

Technical Paper 3

European

Heritage

Godden Mackay Logan

Heritage Consultants



North West Rail Link

EIS 1—Major Civil Construction Works European Heritage Report

Report prepared for NWRL Planning Approvals Team
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1.0 Introduction

1.1 Project Background

Godden Mackay Logan (GML) has prepared this assessment of perceived impacts on European heritage of the proposed North West Rail Link (NWRL) to support the Environmental Impact Statement (EIS) for the Major Civil Construction Works component of the NWRL project.

The NWRL is a priority transport infrastructure project for the NSW Government. Transport for NSW (TfNSW, the NSW Department of Transport) is proposing to undertake construction and operation of the NWRL, a new 23km electrified passenger rail line between Epping and Rouse Hill. The project includes eight new stations (Cherrybrook, Castle Hill, Hills Centre, Norwest, Bella Vista, Kellyville, Rouse Hill and Cudgegong Road), a stabling facility and associated ancillary infrastructure (Figure 1.1).

This report focuses on the Major Civil Construction Works component of the NWRL, assessing impacts on heritage values at 17 construction sites: Epping Services Facility, Epping Decline, Cheltenham Services Facility, eight stations and six sites associated with the above-ground rail corridor from the proposed Bella Vista Station to Tallawong Stabling Facility.

A separate heritage impact assessment report will be prepared for the stations, rail infrastructure and systems component.

1.2 Statutory Context

In NSW, cultural heritage is principally protected under two Acts:

- *Heritage Act 1977* (NSW) (Heritage Act); and
- *Environmental Planning and Assessment Act 1979* (NSW) (EP&A Act).

In 2008 the NWRL project was granted Concept Plan Approval (Reference 06_0157) under Part 3A of the EP&A Act. The Part 3A Concept Plan Approval provided the basis for the environmental and heritage assessment. In addition, the Statement of Commitments for the project was formally endorsed in these conditions.

In 2011 Part 3A of the EP&A Act was repealed and a new approval mechanism for State significant development was implemented—the State and Regional Development State Environmental Planning Policy 2011 (SEPP).

In December 2011 TfNSW made an application to the Department of Planning and Infrastructure for the NWRL project to be assessed as a State Significant Infrastructure (SSI) Project (application no. SSI-5100). As a declared SSI Project, the NWRL project will be assessed under Part 5.1 of the EP&A Act.

Concept Plan Approval Condition 3.15 European Heritage is set out below:

3.15 The proponent shall review the European Heritage impacts of the project, describing measures to minimise and/or appropriately manage impacts.

To meet the conditions of approval and the DGRs, TfNSW has made a Statement of Commitments in relation to non-Indigenous heritage (Table 4.1).

Table 4.1 Statement of Commitments.

Desired Outcome	Actions
Potential for environmental impacts on Indigenous and non-Indigenous heritage minimised through management measures that are consistent with established protocols and guidelines.	30. Additional research would be undertaken to determine the history and potential heritage significance of the sites identified in Castle Hill. Site-specific archaeological assessments would be undertaken in the event that they are found to have heritage significance. 31. Site-specific archaeological assessments would be undertaken for the two archaeological sites identified along Old Windsor Road and Windsor Road. 32. A view analysis would be undertaken to and from Rouse Hill House and its estate and the Glenhope property. If required appropriate mitigation measures would be identified.

This report addresses the requirements of the Concept Plan Approval Condition 3.15 (European Heritage) and also responds to Actions 30, 31 and 32 set out in the TfNSW Statement of Commitments. It also addresses the supplementary environmental assessment requirement relating to Non-Indigenous Heritage as advised by the Office of the Director General on 3 February 2012, namely, the consideration of the *Potential visual and cultural landscape impacts on Rouse Hill House Estate*.

1.3 NWRL Route

The land on which the proposed NWRL will pass through includes portions of the suburbs of Epping, Beecroft, Cheltenham, Cherrybrook, West Pennant Hills, Castle Hill, Bella Vista, Baulkham Hills, Kellyville Ridge and Rouse Hill, within the Local Government Areas (LGAs) of Hornsby, The Hills and Blacktown.



Figure 1.1 The NWRL route. (Source: TfNSW)

1.4 Previous European Heritage Assessment for the NWRL

During the preliminary stages of the NWRL project, the following report was prepared in relation to European heritage:

- Casey & Lowe, Heritage Review: North West Rail Link—Epping to Rouse Hill, prepared for GHD Pty Ltd on behalf of Transport Infrastructure Development Corporation, October 2006.

The Heritage Review was prepared as part of the Environmental Assessment for the Concept Plan application in 2006. The report is a preliminary study and, as such, identifies potential heritage items and European archaeological sites, in addition to listed sites. The report does not include detailed assessment of potential items or sites. Background information from this previous study has been used in the preparation of this report.

1.5 Methodology

1.5.1 General

The following methodology has been followed in preparing this report:

- review of heritage reports previously prepared for the NWRL project;
- review of statutory heritage lists, including the State Heritage Register, heritage schedules on Local Environmental Plans (LEPs) and Regional Environmental Plans, state agency Section 170 heritage and conservation registers and the Register of the National Estate, National Heritage List and Commonwealth Heritage List;
- review of non-statutory heritage lists, including the National Trust Register and the RAIA Register of Significant 20th Century Buildings;
- review of relevant archaeological zoning plans and archaeological assessments, as available;
- site inspections of the NWRL route to inspect listed and potential heritage items;
- desktop research and historical research to inform the impact assessment, including review of relevant conservation management plans (CMPs) and plans of management; and
- consultation with heritage advisors at local councils and state agencies for further advice regarding items on their heritage registers, where required.

1.5.2 Assessment of Heritage Significance

The Statements of Significance for the assessed heritage items have been drawn from the following State and Federal statutory and non-statutory heritage registers:

- Australian Heritage Database;
- NSW State Heritage Register;
- NSW State Heritage Inventory Database;
- *Hornsby Shire Local Environmental Plan 1994* (and the *Draft Hornsby Local Environmental Plan 2011*);

- *Baulkham Hills Local Environmental Plan 2005*;
- *Blacktown Local Environmental Plan 1988*;
- Roads and Traffic Authority S170 Heritage and Conservation Register (now Roads and Maritime Services);
- Department of Planning S170 Heritage and Conservation Register; and
- RailCorp S170 Heritage and Conservation Register.

Additional information on significance, including heritage curtilages and assessments of condition have been drawn from conservation reports, such as Conservation Management Plans, Conservation Plans and Heritage Impact Statements, where available.

The methodology for assessments of heritage significance is based on the NSW heritage criteria as set out in the *NSW Heritage Manual* guideline *Assessing Heritage Significance*, prepared by the NSW Heritage Council 2002. These indicate that an item is of state or local heritage significance if it meets one of the seven criteria. Where required, some additional primary research has been undertaken.

1.5.3 Archaeological Assessment Methodology

The evaluation of the historical archaeological potential associated with various phases of the study area's history is based on consideration of the physical evidence observed at the sites, identified areas of previous disturbance, historical information about the development and occupation of the sites and previous archaeological assessments. Consequently, a broad approach to the identification of the potential archaeological remains has been adopted and is based on a predictive model that assumes that historical archaeological remains are generally located in close proximity to occupation and activity areas.

The assessment of archaeological impacts has been primarily prepared based on readily available secondary sources and a field survey. Consultation with RTA's heritage officers/archaeologists in relation to the items listed on RTA's S170 register has also been undertaken.

Historical background and significance assessment of individual sites has been primarily based on existing historical documentation contained in the previous NWRL reports, supplemented by some additional primary research where required. A field survey of the sites along the NWRL route has been undertaken to assess the general condition of the historical archaeological sites and items identified in the previous reports and readily available documentation such as LEPs.

1.5.4 Assessment of Heritage Impact

This heritage impact assessment has been prepared with reference to the guideline document *Statements of Heritage Impact*, 2002, prepared by the NSW Heritage Office and contained within the *NSW Heritage Manual*.

In order to clarify the potential impacts of the proposed works, GML has developed a ranking for the measuring the severity of potential impacts on heritage values. The methodology used to rate the severity is explained below.

Table 4.2 Ranking of severity of heritage impact.

Rating	Definition
Major adverse	Actions which will have a severe, long-term and possibly irreversible impact on a heritage item. Actions in this category would include partial or complete demolition of a heritage item or addition of new structures in its vicinity that destroy the visual setting of the item. These actions cannot be fully mitigated.
Moderate adverse	Actions which will have an adverse impact on a heritage item. Actions in this category would include removal of an important part of a heritage item's setting or temporary removal of significant elements or fabric. The impact of these actions could be reduced through appropriate mitigation measures.
Minor adverse	Actions which will have a minor impact on a heritage item. This may be the result of the action affecting only a small part of the place or a distant/small part of the setting of a heritage place. The action may also be temporary and/or reversible.
Neutral	Actions which will have no heritage impact.
Minor positive	Actions which will bring a minor benefit to a heritage item, such as an improvement in the item's visual setting.
Moderate positive	Actions which will bring a moderate benefit to a heritage item, such as removal of intrusive elements or fabric or a substantial improvement to the item's visual setting.
Major positive	Actions which will bring a major benefit to a heritage item, such as reconstruction of significant fabric, removal of substantial intrusive elements/fabric or reinstatement of an item's visual setting or curtilage.

1.5.5 Consultation

An initial consultation meeting was held with representatives of the NSW Heritage Branch of the Office of Environment and Heritage (OEH) on 25 October 2011. GML's proposed methodology and approach to the identification of items of European heritage along the NWRL route, and the assessment of likely impacts, was outlined at the meeting and received in-principle endorsement from the Heritage Branch representatives in attendance.

1.6 Objectives of Assessment

This report addresses impacts on European heritage likely to result from the Major Civil Construction Works component of the NWRL project. These works are predominantly below ground. The impacts will result primarily from demolition and clearing, removal of vegetation and site preparation works such as excavation and establishing foundations. A separate report will be prepared for the stations, rail infrastructure and systems components.

As much of the NWRL route will comprise underground tunnels, this heritage impact assessment focuses on areas where construction work will take place at or above the surface, namely the surface civil construction works sites, including stations areas and service facilities, at grade rail line, above-ground viaducts and bridges and the stabling yard.

A separate heritage impact assessment will be prepared for the Stations, Rail Infrastructure and Systems. The heritage impact of elements such as station buildings will be assessed in that report.

1.7 Author Identification

This heritage impact assessment has been prepared by Rod Howard, Built Heritage Advisor; Anita Yousif, Senior Archaeologist; and Julia Dowling, Consultant. Michelle Richmond, Historian, undertook the background historical research. The report was reviewed by Peter Romey, Partner.

1.8 Acknowledgements

GML gratefully acknowledges the assistance provided by the following people during the preparation for this report:

- Neville Hattingh, AECOM;
- Danielle Phillips, AECOM;
- Denis Gojak, Roads and Maritime Services; and
- Gretta Logue, Roads and Maritime Services.

2.0 European Historical Context of the Study Area

2.1 Preamble

This section of the report provides a general historical overview of the districts through which the route of the NWRL passes as well as historically important areas close by. It outlines the historical context (including a brief history of settlement and land use) in those regions where the NWRL is to be built.

2.2 Early European Settlement

2.2.1 Overview

Early European settlement in the general area of the proposed North West Rail Link was shaped by three major influences: the creation of Windsor and Old Windsor Roads connecting Parramatta with the Hawkesbury farms allowing clusters of farms to gather along these roads from as early as the late 1790s; the government farm and stock reserve at Castle Hill created in 1802; and the Field of Mars Common created in 1804, which was not released for sale until the 1880s. These developments created, restricted and repelled settlement within the study area.

2.2.2 Early Settler Farms

Governor Phillip led an exploration party through this area in 1791. His party left Rose Hill (Parramatta), travelling north for a couple of miles and then turning to the northwest. The following year David Burton was instructed to examine the country around Parramatta in search of good land suitable for cultivation and in 1794 Governor Grose made 22 land grants at Windsor. A track from Parramatta to access these grants (Old Windsor Road) was cut the same year and went via the Toongabbie Government Farm. In 1813 Governor Macquarie organised for the construction of a new alignment for part of the road between Parramatta and Kellyville (Windsor Road) which would avoid the hilly section which Governor King had called Seven Hills. Macquarie also organised for the existing road between Kellyville and Windsor to be upgraded. A toll system was introduced to pay for the new road which had 70 bridges, with toll booths at Rouse Hill and North Parramatta.

In the early years these roads were the focus of the local communities and a means of bringing supplies and of selling produce and stock. Inns, sly grog shops and hotels were established along the roads and became easy targets for bushrangers who were active in the district in the 1810s and 1820s. The first land grant within the locality was 30 acres made to William Joyce, a pardoned convict in 1794. His land fronted the newly cut track to the Hawkesbury (Old Windsor Road) and straddled Toongabbie Creek. Other land grants soon followed clinging closely to this early road. Free settler Matthew Pearce received a large grant in the area which named Kings Langley. At Baulkham Hills several grants of 100 acres or over were made to pioneer settlers, many of whom became successful farmers. The largest grant, 980 acres made jointly to Joseph Foveaux and Charles Grimes fronted Old Windsor Road. Foveaux ran more than 1200 Merino sheep on his farm which was sold to John and Elizabeth MacArthur in 1815. They called this property Seven Hills Farm. In 1821 the farm was purchased by the Pearce family and re-named Bella Vista.

In 1802 Baulkham Hills was one of six new districts created for administrative purposes by the Governor King. His purpose was to place stock in these districts within the reach 'of the industrious independent settler'.¹ In 1810 Governor Macquarie visited Baulkham Hills and praised the orderly and well cultivated farms of the district.

The largest land grant in the Pennant Hills area was to Dr John Savage, a doctor attached to Parramatta Hospital in 1804. His 290 acre grant covers much of today's West Pennant Hills. When he left the colony in 1835 his land was subdivided and sold as smaller farm lots which then supported a growing local population.²

Cherrybrook farm west of Savage's landholdings contained 65 acres and was settled in 1839 by Joseph Harrison. Here he planted orchards including peaches, apricots, pears, plums, and citrus fruit. Many years later the farm became a dairy but kept its name.

The Kellyville district (named after Hugh Kelly, an Irish former convict turned land owner) remained semi-rural for most of the nineteenth and twentieth centuries. By 1829 Hugh Kelly had become one of the largest land owners in the district. He operated a coaching service between Parramatta and Windsor by 1832 and had bought the right to collect tolls at Howe's Bridge over South Creek.³

Rouse Hill is named after Richard Rouse a prominent free settler who arrived in the colony in 1801. His first grant here was in 1802 and his second grant was in 1816. Rouse built his home, Rouse Hill House, from 1813-18. Rouse was made superintendent of public works for Parramatta, Richmond and Windsor, and is best known for building the tollhouse and turnpike at Parramatta in 1811, and for supervising the construction of Parramatta Hospital, completed in 1818.

Rouse Hill gained early notoriety as the location of the colonies only convict uprising, the Battle of Vinegar Hill. On 4 March 1804, 200 convicts from the Government Farm at Castle Hill rose in rebellion against the British Colonial authority. They had planned to march to Parramatta but were headed off by Government troops and turned and headed for Windsor. By the time the troops caught up with the convicts they were on the hills near Windsor Road and this is where the battle took place. The convicts were quickly defeated and the ringleaders hanged. The area of the battle lies close to the present day suburb of Rouse Hill part of which was originally called Vinegar Hill. The exact location of the site of the uprising is still debated. A monument with a plaque commemorating the event can be seen within the Castlebrook Lawn Cemetery on Windsor Road at Kellyville Ridge.

Agriculture was the district's first industry. Wheat and corn were the principal crops while sheep were raised for meat and wool. As the western plains developed and the climate proved superior for wheat and wool, fruit growing began to dominate the Hills District. Pioneer George Suttor grew the first oranges in the district which in 1807, he claimed were the first to be sent to the Sydney markets. This was the beginning of the area becoming the premier orange growing district in the Colony.⁴

2.2.3 Castle Hill Government Farm

A huge area of 34,539 acres (14,000 hectares) covering much of the later parish of Castle Hill, was set aside 'for Government Purposes' by Governor King in 1803. Governor Phillip, in his travels through the area in 1791, had intended this area to be a stock farm. This prevented settlement in the north eastern part of the study area. An extensive common of 5,830 acres was also set aside along the track to Castle Hill which led up to the government farm (now part of Old Northern Road). King had established this farm in 1801 as part of a plan to revitalise public farming and provide food for the colony. By 1802 300 convicts were stationed there.⁵ This land covered where Rogan's Hill, Glenhaven and Cherrybrook now stand and stretched as far as Glenorie in Hornsby Shire and across to Kellyville. The assignment of numerous Irish convicts to this isolated outstation led to the colony's only convict uprising in 1804 which became known as the Battle of Vinegar Hill.

2.2.4 Field of Mars Common

Another extensive area of land, alienated by the government was the Field of Mars Common, comprising 5,050 acres (20km²) in 1804. This land was one of several commons set aside by the colonial government for use by all settlers to pasture their sheep and cattle. The Common stretched from Hunters Hill to Pennant Hills. Boundary Road today marks the northern boundary of the Field of Mars Common and Pennant Hills Road marks the western boundary.

This land remained a Common until 1873 when the government invited real estate agents Richardson and Wrench to value the Field of Mars Common. Their recommendations led to an Act of Parliament in 1874 which released the land for sale. Much of the land contained in the suburbs Epping Beecroft and Cheltenham remained locked within the boundaries of the Field of Mars Common until this time.

2.3 Intensification and Diversification, 1880s–1950s

By the time the Strathfield to Hornsby section of the Great Northern Railway Line opened in September 1886, the land in the field of Mars Common had been marked out with streets. The first land sales took place in October 1886. The first general store at Epping opened in 1892. The construction of the railway into this area allowed wealthier persons to work in the city but live in a spacious tree lined suburb. As a result a more gracious style of home was built on substantial blocks which mostly had their own small orchard especially in the Beecroft and Cheltenham areas.

In other areas the land between Parramatta and Castle Hill was used to grow oranges, apples, plums, peaches and apricots. The Castle Hill District boasted splendid orchards, model farms and numerous houses by the 1890s.⁶ Citrus growing continued into the early part of the twentieth century and for many years, most of Sydney's citrus products were grown in the Hills District.

The issue of transporting the fruit to market saw a tramway open in 1902 which went from Parramatta to Baulkham Hills. The tram line operated from Parramatta to Castle Hill from 1910 with the terminus lying just south of the intersection of Old Northern Road and Old Castle Hill Road. In the early 1920s the old tram line was converted to railway standards and the railway commenced on 28 January 1923 with the new railway terminus constructed on what is today known as Arthur Whiting Reserve. The railway line was extended to Rogan's Hill on 24 November 1924.⁷ The line generally followed the roadway and was called a 'pinch penny' service, having no platforms and with all tickets sold on board the trains. Castle Hill Railway station was not manned so a junior porter sold tickets on the steam train.⁸ As the use of vehicular traffic increased, patronage of the train line decreased and the railway eventually closed in 1932.

The existence of the railway accelerated the residential subdivision of old estates in the areas adjacent to the line, in particular around the urban areas of Castle Hill and Baulkham Hills. One result of the desirable climate, enhanced transport facilities and increasing middle class prosperity was the creation of large houses in substantial garden settings, commonly referred to as 'country retreats'. Typically they were located along major ridgelines such as Old Castle Hill Road to take advantage of the impressive views. This dress circle ridge became the location for many large houses such as Glenhope (1895), Dunrath, Pine Ridge and Fairholme (1890s).

The Castle Hill Show developed in the 1880s from earlier sports and ploughing contests. It opened on its present site beside Showground Road in 1891 on land granted to the show society for the site of a permanent showground. Permanent pavilions began to be built at the showground from 1925, with the opening of the Taylor Pavilion. During World War II the showground was occupied by the

Victorian Ambulance Brigade. From the 1940s the Castle Hill Show had the reputation of being second only to the Royal Easter Show.

At Bella Vista Farm, Edward Henry Pearce operated what by 1890 was recognised as one of the largest orchards in the colony. This was complemented by a dairy and other farming activities. The land remained a working farm until the late 1990s when much of the land was subdivided and sold for development.

2.4 Suburban Expansion, 1960s–Present

From the 1960s the study area became the focal point of the NSW Government's plan to make residential land available in the expanding Sydney area. Old orchards, rough roads and timber framed cottages gave way to suburban blocks, and sealed roads with kerbs and gutters. Baulkham Hills saw much red-brick residential development during the 1960s.

In 1959 land located within the former Cherrybrook Farm was subdivided to become the first project home village in Sydney. The original bushland was bulldozed, and exhibition homes were built on cut and fill sites, then landscaped. A large number of builders erected their homes with the entire project being promoted through the Australian Women's Weekly. This initial phase was followed by further period of accelerated development during the 1980s. This new development featured numerous cul-de-sacs and a variety of housing types.

Until the mid-1990s, the area around Bella Vista Farm was primarily used for small-scale agriculture. Since then, significant changes have become apparent as this area now incorporates a burgeoning residential area and a busy business district. The homestead and old farm buildings have been preserved and this portion of the former Pearce family property is now owned by The Hills Shire Council.

2.5 Endnotes

- ¹ McClymont J 2003, *Baulkham Hills Shire: Pictorial History* pp 28-29.
- ² Metzke M 2004, *Hornsby Shire: Pictorial History*, pp70-71
- ³ Bowd D, 1986, *Hawkesbury Journey: Up the Windsor Road from Baulkham Hills* pp 29-31, Galea M, 1983, *History of Kellyville*, pp 50–51.
- ⁴ McClymont J 2003, *Baulkham Hills Shire: Pictorial History*, pp 19–21.
- ⁵ Jervis J 1929, "The Beginnings of a Settlement in the Parish of Castle Hill", *RAHSJ*, Vol 15, p226.
- ⁶ Jeans D, *An Historical Geography of NSW to 1901* p209
- ⁷ Oakes J 2008, *Sydney's Forgotten Park and Rural Railways*, Australian Railway Historical Society, pp 73–96
- ⁸ <http://www.thehills.nsw.gov.au/external/hillsvoices/BruceIrwin.htm>

3.0 Heritage Significance and Impact Assessment

3.1 Preamble

This section of the report identifies the existing and potential heritage items and archaeological potential within or in the vicinity of the 17 major construction sites along the route of the proposed NWRL. This section outlines the major civil construction works planned for the NWRL and identifies the likely direct and indirect heritage impacts upon these items that would result from carrying out these works.

The Major Civil Construction Works for the proposed NWRL include locations for the launch of the Tunnel Boring Machine (TBM) and road header launch, TBM and road header retrieval, TBM support facilities, viaduct and earthworks support, excavations for station construction, services facilities construction, concrete batching and manufacture of pre-cast concrete components. Most of the above activities would take place at a series of construction sites along the route.

3.2 Structure

The impact assessments have been set out on a construction-site-by-construction-site basis. For each site, the report:

- identifies the study area;
- provides an overview of its historical and heritage context;
- identifies heritage items and/or archaeological sites with the potential to be affected by the NWRL civil construction works;
- provides Statements of Significance for the heritage items that are likely to be subject to impacts resulting from the proposed works;
- provides a general description of the proposed works at each site;
- assesses the heritage impact of the proposed works on the heritage significance of each of the affected heritage items or archaeological sites;
- provides an overall ranking of the severity of the impact; and
- recommends measures to mitigate any adverse impacts on heritage items.

Recommended mitigation measures for a number of European heritage items and potential European heritage items (including archaeology items) are provided in Section 4.0 of the report (refer to Tables 4.1 and 4.2).

3.3 Heritage Significance and Impact Assessment

3.3.1 Epping Services Facility (Construction Site 1) and Epping Decline (Construction Site 2)

Site Location

The Epping Services Facility construction site is to cover an area of approximately 3,400m² on the western side of Beecroft Road approximately 400 metres north of the intersection with Carlingford

Road. This site is centred upon land currently occupied by the commercial building at No. 240 Beecroft Road, however some of the adjacent bushland area to the north of this building would also be affected by the works.

The Epping Decline civil construction works site is located on the east side of Beecroft Road not far from the intersection of Beecroft Road and Kandy Avenue. Covering an area of approximately 4,500m², the site would occupy part of the narrow strip of land between Beecroft Road and the existing main northern railway line. This area now contains part of the concrete hardstand associated with the former bus ramp to the M2 Motorway as well as some bushland vegetation.

The locations of items in the vicinity of Construction Sites 1 and 2 are indicated on Map 1 in the series of aerial images (maps) reproduced at the end of this section.

Heritage Context

The area around the Epping Services Facility and the Epping Decline sites is characterised by late nineteenth and early twentieth century residential development. The Main Northern railway was constructed through Epping in 1886 and the area, which had previously been dominated by orchards and sparsely settled, saw a marked increase in population and residential development.

Heritage Items

Heritage items within 500 metres of the Epping Services Facility and Epping Decline are listed in the table below. Items with the potential to be impacted by the NWRL are highlighted.

No.	Item	Address	Listing
357	Bushland	Road reserve, Beecroft Road between Carlingford Road and Kandy Avenue, Epping	Local (Hornsby LEP)
403	'Woodlands' house	25 Ray Road, Epping	Local (Hornsby LEP)
	House	9 Rosebank Avenue, Epping	Local (Hornsby LEP)
	House	10 Rosebank Avenue, Epping	Local (Hornsby LEP)
	Epping Railway Station Group	Beecroft Road, Epping	RailCorp S170 Heritage and Conservation Register

Archaeological Potential

A stone causeway over Devlin's Creek is to the north of Construction Sites 1 and 2. There are no other known historical archaeological sites within the construction sites.

Item	Address	Listing	Archaeological Remains	Archaeological Potential
Stone causeway over Devlin's Creek	Beecroft Road, Epping	Local (Hornsby LEP)	Aligned sandstones	High

Summary of Proposed Works

The proposed civil works at the Epping Decline site include excavation of a decline tunnel, tunnel preparation and road header launch to undertake excavation works, excavation of new stub tunnels to accommodate future rail works, and the removal of approximately 100,000m³ of spoil from the

road header works. Access to this site would be directly from Beecroft Road. A one-way internal access road would be formed between the access and egress points. A large acoustic shed would be constructed around the start of the decline tunnel, spoil handling and storage areas. Workshops, offices and a water treatment plant would be erected elsewhere on the site (outside the acoustic shed).

The planned civil works at the Epping Services Facility site include demolition of an existing commercial building, clearing of some existing bushland vegetation, formation of access roads, provision of a tunnel ventilation plant and other equipment necessary to connect the NWRL to the existing Epping to Chatswood Rail Link. A large acoustic shed would be erected to accommodate the shaft excavation, storage, spoil handling and workshop areas. Offices and a water treatment plant are to be located outside the acoustic shed. Approximately 5,600m³ of spoil would be removed from the shaft excavation works.

Assessment of Heritage Impacts

Based on the location of the heritage sites with respect to the proposed works, two heritage items are likely to be affected by the NWRL project. The potential impacts on these items are assessed in the tables below.

Other existing heritage items in the broader vicinity of the proposed Epping Service Facility and Epping Decline, such as Epping Railway Station Group and the stone causeway across Devlin's Creek, are unlikely to be affected by the proposed works due to the nature of existing development in the immediate vicinity, and their distance from the proposed civil construction works sites.

Item	Bushland, road reserve Beecroft Road between Carlingford Road and Kandy Avenue
Image	 Figure 3.1 Looking towards bushland on the eastern side of Beecroft Road in the vicinity of the Epping Decline site. (Source: GML 2012)



Figure 3.2 Bushland on the western side of Beecroft Road in the region of the designated site for the Epping Services Facility. (Source: GML 2012)

Significance	Local
Statement of Significance	<i>Remnant native forest in prominent location along Beecroft Road in Epping. Of local significance. (State Heritage Inventory)</i> Remnant native forest and sandstone outcropping located north of Epping Station. Individual trees within the bushland date from c1940 and include Blackbutt Blue Gum, Stringybark, Red Bloodwood, Pittosporum and many smaller shrubs. The bushland has aesthetic significance at the Local level, forming an attractive visual corridor along Beecroft Road. The bushland provides evidence of the original, natural landscape of the Epping area.
Heritage Impact	It is understood that the northern civil construction works site at Epping (the Epping Decline) would require the removal of some existing bushland including a number of trees in the vicinity of Beecroft Road, (opposite Kandy Avenue) and the existing railway corridor. Planned works for the proposed Epping Services Facility would also necessitate removal of part of the existing heritage-listed bushland in the zone between Carlingford Road and Kandy Avenue. The construction works proposed for both Epping sites would have a major adverse impact upon the heritage-listed bushland in this region due to the necessary clearing of some existing vegetation.

Item	'Woodlands' house
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Image	
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Figure 3.3 Woodlands House. (Source: GML 2012)



Figure 3.4 Views looking east towards bushland from directly in front of Woodlands house. (GML 2012)

Significance	Local
Statement of Significance	<i>Fine quality Federation Bungalow style house with complex roof form and good original sandstone. Integrity partly compromised by verandah enclosures. (State Heritage Inventory)</i> Woodlands house has aesthetic and representative significance at the Local level. It is a good, representative example of the Federation Bungalow style architecture and retains primary features of the style, including shingled gables, a sandstone and timber verandah and tapering chimneys with a roughcast finish. The visual setting of the house has been compromised by the adjacent residential flat development, built within the original grounds.
Heritage Impact	The designated civil construction works sites are separated from Woodlands house by existing medium density unit development along the eastern side of Edensor Street. An area of remnant bushland beyond the medium-density development is evident in views from the house and forms part of its visual setting (see Figure 3.4). Some of this bushland will be removed for the construction of the Epping Services Facility and this may have some impact on visual setting of the house. However, since the area of bushland to be removed forms just a small (and distant) part of the visual setting of Woodlands house, it is considered that its removal would have only a minor negative heritage impact.

Assessment of Archaeological Impacts

There is no known archaeological potential within Construction Sites 1 and 2. The stone causeway over Devlin's Creek is located outside the construction sites and will not be affected by the works. There is the possibility of indirect impacts on the causeway from erosion and sedimentation associated with the construction works.

3.3.2 Cheltenham Services Facility (Construction Site 3)

Site Location

The proposed intermediate services facility at Cheltenham is to be located at Cheltenham Park, which comprises an oval, other sports facilities and an area of bushland within a belt of land situated between Castle Howard Road and the M2 Motorway. The 12,000m² site, which would accommodate emergency access and egress facilities between Epping and Cherrybrook Stations, is centred on existing netball courts on the western side of Cheltenham Oval.

The locations of items in the vicinity of Construction Site 3 are indicated on Map 3 in the series of aerial images (maps) reproduced at the end of this section.

Heritage Context

The site area at Cheltenham Park lies within the boundary of the broader Beecroft/Cheltenham Heritage Conservation Area (in Precinct B3). This conservation area is primarily significant because it demonstrates layers of suburban subdivision, re-subdivision and development from the 1880s until the present day and contains numerous individual houses, churches, and other structures of fine aesthetic quality from the Victorian, Federation, Inter-war and Post-war periods. Many of the residences were designed by architects of note. The intactness of the early twentieth century residential fabric and streetscapes contributes to the significance of this area. The area demonstrates the influence of the natural topography and vegetation on the suburban fabric. Remnant native vegetation is closely integrated into the street patterns and residential allotments, and the dominant character of the area is derived from the tall tree canopy in pockets of remnant forests and in reserves. The forest trees provide a backdrop behind the majority of the buildings.

Records show that the oval at Cheltenham Park was constructed c1934 and aerial photographs of the area indicate that the oval was well-established by 1943. The existing amenities block near Castle Howard Road appears to have been constructed at a later date.

Heritage Items

Heritage items in the vicinity of the Cheltenham Services Facility are listed in the table below. Items with the potential to be impacted by the NWRL are highlighted.

No.	Item	Address	Listing
70	Bushland Reserve, Beecroft/Cheltenham Park	Castle Howard Road, Beecroft	Local (Hornsby LEP)
69	Street trees	Castle Howard Road, Beecroft	Local (Hornsby LEP)
274	House	76 Cheltenham Road, Cheltenham	Local (Hornsby LEP)
	Beecroft/Cheltenham Heritage Conservation Area	Area generally bounded by Boundary Road, Hull Road, Beecroft and Castle Howard Bushland Reserves, and the suburb boundaries of Epping and North Epping	Local (Hornsby LEP)

Archaeological Potential

There are no known archaeological sites within the boundary of the Cheltenham Services Facility construction zone.

Summary of Proposed Works

The proposed construction works at the Cheltenham Services Facility Site will involve removal of existing vegetation (including numerous forest trees), establishment of internal access roadways and hardstand areas, excavation for emergency access passages to the rail tunnels plus associated removal of approximately 12,000m³ of excavated material.

Assessment of Heritage Impacts

Based on the location of the heritage sites with respect to the proposed works, there is potential for two heritage items and one heritage conservation area to be affected by the NWRL project. The potential impacts on these items are assessed in the tables below.

Item	Bushland Reserve, Beecroft/Cheltenham Park
Image	 Figure 3.5 Part of the affected area of bushland near existing netball courts adjacent to Cheltenham Oval. (Source: GML 2012)
Significance	Local significance
Statement of Significance	<i>Bushland conserve along railway and adjacent roadsides significant element on local landscape and for passenger traffic on trains. (State Heritage Inventory)</i> The bushland reserve at Cheltenham Park has significance at the Local level for its aesthetic qualities and natural values. Trees in the reserve include Blue gums, Grey Ironbark, Smooth Bark Angophora, Pittosporum and Geebung. Note: The oval and sports amenities at Cheltenham Park are not included in the listing.
Heritage Impact	Part of an existing heritage-listed bushland reserve in the vicinity of the Cheltenham Oval area would be affected by the proposed works with numerous trees having to be removed. However, the affected zone represents a relatively small percentage of the total tract of bushland in this area. The proposed construction works will have a minor adverse impact on this bushland conserve.

Item	Street Trees, Castle Howard Road, Beecroft
Image	
	Figure 3.6 Street trees and bushland on Castle Howard Road. (Source: GML 2012)
Significance	Local significance
Statement of Significance	<i>Roadside verge conserving remnant forest of indigenous trees and some indigenous shrubs displaying rustic bushland local Australian identity. Of local significance. (State Heritage Inventory)</i>
Heritage Impact	The street trees along the full length of Castle Howard Road are listed as a landscape heritage item of local significance on Hornsby LEP. Construction of the proposed service facility at Cheltenham would have a minor adverse impact on this item resulting from the necessary removal of a number of trees along the southern side of the road at Cheltenham Park.

Item	Beecroft/Cheltenham Heritage Conservation Area
Image	
	Figure 3.7 Castle Howard Road, Beecroft/Cheltenham Heritage Conservation Area. (Source: GML 2012)
Significance	Local significance
Statement of Significance	The heritage conservation area is primarily significant because it demonstrates layers of suburban subdivision, re-subdivision and development from the 1880s until the present day and contains numerous individual houses, churches, and other structures of fine aesthetic quality from the Victorian, Federation, Inter-war and Post-war periods. Many of the residences were designed by

	architects of note. The intactness of the early twentieth century residential fabric and streetscapes contributes to the significance of this area. The area demonstrates the influence of the natural topography and vegetation on the suburban fabric. Remnant native vegetation is closely integrated into the street patterns and residential allotments, and the dominant character of the area is derived from the tall tree canopy in pockets of remnant forests and in reserves. The forest trees provide a backdrop behind the majority of the buildings.
Heritage Impact	Since the existing areas of bushland in the vicinity of Cheltenham Oval make an important contribution to the character and significance of the Beecroft /Cheltenham Heritage Conservation Area, it follows that the loss of vegetation resulting from the construction activities associated with the Cheltenham Service Facility site would have a minor adverse impact upon the significance of the broader conservation area.

Assessment of Archaeological Impacts

As no archaeological potential has been identified within the construction zone, the construction works are unlikely to have an archaeological impact.

3.3.3 Cherrybrook Station (Construction Site 4)

Site Location

The designated site for Cherrybrook Station would occupy approximately 61,000m² of land on the northern side of Castle Hill Road, immediately west of Franklin Road.

The locations of items in the vicinity of Construction Site 4 are indicated on Map 4 in the series of aerial images (maps) reproduced at the end of this section.

Heritage Context

The area of the proposed Cherrybrook Station remained largely rural until the 1960s. The station site currently consists of a number of residential properties, some areas of open space, as well as bushland and a transmission line easement. Some large houses established during the late nineteenth century and early twentieth century are located nearby. The character of Castle Hill Road in this area remains predominantly verdant with stands of tall trees remaining on both sides of the road.

Glenhope, a large two-storey residence is situated on the southern side of Castle Hill Road, directly opposite the proposed station site. The house, which faces the road, is set well back within a landscaped garden setting and extensive grounds. The outlook from Glenhope to the north is of trees and bushland on the northern side of Castle Hill Road, and provides an appropriate setting for the house.

Heritage Items

Heritage items in the vicinity of the proposed Cherrybrook Station are listed in the table below. Items with the potential to be impacted by the NWRL are highlighted.

No.	Item	Address	Listing
197	Glenhope	113 Castle Hill Road, West Pennant Hills	Local (Baulkham Hills LEP)
303	Inala School	160-168 Castle Hill Road, Cherrybrook	Local (Hornsby LEP)
198	Dunrath	139 Castle Hill Road, West Pennant Hills	Local (Baulkham Hills LEP)
302	House	150 Castle Hill Road, Cherrybrook	Local (Hornsby LEP)

Archaeological Potential

Two potential archaeological sites have been identified within the area of the Cherrybrook Station. A 1920s plan of the site shows two structures fronting Franklin Road, near the junction with Castle Hill Road. Only one of the structures is shown on the 1947 aerial, with the rest of the area being cleared paddocks with a few isolated buildings. The actual function of both pre-1920s structures has not yet been ascertained; however it is assumed that they were of residential occupancy, most likely farmhouses.

The site of both structures is today occupied by five residential lots, four of which have modern houses built along the Franklin Road frontage (Figure 3.8). No above-ground evidence of the structures could be seen during the field survey. The former cleared paddock area located west of the properties is now covered by dense vegetation including some mature trees and two extant houses. A timber and wire fence including early timber fence posts is still evident along the north side of Castle Hill Road (Figure 3.9).

Given the level of disturbance caused by development of the modern houses along the Franklin Road frontage, any evidence of the former structures and associated land use is likely to be fragmentary at best. Any potential archaeological remains would include evidence of land cultivation, fragmentary remains of features located in the backyards of the structures such as wells and privies, refuse dumps and pits, random posts/postholes of fences and enclosures and scattered domestic and other artefacts.

Site	Address	Listing	Archaeological remains	Potential
House Site	Franklin Road, Cherrybrook	Noted in Casey & Lowe, 2006	Structural remains (postholes, timber posts), wells/cisterns, privies, refuse dumps and pits, scattered domestic and other artefacts; evidence of land cultivation	Low
House Site	Franklin Road, Cherrybrook	Noted in Casey & Lowe, 2006	Structural remains (postholes, timber posts), wells/cisterns, privies, refuse dumps and pits, scattered domestic and other artefacts; evidence of land cultivation	Low



Figure 3.8 Contemporary houses fronting Franklin Road located at the site of the two former pre-1920s structures. (Source: GML 2011)



Figure 3.9 Timber posts of a fence line running along the north side of Castle Hill Road. (Source: GML 2011)

Summary of Proposed Works

The proposed Cherrybrook Station is to be an open retained cut box structure. The proposed civil construction works at the Cherrybrook Station site will involve excavation of the station cavern to a depth of 18-29m below ground level and removal of large quantities of spoil material (approximately 670,00m³) from the cavern and tunnel excavation works. There will also be provision of TBM launch and support services, a large acoustic shed, formation of a carparking area, introduction of a temporary water treatment plant or sediment basin and introduction of a signalised intersection to help manage traffic.

Assessment of Heritage Impacts

Based on the location of the heritage sites with respect to the proposed works, there is potential for two heritage items to be affected by the NWRL project. The potential impacts on these items are addressed in the tables below.

Dunrath at 139 Castle Hill Road and the house at 150 Castle Hill Road are unlikely to be affected by the proposed civil construction works, because they are located quite some distance away from the designated works site.

Item	Glenhope
Image	 Figure 3.10 Glenhope, viewed from Castle Hill Road. (Source: GML 2011)
Significance	State
Statement of Significance	Glenhope is an intact early Federation period mansion characteristic of its type. It is particularly important for its retained internal finishes and architectural features which heralded new trends in late nineteenth century interior decoration. Its prominent ridge-crest location, remnant garden features and mature trees provide Glenhope with an outstanding setting which is rare for this area. (Adapted from the Australian Heritage Places Inventory)
Heritage Impact	The construction works will have some temporary adverse impacts upon the setting of (and the outlook from) the heritage-listed property known as Glenhope, which is directly opposite the road from the site designated for Cherrybrook Station. Existing vegetation on the northern side of the road (within the construction zone) forms part of the visual setting for Glenhope house. Much of this vegetation will be removed for the proposed civil construction works. This will have a moderate adverse impact on the visual setting of (and the outlook from) Glenhope.
Item	Inala
Image	 Figure 3.11 Inala as seen from Castle Hill Road. (Source: GML 2011)
Significance	Local
Statement of	<i>Good example of a large early Federation Bungalow style house. Elegant design with distinctive</i>

Significance	<i>tall chimneys and pair of gablets. Integrity affected by some unsympathetic modifications. (State Heritage Inventory)</i>
Heritage Impact	There may be some minor impact upon the setting of this property resulting from the station construction works if trees are to be removed from near Franklin Road. It is considered that such loss of vegetation would have only a minor adverse impact upon the general setting of Inala. The main outlook from this heritage item would not be greatly affected.

Assessment of Archaeological Impacts

Any archaeological remains associated with the two structures identified on the 1920s plan and subsequent 1947 aerial would be located within the perimeters of the proposed deep excavations for the construction of Cherrybrook Station. The proposed earthworks required for the station would result in the removal of any potential archaeological resource that may have survived at the site. This would be a moderate adverse impact.

3.3.4 Castle Hill Station (Construction Site 5)

Site Location

The designated site for Castle Hill Station is located in the commercial centre of Castle Hill. Covering an area of approximately 18,000m², the site occupies most of the existing Arthur Whitling Reserve as well as part of the Old Northern Road reserve. Arthur Whitling Reserve is a public park situated in the triangular wedge of land between the converging sections of Old Castle Hill Road and Old Northern Road on the eastern side of the Castle Towers Shopping Centre. The eastern end of this reserve extends to McMullen Avenue where a war memorial and commemorative Lone Pine tree are located.

The locations of items in the vicinity of Construction Site 5 are indicated on Map 5 in the series of aerial images (maps) reproduced at the end of this section.

Heritage Context

Arthur Whitling Reserve was established in 1934 on the site of the former Castle Hill Railway Station (1923–1932). The reserve was originally known as Castle Hill Park, but was renamed in 1989 in honour of former Councillor and Shire President Arthur Whitling. An Anzac Memorial Hall was located at the southern end of the park until 2005. It was constructed in 1935 as a community hall and was later used as the first Castle Hill RSL until 1974, when it was converted back to a community hall. A number of potentially significant items are located within the grounds of this park including the war memorial, several other memorials and commemorative trees, as well as some other mature trees.

Arthur Whitling Reserve is not listed as a heritage item, however the place is recognised as having important heritage values by many in the local community. An old railway signal is located within the park. A large war memorial and a commemorative Gallipoli Lone Pine (planted in April 1972) are located at the northern end of park, while other memorials, including a plaque for Max Ruddock MP, are located within its central area. The central pathway and the mature plantings along the Old Northern Road side probably date from the time that the park was established.

Heritage Items

Listed heritage items as well as unlisted items with heritage attributes located in the vicinity of the proposed Castle Hill Station are identified in the table below. Items with the potential to be impacted by the NWRL are highlighted.

No.	Item	Address	Listing
	Arthur Whiting Reserve	Old Northern Road, Old Castle Hill Road and McMullen Avenue	Not listed
64	Castle Hill Public School	264–266 Old Northern Road, Castle Hill	Local (Baulkham Hills LEP)
64	Police Station	264–266 Old Northern Road, Castle Hill	Local (Baulkham Hills LEP)
	The White House Gallery	6 McMullen Avenue, Castle Hill	Not listed

Archaeological Potential

The Parramatta to Castle Hill tramway connection transported fruit grown in the Castle Hill district to markets in Sydney. The line consisted of a single track with a reversing loop at Castle Hill. It was extended to Rogan's Hill in 1924. The Parramatta to Castle Hill tramway (1910–1932) is not listed as a heritage item or archaeological site on Baulkham Hills LEP, however the NWRL Heritage Review (Casey & Lowe, 2006) assesses the item to be of high local significance.

There is no visible physical evidence of the tracks and/or terminus within Arthur Whiting Reserve. The construction of this park, including garden beds and mature trees, is likely to have disturbed any remaining archaeological evidence of the tramway/railway. Based on the available historical evidence, some of which is summarised on the interpretive signage in the park (Figure 3.4), the high level of disturbance caused by the construction of the park means that it is unlikely that a great deal of archaeological evidence associated with the former tramway/railway and the terminus still survives at the site. Any archaeological evidence surviving in situ could include remains of the railway ballast, some isolated minor artefacts (bolts, chains, fasteners, etc.) and deeper post holes of timber structural elements.



Figure 3.12 View looking east showing Arthur Whiting Reserve located near the former Castle Hill tramway/railway terminus. (Source: GML 2011)



Figure 3.13 Interpretive panel within Arthur Whiting Reserve in Castle Hill. The panel is mounted on timber sleepers of unknown origin. (Source: GML 2011)

Summary of Proposed Works

Castle Hill Station will be a cut and cover box structure constructed to a depth of 25m below ground level. The proposed construction works will involve partial closure of Old Northern Road as well as removal (and possible relocation) of the war memorial, relocation of the existing bus interchange, open cut excavation works for the Station, and excavation of tunnel crossovers beside the station. It is estimated that approximately 150,000m³ of spoil would be removed from this site during the excavation operations.

Assessment of Heritage Impacts

Based on the location of the heritage sites with respect to the proposed works, two potential heritage items (Arthur Whitting Reserve and the White House Gallery) are likely to be affected by the NWRL project. The potential impacts on these items are assessed in the tables below.

The entire area of the Arthur Whitting Reserve will be directly affected by the major civil works and activities associated with the construction of the new Castle Hill Station. The former Castle Hill Public School and former Police Station buildings located on the northwestern side of Old Northern Road are listed as heritage items of local significance. These items are not in the direct vicinity of the proposed construction site and are therefore unlikely to be affected by the proposed construction at the Castle Hill Station site.

Item	Arthur Whitting Reserve
Image	 The photograph shows a grassy reserve area with several trees. In the foreground, there is a road with a white-striped crosswalk. A tall, thin pole stands near the crosswalk. The background shows more trees and a cloudy sky.
	Figure 3.14 Arthur Whitting Reserve viewed from the east. (Source: GML 2012)
Significance	Local
Statement of Significance	Arthur Whitting Reserve has significance at the local level for its historic use as the site of the Castle Hill railway station and terminus, and as the first site of the Castle Hill RSL, in the Anzac Memorial Hall (demolished 2005). The reserve land has a long history of community use, being the site of Castle Hill's first community hall in 1879. However, no physical evidence of these past significant uses remain within the reserve; rather, its history is reflected in the numerous plaques and memorials to local people that are scattered throughout the reserve and the construction of a new war memorial at its northeastern corner. The war memorial and commemorative elements have social value at a local level as places of remembrance and ceremony. Arthur Whitting Reserve has some aesthetic significance for its elegant arrangement of mature trees and planted garden beds.

Heritage Impact	Arthur Whiting Reserve occupies the site of the proposed Castle Hill Station. The construction zone would necessitate the removal of the entire area of the park. Although this park is not a listed heritage item, it has existed since the mid-1930s, and it contains several monuments and memorials as well as numerous established mature trees. A war memorial with a central fountain occupies the northern section of the park. The removal of the park and all of its various components would have a major adverse effect upon the existing aesthetic character of the space. The works would also have negative heritage impacts upon the existing historic and social values of the Arthur Whiting Reserve.
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Item	White House Gallery
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Image	
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Figure 3.15 The White House Gallery at 6 McMullen Avenue. (Source: GML 2012)

Significance	Local
Statement of Significance	The White House Gallery has significance at the local level for its aesthetic values. This former residence is a good representative example of the Inter-War Spanish Mission style of domestic architecture. Its characteristic features include a roughly textured stucco wall finish, gabled tops to the chimneys and a projecting loggia-style porch with barleytwist columns supporting a series of four arched openings beneath a decorative parapet. It is now a part of a centre for senior citizens.
Heritage Impact	The White House Gallery is located directly opposite the northeastern end of Arthur Whiting Reserve on the northern side of McMullen Avenue. The building is oriented towards the southeast, and does not face the park. Its traditional setting has previously been compromised by later building construction. Although the construction works for Castle Hill Station will have some impact on the visual setting of this building, it is considered that such impact would be of a minor nature.

Assessment of Archaeological Impacts

The potential archaeological remains associated with the Parramatta to Castle Hill tramway and terminus are located within the perimeters of the proposed deep excavations for the construction of the proposed Castle Hill Station involving a cut and cover method. The proposed cut and cover construction method would require a total removal of any potential archaeological resource, if present, which would be considered a moderate adverse impact.

3.3.5 The Hills Centre Station (Construction Site 6)

Site Location

The proposed Hills Centre Station will be built on the site of The Hills Shire Council Works Depot which adjoins the southwestern corner of the Castle Hill Showground. The proposed construction works zone stretches from Carrington Road through the Works Depot site and into the

southwestern area of the Showground. Road access to the construction site from Showground Road makes use of an existing tree-lined roadway that passes through the western precinct of the Showground along the eastern side of Cattai Creek. The construction site for the proposed station would cover an area of approximately 65,000m² and require the temporary possession of the affected portions of the Castle Hill Showground. The station footprint will be located mainly within the area now occupied by the Works Depot, fronting Carrington Road.

The locations of items in the vicinity of Construction Site 6 are indicated on Map 6 in the series of aerial images (maps) reproduced at the end of this section.

Heritage Context

The showground has been the home of the annual Castle Hill Show since 1890, and is regularly used by a number of local community groups. The showground has retained its rural character which is reinforced by the vernacular nature of the majority of the sheds and pavilions located to the north and west of the large show ring. The shape and size of the fenced arena with its perimeter racetrack has been modified a number of times during the past one hundred and twenty years.

The existing showground site covers an extensive area and includes the fenced oval and racetrack on the eastern side of Doran Drive (and to the immediate north of The Hills Centre), as well as a number of associated buildings and structures including several showground pavilions (the oldest, the Taylor Pavilion, now home of a local theatre group, was built in 1925).

Heritage Items

Heritage items (listed and unlisted) in the vicinity of the proposed Hills Centre Station are identified in the table below. Items with the potential to be impacted by the NWRL are highlighted.

No.	Item	Address	Listing
	Castle Hill Showground	Showground Road, West Pennant Hills	Not listed
68	House	107 Showground Road, Castle Hill	Local (Baulkham Hills LEP)
69	House	128–132 Showground Road, Castle Hill	Local (Baulkham Hills LEP)

Archaeological Potential

A 1920s plan of the proposed station area shows two buildings located in the area between the Cattai Creek and Carrington Road. The building that was closer to the creek line does not appear on the aerial photograph dated 1947. The 1947 aerial photograph shows the second building as part of a dwelling complex with several outbuildings in a setting that appears to be an orchard.

Due to the subsequent redevelopment of the area into the depot and the showground, no remains that could be associated with the two early buildings are evident. The level of disturbance required for construction of the depot and showground buildings and infrastructure would have left very little to none of the above-ground building remains. The potential archaeological remains related to the early pre-1920s buildings that are likely to have survived would include mainly subsurface elements such as services, water retaining structures (wells, cisterns), privies and possibly remnant posts and/or postholes and artefacts retained within refuse dumps and pits. Although the extent and nature of the extant showground structures would have the potential to destroy most evidence of the earlier site occupations, concrete slabs covering the ground may have preserved any occupation layer below them.

Site	Address	Listing	Archaeological remains	Potential
House Site	Off Carrington Rd, Castle Hill	Noted in Casey & Lowe, 2006	Structural remains (remnant footings, postholes), services, wells/cisterns, privies, refuse dumps and pits with artefacts.	Low–medium
House Site	Off Carrington Rd, Castle Hill	Noted in Casey & Lowe, 2006	Structural remains (remnant footings, postholes), services, wells/cisterns, privies, refuse dumps and pits with artefacts.	Low–medium

Summary of Proposed Works

The proposed Hills Centre Station will occupy an area of approximately 65,000m² and comprise an open cut retained box structure located at a depth of 15–21m below ground level. During construction, the excavated station area would be used as a major TBM support site, requiring a full range of support services including the supply of water and high voltage electricity, ventilation, drainage, plus the creation of a water treatment plant. Workforce facilities (including offices, toilet amenities and car parking), an acoustic shed, plus storage facilities to permit the introduction of pre-cast concrete tunnel lining segments would also be provided here. Large quantities (totalling approximately 396,000m³) of excavated spoil material from both the station and tunnelling works would be removed from the location. The works will also require the formation of a new intersection at the junction of Showground Road and one of the access roadways an upgrading of an existing roadway through the western portion of the Showground.

The location of this station would mainly affect the existing Council Works Depot site, with a relatively small area of the Showground complex having to be disturbed.

Assessment of Heritage Impacts

Based on the location of the heritage sites with respect to the proposed works, one potential heritage item is likely to be affected by the NWRL project. The potential impacts on these items are assessed in the tables below.

Item	Castle Hill Showground
Image	 Figure 3.16 Show pavilions on the southwestern side of the main arena. (Source: GML 2011)
Significance	Local
Statement of Significance	Castle Hill Showground has significance at the local level for its historic, rarity and representative values. The showground has been the home of the Castle Hill Show since 1890, which by the 1950s was the second largest show in Sydney region, after the Royal Agricultural Society's show at Moore Park. It provides evidence of the historical importance of agriculture to the Baulkham Hills district and is a reminder of the vital role the area once played in providing produce for Sydney. Castle Hill Showground is a representative example of rural showgrounds in NSW, with a large show ring and pavilions arranged around it. It is a rare example of a rural-style showground within the Sydney metropolitan area. While the shape of the show ring has changed over time, the essential layout of the showground, with the pavilions arranged around the north and western edges of the show ring, remains unchanged since at least 1930. The Showground is an important and much used cultural and recreational facility in The Hills Shire.
Heritage Impact	The showground facility has existed in this location since the 1890s and the place still retains its rural character, although it is considered that very few of the existing showground pavilions and associated structures have high heritage values as individual built elements. The designated construction zone would have major adverse impacts upon the affected portions of the Castle Hill Showground, and some component items within this zone. Areas and component elements of the Showground that are well outside the construction zone would remain relatively unaffected by the works.

Assessment of Archaeological Impacts

Any potential archaeological remains associated with the two pre-1920s buildings identified on historic plans and aerials would be located within the area designated for earthworks construction of the Hills Centre Station. The nature of the proposed earthworks involving open cut excavation would require that any archaeological remains in situ be removed prior to the construction phase. This would be a moderate adverse impact.

3.3.6 Norwest Station (Construction Site 7)

Site Location

The proposed Norwest Station will be located within the Norwest Business Park either beneath or immediately to the south of Norwest Boulevard opposite the shopping centre. The construction zone

covers an area of around 21,000m² and incorporates land upon which two existing commercial buildings currently stand.

The locations of items in the vicinity of Construction Site 7 are indicated on Map 7 in the series of aerial images (maps) reproduced at the end of this section.

Heritage Context

Historically, the area was characterised by large land grants made in the early years of the colony, the largest being a grant to Foveaux and Grimes in 1799—land which was known as Bella Vista Farm from 1821. The transformation of the area into residential and commercial development has occurred over the past 20 years.

Heritage Items

Heritage items in the vicinity of the proposed Norwest Station are listed in the table below. Items with the potential to be impacted by the NWRL are highlighted.

Item	Address	Listing
Bella Vista Farm	Elizabeth Macarthur Drive, Bella Vista	State Heritage Register State (Baulkham Hills LEP)

Bella Vista Farm is located in the vicinity of the proposed Norwest Station although the construction site for Norwest Station lies about 1km further towards the northeast. The farm retains its rural character and a range of significant buildings, plantings and landscape. However, the broader context of the farm has changed dramatically with the construction of the Norwest Business Park development. At one point the underground railway tunnel would be less than 100 metres away from the northern corner of the Bella Vista Farm property, however the tunnel would be located approximately 20 metres below the ground.

Archaeological Potential

No known archaeological sites have been identified within the proposed Norwest Station construction zone. An aerial photograph of the site dated 1947 indicates that the area was used for agriculture (most likely orcharding and sheep-grazing). No structures appear in the photograph.

Summary of Proposed Works

Major civil construction works at the Norwest Station site would involve open cut excavation for the station cavern generating approximately 65,000m³ of spoil. The proposed station will be located at a depth of 11–15m below ground level. During the construction phase, the site will accommodate materials storage and handling areas, workshop and services areas, site offices and associated amenities, space for vehicle access and parking as well as a water treatment plant and sedimentation tank. Construction of a substation is also envisaged.

Assessment of Heritage Impacts

The construction zone for Norwest Station will not result in any adverse impacts on any known European heritage items. The context of the station is an existing built-up area with few heritage items in the immediate vicinity. The construction works are unlikely to have any appreciable impacts upon Bella Vista Farm or its immediate context.

Assessment of Archaeological Impacts

As no archaeological potential has been identified within the construction zone, the construction works are unlikely to result in any archaeological impacts.

3.3.7 Bella Vista Station (Construction Site 8)

Site Location

The proposed Bella Vista Station will be located within the northwestern precinct of the Norwest Business Park on the site of the existing Homemakers Centre at the corner of Old Windsor Road and Celebration Drive. The designated construction zone covers an area of approximately 63,000m² and is mainly confined to the area occupied by the Homemakers Centre and its associated carpark, however some construction activity will encroach into the land to the north.

The locations of items in the vicinity of Construction Site 8 are indicated on Map 8 in the series of aerial images (maps) reproduced at the end of this section.

Heritage Context

The designated site for Bella Vista Station is located on the eastern side of Old Windsor Road. Historically, the area was characterised by large land grants made in the early years of the colony, the largest being a grant to Foveaux and Grimes in 1799—land which was known as Bella Vista Farm from 1821. The area was connected to Sydney by the Old Windsor Road, established in 1794.

Heritage Items

Listed and unlisted heritage items in the vicinity of the proposed Bella Vista Station are identified in the table below. Items with the potential to be impacted by the NWRL are highlighted.

No.	Item	Address	Listing
	Bella Vista	Elizabeth Macarthur Drive, Bella Vista	State Heritage Register
	Old Windsor Road and Windsor Road Heritage Precincts	Old Windsor Road and Windsor Road	RTA S170 Heritage and Conservation Register
3252	House	36 Old Windsor Road (more recently 18 Cumberlege Lane), Kellyville	Not listed. (Noted in Windsor and Old Windsor Roads CMP 2005.)

Bella Vista Farm is located in the vicinity of the proposed Bella Vista Station. The farm retains its rural character and a range of significant buildings, plantings and landscape within the farm site. However, the broader context of the farm has changed dramatically with the construction of the Norwest Business Park development.

A weatherboard house at 36 Old Windsor Road, just north of the Homemaker centre, was noted as a potential European heritage site in the Windsor and Old Windsor Roads CMP (Clive Lucas, Stapleton and Partners, 2005). This house was not located during field survey investigations carried out by GML for this project in late 2011 and early 2012. It is believed that the house has been demolished.

Archaeological Potential

No known archaeological sites have been identified within the proposed Bella Vista Station construction zone.

Summary of Proposed Works

The proposed works at the Bella Vista Station site will involve the demolition of the Homemaker Centre, open cut excavation works for the station cavern and the provision of TBM support services including supply of necessary electricity, ventilation and water services, offices, workforce facilities, water treatment plant plus storage and vehicle access zones. An acoustic shed would be built to enclose the TBM operations and the handling area for pre-cast concrete units. A significant quantity of excavated material (totalling approximately 430,000m³ of spoil) would be removed from this location.

Assessment of Heritage Impacts

Based on the location of the heritage sites with respect to the proposed works, there is potential for one heritage item and one potential heritage item to be affected by the NWRL project. The potential impacts on these items are assessed in the tables below.

Item	Bella Vista Farm
Image	
	Figure 3.17 Bella Vista Homestead. (Source: Friends of Bella Vista Farm)
Significance	State
Statement of Significance	Bella Vista Farm is of at least state significance to NSW as a rare example of an intact rural cultural landscape on the Cumberland Plain, continuously used for grazing since the 1790s: evidence of patterns of agricultural use of the farm over the last 200 years survive including field patterns, post and rail fences, vernacular slab farm buildings and evidence of the alignment of its traditional transport route, Old Windsor Road, as well as cultural plantings and remnant woodland trees.... <i>Bella Vista Farm is one of the most intact and best examples on the Cumberland Plain of the summit model of homestead siting, where the house and plantings are sited high on a prominent hill in contrast with open fields around. Its driveway is intact and relates to the traditional transport route (Old Windsor Road). Its prominent siting allows views to and from the property from a wide area. Views to the 'summit' are also available from Old Windsor Road. (Adapted from the State Heritage Inventory)</i>

Heritage Impact	It is considered that there would be few appreciable adverse impacts upon any known items of European heritage arising from the construction of Bella Vista Station. The station site is unlikely to be visible from anywhere within the State heritage listed property of Bella Vista Farm which is located approximately one kilometre away from the construction zone. There is already much recent development in the vicinity associated with the Norwest Business Park.
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Item	Weatherboard House, 36 Windsor Road
Image	Not available
Significance	Local significance
Statement of Significance	<i>Cream weatherboard on brick piers with corrugated iron gable roof, sash windows. Fanlight above door. Concrete verandah. Verandah roof supported by timber supports. (Windsor Road and Old Windsor Road CMP 2005)</i>
Heritage Impact	Construction of Bella Vista Station would require removal of this house if it was extant. It would appear however that the building has been demolished.

Assessment of Archaeological Impacts

As no archaeological potential has been identified within the construction zone, the construction works are unlikely to result in any archaeological impacts.

3.3.8 Balmoral Road (Construction Site 9)

Site Location

The proposed Balmoral Road construction site will cover an area of approximately 190,000m² between the proposed Bella Vista Station and Balmoral Road. It extends westwards to the intersection of Old Windsor Road and Balmoral Road.

The locations of items in the vicinity of Construction Site 9 are indicated on Map 9 in the series of aerial images (maps) reproduced at the end of this section.

Heritage Context

There are no known heritage items or potential heritage items within the proposed Balmoral Road construction works zone. No known archaeological sites have been identified within the proposed Balmoral Road construction works zone.

Summary of Proposed Works

The site would be used to support the adjacent cutting works as well as for the establishment of a concrete batch plant and pre-cast component manufacturing facility to be built towards the southwestern corner. This 24 hours-per-day manufacturing operation would supply the pre-cast segments for transportation to the main TBM support sites.

The works at Balmoral Road would comprise construction of internal vehicle access roads (main access into the site will be from Balmoral Road), and a road bridge over the NWRL rail line. It is understood that the road bridge would have a span of approximately 40m. Open cut excavation works would occur towards the western portion of the site.

Assessment of Heritage Impacts

As there are no known heritage items or potential heritage items within the Balmoral Road construction works zone, the construction works are unlikely to result in any heritage impacts.

Assessment of Archaeological Impacts

As no archaeological potential has been identified within the construction zone, the construction works are unlikely to result in any archaeological impacts.

3.3.9 Memorial Avenue (Construction Site 10)

Site Location

The proposed Memorial Avenue construction site covering an area of approximately 35,000m² would be located at the southeastern corner of Old Windsor Road and Memorial Avenue, extending back to Balmoral Road. The site currently encompasses a T-way car park and bus station, open space and some residential properties.

The locations of items in the vicinity of Construction Site 10 are indicated on Map 10 in the series of aerial images (maps) reproduced at the end of this section.

Heritage Context

The area of the Memorial Avenue construction site has historically been rural, with the area sparsely developed and populated. Old Windsor Road has been the main road through the area since 1794.

Heritage Items

There are no known heritage items or potential heritage items within the proposed Memorial Avenue construction zone.

Archaeological Potential

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

Summary of Proposed Works

The works at Memorial Avenue would comprise construction of a rail bridge over the road as part of the NWRL twin track viaduct structure. The rail bridge would have a span of 50m. The construction site is to be used as a staging point for the elevated viaduct section of the NWRL and for the establishment of a second concrete batch plant that will include facilities for storing precast concrete components. A car parking area, site offices and a workshop are to be established on the site. The construction activities would require major road works along the Northwest Transitway to accommodate heavy vehicles.

Assessment of Heritage Impacts

The construction works would have no perceived impacts upon any known European heritage items. The construction works zone is not located in the vicinity of any listed heritage precincts of Old Windsor Road.

Assessment of Archaeological Impacts

The boundary stones along Old Windsor Road, if extant, would be located outside the Memorial Avenue construction works zone. The construction works are therefore unlikely to have any archaeological impacts.

3.3.10 Kellyville Station (Construction Site 11)

Site Location

The proposed site for Kellyville Station occupies an area of approximately 25,000m² on the southeastern side of the intersection of Old Windsor Road and Samantha Riley Drive. A bus station, a Transitway carpark and some residential properties currently exist on part of the construction site area.

The locations of items in the vicinity of Construction Site 11 are indicated on Map 11 in the series of aerial images (maps) reproduced at the end of this section.

Heritage Context

The site for Kellyville Station on the eastern side of Old Windsor Road is located within an area along an original alignment of the road. The area of the station remained predominantly rural until the 1990s, when residential subdivisions and development began to occur.

Heritage Items

The proposed Kellyville Station will be located adjacent to one of the Old Windsor Road heritage precincts listed on the RTA S170 Register.

No.	Item	Address	Listing
	Windsor Road and Old Windsor Road Heritage Precincts (OWR 1—Stanhope Farm Alignment)	Windsor Road and Old Windsor Road	RTA S170 Heritage and Conservation Register (State significance)

The OWR 1—Stanhope Farm Alignment precinct is located on either side of Samantha Riley Drive and includes part of the original alignment of Old Windsor Road, plantings on either side of the road and a post and wire fence. The precinct has historic and aesthetic values of State significance (CMP 2005). The alignment is now occupied by the Northwest Transitway, but the plantings and alignment have been retained.

Archaeological Potential

There are several archaeological items identified in the section of the proposed above-ground route that includes construction of the railway viaduct and Kellyville Station. Apart from the original alignment of Old Windsor Road and a pair of boundary markers associated with the Old Windsor Road that have been replaced and obscured by works associated with construction of the Northwest Transitway, the most significant archaeological item that will be affected by the proposed works is the archaeological site located south of Samantha Riley Drive.

The archaeological site was noted in the Windsor Road and Old Windsor Road CMP (by Clive Lucas, Stapleton and Partners, 2005 in which it was identified by the number 49). The site includes remains of a house captured on Mackenzie's 1885 Road Survey. The structure is also shown on a 1947 aerial in a typical farmland setting, fronting Old Windsor Road. The known archaeological

remains include the house footprint with a separate kitchen, a sandstone brick cistern, two brick cisterns/wells and some sandstones as part of building material.

The site was previously impacted upon to some degree by the works required for the construction of the Northwest Transitway (Casey & Lowe, 2006) and a carpark has since been constructed over the northern part of the site. The most recent site inspection identified two brick wells/cisterns located south of the existing carpark, which are currently protected by a cyclone fence (Figures 3.18 - 3.19).

In addition, the Battle of Vinegar Hill memorial is located approximately 400m west of the station site, although whether the memorial is on the actual site of the battle is uncertain. There is the potential that the event occurred on a different location along Windsor Road.

Site	Location	Listing	Archaeological Remains	Potential
Archaeological site	South from Samantha Riley Drive, Kellyville	Noted in Casey & Lowe, 2006	Structural remains (remnant footings, postholes), services, brick wells/cisterns, privies, refuse dumps and pits with artefacts.	Low–medium
Pair of Boundary Markers	80m south from Samantha Riley Drive, Kellyville	Noted in Windsor Road and Old Windsor Road CMP 2005	Have been removed/reburied as part of NW transitway (RTA comments)	Nil
Pair of Boundary Markers	Immediately South of Samantha Riley Drive, Kellyville	Noted in Windsor Road and Old Windsor Road CMP 2005	Have been removed/reburied as part of NW transitway (RTA comments)	Nil
Site of the Battle of Vinegar Hill	Within Castlebrook Cemetery, Kellyville	Memorial site listed in Blacktown LEP	Three possible locations: cemetery, the corner of Windsor and Old Windsor Roads, or on Old Windsor Road near Rouse Hill House. Potential scattered/lost personal and other artefacts	Low–nil



Figure 3.18 A cistern/well located within the perimeters of the archaeological site located south of Samantha Riley Drive. (Source: GML 2011)



Figure 3.19 A second, smaller cistern/well located in the close proximity of the larger one shown in the preceding image. (Source: GML 2011)

Summary of Proposed Works

The proposed Kellyville Station will be an elevated station constructed in conjunction with the viaduct. The construction works site will extend east from the Northwest Transitway to just west of Elizabeth Macarthur Creek and south from Samantha Riley Drive. The proposed civil works would involve provision of temporary and permanent roadworks including the temporary relocation of some Transitway facilities.

Assessment of Heritage Impacts

Based on the location of the heritage sites with respect to the proposed works, there is potential for one heritage item to be affected by the NWRL project. The potential impacts on this item are assessed in the table below.

Item	Old Windsor Road Heritage Precinct 1 (OWR 1) Stanhope Farm Alignment
Image	 Figure 3.20 Old Windsor Road Stanhope Farm Alignment (Source: Windsor Road and Old Windsor Road CMP, Clive Lucas, Stapleton and Partners, 2005 p.14)
Significance	State
Statement of Significance	<i>Surviving section of the old alignment of Windsor Road showing early construction and design methods. Contains the largest group of alignment stones. Remnants of the early setting also remain. Named after original land grant. (Windsor Road and Old Windsor Road CMP 2005)</i> Assessed as having high historic, associative, aesthetic, research and rarity values in the Windsor Road and Old Windsor Road CMP 2005, this precinct was altered to some extent during the Northwest Transitway works. However, some elements of the precinct remain in situ.
Heritage Impact	As the proposed station site is located adjacent to one of the identified historic precincts along Old Windsor Road, there may be some impacts upon this historic roadway precinct. Since there have been numerous physical changes to this part of Old Windsor Road in recent times, any negative heritage impacts are likely to be of a relatively minor nature.

Assessment of Archaeological Impacts

The two cisterns/wells are located within the perimeters of the ground disturbance works required for the construction of the proposed above-ground Kellyville Station. There is the potential that other known and potential archaeological features associated with the former household still remain

within the area designated for the construction of the station. It is also possible that remains of boundary stones may have survived in this region. The nature of the proposed earthworks for the construction of the elevated station would have the potential to disturb or destroy the known and potential archaeological resource.

Given that the exact location of the site of the battle of Vinegar Hill has not been accurately identified there is the potential, although minor, of survival of archaeological evidence associated with this significant event. The nature of the proposed earthworks for the construction of the elevated station would have the potential to disturb or destroy the known and potential archaeological resource.

3.3.11 Samantha Riley Drive to Windsor Road (Construction Site 12)

Site Location

The site extends in a northwesterly direction from the intersection of Old Windsor Road and Samantha Riley Drive until it reaches the junction of Old Windsor Road and Windsor Road. It traverses part of a floodplain. A section of the Transitway is incorporated.

The locations of items in the vicinity of Construction Site 12 are indicated on Map 12 in the series of aerial images (maps) reproduced at the end of this section.

Heritage Context

The area of Construction Site 12 has historically been rural and sparsely populated. Until comparatively recently, development in the vicinity of this site has also been sparse. Old Windsor Road has been the main road through the area since 1794.

Heritage Items

A series of eucalyptus trees along Old Windsor Road were identified in the Windsor Road and Old Windsor Road CMP (Clive Lucas, Stapleton & Partners, 2005) to the north of Samantha Riley Drive.

Archaeological Potential

A series of boundary stones along Old Windsor Road were identified in the Windsor Road and Old Windsor Road CMP (Clive Lucas, Stapleton & Partners, 2005) to the north of Samantha Riley Drive. The boundary stones were not visible during recent field surveys. It is likely that they were buried or removed during construction of the Northwest Transitway. No other known archaeological sites have been identified within the proposed Samantha Riley Drive to Old Windsor Road construction site. Aerial photographs of the area dated 1943 indicate that the area was used for agriculture (most likely sheep-grazing). No structures appear in these aerial photographs.

Summary of Proposed Works

The site is to be used for the construction of the elevated viaduct structure in this stretch of the NWRL route. It will incorporate rail bridges crossing over Samantha Riley Drive as part of the viaduct structure.

Assessment of Heritage Impacts

The construction works between Samantha Riley Drive and Windsor Road would have no perceived impacts upon any known European heritage items. The eucalyptus trees would be located outside the construction works zone. No mitigation measures are recommended.

Assessment of Archaeological Impacts

The boundary stones, if extant, would be located outside the construction works zone. As no other archaeological sites have been identified within the proposed Samantha Riley Drive to Old Windsor Road construction site, the construction works are unlikely to result in any archaeological impacts.

3.3.12 Old Windsor Road to White Hart Drive (Construction Site 13)

Site Location

The proposed Old Windsor Road to White Hart Drive construction site covering a total area of approximately 97,000m² will be established along the northeastern side of the main roadway between the intersection of Windsor and Old Windsor Roads and White Hart Drive. It traverses waterways and floodplain areas and incorporates some commercial properties at the southern end.

The locations of items in the vicinity of Construction Site 13 are indicated on Map 13 in the series of aerial images (maps) reproduced at the end of this section.

Heritage Context

The area of Construction Site 13 remained predominantly rural following European settlement in the area and the construction of Old Windsor Road in the late eighteenth century. Residential subdivisions have occurred since the late twentieth century and are transforming the visual character of the area.

One heritage item is located in the vicinity of the construction site—Mungerie, a late-nineteenth century house located on Windsor Road, south of White Hart Drive. The house is located within an allotment that has been landscaped to mimic the historic rural setting of the building. The current allotment although substantial, is a remnant of what once was originally a much larger landholding. The open character of the vegetated landscape and the nature and spacing of the trees along both sides of the traditional entry drive between Mungerie and the Transitway provides an appropriate rural setting for the house. The house has been refurbished for use as the Rouse Hill Visitor Information Centre.

Heritage Items

Listed and unlisted heritage items in the vicinity of the proposed Construction Site 13 are identified in the table below. Items with the potential to be impacted by the NWRL are highlighted.

No.	Item	Address	Listing
	Windsor Road and Old Windsor Road Heritage Precincts (WR 14—Caddies Creek Alignment)	Windsor Road and Old Windsor Road	State Heritage Register State (RTA S170 Heritage and Conservation Register)
183	Mungerie	Windsor Road, Rouse Hill	Local (Baulkham Hills LEP and Department of Planning S170 Heritage and Conservation Register)

Archaeological Potential

The NWRL Heritage Review report (Casey & Lowe, 2006) notes that the archaeological site of the former 1830s Swan Inn, shown on Mackenzie's 1885 survey of the Old Windsor Road is site RH/36 as identified in the Windsor Road and Old Windsor Road CMP, 2005. The site is located on the eastern side of Windsor Road, north of the intersection with Old Windsor Road. The Casey & Lowe

report also notes that the front part of the site along Windsor Road was likely impacted by the Transitway construction works. There is some potential for the remains of outbuildings and services to remain.

Site	Location	Listing	Archaeological Remains	Potential
Archaeological site, former Swan Inn	Eastern side of Windsor Rd, north of the intersection with Old Windsor Road	Local (Baulkham Hills LEP)	Structural remains (remnant footings, postholes), services, brick wells/cisterns, privies, refuse dumps and pits with artefacts.	Low-medium

Summary of Proposed Works

The site is to be a support site for the construction of the elevated twin track viaduct structure. Internal access roads would be established along the viaduct corridor. The road works involve major changes to the Northwest Transitway and the establishment of materials handling and storage areas plus workforce amenities.

Assessment of Heritage Impacts

Based on the location of the heritage sites with respect to the proposed works, one heritage item is likely to be impacted by the NWRL project. The potential impacts on this heritage item are assessed below.

Item	Windsor Road Heritage Precinct 14 (WR 14) Caddies Creek Alignment
Image	
	Figure 3.21 Part of Caddies Creek Alignment (Source: Windsor Road and Old Windsor Road CMP, Clive Lucas, Stapleton and Partners, 2005 p.14)
Significance	State
Statement of Significance	<i>Surviving section of the old alignment of Windsor Road and approach to old bridge crossing at Caddies Creek. Remains of the old road alignment also exist on the eastern side of the creek. (Windsor Road and Old Windsor Road CMP 2005)</i> Assessed as having high historic, associative, research and rarity values in the Windsor Road and Old Windsor Road CMP 2005, this precinct was altered to some extent during the Northwest Transitway works. However, some elements of the precinct remain in situ, including the original alignment.

Heritage Impact As the proposed construction works site is located adjacent to one of the identified historic precincts along Old Windsor Road, there may be some impacts upon this historic roadway precinct. Since there have been numerous physical changes to this part of Windsor Road in recent times, any negative heritage impacts are likely to be of a relatively minor nature.

Item	Mungerie
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Image



Figure 3.22 The older section of Mungerie house. (Source: GML 2011)



Figure 3.23 View looking southeast towards Mungerie from near White Hart Drive. Part of the Northwest Transitway is visible on the right of the image. (Source: GML 2011)

Significance	Local
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Statement of Significance	<i>Evidence of late nineteenth century farming. If a Pearce property, the place is also significant for its association with and evidence of the Pearce family as major graziers, orchardists and land dealers in the part of the Shire.</i> (Baulkham Hills Shire Council Heritage Inventory Sheet)
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Heritage Impact	It is considered that there would be a major adverse impact upon the setting and curtilage of Mungerie. The proposed rail corridor cuts across the original entrance driveway into the Mungerie property and the construction of the viaduct structure involving the removal of a number of trees would substantially reduce the remnant curtilage of the house, dominate views towards the heritage item from the west and interrupt important traditional links between the main road and the 1890s house. The proposed work would therefore result in further erosion of the traditional setting of the house and would constitute a major adverse heritage impact.
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Assessment of Archaeological Impacts

The site of the former Swan Inn is located within the proposed Old Windsor Road to White Hart Drive construction site. The proposed works will result in a major adverse impact on the site of the former Swan Inn.

3.3.13 Rouse Hill Station (Construction Site 14)

Site Location

The proposed Rouse Hill Station will be located on the eastern side of Windsor Road adjacent to the Rouse Hill Town Centre and opposite the Castlebrook Lawn Cemetery and Crematorium. Much of the designated construction zone, which covers an area of approximately 18,000m², is now occupied by a major bus station associated with the Northwest Transitway and the town centre.

The locations of items in the vicinity of Construction Site 14 are indicated on Map 14 in the series of aerial images (maps) reproduced at the end of this section.

Heritage Context and Archaeological Potential

The proposed Rouse Hill Station will be located in an area that includes a number of sites with historical associations with the colonial period. These include the site of the Battle of Vinegar Hill in 1804 (the colony's only convict uprising), Old Windsor Road (one of the earliest roads in the colony) and Rouse Hill Farm, which was the property of free settler Richard Rouse, superintendent of public works for Parramatta, Richmond and Windsor in the early nineteenth century.

Heritage Items

Heritage items in the vicinity of the proposed Rouse Hill Station site are listed in the table below. Items with the potential to be impacted by the NWRL are highlighted.

No.	Item	Address	Listing
23	Battle of Vinegar Hill (memorial)	712 Windsor Road	Local (Blacktown LEP)
185	Royal Oak Inn (former) (now Mean Fiddler Hotel)	2 Commercial Road, Rouse Hill	State Heritage Register
	Rouse Hill House and Farm	Windsor Road, Rouse Hill	State Heritage Register

Archaeological Potential

No known archaeological sites have been identified within the proposed Rouse Hill Station site. An aerial photograph of the area dated 1947 indicate that the area was used for agriculture (most likely sheep-grazing). No structures appear in the photograph.

Summary of Proposed Works

The proposed Rouse Hill Station will be an elevated station associated with the viaduct structure. The works will involve major road works for the bus station and the Transitway, which will require the temporary relocation of bus station facilities during the construction phase. The proposed Rouse Hill Station site will be a viaduct launch and support site which will require provision for storage of pre-cast concrete components.

Assessment of Heritage Impacts

The character of the area has changed greatly in recent years with the construction of the Rouse Hill Town Centre and nearby residential developments. Although the proposed construction works may be visible in views from the Battle of Vinegar Hill Memorial and from the Mean Fiddler Hotel, it is considered that these impacts would be of a relatively minor and temporary nature.

Assessment of Archaeological Impacts

As no archaeological potential has been identified within the proposed Rouse Hill Station site, the construction works are unlikely to result in any archaeological impacts.

3.3.14 Windsor Road Viaduct (Construction Site 15)

Site Location

This site is to occupy the north-east and north-west corners of the intersection of Windsor Road, Schofields Road, and Rouse Hill Drive plus a small zone in the median of Windsor Road. The site currently comprises an overflow carpark for the Rouse Hill Town Centre on the north-east side and a residential property on the north-west side. The total area covers approximately 61,000m².

The locations of items in the vicinity of Construction Site 15 are indicated on Map 15 in the series of aerial images (maps) reproduced at the end of this section.

Heritage Context and Archaeological Potential

Heritage Items

Heritage items in the vicinity of the proposed Windsor Road viaduct are listed in the table below. Items with the potential to be impacted by the NWRL are highlighted.

No.	Item	Address	Listing
23	Battle of Vinegar Hill (memorial)	712 Windsor Road	Local (Blacktown LEP)
185	Royal Oak Inn (former) (now Mean Fiddler Hotel)	2 Commercial Road, Rouse Hill	State Heritage Register
	Rouse Hill House and Farm	Windsor Road, Rouse Hill	State Heritage Register
	Christ Church Rouse Hill	Windsor Road, Rouse Hill	Local (Baulkham Hill LEP)

Archaeological Potential

No known archaeological sites have been identified within the proposed Windsor Road Viaduct construction site. An aerial photograph of the area dated 1947 indicate that the area was used for agriculture (most likely sheep-grazing). No structures appear in the photograph.

Summary of Proposed Works

The Windsor Road Viaduct construction site is to be established to facilitate the construction of the elevated pre-cast concrete rail viaduct structure crossing over Windsor Road. The rail bridge would have a 90 metre span and two side spans of approximately 70 metres.

Assessment of Heritage Impacts

Based on the location of the heritage sites with respect to the proposed works, one heritage item (the former Royal Oak Inn) is likely to be impacted by the NWRL project. The potential impacts on this heritage item are assessed below.

Item	Royal Oak Inn (former) (now Mean Fiddler Hotel)
Image	
	Figure 3.24 The former Royal Oak Inn, now Mean Fiddler Hotel. (Source: GML 2012)
Significance	State
Statement of Significance	<i>The former Royal Oak Inn (now the Mean Fiddler Inn) is of historical and technological heritage significance because:</i> <i>It is an important survivor of an early colonial coaching inn of the 1820-40 periods with the main part of the original complex of buildings remaining intact. (Kremmer, 1991)</i> <i>It is probably the only inn along the main road between Parramatta and Windsor that is conserved and which continues its use today as a "watering hole" or "stop over" for the general public and travellers along the Windsor Road;</i> <i>Its Georgian sandstone frontage and elegant verandah facing Windsor Road is a vivid reminder of a roadside inn that once were plentiful along Windsor and Old Windsor Roads (Eds, 2003)</i> <i>It is the site of one of the earliest licensed premises in the colony dating to 1830.</i> <i>It was a simple, practical design for a coaching inn which allowed its use to continue until the advent of the railways, to be adapted for residential use and later to be restored as a restaurant.</i> <i>It is well built with dressed sandstone Georgian facade enhanced with a handsome Colonial verandah. Its structure and fabric have survived relatively well despite changes in ownership and use. The seven main rooms and road frontage have been well conserved internally with plaster walls, lath and plaster ceilings, Australian cedar joinery and traditional hardware. Although compromised and consumed within the Irish Tavern, the L shaped coaching inn remains extant and recognisable. Its structure and fabric have survived relatively well despite changes of ownership and use. (Kremmer, 1991). (State Heritage Inventory)</i>
Heritage Impact	Removal of trees in views south along Windsor Road from the hotel could result in an impact on the visual setting of the former Royal Oak Inn. However, the trees to be removed are a substantial distance from the hotel, and therefore this impact is considered neutral.

Assessment of Archaeological Impacts

As no archaeological potential has been identified within Construction Site 14, the construction works are unlikely to result in any archaeological impacts.

3.3.15 Windsor Road Viaduct to Cudgegong Road (Construction Site 16)

Site Location

The proposed viaduct continues in a southwesterly direction from where it crosses Windsor Road (a little north of Schofields Road), and passes by an old shale quarry and the existing OK Caravan Corral before crossing Second Ponds Creek and continuing to Cudgegong Road. The construction site would be largely located on the property at 103 Schofields Road. Vehicle access into the site will be directly from Schofields Road.

The locations of items in the vicinity of Construction Site 16 are indicated on Map 16 in the series of aerial images (maps) reproduced at the end of this section.

Heritage Context and Archaeological Potential

The area of Construction Site 16 was formerly part of the Rouse Hill Estate and most likely contained open paddocks. Aerial photographs indicate that the paddocks in this area had reverted to bushland by 1947. Subdivision of the estate for smaller rural allotments occurred from second half of the twentieth century.

Heritage Items

Heritage items in the vicinity of the proposed Construction Site 16 are listed in the table below. Items with the potential to be impacted by the NWRL are highlighted.

No.	Item	Address	Listing
	Battle of Vinegar Hill (memorial)	712 Windsor Road	Local (Blacktown LEP)
	Rouse Hill House and Farm	Windsor Road, Rouse Hill	State Heritage Register

Archaeological Potential

There are no known archaeological sites within the boundary of Construction Site 16. By 1947 the proposed construction site area is shown to have reverted to bushland. There is some potential for subsurface archaeological remains of internal tracks/roads and post holes from old fence lines enclosing earlier paddocks.

Summary of Proposed Works

Construction activities at this site include general civil works associated with the formation of the Schofields Road Cutting, the Cudgegong Road overbridge, and the railway bridge crossing over Second Ponds Creek.

Assessment of Heritage Impacts

Due to the topography of the area and the existing vegetation on either side of the proposed construction site, it is considered that no heritage items in the vicinity of Construction Site 16 will be impacted by the works.

Assessment of Archaeological Impacts

Since the potential for archaeological remains to survive in situ within Construction Site 16 is low, the construction works here are unlikely to result in anything other than minor archaeological impacts.

3.3.16 Cudgegong Road Station and Tallawong Stabling Yard (Construction Site 17)

Site Location

The construction site for the proposed Cudgegong Road Station is to be located on the western side of Cudgegong Road and centred within the zone bounded by Schofields, Cudgegong, Macquarie and Tallawong roads. The Station site would cover an area of approximately 50,000m². The major construction site for the Tallawong Stabling Facility is to occupy an area of approximately 300,000m² on the northern side of Schofields Road. It will be located immediately west of Cudgegong Road and will extend westwards from Tallawong Road almost as far as the existing area of dense bushland on the eastern side of First Ponds Creek.

The locations of items in the vicinity of Construction Site 17 are indicated on Map 17 in the series of aerial images (maps) reproduced at the end of this section.

Heritage Context and Archaeological Potential

Both Cudgegong Road Station and Tallawong Stabling Yard will be on land that was originally part of the Rouse Hill Estate, one of the major colonial estates in the area. The surrounding rural areas have started to undergo planned major urban development, with a recently completed housing estate at The Ponds having already commenced the transformation of the visual character of the area from rural to suburban.

Heritage Items

Heritage items in the vicinity of the proposed Cudgegong Road Station and Tallawong Stabling Yard viaduct are listed in the table below. Items with the potential to be impacted by the NWRL are highlighted.

No.	Item	Address	Listing
	Battle of Vinegar Hill (memorial)	712 Windsor Road	Local (Blacktown LEP)
	Rouse Hill House and Farm	Windsor Road, Rouse Hill	State Heritage Register

Archaeological Potential

The Rouse Hill Estate originally extended as far south as Schofields Road and 250m west of Tallawong Road (to the west). The entire proposed Cudgegong Road Station and Tallawong Stabling Yard area was once located within the Rouse Hill Estate and would have comprised open paddocks for grazing and growing of grain.

A 1947 aerial photograph of the proposed station and stabling yard area shows an undeveloped area that had reverted to bushland and was devoid of any substantial structures, but containing a few distinctive features whose potential remains may have survived until now.

Subsequent development initiated by the land subdivisions in the 1950s resulted in the formation of small farms, industries (including a still-active quarry along Schofields Road at the southern edge of the station and stabling yard area) and connecting roads, with minimal impact on the Rouse Hill Estate. The station and stabling yard area, comprising mainly farms and minor industries, has therefore been characterised by small-scale rural development and pockets of uncleared bushland allotments.

Given the above site formation processes, there is little potential for subsurface archaeological remains to remain on site. If any remains do survive in situ, they would generally include internal tracks/roads and post holes from old fence lines enclosing earlier paddocks.

Summary of Proposed Works

The proposed Cudgegong Road Station would be located within a shallow cutting immediately to the west of Cudgegong Road. This site would be used during the major construction phase for a range of general civil construction activities and bulk earthworks associated with the construction of the proposed Station. The principal access road to the site would be via Cudgegong Road. An internal access road would be formed to link the station site with the adjacent Tallawong Stabling Yard construction site.

The major civil construction works at the Tallawong Stabling Facility would involve general earthworks associated with the formation of the yard cutting (approximately 1,020 metres long) and for the carrying out of extensive drainage works. The maximum depth of the cutting would be 13.5m below existing ground level and the associated earthworks would generate about 340,000m³ of spoil which is intended to be deposited in suitable locations elsewhere along the NWRL corridor (as noise mounds), and also as fill material at the nearby disused quarry near the junction of Windsor and Schofields Roads. The construction site is likely to also be used to accommodate site offices, carparking areas, and space for an amenities compound. The main access points into the construction site would be from Tallawong and Schofields roads.

Assessment of Heritage Impacts

Based on the location of the heritage sites with respect to the proposed works, two heritage items are likely to be affected by the NWRL project. The potential impacts on these items are assessed in the tables below.

Item	Rouse Hill House and Farm
Image	 Figure 3.25 Rouse Hill House. (Source: GML 2011)
Significance	State
Statement of Significance	<i>Rouse Hill House is one of the most significant and substantial houses of the Macquarie period which dates from 1810 to 1822. Rouse Hill House Estate is the largest and most complete publically owned physical record - in the form of buildings, furnishings, artefacts and landscape relationship - of the occupancy and culture of a European-Australian family, encompassing the</i>

tastes, fortunes, and endeavours of seven generations from the early 19th century to the late 20th century (Historic Houses Trust 1997:8).

The property is perhaps unique for its survival as a largely intact estate with an unbroken chain of occupancy, allowing the survival of major garden and interior elements of every period of its history to the present. This layering of artefacts and fashions is especially prevalent in the gardens where designs and physical details such as edging, fencing, planting containers, bed designs and paths provide a case history for the study of the development of garden practices in Australia.

The garden is perhaps Australia's oldest surviving colonial garden in relatively intact form. The surviving physical evidence in the gardens includes borders in a variety of materials, fence and gate remnants, fragments of trellis and arbours, paving and numerous soil displacements that become evident with the location's annual dry spells. These physical remains, matched with pictorial evidence from photographs, drawings and engravings of the property, and writings, have resulted in the identification of four stages of the garden's development: c.1825, c.1865, c.1885 and c.1968. This continuity and evidence of evolution of a very early intact garden from the first quarter of the 19th century to the Edwardian era and 20th century is extremely rare in Australia. (Bogle, 1993 adapted by Read, S., 2004) (State Heritage Inventory)

Heritage Impact	Analysis of the topography of the land that lies between Rouse Hill House and The Rouse Hill Town Centre suggests that the potential impact of the NWRL upon the Rouse Hill House property or its extended visual curtilage would be very low. The property lies approximately 1.5 kilometres to the north of the Cudgegong Road Station site, and is further away (about 2 kilometres distant) from the Tallawong Stabling Yard construction site. The Rouse Hill Estate is separated from these two construction sites by an undulating landscape including forested areas. It is considered therefore that the Cudgegong Station and Tallawong Stabling Yard construction works would barely be visible from the Rouse Hill Estate, and that the possibility of these works resulting in any appreciable negative heritage impacts upon this historic property and its curtilage would be very low.
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Item	Battle of Vinegar Hill (memorial)
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Image	
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Figure 3.26 View east from the Battle of Vinegar Hill Memorial within the Castlebrook Cemetery. (Source: GML 2011)

Significance	Local (potential state)
Statement of Significance	<i>The position overlooks Windsor Road, the site of the first military battle to have taken place on Australian soil. (State Heritage Inventory)</i> This memorial commemorates a significant event in the early colonial history of New South Wales.

Heritage Impact

The Battle of Vinegar Hill Memorial is located in an elevated position within the Castlebrook Cemetery at 712 Windsor Road, Rouse Hill, and approximately 500metres (east) away from the Cudgegong Road Station site. However, the actual place where the skirmish occurred has not been determined with certainty. The likelihood of the works associated with the construction of Cudgegong Road Station having any adverse impact(s) upon the existing Battle of Vinegar Hill Memorial is considered to be remote.

Assessment of Archaeological Impacts

The earthworks associated with construction of the station and stabling yard which include a shallow cutting would require the removal of any surviving archaeological remains within the designated area. As the archaeological potential of the area is considered to be low, this is considered to be a minor adverse impact.