



NON-ABORIGINAL
HERITAGE ASSESSMENT
FOR:



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Executive Summary

Existing Environment

The existing environment can be described as a 4 lane dual carriageway motorway, 21 kilometres in length, which passes through the Local Government Areas of: City of Ryde, Hornsby, Ku-ring-gai and The Hills. The areas adjacent to the motorway are highly urbanised and the M2 passes closely to or in the vicinity of a number of heritage items identified by local councils. Associated with the motorway are the entry and exit points, some of which will be modified by the proposed widening of the M2.

Impact Assessment

A heritage survey was undertaken to identify significant items located along the Hills M2 upgrade area. The assessment of each item included fabric analysis and historical research related to their settings. The assessment also included investigations by an arborist where required to address landscape issues. This assessment was completed in accordance with the statutory obligations of local government areas of The Hills Shire Council, Hornsby Shire Council, Ku-ring-gai Council and City of Ryde. The provisions of local government planning instruments and heritage controls have been considered in this report. The extent to which impacts occur at each heritage item is described and tabulated.

Mitigation measures

All potential identified impacts are documented in this report. Measures have been recommended to reduce the impacts, where they occur, to significant items located along the Hills M2 Upgrade. Particular consideration was given to the heritage building located at 266-268 Windsor Road, Model Farms. Its Windsor Road setting contributes significantly to the streetscape and is to be retained along with an adequate curtilage as set out by the policy recommendations section of this report.

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1 **Proposal Details**

Description of Proposal

The proposed upgrade would occur along the Hills M2 Motorway from the M7/Abbott Road, Baulkham Hills, to the Lane Cove Tunnel. The proposed upgrade would include the following components:

- Widening and/or provision of a third lane along sections of the eastbound and westbound carriageways between Windsor Road and Lane Cove Road.
- Provision of new on/off ramps at Windsor Road, Christie Road and Herring Road.
- Widening and provision of a third lane eastbound and westbound in the Norfolk Tunnel.
- Restoration of westbound breakdown lane from Beecroft Road to Lane Cove Road.
- Removal of the Beecroft Road bus on/off ramp.
- Improvement and widening of local arterial roads, Windsor Road and Talavera Road.
- Widening of the bridge at Christie Road and provision of new traffic control signals.
- Upgrades to the Motorway's Intelligent Transport Systems.

A full description of the proposed upgrade can be found in Chapter 7 of the main M2 Upgrade Project Environmental Assessment document.

Description of the Study Area

The M2 Motorway is a four lane dual carriageway opened in 1997 which extends 21 kilometres from the intersection of Abbott Road, Baulkham Hills, to the Lane Cove Tunnel. The motorway passes through the City of Ryde, Hornsby Shire and The Hills Shire local government areas (LGAs). Parramatta LGA borders the alignment of the motorway in some sections. A locality plan for the proposed upgrade is presented as Figure 1 in this report and in the main M2 Upgrade Project Environmental Assessment document.

Much of the area within and adjacent to the study area is highly urbanised and consists of residential properties, commercial precincts, parkland and areas of native vegetation of varying quality. Several larger areas of remnant native vegetation exist within and adjacent to the study area, usually associated with the major watercourses crossed by the motorway. The most significant of these include Bidjigal Reserve, vegetation in the vicinity of Devlins Creek, vegetation surrounding Terrys Creek between Lucknow Park, Berriwerri Reserve and Sommerset Park and parts of Lane Cove National Park adjacent to the M2 corridor in Macquarie Park. A full description of the M2 motorway environs can be found in Chapter 1 of the main M2 Upgrade Project Environmental Assessment document.

The M2 motorway corridor is close to a number of heritage items and areas of heritage value including residential buildings, recreation areas, reserves, conservation areas, landscape features and gardens that are listed by a number of local councils, State

agencies and the Commonwealth government. These items are discussed further in this assessment.

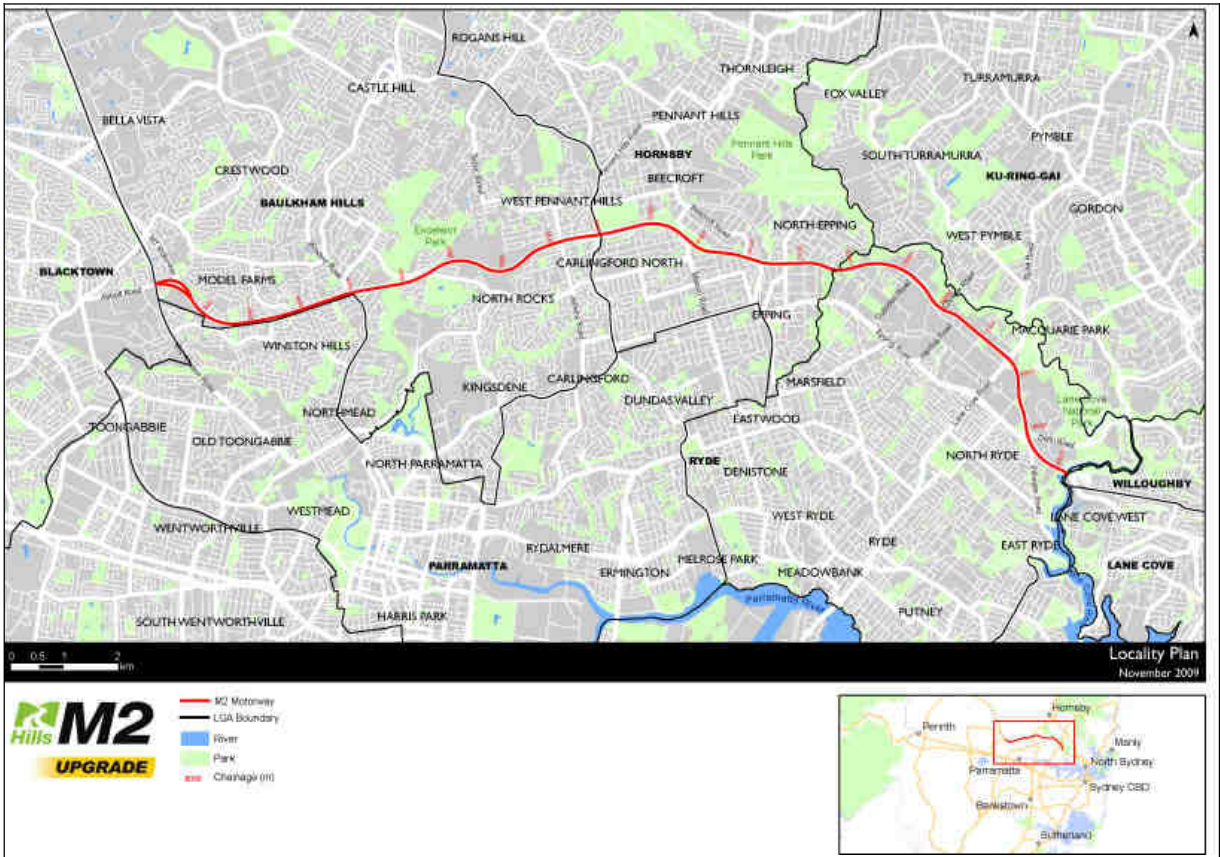


Figure 1: The above map outlines the extent of the study area and the red line indicates the location of the M2 motorway within each Local Government Area. Source: AECOM, January 2010. (Note this figure is taken from the main body of the M2 Upgrade Project Environmental Assessment)

2 Policy Framework and study methodology

Purpose of heritage assessment

This heritage assessment has been carried out for Leighton Contractors Pty Limited to accompany an Environmental Assessment for the M2 Upgrade Project. The report assesses the impact of the proposed M2 Motorway corridor widening as described in Section 1 of this report and Chapter 7 of the M2 Upgrade Project Environmental Assessment.

A Non-Aboriginal heritage assessment has been previously carried out by Conybeare Morrison and Partners in April 1992 identifying heritage items of significance along the M2 route and will be used as a basis for this report. An additional heritage item was identified through consultation with the relevant local council, which has been described in this report. An in-depth field assessment of the all identified items has been undertaken.

The aim of this report is to identify heritage items and values in the vicinity of the proposed upgrade works, establish their current level of significance, identify potential impacts to the heritage items due to the proposed work and identify appropriate mitigations measures and strategies to minimise the potential for adverse impact to those items.

Early in this assessment process consultation occurred with the M2 Upgrade Project Team and potentially affected property owners (266 Windsor Road Model Farms) regarding potential impacts to known items of non-Aboriginal heritage significance. Through this process the proposed design of the upgrade and construction methodology was able to be amended to avoid or lessen potential impacts to the known heritage items. Mitigation measures and strategies were also established to further minimise the potential for adverse impacts to the known non-Aboriginal heritage items in the vicinity of the proposed works.

The assessment reviews and determines the current level of heritage significance of each identified site based on the principles set out in the *Australia ICOMOS, Burra Charter* (November 1999). The assessment defines the importance of the items and their cultural significance.

Information Gathering – Review of Literature and Database

Database searches and literature reviews have been undertaken to:

- Form a clear understanding of the level of significance for each item identified in the study area. This allows the significance levels of each heritage items and heritage values to be reviewed against the new rating criteria set out by the Heritage Branch of the Department of Planning for the State Heritage Register.
- Provide a succinct summary (data sheet) outlining the location of each item and value, associated legal description of each item where known, provide a description of the setting/curtilage of the place, provide a physical description of the item, provide thematic themes (local, state and national site patterns) where relevant and provide a summary statement of significance.

- Database searches and literature reviews were undertaken for previously identified heritage items and values. The information gathered was analysed and assessed prior to carrying out site investigations. This information provided an initial indication of which items and values might be potentially impacted, the heritage significance of those items and values and the likely nature of the potential impact.

Consultation occurred with the local councils. From this process an additional heritage item was identified that could potentially be impacted upon by the proposed works (a sandstone causeway on Devlins Creek between Beecroft Road and the Northern Railway Line). Further database searches and literature reviews were undertaken for this item to allow the significance and potential impacts to be identified and assessed.

From this information gathering and analysis process summary data sheets have been prepared. These data sheets are presented in [Section 6 Appendices of this report](#).

The main sources of information used to assess the heritage items and values are as follows:

- North West Transport Links East, Environmental Impact Statement, Working Paper European Heritage Survey carried out by Conybeare Morrison & Partners, Prepared for Maunsell Pty Ltd on behalf of The Roads and Traffic Authority of NSW Sydney Western Region April 1992.
- Aerial Mapping Systems, sourced from the NSW Department of Lands SIX Viewer at six.nsw.gov.au.

Supporting source material taken from the following registers and schedules

- NSW Roads and Traffic Authority – Section 170 Heritage and Conservation Register, source down from website www.rta.nsw.gov.au March 2009.
- State Rail Authority (Rail Heritage Unit) – Section 170 Heritage and Conservation Register. source downloaded from website www.rta.nsw.gov.au March 2009.
- NSW Heritage Office – The State Heritage Register, source downloaded from website www.heritage.nsw.gov.au April 2009.
- NSW Heritage Office – The State Heritage Inventory, source downloaded from website www.heritage.nsw.gov.au April 2009
- Parramatta City Council – Local Environmental Plan 2001, Schedules 1 (Heritage Items of State and Regional Significance), 2 (Heritage Items of Local Significance) and 3 (Heritage Conservation Areas), source downloaded from website www.parracity.nsw.gov.au March 2009.
- Baulkham Hills City Council – Local Environmental Plan 2005, Schedule 1, Heritage Inventory, and source downloaded from website www.thehills.nsw.gov.au March 2009.
- Ryde City Council – Local Environmental Plan Gazetted 4 August, 2006, Schedule 15 (Heritage Items Clause 84) and Schedule 16 – (Heritage Conservation Areas Clause 84),), source downloaded from website www.ryde.nsw.gov.au March 2009
- Hornsby Shire Council - Local Environmental Plan (HSLEP 1994), Schedule D (Heritage Items) Schedule E (Heritage Conservation Areas), source downloaded from website www.hornsby.nsw.gov.au September 2009

- The Register of the National Estate (Australian Heritage Council), database search March 2009, source downloaded from www.environment.gov.au/cgi-bin/ahdb/search.pl
- The Commonwealth Heritage List (Australian Heritage Council), database search March 2009, source downloaded from www.environment.gov.au/heritage/places/commonwealth/index.html
- The National Heritage list (Australian Heritage Council) database search March 2009, source downloaded from www.environment.gov.au/heritage/about/national/index.html,

Additional source information was taken from North West Transport Link East, Environmental Impact Statement, Working Paper, European Heritage Study, Conybeare Morrison & Partners, Prepared on behalf of The Roads and Traffic Authority of NSW Sydney Western Region April 1992

Consultation

Early in the design development phase, consultation occurred between the Project Team (consisting of Transurban, AECOM, Leighton Contractors Pty Ltd) and HBO+EMTB Heritage Pty Ltd regarding the known items of heritage significance. The heritage items and values potentially impacted by the proposed upgrade works and the nature of the potential impacts were identified. Actions were implemented to mitigate the impacts.

Through this consultation process an additional item of potential heritage significance was identified (the sandstone causeway at Devlins Creek). Further on site investigations confirmed the appearance, location and significance of this item and subsequently it is included in this assessment and illustrated by means of a photograph, location plan and sketch.

Consultation also occurred with the owners of 266-268 Windsor Road, Model Farms. The discussion was centred on the retention of a pedestrian and vehicular access way from Windsor Road and the assessment of the potential significant landscaping presenting to Windsor Road.

Fieldwork

Following the information gathering process and consultation, a site survey was undertaken for each identified heritage item and value. The survey assessed the following:

- the built fabric,
- visual qualities of the items,
- the setting of the items,
- proximity to the proposed works,
- potential impacts to the items.

As a result, a summary of the prescribed measures to mitigate the impacts was prepared (refer to Section 3).

As a result of the field assessment and investigation works, two areas were identified where items of heritage significance may potentially be impacted by the proposed M2 upgrade works. The impacts are outlined in Table 1 in Section 3. Mitigation measures proposed to be developed to reduce the potential for impacts to the heritage items are outlined in Table 2 in Section 4.

Author

This report was written by Christopher Roehrig, Heritage Specialist with HBO+EMTB Heritage Pty Ltd and reviewed by Brian McDonald, Director and Heritage Architect of HBO+EMTB Heritage Pty Ltd in accordance with the HBO+EMTB Pty Ltd quality assurance program.

The fieldwork was carried out by Christopher Roehrig, Heritage Specialist and Rosemarie Canales, Senior Heritage Architect with HBO+EMTB Heritage Pty Ltd.

The photographic report has been compiled in the Data Table section of this report. The data table section of this report was carried out by Rosemarie Canales, Heritage Architect and reviewed by Brian McDonald, Director, HBO+EMTB Heritage Pty Ltd.

3 *Heritage Impact Assessment*

The assessment of heritage significance of the items that have been identified in this report is based on the criteria A-G established for the State Heritage Register assessment methodology and is also based on the conservation principles set out in the *Burra Charter* (1999 version). The assessment defines the importance of the items and their cultural significance.

The concept of cultural significance, Article 1.1 of the Burra Charter, defines Cultural Significance as “the aesthetic, historical, scientific/technical or social value for past, present or future generation.” The general approach to assessing the nature of significance is based on that of *The Conservation Plan* (Kerr 1996) and in the *NSW Heritage Manual* methodology of assessment, an item may be significant for the State or at a local level.

Newly Identified item of heritage significance

The newly identified item (H-12 Stone Causeway over Devlin Creek, Epping) has been described and its heritage significance assessed against the NSW Heritage significance assessment criteria. Relevant information is included in the data summary sheet for this item contained in Section 6 of this report.

Non-Indigenous (European development)

There are 14 items in the vicinity of the M2 motorway that were initially identified as having heritage significance in the early planning stage of the proposed works. With the addition of the additional site referred to above, there are 15 items of heritage significance identified in close proximity to the proposed works.

Non-Indigenous (Natural Areas - Parks)

The 15 identified heritage items in the vicinity of the proposed upgrade works includes seven natural areas (parks) of heritage significance. The potential visual impacts in these areas associated with the proposed upgrade works are unlikely to affect the heritage significance of these items, as the proposed route widening and other works would take place within and immediately adjacent to the existing M2 corridor. The photographic recording and description (as described in Section 6 Appendices – Data sheets) outlines the area where any visual impact will occur affecting the setting of the natural landscape and built elements.

Impacts on Significance

Overview

The design process for the proposed upgrades to the M2 has been guided by the objective of minimising adverse impacts upon heritage items or their setting. In general, the following assessment of impacts is generally an account of the success of the planning and design outcomes in achieving that objective. These outcomes are largely due to the early heritage input on the heritage significance and aesthetic values of the items and their settings.

Basis of Approach

The basis for determining the impacts to each identified item in Table 1 follows guidelines established by the NSW Heritage Office for preparation of Statements of Heritage Impact. The approach when assessing visual and physical impacts to significant items has been measured against the principles, articles and guidelines of the Burra Charter.

The following list of impacts is a summary of the impacts to each identified item and as noted in the data sheet table for each item. A map showing the location of these items is provided in Figure 2.

Table 1, Identified Impacts on Significance

ITEM NUMBER	IDENTIFIED ITEM	STATUTORY LISTING	IMPACTS ON SIGNIFICANCE
H-01	Northern Suburbs Cemetery	Ryde Local Environmental Plan 2008. LEP No. 105 (Locally listed heritage item).	Physical impact: No physical impacts.
			Visual Impact: No visual impacts.
H-02	Lane Cove National Park, Marsfield (see table 2)	Ryde Local Environmental Plan 2008. LEP No. 105 (Locally listed heritage item).	Physical impact: No physical impacts.
			Visual Impact: No visual impacts.
H-03	Christie Park	Not listed as a heritage item. Located within Ryde City Council. ²	Physical Impact: No Physical impacts.
			Visual Impact: No visual impacts.
H-04	266-268 Windsor Road, Model Farms	Parramatta Local Environmental Plan 1996 (Heritage and Conservation) Locally listed item	Physical Impact: Negative physical impact as a result of works will reduce site curtilage, site allotment, and removal of existing mature plantings along eastern site boundaries. Work may also create structural damage due to vibration during works.

² Note: This item was originally included in the study brief as potentially a heritage item. The data research established that it is not a listed heritage item and the site inspection revealed no information that would warrant it being a heritage item.

ITEM NUMBER	IDENTIFIED ITEM	STATUTORY LISTING	IMPACTS ON SIGNIFICANCE
H-04 CONT.			Visual Impact: Negative visual impact due to introduction of new on ramp of M2 Motorway.
H-05	Epping Park, North Epping	Hornsby LEP (Locally listed heritage item)	Physical impact: No physical impacts. Visual Impact: No visual impacts.
H-06	No. 57 Norfolk Road, North Epping Residence	Hornsby LEP (Locally Listed Heritage item)	Physical impact: No direct physical impacts. However, this item may be subject to vibration associated with tunnel widening. Visual Impact: No visual impacts.
H-07	61 Norfolk Road, North Epping Residence	Hornsby LEP (Locally Listed Heritage item)	Physical impact: No direct physical impacts. However, this item may be subject to vibration associated with tunnel widening. Visual Impact: No visual impacts.
H-08	Garden – The Poplars, 64-66 Norfolk Road, North Epping	Hornsby LEP (Locally Listed Heritage item)	Physical impact: No physical impacts. Visual Impact: No visual impacts.
H-09	No. 70 Norfolk Road, North Epping Residence	Hornsby LEP (Locally Listed Heritage item)	Physical Impact: No direct physical impact. However, this item may be subject to vibration associated with tunnel widening. Visual Impact: No visual impacts.
H-10	Beecroft/Cheltenham Conservation Area	Hornsby LEP (Locally Listed Heritage item)	Physical Impact: Physically the works will modify the existing footprint of the overhead lanes introducing additional supporting structure. Visual Impact: Negative impact; the new structural columns will add bulk and scale to the existing structure.
H-11	Chilworth Recreation Reserve	Hornsby LEP (Locally Listed Heritage item)	Physical Impact: Physically the works will modify the existing footprint of the overhead lanes introducing additional supporting structure. Visual Impact: Negative impact; the new structural columns will add bulk and scale to the existing structure.
H-12	Devlin Creek, Epping Stone Causeway (see table 2)	Hornsby LEP (Locally Listed Heritage item)	Physical Impact: Removal of the M2 bus ramp structure proper will not physically impact the existing causeway, however care should be taken with the process and equipment used which may damage the remnant sandstone causeway located immediately below and the surrounding open stormwater brick

ITEM NUMBER	IDENTIFIED ITEM	STATUTORY LISTING	IMPACTS ON SIGNIFICANCE
H-12 CONT.			channel and brick culverts.
			Visual Impact: No visual impacts will occur. Removal of bus ramp will create a positive visual impact to the immediate area.
H-13	Pennant Hills Golf Course	Hornsby LEP (Locally Listed Heritage item)	Physical impact: No physical impacts.
			Visual Impact: No visual impacts.
H-14	Road Reserve – Street Trees (south end) Sutherland Road, Epping	Hornsby LEP (Locally Listed Heritage item)	Physical impact: No physical impacts.
			Visual Impact: No visual impacts.
H-15	Baulkham Hills Public School Former (see table 2)	Baulkham hills LEP 2005, Schedule 1 – Locally listed heritage item	Physical impact: No physical impacts to the site or the structures of the former Baulkham Hills Public School.
			Visual impact: Marginal negative visual impact to the site of the former Baulkham Hills Public School due to the close proximity of the new on ramp to the M2 Motorway.
Note: Item numbers are noted on the attached data sheets in the Section 6, Appendices, Data Sheets for Listed items.			

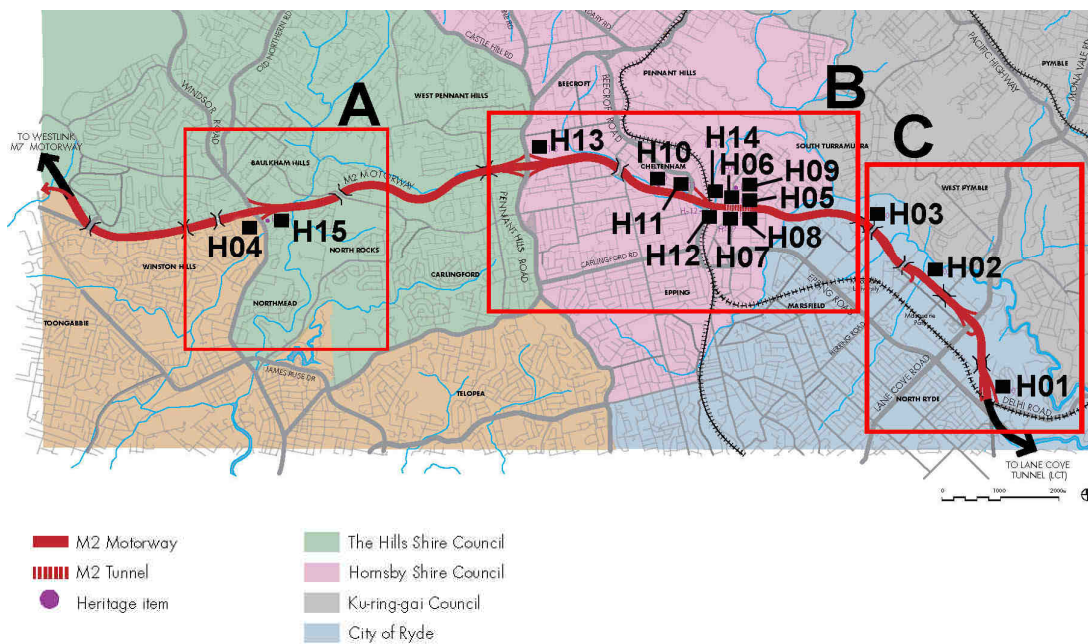


Figure 2: The above map provides locations of each identified item within the study area. The numbers correspond to each item within the Data Table Section 6 Appendices. Source Map supplied by HBO+EMTB Urban Design Landscaping, map overlay provided by Chris Roehrig January 2010.

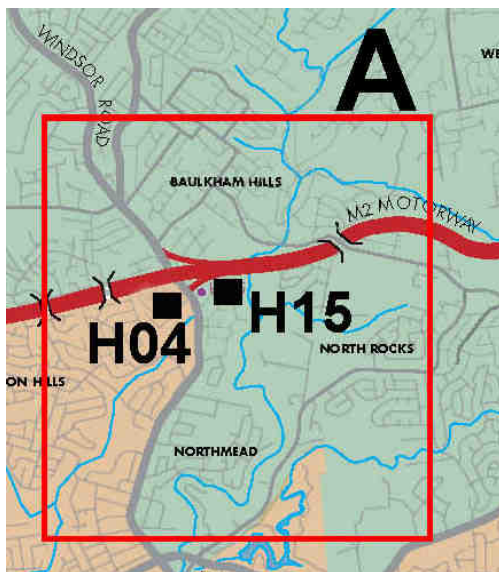


Figure 3: The above map illustrates the approximate location of H04 within Parramatta Local Council and H15 within Baulkham Hills Shire Council. Source Map supplied by HBO+EMTB Urban Design Landscaping, map overlay provided by Chris Roehrig January 2010.

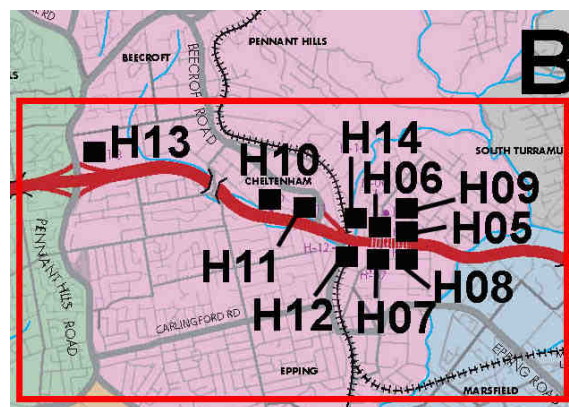


Figure 4: The above map illustrates the approximate location of H05-H14, within Hornsby Shire Council. Source Map supplied by HBO+EMTB Urban Design Landscaping, map overlay provided by Chris Roehrig January 2010.

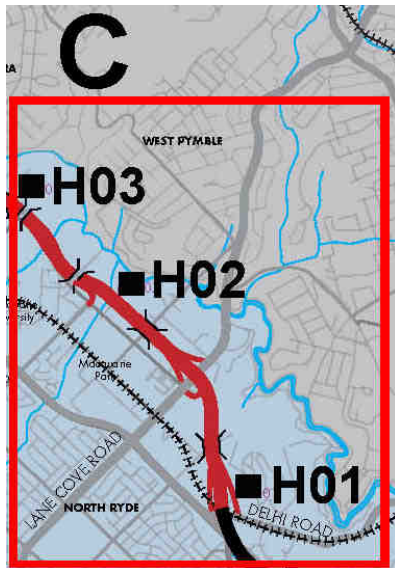
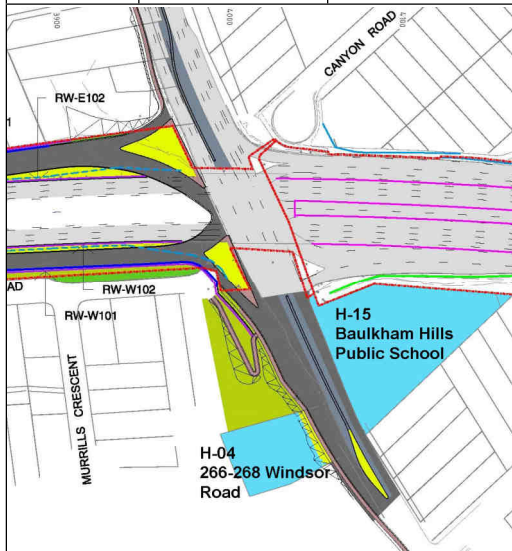


Figure 5: The above map illustrates the approximate location of H01-H03 within the City of Ryde Council. Source Map supplied by HBO+EMTB Urban Design Landscaping, map overlay provided by Chris Roehrig January 2010.

4 Mitigation Measures

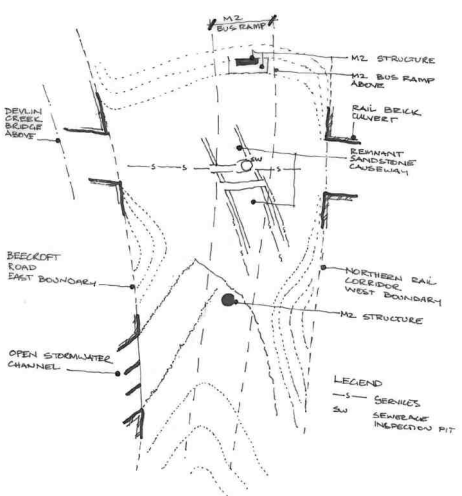
Mitigation measures have been developed to address the potential impacts outlined in Table 1. These are presented below in Table 2.

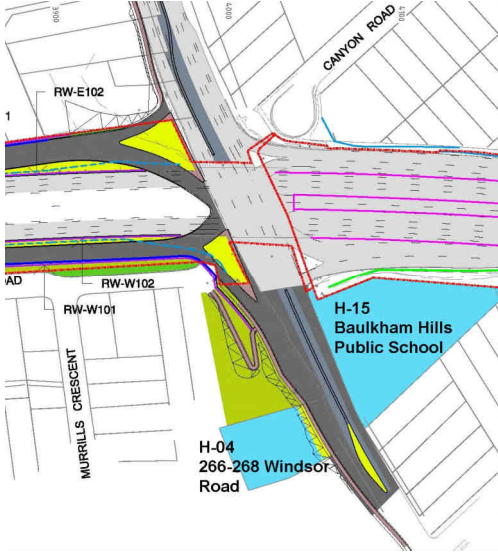
Table 2, Site Specific Mitigation Measures

ITEM NUMBER	IDENTIFIED ITEM	STATUTORY LISTING	IMPACTS ON SIGNIFICANCE	Mitigation Measures
H-04	266-268 Windsor Road, Model Farms Residence	Parramatta Local Environmental Plan 1996 (Heritage and Conservation) Locally listed item	Physical Impact: Negative physical impact as a result of works will reduce site curtilage, site allotment and removal of existing mature plantings along eastern site boundaries. Work may also create structural damage due to vibration during works.	1) During the design stage an alternative solution to reduce the width of the proposed widening, reducing the impact. The alternative solution was put in place. 2) Use of heavy equipment and vibration equipment shall not be permitted within 3 metres of the Farmhouse's front verandah. 3) A detailed dilapidation (condition) survey should be undertaken of the building prior to the commencement of work at this location.
 <p>Figure 6: Map above is the approximate location of H-04 266-268 Windsor Road, Model Farm "Farmhouse" highlighted in blue.</p>			Visual Impact: Negative visual impact due to introduction of new onramp of M2 Motorway.	1) Appropriate landscaping shall occur at this location to ameliorate the impacts to visual amenity associated with the resumption of land and loss of existing vegetation. 2) During the design stage obtain specialist advice on the type of retaining wall materials to be utilised in the proposed widening area in front of the farm house to minimise visual impacts.

ITEM NUMBER	IDENTIFIED ITEM	STATUTORY LISTING	IMPACTS ON SIGNIFICANCE	Mitigation Measures
H-04-continued				3) Suitable vehicular and pedestrian access shall be provided during construction and in the final design.
H-06	57 Norfolk Road, North Epping	Hornsby LEP (Locally Listed Heritage item)	Physical impact: No direct physical impacts. , However, this item may be subject to vibration associated with tunnel widening.	1) Obtain specialist advice regarding potential structural impacts due to vibrations associated with proposed construction activities. 2) If specialist advice indicates that structural impacts are possible, carry out dilapidation (condition) survey of the residence outlining the current condition of the remaining significant fabric. 3) Establish a service emergency contact number for occupants to manage and address complaints if impacts might occur from vibration works.
H-07	61 Norfolk Road, North Epping Residence	Hornsby LEP (Locally Listed Heritage item)	Physical impact: No direct physical impacts. , However, this item may be subject to vibration associated with tunnel widening.	1) Obtain specialist advice regarding potential structural impacts due to vibrations associated with proposed construction activities. 2) If specialist advice indicates that structural impacts are possible, carry out dilapidation (condition) survey of the residence outlining the current condition of the remaining significant fabric. 3) Establish a service emergency contact number for occupants to manage and address complaints if impacts might occur from vibration works.

ITEM NUMBER	IDENTIFIED ITEM	STATUTORY LISTING	IMPACTS ON SIGNIFICANCE	Mitigation Measures
H-09	No. 70 Norfolk Road, North Epping Residence	Hornsby LEP (Locally Listed Heritage item)	Physical impact: No direct physical impacts. , However, this item may be subject to vibration associated with tunnel widening.	1) Obtain specialist advice regarding potential structural impacts due to vibrations associated with proposed construction activities. 2) If specialist advice indicates that structural impacts are possible, carry out dilapidation (condition) survey of the residence outlining the current condition of the remaining significant fabric. 3) Establish a service emergency contact number for occupants to manage and address complaints if impacts might occur from vibration works.
H-10	Beecroft/Cheltenham Conservation Area	Hornsby LEP (Locally Listed Heritage item)	Physical Impact: Physically the works will modify the existing footprint of the overhead lanes introducing additional supporting structure.	1) Physical impact will occur as a result of the M2 road widening. Mitigation measures shall be undertaken as suggested by the Flora and Fauna report as set out in the overall Environmental Assessment Report. 2) On a heritage standpoint the overall setting of Beecroft Cheltenham Conservation Area will remain intact with the exception of a few less trees as seen when hiking through the isolated bush. Where the M2 traverses the conservation area, dense native vegetation screens the elevated motorway reducing the visual impact viewed from a distance.
			Visual Impact: Negative impact; the new structural columns will add bulk and scale to the existing structure.	1) If an arborist has not been consulted and the Flora and Fauna report requires an arborist to be consulted, this should be done to assess any potential impacts prior to work commencing.
H-11	Chilworth Recreation	Hornsby LEP (Locally Listed	Physical Impact: Physically the	1) Physical impact will occur as a result of the M2 road

ITEM NUMBER	IDENTIFIED ITEM	STATUTORY LISTING	IMPACTS ON SIGNIFICANCE	Mitigation Measures
	Reserve	Heritage item)	works will modify the existing footprint of the overhead lanes introducing additional supporting structure.	widening. No mitigation measures required.
			Visual Impact: Negative impact; the new structural columns will add bulk and scale to the existing structure.	1) If an arborist has not been consulted and the Flora and Fauna report requires an arborist to be consulted, this should be done to assess any potential impacts prior to work commencing.
H-12	Devlin Creek, Epping Stone Causeway	Hornsby LEP (Locally Listed Heritage item)	Physical Impact: Removal of the M2 bus ramp structure proper will not physically impact the existing causeway, however care should be taken with the process and equipment used which may damage the remnant sandstone causeway located immediately below and the surrounding open stormwater brick channel and brick culverts.	1) Carry out a site survey, recording the extent of the Devlin Street Causeway prior to commencement of work, illustrating the relationship with Devlin Creek, rail culvert and open brick stormwater channel. 2) Protect Devlin Creek Causeway and its curtilage from damage caused by the demolition of M2 bus ramp. Construct and/or cover the extent of sandstone Causeway during demolition of M2 bus ramp. 3) Prepare an access plan to identify the location of the rare causeway. The plan shall be implemented restricting the use of heavy demolition equipment to within 3 metres of the set boundary. 4) Mitigate impacts from
 <p>Figure 7: Approximate location of H-12 – Devlin Creek/Epping stone causeway highlighted in blue.</p>				

ITEM NUMBER	IDENTIFIED ITEM	STATUTORY LISTING	IMPACTS ON SIGNIFICANCE	Mitigation Measures
			Visual Impact: No visual impacts will occur. Removal of bus ramp will create a positive visual impact to the immediate area.	demolition by utilising existing service road to demolish structure, utilise heavy lifting equipment when removing ramps in segments, heavy equipment to remain minimum 3 metres away from the causeway. 5) Soil and sediment control plan carried out and implemented, reducing the negative impact from the works to the physical features of the causeway.
H-15	Baulkham Hills Public School	Baulkham hills LEP 2005, Schedule 1 – Locally listed heritage item	Visual impact: Marginal negative visual impact to the site of the former Baulkham Hills Public School due to the close proximity of the new on ramp to the M2 Motorway.	1) The impact is marginal and will not detract from the overall setting of the place physically and/or visually. For this reason no mitigation measures are required.
 <p>Figure 8: Approximate location of H-15 - Baulkham Hills Public School, 5-13 Russell Street Model Farm highlighted in blue.</p>				

5 *Summary of Management Measures*

All impacts are moderate and can be mitigated to an acceptable level as set out in Table 2, Mitigation Measures, except for one item H-04 266-268 Windsor Road, Model Farms.

Physical impacts to the farmhouse are unlikely. However, the proposed upgrade will have a negative visual effect on the setting of the farmhouse.

Potential impacts have been reduced by recognising the heritage value of the property and factoring that into the design process. One of the measures implemented to reduce the impact was to recommend an inspection, assessment and survey of the landscaped planting presenting to Windsor Road by a certified Arborist with background knowledge in heritage planting.

The negative effects to the visual setting of this item will be mitigated to a degree by the proposed new landscape design see Section 6 appendices. What will be maintained at a reduced level is the visual presence planting/landscape that provides selected view lines to and from the residence, which is important to the setting of the place.

Physical and procedural protection measures will be required to ensure that physical impacts to the farmhouse do not occur due to the proposed upgrade works.

Item H-12, the sandstone causeway at Devlins Creek is within the immediate construction footprint at this location. However, the works at this location involve the removal of an existing bus flyover, rather than construction of new infrastructure. Suitable physical protective measures and procedural controls will be required to ensure that this heritage item is not adversely impacted by the proposed works.