

# **Richmond Bridge Approaches- Intersection Upgrade at March Street and Bosworth Street, Richmond**

**Addendum review of environmental factors 5- Property Adjustment at 35 Bosworth  
Street**

**Transport for NSW**

June | 2020

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Transport for NSW | June 2020

Prepared by DM Roads and Transport for NSW

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# Document controls

## Approval and authorisation

<b>Title</b>	Richmond Bridge Approaches- Intersection Upgrade at March Street and Bosworth Street, Richmond Addendum review of environmental factors 5 - Property Adjustment at 35 Bosworth Street
<b>Accepted on behalf of Transport for NSW by:</b>	Georgia Barnes Contract Relationship Manager – West Zone, Sydney Maintenance
<b>Signed:</b>	
<b>Dated:</b>	17 June 2020

# Executive summary

## The proposed modification

Transport for NSW proposes to modify the *Richmond Bridge and Approaches- Intersection upgrade at March Street and Bosworth Street*, Richmond by adjusting the boundary fence at 35 Bosworth Street so that it no longer encroaches on Transport for NSW Property (proposed modification) to allow for utilities adjustments to take place. Key features of the proposed modification would include:

- Removing the existing corrugated iron fence at 35 Bosworth Street that currently lies on Transport for NSW land
- Demolishing a small shed on the exterior of the locally heritage listed house to allow for property realignment
- Removal of two mature exotic trees within the Transport for NSW property. Both trees are of a similar size and are approximately four metres high and between 300 - 400 millimetres in diameter at breast height. One of the trees appears to be dead or dying, while the other tree appears to be healthy
- Construction of a new colourbond property fence at the correct cadastral boundary.

## Background

A review of environmental factors (REF) was prepared for Transport for NSW (formerly Roads and Maritime) in April 2016 and was determined on the 3 May 2016 (referred to in this addendum REF as the Project REF).

In addition, the following addendum REFs for the Richmond Bridge Approaches- Intersection upgrade at Bosworth Street and March Street, Richmond have been prepared:

- Addendum REF 1 - Kentucky Fried Chicken (KFC) sign removal and replacement (Determined 20 August 2018)
- Addendum REF 2 - Ancillary facilities (Determined 3 December 2019)
- Addendum REF 3- Vegetation and tree removal and property adjustments (Determined 21 May 2020)
- Addendum REF 4- Out of Hours Work for duration respite (Determined 26 May 2020).

The project generally involves upgrading the intersection of Bosworth Street and March Street at Richmond. This work was identified as part of the broader Richmond Bridge and Approaches strategy designed to alleviate traffic congestion on Richmond Bridge and its approach roads.

## Need for the proposed modification

Chapter 2 of the *Richmond Bridge Approaches - Intersection Upgrade at March Street and Bosworth Street, Richmond REF* addresses the strategic need for the project, the project objectives and the options that were considered. Generally, the proposal is required to improve travel conditions and road safety along the road corridor between Richmond and North Richmond (comprising Richmond Bridge and its approach roads). Bells Line of Road, Kurrajong Road and March Street run through the North Richmond and Richmond town centres. Chapter 2 of the Project REF also detailed that the project was also designed to address a number of objectives outlined in the following strategic plans:

- NSW 2021: A plan to make NSW Number One
- NSW State Infrastructure Strategy

- NSW Long Term Transport Master Plan.

The proposed modification described and assessed in this addendum REF is consistent with the strategic need for the project. The proposed modification is needed as the property fencing at 35 Bosworth Street is encroaching on Transport for NSW property by around 2.5 metres. This land needs to be reclaimed to allow for utilities adjustment associated with the intersection upgrade. This is essential as new utilities are allocated to be laid in the strip of Transport for NSW land that is currently occupied by 35 Bosworth Street.

### Proposal objectives

Section 2.3 of the Project REF identifies the proposal objectives and development criteria that apply to the proposed modification.

- Reduce congestion and improve traffic flow
- Improve accessibility and efficiency for freight and private vehicles
- Improve safety for motorists, cyclists and pedestrians
- Minimise socio-economic and environmental impacts.

While it is unlikely that this modification would result in environmental impacts not already considered in the Project REF, the process of reassessment seeks to ensure this is the case.

### Options considered

The following two options were considered for the proposed modification:

**Option 1: ‘Do Nothing’- This would involve leaving the current fencing at 35 Bosworth Street in its existing position within Transport for NSW property.**

*Disadvantages:*

- Leaving the fencing and therefore incorrect property boundary in its current position would mean multiple utilities would need to be relocated further away from the boundary line
- Relocation of utilities would put them outside their allocation, further easements would need to be granted to allow the installation of these utilities outside of their standard allocation
- As this option would require extended utility easements this may delay the utility adjustment and the project as a whole
- This option would mean that the fence at 35 Bosworth Street would continue to exist outside of its cadastral boundary.

*Advantages:*

- Fewer potential impacts to Non-Aboriginal Heritage.

**Option 2: Reclaim the Transport for NSW land by adjusting the fencing at 35 Bosworth Street to correctly align with the cadastral boundary**

*Disadvantages:*

- Increase in potential impacts to 35 Bosworth Street (a LEP listed heritage item).

*Advantages:*

- Property boundaries will be adjusted to their correct cadastral boundaries, avoiding any future disruptions that may arise

- Utility allocations can be adhered to, avoiding complications that may arise from needing easements granted
- The fencing at 35 Bosworth Street will be replaced like for like.

### **Statutory and planning framework**

This addendum REF has examined and taken into account to the fullest extent possible all matters affecting or likely to affect the environment by reason of the proposed activity.

This has included consideration where relevant, of conservation agreements and plans of management under the NPW Act, biodiversity stewardship sites under the BC Act, wilderness areas, areas of outstanding value, impacts on threatened species, populations and ecological communities and their habitats and other protected fauna and native plants. It has also considered potential impacts to matters of national environmental significance listed under the Federal EPBC Act.

A number of potential environmental impacts from the proposed modification have been avoided or reduced during the design development and options assessment. The proposed modification as described in the addendum REF best meets the project objectives, but would still result in some potential impacts on the Non-Aboriginal Heritage item at 35 Bosworth Street. Safeguards and management measures as detailed in this addendum REF would ameliorate or minimise these expected impacts. On balance the proposed modification is considered justified and the following conclusions are made.

#### **Significance of impact under NSW legislation**

The proposed modification would not result in a change to the findings of the Project REF and subsequent addendum REF's, and would be unlikely to cause a significant impact on the environment. Therefore it is not necessary for an environmental impact statement to be prepared and approval to be sought from the Minister for Planning and Public Spaces under Division 5.2 of the EP&A Act. A Biodiversity Development Assessment Report or Species Impact Statement is not required. The proposed modification is subject to assessment under Division 5.1 of the EP&A Act. Consent from Council is not required.

#### **Significance of impact under Australian legislation**

The proposed modification would not likely cause a significant impact on matters of national environmental significance or the environment of Commonwealth land within the meaning of the EPBC Act. A referral to the Australian Government Department of Agriculture, Water and the Environment is not required.

### **Community and stakeholder consultation**

The owners of 35 Bosworth Street and Hawkesbury Valley Council were consulted about the proposed modification. Their responses were generally positive, with both types of stakeholders understanding and agreeing to the need for the modification.

Complete details of this consultation is detailed in Appendix E.

### **Environmental impacts**

Through this addendum REF the proposed modification to the intersection upgrades at March Street and Bosworth Street has been considered. The likely and potential environmental impacts arising from the proposed modification are discussed in Section 6 of the addendum REF. In consideration of the scope of the modification, the assessment focused largely on non-Aboriginal Heritage impacts arising from the proposed modification.

The main environmental impacts for the proposed modification are:

#### **Non-Aboriginal Heritage issues**

Based on the assessment carried out in the heritage report the following was concluded:

- It is unlikely that the proposed works will cause an adverse impact on the heritage values of the house at 35 Bosworth Street
- Heritage values of the property will be safeguarded by the implementation of further management measures.

The following recommendations were made for the proposed modification:

#### **Recommendation 1**

It is recommended that as the proposed works will be partially carried out within the boundaries of the item, Hawkesbury City Council should be notified of the works.

#### **Recommendation 2**

It is recommended that protective temporary fencing be erected between the item and the works during all works to protect it from accidental damage. It is recommended further that protective measures are implemented to ensure tree branches do not fall onto the house.

#### **Recommendation 3**

It is recommended that prior to the shed's removal that protective fencing or other material is placed along the southern elevation to protect the house from accidental damage during the shed removal works, and that following the shed's removal any evidence of the shed along the southern elevation of the house is sympathetically repaired.

#### **Recommendation 4**

It is recommended that all contractors and sub-contractors be advised of the heritage item's significance and their obligations to not damage the item during the course of the proposed works.

#### **Justification and conclusion**

Transport for NSW are undertaking construction to upgrade the intersection of March Street and Bosworth Street in Richmond. The proposed modification is needed as the property fencing at 35 Bosworth Street is encroaching on Transport for NSW property by around 2.5 metres. This land needs to be reclaimed to allow for utilities adjustment associated with the intersection upgrade. This is essential as new utilities are allocated to be laid in the strip of Transport for NSW land that is currently occupied by 35 Bosworth Street.

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# 1 Introduction

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## 1.1 Proposed modification overview

Transport for NSW proposes to modify the *Richmond Bridge and Approaches- Intersection upgrade at March Street and Bosworth Street*, Richmond by adjusting the boundary fence at 35 Bosworth Street so that it no longer encroaches on Transport for NSW Property (proposed modification) to allow for utilities adjustments to take place. Key features of the proposed modification would include:

- Removing the existing fence at 35 Bosworth Street that currently lies on Transport for NSW land
- Demolishing a small shed on the exterior of the house to allow for property realignment
- Removal of two mature exotic trees within the Transport for NSW property. Both trees are of a similar size and are approximately four metres high and between 300 - 400 millimetres in diameter at breast height. One of the trees appears to be dead or dying, while the other tree appears to be healthy
- Rebuilding the property fence at the correct cadastral boundary.

The proposed modification is shown in Figure 1-1 and Figure 1-2. Chapter 3 describes the proposed modification in more detail.

A review of environmental factors (REF) was prepared for Transport for NSW (formerly Roads and Maritime) in April 2016 and was determined on the 3 May 2016 (referred to in this addendum REF as the Project REF).

In addition, the following addendum REFs for the Richmond Bridge Approaches- Intersection upgrade at Bosworth Street and March Street, Richmond have been prepared:

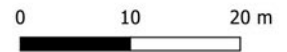
- Addendum REF 1 - Kentucky Fried Chicken (KFC) sign removal and replacement (Determined 20 August 2018)
- Addendum REF 2 - Ancillary facilities (Determined 3 December 2019)
- Addendum REF 3- Vegetation and tree removal and property adjustments (Determined 21 May 2020)
- Addendum REF 4- Out of Hours Work for duration respite (Determined 26 May 2020).



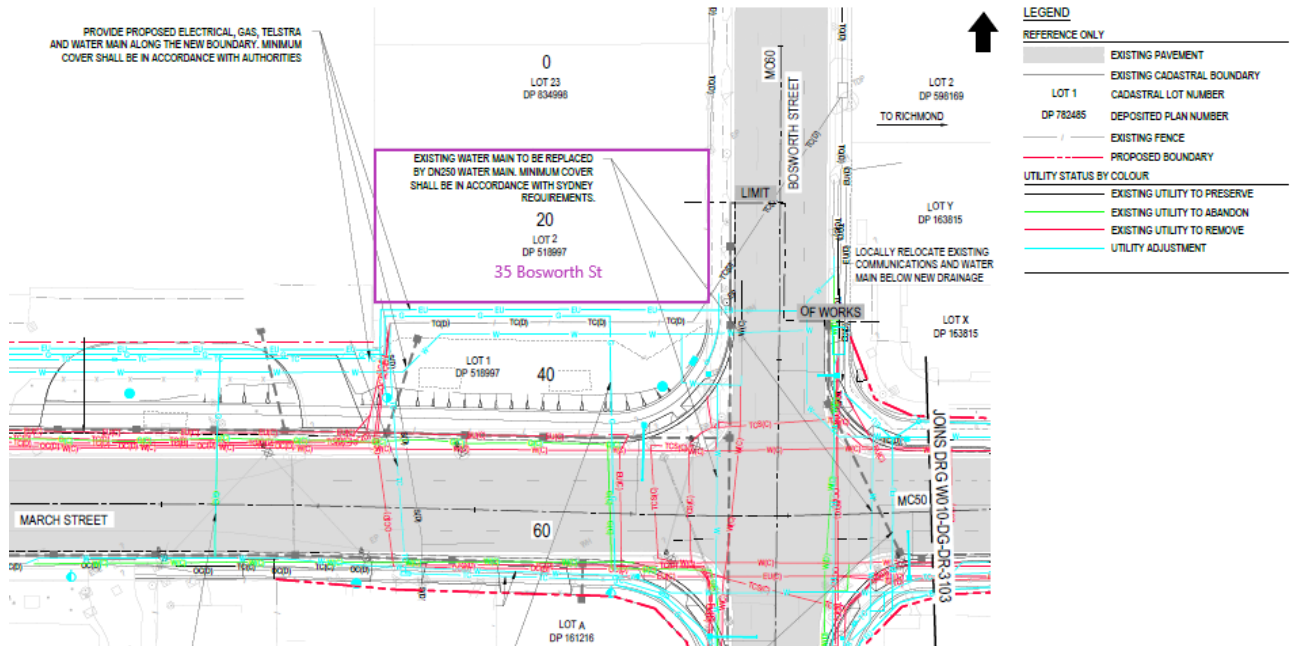
**Legend**

- Property Boundaries
- Heritage Boundary
- Existing Fence (Indicative)

**Property Boundaries- Intersection Upgrade March St/Bosworth St**



**Figure 1-1: Location of the proposed modification**



**Figure 1-2: Approved location of utilities where 35 Bosworth St is within correct cadastral boundaries**

## 1.2 Purpose of the report

This addendum review of environmental factors (REF) has been prepared by DM Roads on behalf of Transport for NSW. For the purposes of these works, Transport for NSW is the proponent and the determining authority under Division 5.1 of the *Environmental Planning and Assessment Act 1979* (EP&A Act).

This addendum REF is to be read in conjunction with the Project REF, and previous addendum REF's for the project listed in Section 1.1. The purpose of this addendum REF is to describe the proposed modification, to document and assess the likely impacts of the proposed modification on the environment, and to detail mitigation and management measures to be implemented.

The description of the proposed work and assessment of associated environmental impacts has been undertaken in context of clause 228 of the Environmental Planning and Assessment Regulation 2000, *Is an EIS Required? Best Practice Guidelines for Part 5 of the Environmental Planning and Assessment Act 1979* (Is an EIS Required? guidelines) (DUAP, 1995/1996), Roads and Road Related Facilities EIS Guideline (DUAP, 1996), the *Biodiversity Conservation Act 2016* (BC Act), the *Fisheries Management Act 1994* (FM Act), and the Australian Government's *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act).

In doing so, the addendum REF helps to fulfil the requirements of:

- Section 5.5 of the EP&A Act including that Transport for NSW examine and take into account to the fullest extent possible, all matters affecting or likely to affect the environment by reason of the activity

The findings of the addendum REF would be considered when assessing:

- Whether the proposed modification is likely to result in a significant impact on the environment and therefore the necessity for an environmental impact statement to be prepared and approval to be sought from the Minister for Planning and Public Spaces under Division 5.2 of the EP&A Act
- The significance of any impact on threatened species as defined by the BC Act and/or FM Act, in section 1.7 of the EP&A Act and therefore the requirement for a Species Impact Statement or a Biodiversity Development Assessment Report
- The significance of any impact on nationally listed biodiversity matters under the EPBC Act, including whether there is a real possibility that the activity may threaten long-term survival of these matters, and whether offsets are required and able to be secured
- The potential for the proposed modification to significantly impact any other matters of national environmental significance or Commonwealth land and therefore the need to make a referral to the Australian Government Department of Agriculture, Water and the Environment for a decision by the Australian Government Minister for the Environment on whether assessment and approval is required under the EPBC Act.

## **2 Need and options considered**

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### **2.1 Strategic need for the proposed modification**

Chapter 2 of the Richmond Bridge Approaches - Intersection Upgrade at March Street and Bosworth Street, Richmond REF addresses the strategic need for the project, the project objectives and the options that were considered. Generally, the proposal is required to improve travel conditions and road safety along the road corridor between Richmond and North Richmond (comprising Richmond Bridge and its approach roads). Bells Line of Road, Kurrajong Road and March Street run through the North Richmond and Richmond town centres. Chapter 2 of the Project REF also detailed that the project was also designed to address a number of objectives outlined in the following strategic plans:

- NSW 2021: A plan to make NSW Number One.
- NSW State Infrastructure Strategy.
- NSW Long Term Transport Master Plan.

The proposed modification described and assessed in this addendum REF is consistent with the strategic need for the project. The proposed modification is needed as the property fencing at 35 Bosworth Street is encroaching on Transport for NSW property by around 2.5 metres. This land needs to be reclaimed to allow for utilities adjustment associated with the intersection upgrade. This is essential as new utilities are allocated to be laid in the strip of Transport for NSW land that is currently occupied by 35 Bosworth Street.

The process of reclamation will involve the removal of the existing fence, removal of a shed and two mature exotic trees that exist within the Transport for NSW land, and the construction of a new colourbond fence to match the other boundary fences of the private property.

### **2.2 Proposal objectives and development criteria**

Section 2.3 of the Project REF identifies the proposal objectives and development criteria that apply to the proposed modification.

- Reduce congestion and improve traffic flow
- Improve accessibility and efficiency for freight and private vehicles
- Improve safety for motorists, cyclists and pedestrians
- Minimise socio-economic and environmental impacts.

While it is unlikely that this modification would result in environmental impacts not already considered in the Project REF, the process of reassessment seeks to ensure this is the case.

### **2.3 Alternatives and options considered**

#### **2.3.1 Methodology for selection of preferred option**

Each option for the proposal was evaluated against the proposal objectives outlined in the Project REF. Options regarding utility relocation also need to consider the allocation of land and whether further easements would need to be granted to allow for required utility adjustment.



### 2.3.2 Identified options

The following two options were considered for the proposed modification:

**Option 1:** 'Do Nothing'

**Option 2:** Reclaim the Transport for NSW land by adjusting the fencing at 35 Bosworth Street to correctly align with the cadastral boundary.

### 2.3.3 Analysis of options

**Option 1: 'Do Nothing'**

The 'do nothing option' in this instance would involve leaving the current fencing at 35 Bosworth Street in its existing position within Transport for NSW property.

*Disadvantages:*

- Leaving the fencing and therefore incorrect property boundary in its current position would mean multiple utilities would need to be relocated further away from the boundary line
- Relocation of utilities would put them outside their allocation, further easements would need to be granted to allow the installation of these utilities outside of their standard allocation
- As this option would require extended utility easements this may delay the utility adjustment and the project as a whole
- This option would mean that the fence at 35 Bosworth Street would continue to exist outside of its cadastral boundary.

*Advantages:*

- Fewer potential impacts to Non-Aboriginal Heritage.

**Option 2: Reclaim the Transport for NSW land by adjusting the fencing at 35 Bosworth Street to correctly align with the cadastral boundary**

*Disadvantages:*

- Increase in potential impacts to 35 Bosworth Street (a LEP listed heritage item).

*Advantages:*

- Property boundaries will be adjusted to their correct cadastral boundaries, avoiding any future disruptions that may arise.
- Utility allocations can be adhered to, avoiding complications that may arise from needing easements granted.
- The fencing at 35 Bosworth Street will be replaced with a colourbond fence to match the other boundary fencing of the private property.

## 2.4 Preferred option

The preferred option is **Option 2**. This option would allow the project to continue as programmed with the existing utility allocations. This option would also avoid complications associated with needing easements allocated for utility adjustment.

Option 2 would also allow Transport for NSW to reclaim land that the property boundary at 35 Bosworth Street has encroached upon. Adjusting the property to the correct cadastral boundary would be of benefit to avoid further development occurring on land owned by Transport for NSW.

Potential impacts to the heritage item at 35 Bosworth Street would be satisfactorily ameliorated with the implementation of further mitigation measures.

### 3 Description of the proposed modification

#### 3.1 The proposed modification

Transport for NSW proposes to modify the *Richmond Bridge and Approaches - Intersection upgrades at March Street and Bosworth Street* by adjusting the boundary fence at 35 Bosworth Street so that it no longer encroaches on Transport for NSW Property (proposed modification) to allow for utilities adjustments to take place. The proposed modification is shown in Figure 1-2.

Key features of the proposed modification would include:

- Removing the existing corrugated iron fence at 35 Bosworth Street that currently lies on Transport for NSW land
- Demolishing a small shed on the exterior of the house to allow for property realignment
- Removal of two mature exotic trees within the Transport for NSW property. Both trees are of a similar size and are approximately four metres high and between 300 - 400 millimetres in diameter at breast height. One of the trees appears to be dead or dying, while the other tree appears to be healthy
- Constructing a new colourbond property fence at the correct cadastral boundary.



#### Legend

- Property Boundaries
- Existing Fence (Indicative)
- Area to be reclaimed

Property Boundaries- Intersection Upgrade March St/Bosworth St

0 10 20 m

Figure 3-1: Key features of the proposed modification



**Figure 3-2 Location of shed and trees**

## **3.2 Construction activities**

### **3.2.1 Work methodology**

The main work methodology outlined in Section 3.3.1 of the Project REF is not expected to change as a result of the proposed additional night work. Additionally, the work methodologies outlined in Section 3.3.1 of Addendum REF 1, Section 3.2.1 of Addendum REF 2 and Section 3.2.1 of Addendum REF 3, will remain unaffected by the proposed modification.

### **3.2.2 Construction hours and duration**

The fence, tree and shed removal and fence replacement is expected to occur during standard construction hours.

Activities associated with the modification are not expected to exceed 7 days in total.

### **3.2.3 Plant and equipment**

Plant and equipment used for the proposed work would be generally consistent with those listed in the Section 3.3.3 of the Project REF.

### **3.2.4 Earthworks**

Earthworks for the proposed modification would be consistent with the earthworks described in the Section 3.3.4 of the Project REF.



### **3.2.5 Source and quantity of materials**

Source and quantity of materials is consistent with those described in the Section 3.3.5 of the Project REF.

### **3.2.6 Traffic management and access**

The proposed modification will not alter the approach to traffic management and access outlined in the Section 3.3.6 of the Project REF.

## **3.3 Ancillary facilities**

The project site compounds are located at the corner of March and Bosworth Street (Ancillary Facility 1) and Kurrajong Road and Old Kurrajong road (Ancillary Facility 2). The proposed modification is not expected to alter the use of these sites.

## **3.4 Public utility adjustment**

The proposed modification would not likely require any additional impacts to public utility adjustment required for the project.

Public utility adjustments have been described in the Section 3.5 of the Project REF.

## **3.5 Property acquisition**

The proposed modification does not require any additional acquisition of private property beyond what has already been acquired as stipulated in the Section 3.6 of the Project REF. The modification does involve the reclaiming of Transport for NSW land, however as this land belongs to Transport for NSW it does not qualify as property acquisition.

## 4 Statutory and planning framework

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### 4.1 Environmental Planning and Assessment Act 1979

#### 4.1.1 State Environmental Planning Policies

##### **State Environmental Planning Policy (Infrastructure) 2007**

State Environmental Planning Policy (Infrastructure) 2007 (ISEPP) aims to facilitate the effective delivery of infrastructure across the State.

Clause 94 of ISEPP permits development on any land for the purpose of a road or road infrastructure facilities to be carried out by or on behalf of a public authority without consent.

As the proposed modification is for a road project and is to be carried out by DM Roads on behalf of Transport for NSW, it can be assessed under Division 5.1 of the EP&A Act.

Development consent from council is not required.

The proposal is not located on land reserved under the *National Parks and Wildlife Act 1974* and does not require development consent or approval under State Environmental Planning Policy (Coastal Management) 2018 (CM SEPP), State Environmental Planning Policy (State and Regional Development) 2011 or State Environmental Planning Policy (State Significant Precincts) 2005.

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

Consultation, including consultation as required by ISEPP (where applicable), is discussed in Chapter 5 of this addendum REF.

#### **Other SEPPs**

The proposed modification does not trigger any other state planning policies, nor does it alter the consideration given to the relevant planning policies outlined in the Section 4.1 of the Project REF.

#### 4.1.2 Local Environmental Plans

##### **Hawkesbury Local Environmental Plan**

The proposed modification is located within the Hawkesbury LGA, as is the project, and development within this area is controlled by Hawkesbury City Council under the Hawkesbury Local Environmental Plan (LEP) 2012. The zonings which apply to the land affected by the proposal are outlined with their objectives in the Figure 4-1 of the project REF.

35 Bosworth Street is identified as a locally listed non-Aboriginal heritage item in the LEP. An assessment of the heritage impacts of the proposal was carried out and is described in Section 6.1 of this Addendum REF. The proposal is not expected to have any impact on the heritage listing.

No additional requirements or changes to land use already discussed in the determined project are proposed as part of the modification.

## **4.2 Other relevant NSW legislation**

The proposed modification will not alter the relevance or applicability of other NSW legislation listed in the Section 4.4 of the Project REF.

Under the scope of the modification, no additional permit, licence or approval will be required under the legislative acts assessed in Appendix A of the Project REF.

## **4.3 Commonwealth legislation**

### **4.3.1 Environment Protection and Biodiversity Conservation Act 1999**

Under the EPBC Act a referral is required to the Australian Government for proposed 'actions that have the potential to significantly impact on matters of national environmental significance or the environment of Commonwealth land. These are considered in Appendix A and Chapter 6 of the addendum REF.

A referral is not required for proposed road actions that may affect nationally listed threatened species, endangered ecological communities and migratory species. This is because requirements for considering impacts to these biodiversity matters are the subject of a strategic assessment approval granted under the EPBC Act by the Australian Government in September 2015.

Potential impacts to these biodiversity matters are also considered as part of Chapter 6 of the addendum REF and Appendix A.

### **Findings – matters of national environmental significance (other than biodiversity matters)**

The assessment of the proposed modification's impact on matters of national environmental significance and the environment of Commonwealth land found that there would be no change to the findings of the determined activity and would be unlikely to cause a significant impact on matters of national environmental significance or the environment of Commonwealth land. A referral to the Australian Government Department of Agriculture, Water and the Environment is not required.

## **4.4 Confirmation of statutory position**

The proposed modification is categorised as development for the purpose of a road and/or road infrastructure facilities and is being carried out by or on behalf of a public authority. Under clause 94 of ISEPP the proposed modification is permissible without consent. The proposed modification is not State significant infrastructure or State significant development. The proposed modification can be assessed under Division 5.1 of the EP&A Act. Consent from Council is not required.

## 5 Consultation

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### 5.1 Consultation strategy

The following consultation strategy was undertaken for the proposed modification:

- The Project Community Relations Manager has had several conversations over the phone and by email with the property owner (noting that there are several co-owners of this property) about the planned intersection upgrade and the property boundary issue.
- On 6 April 2020 a meeting with the owner, the real estate agent and representatives from the project team occurred at the property.
- The formal consultation letters between Transport for NSW and the owners of 35 Bosworth Street are detailed in Appendix E.
- Hawkesbury Valley Council was contacted under ISEPP consultation requirements and their responses are also detailed in Appendix E. This consultation also forms part of one of the recommendations given in the Heritage Assessment, to notify council of the proposed modification.

### 5.2 Consultation outcomes

During the meeting that took place on 6 April 2020, the owner explained that the property boundary that runs parallel to March Street appears to have always been in the same position, before they purchased the property about five years ago. However, the owner understood from the project team members that the registered surveyor had picked up the discrepancy. The owner was very cooperative and supportive of the process that may need to be taken to rectify the problem.

The owner was not concerned about the need to move the fence, remove the shed, or remove the trees but requested that Transport for NSW's decision about what to do next be put in writing along with a survey plan and an explanation of any costs involved.

Transport for NSW wrote to the seven co-owners on 13 May 2020 to inform them that the common fence between Lot 1 DP 518997 (owned by Transport for NSW) and Lot 2 DP 518997 (35 Bosworth Street) had been identified to be encroaching up to 2.45 metres into Transport for NSW's property. The owners were informed that a contractor would remove the existing property boundary fence, vegetation (including two large trees) and a shed that are currently located on Lot 1 DP 518997 in June (pending planning approvals). The work would be done at no cost to the owners and the contractor would install a replacement fence along the common boundary as part of the work.

The representative of the owner's group clarified the type of replacement fence and who would pay for it. On 19 May 2020, the owners representative acknowledged via return email the work to be done, gave permission to access the property to carry out the work and told the Project Community Relations Manager they would let him know the preferred colour for the new fence.

### 5.3 ISEPP Consultation

An ISEPP letter was prepared and sent to Hawkesbury City Council on the 13 May 2020. The letter has been included in Appendix E.

Hawkesbury City Council referred the proposed modification to the Planning Department of Council and a Heritage Evaluation was carried out by Council to verify the findings of the

Heritage Assessment carried out for the modification. In addition to this the modification was also discussed in the Council's Heritage Advisory Committee meeting in May.

A formal response from council was received on the 15/06/2020. This provided some recommendations in addition to those listed in the Heritage Assessment which have been listed in section 6.1 and integrated as additional safeguards.

#### **5.4 Ongoing or future consultation**

Consultation with the property owner will continue throughout the property adjustment and project as a whole.

## 6 Environmental assessment

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This section of the addendum REF provides a detailed description of the potential environmental impacts associated with the construction and operation of the proposed modification of the *Richmond Bridge and Approaches- Intersection upgrade at March Street/Bosworth Street*. All aspects of the environment potentially impacted upon by the proposed modification are considered. This includes consideration of the factors specified in the guidelines *Roads and Related Facilities EIS Guideline* (DUAP, 1996) and *Is an EIS required?* (DUAP, 1999) as required under clause 228(1) of the Environmental Planning and Assessment Regulation 2000. The factors specified in clause 228(2) of the Environmental Planning and Assessment Regulation 2000 are also considered in Appendix A.

Site-specific safeguards and management measures are provided to ameliorate the identified potential impacts.

### 6.1 Non-Aboriginal Heritage

A specialist non-Aboriginal heritage assessment was carried out for the proposal as part of the Project REF. The full impact assessment report is summarised in section 6.12 of the Project REF.

A second specialist non-Aboriginal Heritage assessment has been carried out for the modification as 35 Bosworth Street is a Hawkesbury Valley LEP heritage listed property. The detailed heritage assessment report is included in Appendix D.

#### 6.1.1 Methodology

In addition to desktop searches done as part of the Project REF to assess the presence of Non-Aboriginal Heritage, a site visit to 35 Bosworth Street, Richmond was carried out on 4 May 2020. This included an inspection from publicly accessible areas, no internal inspection was deemed necessary.

#### 6.1.2 Existing environment

The study area, 35 Bosworth Street, is a Californian Bungalow style house currently used for commercial purposes. A separate structure is located at the north western corner of the property at the end of the driveway. The southern fence bordering the Transport for NSW land is made of corrugated iron sheets and timber posts. Two mature exotic trees also existing on the south western side of the property directly next to the fence line.

#### 6.1.3 History

##### History of the study area- 35 Bosworth Street

The following details of the history of 35 Bosworth Street have been summarised from the Heritage Assessment (Appendix D).

The item was first granted to George Mitchell on 20 February 1849, as “Allotment No. 5 in Section 2 of the town of Richmond” (Figure 3). Mitchell also co-owned another allotment in Section 2, being Lot 3 with Charles Farrell in trust as per the Will of the Late John Cuffe, dated 20 March 1840.

Mitchell’s land was converted under the *Real Property Act 1900* in 1903 under Primary Application 12238. However, when the resulting title document was registered, the land comprising the item (i.e. 35 Bosworth Street) was not part of the title and specifically excluded. This corner block was associated with the Cuffe family, who took possession of

the land in 1903. Honora Smith converted the land under the *Real Property Act 1900* in 1917.

From 1921 the land changed hands only four times until 1963. In 1966 the property was subdivided into Lots 1 and 2 in Deposited Plan 518997, with Lot 1 being dedicated for public purposes and Lot 2 becoming the land associated with the item. It is likely that the fence was constructed at this time.

In 1974, road widening works on Bosworth Street required the resumption of land shown in Deposited Plan 247751. That plan shows that at that time the fence was outside of its cadastral boundary (Figure 6-1).

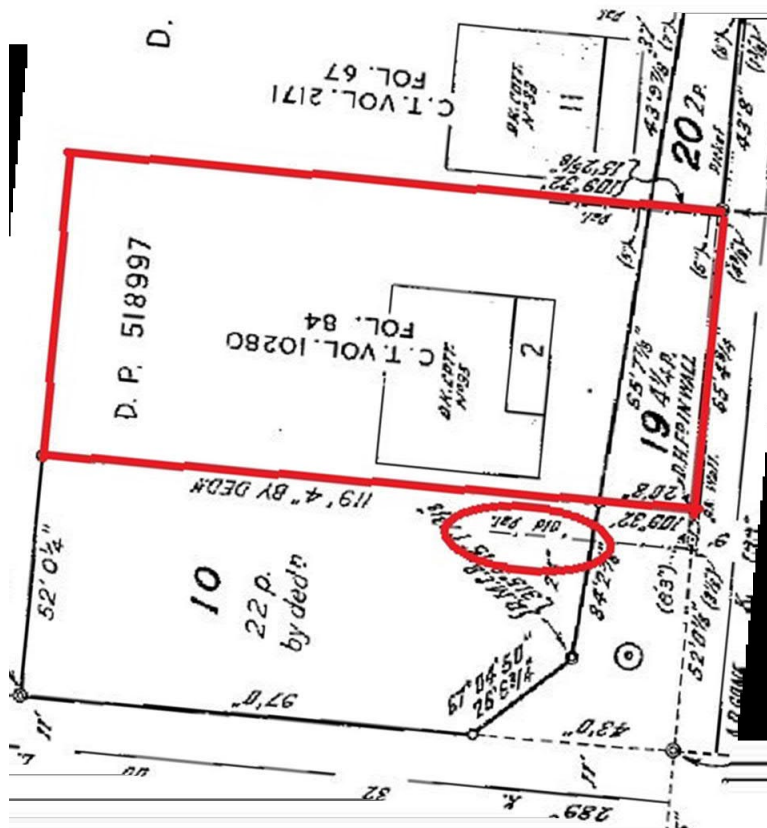


Figure 6-1 1974 Detail of 35 Bosworth Street showing 'old paling' (fencing) outside the cadastral boundary

The item is listed as Item I4 on Schedule 5 of the *Hawkesbury Local Environment Plan 2012*. It is not within a heritage conservation area.

The item was assessed in 1986 by Shellshear in *Richmond NSW Townscape Study*. The item was described as:

*Bungalow style cottage of rectangular plan with large terra cotta tiled gable roof. Face brick construction with gable ends sheeted and battened to the lower half and shingled to the upper half into the apex of the gable. Wide eaves overhang. Large gable roofed veranda off front side matching main gable details and supported on triple timber posts over brick piers. Verandah enclosed by low brick dwarf wall. Nicely detailed shallow oriel windows set with diamond lead light glazing. House set in large grounds and now used for commercial purposes. (Shellshear, 1986:152).*

Shellshear (1986) assessed the item as having heritage significance based on its historicity, its architectural values adding value to the streetscape (aesthetic heritage significance). As



Shellshear's assessment is the first known mention of this item's heritage value, it would appear that the item's heritage values are confined to the brick and tile former residence.

In 1986, Shellshear noted that the item was being used as a real estate agent, but that no significant changes to the original architecture were noted. However:

*The appearance of the house is marred by the application of unsympathetic signs...  
In respect of the house its preservation in this original form is desirable.*

In his 1986 assessment of 35 Bosworth Street, Shellshear concluded that the brick and tile constructed, Californian bungalow-style cottage was constructed in around 1925.

#### **6.1.4 Potential impacts**

Each feature of the modification was assessed in the heritage report for their potential impacts as follows:

##### ***Fence removal and replacement***

The removal of the fence will require the clearance of vegetation, removal of existing fence and reconstruction of the fence along the cadastral boundary for the item. The proximity of these works to the item raises the potential for accidental damage to significant fabric of the item. Mitigation measures, such as the installation of temporary fencing and advising contractors and subcontractors of the nature of the heritage item and the requirements to ensure that the heritage item is not physically impacted, should be implemented prior to any works being undertaken.

In relation to fence removal, clause 10.4.2 of the Development Control Plan (DCP) 2002 for Hawkesbury Council lists a variety of minor works for which development consent is not required. The demolition and erection of any fences or boundary walls is explicitly listed as one such minor work, when:

*...fences (are) not identified as significant, do not contribute to the overall setting or character of a heritage item or conservation area.* (Hawkesbury City Council, 2002:10-8).

The existing fence is of relatively modern construction and is not assessed as being significant or contributing in any way to the overall setting or character of the item. Development consent is therefore not required for the works.

##### ***Shed removal***

As noted above, it is considered that the shed does not form part of the item. It is considered further that the shed also does not contribute to the heritage significance of the item and, given its location behind a fence and therefore not visible from the street, it also does not contribute to the character of the item or the streetscape. The removal of the fence and trees may increase visibility to the southern elevation of the item and therefore the shed's visibility. The removal of the shed, therefore, will increase the visibility of the heritage item and may enhance its heritage significance.

However, as noted above, the shed has been attached to the southern elevation of the item and its removal must seek to prevent damage to the item during those works. It is therefore recommended that the shed's removal employ the following principles:

- that protective material or fencing be placed along the southern elevation during removal of the shed to protect the house from accidental damage, and
- that following removal of the shed any evidence of the former shed in the original fabric of the item is sympathetically repaired.



As noted in Section 6.2.1 above, Clause 10.4.2 of the DCP lists a number of minor works that may be carried out without development consent. One example of such minor works states:

*Any works involving the removal of additions and alterations which do not contribute to the heritage significance of the building or the character of the conservation area.*

The criteria for this type of work being exempt from development consent is:

*Where the proposed removal allows increased exposure of the heritage item and generally enhances its heritage significance.*

### **Tree removal**

As noted above, the trees are located within the cadastral boundary of the Transport for NSW land. It is noted the removal of the trees on Transport for NSW land will result in a reduction of the leafy character of this aspect of the property, however it should be noted that the heritage significance of the item is related to its architecture. The trees do not form part of the significance of the item, nor are they within the cadastral boundaries of the item.

In addition, the property was subdivided in 1966, meaning that the trees date from that time or later. They are therefore not connected with either the historicity, aesthetic significance or representativeness of the item.

However, there is potential for the item to be accidentally damaged during the process of the trees' removal. It is therefore recommended that protective measures be implemented to ensure tree branches do not fall onto the house.

In relation to the removal of trees in association with heritage items, Clause 9.3.3 of the DCP for Hawkesbury Council states that:

*Development consent is required for the ringbarking, cutting down, topping, lopping, removal, injuring or destruction of a tree or vegetation that is or forms part of a heritage item or that is within a heritage conservation area.*

As the trees are located on Transport for NSW land and therefore do not form part of the heritage item, development consent is not required.

Based on the assessment carried out in the heritage report the following was concluded:

- It is unlikely that the proposed works will cause an adverse impact on the heritage values of the house at 35 Bosworth Street
- Heritage values of the property will be safeguarded by the implementation of further management measures.

The following recommendations were made for the proposed modification:

### **Recommendation 1**

It is recommended that as the proposed works will be partially carried out within the boundaries of the item, Hawkesbury City Council should be notified of the works. Section 5.3 outlines the consultation process that was carried out with the Hawkesbury City Council in regard to this modification.

### **Recommendation 2**

It is recommended that protective temporary fencing be erected between the item and the works during all works to protect it from accidental damage. It is recommended further that protective measures are implemented to ensure tree branches do not fall onto the house.

### Recommendation 3

It is recommended that prior to the shed's removal that protective fencing or other material is placed along the southern elevation to protect the house from accidental damage during the shed removal works, and that following the shed's removal any evidence of the shed along the southern elevation of the house is sympathetically repaired.

### Recommendation 4

It is recommended that all contractors and sub-contractors be advised of the heritage item's significance and their obligations to not damage the item during the course of the proposed works.

**Hawkesbury City Council** provided further recommendations from the Council's Heritage Advisor:

- Removal should ensure that the methodology is such that there is no damage to the main building's façade
- Shed removal should occur and be documented under the guidance of a heritage architect
- The heritage architect should provide a report on the completion of shed removal and this report would be sent to Hawkesbury City Council with suitable photographs.

#### 6.1.5 Safeguards and management measures

Overall, the level of impact on 35 Bosworth Street will be slightly increased from that assessed in the determined project. As a result the following additional safeguards will be put in place to protect the heritage fabric of the house at 35 Bosworth Street.

Impact	Environmental safeguards	Responsibility	Timing	Reference
Non-Aboriginal Heritage	Hawkesbury City council will be notified prior to the commencement of work.	Project Manager Environment Manager	Pre-Construction	Heritage Assessment
Non-Aboriginal Heritage	Protective temporary fencing would be erected between the item and the works during all works to protect it from accidental damage. including falling tree branches from low heights.	Construction Contractor	Construction	Heritage Assessment
Non-Aboriginal Heritage	Prior to the shed's removal protective fencing or other material would be placed along the southern elevation to protect the house from	Construction Contractor	Construction	Heritage Assessment

	accidental damage during the shed removal works.			
<b>Non-Aboriginal Heritage</b>	Following the shed's removal any evidence of the shed along the southern elevation of the house would be sympathetically repaired.	Construction Contractor	Construction	Heritage Assessment
<b>Non-Aboriginal Heritage</b>	All contractors and sub-contractors would be advised of the heritage item's significance and their obligations to not damage the item during the course of the proposed works.	Construction Contractor	Construction	Heritage Assessment
<b>Non-Aboriginal Heritage</b>	Removal should ensure that the methodology is such that there is no damage to the main building's façade	Construction Contractor	Construction	Hawkesbury Council
<b>Non-Aboriginal Heritage</b>	Shed removal should occur and be documented under the guidance of a heritage architect	Construction Contractor	Construction	Hawkesbury Council
<b>Non-Aboriginal Heritage</b>	The heritage architect should provide a report on the completion of shed removal and this report would be sent to Hawkesbury City Council with suitable photographs.	Construction Contractor	Construction	Hawkesbury Council

Other safeguards and management measures that would address impacts are identified in Section 6.2.


## 6.2 Other impacts

Environmental factors with negligible to minor impacts are assessed in the table below. Any additional safeguards will be indicated by *italicised blue text*.

### 6.2.1 Existing environment and potential impacts

Environmental factor	Existing environment	Potential impacts
<p><b>Traffic and Transport access</b></p>	<p>Detailed traffic modelling and investigations for the Richmond Bridge and Approaches strategy are detailed in Section 6.2 of the Project REF. The REF was based upon the review of the following three studies, as well as desktop searches:</p> <ul style="list-style-type: none"> <li>• Richmond Bridge and Approaches Congestion Study – Stage 1 (Roads and Maritime 2012)</li> <li>• The Richmond Bridge and Approaches Congestion Study – Long-term Options Report (Roads and Maritime 2012)</li> <li>• The Richmond Bridge and Approaches Congestion Study – Preferred Short-term and Long-term Options Report (Roads and Maritime 2013).</li> </ul> <p>In summary, the potential and likely impacts arising from the construction of the project were most notably:</p> <ul style="list-style-type: none"> <li>• A temporary minor increase in traffic along haulage routes</li> <li>• The works are not anticipated to have a significant impact to the performance of the road network</li> <li>• Delays for road users owing to traffic lane closures, the implementation of roadwork speed limits and/or when manual traffic control is on operation to facilitate the movement of construction vehicle as required</li> <li>• Temporary impacts on pedestrian traffic, due to footpath realignments.</li> <li>• Temporary impacts of cyclists potential to impact on cyclist movements in the proposal area, as cyclists travelling along the affected roads would need to</li> </ul>	<p>The proposed modification is not expected to cause any further Traffic and Transport access impacts over what has been assessed as part of the Determined Project.</p> <p>As such no additional safeguards are proposed.</p>

Environmental factor	Existing environment	Potential impacts
	<p>move further into the adjacent traffic lane in order to travel around the construction worksite</p> <ul style="list-style-type: none"> <li>• Temporary and permanent loss of street parking</li> <li>• Intermittent and temporary disruption to private property access</li> <li>• Bus services travelling along affected roads would be subject to minor delays and increased travel times as a result of increased congestion at intersections due to the implementation of roadwork speed limits and/or short-term traffic control.</li> </ul>	
<p><b>Aboriginal Heritage</b></p>	<p>A desktop assessment of known Aboriginal heritage records and previous archaeological investigations was carried out for the project area on the 26/09/2019.</p> <p>This assessment included a search of OEH Aboriginal Heritage Information Management System (AHIMS). Six recorded sites were identified within a three-kilometre radius around the combined Richmond Bridge Approaches Proposals. These included an open campsite, axe grinding grooves, shelters and non-specified sites.</p>	<p>The proposed modification would not have direct impacts on any known Aboriginal heritage sites and in light of the historic land uses and associated levels of disturbance, no areas were identified as having archaeological potential within the study area.</p> <p>The safeguards and mitigation measures outlined in the Determined Project are considered sufficient to address the potential impacts arising from the proposed modification.</p>

Environmental factor	Existing environment	Potential impacts
	 <p>The key findings of the survey were that the project site has been substantially disturbed from past clearing and road construction activities, and no areas within the proposal area were identified as having archaeological potential.</p>	
<p><b>Topography, geology and soils</b></p>	<p>The <i>Richmond Bridge Approaches-Intersection upgrade at March Street and Bosworth Street REF</i> included a desktop analysis of topography, geology and soils of the study area based on existing topographic and geological maps, database searches and other publicly available information. This assessment determined that:</p>	<p>The proposed modification would not have any additional impacts greater than those described in the Determined Project.</p>

Environmental factor	Existing environment	Potential impacts
	<ul style="list-style-type: none"> <li>The proposal site has a low risk of ASS/PASS impacts</li> <li>The removal of vegetation and ground disturbance has the potential to expose ASS (if present) and increase the possibility of erosion and sedimentation.</li> </ul> <p>Ultimately the assessment found that construction and operation of the project to be unlikely to result in impacts to topography, geology and soils that could not be managed via the implementation of the recommended safeguards and management measures.</p>	<p>The safeguards and mitigation measures outlined in the Determined Project are considered sufficient to address the potential impacts arising from the proposed modification.</p>
<p><b>Landscape character and visual amenity</b></p>	<p>A detailed landscape character and visual impact assessment was carried out as part of the Project REF. This assessment determined the following:</p> <ul style="list-style-type: none"> <li>The majority of visual impacts during construction would be caused by the equipment associated with road widening, including temporary fencing, signage and construction machinery</li> <li>Construction would result in a more cluttered street scape and there may be a visible increase in traffic</li> <li>The use of portable lighting may impact on the visual amenity of the area owing to associated light spill.</li> <li>Permanent visual changes to the streetscape, mostly associated with the removal of trees and widening of the road.</li> </ul> <p>The March Street and Bosworth Street intersection is a significant junction in the town of Richmond, and in carrying out the proposed intersection upgrade, some impact on the local landscape is unavoidable. Landscape character and visual amenity are able to be maintained through the implementation of recommended safeguards and management measures.</p> <p>The proposed ancillary facility at 148 Old Kurrajong Road is located on a busy roadway at the last intersection before Richmond Bridge. During construction there would be minor impacts on visual amenity from the stockpiles, machinery, fenced</p>	<p>The proposed modification is unlikely to change the landscape character or visual amenity of the project area. The corrugated iron fence to be removed on the southern side of 35 Bosworth Street will be replaced like for like. To minimise any changes to the view of the property from the road, footpath or other properties.</p> <p>The safeguards implemented in the Determined Project would still be considered sufficient to manage any potential impacts associated with the modification.</p> <p>One additional safeguard would be necessary to ensure the like for like replacement of fencing:</p> <p><i>The existing corrugated iron fence on the southern side of 35 Bosworth Street will be replaced with a Colourbond fence to match</i></p>



Environmental factor	Existing environment	Potential impacts																		
	<p>compound area etc. These impacts would be temporary as the area would be returned to its current condition at the completion of works.</p> <p>Permanent changes to the landscape through increased tree removal were proposed as part of Addendum 3. These changes would generally increase the exposure of residents and pedestrians to the road way. Impacts from tree removal would be mitigated by placement of roadside plantings in line with the project landscape plan at the end of work.</p>	<p><i>the existing boundary fences of the private property.</i></p>																		
<p><b>Contaminated land</b></p>	<p>A desktop contamination assessment of the study area was conducted for the <i>Richmond Bridge Approaches-Intersection upgrade at March Street and Bosworth Street</i>). The assessment determined that:</p> <ul style="list-style-type: none"> <li>• The nearest registered contaminated site on the NSW EPA database is located over six kilometres north-west</li> <li>• A search of registered groundwater wells located within one kilometer (approximate) of the proposal identified four bores it is anticipated that the likely depth of groundwater within the study area would be encountered at about eight metres below the ground surface</li> <li>• Three Environmental Protection Licences (EPLs) were confirmed within a 5 kilometre radius of the proposal these include two sewage treatment plants and one water filtration plant.</li> </ul> <table border="1" data-bbox="510 1042 1563 1318"> <thead> <tr> <th>Number</th> <th>Name</th> <th>Location</th> <th>Type</th> <th>Status</th> <th>Issued date</th> </tr> </thead> <tbody> <tr> <td>190</td> <td>SYDNEY WATER CORPORATION</td> <td>CNR BELLS LINE OF ROAD &amp; CROOKED LANE, NORTH RICHMOND, NSW 2754</td> <td>POEO licence</td> <td>Issued</td> <td>25-May-00</td> </tr> <tr> <td>1726</td> <td>SYDNEY WATER CORPORATION</td> <td>BLACKTOWN ROAD, RICHMOND, NSW 2753</td> <td>POEO licence</td> <td>Issued</td> <td>25-May-00</td> </tr> </tbody> </table>	Number	Name	Location	Type	Status	Issued date	190	SYDNEY WATER CORPORATION	CNR BELLS LINE OF ROAD & CROOKED LANE, NORTH RICHMOND, NSW 2754	POEO licence	Issued	25-May-00	1726	SYDNEY WATER CORPORATION	BLACKTOWN ROAD, RICHMOND, NSW 2753	POEO licence	Issued	25-May-00	<p>The proposed modification is not expected to alter the assessment of contaminated land and risk conducted for the Determined Project.</p> <p>The safeguards and mitigation measures outlined in the Determined Project are considered sufficient to address the potential impacts arising from the proposed modification.</p>
Number	Name	Location	Type	Status	Issued date															
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Environmental factor	Existing environment						Potential impacts
	5425	SYDNEY WATER CORPORATION	GROSE VALE ROAD, NORTH RICHMOND, NSW 2754	POEO licence	Issued	19-Jun-00	<p>➤ A review of the Hawkesbury City Council flood level maps indicates that the proposal site is located within the probable maximum flood level.</p> <p>The assessment also considered potential contamination sources, the following which would remain relevant for the proposed modification:</p> <ul style="list-style-type: none"> <li>• Exhaust particulates and hydrocarbons released from motor vehicles on March Street and Bosworth Street</li> <li>• Unlawfully dumped waste at proposal site</li> <li>• The low risk of acid sulfate soils.</li> </ul> <p>The conclusions drawn from the assessment were that most potential sources, and therefore the relative contamination risk, would be low.</p>
<b>Socio-economic</b>	<p>An assessment of the potential socio-economic impacts was previously conducted for the project. In summary, and with reference to the proposed modification:</p> <ul style="list-style-type: none"> <li>• No land acquisition or property adjustment is required</li> <li>• No public transport facilities or services are in direct proximity to the work site</li> <li>• Changes in conditions for cyclists near to construction works, particularly where road shoulders and/or kerbside traffic lanes on the approach to the March Street/Bosworth Street intersection are temporarily closed or narrowed</li> <li>• Changed access for pedestrians near to construction activities, particularly where footpath realignments are required at March Street and Bosworth Street. This may impact on perceptions of safety for some pedestrians, including children, the elderly and people with mobility difficulties</li> </ul>						<p>The proposed modification is not expected to result in socio-economic appreciably different from those characterised in the Determined Project.</p>

Environmental factor	Existing environment	Potential impacts
	<ul style="list-style-type: none"> <li>• Temporary changes to property access for residents and local businesses that have direct access onto March Street and Bosworth Street roads near to the proposed works</li> <li>• Temporary loss of or restrictions to on-street parking within or near to the construction footprint which may require some people to walk further to access residential, commercial or community uses</li> <li>• The majority of properties near to the proposal have access to off-street parking, which would assist in minimising potential impacts on surrounding residential, commercial and community properties.</li> </ul>	
<b>Land use and property</b>	<p>An assessment of the land use and property impacts aligned with this proposed modification, and derived from studies in support of the <i>Richmond Bridge Approaches-March Street and Bosworth Street Intersection REF</i>, determined that:</p> <ul style="list-style-type: none"> <li>• The proposed modification is located within the Hawkesbury LGA with land zoned SP2(Infrastructure), R2 (Low Density Residential), B2 (Local Centre) under Hawkesbury LEP</li> <li>• Land uses in the area surrounding the proposed modification comprise existing road infrastructure (e.g. road pavement, drainage and guard rails), utility easements (comprising overhead electricity supplies, water mains and telecommunications infrastructure), residential and other privately-owned property and vacant land located within the existing road reserve</li> <li>• Amenity related impacts associated with the proposal are not considered to be of an extent, magnitude or duration that would have the potential to impact on the current use of nearby properties.</li> </ul>	<p>The proposed modification would not change any land use or cause any property impacts relating to the approved project.</p> <p>As the proposed modification relates to reclaiming Transport for NSW land that has been encroached upon by the neighbouring property there would be no changes to the use of land on any private property.</p> <p>Therefore, the land use and property impacts are considered to be similar to those described and approved in the Determined Project and would be managed in accordance with the safeguards in Section 7.</p>

Environmental factor	Existing environment	Potential impacts
<b>Biodiversity</b>	<p>The biodiversity assessment conducted for the project summarised the biodiversity values of existing environment adjoining the project site.</p> <ul style="list-style-type: none"> <li>• A review of existing broad scale vegetation mapping identified six native vegetation communities within two kilometres of the study area, five of which are listed as a threatened ecological community under the then TSC Act and/or the EPBC Act</li> <li>• The proposal area consists of road side plantings of exotic and native trees, including Crepe Myrtle (<i>Lagerstroemia indica</i>), Broad-leaved Paperbark (<i>Melaleuca quinquenervia</i>) and Milkflower Cotoneaster (<i>Cotoneaster coriaceus</i>), as well maintained gardens situated along existing footpaths and within residential properties</li> <li>• No native fauna habitat was identified at the project site in the form of nests, hollows or suitable habitat trees</li> <li>• Existing vegetation that would be affected by the proposal was all identified as planted natives, or exotic species</li> <li>• There were no major wildlife corridors located within the proposal area</li> <li>• Threatened flora species identified within the area were considered to have either a low potential to occur or are unlikely to occur in the proposal area due to the absence of these non-cryptic species and/or the absence of suitable habitat for these species</li> <li>• The majority of the fauna species identified within the area were considered unlikely to, or have low potential to occur within the proposal area (54 species); however, one species- the Grey headed Flying Fox (listed as vulnerable under the then TSC Act and EPBC Act) - is considered to have a moderate potential to occur based on the habitats present and their condition.</li> </ul>	<p>The impacts of the proposed modification are considered to be similar to those described in the Determined Project. Two mature exotic trees would be removed as part of the modification. The biodiversity assessment carried out for the determined project noted that exotic trees along the project footprint provide no suitable habitat trees for any native fauna. It is expected that the trees to be removed, although just outside the study area for the biodiversity assessment are consistent with this characterisation. Any potential impacts associated with biodiversity would be managed with the implementation of safeguards and mitigation measures outlined in the determined project.</p> <p>Therefore, no additional safeguards are proposed in addition to those found in Section 7.</p>

Environmental factor	Existing environment	Potential impacts
<b>Water Quality and Hydrology</b>	<p>An assessment of the potential impacts to water quality and hydrology was conducted for the <i>Richmond Bridge Approaches- Intersection upgrade at March Street and Bosworth Street, Richmond</i> and is summarised as follows:</p> <ul style="list-style-type: none"> <li>• Two surface waterways are located in the vicinity of the proposal area. These comprise Pughs Lagoon and the Hawkesbury River, which are located about 500 metres and 2.3 kilometres to the north-west of the proposal, respectively</li> <li>• The existing road drainage for this intersection consists of a conventional urban pit and pipe network that drains east and west from Bosworth Street (i.e. the western side drains towards Chapel Street)</li> <li>• The west-draining flows eventually discharge into Pughs Lagoon, approximately 500 metres north-west of Bosworth Street. The eastern side of the intersection drains east towards East Market Street before draining to the north east along East Market Street towards Bensons Lane Sporting Complex</li> <li>• The kerb inlet pit located on the corner of Bosworth Street and March Street north appears to have an offset sump and limited pipe cover with twin 225 diameter pipes draining towards March Street east</li> <li>• The proposal is located in the flood plain of the Hawkesbury River. A review of Hawkesbury City Council's (2011) Approximate Flood Extents of the Hawkesbury River indicates that the proposal is located outside of the flood extent for a 100 year Average Recurrence Interval (ARI) event. However, the area would be inundated during the Probable Maximum Flood (PMF)</li> <li>• Given the distance to natural waterways, and the topography.</li> </ul>	<p>The proposed modification is not expected to result in impacts to water quality and hydrology not already characterised in the Determined Project.</p> <p>Therefore, these impacts would be managed in accordance with safeguards outlined in the Determined Project.</p>
<b>Air quality</b>	<p>An assessment of the potential impacts to air quality was conducted for the Project REF and is summarised as follows:</p> <ul style="list-style-type: none"> <li>• Ambient air quality within the proposal area is likely to be primarily affected by local air emission sources. These include exhaust emissions from vehicles</li> </ul>	<p>The proposed modification is not expected to result in additional impacts to air quality exceeding those characterised in the Determined Project.</p>

Environmental factor	Existing environment	Potential impacts
	<p>using the existing road network, particulate emissions (dust) from wind erosion from exposed areas and agricultural activities occurring on nearby rural land</p> <ul style="list-style-type: none"> <li>• No manufacturing or other emitting industry is located near to the proposed work. Therefore, air quality in the study area is likely to reflect the typically rural residential nature of the area</li> <li>• The nearest sensitive receivers are: <ul style="list-style-type: none"> <li>○ Seven residential properties five metres from the proposed work</li> <li>○ Commercial premises between five and sixty metres from the proposed work</li> <li>○ The Uniting Care Hawkesbury Village located about fifty-five metres from the proposed work.</li> </ul> </li> <li>• Primary sources of emissions of airborne particulate matter from the construction of the proposal would include. <ul style="list-style-type: none"> <li>○ Wind erosion from unsealed surfaces and stockpiles</li> <li>○ The loading/unloading of construction vehicles along paved and unsealed haulage routes and other work areas</li> <li>○ Vehicle (exhaust) emissions.</li> </ul> </li> <li>• The volume of dust generated during a typical work day is anticipated to be small and is not expected to result in a significant reduction in local air quality at the nearest sensitive receivers</li> <li>• The focus of air quality management is to control dust emissions and mitigate impacts to ensure the proposal does not result in exceedances of air quality criteria at sensitive receptors.</li> </ul>	<p>The safeguards and management measures outlined in the Determined Project are considered sufficient to address the potential impacts arising from the proposed modification.</p>
<p><b>Resource use and waste</b></p>	<p>An assessment of the waste and resource management aspects of the project was conducted and is summarised as follows:</p>	<p>The proposed modification is not expected to result in material differences to the waste and resources management impacts</p>

Environmental factor	Existing environment	Potential impacts
	<ul style="list-style-type: none"> <li>• Various waste streams are likely to be generated by the project and the waste management hierarchy defined in the Waste Avoidance and Resource Recovery Act 2001 is considered relevant</li> <li>• The existing road network currently generates minimal waste</li> <li>• The proposed work would generate various waste streams from the demolition of medians and existing road pavements and kerbside areas (i.e. grasses and topsoils)</li> <li>• Construction would also generate waste streams typical of road construction and general wastes and sewage from site compounds and offices.</li> </ul> <p>Wastes would be classified, managed, transported and disposed of in accordance with the Waste Classification Guidelines (DECCW 2008).</p>	<p>assessed in the Determined Project.</p> <p>A minor adjustment to the safeguards and mitigation measures outlined in the Determined Project is required for them to be considered sufficient to address the potential impacts arising from the proposed modification.</p> <p>The following additional detail would be added to existing safeguards:</p> <p>Prior to demolition, a hazardous materials survey must be carried out to determine the presence of hazardous materials in the house at 164 March Street, within the garage at 168 March Street, and <i>within the shed at 35 Bosworth Street</i></p>
<p><b>Greenhouse gas emissions and climate change</b></p>	<p>The Project REF'S conducted an assessment of greenhouse gas emissions and climate change and determined that various types of greenhouse gas emissions would be produced including:</p> <ul style="list-style-type: none"> <li>• Carbon dioxide, methane and nitrous oxide generated from liquid fuel use in plant and vehicles (diesel, petrol)</li> <li>• Embedded emissions associated with the manufacture and delivery of construction materials</li> <li>• Methane generated from land filling any carbon-based waste.</li> </ul>	<p>The modification is not expected to result in a material increase in greenhouse gas emissions and/or increase in climate change risk not already assessed in the Determined Project.</p> <p>It is expected that the safeguards and mitigation measures outlined in the Determined Project are</p>

Environmental factor	Existing environment	Potential impacts
	<p>Given the nature of the proposal, it would not be possible to completely avoid the generation of greenhouse gas emissions during construction (due to the need to consume energy and resources). Overall, construction related greenhouse gas emissions associated with the proposal would be relatively minor comparable with similar road upgrade projects.</p> <p>Climate change risks are generally considered to be minor and would be readily manageable through the application of standard mitigation measures that have been adequately designed to respond to the potential occurrence of the increased frequency and severity of rainfall events.</p>	<p>sufficient to address the potential impacts arising from the proposed modification.</p>
<p><b>Noise and Vibration</b></p>	<p>Exceedances of the noise management levels are predicted to occur at a large number of residences along the Project Footprint. These exceedances would occur during all work carried out during the day-time, evening and night time periods, with the largest exceedances expect to occur during night time utility works and pavement work. A detailed noise assessment was carried out as part of Addendum REF 4, Section 6.1 of the document details the predicted impacts associated with the project. The work associated with this modification would all occur during standard construction hours, and therefore are not expected to result in more than a minor change in noise and vibration impacts associated with the Project.</p> <p>With regard to building damage criteria, it is unlikely that the lowest values (for 1 to 10 Hz) for commercial premises would be exceeded during the works. Where vibration-intensive equipment is used in closer proximity to residential properties (10 metres or closer to closest façade) it is possible that the lowest values (for 1 to 10 Hz) for building damage could be exceeded. In regard to heritage listed properties, several exist within the safe working distances for vibration intensive equipment. As such mitigation measures have been put in place to manage vibration impacts associated with the Project.</p>	<p>The work associated with this modification would occur during standard construction hours, and therefore is not expected to result in more than a minor change in noise and vibration impacts associated with the Determined Project and modifications to the project approval.</p> <p>Two additional trees would be removed as part of the modification, however this is not expected to have a material impact on the overall impacts associated with the project.</p> <p>It is expected that the safeguards and mitigation measures outlined in the Determined Project are sufficient to address the potential</p>

Environmental factor	Existing environment	Potential impacts
		impacts arising from the proposed modification.



## 6.2.2 Safeguards and management measures

Impact	Environmental safeguards	Responsibility	Timing	Reference
<b>Non-Aboriginal Heritage</b>	<i>Hawkesbury City council will be notified prior to the commencement of work.</i>	<i>Project Manager Environment Manager</i>	<i>Pre-Construction</i>	<i>Heritage Assessment</i>
<b>Non-Aboriginal Heritage</b>	<i>Protective temporary fencing would be erected between the item and the works during all works to protect it from accidental damage including falling tree branches.</i>	<i>Construction Contractor</i>	<i>Construction</i>	<i>Heritage Assessment</i>
<b>Non-Aboriginal Heritage</b>	<i>Prior to the shed's removal, protective fencing or other material is placed along the southern elevation to protect the house from accidental damage during the shed removal works.</i>	<i>Construction Contractor</i>	<i>Construction</i>	<i>Heritage Assessment</i>
<b>Non-Aboriginal Heritage</b>	<i>Following the shed's removal any evidence of the shed along the southern elevation of the house should be sympathetically repaired.</i>	<i>Construction Contractor</i>	<i>Construction</i>	<i>Heritage Assessment</i>
<b>Non-Aboriginal Heritage</b>	<i>All contractors and sub-contractors be advised of the heritage item's significance and their obligations to not damage the item during the course of the proposed works.</i>	<i>Construction Contractor</i>	<i>Construction</i>	<i>Heritage Assessment</i>
<b>Non-Aboriginal Heritage</b>	<i>Removal should ensure that the methodology is such that there is no damage to the main building's façade</i>	<i>Construction Contractor</i>	<i>Construction</i>	<i>Hawkesbury Council</i>
<b>Non-Aboriginal Heritage</b>	<i>Shed removal should occur and be documented under the guidance of a heritage architect</i>	<i>Construction Contractor</i>	<i>Construction</i>	<i>Hawkesbury Council</i>
<b>Non-Aboriginal Heritage</b>	<i>The heritage architect should provide a report on the completion of shed removal and this report would be sent to Hawkesbury City Council with suitable photographs.</i>	<i>Construction Contractor</i>	<i>Construction</i>	<i>Hawkesbury Council</i>

<b><i>Landscape character and visual amenity</i></b>	<i>The existing corrugated iron fence on the southern side of 35 Bosworth Street will be replaced with a Colourbond fence to match the existing boundary fences of the private property.</i>	<i>Construction contractor</i>	<i>Construction</i>	<i>Additional Safeguard</i>
<b>Resource use and waste</b>	Prior to demolition, a hazardous materials survey must be carried out to determine the presence of hazardous materials in the house at 164 March Street, within the garage at 168 March Street, and <i>within the shed at 35 Bosworth Street</i>	Construction Contractor	Pre-construction, construction	Addendum REF 2 and 3 Best Practice

## **6.3 Cumulative impacts**

The proposed modification is not considered to increase any cumulative impacts additional to those identified for the approved project.

### **6.3.1 Potential impacts**

The proposed modification is not expected to result in material increase in potential cumulative environmental impacts assessed in the Project REF. The proposed modification is unlikely to result in an increase in cumulative impacts such that additional mitigation measures are necessary.

The impacts arising from the Project, including the proposed modification, will not exacerbate similar impacts from other projects occurring along the broader Kurrajong and March Street corridor. The safeguards and mitigation measures outlined in the Project REF are considered sufficient to address the potential cumulative impacts arising from the proposed modification.

## **7 Environmental management**

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### **7.1 Environmental management plans**

A number of safeguards and management measures have been identified to minimise adverse environmental impacts, including social impacts, which could potentially arise as a result of the proposed modification. Should the proposed modification proceed, these management measures would be addressed if required during detailed design and incorporated into the Contractors Environmental Management Plan (CEMP) and applied during the construction and operation of the proposed modification.

## 7.2 Summary of safeguards and management measures

Environmental safeguards and management measures for the Richmond Bridge and Approaches- Intersection upgrade at March Street/Bosworth Street are summarised in Table 7-1. Additional safeguards and management measures identified in this addendum REF are included in bold and italicised font. The safeguards and management measures will be incorporated into the CEMP and implemented during construction and operation of the proposed modification, should it proceed. These safeguards and management measures will minimise any potential adverse impacts arising from the proposed works on the surrounding environment.

**Table 7-1: Summary of safeguards and management measures**

No.	Impact	Environmental safeguards	Responsibility	Timing	Reference
<b>General</b>					
<b>GEN1</b>	General	All environmental safeguards must be incorporated within the following: <ul style="list-style-type: none"> <li>Detailed design stage</li> <li>Contract specifications for the proposal</li> <li>Contractor's Environmental Management Plan.</li> </ul>	Project Manager	Pre-construction	G36
<b>GEN2</b>	General	A risk assessment must be carried out on the proposal with the Transport for NSW Regional Environmental Staff, prior to construction. The recommendations of the risk assessment are to be implemented. A review of the risk assessment must be carried out after the initial audit or inspection to evaluate if the level of risk chosen for the project is appropriate. Any work resulting from the proposal and as covered by the REF may be subject to environmental audit(s) and/or inspection(s) at any time during their duration.	Project Manager and Regional Environmental Staff	Pre-construction  After first audit	G36
<b>GEN3</b>	General	All businesses and residences likely to be affected by the proposed work must be notified at least five working days before the start of the proposed activities.	Project Manager	Pre-construction	G36

<b>GEN4</b>	General	Environmental awareness training must be provided, by the contractor, to all field personnel and subcontractors.	Contractor	Pre-construction and during construction as required	G36
<b>Noise and vibration</b>					
<b>NV1</b>	Construction noise	<p>A Construction Noise and Vibration Management Plan (CNVMP) would be prepared as part of the CEMP. This plan would include, but would not be limited to, the following:</p> <ul style="list-style-type: none"> <li>• A map indicating the locations of sensitive receivers including residential properties, and clear protocols for communicating with affected residents with regard to likely exceedances of construction noise limits, and the frequency and duration of these events</li> <li>• Procedures for prior notification of nearby residents in advance of high noise construction activities and work outside of standard hours</li> <li>• Procedures for notifying residents about the program of work, duration of works including high noise activities, noise management and mitigation methods, and complaints procedure</li> <li>• Management measures to minimise potential noise impacts from mobile, high noise construction activities such as concrete cutting</li> <li>• Mitigation measures to avoid noise and vibration impacts associated with truck movements during construction</li> <li>• A process for assessing the performance of the implemented mitigation measures, including a noise and vibration monitoring program for sensitive receivers</li> <li>• A process for documenting and resolving issues and complaints</li> </ul>	Construction Contractor	Construction	Project REF

		<ul style="list-style-type: none"> <li>• A process for updating the plan when activities affecting construction noise and vibration change</li> <li>• Identify in toolbox talks where noise and vibration management is required</li> <li>• Implement EPA Interim Construction Noise Guidelines (DECCW 2009).</li> </ul>			
<b>NV2</b>	Construction noise	<p>Any out of hours work would comply with G36 community notification requirements specified within the Roads and Maritime Construction Noise and Vibration Guidelines.</p> <p>Communications material such as the project website and community notification would include a contact person and phone number to enable complaints to be received and responded to.</p>	Construction Contractor	Construction	Project REF
<b>NV3</b>	Construction noise	If a complaint relating to vibration is received, attended monitoring would be carried out to assess whether criteria are being met. If monitoring identifies that criteria are being exceeded, then all work is to be scaled back until an acceptable vibration level can be reached in consultation with the affected resident.	Construction Contractor	Construction	G36 Project REF <i>Roads and Maritime Construction Noise and Vibration Guidelines</i>
<b>NV4</b>	Construction vibration	Pre-condition surveys are to be conducted at heritage listed properties situated in close proximity to work zones, specifically 190 March Street (Item I72), 35 Bosworth Street (Item I4), 162 March Street (Item I483), 160 March Street (Item I482), 158 March Street (Item I69), and 155 March Street (Item I71).	Construction Contractor	Pre-Construction	G36 Project REF
<b>NV5</b>	Construction vibration	Where possible, carry out the tree removal during standard work hours (7am-6pm) or alternatively Out of Hours Work Period 1 (6pm-10pm).	Construction Contractor	Construction	Addendum REF 3
<b>NV6</b>	Construction vibration	Prior to vibration intensive activities commencing within the vicinity of known heritage items, a vibration trial will be carried	Construction Contractor	Pre- vibration intensive work	G36 Addendum REF 4



		out to determine the safe working distances of the vibration intensive plant and equipment.			
<b>NV7</b>	Construction vibration	Where safe working distances cannot be complied with, vibration monitoring will be carried out ensure vibration limits are not exceeded at heritage listed properties.	Construction Contractor	Construction	G36 Addendum REF 4
<b>NV8</b>	Noise and Vibration	Locate compressors, generators, pumps and any other fixed plant as far from residences as possible and behind site structures.	Construction Contractor	Construction	Project REF <i>Roads and Maritime Construction Noise and Vibration Guidelines</i>
<b>NV9</b>	Noise and Vibration	Alternatives to reversing alarms will be considered for site equipment subject to Work Health Safety compliance requirements and risk assessments.	Construction Contractor	Construction	Project REF <i>Roads and Maritime Construction Noise and Vibration Guidelines</i>
<b>NV10</b>	Noise and Vibration	Vehicle delivery times will be scheduled where feasible to <del>the recommended construction hours</del> to minimise noise impacts from heavy vehicle movements and deliveries. Plant should not be delivered during the night time period to Ancillary site 1.	Construction Contractor	Construction	Addendum REF 4 <i>Roads and Maritime Construction Noise and Vibration Guidelines</i>
<b>NV7</b>	Noise and Vibration	<del>Out of hours construction noise in out of hours period 1 shall be limited to no more than three consecutive evenings per week except where there is a Duration Respite. For night work these periods of work should be separated by not less than one week and no more than 6 evenings per month.</del>	Construction Contractor	Construction	Additional safeguard
<b>NV8</b>	Noise and Vibration	<del>Night time construction noise in out of hours period 2 (Mon-Fri 10pm-7am, Sat 10pm-8am, Sun/Pub Hol 6pm-7am) shall be limited to two consecutive nights except for where there is a</del>	Construction Contractor	Construction	Additional safeguard

		<del>Duration Respite. For night work these periods of work should be separated by not less than one week and 6 nights per month. Where possible, high noise generating works shall be completed before 11pm.</del>			
<b>NV11</b>	Noise and Vibration	No swearing or unnecessary shouting or loud stereos/radios on site.	Construction Contractor	Construction	Roads and Maritime Construction Noise and Vibration Guidelines Addendum REF 4
<b>NV12</b>	Nosie and Vibration	No dropping of materials from height, throwing of metal items and slamming of doors.	Construction Contractor	Construction	Roads and Maritime Construction Noise and Vibration Guidelines Addendum REF 4
<b>NV13</b>	Noise and Vibration	Relating to use and sitting of plant: <ul style="list-style-type: none"> <li>• The offset distance between noisy plant and adjacent sensitive receivers is to be maximised</li> <li>• Plant used intermittently to be throttled down or shut down</li> <li>• Noise-emitting plant to be directed away from sensitive receivers</li> <li>• Only have necessary equipment on site.</li> </ul>	Construction Contractor	Construction	Roads and Maritime Construction Noise and Vibration Guidelines Addendum REF 4
<b>NV14</b>	Noise and Vibration	Stationary noise sources should be enclosed or shielded where feasible and reasonable whilst ensuring that the occupational health and safety of workers is maintained.	Construction Contractor	Construction	Roads and Maritime Construction Noise and

					Vibration Guidelines Addendum REF 4
<b>NV15</b>	Noise and Vibration-respite periods	Duration Respite in the form of working up to five nights a week should be employed in order to complete the project more quickly.	Project Manager Construction Contractor	Construction	Interim Construction Noise Guideline (ICNG) (DECC 2006) Construction Noise and Vibration Guideline (RMS 2016). Addendum REF 4
<b>NV16</b>	Noise and Vibration	All additional safeguards as outlined in the Construction Noise and Vibration Guideline should be considered for affected receivers.	Project Manager Environment Manager Community and Stakeholder Engagement Manager	Pre-construction and Construction	Construction Noise and Vibration Guideline (RMS 2016). Addendum REF 4
<b>Traffic, transport and access</b>					
<b>TTA1</b>	Construction traffic management	A detailed traffic management plan would be prepared in accordance with Traffic Control at Work Sites (Roads and Traffic Authority 2010) and QA Specification G10 Control of Traffic (Roads and Traffic Authority 2005) to provide a comprehensive and objective approach to minimize any potential impacts on road network operations during construction.  The traffic management plan would include measures to minimise heavy vehicle usage on local roads. Where practicable,	Construction Contractor	Pre-construction and construction	G10 Project REF

		deliveries of plant and materials would be carried out outside of peak traffic periods.			
<b>TTA2</b>	Construction traffic management	The Construction Contractor would review the proposed timing of construction works at each of the intersection upgrade locations, with the objective of minimising the potential for cumulative traffic impacts.	Construction Contractor	Pre-construction and construction	Project REF
<b>TTA3</b>	Construction traffic management	Consultation would be carried out with emergency services. Emergency vehicle access would be maintained at all times for the duration of construction.	Construction Contractor	Pre-construction and Construction	Project REF Best Practice
<b>TTA4</b>	Public transport	Access to bus stop locations would be maintained during construction wherever possible in consultation with bus operators (Busways).	Construction Contractor	Pre-construction and Construction	Project REF Best Practice
<b>TTA5</b>	Public transport	Consultation with Transport for NSW and Busways would be carried out prior to commencement of any works that would impact on existing bus stop locations. This consultation would include selection of temporary and permanent bus stop locations (where required).  Updates on the location of temporary and permanent bus stops would be provided to the community during the construction period to ensure disruption is minimized.	Construction Contractor	Pre-construction and Construction	Project REF Best Practice
<b>TTA6</b>	Road user delay	The community would be kept informed about upcoming road construction activities. Notifications would include advertisements in the local media and prominently placing advisory notices and/or variable message signs.	Construction Contractor	Construction	Project REF Best Practice
<b>TTA7</b>	Pedestrian access	Safe pedestrian access around the worksite would be provided by the construction contractor (in consultation with Transport for NSW and Hawkesbury City Council) and capture within the traffic management plan.	Construction Contractor	Pre-construction and Construction	Project REF Best Practice
<b>TTA8</b>	Pedestrians and cyclists	Signage outlining pedestrian and cyclist diversion routes would be displayed during construction (where required).	Construction Contractor	Construction	Project REF

					Best Practice
<b>TTA9</b>	Property access	Access to affected residential properties and businesses would be maintained during construction and temporary property access would be provided to residences and businesses where required. The management of property access would be considered by the construction contractor and detailed as part of the final staging plan for the proposal.	Construction Contractor	Pre-construction and Construction	Project REF Best Practice
<b>TTA10</b>	On-street parking	The parking of light construction vehicles (eg staff vehicles) would be restricted to designated areas within the proposed construction compounds, wherever possible to minimise the proposal's impact on the existing parking supply within the study area.	Construction Contractor	Construction	Project REF Best Practice
<b>Aboriginal Heritage</b>					
<b>AH1</b>	Discovery/ disturbance of previously unrecorded Aboriginal sites	In the event of an unexpected find of Aboriginal cultural heritage, work will cease in the affected area and the Standard Management Procedure – Unexpected Archaeological Finds (Roads and Maritime 2012) will be implemented. This would include stopping all work in the vicinity of the find and contacting Transport for NSW Aboriginal Cultural Heritage Advisor or the relevant Transport for NSW Officer immediately to identify the appropriate course of action. Work would not recommence until receipt of written approval from Transport for NSW.	Construction Contractor	Construction	G36 <i>Standard Management Procedure – Unexpected Archaeological Finds</i>
<b>Landscape character and visual impact</b>					
<b>LCVI1</b>	Visual amenity impact – vegetation removal	Existing roadside trees should be retained where possible to minimise the potential landscape character and visual impact of the works. Where roadside trees cannot be retained, re-planting is to be carried out in accordance with the proposed Landscape Plan.	Construction Contractor	Construction	Project REF
<b>LCVI2</b>	Visual amenity impact – vegetation removal	Tree planting is to be carried out where feasible outside of the clear zone. Frangible screen planting within the clear zone will assist to reduce the impact of the works on the existing landscape character.	Construction Contractor	Construction	Project REF

<b>LCVI3</b>	Visual impacts of construction activities	The work site will be left in a tidy manner at the end of each work day.	Construction Contractor	Construction	Project REF Best Practice
<b>LCVI4</b>	Visual impacts of construction activities	Where appropriate, fencing with material attached (eg shade cloth) would be provided around the construction compound to screen views of the construction compounds from adjoining properties.	Construction Contractor	Construction	Project REF Best Practice
<b>LCVI5</b>	Visual impacts of construction activities	Where required, lighting for night-time work would comply with relevant Australian Standards, including AS4282-1997 ( <i>Control of the obtrusive effects of outdoor lighting</i> ).	Construction Contractor	Construction	Project REF Best Practice
<b>LCVI6</b>	<i>Visual impacts of construction activities</i>	<i>The existing corrugated iron fence on the southern side of 35 Bosworth Street will be replaced with a Colourbond fence to match the existing boundary fences of the private property.</i>	<i>Construction Contractor</i>	<i>Construction</i>	<i>Additional Safeguard</i>
<b>Topography, geology and soils</b>					
<b>S1</b>	Soil and Water Quality	<p>An Erosion and Sediment Control Plan would be prepared and incorporated into the CEMP. The plan would be prepared in accordance with Landcom's (2004) <i>Managing Urban Stormwater: Soils and Construction</i> and would include, but not be limited to:</p> <ul style="list-style-type: none"> <li>• Identify the site catchment, high risk areas and sensitive areas (eg ground disturbance areas)</li> <li>• Confirm the size of the above areas and catchments</li> <li>• Proposed staging plans for the proposal to ensure appropriate erosion and sediment controls measures are possible</li> <li>• The likely run-off from each worksite and direction of on and off site water flow</li> <li>• Diversion of clean water around the work site.</li> <li>• The locations and sizing of sediment sumps and associated drainage</li> <li>• A mapped plan identifying the above.</li> </ul>	Construction Contractor	Pre-Construction	G36 Project REF Best Practice <i>Managing Urban Stormwater: Soils and Construction (Landcom 2004)</i>

<b>S2</b>	Soil and Water Quality	The Erosion and Sediment Management Plan and the Acid Sulfate Soil Management Plan, will be sent to the Transport for NSW Environmental Manager for review and verification, prior to the commencement of any construction.	Construction Contractor	Pre-Construction	G38
<b>Contaminated land</b>					
<b>CL1</b>	Potential exposure of contamination to site workers, public and environmental receptors	In the event of an unexpected find of contaminated materials, work would cease in the vicinity of the find and the unexpected contamination find procedure followed.	Construction Contractor	Construction	G36 Best Practice
<b>Socio-economic</b>					
<b>SE1</b>	Community consultation	<p>A Communication Engagement Plan (CEP) will be prepared and will include (as a minimum):</p> <ul style="list-style-type: none"> <li>• Requirements to provide details and timing of proposed activities to affected residents</li> <li>• Contact name and number for complaints</li> <li>• Procedure to notify nearby land users for changed conditions during the construction period such as traffic, pedestrian and driveway access.</li> </ul> <p>The communications plan will be prepared in accordance with G36 requirements and Roads and Maritime Community Engagement and Communications Manual (Roads and Maritime 2012).</p>	Construction Contractor	Pre-construction	G36 Project REF Best Practice
<b>SE2</b>	Socioeconomic	The times and duration of any disruptions to vehicular movements accessing the KFC drive thru lane would be negotiated between Transport for NSW and KFC prior to sign installation.	Transport for NSW	Construction	Safeguard 30A Addendum REF 1- KFC sign
<b>SE3</b>	Property access	During construction, access to properties within the proposal area will be maintained. Temporary property access will be provided to residences and businesses where required.	Construction Contractor	Construction	Project REF Best Practice



		Consultation will be undertaken with the Best Western Colonial Motel and KFC Richmond to ensure access is maintained for pedestrians and vehicles at these sites.			
<b>SE4</b>	Emergency vehicle access	Access will be maintained for emergency vehicles near construction areas. Transport for NSW will consult with emergency services throughout construction to ensure that potential impacts are identified and appropriately managed.	Construction Contractor	Construction	Project REF Best Practice
<b>Land use and property</b>					
<b>LUP1</b>	Direct land use and property impacts	Land directly affected during the establishment and operation of the construction compounds would be restored to its pre-construction condition.	Construction Contractor	Construction	Project REF Best Practice
<b>LUP2</b>	Property acquisition	All land acquisitions would be undertaken in accordance with the provisions of the <i>Land Acquisition (Just Terms) Compensation Act 1991</i> .	Transport for NSW	Pre-Construction	Project REF Best Practice
<b>LUP3</b>	Leasing of private land	Landowner consent would be sought before the establishment of the construction compounds or any other ancillary facilities on private property. The construction compounds would not be established until a signed lease agreement has been received from the relevant Landowner. Transport for NSW would be consulted before contacting any landowners about the temporary leasing of their land.	Construction Contractor	Pre-Construction	Project REF Best Practice
<b>LUP4</b>	Property Impacts	The contractor will provide the following to the land owner at 168 March Street: <ul style="list-style-type: none"> <li>evidence of structural integrity to the property owner at 168 March street, in the form of a certificate provided by a structural engineer stating that the new garage is structurally sound and compliant with the Building Code.</li> <li>A deed of letter outlining that the garage was a lawful development assessed under Part 5 of the EP&amp;A Act. This document should include a property adjustment plan.</li> </ul>	Construction Contractor	Construction	Addendum REF 3 – additional safeguard.

<b>Biodiversity</b>					
<b>FF1</b>	Clearing limits / Habitat trees	Clearing limits would be marked out by a surveyor prior to the commencement of works and would be clearly demarcated.	Construction Contractor	Construction	G36 Project REF Best Practice <i>Biodiversity Guidelines</i>
<b>FF2</b>	Clearing limits / Habitat trees	All works are to comply with Roads and Maritime <i>Biodiversity Guidelines – Protecting and managing biodiversity on RTA projects.</i>	Construction Contractor	Construction	G36 Project REF Best Practice <i>Biodiversity Guidelines</i>
<b>FF3</b>	Noxious weeds	Develop and implement a weed management plan including specific measures in accordance with the regulations set out under the <i>Biosecurity Act 2015.</i>	Construction Contractor	Construction	G36 Project REF Best Practice <i>Biodiversity Guidelines Biosecurity Act 2015</i>
<b>FF4</b>	Noxious weeds	A machinery hygiene procedure would be implemented to prevent spread of weeds.	Construction Contractor	Construction	G36 Project REF Best Practice <i>Biodiversity Guidelines</i>
<b>FF5</b>	Noxious weeds	Weeds are to be kept separate from general green waste and appropriately disposed of.	Construction Contractor	Construction	G36 Project REF Best Practice <i>Biodiversity Guidelines</i>

<b>FF6</b>	General	Locate temporary infrastructure (plant sites and offices etc.) in cleared areas away from vegetation, outside of the dripline of trees. Erect bunting around the dripline of trees to prevent stockpiling in tree protection zones.	Construction Contractor	Construction	G36 Project REF Best Practice <i>Biodiversity Guidelines</i>
<b>Water quality and hydrology</b>					
<b>WQ1</b>	Water quality management	Soil and water management measures would be incorporated in the CEMP in accordance with the requirements of Roads and Maritime contract specification G38 before the start of construction. These measures will address the: <ul style="list-style-type: none"> <li>• Roads and Maritime Code of Practice for Water Management (1999), the Roads and Maritime Erosion and Sedimentation Procedure</li> <li>• The NSW Soils and Construction – Managing Urban Stormwater Volume 1 “The Blue Book” (Landcom, 2004) and Volume 2 (DECC, 2008)</li> <li>• Roads and Maritime Technical Guideline: Temporary Stormwater Drainage for Road Construction, 2011</li> <li>• Roads and Maritime Technical Guideline: Environmental Management of Construction Site Dewatering, 2011</li> <li>• Erosion and Sediment Management Procedures (P143P), Nov 2008.</li> </ul>	Construction Contractor	Pre-Construction	G36 Project REF Best Practice
<b>WQ2</b>	Water quality management	Before the start of work, an Erosion and Sediment Control Plan (ESCP) is to be prepared in accordance with the requirements of the Blue Book and reviewed by the Transport for NSW Environment Officer. The ESCP is also to address the following as a minimum: <ul style="list-style-type: none"> <li>• A procedure to routinely monitor the BOM weather forecast and identification of additional controls to be implemented ahead of rain</li> <li>• A procedure for routine inspection and maintenance of erosion and sediment controls</li> </ul>	Construction Contractor	Construction Contractor	G36 Project REF Best Practice

		<ul style="list-style-type: none"> <li>• Nominated concrete washout areas away from watercourses and drainage</li> <li>• Nominated spill kit locations</li> <li>• Progressive stabilisation plan</li> <li>• Stockpiles are to be restricted to the identified construction compounds, and managed in accordance with Roads and Maritime Stockpile Site Management Guideline, RMS Environmental Protection (Management System) QA Specification G36 and RMS Vegetation QA Specification R178</li> <li>• Any dewatering required would be in accordance with Roads and Maritime Environmental Management of Construction Site Dewatering 2011</li> <li>• Controls are to be implemented at exit points to minimise tracking soil and particulates onto pavement surfaces</li> <li>• Any material transported onto pavements would be swept and removed at the end of each working shift and before rainfall.</li> </ul>			
<b>Air quality</b>					
<b>AQ1</b>	Dust and air quality management	<p>Dust emissions during construction of the proposal would be minimised through the implementation of standard mitigation measures, which would include (but would not be limited to) the following:</p> <ul style="list-style-type: none"> <li>• Measures (including watering or covering exposed areas) are to be used to minimise or prevent air pollution and dust</li> <li>• Work (including the spraying of paint and other materials) are not to be carried out during strong winds or in weather conditions where high levels of dust or air borne particulates are likely</li> <li>• Vehicles transporting waste or other materials that may produce odours or dust are to be covered during transportation</li> <li>• Stockpiles or areas that may generate dust are to be managed to suppress dust emissions in accordance with</li> </ul>	Construction Contractor	Construction	G36 Project REF Best Practice

		<p>the Roads and Maritime Stockpile Site Management Guideline (2011)</p> <ul style="list-style-type: none"> <li>• Communications material such as the project website and community notification would include a contact person and phone number to enable complaints to be received and responded to</li> <li>• The Erosion and Sediment Control Plan would be reviewed for adequacy in response to any dust complaints.</li> </ul>			
<b>Non-Aboriginal heritage</b>					
<b>NAH1</b>	Potential impact on listed heritage items	The works footprint is to remain within detailed design footprint, and is to avoid any direct impact on known listed heritage items except where the house at 162 March Street is used for the purpose of an office.	Construction Contractor	Construction	G36 Project REF Best Practice Roads and Maritime Standard Management Procedure: Unexpected Archaeological Finds procedure
<b>NAH2</b>	Unexpected archaeological remains	If unexpected archaeological remains are uncovered during the works, all works must cease in the vicinity of the material/find and the steps in the Roads and Maritime Standard Management Procedure: Unexpected Archaeological Finds procedure must be followed. Transport for NSW Senior Regional Environmental Officer must be contacted immediately.	Construction Contractor	Construction	Roads and Maritime Standard Management Procedure: Unexpected Archaeological Finds procedure
<b>NAH3</b>	Inductions	Environmental awareness is to include responsibilities under heritage legislation and the contractors CEMP. Training is to include details about the heightened risk of finding unexpected elements of rail infrastructure when excavating throughout the Project.	Construction Contractor	Pre-Construction	G36 Project REF Addendum REF 2 Best Practice

<b>NAH4</b>	Potential impact on 162 March Street	The house at 162 March Street must only be utilised for office use. No alterations are to be made to any part of the structure or fittings (internal or external) and all staff that will access the office must be trained in the appropriate use of the house.	Construction Contractor	Construction	Addendum REF 2 Best Practice
<b>NAH5</b>	<i>Non-Aboriginal Heritage</i>	<i>Hawkesbury City council will be notified prior to the commencement of work.</i>	<i>Project Manager Environment Manager</i>	<i>Pre-Construction</i>	<i>Heritage Assessment Additional Safeguard</i>
<b>NAH6</b>	<i>Non-Aboriginal Heritage</i>	<i>Protective temporary fencing would be erected between the item and the works during all works to protect it from accidental damage including falling tree branches.</i>	<i>Construction Contractor</i>	<i>Construction</i>	<i>Heritage Assessment Additional Safeguard</i>
<b>NAH7</b>	<i>Non-Aboriginal Heritage</i>	<i>Prior to the shed's removal that protective fencing or other material is placed along the southern elevation to protect the house from accidental damage during the shed removal works.</i>	<i>Construction Contractor</i>	<i>Construction</i>	<i>Heritage Assessment Additional Safeguard</i>
<b>NAH8</b>	<i>Non-Aboriginal Heritage</i>	<i>Following the shed's removal any evidence of the shed along the southern elevation of the house should be sympathetically repaired.</i>	<i>Construction Contractor</i>	<i>Construction</i>	<i>Heritage Assessment Additional Safeguard</i>
<b>NAH9</b>	<i>Non-Aboriginal Heritage</i>	<i>All contractors and sub-contractors be advised of the heritage item's significance and their obligations to not damage the item during the course of the proposed works.</i>	<i>Construction Contractor</i>	<i>Construction</i>	<i>Heritage Assessment Additional Safeguard</i>
<b>NAH10</b>	<i>Non-Aboriginal Heritage</i>	<i>Removal should ensure that the methodology is such that there is no damage to the main building's façade</i>	<i>Construction Contractor</i>	<i>Construction</i>	<i>Hawkesbury Council Additional Safeguard</i>
<b>NAH11</b>	<i>Non-Aboriginal Heritage</i>	<i>Shed removal should occur and be documented under the guidance of a heritage architect</i>	<i>Construction Contractor</i>	<i>Construction</i>	<i>Hawkesbury Council</i>

					<i>Additional Safeguard</i>
<b>NAH12</b>	<i>Non-Aboriginal Heritage</i>	<i>The heritage architect should provide a report on the completion of shed removal and this report would be sent to Hawkesbury City Council with suitable photographs.</i>	<i>Construction Contractor</i>	<i>Construction</i>	<i>Hawkesbury Council Additional Safeguard</i>
<b>Resource use and waste</b>					
<b>W1</b>	Resource use and waste	<p>The following resource management hierarchy principles are to be followed:</p> <ul style="list-style-type: none"> <li>• Avoid unnecessary resource consumption as a priority</li> <li>• Avoidance is followed by resource recovery (including reuse of materials, reprocessing, recycling and energy recovery)</li> <li>• Disposal is carried out as a last resort (in accordance with the <i>Waste Avoidance &amp; Resource Recovery Act 2001</i>).</li> </ul> <p>All waste would be disposed of in accordance with the EPA Waste Classification Guidelines (2014) at an appropriately licensed waste facility.</p> <p>Working areas are to be maintained, kept free of rubbish and cleaned up at the end of each working day.</p> <p>Procurement would endeavour to use materials and products with a recycled content where that material or product is cost and performance effective.</p>	Construction Contractor	Construction	G36 <i>Waste Classification Guidelines</i> (EPA, 2014)
<b>W2</b>	Resource use and waste	Prior to demolition, a hazardous materials survey must be carried out to determine the presence of hazardous materials in the house at 164 March Street, within the garage at 168 March Street, and <i>within the shed at 35 Bosworth Street</i>	Construction Contractor	Pre-construction, construction	Addendum REF 2 and 3 Best Practice
<b>Greenhouse gas emissions and climate change</b>					
<b>GCC1</b>	Construction greenhouse gas	<ul style="list-style-type: none"> <li>• Plant and equipment would be switched off when not in use</li> </ul>	Construction Contractor	Construction	G36 Best Practice



	emissions	<ul style="list-style-type: none"> <li>• Vehicles, plant and construction equipment would be appropriately sized for the task and properly maintained so as to achieve optimum fuel efficiency</li> <li>• Materials would be delivered with full loads and would come from local suppliers, where possible</li> <li>• The energy efficiency and related carbon emissions would be considered in the selection of vehicle and plant equipment.</li> </ul>			
<b>Cumulative environmental impacts</b>					
<b>CEI1</b>	Cumulative impacts from concurrent developments	The CEMP would be updated as required to incorporate potential cumulative impacts from surrounding development activities as they become known. This would include a process to review and update mitigation measures as new work begins or if complaints are received.	Construction Contractor	Pre-Construction	Best Practice

### 7.3 Licensing and approvals

All relevant licenses, permits, notifications and approvals needed for the Richmond Bridge and Approaches- March Street/Bosworth Street Intersection Upgrade and when they need to be obtained are listed in Table 7-2. Additional or changed licenses and approval requirements identified in this addendum REF are indicated by underlined and/or struck out font.

**Table 7-2: Summary of licensing and approval required**

<b>Instrument</b>	<b>Requirement</b>	<b>Timing</b>
<b>Road Occupancy Licence</b>	Prior to changing traffic conditions, a Road Occupancy Licence (ROL) must be obtained from the Traffic Management Centre (TMC) or local council.	Prior to changing traffic conditions.

## 8 Conclusion

### 8.1 Justification

Transport for NSW are undertaking construction to upgrade the intersection at of March Street and Bosworth Street in Richmond. The proposed modification is needed as the property fencing at 35 Bosworth Street in encroaching on Transport for NSW property by around 2.5m. This land needs to be reclaimed to allow for utilities adjustment associated with the intersection upgrade. This is essential as new utilities are allocated to be laid in the strip of Transport for NSW land that is currently occupied by 35 Bosworth Street.

### 8.2 Objects of the EP&A Act

Object	Comment
<b>1.3(a) To promote the social and economic welfare of the community and a better environment by the proper management, development and conservation of the State's natural and other resources.</b>	The determined Project, including the proposed modification, together with the impact mitigation and management measures detailed in the Project REF and the four Addendum REF's allow for the proper management, development and conservation of natural and artificial resources. The main object of the Project is to improve the safety and transport efficiency of the intersection. Where possible throughout the design of the Project, management and conservation of natural resources has been incorporated. This has included optimising the road design to reduce the clearing footprint as far as possible. The works are wholly within the existing road reserve with impacts on existing rural residential land uses restricted to construction phase only. The incorporation of the proposed modification into the broader Project plan has not altered the approach to achieving this objective.
<b>1.3(b) To facilitate ecologically sustainable development by integrating relevant economic, environmental and social considerations in decision-making about environmental planning and assessment.</b>	The approach to ecologically sustainable development is considered in Section 8.2.1 to 8.2.4 below.
<b>1.3(c) To promote the orderly and economic use and development of land.</b>	The Project would assist in the coordination of the orderly economic use and development of land for the region and along this important transition corridor, both for business and tourism. The incorporation of the proposed modification into the broader

	Project plan has not altered the approach to achieving this objective.
<b>1.3(d) To promote the delivery and maintenance of affordable housing.</b>	Not relevant to the project.
<b>1.3(e) To protect the environment, including the conservation of threatened and other species of native animals and plants, ecological communities and their habitats.</b>	The Project has been designed to minimise impacts on the environment, including threatened species, populations and ecological communities and their habitats. Additional measures would be developed to manage and offset impacts during construction. The incorporation of the proposed modification into the broader Project plan will not alter the approach to meeting this objective.
<b>1.3(f) To promote the sustainable management of built and cultural heritage (including Aboriginal cultural heritage).</b>	Potential impacts associated with the modification will be managed via the implementation of the additional safeguards outlined in Section 6.1.5.
<b>1.3(g) To promote good design and amenity of the built environment.</b>	Not relevant to the project.
<b>1.3(h) To promote the proper construction and maintenance of buildings, including the protection of the health and safety of their occupants.</b>	Not relevant to the modification. The safeguards outlined in Section 7.2 have been designed to promote the proper construction and maintenance of buildings, including the protection of health and safety of their occupants.
<b>1.3(i) To promote the sharing of the responsibility for environmental planning and assessment between the different levels of government in the State.</b>	Not relevant to the project.
<b>1.3(j) To provide increased opportunity for community participation in environmental planning and assessment.</b>	The development process for the intersection upgrade at March Street and Bosworth Street, Richmond and the Project has involved consultation with relevant government agencies, non-government agencies, community members and stakeholders. Consultation specific to the proposed modification has been conducted and will continue during the construction phase.

## 8.3 Ecologically sustainable development

### 8.3.1 The precautionary principle

The precautionary principle deals with certainty in decision making. It provides that where there is a threat of serious or irreversible environmental damage, the absence of full scientific certainty should not be used as a reason to postpone measures to prevent environmental degradation.

The detailed assessment of potential environmental impacts has sought to minimise impacts of the proposal on the environment. Where information has been lacking, a conservative approach has been adopted for the assessment. Safeguards would be implemented during construction and operation of the proposal. No safeguards have been postponed as a result of a lack of scientific certainty.

### **8.3.2 Intergenerational equity**

Intergenerational equity provides that the present generation should ensure that the health, diversity and productivity of the environment is maintained or enhanced for the benefit of future generations.

The proposed modification would allow for the planned completion of the project which would provide improved road infrastructure for future generations. Should the modification not proceed, longer term impacts may result. The principle of intergenerational equity however should not be compromised

The Project would also benefit future generations by ensuring that road safety is improved, with this being a positive benefit for all road users.

### **8.3.3 Conservation of biological diversity and ecological integrity**

The conservation of biological diversity and ecological integrity provides that the diversity of genes, species, populations and communities, as well as the ecosystems and habitats to which they belong, must be maintained and improved to ensure their survival.

An assessment of the existing local environment has been carried out to identify and manage any potential impact of the Project on local biodiversity. The potential impacts of the Project on biodiversity would be limited to the construction phase and would involve the removal of planted native and exotic vegetation from the area surrounding the proposal.

All vegetation and habitats that would be affected by the proposal are exotic plantings that do not support habitat for native fauna. Safeguards and management measures to minimise the extent of native vegetation clearing by the proposal are provided in Section 6.9.4.

The modification would not significantly fragment or isolate any existing large patches of vegetation and would not compromise biological diversity or ecological integrity.

### **8.3.4 Improved valuation, pricing and incentive mechanisms**

Improved valuation, pricing and incentive mechanisms provide that cost to the environment should be factored into the economic costs of a proposal. This Addendum REF has examined the environmental consequences of the modification and identified additional mitigation measures for areas which have the potential to experience adverse impacts.

Requirements imposed and terms of implementation of these mitigation measures would result in an economic cost to Transport for NSW. The implementation of mitigation measures would increase both capital and operating costs of the proposal. This signifies that environmental resources have been given appropriate valuation.

## **8.4 Conclusion**

This addendum REF has examined and taken into account to the fullest extent possible all matters affecting or likely to affect the environment by reason of the proposed activity.

This has included consideration where relevant, of conservation agreements and plans of management under the NPW Act, biodiversity stewardship sites under the BC Act, wilderness areas, areas of outstanding value, impacts on threatened species, populations and ecological communities and their habitats and other protected fauna and native plants. It has also

considered potential impacts to matters of national environmental significance listed under the Federal EPBC Act.

A number of potential environmental impacts from the proposed modification have been avoided or reduced during the design development and options assessment. The proposed modification as described in the addendum REF best meets the project objectives, but would still result in some potential impacts on the Non-Aboriginal Heritage item at 35 Bosworth Street. Safeguards and management measures as detailed in this addendum REF would ameliorate or minimise these expected impacts. On balance the proposed modification is considered justified and the following conclusions are made.

### **Significance of impact under NSW legislation**

The proposed modification would not result in a change to the findings of the project REF and subsequent addendum REF's, and would be unlikely to cause a significant impact on the environment. Therefore, it is not necessary for an environmental impact statement to be prepared and approval to be sought from the Minister for Planning and Public Spaces under Division 5.2 of the EP&A Act. A Biodiversity Development Assessment Report or Species Impact Statement is not required. The proposed modification is subject to assessment under Division 5.1 of the EP&A Act. Consent from Council is not required.

### **Significance of impact under Australian legislation**

The proposed modification would not likely cause a significant impact on matters of national environmental significance or the environment of Commonwealth land within the meaning of the EPBC Act. A referral to the Australian Government Department of Agriculture, Water and the Environment is not required.

## 9 Certification

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This addendum review of environmental factors provides a true and fair review of the proposed modification in relation to its potential effects on the environment. It addresses to the fullest extent possible all matters affecting or likely to affect the environment as a result of the proposed modification.



Aidann Stathis  
Graduate Environmental Scientist  
Hutchison Weller Pty Ltd  
Date: 17 June 2020



Cameron Weller  
Senior Environmental Scientist  
Hutchison Weller Pty Ltd  
Date: 17 June 2020

I have examined this addendum review of environmental factors and accept it on behalf of Transport for NSW.



Georgia Barnes  
Contract Relationship Manager  
Sydney Maintenance West Zone Transport for NSW – Sydney Region  
Date: 17 June 2020

## Terms and acronyms used in this addendum REF

Term / Acronym	Description
<b>BC Act</b>	<i>Biodiversity Conservation Act 2016 (NSW).</i>
<b>CEMP</b>	Construction / Contractor's environmental management plan
<b>EIA</b>	Environmental impact assessment
<b>EP&amp;A Act</b>	Environmental Planning and Assessment Act 1979 (NSW). Provides the legislative framework for land use planning and development assessment in NSW
<b>EPBC Act</b>	Environment Protection and Biodiversity Conservation Act 1999 (Commonwealth). Provides for the protection of the environment, especially matters of national environmental significance, and provides a national assessment and approvals process.
<b>ESD</b>	Ecologically sustainable development. Development which uses, conserves and enhances the resources of the community so that ecological processes on which life depends, are maintained and the total quality of life, now and in the future, can be increased
<b>FM Act</b>	<i>Fisheries Management Act 1994 (NSW)</i>
<b>Heritage Act</b>	<i>Heritage Act 1977 (NSW)</i>
<b>ISEPP</b>	State Environmental Planning Policy (Infrastructure) 2007
<b>LALC</b>	Local Aboriginal Land Council
<b>LEP</b>	Local Environmental Plan. A type of planning instrument made under Part 3 of the EP&A Act.
<b>LoS</b>	Level of Service. A qualitative measure describing operational conditions within a traffic stream and their perception by motorists and/or passengers.
<b>NES</b>	Matters of national environmental significance under the Commonwealth <i>Environment Protection and Biodiversity Conservation Act 1999</i> .
<b>NPW Act</b>	<i>National Parks and Wildlife Act 1974 (NSW)</i>
<b>Roads and Maritime</b>	NSW Roads and Maritime was dissolved by the Transport Administration Amendment Bill in August 2019, all function are now managed by Transport for NSW
<b>SEPP</b>	State Environmental Planning Policy. A type of planning instrument made under Part 3 of the EP&A Act.
<b>SEPP 14</b>	State Environmental Planning Policy No.14 – Coastal Wetlands
<b>TSC Act</b>	<i>Threatened Species Conservation Act 1995 (NSW)</i>
<b>QA Specifications</b>	Specifications developed by Roads and Maritime Services for use with road work and bridge work contracts let by Transport for NSW.







# Appendix A

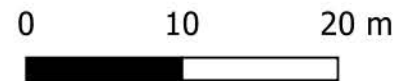
## Figures



**Property Boundaries- Intersection Upgrade March St/Bosworth St**

**Legend**

-  Property Boundaries
-  Existing Fence (Indicative)
-  Trees to be removed
-  Existing Shed



# Appendix B

Consideration of clause 228(2) factors and matters of National Environmental Significance and Commonwealth land



## Clause 228(2) Checklist

In addition to the requirements of the Is an EIS required? (1995/1996) guideline and the Roads and Related Facilities EIS Guideline (DUAP, 1996) as detailed in the addendum REF, the following factors, listed in clause 228(2) of the Environmental Planning and Assessment Regulation 2000, have also been considered to assess the likely impacts of the proposed modification on the natural and built environment.

Factor	Impact
<p><b>Any environmental impact on a community?</b></p> <p>The proposed modification is unlikely to have any environmental impacts on the local community. However, the potential impacts would be minimised via the implementation of the safeguards detailed in the Project REF, four addendum REF's, this addendum REF, CEMP and CNVMP.</p>	Nil
<p><b>Any transformation of a locality?</b></p> <p>The proposed modification would not transform the locality. The site would be remediated upon completion of the works and fencing would be replaced like for like.</p>	Nil
<p><b>Any environmental impact on the ecosystems of the locality?</b></p> <p>The proposed modification is not anticipated to have impacts on the ecosystem of the locality. Two exotic trees would need to be removed as part of this modification to the Project, however, they do not provide any habitat or ecological benefit. Any potential impacts would be minimised via the implementation of the safeguards detailed in the Project REF, four addendum REF's, this addendum REF, CEMP and CNVMP.</p>	Nil
<p><b>Any reduction of the aesthetic, recreational, scientific or other environmental quality or value of a locality?</b></p> <p>The proposed modification would not reduce the aesthetic, recreational, scientific or other environmental quality of the locality.</p>	Nil
<p><b>Any effect on a locality, place or building having aesthetic, anthropological, archaeological, architectural, cultural, historical, scientific or social significance or other special value for present or future generations?</b></p> <p>The proposed modification may have minor short-term impacts on the heritage item at 35 Bosworth Street. Potential impacts associated with working close to a heritage item would be minimised with the implementation of safeguards outlined in Section 7.2 of this addendum REF.</p>	Minor short-term negative
<p><b>Any impact on the habitat of protected fauna (within the meaning of the <i>National Parks and Wildlife Act 1974</i>)?</b></p> <p>The proposed modification would not impact on the habitat of any protected fauna.</p>	Nil

Factor	Impact
<p><b>Any endangering of any species of animal, plant or other form of life, whether living on land, in water or in the air?</b></p> <p>The proposed modification would not endanger and species of animal, plant or other life form, whether living on land, in water or in the air.</p>	Nil
<p><b>Any long-term effects on the environment?</b></p> <p>No long-term negative effects on the environment are expected as a result of the proposed modification.</p>	Nil
<p><b>Any degradation of the quality of the environment?</b></p> <p>The proposed modification will have no impact on the degradation of the quality of the environment</p>	Nil
<p><b>Any risk to the safety of the environment?</b></p> <p>No risk to the safety of the environment is expected because of the proposed modification.</p>	Nil
<p><b>Any reduction in the range of beneficial uses of the environment?</b></p> <p>There would be no reduction in the range of beneficial uses of the environment arising from the proposed modification.</p>	Nil
<p><b>Any pollution of the environment?</b></p> <p>It is not anticipated that the proposed modification will cause any material increases to the risk of pollution beyond what has been categorised in the determined project. Impacts would be minimised with the implementation of the safeguards provided in Section 7.2 of this addendum REF.</p>	Negligible
<p><b>Any environmental problems associated with the disposal of waste?</b></p> <p>The proposed modification would generate additional green waste. It is not anticipated that there would be any environmental problems associated with the disposal of waste.</p>	Negligible
<p><b>Any increased demands on resources (natural or otherwise) that are, or are likely to become, in short supply?</b></p> <p>The proposed modification would not significantly increase demands on resources, which are in, or likely to become in short supply.</p>	Nil
<p><b>Any cumulative environmental effect with other existing or likely future activities?</b></p> <p>There are no known existing or likely future activities that would result in cumulative effects.</p>	Nil
<p><b>Any impact on coastal processes and coastal hazards, including those under projected climate change conditions?</b></p>	Nil

Factor	Impact
The proposed modification would not impact on coastal processes and coastal hazards.	

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## Matters of National Environmental Significance and Commonwealth land

Under the environmental assessment provisions of the EPBC Act, the following matters of national environmental significance and impacts on Commonwealth land are required to be considered to assist in determining whether the proposed modification should be referred to the Australian Government Department of Water, Agriculture and the Environment.

Under the EPBC Act strategic assessment approval a referral is not required for proposed road actions that may affect nationally listed threatened species, populations, endangered ecological communities and migratory species. Impacts on these matters are assessed in detail as part of this addendum REF in accordance with Australian Government significant impact criteria and taking into account relevant guidelines and policies.

<b>Factor</b>	<b>Impact</b>
<b>Any impact on a World Heritage property?</b>	Nil
<b>Any impact on a National Heritage place?</b>	Nil
<b>Any impact on a wetland of international importance?</b>	Nil
<b>Any impact on a listed threatened species or communities?</b>	Nil
<b>Any impacts on listed migratory species?</b>	Nil
<b>Any impact on a Commonwealth marine area?</b>	Nil
<b>Does the proposed modification involve a nuclear action (including uranium mining)?</b>	Nil
<b>Additionally, any impact (direct or indirect) on Commonwealth land?</b>	Nil

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# Appendix C

## Statutory consultation checklists



# Infrastructure SEPP

## Certain development types

Development type	Description	Yes / No	If 'yes' consult with	ISEPP clause
Car Park	Does the project include a car park intended for the use by commuters using regular bus services?	No	Hawkesbury Valley Council	ISEPP cl. 95A
Bus Depots	Does the project propose a bus depot?	No	Hawkesbury Valley Council	ISEPP cl. 95A
Permanent road maintenance depot and associated infrastructure	Does the project propose a permanent road maintenance depot or associated infrastructure such as garages, sheds, tool houses, storage yards, training facilities and workers' amenities?	No	Hawkesbury Valley Council	ISEPP cl. 95A

## Development within the Coastal Zone

Issue	Description	Yes / No / NA	If 'yes' consult with	ISEPP clause
Development with impacts on certain land within the coastal zone	Is the proposal within a coastal vulnerability area and is inconsistent with a certified coastal management program applying to that land?	N/A	Hawkesbury Valley Council	ISEPP cl. 15A

Note: See interactive map here: <https://www.planning.nsw.gov.au/policy-and-legislation/coastal-management>. Note the coastal vulnerability area has not yet been mapped.

Note: a certified coastal zone management plan is taken to be a certified coastal management program

## Council related infrastructure or services

Issue	Potential impact	Yes / No	If 'yes' consult with the relevant local council(s).	ISEPP clause
<b>Stormwater</b>	Are the works likely to have a substantial impact on the stormwater management services which are provided by council?	No	Hawkesbury Valley Council	ISEPP cl.13(1)(a)

Issue	Potential impact	Yes / No	If 'yes' consult with the relevant local council(s).	ISEPP clause
<b>Traffic</b>	Are the works likely to generate traffic to an extent that will strain the capacity of the existing road system in a local government area?	No	Hawkesbury Valley Council	ISEPP cl.13(1)(b)
<b>Sewerage system</b>	Will the works involve connection to a council owned sewerage system? If so, will this connection have a substantial impact on the capacity of any part of the system?	No	Hawkesbury Valley Council	ISEPP cl.13(1)(c)
<b>Water usage</b>	Will the works involve connection to a council owned water supply system? If so, will this require the use of a substantial volume of water?	No	Hawkesbury Valley Council	ISEPP cl.13(1)(d)
<b>Temporary structures</b>	Will the works involve the installation of a temporary structure on, or the enclosing of, a public place which is under local council management or control? If so, will this cause more than a minor or inconsequential disruption to pedestrian or vehicular flow?	No	Hawkesbury Valley Council	ISEPP cl.13(1)(e)
<b>Road &amp; footpath excavation</b>	Will the works involve more than minor or inconsequential excavation of a road or adjacent footpath for which council is the roads authority and responsible for maintenance?	No	Hawkesbury Valley Council	ISEPP cl.13(1)(f)

## Local heritage items

Issue	Potential impact	Yes / No	If 'yes' consult with the relevant local council(s)	ISEPP clause
<b>Local heritage</b>	Is there is a local heritage item (that is not also a State heritage item) or a heritage conservation area in the study area for the works? If yes, does a heritage assessment indicate that the potential impacts to the heritage significance of the item/area are more than minor or inconsequential?	Yes – 35 Bosworth Street is listed on the Hawkesbury LEP.  No - Impacts to heritage item are expected to be minor or inconsequential.  ISEPP Consultation has been carried out regardless of potential impact.	Hawkesbury Valley Council	ISEPP cl.14

## Flood liable land

Issue	Potential impact	Yes / No	If 'yes' consult with	ISEPP clause
<b>Flood liable land</b>	Are the works located on flood liable land? If so, will the works change flood patterns to more than a minor extent?	No	Hawkesbury Valley Council	ISEPP cl.15
<b>Flood liable land</b>	Are the works located on flood liable land? (to any extent). If so, do the works comprise more than minor alterations or additions to, or the demolition of, a building, emergency works or routine maintenance	No	State Emergency Services  Email: erm@ses.nsw.gov.au	ISEPP cl.15AA

Note: Flood liable land means land that is susceptible to flooding by the probable maximum flood event, identified in accordance with the principles set out in the manual entitled Floodplain Development Manual: the management of flood liable land published by the New South Wales Government.

## Public authorities other than councils

Issue	Potential impact	Yes / No	If 'yes' consult with	ISEPP clause
<b>National parks and reserves</b>	Are the works adjacent to a national park or nature reserve, or other area reserved under the <i>National Parks and Wildlife Act 1974</i> , or on land acquired under that Act?	No	DPIE	ISEPP cl.16(2)(a)
<b>National parks and reserves</b>	Are the works on land in Zone E1 National Parks and Nature Reserves or in a land use zone equivalent to that zone?	No	DPIE	ISEPP cl. 16(2)(b)
<b>Aquatic reserves and marine parks</b>	Are the works adjacent to an aquatic reserve or a marine park declared under the <i>Marine Estate Management Act 2014</i> ?	No	Department of Industry	ISEPP cl.16(2)(c)
<b>Sydney Harbour foreshore</b>	Are the works in the Sydney Harbour Foreshore Area as defined by the <i>Sydney Harbour Foreshore Authority Act 1998</i> ?	No	Sydney Harbour Foreshore Authority	ISEPP cl.16(2)(d)
<b>Bush fire prone land</b>	Are the works for the purpose of residential development, an educational establishment, a health services facility, a correctional centre or group home in bush fire prone land?	No	Rural Fire Service	ISEPP cl.16(2)(f)
<b>Artificial light</b>	Would the works increase the amount of artificial light in the night sky and that is on land within the dark sky region as identified on the dark sky region map? (Note: the dark sky region is within 200 kilometres of the Siding Spring Observatory)	No	Director of the Siding Spring Observatory	ISEPP cl. 16(2)(g)
<b>Defence communications buffer land</b>	Are the works on buffer land around the defence communications facility near Morundah? (Note: refer to Defence Communications Facility Buffer Map referred to in clause 5.15 of Lockhardt LEP 2012, Narrandera LEP 2013 and Urana LEP 2011).	No	Secretary of the Commonwealth Department of Defence	ISEPP cl. 16(2)(h)
<b>Mine subsidence land</b>	Are the works on land in a mine subsidence district within the meaning of the <i>Mine</i>	No	Mine Subsidence Board	ISEPP cl. 16(2)(i)

Issue	Potential impact	Yes / No	If 'yes' consult with	ISEPP clause
	<i>Subsidence Compensation Act 1961?</i>			

#### Growth Centres SEPP

Issue	Potential impact	Yes / No	If 'yes' consult with	SEPP clause
<b>Clearing native vegetation</b>	Do the works involve clearing native vegetation (as defined in the Local Land Services Act 2013) on land that is not subject land (as defined in cl 17 of schedule 7 of the <i>Threatened Species Conservation Act 1995</i> )?	No	Department of Planning, Industry and Environment	SEPP 18A

# Appendix D

## Heritage Report

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Subject	Heritage Assessment of 35 Bosworth Street, Richmond	Project Name	Richmond Bridge Approaches - March Street and Bosworth Street, Richmond Intersection Upgrade
Attention	Cameron Weller	Project No.	IA026100
From	Deborah Farina		
Date	8 May 2020		

---

## 1. Introduction

### 1.1 Background

This heritage assessment is related to the Richmond Bridge Approaches – March Street and Bosworth Street, Richmond Intersection Upgrade (intersection upgrade). The property known as 35 Bosworth Street, Richmond (the item) is located near the north western corner of the March Street/Bosworth Street intersection (Figure 1) and is listed on Schedule 5 of the Hawkesbury Local Environmental Plan 2012 as an item of local heritage significance.

A Review of Environmental Factors (REF) was prepared by Jacobs in 2016 for the intersection upgrade. Included in that REF was an assessment of all non-Aboriginal heritage items that were potentially to be affected by the intersection upgrade – Richmond Bridge Approaches – Short Term Improvements Non-Aboriginal Heritage Assessment (Jacobs 2015). The item was one of those assessed. The 2015 heritage assessment concluded that the intersection upgrade would not impact on the heritage significance of the item, with works being confined to the curb and therefore outside the curtilage of the item.

It has since been established that the southern fence for the item is outside of its cadastral boundary and lies on the adjoining block owned by Transport for New South Wales (TfNSW). Utility relocation works associated with the intersection upgrade are planned for the area currently occupied by the fence, requiring it to be moved 3-4 metres back to the cadastral boundary for the item. This will necessitate the removal of two trees and a shed within the heritage curtilage of the item (Figure 2).

The purpose of this heritage assessment is to assess whether the removal of the trees and shed and reinstallation of the fence on the cadastral boundary will impact on the heritage values of the item. This assessment should be read in conjunction with the Non-Aboriginal heritage assessment prepared by Jacobs in 2015 for the REF.

### 1.2 The study area

The study area for this assessment is the heritage item known as 35 Bosworth Street, Richmond with the legal description of Lot 2 in Deposited Plan 518997. The item comprises a brick, Californian bungalow-style house with a tiled roof and is currently used for commercial purposes. A separate structure is located in the north western corner of the property at the end of the driveway access from Bosworth Street and is also used for commercial purposes. The southern fence is of modern

construction, comprising corrugated iron sheets held in place by timber posts. Two large, exotic trees are also located along the southern boundary, giving a leafy character to the March Street boundary.

### 1.3 Heritage Listing

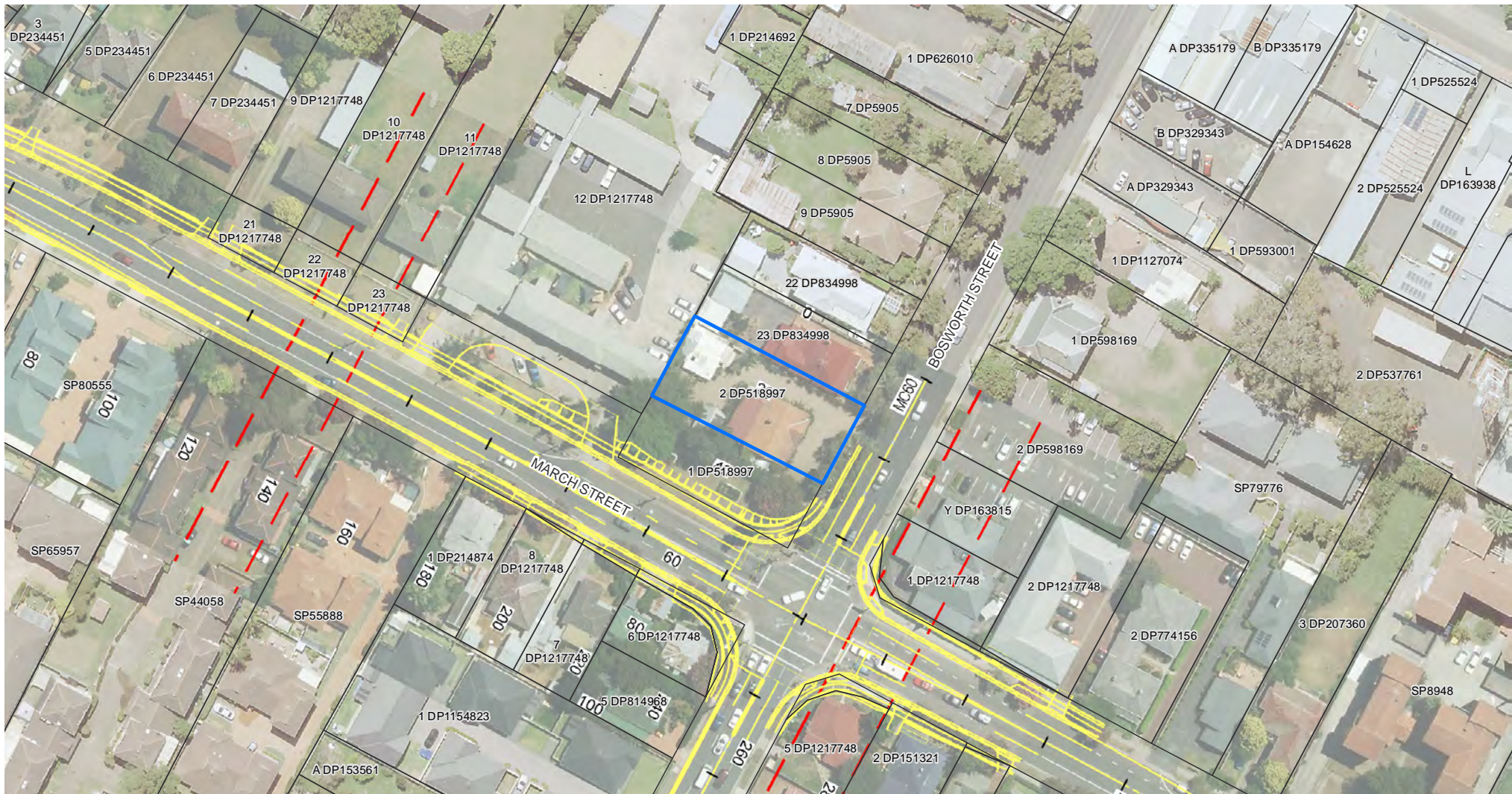
The item is listed as Item I4 on Schedule 5 of the Hawkesbury Local Environment Plan 2012. It is not within a heritage conservation area.

The item was assessed in 1986 by Shellshear in Richmond NSW Townscape Study. The item was described as:

Bungalow style cottage of rectangular plan with large terra cotta tiled gable roof. Face brick construction with gable ends sheeted and battened to the lower half and shingled to the upper half into the apex of the gable. Wide eaves overhang. Large gable roofed veranda off front side matching main gable details and supported on triple timber posts over brick piers. Verandah enclosed by low brick dwarf wall. Nicely detailed shallow oriel windows set with diamond lead light glazing. House set in large grounds and now used for commercial purposes. (Shellshear, 1986:152).

Shellshear (1986) assessed the item as having heritage significance based on its historicity, its architectural values adding value to the streetscape (aesthetic heritage significance). As Shellshear's assessment is the first known mention of this item's heritage value, it would appear that the item's heritage values are confined to the brick and tile former residence.





**Legend**  
 Study area  
 Lot boundary



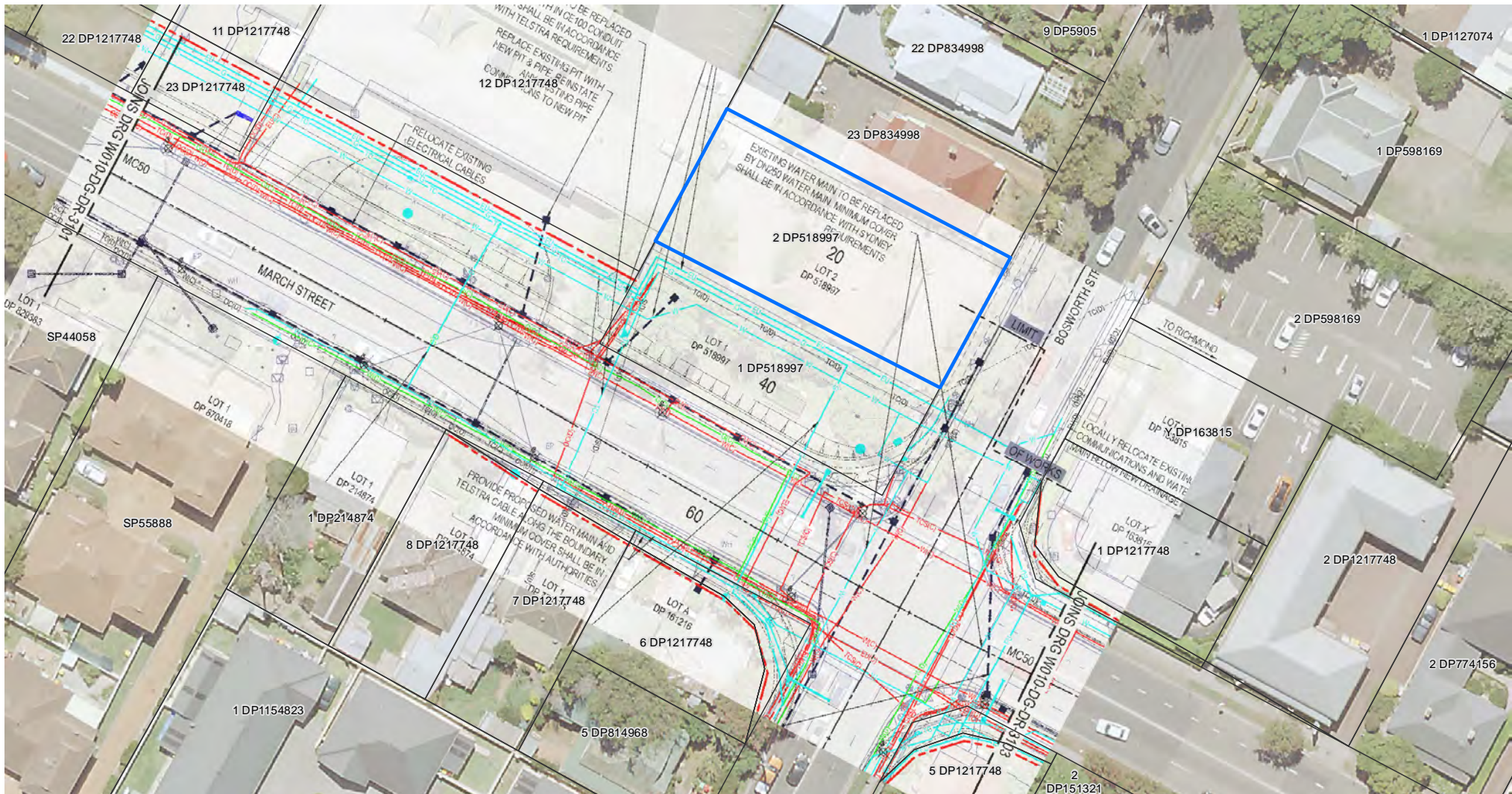
1:1,250 at A4



**Data sources**  
 Jacobs 2020  
 Ausimage 2018  
 NSW Spatial Services 2020  
 GDA94 MGA66

**Figure 1** Study area





**Legend**  
 Study area  
 Lot boundary



**Data sources**  
 Jacobs 2020  
 Ausimage 2018  
 NSW Spatial Services 2020  
 GDA94 MGA56

**Figure 2** Study area with proposed works



## 2. Historical context

For historical information regarding the development of the town of Richmond, please see Jacobs, 2015.

### 2.1 Land ownership

The item was first granted to George Mitchell on 20 February 1849, as "Allotment No. 5 in Section 2 of the town of Richmond" (Figure 3). Mitchell also co-owned another allotment in Section 2, being Lot 3 with Charles Farrell in trust as per the Will of the Late John Cuffe, dated 20 March 1840.

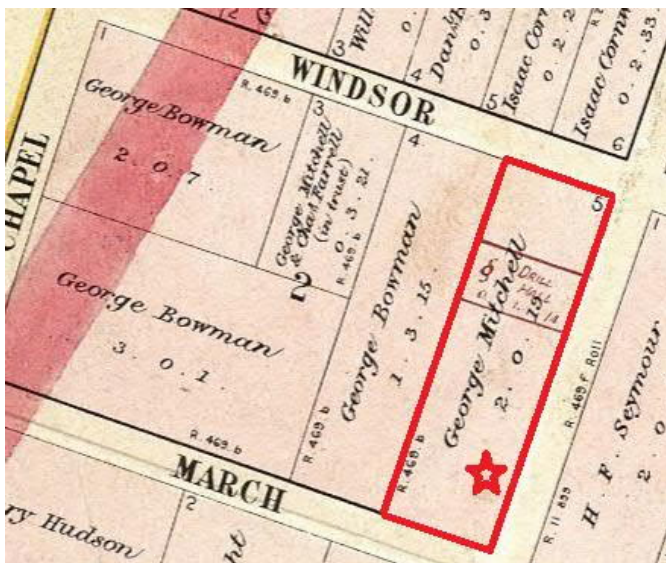


Figure 3: Detail of Town of Richmond map, 1892 showing original grant. The approximate location of the item is also marked with a star (Historical Land Records Viewer, PMAPMN01, 14034502.jp2).

Mitchell's land was converted under the Real Property Act 1900 in 1903 under Primary Application 12238 (Figure 4). However, when the resulting title document was registered, the land comprising the item was not part of the title and specifically excluded (Figure 5).



This corner block was associated with the Cuffe family, who took possession of the land in 1903. Honora Smith converted the land under the Real Property Act 1900 in 1917 (Figure 6)

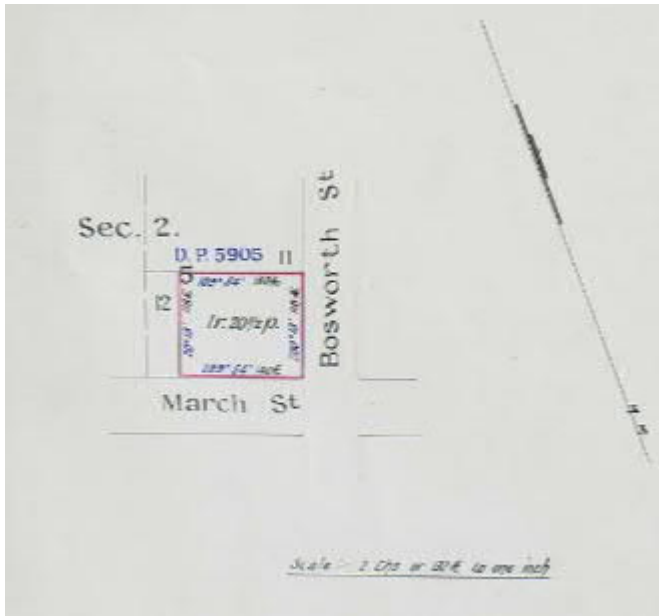


Figure 6: 1917 Detail map from Certificate of Title Volume 2811 Folio 161 (Historical Land Records Viewer, 2811\_161\_01.jp2).

From 1921 the land changed hands only four times until 1963. In 1966 the property was subdivided into Lots 1 and 2 in Deposited Plan 518997, with Lot 1 being dedicated for public purposes and Lot 2 becoming the land associated with the item (Figure 7). It is likely that the fence was constructed at this time.

In 1974, road widening works on Bosworth Street required the resumption of land shown in Deposited Plan 247751. That plan shows that at that time the fence was outside of its cadastral boundary (Figure 8).

In 1986, Shellshear noted that the item was being used as a real estate agent, but that no significant changes to the original architecture were noted. However:

The appearance of the house is marred by the application of unsympathetic signs... In respect of the house its preservation in this original form is desirable.

In his 1986 assessment of 35 Bosworth Street, Shellshear concluded that the brick and tile constructed, Californian bungalow-style cottage was constructed in around 1925.

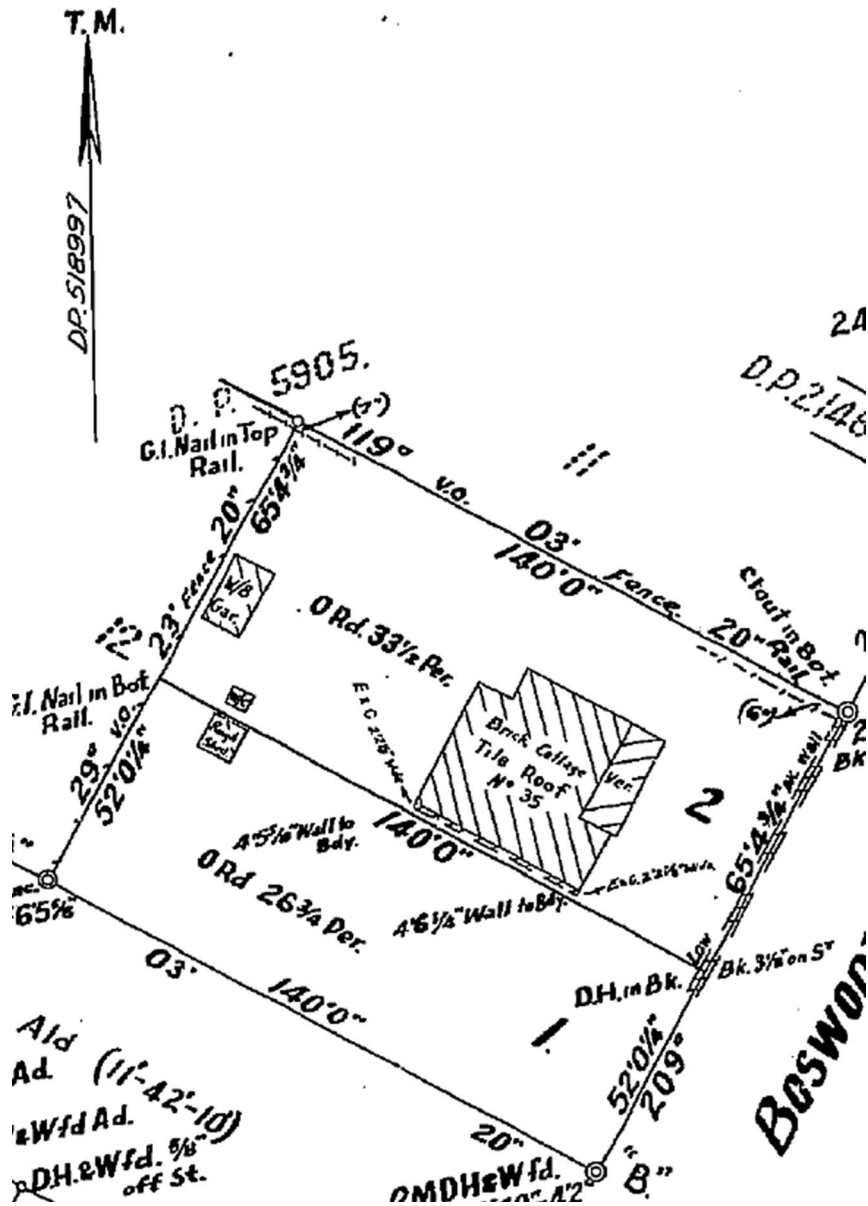


Figure 7: 1966 Detail of Deposited Plan 518997 (Land & Property Information).

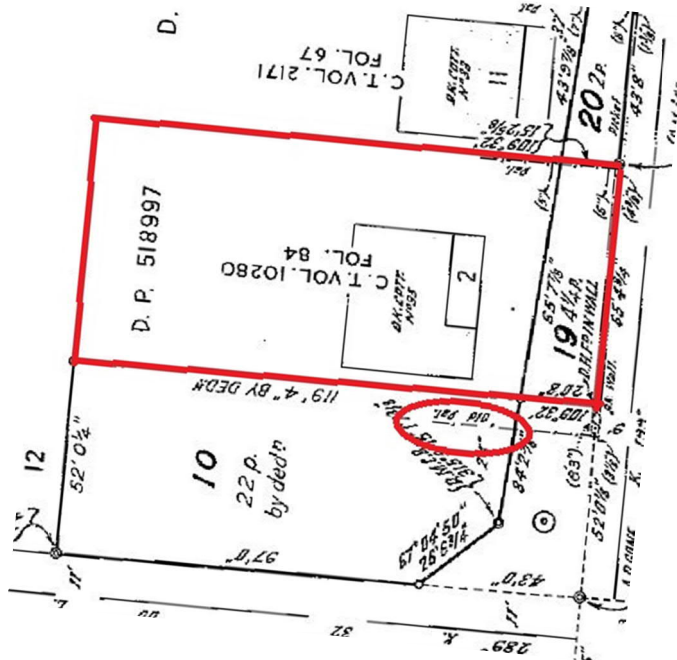


Figure 8: 1974 Detail of DP247751 showing outline of cadastral boundaries in red. The red circle indicates a notation of a “old paling”, representing the fence line.

### 3. Archaeological Potential

An Archaeological Management Plan for Richmond was prepared in 1996 for Hawkesbury Council (Edward Higginbotham & Associates 1996: Vol 2:1). That management plan found that the item did not have any archaeological potential and that no additional assessment was required prior to any ground disturbance works.

### 4. Significance Assessment

Table 1 is an assessment against the NSW Heritage Significance Criteria (NSW Heritage Office, 2001). This assessment assists in establishing the heritage values of the item.

Table 1: Significance assessment of 35 Bosworth Street, Richmond

Criterion	Assessment
<p>1. Historical Significance</p> <p>An item is important in the course or pattern of NSW's cultural or natural history (or the cultural or natural history of the local area)</p>	<p>As noted by Shellshear, the item appears to have been constructed in the 1920s. This time period represents a time of expansion in the town of Richmond, with the establishment of the RAAF Base during World War 1 and the Richmond-Kurrajong railway in 1926. The item fulfils this criterion.</p>
<p>2. Associative significance</p> <p>An item has strong or special association with the life or works of a person, or group of</p>	<p>There are no known strong or special associations with the item. Does not meet this criterion.</p>

Criterion	Assessment
persons, of importance in NSW's cultural or natural history (or the cultural or natural history of the local area).	
<p>3. Aesthetic/technical significance</p> <p>An item is important in demonstrating aesthetic characteristics and/or a high degree or creative or technical achievement in NSW (or the local area).</p>	The aesthetic/technical characteristics of the item are indicative of the 1920s phase of construction in Richmond. Despite currently being used for commercial purposes, the house retains many of the architectural features associated with this style of architecture and therefore contributes to the heritage streetscape. The item fulfils this criterion.
<p>4. Social significance</p> <p>An item has strong or special association with a particular community or cultural group in NSW (or the local area) for social, cultural or spiritual reasons.</p>	There are no known social, cultural or spiritual associations with the item. Does not meet this criterion.
<p>5. Research potential</p> <p>An item has potential that will contribute to an understanding of NSW's cultural or natural history (or the cultural or natural history of the local area).</p>	As noted in the Archaeological Management Plan for Richmond, there is no research potential attached to the item. Does not meet this criterion.
<p>6. Rarity</p> <p>An item possesses uncommon, rare or endangered aspects of NSW's cultural or natural history (or the cultural or natural history of the local area);</p>	The item is not considered rare. Does not meet this criterion.
<p>7. Representativeness</p> <p>An item is important in demonstrating the principal characteristics of a class of NSW's</p> <ul style="list-style-type: none"> <li>• Cultural or natural places; or</li> <li>• Cultural or natural environments.</li> </ul> <p>(or a class of the local area's</p> <ul style="list-style-type: none"> <li>• Cultural or natural places; or</li> <li>• Cultural or natural environments).</li> </ul>	The item contributes to the heritage character of the streetscape. It is therefore representative of the principal characteristics of architecture in the local area of Richmond. The item fulfils this criterion.

#### 4.1 Integrity and intactness

With the exception of the façade fronting Bosworth Street, the item has been substantially altered externally and has been used as a commercial premises for some time. Given these alterations, the heritage values appear to be limited to the former house.

As the item's primary heritage value is the architecture of the former residence, the shed does not form part of the item. The shed comprises corrugated metal walls, decorated on the northern elevation near the entrance by a modern timber lattice panel, and a skillion roof. A curved corrugated



metal sheet is positioned to mimic a “bullnose” verandah cover (Figure 12). Although these materials are uncharacteristic for Californian bungalow-style architecture, the colour palette is neutral and the shed’s footprint is small. In its present state, the fabric and location of the shed represent a neutral addition to the heritage item, in that it is not considered to enhance the item and its current low visibility prevents it from being intrusive.

The modern fence located on the southern boundary are also later additions and do not form part of this listing.

#### 4.2 Statement of significance

As noted in Section 1.3 above, the heritage values for this item are confined to the brick and tile former residence. Once part of a much larger block extending to March Street, the item was constructed in the 1920s. As this was a time of expansion of the town of Richmond, it is assessed that the item is of historical significance. Although used as a commercial premises, the street-front façade is largely intact, and it contributes to the streetscape. It is therefore assessed as also being of moderate aesthetic heritage significance at a local level and representative of the heritage character of Bosworth Street and Richmond.

#### 5. Site visit and additional site information

A site visit was undertaken on 4 May 2020 by Jacobs Senior Heritage Consultant, Deborah Farina. The property was inspected from publicly accessible areas. No internal inspection was deemed necessary.

The item is a well-maintained California bungalow-style brick and tile former residence (Figure 9). The north and east (street front) elevations both retain numerous features associated with this architectural style. Intrusive signage described by Shellshear in 1986 has been removed. There are spacious grounds surrounding three sides of the structure, with mature plantings along the southern boundary facing March Street (Figure 10).

The shed is located along the southern elevation of the item and is not visible from any position along the public thoroughfares of Bosworth Street or March Street. It does not appear on either the 1966 or 1974 drawings and appears to be constructed of modern material. Information provided by DM Roads from the owner states that the shed was “tacked on” and is currently used as a storage room (Pers. Comm, C. Wu, 11 May 2020).



Figure 9: 35 Bosworth Street, Richmond, looking west (Jacobs, 2020).



Figure 10: Southern (March Street) boundary, looking north east toward Bosworth Street (Jacobs, 2020)

The fence along the southern (March Street) boundary adjoining Lot 1 (TfNSW land) comprises corrugated iron with timber posts. Behind this fence are two mature, exotic trees (Figure 10). Although within the fenced boundaries of 35 Bosworth Street, both trees are located within the cadastral boundary of the TfNSW land (Figure 11). The species of these trees were not identified. It is understood that there is a shed along this southern boundary fence and adjoining the item, however owing to extensive vegetation growth this was not able to be sighted from outside the property (Figure 12).



Figure 11: View west along southern boundary of 35 Bosworth Street (Jacobs, 2020).





Figure 12: Shed along southern boundary of the item (Courtesy: Hutchison Weller).

## 6. Impact Assessment

### 6.1 Proposed works

As noted above, Jacobs concluded in 2015 that there would be no adverse impacts to the item based on designs available at the time (Jacobs, 2015:31). However, utility relocations as part of the March Street/Bosworth Street intersection upgrade now require the following:

- Southern fence to 35 Bosworth Street relocated to cadastral boundary of Lot 2/DP 518997
- Removal of trees and shed to allow fence relocation.

### 6.2 Impact Assessment and Approvals Requirement

#### 6.2.1 Fence relocation

The removal of the fence will require the clearance of vegetation, removal of existing fence and reconstruction of the fence along the cadastral boundary for the item. The proximity of these works to the item raises the potential for accidental damage to significant fabric of the item. Mitigation measures, such as the installation of temporary fencing and advising contractors and subcontractors of the nature of the heritage item and the requirements to ensure that the heritage item is not physically impacted, should be implemented prior to any works being undertaken.

In relation to fence removal, clause 10.4.2 of the Development Control Plan (DCP) 2002 for Hawkesbury Council lists a variety of minor works for which development consent is not required. The demolition and erection of any fences or boundary walls is explicitly listed as one such minor work, when:

...fences (are) not identified as significant, do not contribute to the overall setting or character of a heritage item or conservation area. (Hawkesbury City Council, 2002:10-8).

The fence is of relatively modern construction and is not assessed as being significant or contributing in any way to the overall setting or character of the item. Development consent is therefore not required for the works. However, given that the works will take place within the boundaries of the heritage item, it is recommended that Council is advised of the works.

### 6.2.2 Removal of Trees

As noted above, the trees are located within the cadastral boundary of the TfNSW land. It is noted the removal of the trees on TfNSW land will result in a reduction of the leafy character of this aspect of the property, however it should be noted that the heritage significance of the item is related to its architecture. The trees do not form part of the significance of the item, nor are they within the cadastral boundaries of the item.

In addition, the property was subdivided in 1966, meaning that the trees date from that time or later. They are therefore not connected with either the historicity, aesthetic significance or representativeness of the item.

However, there is potential for the item to be accidentally damaged during the process of the trees' removal. It is therefore recommended that protective measures be implemented to ensure tree branches do not fall onto the house.

In relation to the removal of trees in association with heritage items, Clause 9.3.3 of the DCP for Hawkesbury Council states that:

Development consent is required for the ringbarking, cutting down, topping, lopping, removal, injuring or destruction of a tree or vegetation that is or forms part of a heritage item or that is within a heritage conservation area.

As the trees are located on TfNSW land and therefore do not form part of the heritage item, development consent is not required.

### 6.2.3 Removal of shed

As noted above, it is considered that the shed does not form part of the item. It is considered further that the shed also does not contribute to the heritage significance of the item and, given its location behind a fence and therefore not visible from the street, it also does not contribute to the character of the item or the streetscape. The removal of the fence and trees may increase visibility to the southern elevation of the item and therefore the shed's visibility. The removal of the shed, therefore, will increase the visibility of the heritage item and may enhance its heritage significance.

However, as noted above, the shed has been attached to the southern elevation of the item and its removal must seek to prevent damage to the item during those works. It is therefore recommended that the shed's removal employ the following principles:

- that protective material or fencing be placed along the southern elevation during removal of the shed to protect the house from accidental damage, and
- that following removal of the shed any evidence of the former shed in the original fabric of the item is sympathetically repaired.

As noted in Section 6.2.1 above, Clause 10.4.2 of the DCP lists a number of minor works that may be carried out without development consent. One example of such minor works states:

Any works involving the removal of additions and alterations which do not contribute to the heritage significance of the building or the character of the conservation area.

The criteria for this type of work being exempt from development consent is:

Where the proposed removal allows increased exposure of the heritage item and generally enhances its heritage significance.

## 7. Conclusion and recommendations

Based on the above assessment, it is concluded that:

- (a) It is unlikely that the proposed works will cause an adverse impact on the heritage values of the item
- (b) However, the management measures noted in Section 6.2 above will safeguard existing heritage values.

The following recommendations are made:

### Recommendation 1

It is recommended that as the proposed works will be partially carried out within the boundaries of the item, Hawkesbury City Council should be notified of the works.

### Recommendation 2

It is recommended that protective temporary fencing be erected between the item and the works during all works to protect it from accidental damage. It is recommended further that protective measures are implemented to ensure tree branches do not fall onto the house.

### Recommendation 3

It is recommended that prior to the shed's removal that protective fencing or other material is placed along the southern elevation to protect the house from accidental damage during the shed removal works, and that following the shed's removal any evidence of the shed along the southern elevation of the house is sympathetically repaired.

### Recommendation 4

It is recommended that all contractors and sub-contractors be advised of the heritage item's significance and their obligations to not damage the item during the course of the proposed works.

### BIBLIOGRAPHY

#### Primary Documents

Certificate of Title Volume 1502, Folio 42, Land & Property Information NSW

Certificate of Title Volume 2811, Folio 161, Land & Property Information NSW

Deposited Plan 247751, Land & Property Information NSW

Hawkesbury City Council, Development Control Plan 2002

Primary Application 12238, Land & Property Information NSW

Primary Application 12322, Land & Property Information

#### Secondary Documents

Edward Higginbotham & Associates 1996 Archaeological Management Plan, Richmond, NSW, 2  
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Hawkesbury City Council 2002 Hawkesbury Development Control Plan

Jacobs Group (Australia) Pty Ltd 2015, Richmond Bridge Approaches – Short Term Improvements –  
Non-Aboriginal Heritage Assessment, unpublished report to Downer Mouchel.

NSW Heritage Office 2001, Assessing Heritage Significance, Sydney, New South Wales Government.

Shellshear, T 1986 Richmond NSW Townscape Study, unpublished report to Hawkesbury Shire Council.



# Appendix E

ISEPP Consultation



Transport  
for NSW

13 May 2020

Peter Conroy  
General Manager  
Hawkesbury City Council  
366 George Street  
Windsor, NSW, 2756  
Via Email: [council@hawkesbury.nsw.gov.au](mailto:council@hawkesbury.nsw.gov.au)

Dear Mr Conroy

**Consultation regarding proposed Intersection upgrade at March Street/Bosworth Street, Richmond**

Transport for NSW is proposing to undertake works for the Intersection upgrade at March Street and Bosworth Street, Richmond.

Under the State Environmental Planning Policy (Infrastructure) 2007, Transport for NSW is required to consult with Hawkesbury Shire Council under clause 14 due to the potential impacts on local heritage.

Transport for NSW proposes to modify the approved Project by adjusting the boundary fence at 35 Bosworth Street so that it no longer encroaches on Transport for NSW Property (i.e. the existing fence location is on Transport for NSW property). The reclamation of this land is necessary to allow for utilities adjustments associated with the intersection upgrade. 35 Bosworth Street is listed in the Local Environment Plan as having heritage value, however, it has been determined that this proposal will have an inconsequential impact upon 35 Bosworth Street.

A detailed outline of the proposal is attached to this letter along with the heritage report prepared by Jacobs.

It would be appreciated if you could provide any comments about this proposal by 02/06/2020.

DM Roads are working on behalf of Transport for NSW for this Project and would be pleased to provide further information if required. In this regard Cameron Weller may be contacted on 0428 271 496 or by email [Cameron.Weller@dmroads.com.au](mailto:Cameron.Weller@dmroads.com.au)

Yours faithfully

A handwritten signature in black ink, appearing to read 'Cameron Weller', with a horizontal line underneath.

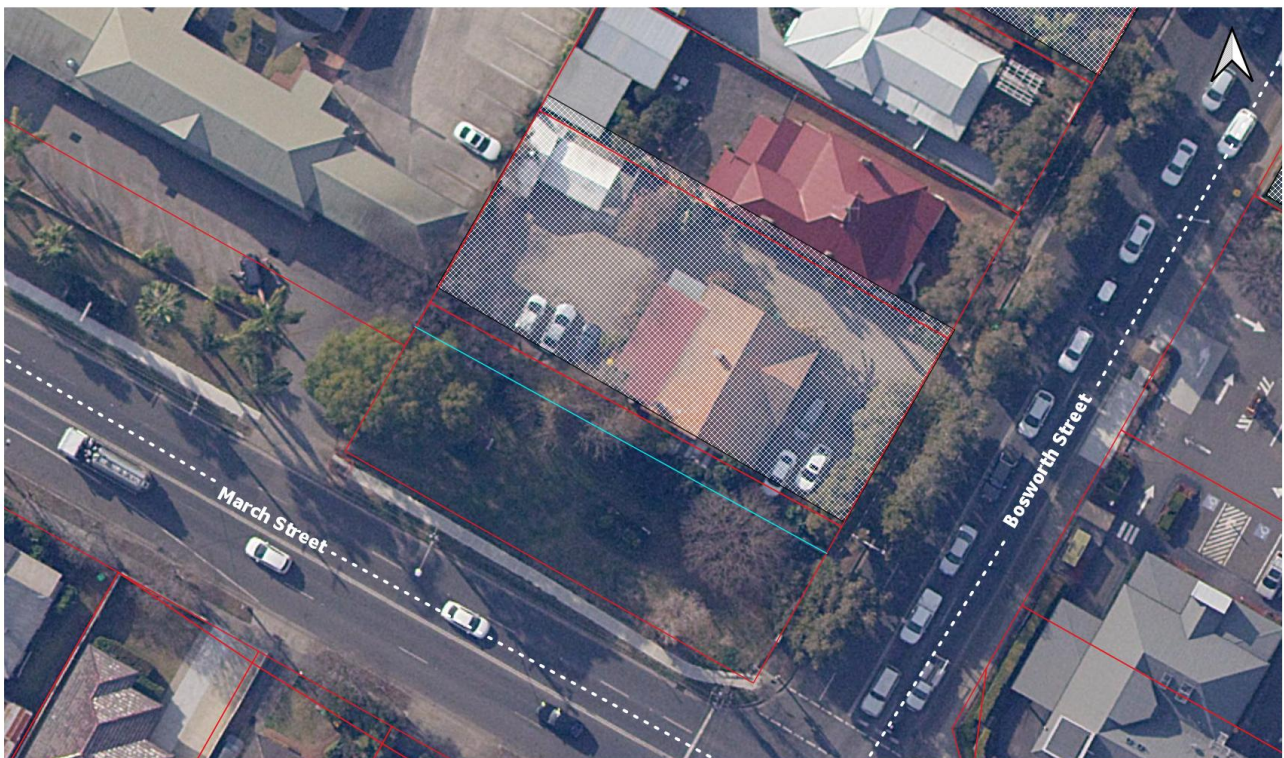
Cameron Weller  
Environmental Consultant  
DM Roads

**Transport for NSW**

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P MI0019 | [W roads-maritime.transport.nsw.gov.au](http://www.roads-maritime.transport.nsw.gov.au) | ABN 18 804 239 602

## Attachment 1- Project Overview- RBA 3 Addendum 5

Transport for NSW proposes to modify the approved intersection upgrade of Bosworth Street and March Street, Richmond project (the Project) by adjusting the boundary fence at 35 Bosworth Street so that it no longer encroaches on Transport for NSW property. The reclamation of this land is necessary to allow for utilities adjustments associated with the intersection upgrade.



### Legend

- Property Boundaries
- Heritage Boundary
- Existing Fence (Indicative)

### Property Boundaries- Intersection Upgrade March St/Bosworth St

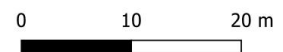


Figure 1 Cadastral boundaries and current fence

The proposed modification involves the adjustment of the property boundary at 35 Bosworth Street so that the boundary does not extend into the adjacent Transport for NSW land. The adjustment is needed to ensure that utilities work can take place, as these were designed to the correct property boundaries. Adjusting this boundary would involve removing the existing fence and relocating it to the correct property line, demolishing a shed that has been built on the exterior of the house outside the cadastral boundaries, as well as removing two large exotic trees that exist on

### Transport for NSW

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Transport for NSW property. Any other structures that exist on Transport for NSW property would also be removed in consultation with the property owner.

35 Bosworth Street, Richmond is a heritage item listed in the Richmond Valley Local Environment Plan 2012. A Heritage Assessment prepared by Jacobs in May 2020 (Attachment A) for the property noted that the fencing has been located outside of the property's cadastral boundaries for many years. The heritage value of the property lies primarily in the architecture of the original house which is a California Bungalow style property constructed around 1925. It was concluded that additions to the property, including the shed, fencing and trees on Transport for NSW land do not form part of the heritage listing.

During the removal of the structures that lie outside the cadastral boundaries of 35 Bosworth Street, appropriate safeguards will be put in place to protect the heritage fabric of the property. However, it is unlikely that the proposed modification will impact the heritage values of the item.



**Transport  
for NSW**

## **Attachment 2 – Heritage Report on 35 Bosworth Street, Richmond**

**Transport for NSW**

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Subject	Heritage Assessment of 35 Bosworth Street, Richmond	Project Name	Richmond Bridge Approaches - March Street and Bosworth Street, Richmond Intersection Upgrade
Attention	Cameron Weller	Project No.	IA026100
From	Deborah Farina		
Date	8 May 2020		

---

## 1. Introduction

### 1.1 Background

This heritage assessment is related to the Richmond Bridge Approaches – March Street and Bosworth Street, Richmond Intersection Upgrade (intersection upgrade). The property known as 35 Bosworth Street, Richmond (the item) is located near the north western corner of the March Street/Bosworth Street intersection (Figure 1) and is listed on Schedule 5 of the Hawkesbury Local Environmental Plan 2012 as an item of local heritage significance.

A Review of Environmental Factors (REF) was prepared by Jacobs in 2016 for the intersection upgrade. Included in that REF was an assessment of all non-Aboriginal heritage items that were potentially to be affected by the intersection upgrade – Richmond Bridge Approaches – Short Term Improvements Non-Aboriginal Heritage Assessment (Jacobs 2015). The item was one of those assessed. The 2015 heritage assessment concluded that the intersection upgrade would not impact on the heritage significance of the item, with works being confined to the curb and therefore outside the curtilage of the item.

It has since been established that the southern fence for the item is outside of its cadastral boundary and lies on the adjoining block owned by Transport for New South Wales (TfNSW). Utility relocation works associated with the intersection upgrade are planned for the area currently occupied by the fence, requiring it to be moved 3-4 metres back to the cadastral boundary for the item. This will necessitate the removal of two trees and a shed within the heritage curtilage of the item (Figure 2).

The purpose of this heritage assessment is to assess whether the removal of the trees and shed and reinstallation of the fence on the cadastral boundary will impact on the heritage values of the item. This assessment should be read in conjunction with the Non-Aboriginal heritage assessment prepared by Jacobs in 2015 for the REF.

### 1.2 The study area

The study area for this assessment is the heritage item known as 35 Bosworth Street, Richmond with the legal description of Lot 2 in Deposited Plan 518997. The item comprises a brick, Californian bungalow-style house with a tiled roof and is currently used for commercial purposes. A separate structure is located in the north western corner of the property at the end of the driveway access from Bosworth Street and is also used for commercial purposes. The southern fence is of modern

construction, comprising corrugated iron sheets held in place by timber posts. Two large, exotic trees are also located along the southern boundary, giving a leafy character to the March Street boundary.

### 1.3 Heritage Listing

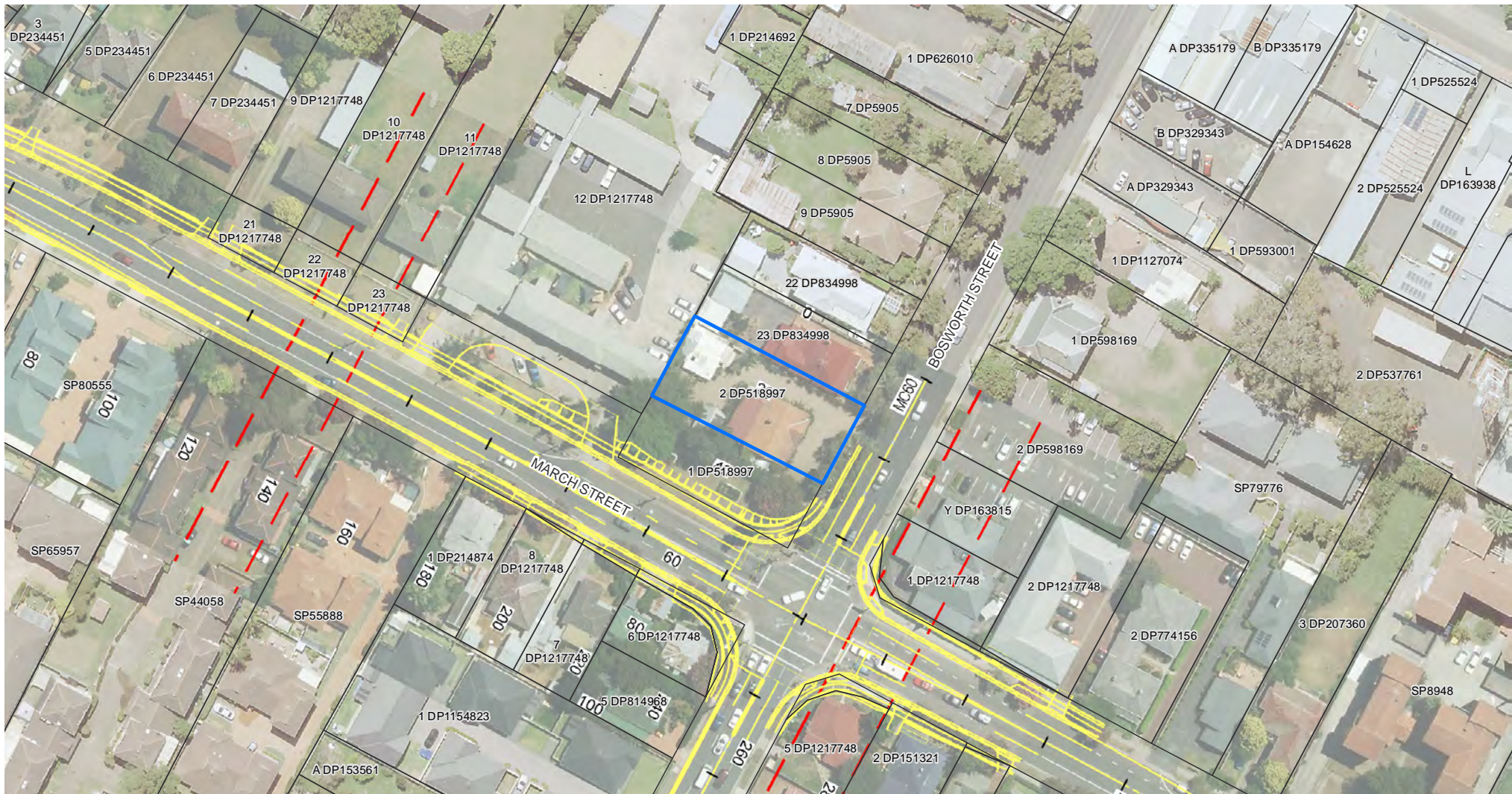
The item is listed as Item I4 on Schedule 5 of the Hawkesbury Local Environment Plan 2012. It is not within a heritage conservation area.

The item was assessed in 1986 by Shellshear in Richmond NSW Townscape Study. The item was described as:

Bungalow style cottage of rectangular plan with large terra cotta tiled gable roof. Face brick construction with gable ends sheeted and battened to the lower half and shingled to the upper half into the apex of the gable. Wide eaves overhang. Large gable roofed veranda off front side matching main gable details and supported on triple timber posts over brick piers. Verandah enclosed by low brick dwarf wall. Nicely detailed shallow oriel windows set with diamond lead light glazing. House set in large grounds and now used for commercial purposes. (Shellshear, 1986:152).

Shellshear (1986) assessed the item as having heritage significance based on its historicity, its architectural values adding value to the streetscape (aesthetic heritage significance). As Shellshear's assessment is the first known mention of this item's heritage value, it would appear that the item's heritage values are confined to the brick and tile former residence.



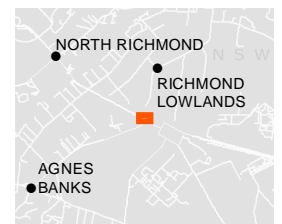


**Legend**  
 Study area  
 Lot boundary



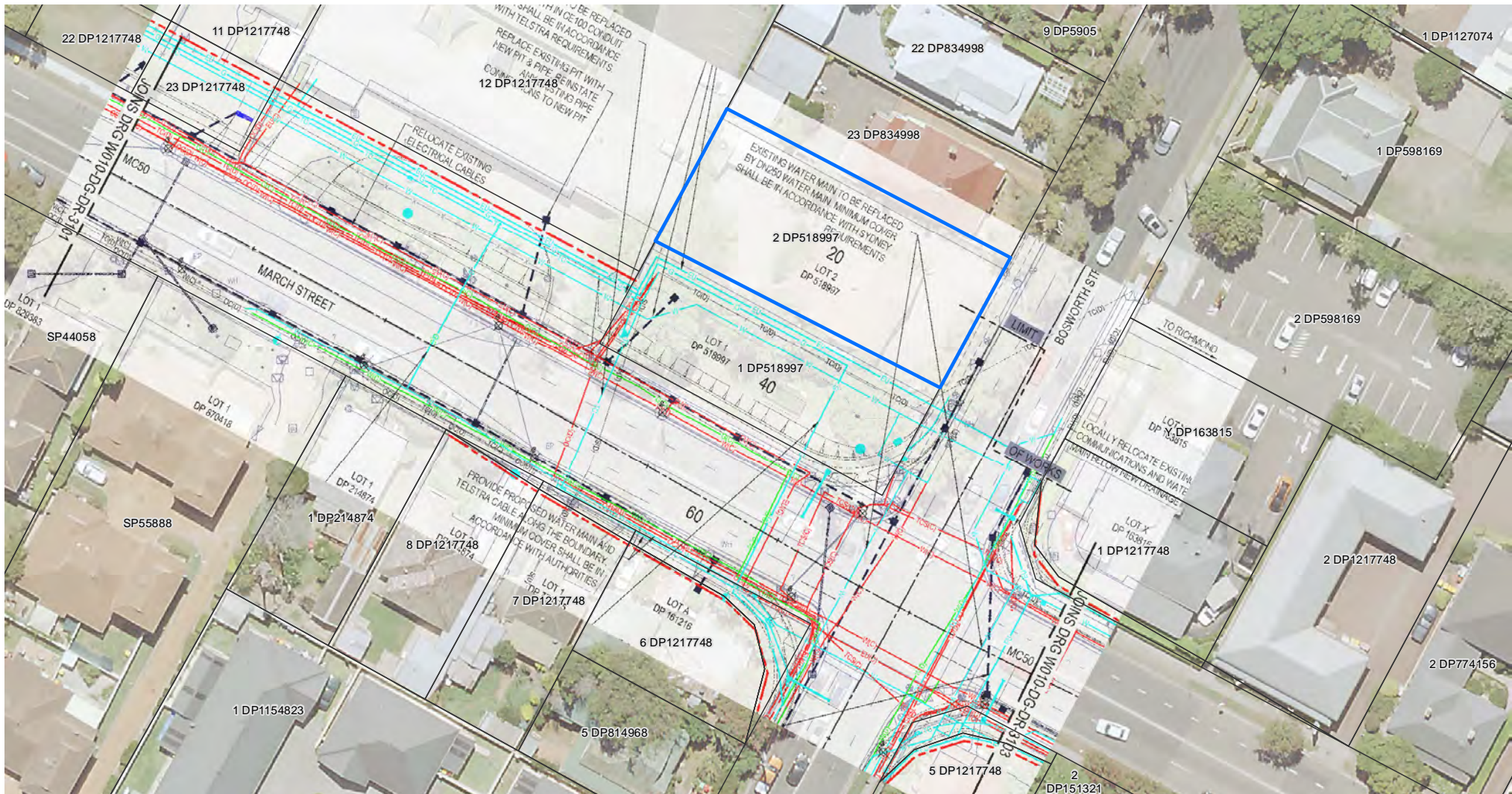
1:1,250 at A4

**Data sources**  
 Jacobs 2020  
 Ausimage 2018  
 NSW Spatial Services 2020  
 GDA94 MGA66



**Figure 1** Study area





**Legend**  
 Study area  
 Lot boundary



**Data sources**  
 Jacobs 2020  
 Ausimage 2018  
 NSW Spatial Services 2020  
 GDA94 MGA56

**Figure 2** Study area with proposed works



## 2. Historical context

For historical information regarding the development of the town of Richmond, please see Jacobs, 2015.

### 2.1 Land ownership

The item was first granted to George Mitchell on 20 February 1849, as "Allotment No. 5 in Section 2 of the town of Richmond" (Figure 3). Mitchell also co-owned another allotment in Section 2, being Lot 3 with Charles Farrell in trust as per the Will of the Late John Cuffe, dated 20 March 1840.

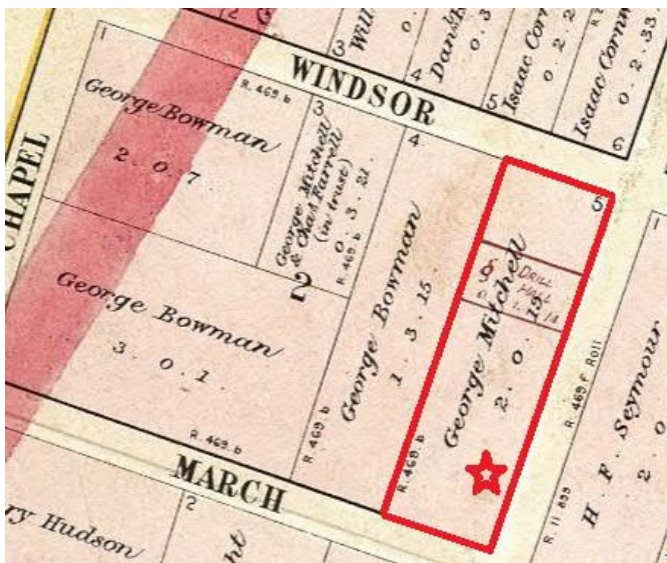


Figure 3: Detail of Town of Richmond map, 1892 showing original grant. The approximate location of the item is also marked with a star (Historical Land Records Viewer, PMAPMN01, 14034502.jp2).

Mitchell's land was converted under the Real Property Act 1900 in 1903 under Primary Application 12238 (Figure 4). However, when the resulting title document was registered, the land comprising the item was not part of the title and specifically excluded (Figure 5).



This corner block was associated with the Cuffe family, who took possession of the land in 1903. Honora Smith converted the land under the Real Property Act 1900 in 1917 (Figure 6)

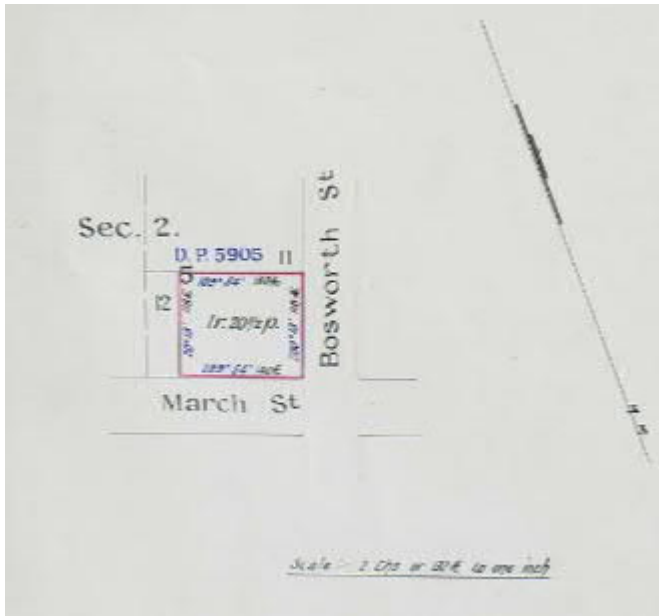


Figure 6: 1917 Detail map from Certificate of Title Volume 2811 Folio 161 (Historical Land Records Viewer, 2811\_161\_01.jp2).

From 1921 the land changed hands only four times until 1963. In 1966 the property was subdivided into Lots 1 and 2 in Deposited Plan 518997, with Lot 1 being dedicated for public purposes and Lot 2 becoming the land associated with the item (Figure 7). It is likely that the fence was constructed at this time.

In 1974, road widening works on Bosworth Street required the resumption of land shown in Deposited Plan 247751. That plan shows that at that time the fence was outside of its cadastral boundary (Figure 8).

In 1986, Shellshear noted that the item was being used as a real estate agent, but that no significant changes to the original architecture were noted. However:

The appearance of the house is marred by the application of unsympathetic signs... In respect of the house its preservation in this original form is desirable.

In his 1986 assessment of 35 Bosworth Street, Shellshear concluded that the brick and tile constructed, Californian bungalow-style cottage was constructed in around 1925.

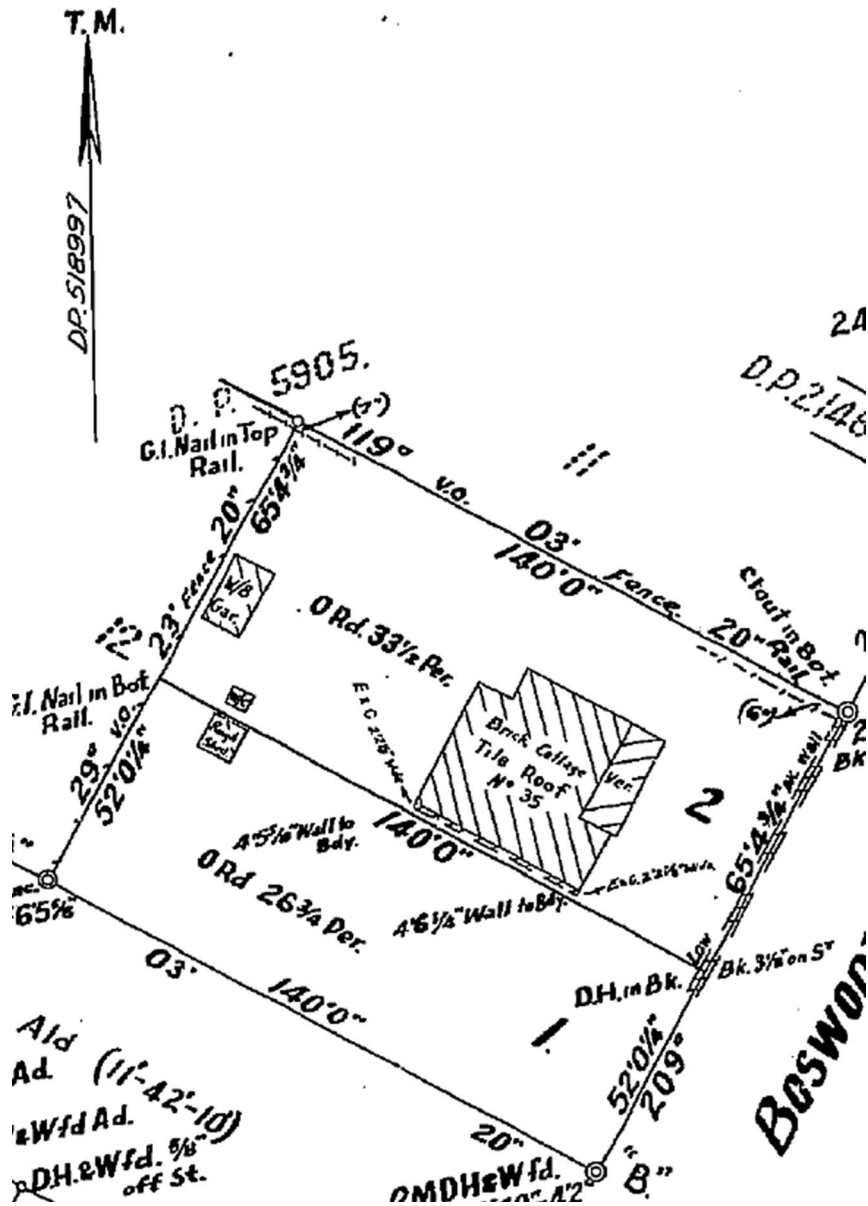


Figure 7: 1966 Detail of Deposited Plan 518997 (Land & Property Information).

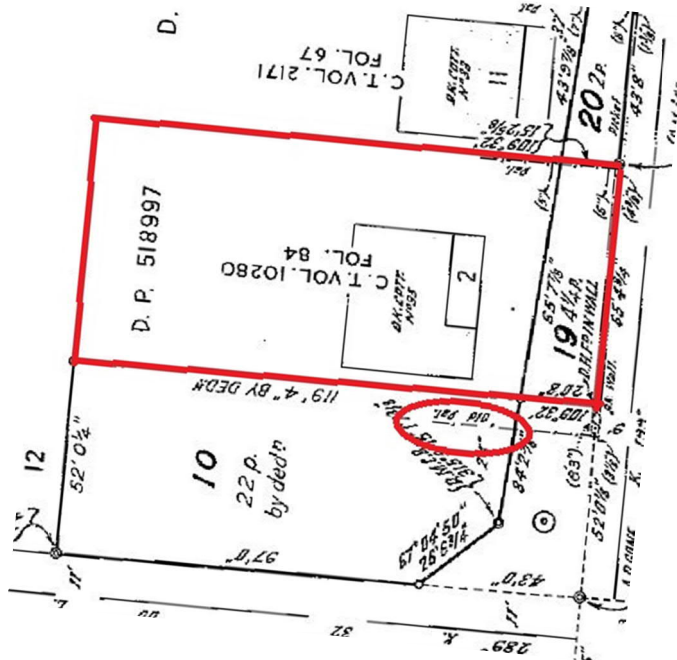


Figure 8: 1974 Detail of DP247751 showing outline of cadastral boundaries in red. The red circle indicates a notation of a “old paling”, representing the fence line.

### 3. Archaeological Potential

An Archaeological Management Plan for Richmond was prepared in 1996 for Hawkesbury Council (Edward Higginbotham & Associates 1996: Vol 2:1). That management plan found that the item did not have any archaeological potential and that no additional assessment was required prior to any ground disturbance works.

### 4. Significance Assessment

Table 1 is an assessment against the NSW Heritage Significance Criteria (NSW Heritage Office, 2001). This assessment assists in establishing the heritage values of the item.

Table 1: Significance assessment of 35 Bosworth Street, Richmond

Criterion	Assessment
<p>1. Historical Significance</p> <p>An item is important in the course or pattern of NSW’s cultural or natural history (or the cultural or natural history of the local area)</p>	<p>As noted by Shellshear, the item appears to have been constructed in the 1920s. This time period represents a time of expansion in the town of Richmond, with the establishment of the RAAF Base during World War 1 and the Richmond-Kurrajong railway in 1926. The item fulfils this criterion.</p>
<p>2. Associative significance</p> <p>An item has strong or special association with the life or works of a person, or group of</p>	<p>There are no known strong or special associations with the item. Does not meet this criterion.</p>

Criterion	Assessment
persons, of importance in NSW's cultural or natural history (or the cultural or natural history of the local area).	
<p>3. Aesthetic/technical significance</p> <p>An item is important in demonstrating aesthetic characteristics and/or a high degree of creative or technical achievement in NSW (or the local area).</p>	The aesthetic/technical characteristics of the item are indicative of the 1920s phase of construction in Richmond. Despite currently being used for commercial purposes, the house retains many of the architectural features associated with this style of architecture and therefore contributes to the heritage streetscape. The item fulfils this criterion.
<p>4. Social significance</p> <p>An item has strong or special association with a particular community or cultural group in NSW (or the local area) for social, cultural or spiritual reasons.</p>	There are no known social, cultural or spiritual associations with the item. Does not meet this criterion.
<p>5. Research potential</p> <p>An item has potential that will contribute to an understanding of NSW's cultural or natural history (or the cultural or natural history of the local area).</p>	As noted in the Archaeological Management Plan for Richmond, there is no research potential attached to the item. Does not meet this criterion.
<p>6. Rarity</p> <p>An item possesses uncommon, rare or endangered aspects of NSW's cultural or natural history (or the cultural or natural history of the local area);</p>	The item is not considered rare. Does not meet this criterion.
<p>7. Representativeness</p> <p>An item is important in demonstrating the principal characteristics of a class of NSW's</p> <ul style="list-style-type: none"> <li>• Cultural or natural places; or</li> <li>• Cultural or natural environments.</li> </ul> <p>(or a class of the local area's</p> <ul style="list-style-type: none"> <li>• Cultural or natural places; or</li> <li>• Cultural or natural environments).</li> </ul>	The item contributes to the heritage character of the streetscape. It is therefore representative of the principal characteristics of architecture in the local area of Richmond. The item fulfils this criterion.

#### 4.1 Integrity and intactness

With the exception of the façade fronting Bosworth Street, the item has been substantially altered externally and has been used as a commercial premises for some time. Given these alterations, the heritage values appear to be limited to the former house.

As the item's primary heritage value is the architecture of the former residence, the shed does not form part of the item. The shed comprises corrugated metal walls, decorated on the northern elevation near the entrance by a modern timber lattice panel, and a skillion roof. A curved corrugated

metal sheet is positioned to mimic a “bullnose” verandah cover (Figure 12). Although these materials are uncharacteristic for Californian bungalow-style architecture, the colour palette is neutral and the shed’s footprint is small. In its present state, the fabric and location of the shed represent a neutral addition to the heritage item, in that it is not considered to enhance the item and its current low visibility prevents it from being intrusive.

The modern fence located on the southern boundary are also later additions and do not form part of this listing.

#### 4.2 Statement of significance

As noted in Section 1.3 above, the heritage values for this item are confined to the brick and tile former residence. Once part of a much larger block extending to March Street, the item was constructed in the 1920s. As this was a time of expansion of the town of Richmond, it is assessed that the item is of historical significance. Although used as a commercial premises, the street-front façade is largely intact, and it contributes to the streetscape. It is therefore assessed as also being of moderate aesthetic heritage significance at a local level and representative of the heritage character of Bosworth Street and Richmond.

#### 5. Site visit and additional site information

A site visit was undertaken on 4 May 2020 by Jacobs Senior Heritage Consultant, Deborah Farina. The property was inspected from publicly accessible areas. No internal inspection was deemed necessary.

The item is a well-maintained California bungalow-style brick and tile former residence (Figure 9). The north and east (street front) elevations both retain numerous features associated with this architectural style. Intrusive signage described by Shellshear in 1986 has been removed. There are spacious grounds surrounding three sides of the structure, with mature plantings along the southern boundary facing March Street (Figure 10).

The shed is located along the southern elevation of the item and is not visible from any position along the public thoroughfares of Bosworth Street or March Street. It does not appear on either the 1966 or 1974 drawings and appears to be constructed of modern material. Information provided by DM Roads from the owner states that the shed was “tacked on” and is currently used as a storage room (Pers. Comm, C. Wu, 11 May 2020).





Figure 9: 35 Bosworth Street, Richmond, looking west (Jacobs, 2020).



Figure 10: Southern (March Street) boundary, looking north east toward Bosworth Street (Jacobs, 2020)

The fence along the southern (March Street) boundary adjoining Lot 1 (TfNSW land) comprises corrugated iron with timber posts. Behind this fence are two mature, exotic trees (Figure 10). Although within the fenced boundaries of 35 Bosworth Street, both trees are located within the cadastral boundary of the TFNSW land (Figure 11). The species of these trees were not identified. It is understood that there is a shed along this southern boundary fence and adjoining the item, however owing to extensive vegetation growth this was not able to be sighted from outside the property (Figure 12).



Figure 11: View west along southern boundary of 35 Bosworth Street (Jacobs, 2020).





Figure 12: Shed along southern boundary of the item (Courtesy: Hutchison Weller).

## 6. Impact Assessment

### 6.1 Proposed works

As noted above, Jacobs concluded in 2015 that there would be no adverse impacts to the item based on designs available at the time (Jacobs, 2015:31). However, utility relocations as part of the March Street/Bosworth Street intersection upgrade now require the following:

- Southern fence to 35 Bosworth Street relocated to cadastral boundary of Lot 2/DP 518997
- Removal of trees and shed to allow fence relocation.

### 6.2 Impact Assessment and Approvals Requirement

#### 6.2.1 Fence relocation

The removal of the fence will require the clearance of vegetation, removal of existing fence and reconstruction of the fence along the cadastral boundary for the item. The proximity of these works to the item raises the potential for accidental damage to significant fabric of the item. Mitigation measures, such as the installation of temporary fencing and advising contractors and subcontractors of the nature of the heritage item and the requirements to ensure that the heritage item is not physically impacted, should be implemented prior to any works being undertaken.

In relation to fence removal, clause 10.4.2 of the Development Control Plan (DCP) 2002 for Hawkesbury Council lists a variety of minor works for which development consent is not required. The demolition and erection of any fences or boundary walls is explicitly listed as one such minor work, when:

...fences (are) not identified as significant, do not contribute to the overall setting or character of a heritage item or conservation area. (Hawkesbury City Council, 2002:10-8).

The fence is of relatively modern construction and is not assessed as being significant or contributing in any way to the overall setting or character of the item. Development consent is therefore not required for the works. However, given that the works will take place within the boundaries of the heritage item, it is recommended that Council is advised of the works.

### 6.2.2 Removal of Trees

As noted above, the trees are located within the cadastral boundary of the TfNSW land. It is noted the removal of the trees on TfNSW land will result in a reduction of the leafy character of this aspect of the property, however it should be noted that the heritage significance of the item is related to its architecture. The trees do not form part of the significance of the item, nor are they within the cadastral boundaries of the item.

In addition, the property was subdivided in 1966, meaning that the trees date from that time or later. They are therefore not connected with either the historicity, aesthetic significance or representativeness of the item.

However, there is potential for the item to be accidentally damaged during the process of the trees' removal. It is therefore recommended that protective measures be implemented to ensure tree branches do not fall onto the house.

In relation to the removal of trees in association with heritage items, Clause 9.3.3 of the DCP for Hawkesbury Council states that:

Development consent is required for the ringbarking, cutting down, topping, lopping, removal, injuring or destruction of a tree or vegetation that is or forms part of a heritage item or that is within a heritage conservation area.

As the trees are located on TfNSW land and therefore do not form part of the heritage item, development consent is not required.

### 6.2.3 Removal of shed

As noted above, it is considered that the shed does not form part of the item. It is considered further that the shed also does not contribute to the heritage significance of the item and, given its location behind a fence and therefore not visible from the street, it also does not contribute to the character of the item or the streetscape. The removal of the fence and trees may increase visibility to the southern elevation of the item and therefore the shed's visibility. The removal of the shed, therefore, will increase the visibility of the heritage item and may enhance its heritage significance.

However, as noted above, the shed has been attached to the southern elevation of the item and its removal must seek to prevent damage to the item during those works. It is therefore recommended that the shed's removal employ the following principles:

- that protective material or fencing be placed along the southern elevation during removal of the shed to protect the house from accidental damage, and
- that following removal of the shed any evidence of the former shed in the original fabric of the item is sympathetically repaired.

As noted in Section 6.2.1 above, Clause 10.4.2 of the DCP lists a number of minor works that may be carried out without development consent. One example of such minor works states:

Any works involving the removal of additions and alterations which do not contribute to the heritage significance of the building or the character of the conservation area.

The criteria for this type of work being exempt from development consent is:

Where the proposed removal allows increased exposure of the heritage item and generally enhances its heritage significance.

## 7. Conclusion and recommendations

Based on the above assessment, it is concluded that:

- (a) It is unlikely that the proposed works will cause an adverse impact on the heritage values of the item
- (b) However, the management measures noted in Section 6.2 above will safeguard existing heritage values.

The following recommendations are made:

### Recommendation 1

It is recommended that as the proposed works will be partially carried out within the boundaries of the item, Hawkesbury City Council should be notified of the works.

### Recommendation 2

It is recommended that protective temporary fencing be erected between the item and the works during all works to protect it from accidental damage. It is recommended further that protective measures are implemented to ensure tree branches do not fall onto the house.

### Recommendation 3

It is recommended that prior to the shed's removal that protective fencing or other material is placed along the southern elevation to protect the house from accidental damage during the shed removal works, and that following the shed's removal any evidence of the shed along the southern elevation of the house is sympathetically repaired.

### Recommendation 4

It is recommended that all contractors and sub-contractors be advised of the heritage item's significance and their obligations to not damage the item during the course of the proposed works.

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#### Primary Documents

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Jacobs Group (Australia) Pty Ltd 2015, Richmond Bridge Approaches – Short Term Improvements –  
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NSW Heritage Office 2001, Assessing Heritage Significance, Sydney, New South Wales Government.

Shellshear, T 1986 Richmond NSW Townscape Study, unpublished report to Hawkesbury Shire Council.



Your Ref: March/Bosworth Street Intersection Upgrade  
Our Ref:



16 June 2020

Mr Cameron Weller  
Environmental Consultant  
DM Roads  
Transport for NSW  
Locked Bag 928  
NORTH SYDNEY NSW 2059

E-mail: [Cameron.Weller@dmroads.com.au](mailto:Cameron.Weller@dmroads.com.au)

Dear Sir

### **Removal of Fencing for Intersection Upgrade at March/Bosworth Streets, Richmond**

In response to your correspondence dated 13 May 2020 seeking Council's comments regarding the removal of an encroaching boundary fence and other improvements at 35 Bosworth Street, Richmond, please note the following.

Council's Heritage Adviser has reviewed your proposal, attended the site to inspect the fencing, structures and vegetation proposed to be removed, and has advised that from a heritage perspective these may be removed.

However, as these structures are attached to the main heritage building's façade, the removal should ensure that the methodology is such that there is no damage to the main building's façade.

Further, it is recommended that this aspect of the removal occurs under the guidance of a heritage architect and that once the work is complete a copy of Heritage Architect/s report be forwarded to Council with suitable photographs.

This correspondence relates to the heritage considerations associated with the proposal. Any further requisite approvals required for these works (if required) should be obtained by DM Roads. It is also expected that you have fully liaised with the property owner at 35 Bosworth Street, Richmond in terms of the proposal and timing associated with the removal of encroaching fencing, structures and vegetation.

Should you have any queries in this respect do not hesitate to contact me on (02) 4560 4604 or [andrew.kearns@hawkesbury.nsw.gov.au](mailto:andrew.kearns@hawkesbury.nsw.gov.au)

Yours faithfully

**Andrew Kearns** | Manager Strategic Planning | Hawkesbury City Council

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