Exceptional (E)	Rare or outstanding element directly contributing to an item's local and State significance.	Fulfils criteria for Local or State listing.	
High (H)	High degree of original fabric. Demonstrates a key element of the item's significance. Alterations do not detract from significance.	Fulfils criteria for Local or State listing.	
Moderate (M)	Altered or modified elements. Elements with little heritage value, but which contribute to the overall significance of the item	Fulfils criteria for Local or State listing.	
Little (L)	Alterations detract from significance. Difficult to interpret.	Does not fulfil criteria for Local or State listing.	
Intrusive (I)	Damaging to the item's heritage significance.	Does not fulfil criteria for Local or State listing.	

The following sections will outline the heritage significance of those heritage items that may be impacted by the proposal, and will provide a statement of heritage significance of the potential archaeological resources.

5.4.1 Built items

Heritage significance of The Bringelly Public School Group

The heritage significance of the Bringelly Public School Group is listed on the OEH State Heritage Inventory⁷². This assessment has been included in Table 6.

⁷² This information can be accessed online via the Office of Environment & Heritage, State Heritage Inventory



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Table 6: Significance assessment of Bringelly Public School

Criteria	Significance assessment				
A – Historical Significance	The site demonstrates the history of the initial foundation and development of formal education in the region.				
Significance	This item has local significance under this criterion.				
B – Associative Significance	Whilst the school group may have associative significance for former pupils and students it is not associated with the life or works of a person or group of persons of importance in the local area's cultural or natural history.				
	This item does not meet the local significance threshold under this criteria.				
C - Aesthetic	The school group is an aesthetically pleasing example of a late nineteenth century semi-rural school complex.				
Significance	This item has local significance under this criterion.				
D – Social Significance	The school group has been in operation as a school since 1878. It has social significance for those who have attended or taught at the school in the past and their descendants as well as those attending and teaching at the school today. The school has been an important and prominent landmark within Bringelly Village and continues to be so today.				
	The item has local significance under this criterion				
E – Research	Further documentary research, architectural analysis, and archaeological research could reveal information about educational practices and the domestic lives of teachers and their families.				
	This item has local significance under this criterion.				
F – Rarity	The former teacher's residence is a rare surviving residence from the early years of settlement at Bringelly.				
	This item has local significance under this criterion.				
G – Representative	The site is representative of the simple, functional design of educational buildings from the late nineteenth/early twentieth century.				
	This item has local significance under this criterion.				

Statement of significance

The Bringelly Public School Group is significant at a local level as a site which demonstrates the history of settlement and education in the area. The classroom building is representative of educational buildings from the late nineteenth and early twentieth century, while the teacher's residence is representative of the design of teachers' residences commonly built in association with rural schools at this time. Further architectural, archaeological, and documentary research could reveal information about both education and domestic life during the late nineteenth and twentieth centuries.



Heritage significance of the Cottage, 1186 The Northern Road

The heritage significance of the cottage at 1186 The Northern Road has been previously assessed by Artefact Heritage against the NSW heritage significance criteria⁷³. The assessment is included in Table 7.

Table 7: Significance assessment of the cottage at 1186 The Northern Road

Criteria	Significance assessment				
A – Historical Significance	The cottage is of local historical significance. It is situated on land originally owned by William Hutchinson, whose property was one of the earliest land grants in Bringelly, and demonstrates the history of settlement of Bringelly Village. It was built in 1923 as the Shire Clerk's residence.				
	This item has local significance under this criterion.				
B – Associative	The site does not have any associations with prominent members of the local community.				
Significance	This item does not meet the local significance threshold under this criteria.				
C - Aesthetic	The site has local aesthetic significance as an Edwardian style house and outbuildings.				
Significance	This item has local significance under this criterion.				
D – Social	Whilst the site has some associations with the establishment of the Nepean Council in Bringelly Village it does not contain any substantial social significance.				
Significance	This item does not meet the local significance threshold under this criteria.				
E – Research	The cottage may provide information about the characteristics of early residences in Bringelly, and could also provide information about domestic life through archaeological deposits.				
Potential	This item has local significance under this criterion.				
E. Davita	The cottage is a rare surviving residence from the early years of settlement at Bringelly.				
F – Rarity	This item has local significance under this criterion.				
G –	The cottage may be representative of early residences in the area.				
Representative	This item has local significance under this criterion.				

Statement of significance

The property is significant at a local level as a surviving early residence of the town of Bringelly. The dwelling is now a rare 20th Century survivor of the historical growth of Bringelly Village, and which would be worthy of further historical research as to its associations with the village centre⁷⁴.

⁷⁴ This information can be accessed online via the Office of Environment & Heritage, State Heritage Inventory



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⁷³ Artefact Heritage 2012

5.4.2 Cultural and visual landscapes

Heritage significance of the Bringelly/Greendale Road cultural landscape

One cultural and visual landscape is listed on the Camden DCP (2011) as items of potential heritage significance. This includes the Bringelly Road/Greendale Road with its associated rural cultural landscape. The significance assessment of this item is summarised in Table 8.

Table 8: Significance assessment of the Bringelly Road/Greendale Road cultural and visual landscape

Criteria	Significance assessment
A – Historical Significance	The establishment of reliable roads was important for the movement of goods around the colony between the trading centres of Sydney, Parramatta and outlying farms. The establishment of Bringelly Road was important for the establishment of Bringelly Village.
	This item has local significance under this criterion.
B – Associative Significance	The road has some associative significance to the local areas development but does not have strong ties to any one person or group of people.
olgimicance	This item does not meet the local significance threshold under this criterion.
C - Aesthetic	The item maintains a clear visual link to the local area's agricultural history.
Significance	This item has local significance under this criterion.
D – Social Significance	The cultural landscape does not have any strong or special association with a particular community or cultural group in the local area.
Olgimicanoc	This item does not meet the local significance threshold under this criterion.
E – Research	The item does not have the potential to contribute to research questions concerning the local area's cultural or natural history.
roteittiai	This item does not meet the local significance threshold under this criterion.
F – Rarity	The item is not rare or uncommon.
r – Kailly	This item does not meet the local significance threshold under this criterion.
G – Representative	The Bringelly/Greendale Road is representative of the establishment of early transit routes that were important for the establishment of the villages in outer Sydney. Given the increasing residential subdivisions in the area and the widening of Bringelly Road this landscape is rapidly changing and no longer representative of rural cultural landscapes.
	This item does not meet the local significance threshold under this criterion.

Statement of significance

This landscape possesses historical and aesthetic significance at a local level as a rural landscape that has remained relatively intact since early settlement, and that maintains a clear visual link to the local area's agricultural history.



5.4.3 Unlisted item

The Northern Road and Bringelly Road

The heritage significance of The Northern Road and Bringelly Road has been previously assessed by Artefact Heritage against the NSW heritage significance criteria 75. The assessment is included in Table 9.

Table 9: Significance assessment of The Northern Road and Bringelly Road

Criteria	Significance assessment				
A – Historical Significance	The Northern Road and Bringelly Road are both early main roads in the colony and therefore important in the cultural history of the local area.				
O.g.mounou	The items have local significance under this criterion.				
B – Associative	The roads have some associative significance to the local areas development but do not have any strong ties to any one person or group of people.				
Significance	The items do not meet the local significance threshold under this criterion.				
C – Aesthetic Significance	The roads demonstrate the aesthetic characteristics of main roads in the local area. The construction methods used to build the roads may also demonstrate a high degree of technical achievement.				
	The items have local significance under this criterion.				
D – Social Significance	The roads do not have any identified strong or special association with a particular community or cultural group in the local area.				
Olgimicance	The items do not meet the local significance threshold under this criterion.				
E – Research	The roads have low potential for archaeological evidence of former road surfaces due to the ephemeral nature of those features.				
Potential	The items do not meet the local significance threshold under this criterion.				
F – Rarity	The roads are rare as early main roads that largely retain their original alignment.				
i — Nainty	The items have local significance under this criterion.				
G -	The Northern Road and Bringelly Road are representative of early main roads in the local area.				
Representative	The items have local significance under this criterion.				

Statement of significance

The Northern Road and Bringelly Road are important as some of the main routes through the early colony. The Northern Road and Bringelly Road can be assessed as being of Local significance. The Northern Road and Bringelly Road satisfy four of the potential criteria for heritage listing at a Local level, including Historic, Aesthetic, Rarity and Representativeness.

⁷⁵ Artefact Heritage 2012





6.0 ARCHAEOLOGICAL POTENTIAL

6.1 Background

Non-Aboriginal archaeological potential is defined as the potential of a site to contain historical archaeological relics, as classified under the *NSW Heritage Act* 1977. The following section provides a detailed archaeological assessment for the study area. Historical (non-Aboriginal) 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 following discussion of the historical archaeological potential of the study area is not intended to be exhaustive. Based on the history of the site and the likely lack of disturbance that has occurred in some areas, there is always some probability that unexpected historical archaeological remains may be encountered during works.

6.2 Previous Impacts

Earlier impacts need to be identified before an assessment of archaeological potential can be undertaken. This is because subsurface impacts associated with former or current land uses could remove or damage potential archaeological remains. Following the site inspection and the analysis of available archaeological reports and historical sources, it has been determined that the proposal site has a low potential to contain relics associated with the early settlement and habitation of Bringelly.

The proposal site has undergone little development since the earliest phase of non-Indigenous occupation commenced after 1815. The earliest land grants were typically large areas typically made to colonists living in Sydney. These areas were later subdivided. The analysis of aerial photography from 1947 and 1955 indicates that there has been little development of the area within the proposal site boundary other than the initial land clearance. The current lots bordering Bringelly Road to the north and south were established post 1955.

The main impacts to the proposal site have been the construction of residential and agricultural infrastructure, the modification of landforms in the creation of dams and the construction and maintenance of Bringelly Road and The Northern Road.

6.3 Discussion of Potential Archaeological Remains

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 potential impacts to the proposal site have been outlined in the previous section. Types of archaeological remains often found in agricultural and small-scale industrial contexts may include the following:

- Evidence for gardens, layout and use of the yard areas
- Fencelines which may assist with clarification of lot boundaries and indicate the internal use of lots
- Evidence of land clearing or modification, including major infilling events i.e. backfilling of dams or ponds
- Rubbish dumps and other occupational debris



- Pollen and soil evidence which can be analysed to reveal the types of crops and earlier vegetation located in the area
- Former road surfaces.

The potential impacts to the study area have been outlined in the previous section. A series of gradations of potential have been identified and mapped to indicate the degree to which archaeological remains are likely to survive within the study area. The identified levels of archaeological potential are:

Low potential: while there is likely to be quite high impacts in these areas, deeper sub-surface features such as wells, cesspits and their artefact-bearing deposits may survive.

Moderate potential: while there are impacts in this area, a range of archaeological remains are likely to survive across the site, including building footings and shallower remains as well as deeper subsurface features.

High potential: substantially intact archaeological remains could survive in these areas due to minimal post-depositional disturbances or because the land was a focal point of activity and in some cases both.

6.3.1 Phase 1: Early land grants (1810s – 1890s)

The area of Bringelly was first visited by Europeans in 1802 when the explorer William Caley first travelled through the area ⁷⁶. Governor Macquarie visited the area in 1810 and recognised its potential for grazing especially since the colony's runaway cattle had been found in the area 77. The first land grant in the area was submitted to Robert Lowe in 1812 to the south east of the proposal site boundary.

There are two main grants made in the Parish of Bringelly and the Parish of Cook located within the proposal site boundary. The first of these, 600 acres, was granted to Charles Reid in 1818. Reid later sold his grant to Thomas Laycock who had acquired the neighbouring property. The second grant, located south of Bringelly Road, was made to William Hutchinson in 1818 and named "Cow Pasture Farms". Hutchinson subdivided his land grants into smaller acerages to be let to tenant farmers in a speculative venture.

It is unlikely that a homestead was ever built on either of the properties and that Reid and Hutchinson's grants were largely used for grazing animals. Potential archaeological remains typically associated with these types of uses include evidence of landscape modification and vegetation removal (occasionally associated with the burning of tree stumps and opportunistic deposition of rubbish within resulting tree boles), evidence of lot divisions and fencelines, evidence of earlier road alignments, evidence of the formalisation of watercourses and evidence of modification of the landscape to suit agricultural purposes, such as the installation of garden beds, introduction of topsoil or evidence of ploughing.

Analysis of aerial photographs of the area indicate that prior to 1955 there had been little substantial impacts to the proposal site. The area north of Bringelly Road appears not to have been subdivided into smaller lots, whilst the area south of Bringelly Road has been subdivided although only small structures appear to have been constructed on the lots.

There are unlikely to be relics associated with early land grants within the proposal site boundary. Early plans of the area do not indicate that homesteads were built on the Reid or Hutchinson land

77 Perumal Murphy 1990 in Austral 2011



⁷⁶ Form 2006 in Austral 2011

grants. Therefore it is unlikely that the proposal site was inhabited at this time. Agricultural activities such as grazing would have left little material evidence and subsequent land use may have removed or damaged archaeological remains associated with them.

It is possible that archaeological remains of earlier road surfaces are preserved in the proposal site boundary. Godden Mackay Logan (2008) noted that where the existing road alignment of The Northern Road follows its historical alignment, there is the potential for early road surfaces to survive beneath the current surface. However, before the mid-twentieth century these roads were unsealed or insubstantial and remains related to former surfaces would therefore be limited.

There is low archaeological potential for remaining early road surfaces of The Northern Road and Bringelly Road due to the largely ephemeral nature of road surfaces during the early period and the subsequent disturbance related to construction of the modern road.

There is nil-low potential for archaeological relics associated with this period of development and road construction to be present within the proposal site boundary.

6.3.2 Phase 2: The growth of villages and towns, Bringelly (1890s – 1950s)

The settlement of Bringelly was established in 1891 with the subdivision of grants in the area. Although the wider area was known as the Parish of Bringelly, the town officially became Bringelly when the post office, opened in 1857, was named Bringelly Post Office in 1863⁷⁸.

Bringelly Public School was established in 1878. The school buildings were sold to the Council of Education by George Stanfield⁷⁹. This portion of land is located within the south western portion of Cottage Grove originally submitted to Charles Reid.

During the twentieth century, further community services were established around the post office. In 1914, an agency of the Commonwealth Bank opened, and by 1925 a grocery business was being conducted in conjunction with the post office. The Camden LEP listed cottage at 1186 The Northern Road was built in 1923 to house the Nepean Shire Clerk, the offices of which were located across the road at 1185 The Northern Road⁸⁰. A Wesleyan Church was erected in the village at 991 Bringelly Road in the early 1900s. However, it was destroyed by fire on 31 December 1963 and not restored. The area in which the church remains are located has not been redeveloped since the church was destroyed. These buildings are all visible on the 1947 and 1955 aerial photographs of the region.

The concrete footings identified during the survey have been identified as structures shown on the 1955 aerial photographs of the area. These are most likely related to twentieth century agricultural activities within the property on which they are located and are unlikely to meet the threshold of local significance.

Early plans of the Bringelly area show the locations of the post office and school. There is no indication that any substantial structures were built within the proposal site boundary prior to the current residences post 1955. Therefore it is unlikely that the proposal site will contain potential subsurface archaeological material associated with this phase.

The current alignments of The Northern Road and Bringelly Road are the same as shown in the 1947 and 1955 aerial photographs. There is low potential for the remains of road surfaces from Phase 2 due to the recurrent modifications to those road surfaces in the intermediate period. The majority of the area within the proposal site boundary would not be within areas where former road surfaces are likely to exist.

⁷⁸ Bringelly Fact Sheet n.d 79 SRNSW[5/15090.1] Letter from George Stanfield to Council of Education, 16th Aug 1877' 80 Austral 2011







The site of the former Bringelly Church has not been developed since the church burnt down in the 1960s. The site appears to have been largely disused aside from a dirt bike and horse riding track. This would have had little impact on any subsurface remains that may be located within in the site. The area of potential associated with the church is located outside of the proposal site boundary.

There is nil-low potential for archaeological relics associated with this period of development to be present within the remainder of the proposal site boundary.

6.4 Previously Identified Areas of Potential

Previous studies have identified two areas of archaeological potential within the vicinity of the study area (AMAC 2008, Austral 2011). These are the remains of the former Bringelly Church and former road surfaces of The Northern Road and Bringelly Road. There are no areas of archaeological potential located within the proposal site.

6.4.1 Remains of former Bringelly Church

History

During the 19th century the construction of a church in a country town was a significant developmental milestone. Initially, early settlers in rural areas did not have formal places of worship and instead were periodically visited by travelling ministers who officiated in private homes. As the rural population grew, the Cumberland Plain region was divided into gradually smaller preaching circuits, while townships with a high enough population began to build churches. Churches were established in Camden, Narellan, and Cobbitty during the 1840s; however the first church at Bringelly was not built until the early 1900s.

The church was Methodist/Wesleyan and was located at 991 Bringelly Road (Lot 2 DP 918331), near the corner of Bringelly Road and The Northern Road. The potential remains of the church are approximately three metres south of the proposal boundary site. The land formed part of 250 acres originally granted to William Hutchinson in 1817, and in 1898 a Joint Tenancy Agreement was recorded between Robert Watson (Senior Freeholder), Robert Watson Jnr (Orchardist), William James Watson (Orchardist), Alfred Woodward (Teacher), Joseph Earl (Farmer), and Richard M Knight (Farmer), all of Bringelly 81. It is likely that these tenants acted as trustees for the church. In 1928, six new tenants were listed as Trustees of the land and endorsed as the registered proprietors of the land under the provisions of the *Methodist Church Property Acts* 1889–1902 82. The church and churchyard are visible in a 1947 aerial photograph (Figure 14).

It is understood that the church was destroyed by fire on the 31 December 1963; however the Methodist Church (NSW) Property Trust remain the registered proprietors of the property⁸³.

⁸³ Austral Archaeology 2011:51





⁸¹ Certificate of Title Vol. 1265 Fol. 29

⁸² Certificate of Title Vol. 1265 Fol. 29



Figure 14: 1947 aerial photograph showing Bringelly church, proposal site boundary outlined in red, location of church indicated in yellow.

Archaeological potential

The former location of the church is approximately three metres south of the proposal site boundary. The area in which the church was located has remained undeveloped and undisturbed since its destruction and it would be likely that archaeological remains associated with the building, such as footings have survived.

There is no documentary evidence to suggest that the church property ever included a graveyard. There is no sign of grave markers in the 1947 aerial photograph of the site (Figure 14) and a review of the newspaper death notices for Bringelly residents shows that all were buried outside of Bringelly, including cemeteries at Luddenham, Denham Court and Rookwood⁸⁴.

The area where Bringelly church was visible in the 1947 aerial photograph was surveyed by Artefact Heritage in 2011 (Figure 12). A rectangular outline of ridged land delineates the site of the church (Plate 15 and Plate 16). The ridges were overgrown with grass, but at the southern and northern ends brick fragments were visible on the surface, indicating that the ridges are formed by the remains of the church walls (Plate 15 to Plate 18). The area has been undisturbed since the destruction of the church and therefore subsurface archaeological remains, such as the church's foundations and artefacts associated with the building, would be likely to have survived.

⁸⁴ NLA online newspaper database





The site was visited during the current survey. It was found to be in a similar condition to that recorded in 2011. Therefore it remains likely that subsurface archaeological materials exist within the church property.

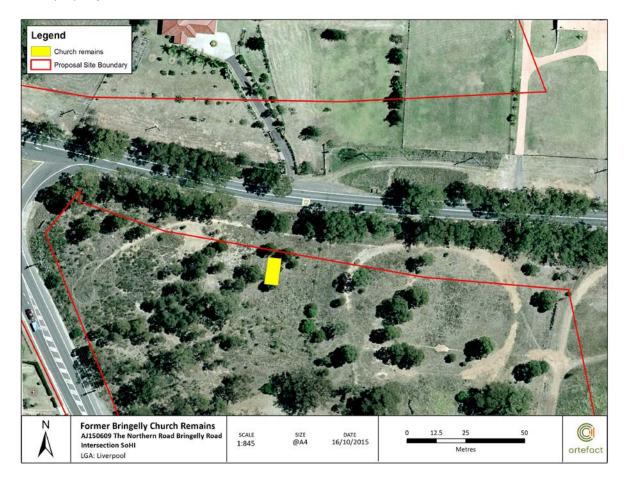


Figure 15: Location of church remains



Plate 15: View southeast across raised areas delineating the former site of Bringelly Church. 85s

 $^{^{\}rm 85}$ Facing north-east, toward Bringelly Road (Artefact Heritage 2011)





Plate 16: Yellow line delineating raised areas at the former site of Bringelly Church. 86



Plate 17: Brick fragment from southern end of church site. 87



Plate 18: Brick fragment from northern end of church site. ⁸⁸

⁸⁶ Ibid ⁸⁷ Artefact Heritage 2011 ⁸⁸ Ibid



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6.5 Archaeological Significance

6.5.1 Introduction

The Heritage Division of the Office of Environment and Heritage (OEH) issued a new set of guidelines in 2009: Assessing Significance for Historical Archaeological Sites and 'Relics'. These guidelines call for broader consideration of multiple values of archaeological sites beyond their research potential. The following section presents a discussion of the potential archaeological resource's research potential and an assessment against the NSW heritage significance criteria.

6.5.2 Archaeological research potential

Consideration of archaeological research potential is required when undertaking a significance assessment of an historical archaeological site. Bickford and Sullivan espoused the principles and developed a framework in order to assess archaeological research potential. These principles have been incorporated into three questions and should be used as a guide for assessing the significance of an archaeological site⁸⁹:

- Can the site contribute knowledge that no other site can?
- Can the site contribute knowledge that no other resource can?
- Is this knowledge relevant to general questions about human history or other substantive questions relating to Australian history, or does it contribute to other major research questions?

The study area has nil - low potential to contain an archaeological resource that may be able to support and enhance the current state of knowledge about its phases of occupation. Aerial photography analysis has revealed that the area within the proposal site boundary has largely been used for crop cultivation and grazing. Therefore any remains are likely to be ephemeral in nature. Other more substantial sites dating to the same time periods may be able to provide archaeological data and contribute to research questions to a greater extent than the current study area.

Given the nature of the potential archaeological resource it is unlikely to contribute to current archaeological research questions.

6.5.3 Archaeological significance assessment

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 (Heritage Act) and implemented through the NSW *Heritage Manual* and the *Archaeological Assessment Guidelines*⁹⁰. 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. If a potential relic is not considered to reach the local or State significance threshold, then it is not a relic under the Heritage Act. *'State heritage significance'*, in relation to a place, building, work, relic, moveable object or precinct, means significance to NSW in relation to the historical, scientific, cultural, social, archaeological, architectural, natural or aesthetic value of the

⁹⁰ NSW Heritage Office 1996; 25-27





⁸⁹ Bickford, A and S Sullivan, pp. 23-24

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. ⁹¹

The heritage significance assessment criteria are the same as for built heritage items (see Section 5.4)

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 10 below.

Table 10: Consideration against NSW heritage assessment criteria

Criteria	Description				
A – Historical Significance	There is nil – low potential for archaeological remains to be located within the proposal site boundary, therefore the potential archaeological resource would be unlikely to have historical significance for its ability to provide information relating to the development of the area within the proposal site boundary, the development of The Northern Road and Bringelly Road and the wider Bringelly area.				
	The potential archaeological resource does not meet the local significance threshold under this criterion.				
B – Associative Significance	The study area has some associations with early land grant holders such as Charles Reid and William Hutchinson. The potential archaeological resource, however, is unlikely to contribute significantly to the knowledge of the land grant holders lives.				
	The potential archaeological resource does not meet the local significance threshold under this criterion.				
C – Aesthetic Significance	Although it is recognised that exposed in situ archaeological remains may have distinctive/attractive qualities, only rarely are these considered 'important in demonstrating aesthetic characteristics and/or a high degree of creative or technical achievement in NSW'.				
	The potential archaeological resource does not meet the local significance threshold under this criterion.				
D. Casial Cimpificana	This study has not revealed any association between the project site and any particular community or cultural group in the local area.				
D – Social Significance	Therefore, the potential archaeological resource does not meet the local significance threshold under this criterion.				
E – Research Potential	The study area has low potential to contain an archaeological resource that may be able to support and enhance the current state of knowledge about its phases of occupation. The project site has generally been used for crop cultivation and grazing. Any archaeological remains are likely to be ephemeral in nature and would not contribute significantly to research questions about the region.				
	The potential archaeological resource does not meet the local significance threshold under this criterion.				

⁹¹ This section is an extract based on the Heritage Office Assessing Significance for Historical Archaeological Sites and Relics 2009, p.6.



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Criteria	Description				
F – Rarity	Archaeological remains associated with the earliest European settlement of the Bringelly area would be rare. This study has revealed that no substantial homesteads were built within the proposal site boundary and this area has largely been used for agricultural activities. Therefore it is unlikely that remains of these phases would be located intact within the proposal site boundary. The potential archaeological resource does not meet the local significance threshold under this criterion.				
G – Representativeness	The potential archaeological remains within the study area are likely to be representative of agricultural uses typically found in agricultural contexts. Although any remains are likely to demonstrate the principle characteristics of this type site, it is unlikely that they would be considered particularly representative. The potential archaeological resource does not meet the local significance threshold under this criterion.				

6.6 Statement of Archaeological Significance

Owing to the largely agricultural land-use history of the project site there is low potential for significant archaeological remains to be located within the study area. As such, the potential archaeological resource is unlikely to contribute to research agendas and does not meet the local significance threshold.

6.7 Summary

Due to the nature of the initial European settlement of the area and subsequent agricultural uses of the site there is nil to low potential for archaeological remains to be located within the proposal site boundary. There is nil-low potential for portions of the original Bringelly Road and The Northern Road surfaces to be located within the proposal site boundary. Buildings associated with the early township of Bringelly are generally located around the existing intersection of Bringelly Road and The Northern Road outside of the proposal site boundary. Therefore these items are unlikely to be impacted by the proposal.

7.0 IMPACT ASSESSMENT

7.1 The Proposal

The proposal involves constructing a grade separated interchange about 300 m east of the existing intersection of The Northern Road, Bringelly Road and Greendale Road. The key features of the proposal are shown in Figure 1 and include:

- Widening and upgrading about 400 m of Bringelly Road, between Kelvin Park Drive and Greendale Road, to provide:
 - Two traffic lanes in each direction between Kelvin Park Drive and The Northern Road/Bringelly Road interchange, with wide central medians to allow for a future third traffic lane in each direction
 - Two traffic lanes in each direction on the western side of the interchange, transitioning to one lane in each direction to tie in to Greendale Road
- Constructing a new section of The Northern Road between Robinson Road and Thompsons
 Creek, to the east of the existing alignment. The new section would be about one kilometre long and about 50 m wide (including embankments), and would include:
 - Two 3.5 m wide traffic lanes in each direction
 - Four metre wide shoulders connecting to the on and off ramps of the interchange, allowing for the future provision of a bus lane
 - An underpass about 60 m long beneath the upgraded section of Bringelly Road
 - 2.5 m wide shoulders along The Northern Road under the interchange for a length of about one kilometre
 - A wide central median to allow construction of a future third traffic lane in each direction
- Providing a new signalised intersection on Bringelly Road over The Northern Road, with turning movements provided in all directions
- Providing dual right turn movements in all directions to and from The Northern Road and Bringelly Road, and dedicated left turn lanes in all directions
- Providing bus service facilities by:
 - Retaining the existing bus stops on the existing alignment of The Northern Road
 - Relocating existing bus stops on Bringelly Road to suit the interchange
 - Providing two new bus stops on The Northern Road northbound and southbound interchange on ramps
 - Providing a bus only lane for buses travelling north and south along The Northern Road at the signalised intersection on Bringelly Road
- Providing three metre wide shared paths for pedestrians and cyclists
- Providing a new connection between Robinson Road and The Northern Road via an extension to the realigned Belmore Road intersection
- Converting the existing section of The Northern Road to a 'no through road', providing a cul-de-sac at the southern end near Robinson Road, and a cul-de-sac at Thames Road at the northern end.

7.2 Heritage Impact Assessment

7.2.1 Built heritage

The proposal will not directly impact heritage items located outside of the proposal site boundary. There will be minor visual impacts to the Bringelly Public School Group and the Cottage at 1186 The Northern Road due to vegetation removal and potential construction of bunds and noise walls.

7.2.2 Cultural and visual landscapes

It is likely that there will be impacts to the Bringelly/Greendale Road cultural and visual landscape. Impacts to the landscape item as a whole will be moderate due to the removal of trees, construction of bunds, noise walls and widening of the existing Bringelly Road.

7.2.3 Unlisted items – The Northern Road and Bringelly Road

It is likely that there will be impacts to The Northern Road and Bringelly Road within the proposal site boundary. This will include removal of a portion of Bringelly Road to accommodate the new intersection, as well as converting the existing portion of The Northern Road into a cul-de-sac (see Figure 1).

7.2.4 Archaeological resource

The archaeological resource is likely to be ephemeral in nature due to disturbance associated with agricultural uses and construction of The Northern Road and Bringelly Road. It is therefore unlikely that the development will impact on archaeological relics and works.

7.3 Statement of Impact

Development	Discussion	
What aspects of the proposal respect or enhance the heritage significance of the proposal site?	The current proposal involves constructing a new intersection 300 metres east of the current Bringelly Road, The Northern Road intersection. By relocating the intersection rather than modifying the current intersection the proposal avoids impacting on the heritage curtilages of heritage items The Bringelly Public School Group and the Cottage, 1186 The Northern Road. These items have been assessed to be of local significance and are important to the history of the development and establishment of Bringelly since the first initial land grants in the area. It is understood that the plans to update infrastructure along the existing corridor of The Northern Road will not involve road widening or impacts within identified heritage item curtilages.	
	There are unlikely to be impacts on archaeological remains within the proposal site boundary. Impacts to the area of archaeological potential associated with the former Bringelly Church would be avoided.	
What aspects of the proposal could have a detrimental impact on the heritage significance of	There will be moderate impacts to vistas and views associated with the Bringelly/Greendale Road rural cultural landscape listed on the Camden DCP. The proposal will involve landform modification vegetation clearing, road widening, and installation of associated infrastructure such as traffic lights and street lights which will detract from the rural nature of the Bringelly area.	
the proposal site?	Vegetation clearance will detract from the views and vistas from and to the two LEP listed heritage items, The Bringelly Public School Group and the Cottage, 1186 The Northern Road. Visual impacts to these items is considered minor.	

Development	Discussion
Have more sympathetic options been considered and discounted?	The current proposal will not directly impact any heritage items or areas of archaeological potential.

8.0 MITIGATION MEASURES

The current 50 per cent concept designs indicate that there are no direct physical impacts to the fabric of listed heritage items or areas of archaeological potential. The recommended mitigation measures for the proposal are summarised in Table 11.

The proposal is likely to have minor impacts on the views and vistas to and from LEP listed items The Bringelly Public School Group and the Cottage, 1186 The Northern Road. The proposal is likely to have a moderate impact on the DCP listed Bringelly/Greendale Road Cultural Landscape. The following mitigation measures are recommended to minimise adverse impacts to the views and vistas to and from heritage items:

- Retain a buffer of vegetation between the cottage and the proposal. If any trees are proposed for removal these should be replaced with plantings of similar type and maturity.
- Consideration of sympathetic colours and materials where appropriate in the construction of noise walls and bunds.
- Where possible, the utilisation of earth walls and mounds as opposed to concrete structures to soften the visual impact and tie the works into the surrounding rural landscape.

A Visual Impact Assessment would be prepared for the proposal and would include a detailed assessment of the visual impacts of the intersection and appropriate mitigation measures.

The remains of the former Bringelly Church are located outside the proposal site boundary and would not be impacted by the proposal. Given the proximity of the remains to the proposal site boundary (approximately three metres) an exclusion zone should be put in place and a map of the location of the remains should be included in the CEMP. The CEMP and site induction should specify that impacts to the area should be avoided, including driving over the site, storing materials within the site and disturbing the ground surface. If the current boundaries of the 50 per cent concept design are extended and there is the potential that the former Bringelly Church site is to be impacted further investigation would be required under an excavation permit obtained from the NSW Heritage Division.

Table 11: Heritage impact assessment and mitigation measures

ltem	Listing	Impacts to Heritage fabrio	Impacts to c Archaeological remains	Impacts to Views and vistas	Mitigation Measures
The Bringelly Public School Group	Liverpool LEP, s170	No	No	Low	Retain a buffer of vegetation between the cottage and the proposal site boundary. If any trees are proposed for removal these should be replaced with plantings of similar type and maturity. Consideration of sympathetic colours and materials where appropriate in the construction of noise walls and bunds in the vicinity of the school. Where possible the utilisation of earth walls and
					mounds as opposed to concrete structures to soften the visual impact and tie the works into the surrounding rural landscape in the vicinity of the school.
Cottage, 1186 The Northern Road	Camden LEP	No	No	Low	Retain a buffer of vegetation between the cottage and the proposal site boundary. If any trees are proposed for removal these should be replaced with plantings of similar type and maturity.
					Consideration of sympathetic colours and materials where appropriate in the construction of noise walls and bunds in the vicinity of the cottage.
					Where possible the utilisation of earth walls and mounds as opposed to concrete structures to soften the visual impact and tie the works into the surrounding rural landscape in the vicinity of the cottage.

ltem	Listing	Impacts to Heritage fabrio	Impacts to c Archaeological remains	Impacts to Views and vistas	Mitigation Measures
Bringelly/Greendale Road cultural and visual landscape	Camden DCP	No	No	Moderate	Retain a buffer of vegetation along Bringelly Road. If any trees are proposed for removal these should be replaced with plantings of similar type and maturity.
					Consideration of sympathetic colours and materials where appropriate in the construction of noise walls and bunds with the surrounding rural landscape
					Where possible the utilisation of earth walls and mounds as opposed to concrete structures to soften the visual impact and tie the works into the surrounding rural landscape.
Bringelly Church – archaeological site	N/A	N/A	No	N/A	Exclusion zone to be set up around site during construction.
					Inclusion in CEMP and induction
					Roads and Maritime Unexpected Heritage Items Procedure (2015).
The Northern Road and Bringelly Road – archaeological potential	N/A	N/A	Potential impacts	N/A	Roads and Maritime Unexpected Heritage Items Procedure (2015).

9.0 Conclusions and Recommendations

9.1 Conclusions

- There are two listed heritage items located within 50 metres of the proposal site boundary. These are:
 - The Bringelly Public School Group (Liverpool LEP)
 - Cottage, 1186 The Northern Road (Camden LEP)
- The Bringelly Public School Group and Cottage, 1186 The Northern Road have been assessed as being significant at a local level.
- The Bringelly Public School Group and Cottage, 1186 The Northern Road would not be physically impacted on by the project. These items would be subject to minor visual impacts only.
- The Bringelly/Greendale rural cultural landscape is listed in the Camden Council DCP and located within the proposal site boundary. This landscape has been assessed as being significant at a local level.
- The Northern Road and Bringelly Road are unlisted items assessed as being significant at a local level.
- There is nil to low potential that archaeological remains associated with former road surfaces of The Northern Road and Bringelly Road would be located within the proposal site boundary.
- The remains of the Bringelly Church are located outside the proposal site boundary. There is low
 potential for associated archaeological relics to extend into the proposal site boundary.
- The remainder of the proposal area has been assessed as having nil-low archaeological potential.

9.2 Recommendations

- The ten properties not accessible for the current investigation would be investigated once access is available. The survey and assessment of these properties would be undertaken prior to works commencing on site
- An exclusion zone would be set up around the location of the former Bringelly Church during construction. A map showing the location of the former Bringelly Church remains should be included in the CEMP and the site induction. All impacts to the site should be avoided including driving over the site, storing materials within the site and ground surface disturbances. If the project site boundaries are extended and the site of the former Bringelly Church is to be impacted further archaeological investigation will be required under an excavation permit obtained from the NSW Heritage Division
- Impacts to views and vistas to and from LEP items (The Bringelly Public School Group and the Cottage at 1186 The Northern Road) and DCP item Bringelly/Greendale Road cultural and visual landscape would be mitigated by:
 - Retention of a buffer of vegetation between the cottage and school and the proposal site boundary. If any trees are proposed for removal these should be replaced with plantings of similar type and maturity.

- Consideration of sympathetic colours and materials where appropriate in the construction of noise walls and bunds in the vicinity of the cottage and school.
- Where possible the utilisation of earth walls and mounds as opposed to concrete structures to soften the visual impact and tie the works into the surrounding rural landscape in the vicinity of the cottage and school.
- Roads and Maritime should consult with the Camden and Liverpool Councils regarding impacts to items on their respective LEPs.
- The CEMP should include the locations of heritage items and potential archaeological site within 50 metres of the proposal site boundary. This includes The Bringelly Public School Group and the Cottage at, 1186 The Northern Road and remains of the former church.
- If unexpected archaeological finds are discovered during the proposed works, the Roads and Maritime Standard Management Procedure: Unexpected Heritage Items (2015) would be followed.
 The NSW Heritage Division would be notified of the discovery of a relic in accordance with Section 146 of the NSW Heritage Act 1977.
- A heritage induction would be provided to workers before construction begins informing them of the location of heritage items, and guidelines to follow if unexpected heritage items or potential relics are located during works.

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