



ANDREW LONG +
ASSOCIATES

VicRoads

Report for Western Highway Project Impact Assessment Report

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Section 3

Cultural Heritage: Historical

**Authors: Ricky Feldman, Sharne Thomas,
Eden Alley-Porter, Michael Lever**

PO Box 2471 Fitzroy BC
Victoria 3065 Australia
T (030) 9470 9222
F (03) 9416 1240
www.alassoc.com.au
Andrew Long & Associates Pty Ltd
ACN 131 713 409
ABN 86 131 713 409

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The services undertaken by ALA in connection with preparing this Report were limited to those specifically detailed in Section '4. Methodology' of this Report.

The opinions, conclusions and any recommendations in this Report are based on assumptions made by ALA when undertaking services and preparing the Report ("Assumptions"), as specified in Section '4. Methodology' and throughout this Report.

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Executive Summary

VicRoads is progressively upgrading the Western Highway as a four-lane divided highway between Ballarat and Stawell (Western Highway Project). The Western Highway Project consists of three sections, to be constructed in stages. Section 3 (Ararat to Stawell) of the Western Highway Project (Project) is the subject of this report.

On 27 October 2010, the Victorian Minister for Planning advised that an Environmental Effects Statement (EES) would be required to identify the anticipated environmental effects of the Project. VicRoads contracted GHD Pty Ltd to prepare the EES and GHD subsequently commissioned Andrew Long and Associates Pty Ltd (ALA) to undertake a cultural heritage impact assessment for Section 3 of the Project as part of the EES.

Following a multi-criteria assessment of numerous potential alignment options, VicRoads selected an alignment for the Project which was subjected to the risk and impact assessment presented in this report. The proposed alignment is outlined in Section 6.1 of this report.

The cultural heritage evaluation objective of the Project EES is to protect Aboriginal and non-Aboriginal (historical) heritage. This report details the *historical* cultural heritage of the Project area. A separate report has been prepared detailing Aboriginal cultural heritage.

In addition to the existing conditions and values of the Project, the legislation, guidelines and policies described in Section 3 of this report form the criteria suitable to assess the alignment option.

For the non-Aboriginal (historical) cultural heritage aspects of the Project, the relevant draft evaluation objectives outlined in the EES Scoping Requirements are:

- ▶ To protect non-Aboriginal cultural heritage.

The following evaluation criterion was defined to allow for the consideration of all existing and potential values:

- ▶ Impact on registered and potential Heritage Inventory (HI) places, local planning scheme Heritage Overlay (HO) places, Victorian Heritage Register (VHR) places and other historical heritage registers.

The impact assessment undertaken by ALA involved:

- ▶ desktop assessment;
- ▶ heritage register searches;
- ▶ community consultation; and
- ▶ field survey.

A total of ten sites have been identified and assessed as being affected by the construction and operation of the proposed alignment of Section 3. Nine sites are registered with the Heritage Inventory (HI) and two are listed as locally significant with the Department of Sustainability and Environment (DSE). Seven sites have their extents partially within proposed alignment and three have extents entirely within the proposed alignment. A total of ten sites have been identified and assessed as being affected by the construction and operation of the proposed alignment of Section 3. Nine sites are registered with the Heritage Inventory (HI) and two are listed as locally significant with DSE. Seven sites have their site extents partially within proposed alignment and three have extents entirely within the proposed alignment. The proposed construction footprint intersects the periphery of three registered HI site extents

that were unable to be located during the Impact Assessment Survey. They are also considered in the Impact Assessment and Mitigation Measures in recognition that the potential for as yet unidentified subsurface archaeological deposits may exist.

The risks presented by the adverse impacts identified can be managed and mitigated through implementing appropriate mitigation measures outlined in Chapter 7 of this report.

The key outcomes in terms of management and legislative obligations/approvals can be defined in four categories based on risk description, as follows:

Risk Category 1

Where construction encounters a locally significant historical site (i.e.. DSE local listing), a submission to the relevant authority of site's actual extent (DSE) prior to damaging, disturbing or otherwise impacting cultural heritage site.

Risk Category 2

Where construction encounters a known HI listed historical archaeological site, approval is to be sought from Heritage Victoria prior to damaging, disturbing or otherwise impacting the cultural heritage site, alleviating any potential delays resulting from unexpected finds and does not compromise the collection of data.

Risk Category 3

Where construction encounters the site extent of potential, as yet unidentified, subsurface archaeological deposits from a previously registered historical archaeological site (HI), then consultation with Heritage Victoria to implement low level monitoring by a suitably qualified archaeologist is recommended.

Risk Category 4

An Environment Management Plan (EMP) should be prepared to include contingency measures that manage the unexpected discovery of historical cultural heritage sites and features. If the sites cannot be avoided, approval from relevant authorities prior to damaging, disturbing or otherwise impacting cultural heritage sites should be sought.

Based on the risks and impacts identified, historical heritage is impacted by the proposed alignment but these impacts can be mitigated. The proposed alignment has a moderate overall impact on known historical cultural heritage.

1. Introduction

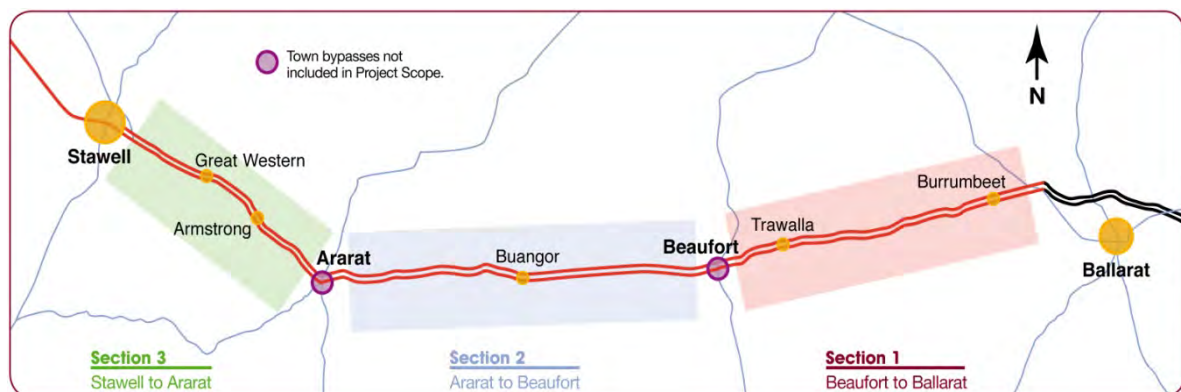
1.1 Background

The Western Highway (A8) is being progressively upgraded as a four-lane divided highway for approximately 110 kilometres (km) between Ballarat and Stawell. As the principal road link between Melbourne and Adelaide, the Western Highway serves interstate trade between Victoria and South Australia and is the key corridor through Victoria's west, supporting farming, grain production, tourism and a range of manufacturing and service activities. Currently, more than 5500 vehicles travel on the highway west of Ballarat each day, including 1500 trucks.

The Western Highway Project consists of three stages, illustrated in Figure 1:

- ▶ Section 1: Ballarat to Beaufort
- ▶ Section 2: Beaufort to Ararat
- ▶ Section 3: Ararat to Stawell.

Figure 1: The Western Highway Project



Works on an initial 8 km section between Ballarat and Burrumbeet (Section 1A) commenced in April 2010 and will be completed in 2012. Construction for Section 1B (Burrumbeet to Beaufort-Carngham Road) commenced in early 2012 and is expected to be completed by June 2014. The last 3 km section from Beaufort-Carngham Road to Smiths Lane in Beaufort (Section 1C) commenced in late 2011 and will finish in 2012. Separate Environment Effects Statements (EESs) and Planning Scheme Amendments (PSAs) must be prepared for both Sections 2 and 3. It is expected that Sections 2 and 3 will be completed and opened in stages through to 2016, subject to future funding.

Section 2 of the Project commences immediately west of the railway crossing (near Old Shirley Road) west of the Beaufort township and extends for a distance of approximately 38 km to Heath Street, Ararat. Construction works for Section 2 commence at McKinnon Lane.

Section 3 of the Project commences at Pollard Lane, Ararat and extends for approximately 24 km to Gilchrist Road, Stawell.

The Section 3 EES will focus on assessment of the proposed ultimate upgrade of the Western Highway between Ararat and Stawell to a duplicated highway standard complying with the road category 1

(freeway) of VicRoads Access Management Policy (AMP1). The project includes a duplicated road to allow for two lanes in each direction separated by a central median.

The Section 3 EES has also considered a proposed interim upgrade of the Western Highway to a highway standard complying with the VicRoads Access Management Policy AMP3. When required, the final stage of the project is proposed to be an upgrade to freeway standard complying with AMP1.

The proposed interim stage of the Project (AMP3) would provide upgraded dual carriageways with wide median treatments at key intersections. Ultimately, the Western Highway is proposed to be a freeway (AMP1) where key intersections would be grade separated, service roads constructed and there would be no direct access to the highway.

To date \$505 million has been committed for the Western Highway Project by the Victorian Government and the Australian Government as part of the Nation Building Program.

Beyond Stawell to the South Australian border, ongoing Western Highway improvements will involve:

- ▶ Constructing two new traffic lanes adjacent to the existing highway, separated by a central median.
- ▶ Converting the existing highway carriageway to carry two traffic lanes in the opposite direction.
- ▶ Constructing sections of new four-lane divided highway on a new alignment.

In addition to separating the traffic lanes, highway safety would be improved with sealed road shoulders, safety barriers, protected turning lanes, intersection improvements, and service lanes for local access at some locations. These improvement works will occur independently of the Western Highway Project, and are funded separately.

Town bypasses of Ararat and Stawell are not included in the current proposals.

The aims/objectives of this Project are to:

- ▶ Provide safer conditions for all road users by:
 - Reducing the incidence of head-on and run-off-road crashes;
 - Improving safety at intersections; and
 - Improving safety of access to adjoining properties.
- ▶ Improve efficiency of freight by designing for High Productivity Freight Vehicles.
- ▶ Provide adequate and improved rest areas.
- ▶ Locate alignment to allow for possible future bypasses of Beaufort and Ararat.

1.2 Project and Study Areas

1.2.1 Project Area

The project area was defined for the purposes of characterising the existing conditions for Section 3 of the Project, and to consider alignment alternatives. The project area encompasses a corridor extending generally up to 1500 metres (m) either side (east and west) of the edge of the road reserve, except around Great Western where the project area extends up to 1800 m (encompassing the extent of new alignment possibilities).

1.2.2 Study Area

A study area was defined for the purpose of this historical cultural heritage assessment that was different to the project area described above. For the purposes of the Existing Conditions assessment the physical footprint of the study area extended 200 m beyond the alignment options that are furthest from the existing Western Highway alignment. In addition, a 100 m Buffer around the alignment options was considered to ensure that spatial data represented in the datasets as point data was not overlooked.

1.3 Proposed Alignment

A multi-criteria assessment of alignment options was conducted based on information from the Existing Conditions assessments. The outcome was the selection of a proposed alignment for further consideration in the EES for Section 3. The proposed alignment and associated construction corridor are the subject of the risk and impact assessment presented in this report and are described in more detail in Section 6. The assessment of alignment options and selection of the proposed alignment is documented in Chapter 5 (Project Alternatives) of the EES, and in the Options Assessment Report (Technical Appendix to the EES).

2. EES Scoping Requirements

2.1 EES Objectives

For the non-Aboriginal (historical) cultural heritage aspects of the Western Highway Project, the relevant draft evaluation objectives outlined in the EES Scoping Requirements is:

- To protect non-Aboriginal cultural heritage.

2.2 EES Scoping Requirements

The EES should identify, assess and document all non-Aboriginal places of cultural significance within the project area. The EES should assess significance in terms of place types, periods and heritage values. In assessing significance, the proponent should consult the Heritage Council Criteria for the Assessment of Cultural Heritage Significance (August 2008), Victoria's Framework of Historical Themes (February 2010) and Guidelines for Conducting Archaeological Surveys (July 2008).

The EES Scoping Requirements for historical cultural heritage aspects are as follows:

- To identify relevant historical information within the vicinity of the project area and provide a thematic history of the area.
- To provide an inventory of any historical cultural heritage places of significance in and within the vicinity of the project area. Survey work may be required to ensure that the inventory is a thorough listing of all historical heritage places in and within the vicinity of the project area.
- To establish the cultural heritage significance of any known or newly recorded sites in consultation with Heritage Victoria and the Ararat Rural City Council and Northern Grampians Shire Council.
- To identify and assess the potential effects of the project on known and recorded sites, including whether the project would affect the setting and context of heritage places.
- To identify measures to avoid, mitigate or manage potential effects on known and recorded places of cultural heritage significance. Include details of any proposed measures such as project redesign, site protection measures, site recording and documentation, funding options and relocation procedures, if necessary, and any requirements under either the Ararat or Northern Grampians Planning Schemes and the *Heritage Act 1995*.
- To identify the residual effects of the project on historical cultural heritage and values in or nearby to the project area.

2.3 EES Evaluation Criteria

The evaluation criteria were defined to allow for the consideration of all existing and potential values in the criteria.

- Impact on registered and *potential* Heritage Inventory (HI) places, local planning schemes Heritage Overlay (HO) places, Victorian Heritage Register (VHR) places and other Historical Heritage Registers.

3. Legislation, Policy and Guidelines

The following legislation, policies and guidelines detail the requirements of this cultural heritage study and future investigations regarding historical heritage.

3.1 Burra Charter

The Burra Charter and its accompanying guidelines define the basic principles, processes and practices upon which statutory assessments of heritage significance in Australia are based. The Charter is not a statutory document, rather it informs the principles by which field work and consideration of sites (significance and registration) is undertaken. The general assessment criteria are as follows:

- association with special events, developments or phases;
- rarity due to association with a distinctive way of life, custom, process, land use, function or design no longer practiced;
- importance for demonstrating principal characteristics of a particular type or class of human activities (for example stating a stone quarry is a classic example of its type as it has all the features typically associated with utilised stone sources in good condition);
- aesthetic value to the local community (for example as a landmark);
- value for demonstrating a particular technical or creative process;
- strong or special association with a particular community or ethnic group for social, cultural or spiritual reasons; and
- special association with a famous person or group of people.

Generally these criteria can be grouped into three main categories: social (I), scientific (II) and historical (III), depending on the nature of a given place or item.

3.2 Commonwealth

Amendments introduced in January 2004 to the *Environment Protection and Biodiversity Conservation (EPBC) Act 1999*, together with amendments to the Environment Protection and Biodiversity Conservation Regulations 2000 (the 'Regulations'), introduced a new national cultural heritage management regime. The Regulations defined a suite of Commonwealth Heritage Values / Commonwealth Heritage Management Principles and National Heritage Values / National Heritage Management Principles. The Heritage Values derive from aesthetic, historic, scientific or social significance or other special value for future generations as well as for the present community. The Heritage Management Principles are broad principles which provide a guiding framework for excellence in managing heritage properties, and address aspects of the management of heritage properties including objectives, standards, processes and practices.

The amended legislation also established two new lists or registers for heritage places at Commonwealth/National level, the National Heritage List (for places of outstanding cultural heritage significance to Australia) and the Commonwealth Heritage List (for significant heritage places owned or controlled by Commonwealth Government organisations). The National Heritage List criteria require that a place has outstanding value to the Australian community as a whole, whereas the Commonwealth Heritage List can contain heritage items that have national, State, Territory or local heritage significance.

3.2.1 National Heritage List

The National Heritage List is a list of places of outstanding heritage significance to Australia, and comprises natural, historic and indigenous places. Unlike the Commonwealth Heritage List places, there is no requirement that National Heritage List places be Commonwealth owned. Places that are included in the National Heritage List are subject to management and approvals requirements detailed in the EPBC Act and its regulations.

3.2.2 Commonwealth Heritage List

To be considered for inclusion in the Commonwealth Heritage List, a place must be owned or leased by the Australian Government. Places that are included in the Commonwealth Heritage List are subject to management and approvals requirements detailed in the EPBC Act and its regulations.

3.2.3 Register of the National Estate

The Register of the National Estate (RNE) is a national inventory of important natural, Indigenous and historic places throughout Australia. Initially established under the now-repealed *Australian Heritage Commission Act 1975*, but retained under the amended EPBC Act, places on the Register that are in Commonwealth areas, or subject to actions by the Australian Government, are protected under the EPBC Act by the same provisions that protect Commonwealth Heritage places. The Register of the National Estate is the predecessor to the National Heritage List. Following amendments to the *Australian Heritage Council Act 2003*, the Register was frozen on 19 February 2007, which means that no new places can be added, or removed. The Register ceased as a statutory register in February 2012.

3.3 State

3.3.1 Heritage Act 1995

The main purpose of this Act is to provide for the protection and conservation of places and objects of cultural heritage significance and the registration of such places and objects through the administering agency of Heritage Victoria. There are extensive enforcement provisions which apply in relation to unlawful activities to registered places, objects, archaeological sites, historic shipwrecks, shipwreck relics and protected zones.

3.3.2 Victorian Heritage Register

The Victorian Heritage Register (VHR) lists the State's most significant heritage places and objects. These can be searched on the Victorian Heritage Database. The guiding principle for places in the Register is to protect and conserve as much of the fabric of the place and the relics/ artefacts as is possible. There are enforcement provisions for unlawful activities in relation to registered places and objects.

3.3.3 Heritage Inventory

The Heritage Inventory (HI) includes all known historical archaeology sites in Victoria. It includes information about sites and artefacts, including a description and assessment of significance. The Heritage Inventory enables Heritage Victoria to record and monitor sites that are not considered to be of State significance (which are included in the Victorian Heritage Register) or where the significance is unknown.

For places listed in the Heritage Inventory the guiding principles of recording, excavating and monitoring are the usual methods of assessing and managing the heritage values of a site. Any activities that would result in the excavation or disturbance to an archaeological site or its objects included on the Heritage Inventory must have first obtained the consent of Heritage Victoria.

Note that all archaeological sites more than 50 years in age in Victoria are protected by the *Heritage Act 1995*, regardless of whether they are included in the Heritage Inventory.

3.3.4 Department of Sustainability and Environment (DSE) List

The Department of Sustainability and Environment has a listing of heritage places with significance ratings. Whilst this list has no legislative status or statutory protection, it is consulted to verify whether the sites are required to be registered elsewhere (e.g. registered for the Heritage Inventory or recommended for inclusion on the Heritage Overlay).

3.4 Planning Scheme Heritage Overlays

For all municipalities in Victoria, the requirements for land use, development and protection are covered by land use planning controls which are prepared and administered by State and local government authorities through planning schemes. The legislation governing such controls is the *Planning and Environment Act 1987*. Places of heritage significance to a locality can be protected by a Heritage Overlay. Heritage Overlays are contained within planning schemes and assist in protecting the heritage of a Local Government Area (LGA). Heritage Overlays include places of local significance as well as places included in the VHR. There are two LGAs within the Section 3 study area: Ararat Rural City and Northern Grampians Shire.

4. Methods

4.1 Existing Conditions

A report documenting the Cultural Heritage (Aboriginal and Historical) Existing Conditions for the Western Highway Project Section 3 EES was initially prepared by Andrew Long and Associates Pty Ltd in September 2011 to assist the alignment options assessment process and thereby guide development across the Western Highway Project. The existing conditions data has been updated for the preparation of this cultural heritage impact assessment.

Research on existing conditions was conducted through:

- ▶ desktop assessment;
- ▶ Geographic Information System (GIS) datasets;
- ▶ site inspection; and
- ▶ community consultation.

4.1.1 Desktop Assessment

A desktop assessment assisted the selection of a preferred alignment option and thereby guided development across the Western Highway Project. The purpose of the desktop review was:

- ▶ to determine the level of prior cultural heritage assessment (for example the 2008 Noble et. al. report 'Western Highway Duplication: Burrumbeet to Stawell, Cultural Heritage Due Diligence') of the study area and the surrounding region;
- ▶ to determine the presence of registered historical heritage places within the study area and the surrounding region; and
- ▶ to determine the environmental context of the study area with regard to landform.

The desktop assessment report considered all known heritage listings and associations, including but not limited to:

- ▶ Victorian Heritage Register
- ▶ Heritage Inventory
- ▶ Register of the National Estate
- ▶ Commonwealth Heritage List
- ▶ National Heritage List, and
- ▶ Planning Scheme Heritage Overlays:
 - Ararat Rural City
 - Northern Grampians Shire.

4.1.2 GIS Datasets and Methodology

To inform the existing conditions assessment a number of spatial datasets were consulted (Table 1). The intersection of the various ESRI ArcGIS datasets was applied specifically to the alignment options in order to determine the number of heritage places and administrative elements impacted by the alignment options. For polygon data, the surface area of areas of intersection was calculated.

Table 1: Spatial datasets consulted for cultural heritage existing conditions

Dataset	Description
Heritage Register gda94_region	Heritage Register polygons, Heritage Victoria
Heritage Inventory gda94_region	Heritage Inventory polygons, Heritage Victoria
Heritage Inventory delisted gda94_region	Delisted Heritage Inventory polygons, Heritage Victoria
heritageoverlay	Heritage Overlay polygons, Heritage Victoria

4.1.3 Rationale for Historical Heritage Assessment

The impact the alignment options had on registered and potential Heritage Inventory (HI) places, planning scheme Heritage Overlay (HO) places, Victorian Heritage Register (VHR) places and other historical heritage registers (e.g. DSE) was determined by the:

- ▮ inspection of previously registered sites and confirmation of their extents, and the
- ▮ integration of geo-referenced parish maps, in consultation with local historical societies, community members, and local councils.

4.1.4 Site Inspection Survey

A site inspection survey to confirm the existence of previously registered historic places within the Western Highway Project study area was undertaken by ALA historical archaeologists Eden Alley-Porter and Helene Athanasiadis on 13 -16 September 2011.

The extent of previously registered places was examined and their significance rating assessed. Unregistered historical places were also documented where possible and recommendations made for further assessment.

The results of the site inspection survey are presented in the Historical Cultural Heritage Site Assessment Table (Options Assessment Report Section 3, Appendix 7) and their spatial distribution represented in the Historical Cultural Heritage Site Maps (Options Assessment Report Section 3, Appendix 8). The Historical Cultural Heritage Site Assessment Table was consulted for the Options Assessment Ratings Table (Options Assessment Report Section 3, Appendix 1).

4.1.5 Research

The following sources were consulted at Public Record Office Victoria for the initial research stages of the Western Highway Project:

- ▮ Parish maps:Ararat, Concongella, Concongella South, Mokepilly, Stawell
- ▮ VPRS 625 Selection Files, Sections 19 and 20, Land Act 1869*
- ▮ VPRS 626 District Selection Files, Sections 19 and 20, Land Act 1869*
- ▮ VPRS 627 Land Selection Files, Section 31, Land Act 1869*
- ▮ VPRS 629 Land Selection Files, Section 33, Land Act 1869*
- ▮ VPRS 5920 Pastoral Run Files.

Numerous individual files within these series were accessed and reviewed. These form the basis of a Land Use History Report (Options Assessment Report Section 3, Appendix 9) undertaken by historians Sarah Rood and Fiona Poulton.

4.1.6 Community Consultation

In addition to primary source research and prior to the site inspection survey described above, consultation meetings with relevant local Councils and historical societies were undertaken by historians Sarah Rood and Fiona Poulton. The purpose of this consultation was threefold – to present the existing historical research, seek feedback on this research and identify any additional sites that could potentially be impacted by the proposed highway duplication.

In order to present the existing research, parish maps of the area were geo-referenced and overlaid with maps of the proposed alignments. This allowed the research to be visually presented to the local community and Council staff who were being consulted. A tabulated summary of the early ownership and land use history of the parcels of land potentially impacted by the proposed alignment options, was also presented during consultation. A log of the consultation is presented in Appendix A of this report.

Large format maps were also used to note the approximate locations of additional historical sites identified during the consultations. These sites were cross referenced with information gathered during the research phase as well as additional secondary source material that was made available during the community consultations. As a result, it was possible to verify the likely existence of some of the identified sites and whether additional research would be worthwhile. Information about the identified sites can be found in the Options Assessment Report Section 3, Appendix B.

4.1.7 Unregistered Sites

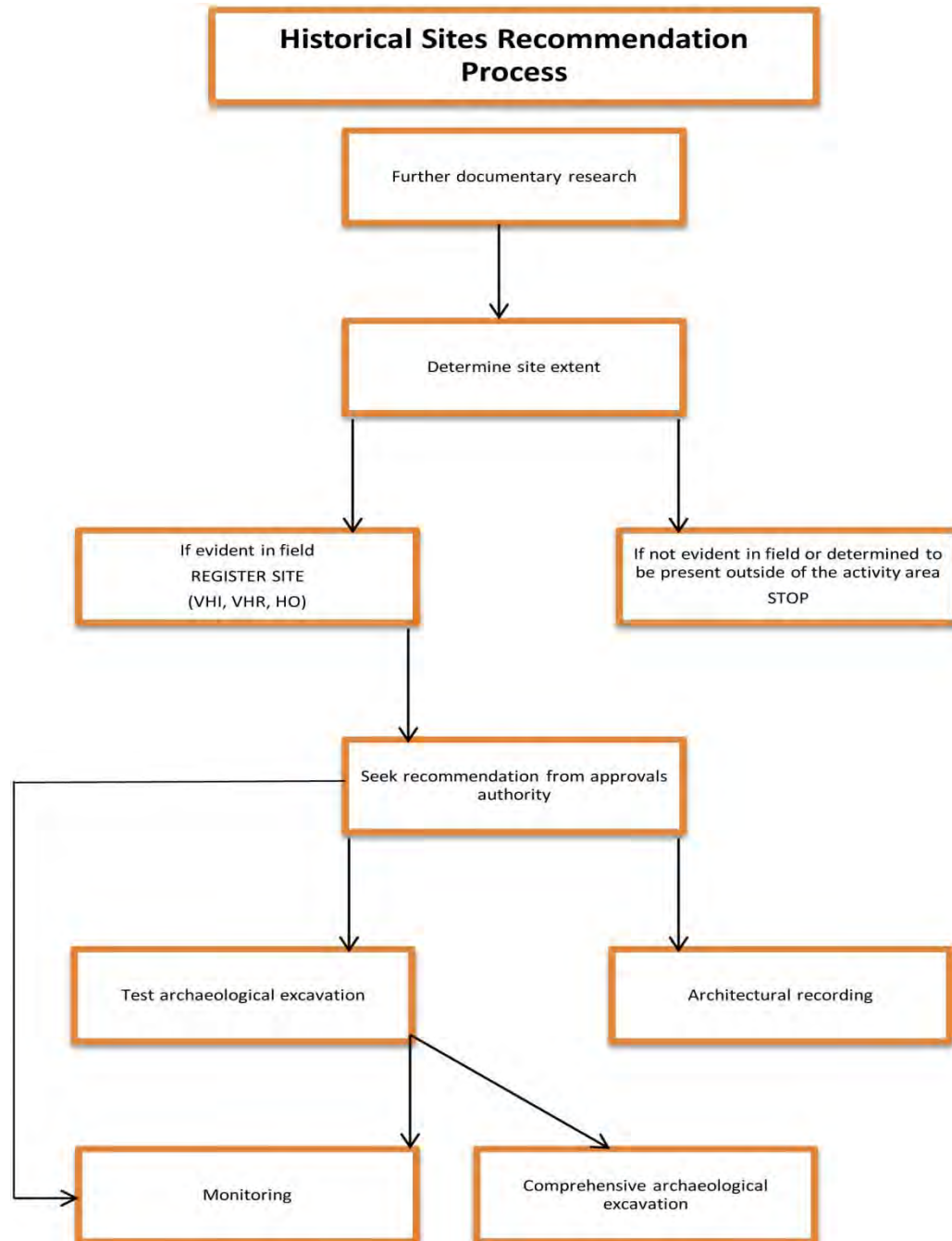
Following the site inspection survey of existing registered sites within the study area, archival research and community consultation, two new types of unregistered sites were identified and added to the existing conditions Historical Cultural Heritage Site Assessment Table:

- 1) Potential sites that were cited locations from community consultation (U); and
- 2) Potential sites where there was reference to a built structure within the historical record (HR).

These potential sites were mapped in accordance with community identification (for U sites) and relevant allotment parcels for (HR sites).

A targeted site inspection of a number of these sites was undertaken by members of the project team and David Bannear, Heritage Victoria, on 24 November 2011. Following this field trip, a process for considering sites and potential sites affected by the shortlisted alignment options under the Impact Assessment was devised and is presented in Figure 2.

Figure 2: Historical Cultural Heritage Recommendation Process



4.2 Impact and Risk Assessment

The following impact assessment methodology was used to determine the historical cultural heritage impact pathways and risk ratings for the Project:

1. Determine the 'impact pathway' (how the Project impacts on a given historical cultural heritage value).
2. Describe the 'consequences' of the impact pathway.
3. Determine the maximum credible 'consequence level' associated with the impact. Table 2 provides guidance criteria for assigning the level of consequence. The method for defining these criteria is described in Section 4.2.1.
4. Determine the 'likelihood' of the consequence occurring to the level assigned in step 3. Likelihood descriptors are provided in Table 3.
5. Using the Consequence Level and Likelihood Level in the Risk Matrix in Table 4 to determine the risk rating.

Table 2 Historical Cultural Heritage Impacts Consequence Table

Insignificant	Minor	Moderate	Major	Catastrophic
No impact to heritage sites. Sites remain unaffected.	Disturbance to a locally significant heritage feature or site (HO or DSE local listing).	Complete removal of heritage site of local significance (HO); and/or Disturbance of a historical heritage inventory site (HI).	Disturbance of a heritage site of State or National significance (VHR).	Complete removal of a heritage site of State or National significance (VHR).

Table 3 Likelihood Guide

Descriptor	Explanation
Almost Certain	The event is expected to occur in most circumstances
Likely	The event will probably occur in most circumstances
Possible	The event could occur
Unlikely	The event could occur but not expected
Rare	The event may occur only in exceptional circumstances

Table 4 Risk Matrix

Likelihood	Consequence Level				
	Insignificant	Minor	Moderate	Major	Catastrophic
Almost Certain	Low	Medium	High	Extreme	Extreme
Likely	Low	Medium	High	High	Extreme
Possible	Negligible	Low	Medium	High	High
Unlikely	Negligible	Low	Medium	Medium	High
Rare	Negligible	Negligible	Low	Medium	Medium

4.2.1 Consequence Criteria

Consequence criteria (Table 2) range on a scale of magnitude from “insignificant” to “catastrophic”. Magnitude was considered a function of the size of the impact; the spatial area affected and expected recovery time of the environmental system. Consequence criteria descriptions indicating a minimal impact over a local area, and with a recovery time potential within the range of normal variability were considered to be at the insignificant end of the scale. Conversely, catastrophic consequence criteria describe scenarios involving a very high magnitude event, affecting a State-wide area, or requiring over a decade to reach functional recovery.

In relation to historical heritage:

- ▶ Insignificant Consequence was considered only where no impacts to heritage sites are proposed and those sites remain unaffected by construction.
- ▶ Minor consequence was considered where disturbance to a locally significant heritage feature or site, HO or Department of Sustainability and Environment (DSE) local listing would be affected by construction.
- ▶ Moderate consequence was considered where there would be complete removal of heritage site of local significance (HO); and/or the disturbance of a heritage site of State significance (HI).
- ▶ Major consequence was considered where there would be complete removal of a heritage site of State significance (HI); and/or the disturbance of a heritage site of State or National significance (VHR and/or NHL).
- ▶ Lastly, a Catastrophic consequence was considered to be the complete removal of a heritage site of State or National significance (VHR and/or NHL).

5. Existing Conditions

A comprehensive Land Use History Report is presented in Appendix 9 of the Options Assessment Report for the Section 3 EES of the Western Highway Project and was initially prepared by Andrew Long and Associates Pty Ltd in September 2011 to assist the alignment options assessment process and thereby guide development across the Western Highway Project. The existing conditions data has been summarised for the preparation of this cultural heritage impact assessment.

This information is described from south to north along the proposed alignment route and assisted in formulating subsistence and occupation patterns in the study area. An analysis of the documented archaeological record is also provided, summarising regional and local reports, and studies specifically undertaken on the study area in relation to this project.

5.1 A Review of the Land Use History of the Study Area

The area surrounding the Western Highway between Stawell and Ararat was the subject of at least two decades of tension between squatters, then settlers, miners and townspeople. The location of Stawell was disputed for some time as to whether its current location, or that of the Pleasant Creek mines should be the primary local township. The first European explorers to travel through this region had been Major Thomas Mitchell, surveyor-general of New South Wales, and his party in 1836, while on an expedition to chart tributaries of the Murray River. European settlement in the region began soon after, in the 1840s, with vast expanses of pastoral land taken up by squatters who used the land for pastoral purposes, bringing with them thousands of livestock –primarily sheep. The proposed alignment passes directly through, or nearby to, three major historical pastoral holdings:

- ▀ Concongela – 24,000 hectares from slightly north of Stawell to slightly north of the town of Great Western in its south. This was first claimed in 1841 by John Allan (after whom is named Allanvale to the east of the Western Highway, 12 kilometres north of Ararat).
- ▀ Sinclair – 6,600 hectares from slightly north of Great Western to slightly north of Ararat in its south. This was taken by E. L. McKeand and Son in 1849.
- ▀ Burrumbeep – 44,500 hectares from slightly north of Ararat southwards. This was taken by James Winter Ross and William McGill in 1848.

As part of the conditions for holding such runs, land owners constructed homesteads and outstations on them and used their land primarily for grazing purposes (Spreadborough and Anderson 1988).

The main road linking the towns of Ballarat and Stawell was first constructed during the gold rushes of the 1850s, which attracted a huge influx of miners into western Victoria. This road eventually became known as the Western Highway. A comparison of present day maps and parish maps dating from the 19th century demonstrates that the road followed much the same route as it does today.

The gold rushes led to the foundation of settlements near the major diggings in this area such as at Pleasant Creek near Stawell. Smaller towns such as Armstrong and Great Western developed near lesser finds, and as staging posts en-route to settlements such as Stawell. The first gold to be found in the Ararat area was in 1854. Gold diggers again flocked to the region in their thousands after Chinese diggers discovered the rich Canton Lead at Ararat a few years later in 1857. In 1858 a further rush was triggered when gold in quartz was discovered four kilometres south of Stawell at Deep Lead, and on the

16th August 1864, the Argus reported a gold rush five kilometres north of Stawell, at Pleasant Creek on Concongela Hill in the Concongela run. These later rushes have been depicted as more frantic than earlier rushes in Ballarat, as the large number of miners then in Victoria despaired of making their fortunes and grew increasingly desperate to do so. Mining saw great change to the natural landscape, with large quantities of trees logged to provide structural timber and fuel for the mines, miners' residences, and the increasing number of buildings constructed to provide for trade and infrastructure.

The incursion of miners and accompanying traders and settlers was the cause of significant friction between miners, the pre-existing squatters and new settlers. Restrictions had been placed on the sale of land within 12 kilometres of gold workings and by invoking these restrictions miners could and did prevent sale of land along the entire distance between Stawell and Ararat. This, added to the generally poor nature of soil in the area, rendered it difficult to establish agriculture in the region beyond grazing of livestock – predominantly sheep for wool.

Against local wisdom, the undulating thinly soiled slopes proved suitable for viticulture, with migrant French and German viticulturists establishing wineries in areas such as Great Western, including St Ethel's, Best's 'Great Western' and Hockheim wineries - subsequently purchased by Seppelts. These institutions were among the founding houses of Australian winemaking. Joseph Best well encapsulates many of the above listed trends. Best moved to Great Western in search of gold in 1858 and established a livestock dealership there. He battled miners to purchase land, in 1865 planted his first grape vines and within eight years had won a gold medal for his vintage at the London International Exhibition. With the decline of the gold rushes, Best was able to use the expertise of miners to excavate large underground wine cellars and tunnels which endure to the present. Surviving elements of St Ethel's winery have also been identified as of enduring heritage value. The grape glut of the early 1900's saw many of these vineyards ploughed into grazing land and turned to wool production.

A further cause of friction and a distinctive feature of gold-rush immigration to the area was the presence of large numbers of Chinese miners –such as the discoverers at Ararat of the Canton Lead (named after their port of origin). Subject to immigration taxation, inequitable treatment by the law and, outright discrimination, Chinese miners tended to focus on reworking diggings that had been abandoned as exhausted by Europeans. Evidence of Chinese mining activities persists throughout the area, notably in shaft and water race remains at Garden Gully –almost midway between Stawell and Ararat. Despite virulent prejudice, those Chinese who remained in the area after gold ran out made themselves a local name as market gardeners and reliable station and farm-hands.

The arrival of the North Western Railway in the mid-1870s was another major factor in the development of towns in the study area, enabling ferrying of people and goods, including machinery, produce, livestock and building materials to and from Melbourne. The line from Melbourne to Ararat opened on 5 April 1875, and was extended to Stawell in 1876. Eleven years later, in 1887, the first Melbourne – Adelaide express passed through Stawell, with the area now joined to two colonial capital cities. As road and rail conduits between Melbourne, the north-west, and Adelaide, Ararat and Stawell subsequently developed as important regional hubs, with the often hilly land between them continuing as grape and wool growing areas.

5.2 Review of Reports about Historical Cultural Heritage in the Region

Brumby, Dorothy. Jackson, Betty. King, Dorothy. Kingston, Alan. Loats, Cliff. Mason, Margaret. 1990. Historical Survey, Shire of Stawell and Hall's Gap Historical Societies.

In June 1990 Brumby et al. completed this wide-ranging report over the entirety of the then Stawell Shire, the majority of which does not touch on items of heritage within the study area, and does not include relevant items otherwise unlisted. The authors noted an almost total unwillingness by local landowners to contribute information, resulting in the study being nearly exclusively concerned with Crown Land.

Clarke, Vincent, Murphy, Andrea. 1999. Western Highway Armstrong Deviation Highway Realignment - Archaeology and Heritage Study Unpublished Report to VicRoads.

Clarke and Murphy undertook to report on the archaeological and heritage values, both Aboriginal and European, for an area proposed to be impacted by highway realignment associated with the railway crossing, at Armstrong. The study extent measured some four kilometres along the Western Highway at the then Armstrong railway underpass, and as such is very limited in scope. The authors noted the local history of squatting, with the township named after a prominent local squatter, John Armstrong. Gold rush mining was intense in the area, and a Toll Gate was erected on the highway at Armstrong. This was subsequently relocated to the Ballarat Mechanics Institute as a historical display, where it presently remains.

Murphy, Andrea, Di Fazio, Bianca. 2003. Great Western Overtaking Lane, Cultural Heritage Assessment. A Report to VicRoads.

This report concerns archaeological and heritage values, both Aboriginal and European, of a two kilometre stretch of the Western Highway at Great Western. The authors noted 11 previously recorded historical heritage sites within a five kilometre radius of their study area, but did not identify any further sites in the vicinity of the proposed activity.

Clark, Vincent. Dolling, Wendy. Ellis, Adrienne. Langberg, Veronica and Anna Stevens. 2002. Historical Sites at Armstrong in Western Victoria. Victorian Heritage Inventory Sites H7423-071, H7423-072, H7423-073, H7423-062. A Report on Archaeological Investigations. A Report To VicRoads. Vols I & II.

This report concerns intensive archaeological investigation of four registered sites in the vicinity of Armstrong and the Western Highway, prior to their destruction. They were the Garden Gully Road Ruin Site, Armstrong Brick Ruins, Armstrong Hotel and Armstrong Graves – initially thought to be a burial site. All were shown to be ruins of structures generally dating from the 1860s, and the purported grave site was found to be the remains of a garden. Given the ruinous nature of these sites, recommendations were constrained to archaeological monitoring during eventual demolition.

Noble, A., H. Kiddell and V. Clark. 2008. Western Highway Duplication: Burrumbeet to Stawell, Cultural Heritage Due Diligence. A report to VicRoads.

In October 2008 Noble et al. undertook a cultural heritage due diligence for the Western Highway Duplication from Burrumbeet to Stawell, a distance of some 100 kilometres. This included a comprehensive search and summary of previous works on heritage in the area.

Noble et al. noted that there were a number of unrecorded historic sites that were observed during the field inspection which may be impacted by the proposed road duplication. Further research in to these observations was undertaken by Andrew Long and Associates and considered for the alignment options assessment in September 2011 and current impact assessment

Jacobs, Wendy. Johnson, Vicki. Rowe, David and Phil Taylor. 2004. Northern Grampians Shire Heritage Study Stage 2 (Vols 1-14). Report to Northern Grampians Shire.

Jacobs et al. is an extremely comprehensive and lengthy report on European Heritage in the Northern Grampians Shire. This is a large area, extending from the Glenelg River in the south west, to the Avoca River in the north east. Along the Western Highway this Shire extends from Armstrong in the south west to near Dadswells Bridge in the north west and does not include the Western Highway alignment from Ararat to Armstrong. The report identified, studied and assessed 1,415 places including 56 archaeological sites. Those of relevance to this study have been identified in this report. The great majority of these are within townships. The study identified ten Heritage Precincts, primarily in Stawell and St Arnaud, but included the Great Western Heritage Precinct, at Great Western, which falls within the parameters of this study (Jacobs et al. 2004: viii). The history of this precinct is succinctly but comprehensively provided (Jacobs et al. 2004: 138-152), with note taken of the centrality of the Western Highway to the precinct. Describing built, natural, planted and design heritage features, the report considers Great Western to be of local heritage significance as a largely preserved 19th –early 20th century township.

5.3 Registered and Potential Historical Cultural Heritage Sites in the Existing Conditions Study Area

In the Existing Conditions Study Area of Section 3 the historical heritage sites listed in Table 5 were identified as a result of:

- ▮ inspecting previously registered sites and confirmation of their extents;
- ▮ the integration of geo-referenced parish maps;
- ▮ historical archival research; and community consultation.

Table 5: Number of Registered and Potential Historical Cultural Heritage Sites in the Existing Conditions Study Area

Registered Historical Cultural Heritage Sites	Number	Significance
National Heritage List	0	National
Commonwealth Heritage List	0	National
Register of the National Estate <i>Seppelts Champagne Cellars</i> <i>Seppelts Winery Shaft House</i>	2	National
Victorian Heritage Register (VHR) : <i>H0338 Seppelts Champagne Cellars</i>	1	State
Heritage Inventory (HI) <i>H7423-0027 Great Western Lead Mine</i> <i>H7423-0060 Armstrong No.1 ruins site</i> <i>H7423-0061 Armstrong No 2</i> <i>H7423-0062 Garden Gully Road Ruin</i> <i>H7423-0063 Garden Gully Road House Site No.1</i> <i>H7423-0064 Garden Gully Road House Site No. 2</i> <i>H7423-0065 Armstrong Alluvial Gold Mining Area No. 1</i> <i>H7423-0066 Armstrong Alluvial Gold Mining Area No. 2</i> <i>H7423-0071 Armstrong Brick Structure Ruins</i> <i>H7423-0072 Armstrong Hotel Ruins</i> <i>H7423-0073 Armstrong Graves</i> <i>H7423-0075 St Peter's Vineyard</i>	12	Local
Heritage Overlay (HO): <i>HO1 Seppelts Champagne Cellars</i> <i>HO112 Fountain Head Brewery Residence</i>	2	Local
DSE List <i>Railway Bridge, Between Ararat And Great Western</i> <i>Boiler Setting</i> <i>Sisters Rock Graffiti Site</i> <i>Primary School #860</i> <i>Brandt's Plough Memorial, Great Western</i> <i>Great Western Cemetery</i> <i>Great Western Lead Mine (H7423-0027)</i>	7	Not assessed Not assessed Local Local Local Local Local
Potential Historical Cultural Heritage Sites (Unregistered)		
U Cited locations from community consultation	13	
Historical references to built structures	8	
TOTAL (Sites occurring in multiple registers only counted once)	42	

5.4 Registered and Potential Historical Cultural Heritage Sites in the Short-listed Alignment Study Area

The options assessment process reduced the number of alignments considered for impact assessment from six to one. At the completion of the options assessment process it was determined that the proposed alignment would not impact on the previously registered sites of the Seppelts Champagne Cellars (VHR/RNE/HO); Seppelts Winery Shaft House (RNE); St Peter's Vineyard (HI); Fountain Head Brewery Residence (HO); and the following DSE listed sites:

- Railway Bridge, between Ararat and Great Western
- Boiler Setting
- Sisters Rock Graffiti Site
- Primary School #860
- Brandt's Plough Memorial, Great Western
- Great Western Cemetery
- Weighbridge, Great Western
- Railway Bridge, Great Western, and
- Lock-Up (Former), Great Western.

The total number of sites within the proposed alignment study area was reduced from 42 to 18 (Table 6). These sites were subject to comprehensive background research and an Impact Assessment Survey to verify the existence of potential sites and, if verified, record their extents. The sites were assessed in the detail described in the Historical Sites Recommendations Process (Figure 2).

Sisters Rock Graffiti Site (DSE)

At the completion of the options assessment process it was determined that the proposed alignment would not impact on the previously registered DSE site of Sisters Rock Graffiti. It was therefore not considered in the Impact Assessment Survey. The final proposed alignment intersects the western boundary of the site's registered DSE extent, the property parcel. The site therefore is considered in the Impact Assessment and Mitigation Measures.

Map 1 illustrates the registered historical heritage sites within the study area. It includes those not impacted by the proposed alignment as a result of the options assessment process (apart from Sisters Rock), the registered sites unable to be located by the Impact Assessment field survey and the sites subject to impact assessment and mitigation measures.

Map 1 Registered Historical Heritage Sites within the Study Area

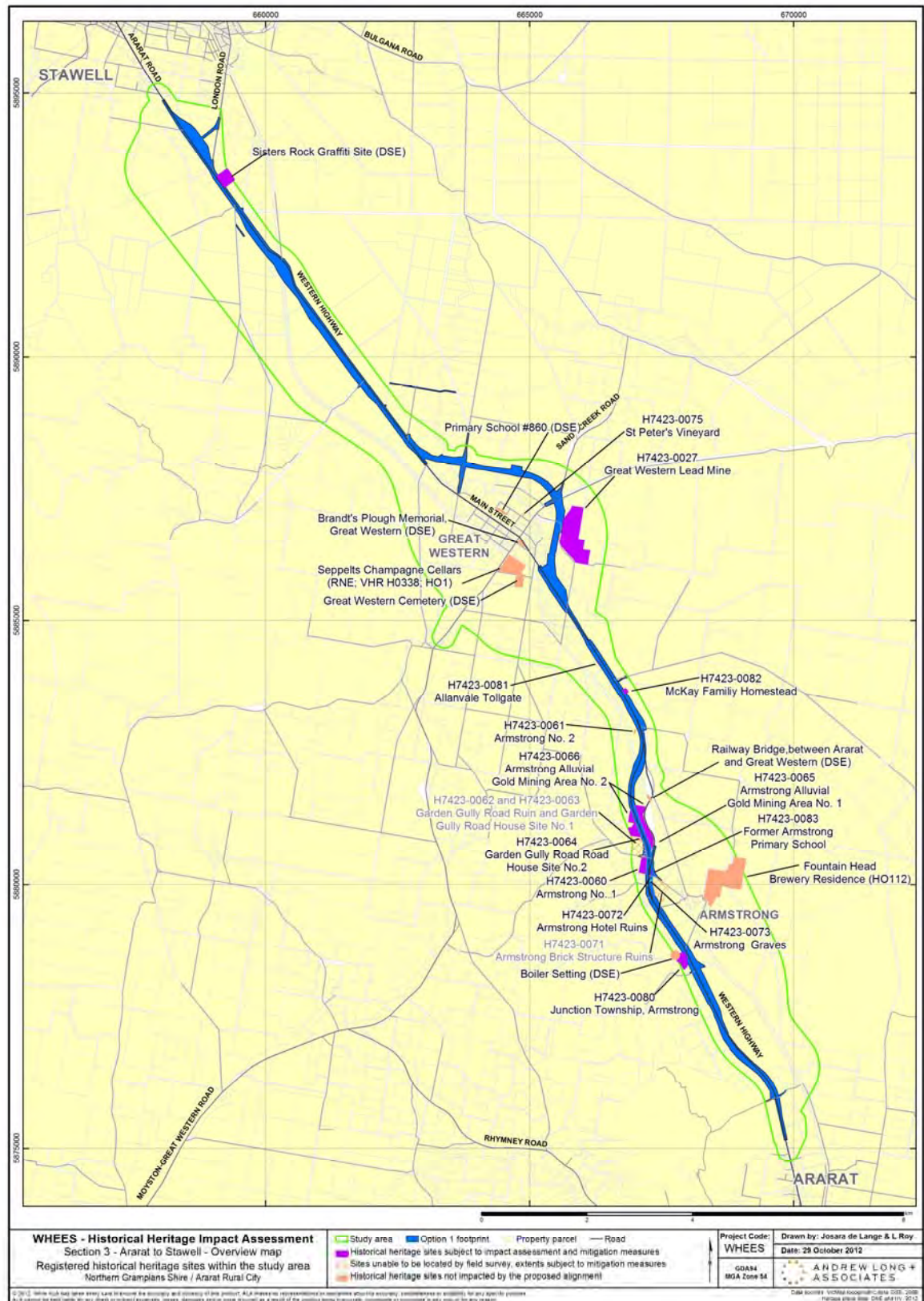


Table 6: Registered and Potential Historical Cultural Heritage Sites in the Proposed Alignment Study Area

Registered Historical Cultural Heritage Sites	
Heritage Inventory (HI):	11
H7423-0027 Great Western Lead Mine	
H7423-0060 Armstrong No.1 ruins site	
H7423-0061 Armstrong No 2	
H7423-0062 Garden Gully Road Ruin	
H7423-0063 Garden Gully Road House Site No.1	
H7423-0064 Garden Gully Road House Site No. 2	
H7423-0065 Armstrong Alluvial Gold Mining Area No. 1	
H7423-0066 Armstrong Alluvial Gold Mining Area No. 2	
H7423-0071 Armstrong Brick Structure Ruins	
H7423-0072 Armstrong Hotel Ruins	
H7423-0073 Armstrong Graves	
DSE List:	2
Great Western Lead Mine (H7423-0027)	
Sisters Rocks Graffiti Site	
Potential Historical Cultural Heritage Sites (Unregistered)	
U Cited locations from community consultation	7
Historical references to built structures	0
TOTAL (Sites occurring in multiple registers only counted once).	18

The results of the Impact Assessment Survey were discussed with Heritage Victoria in a workshop on 24 April 2012 and recommendations from Heritage Victoria are described in Table 7 and summarised below:

- Three existing HI sites were unable to be located during the survey (H7423-0062 Garden Gully Road Ruin, H7423-0063 Garden Gully Road House Site and H7423-0071 Armstrong Brick Structure Remains and their site registration was updated to reflect this.
- Two existing HI sites (H7423-0061 Armstrong No.2, H7423-0064 Garden Gully Road House Site No.2) had their place extents amended following survey and were reregistered with Heritage Victoria. As a result, their site extents are outside the proposed alignment. (See Maps 12-14 Appendix B).
- One existing HI site (H7423-0073 Armstrong Graves) was incorporated in to the site registration H7423-0072 Armstrong Hotel Ruins as the survey determined the features to be garden beds forming part of the Armstrong Hotel complex rather than grave sites as previously recorded.
- Five of the previously unregistered sites required listing on the HI as four new individual sites: H7423-0080 Junction Township site, Armstrong, H7423-0083 Former Armstrong Primary School, H7423-0081 Allanvale Tollgate site and H7423-0082 McKay Family Homestead.
- Two of the previously unregistered sites (St. Ethel's Winery and Salinger's Winery) and were nominated for submission to Council recommending inclusion on the Heritage Overlay (HO). Both sites are outside the proposed alignment (See Map 15 Appendix B).

Of the sites listed in Table 7, six archaeological sites, all registered on the Heritage Inventory (HI) and one with a local DSE listing, have their site extents partially within proposed alignment. One DSE listed site not included in the Impact Assessment Survey, Sisters Rock Graffiti Site also has its registered extent partially within the proposed alignment:

H7423-0027	(Former) Great Western Lead Mine (HI and DSE listed)
H7423-0060	Armstrong No.1 ruins site
H7423-0065	(Former) Armstrong Alluvial Gold Mining Area No. 1
H7423-0066	(Former) Armstrong Alluvial Gold Mining Area No. 2
H7423-0080	Junction Township site, Armstrong
H7423-0082	McKay Family Homestead site
DSE	Sisters Rock Graffiti Site

Three archaeological sites, all registered on the Heritage Inventory (HI), have their site extents entirely within proposed alignment:

H7423-0072	Armstrong Hotel Ruins
H7423-0083	Former Armstrong Primary School
H7423-0081	(Former) Allanvale Tollgate site.

Two registered sites whose surface extent was not detectable during the Impact Assessment Survey have their registered extents partially within the proposed alignment:

H7423-0062	Garden Gully Road Ruin
H7423-0063	Garden Gully Road House Site No.1

One registered sites whose surface extent was not detectable during the Impact Assessment Survey has its' registered extent immediately adjacent to the proposed alignment:

H7423-0071	Armstrong Brick Structure Remains
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Detailed documentation of sites examined during the Impact Assessment Survey is in Table 7 and is presented in Appendix C of this report. The following Impact Assessment section of the report addresses the potential impacts of the proposed road construction on the above 10sites. An overview of their location is illustrated in Map 2 and their individual contexts in Maps 3-12.

Table 7 Heritage Victoria Site Recommendations following Impact Assessment Survey

Register	Site Number	Site Name	Description	Additional information from Impact Assessment	Recommendation from Heritage Victoria
Registered VHI sites	H7423-0027	Great Western Lead Mine (Included In DSE Register)	Narrow band of intensive sinkings (shafts and small mounds). Very scrubby but workings are undisturbed and do provide an appreciation of the nature of this type of gold mining. Good integrity in the condition of the features.	Diggings appear to be predominantly undisturbed.	Update existing registration. Site partially within proposed alignment. Ch. ~12750 – 1300 directly adjacent to site. Ch. ~13000 – 13200 encounters site. Apply for consent to destroy.
	H7423-0060	Armstrong No.1 ruins site (ruins)	Ruins comprising a ruined structure, marked by stone wall foundations and a possible stone hearth with a possible outbuilding and a raised circular structure with a central depression.	The site is on land formerly known as Riley's Paddock. Place extent amended.	Update existing registration. Site partially within proposed alignment. Ch. ~5700 – 6000 encounters site. Apply for consent to destroy.
	H7423-0061	Armstrong No. 2 (ruins)	House ruins with remnant cistern and garden.	Additional features identified including outbuildings and dump. Registered place extent of entire property is incorrect. Place extent amended.	Update existing registration. Outside proposed alignment.
	H7423-0062	Garden Gully Road Ruin	Site consists of a ruinous structure, marked by the remains of a stone fireplace with stones set in mud mortar. There a few scattered hand-made bricks	Site not able to re located during current survey. The site was excavated in 2002 which confirmed that the site was a fireplace. Although the remainder of the structure was not found it is likely it was a hut, probably a gold rush building of local historical significance. The artefacts were primarily domestic and architectural in nature.	Updated existing registration to notify Heritage Victoria that the field survey was unable to relocate this site. As the sites could not be identified HV do not require a consent to be applied for works to be carried out, HV recommend that monitoring take place during all subsurface works at the locations.
	H7423-0063	Garden Gully Road House Site No.1	A ruinous, four roomed timber house, with a lean-to kitchen at the rear and a verandah at the front and side. A cellar has been excavated under the east side. There is a shearing shed to the west and brick shed foundations nearby, a small dam and a brick cistern. Artefacts and equipment are scattered over the site and there is a remnant orchard, mature pines and other exotic trees.	Unable to relocate during comprehensive site surveys between Sep 2011 and Feb 2012.	Updated existing registration to notify Heritage Victoria that the field survey was unable to relocate this site. As the sites could not be identified HV do not require a consent to be applied for works to be carried out, HV recommend that monitoring take place during all subsurface works at the locations.
	H7423-0064	Garden Gully Road House Site No. 2	Stone and brick foundations, low mounds and scattered historical artefacts. There is also a brick cistern and a remnant garden.	As a result of the current survey site was updated to include a new extent and additional features of the site. The house site is of local significance and may be of a very early date. It has potential for further archaeological investigation.	Update existing registration. Outside proposed alignment.

Register	Site Number	Site Name	Description	Additional information from Impact Assessment	Recommendation from Heritage Victoria
	H7423-0065	Armstrong Alluvial Gold Mining Area No.1	Extensive area of shallow alluvial gold workings. Area is marked by shallow pits, low mounds of spoil and scattered historical artefacts. Further workings in the road reserve of existing Western Highway are part of the same site.	Site extent confirmed.	Site partially within proposed alignment. Ch. ~ 6200 - 6700 Apply for consent to destroy.
	H7423-0066	Armstrong Alluvial Gold Mining Area No.2	Shallow alluvial gold workings along the banks of Concongella Creek. Marked by shallow pits, low mounds, one partially filled tunnel and scattered historical artefacts.	Site extent confirmed.	Site partially within proposed alignment. Ch. ~ 6500 - 7100 Apply for consent to destroy.
	H7423-0071	Armstrong Brick Structure Remains	Brick and stone footings covered by long grass. Handmade bricks, granite and lime mortar. Some wall lines are apparent in an area about 10x10 m. Low mounds 50-60 cm above ground level may mark further ruins	Site was unable to be located during the recent survey. Previous excavation (Clark 2002) presented two distinct periods of occupation; 1870s to 1920, at which point a fire destroyed the structure, after which a brick floor was laid and stables constructed (part of the Armstrong Hotel complex)	Updated existing registration to notify Heritage Victoria that the field survey was unable to relocate this site. As the sites could not be identified HV do not require a consent to be applied for works to be carried out, HV recommend that monitoring take place during all subsurface works at the locations.
	H7423-0072	Armstrong Hotel Ruins	Ruined stone structure, with some well-preserved sections of wall (up to 1.5m high). Walls are of mudstone and mud mortar. Appears to be large and multi-roomed but difficult to assess as it is covered by dense scrub, may be garden remains on south side of structure.	Hotel and associated ruins (Armstrong Brick Ruins and Armstrong Graves) is of high local historical significance for its association with the gold rush. Licensed as a hotel between 1873 and 1921, the building hosted a variety of owners and residents includes at least four stages of its transformation from residential dwelling to hotel and store.	Update existing registration. Site entirely within proposed alignment. Ch. ~5600 – 5670 Apply for consent to destroy.
	H7423-0073	Armstrong Graves	A group of 8-9 low oval mounds edged by field stones. Appear to be graves. Most are small (ie. children's?) but 3 are larger. One is shaped like a cross. There are a number of larger, rectangular areas that are also raised and edged by stones.	During comprehensive site surveys between Sep 2011 and Feb 2012 mounds were determined to be former garden beds - not graves as previously recorded. Included as part of the Armstrong Hotel complex.	Update existing registration, included in site H7423-0072 Armstrong Hotel Ruins registration.

Register	Site Number	Site Name	Description	Additional information from Impact Assessment	Recommendation from Heritage Victoria
PREVIOUSLY UNREGISTERED Cited locations from community consultation	U1	H7423-0080 Junction Township site, Armstrong	Extensive diggings, shafts associated with quartz and alluvial mining. Remnant structures include battery, 2 small buildings in a largely wooded setting. Powerlines and Western Highway have previously impacted site.	* 1875 Geological map shows Hotel structure at the end of a road leading to the brewery which matches the locations of foundation identified during the field survey. *Extensive reference to Armstrong's in newspaper articles. Survey determined place extent.	Register on Heritage Inventory as a site: H7423-0080 Junction Township site, Armstrong Site partially within proposed alignment. Ch. ~ 3800 - 4150 Apply for consent to destroy.
	U2	H7423-0083 Former Armstrong Primary School site	Location of former Armstrong School. Exotic trees, no extant structural remains	* 1875 Geological map shows Hotel structure and school marked at the edge of the then highway *Extensive reference to Armstrong's in newspaper articles. Survey determined place extent.	Register on Heritage Inventory as a site: H7423-0083 Former Armstrong Primary School Site entirely within proposed alignment. Ch. ~5750 -5800 Apply for consent to destroy.
	U8	St. Ethel's Winery	Located east of Great Western on the Western Highway. Photocopied info provided by Stawell Historical Society. Also information on wineries provided by society member Judy Barry from Ararat.	Original Winery House and shed/cellar (mud brick/timber) intact and in good condition/currently inhabited, some progressive alterations and repairs to mud brick structural elements, including the addition of an alcove at rear of house, intact wells and storage. All vineyards removed in the early 20th century. Only small, former winery with surviving extant structures in Great Western district. Survey determined place extent.	Submit letter to Council recommending inclusion on Heritage Overlay (HO). Outside proposed alignment.
	U9	H7423-0081 Allanvale Tollgate site	Located in the township of Great Western on what was Crown Allotment 51, initially owned by J.Patching. Allotment borders on the Concongella Creek. Site comprises a small area of unidentified exotic vegetation, a diffuse scatter of redbrick, glass, bluestone and granite surrounding a small linear mound containing similar material ~2m x .9m in size.	No in situ features were able to be identified during the field survey (Feb 2012). High voltage power lines have been installed nearby and their installation may have resulted in significant subsurface disturbance to the area. Survey determined place extent.	Register on Heritage Inventory as a site: H7423-0081 Allanvale Tollgate site. Site entirely within proposed alignment. Ch. ~10050 - 10150 Apply for consent to destroy.
	U10	Salinger's Winery	Located in the township of Great Western on what was Crown Allotment 114, initially owned by I Barrant. Allotment bounded by the Western Highway and Locke Street	Present day modern vineyards and cellar door/sheds (Grampians estate winery) Brick lined well at front of property purported to be from original winery of the 1860's. May be a photograph of the original winery on an old port bottle at the cellar door. Descendants of the original owners live in Warrnambool. Survey determined place extent.	Submit letter to Council recommending inclusion on Heritage Overlay (HO). Outside proposed alignment.
	U11 and U12	H7423-0082 McKay Family Homestead site	Stone remnants located beyond intersection of Patterson Road and Western Highway.	Earthen wall, fibro, concrete redbrick and granite structural elements, extensive exotic vegetation around main area, granite paving and large square ditch on small rise to the south of structures. Survey determined place extent.	Register on Heritage Inventory as a site: H7423-0082 McKay Family Homestead Site partially within proposed alignment. Ch. ~ 92300 - 92400 Apply for consent to destroy.

6. Impact Assessment

The detailed impact assessment documented in this report addresses the potential impacts of the construction and operation of the proposed alignment of the Project. The alignment assessed is a culmination of progressive refinement of the design and consideration of potential impacts. The process for assessment and rationale for selection of the proposed alignment assessed in the EES is described in the 'Western Highway Project Section 3 Options Assessment Report' (February 2012) (Technical Appendix B of the EES).

The Existing Conditions section of this report covers an area encompassing the long list of alignment options considered for the Project. Potential impacts of each option in the long list of alignments were considered in Phase 1 of the options assessment process, and were used to reduce the initial long list to a short list of alignment options.

The potential impacts of each option in the short list of alignment options were considered in more detail in Phase 2 of the option assessment process. A single proposed alignment was selected for further detailed assessment in the EES. The impacts of the proposed alignment, together with potential mitigation measures, were considered in detail through the environmental risk and impact assessment process. The outcomes of the environmental risk and impact assessment process were used to finalise the proposed alignment assessed in the EES. The environmental risk assessment methodology and complete risk register for all specialist disciplines is presented in 'Western Highway Project Section 3 EES Environmental Risk Assessment' (November 2012) report.

The proposed alignment assessed in this impact assessment report is the outcome of progressive refinement through each phase of the options assessment process. The proposed alignment was also refined following the initial consideration of the environmental risk and impact assessment.

Extracts from the environmental risk register are provided in this report and the identified impacts of the proposed alignment are considered in detail in the following sections.

6.1 Project Description

The Project provides two lanes in each direction, and associated intersection upgrades to improve road safety and facilitate the efficient movement of traffic. It commences near Pollard Lane, Ararat, and extends northwest for approximately 24 km to Gilchrist Road, Stawell. The upgrade assessed in this impact assessment is a combination of freeway standard (AMP1) and highway standard (AMP3). The first length is proposed to be upgraded highway standard (AMP3) from Pollard Lane to The Majors Road. Then the upgrade is proposed to be freeway standard (AMP1) from The Majors Road to Gilchrist Road on the outskirts of Stawell.

From Ararat the existing carriageway is duplicated to the east, crossing the railway via a new bridge for the south bound carriageway adjacent to the existing Armstrong Deviation bridge. A new dual carriageway highway alignment provides for a north-eastern bypass of Great Western, commencing north-west of Delahoy Road and passing through part of the former Great Western landfill and a quarry, meeting the existing highway alignment again near Briggs Lane. The existing carriageway is then duplicated to the west until Harvey Lane. Oddfellows Bridge at Harvey Lane would be used to accommodate a service road crossing of the railway, and two new bridges would be constructed for the two new freeway carriageways further west.

Overall, the proposed alignment involves two crossings of the Melbourne to Adelaide railway, eight crossings of major waterways and 26 minor waterways (tributaries, drainage lines and irrigation channels), and bypasses of both Armstrong and Great Western townships.

The topography is undulating, and the surrounding land use predominately agricultural (grazing, cropping, viticulture), apart from the forested Ararat Regional Park and other smaller remnants.

Apart from the Melbourne to Adelaide railway line which carries passenger services, no State significant infrastructure, such as major pipelines or powerlines, is located within the study area

6.2 Key Issues

This section reviews the key issues in terms of the potential impacts of the eventual development on the non-Aboriginal (historical) cultural heritage within or nearby to the project area. To inform this assessment, several modes of investigation were utilised in accordance with the EES Scoping Requirements discussed in Section 3 of this report. These included a detailed review of existing conditions by identifying relevant historical information within the vicinity of the project area through desktop and site survey investigations; providing an inventory of any historical cultural heritage places of significance in and within the vicinity of the project area; and establishing the cultural heritage significance of any known or newly recorded sites in consultation with Heritage Victoria and the Ararat Rural City and Northern Grampians Shire.

This assessment identifies measures to avoid, mitigate or manage potential effects on known and registered places of historical cultural heritage significance and identifies the residual effects of the project on any potential historical cultural heritage and values in or nearby to the project area.

6.3 Impact Pathways

This section identifies and describes historical heritage cause and effect impact pathways associated with the construction and operation of the Project.

The impact pathways are considered in terms of how the Project would either encounter or interact with immediately adjacent non-Aboriginal (historical) cultural heritage. The construction of a road and associated infrastructure would likely involve the clearing of the Project area to a depth that would encounter historical heritage, if it is present. Thus, construction risks impacting upon historical heritage located above ground and in a subsurface context.

A total of ten sites have been identified and assessed as being affected by the construction and operation of the proposed alignment of the Project. Seven have their site extents partially within proposed alignment. The proposed construction footprint intersects the periphery of two registered HI site extents that were unable to be located during the Impact Assessment Survey, and is immediately adjacent to one. These three sites are also considered in the Impact Assessment and Mitigation Measures in recognition that the potential for as yet unidentified subsurface archaeological deposits may exist

H7423-0080	(Former) Junction Township site, Armstrong
H7423-0060	Armstrong No.1 ruins site
H7423-0065	(Former) Armstrong Alluvial Gold Mining Area No. 1
H7423-0066	(Former) Armstrong Alluvial Gold Mining Area No. 2

H7423-0082	McKay Family Homestead site
H7423-0027	(Former) Great Western Lead Mine (HI and DSE listed)
DSE	Sisters Rock Graffiti Site

The remaining three sites have their extents entirely within proposed alignment:

H7423-0072	Armstrong Hotel Ruins
H7423-0083	Former Armstrong Primary School site
H7423-0081	(Former) Allanvale Tollgate site

Two registered sites whose surface extent was not detectable during the Impact Assessment Survey have their registered extents partially within the proposed alignment:

H7423-0062	Garden Gully Road Ruin
H7423-0063	Garden Gully Road House Site No.1

One registered site whose surface extent was not detectable during the Impact Assessment Survey has its' registered extent immediately adjacent to the proposed alignment:

H7423-0071	Armstrong Brick Structure Remains
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Thus, construction activity risks impacting upon historical heritage located both above ground and in a subsurface context. Table 8 summarises the impact pathways by type of heritage listing and proximity to construction pathway. Maps 3 –12 illustrate the impact pathway of the proposed alignment on the ten sites and the three registered sites that were unable to be identified during the Impact Assessment Survey.

Map 2 Historical Heritage Sites Subject to Impact Assessment and Mitigation Measures

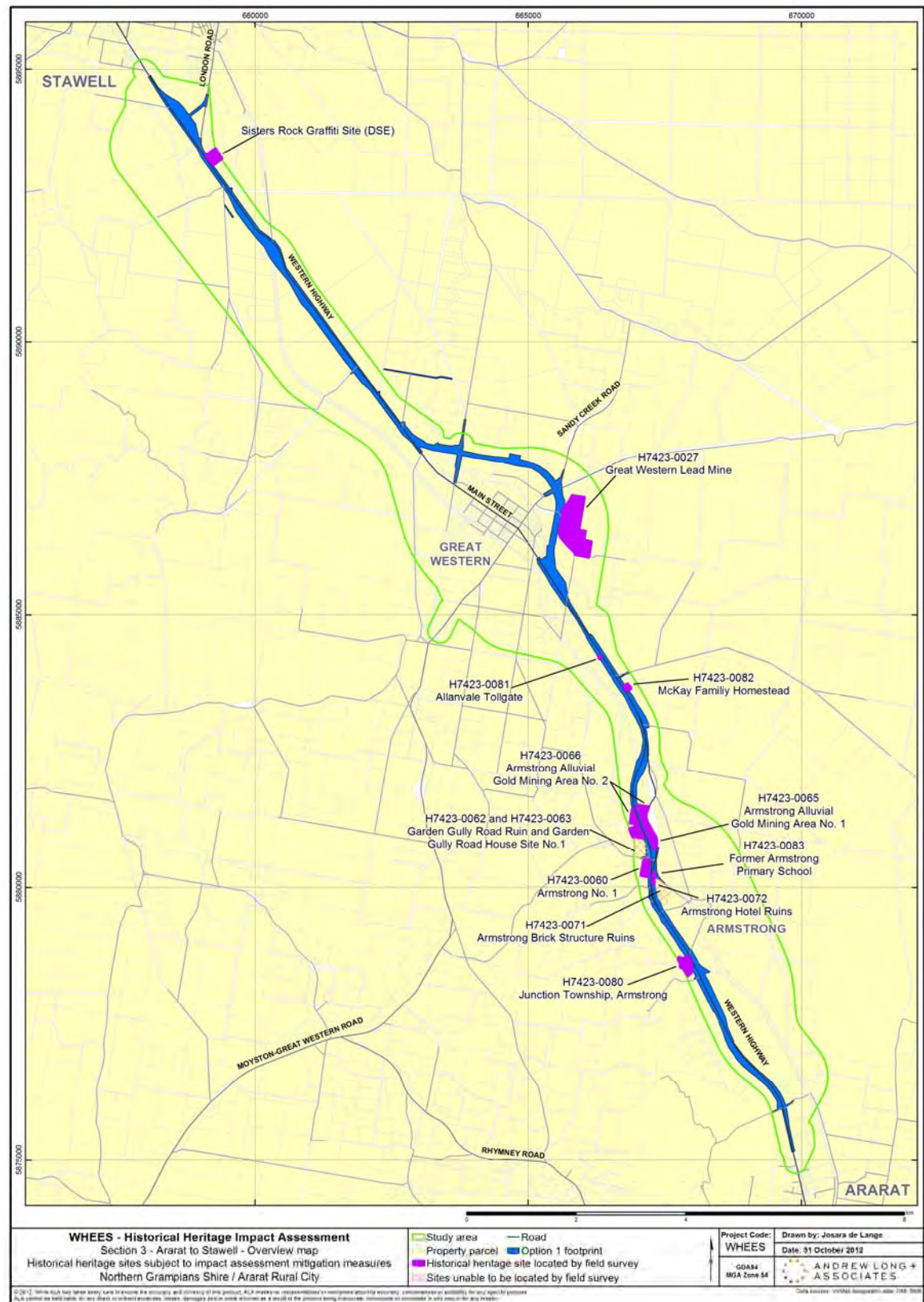
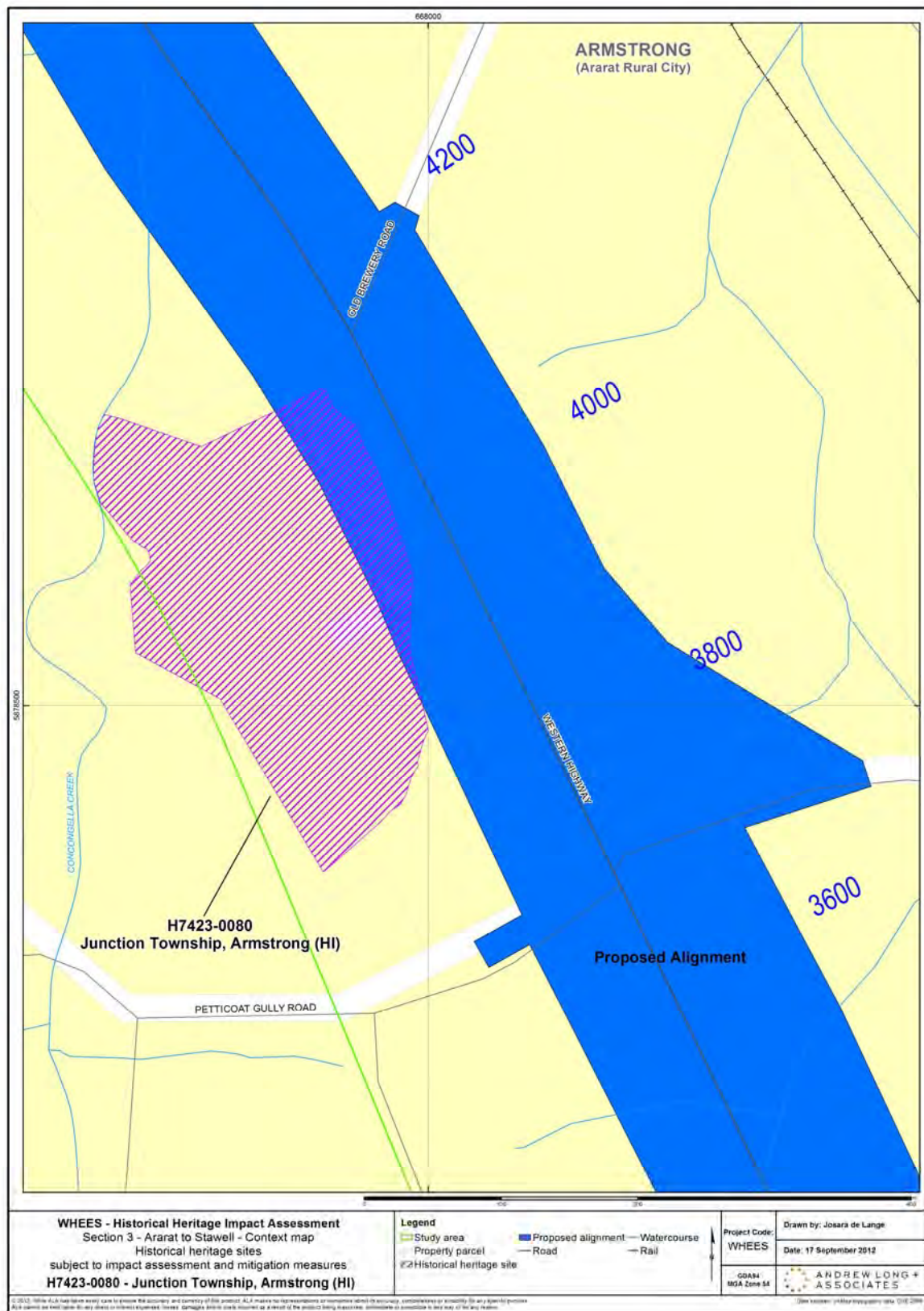


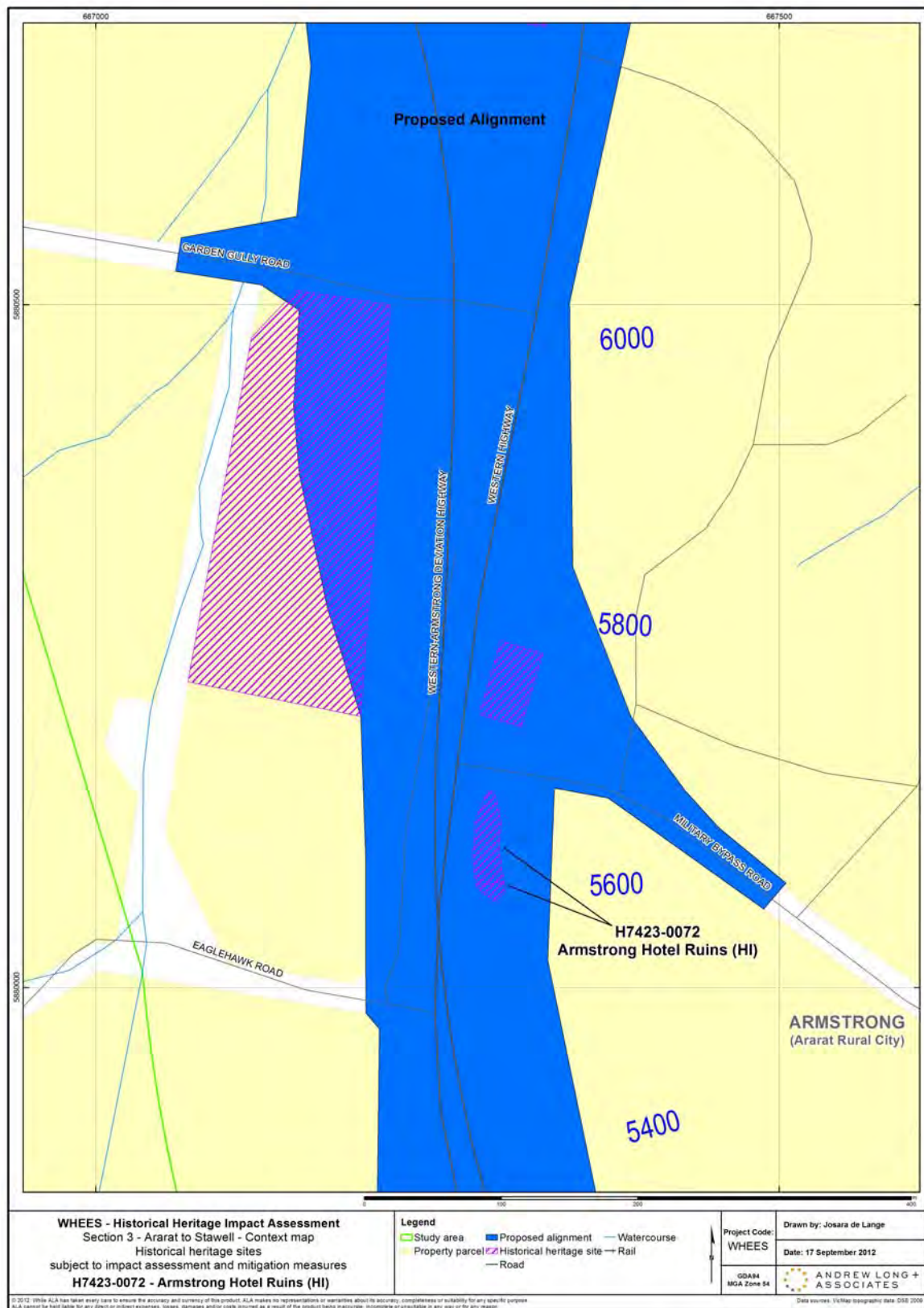
Table 8 Summary of Impact Pathways

Construction encounters Heritage Inventory (HI) feature or site	Construction encounters locally significant historical heritage feature or site (DSE local listing).	Construction encounters previously unregistered and unassessed historical cultural heritage sites
H7423-0080 (Former) Junction Township site, Armstrong Site partially within proposed alignment. Ch. ~ 3800 - 4150	(Former) Great Western Lead Mine (HI and DSE listed) Site partially within proposed alignment. Ch. ~12750 – 1300 directly adjacent to site. Ch. ~13000 – 13200 encounters site.	H7423-0071 Armstrong Brick Structure Ruins Surface evidence of site not detectable, registered site extent immediately adjacent to proposed alignment. Ch. ~5150- 5700
H7423-0072 Armstrong Hotel Ruins Site entirely within proposed alignment. Ch. ~5600 – 5670	Sisters Rock Graffiti Site (DSE) Site partially within proposed alignment. Ch. ~ 22500-22750	H7423-0062 Garden Gully Road Ruin and H7423-0063 Garden Gully Road House Site No.1 Surface evidence of site not detectable, registered site extent partially within proposed alignment. Ch. ~6000-6400
H7423-0083 Former Armstrong Primary School site Site entirely within proposed alignment. Ch. ~5750 -5800		Unknown
H7423-0060 Armstrong No.1 ruins site Site partially within proposed alignment. Ch. ~5700 – 6000 encounters site.		
H7423-0065 (Former) Armstrong Alluvial Gold Mining Area No.1 Site partially within proposed alignment. Ch. ~ 6200 – 6700		
H7423-0066 (Former) Armstrong Alluvial Gold Mining Area No.2 Site partially within proposed alignment. Ch. ~ 6500 – 7100		
H7423-0082 McKay Family Homestead site Site partially within proposed alignment. Ch. ~ 92300 – 92400		
H7423-0081 (Former) Allanvale Tollgate site Site entirely within proposed alignment. Ch. ~10050 – 10150		
H7423-0027 (Former) Great Western Lead Mine Site partially within proposed alignment. Ch. ~12750 – 1300 directly adjacent to site. Ch. ~1300 – 13200 encounters site.		

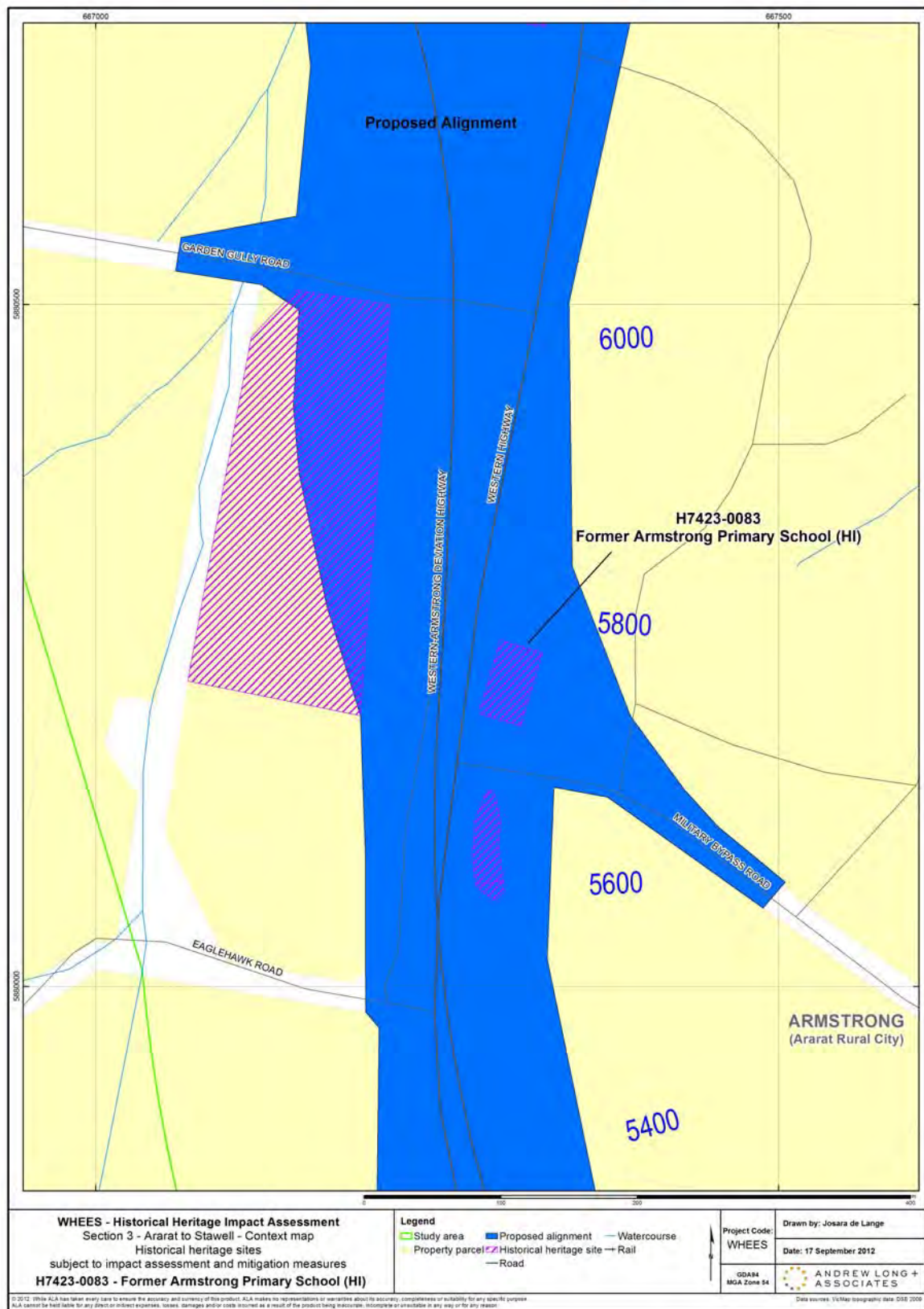
Map 3: H7423- 0080 (Former) Junction Township site, Armstrong



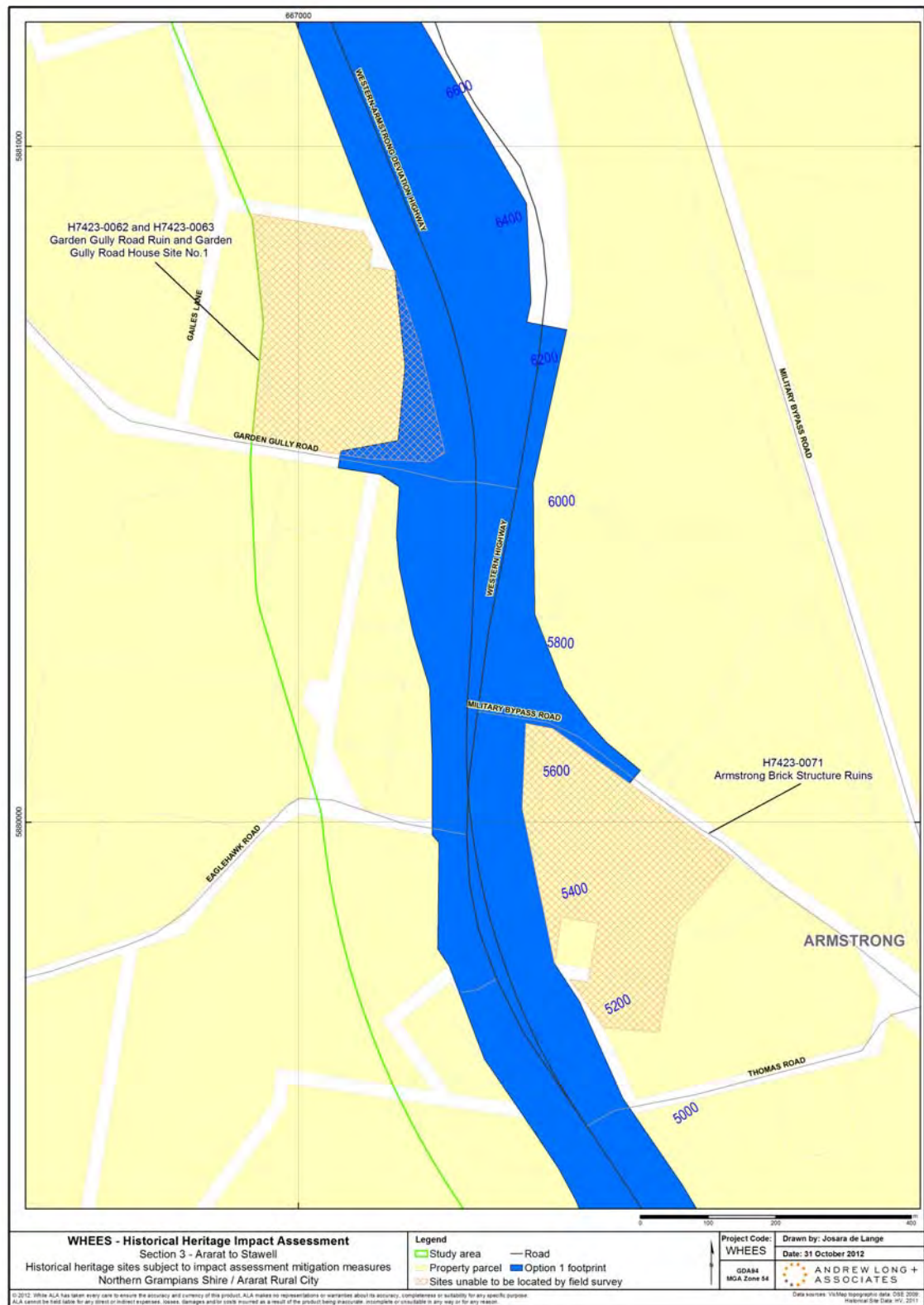
Map 4: H7423-0072 Armstrong Hotel Ruins



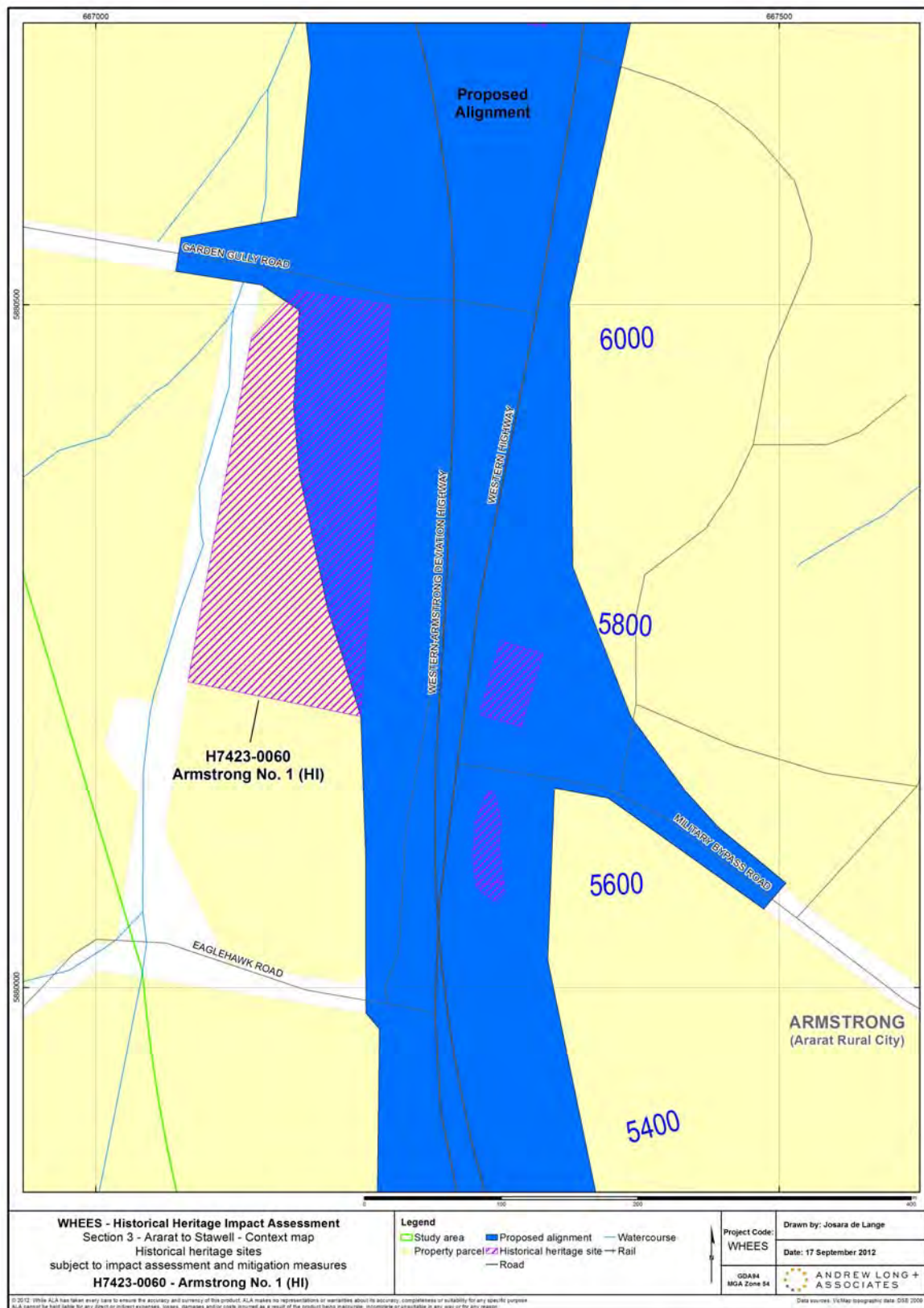
Map 5: H7423-0083 Former Armstrong Primary School site



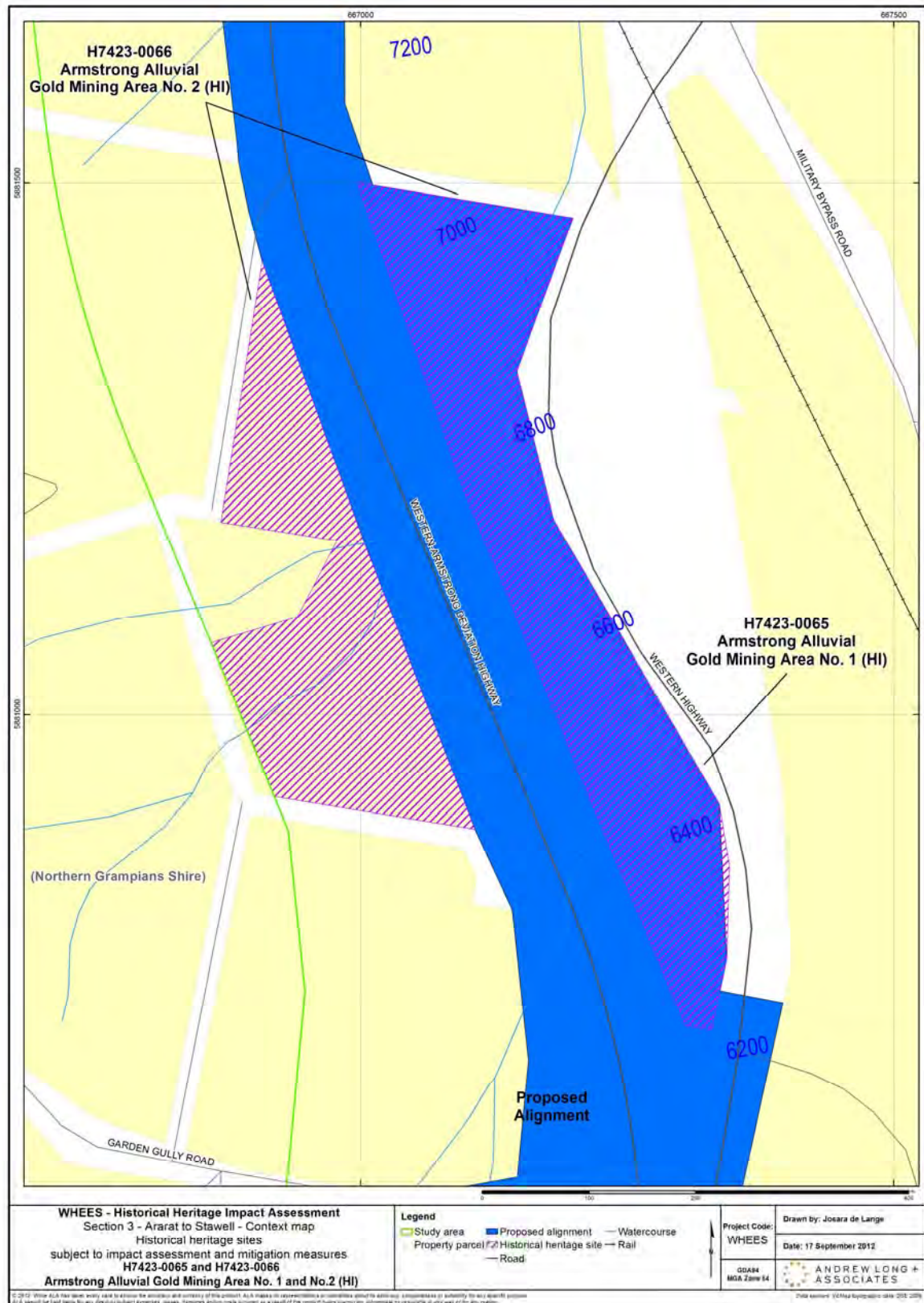
Map 6: H7423-0071 Armstrong Brick Structure Ruins, H7423-0062 Garden Gully Road Ruin and H7423-0063 Garden Gully Road House Site No.1



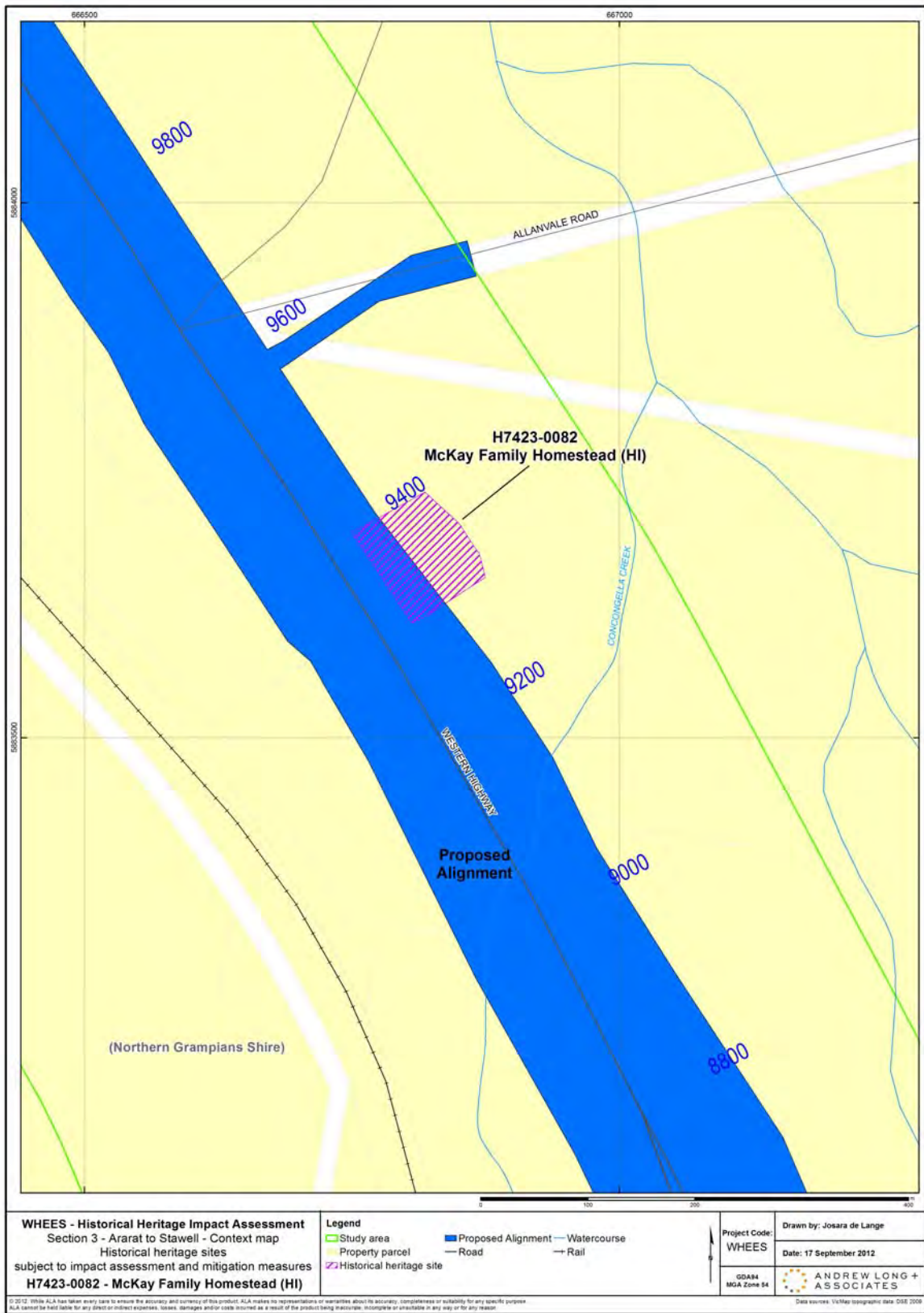
Map 7: H7423-0060 Armstrong No.1 ruins site



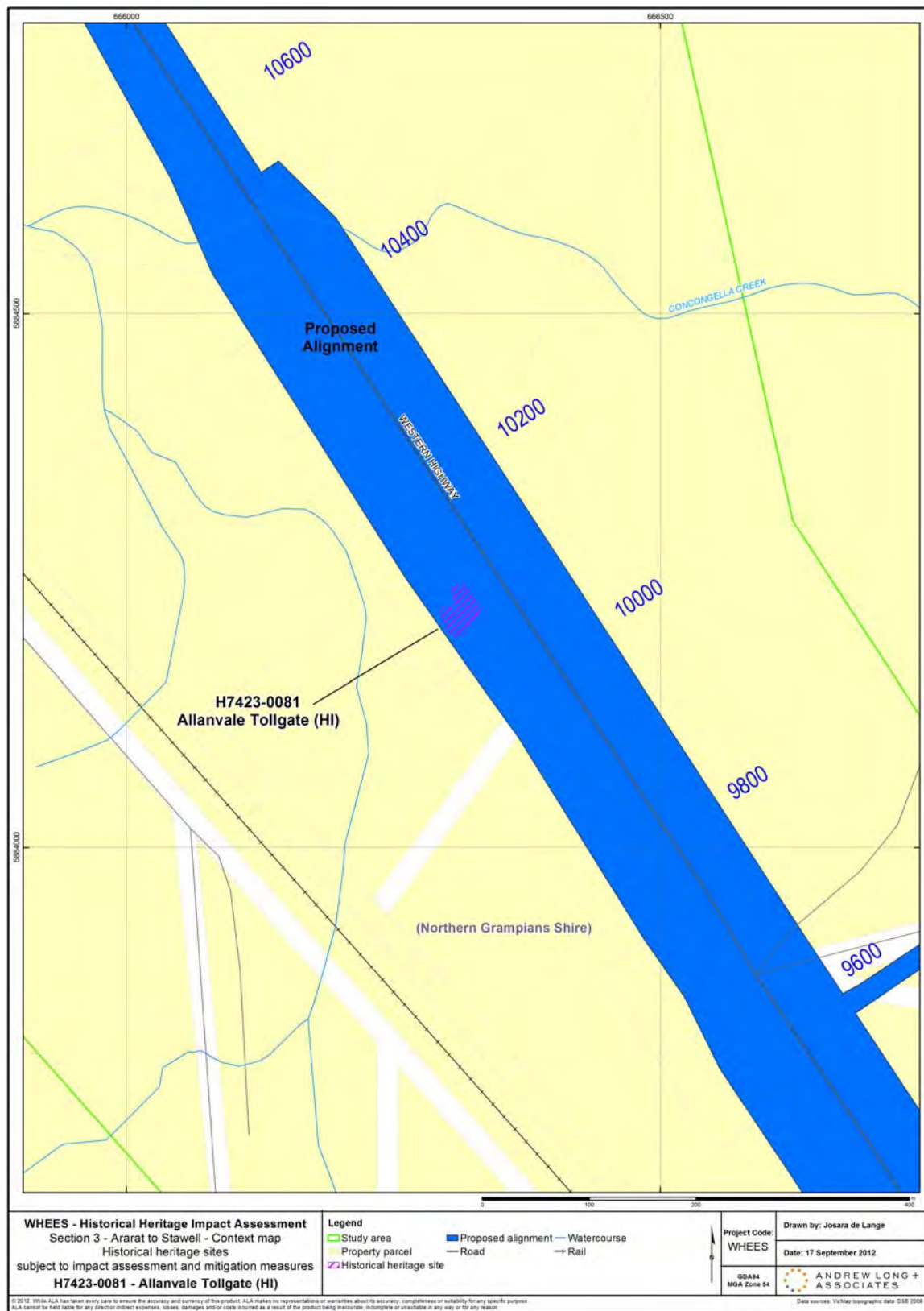
Map 8: H7423-0065 and H7423-0066 (Former) Armstrong Alluvial Gold Mining Area No.1 and No.2



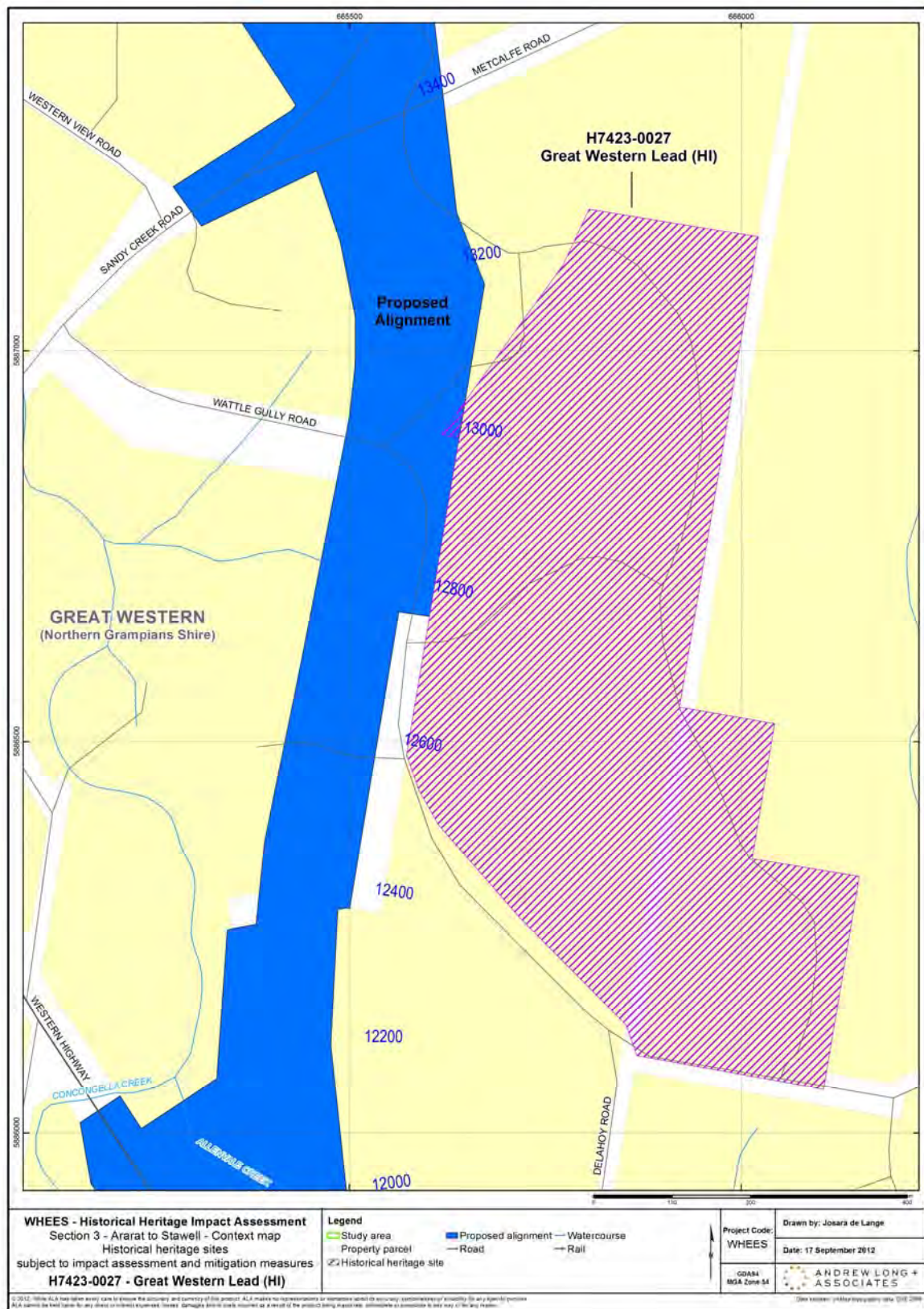
Map 9: H7423-0082 McKay Family Homestead site



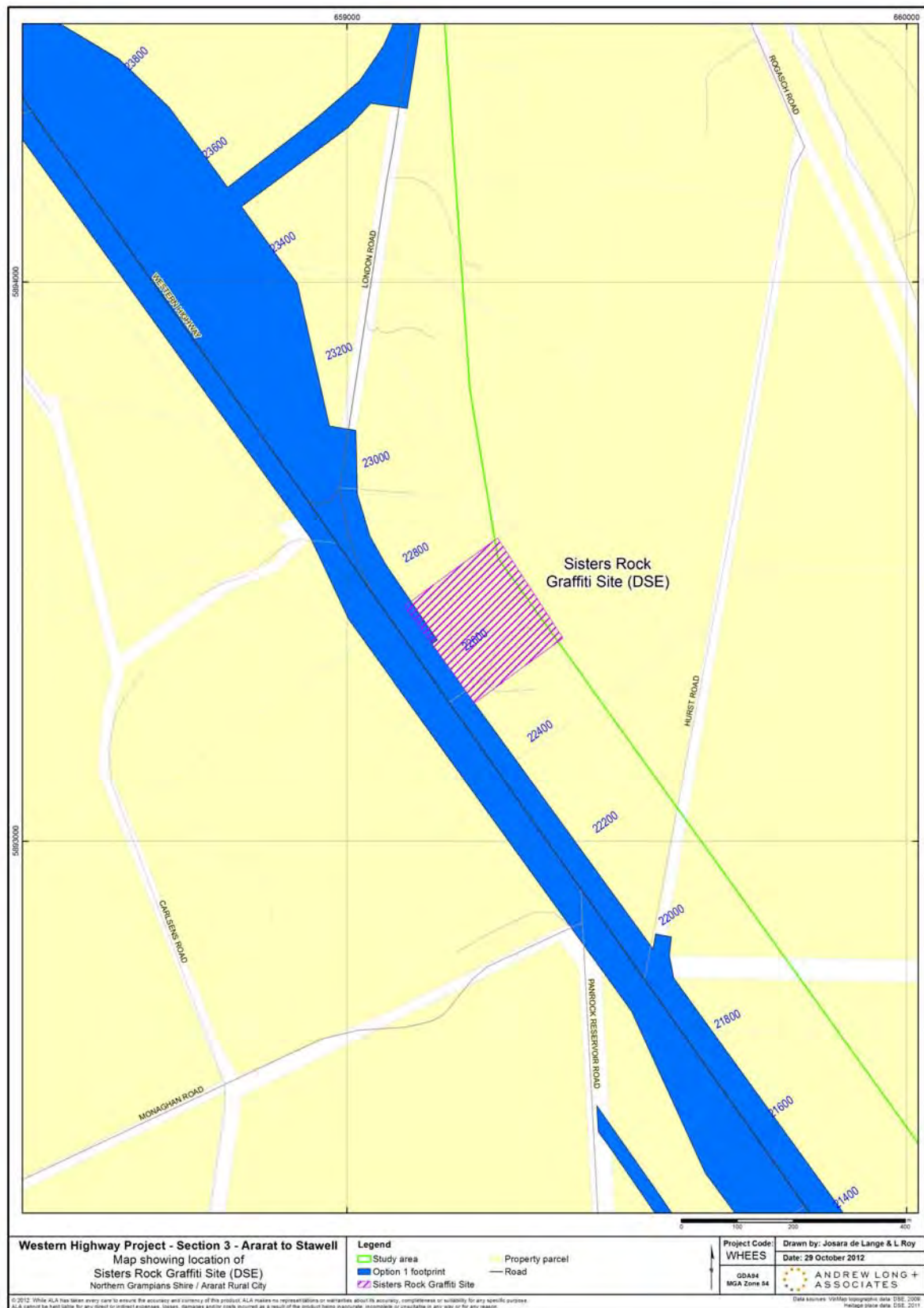
Map 10: H7423-0081 (Former) Allanvale Tollgate



Map 11: H7423-0027(Former) Great Western Lead Mine (HI and DSE listed)



Map 12 Sisters Rock Graffiti Site (DSE)



6.4 Risk Assessment

This section describes the risks resulting from the impact pathways and discusses the significance of the risks and the values that are potentially impacted.

VicRoads has a standard set of environmental protection measures, which are typically incorporated into its construction contracts for road works and bridge works, hereafter referred to as the “VicRoads standard environmental protection measures”. These measures have been used as the starting point for the impact assessment. Those that are relevant to historical heritage are included in the “planned controls” column of the risk assessment (Table 9) and outlined in more detail in Section 7 (Mitigation Measures).

As a result of the initial risk assessment, in some cases additional Project specific controls have been proposed to reduce risks. These are outlined in the “Control Recommended to Reduce Risk” column of the risk assessment in Table 9, and are described in more detail in Section 7.

Key observations from the risk assessment of the proposed alignment and associated construction corridor are:

1. Damage to two previously listed local historical sites, former Great Western Lead Mine DSE listed and Sister Rock Graffiti Site (2 sites).
2. Damage to or complete destruction of previously registered historical archaeological HI sites (9 sites).

Six have their site extents partially within proposed alignment and would be damaged by the construction:

H7423-0080	(Former) Junction Township site, Armstrong
H7423-0060	Armstrong No.1 ruins site
H7423-0065	(Former) Armstrong Alluvial Gold Mining Area No. 1
H7423-0066	(Former) Armstrong Alluvial Gold Mining Area No. 2
H7423-0082	McKay Family Homestead site
H7423-0027	(Former) Great Western Lead Mine (HI and DSE listed)

Three sites have their extents entirely within proposed alignment and would be completely destroyed by the construction:

H7423-0072	Armstrong Hotel Ruins
H7423-0083	Former Armstrong Primary School site
H7423-0081	(Former) Allanvale Tollgate site

3. Damage to or complete destruction of previously unregistered and currently unknown historical sites of potential local, State or national significance.

Two previously registered historical archaeological HI sites whose surface extent was not detectable during the Impact Assessment Survey have their registered extents partially within the proposed alignment and whose subsurface component may be damaged by the construction:

H7423-0062	Garden Gully Road Ruin
H7423-0063	Garden Gully Road House Site No.1

One registered site whose surface extent was not detectable during the Impact Assessment Survey has its' registered extent immediately adjacent to the proposed alignment:

H7423-0071 Armstrong Brick Structure Remains

The proposed alignment would result in damage to two DSE locally listed historical sites, six Heritage Inventory listed places (one of which is also a DSE locally listed place), and complete destruction of three Heritage Inventory listed places, which carry a high initial risk rating, but which can be reduced to low following appropriate early consent application through Heritage Victoria. The proposed alignment has the potential to damage a further three Heritage Inventory listed places if a subsurface component to their registered extents exists.

The impact pathways and risks across the proposed alignment are outlined in Table 9 below. On balance, the proposed alignment impacts historical cultural heritage but these impacts can be mitigated by the measures described in Section 7 and the residual impacts would be moderate.

Table 9 Historical Heritage Risk Assessment

Risk No.	Impact pathway	Description of consequences	Planned Controls to Manage Risk	Initial Risks			Controls Recommended to Reduce Risk	Residual Risks		
				Consequence	Likelihood	Risk Rating		Consequence	Likelihood	Risk Rating
CHH1	Construction encounters H7423-0080 (Former) Junction Township site, Armstrong Site partially within proposed alignment. Ch. ~ 3800 – 4150	Damage to, or complete destruction of previously registered historical archaeological site (HI).	Approval would be obtained from Heritage Victoria prior to damaging, disturbing or otherwise impacting cultural heritage sites.	Moderate	Almost Certain	High	Early application to Heritage Victoria for relocation (prior to construction) alleviates any potential delays resulting from unexpected finds and does not compromise the collection of data.	Moderate	Rare	Low
CHH2	Construction encounters H7423-0072 Armstrong Hotel Ruins Site entirely within proposed alignment. Ch. ~5600 – 5670	Damage to, or complete destruction of previously registered historical archaeological site (HI).	Approval would be obtained from Heritage Victoria prior to damaging, disturbing or otherwise impacting cultural heritage sites.	Moderate	Almost Certain	High	Early application to Heritage Victoria for relocation (prior to construction) alleviates any potential delays resulting from unexpected finds and does not compromise the collection of data.	Moderate	Rare	Low
CHH3	Construction encounters H7423-0083 Former Armstrong Primary School site Site entirely within proposed alignment. Ch. ~5750 -5800	Damage to, or complete destruction of previously registered historical archaeological sites or features (HI).	Approval would be obtained from Heritage Victoria prior to damaging, disturbing or otherwise impacting cultural heritage sites.	Moderate	Almost Certain	High	Early application to Heritage Victoria for relocation (prior to construction) alleviates any potential delays resulting from unexpected finds and does not compromise the collection of data.	Moderate	Rare	Low
CHH4	Construction encounters H7423-0060 Armstrong No.1 ruins site Site partially within proposed alignment. Ch. ~5700 – 6000 encounters site.	Damage to, or complete destruction of previously registered historical archaeological site (HI).	Avoidance or Approval would be obtained from relevant authorities prior to damaging, disturbing or otherwise impacting cultural heritage sites.	Moderate	Almost Certain	High	Early application to Heritage Victoria for relocation (prior to construction) alleviates any potential delays resulting from unexpected finds and does not compromise the collection of data.	Moderate	Rare	Low

Risk No.	Impact pathway	Description of consequences	Planned Controls to Manage Risk	Initial Risks			Controls Recommended to Reduce Risk	Residual Risks		
				Consequence	Likelihood	Risk Rating		Consequence	Likelihood	Risk Rating
CHH5	Construction encounters H7423-0065 (Former) Armstrong Alluvial Gold Mining Area No.1 Site partially within proposed alignment. Ch. ~ 6200 -- 6700	Damage to, or complete destruction of previously registered historical archaeological site (HI).	Approval would be obtained from Heritage Victoria prior to damaging, disturbing or otherwise impacting cultural heritage sites.	Moderate	Almost Certain	High	Early application to Heritage Victoria for relocation (prior to construction) alleviates any potential delays resulting from unexpected finds and does not compromise the collection of data.	Moderate	Rare	Low
CHH6	Construction encounters H7423-0066 (Former) Armstrong Alluvial Gold Mining Area No.21 Site partially within proposed alignment. Ch. ~ 6500 -- 7100	Damage to, or complete destruction of previously registered historical archaeological site (HI).	Approval would be obtained from Heritage Victoria prior to damaging, disturbing or otherwise impacting cultural heritage sites.	Moderate	Almost Certain	High	Early application from Heritage Victoria for consent to destroy (prior to construction) alleviates any potential delays resulting from unexpected finds and does not compromise the collection of data.	Moderate	Rare	Low
CHH7	Construction encounters H7423-0082 McKay Family Homestead site Site partially within proposed alignment. Ch. ~ 92300 -- 92400	Damage to, or complete destruction of previously registered historical archaeological site (HI).	Approval would be obtained from Heritage Victoria prior to damaging, disturbing or otherwise impacting cultural heritage sites.	Moderate	Almost Certain	High	Early application from Heritage Victoria for consent to destroy (prior to construction) alleviates any potential delays resulting from unexpected finds and does not compromise the collection of data.	Moderate	Rare	Low
CHH8	Construction encounters H7423-0081 (Former) Allanvale Tollgate site Site entirely within proposed alignment. Ch. ~10050 -- 10150	Damage to, or complete destruction of previously registered historical archaeological site (HI).	Approval would be obtained from Heritage Victoria prior to damaging, disturbing or otherwise impacting cultural heritage sites.	Moderate	Almost Certain	High	Early application to Heritage Victoria for relocation (prior to construction) alleviates any potential delays resulting from unexpected finds and does not compromise the collection of data.	Moderate	Rare	Low
CHH9	Construction encounters H7423-0027 (Former) Great Western Lead Mine (HI and DSE listed) Site partially within proposed alignment. Ch. ~12750 – 13000 directly adjacent to site. Ch. ~13000 – 13200 encounters site.	Damage to, or complete destruction of previously registered historical archaeological sites (HI).	Approval would be obtained from Heritage Victoria prior to damaging, disturbing or otherwise impacting cultural heritage sites.	Moderate	Almost Certain	High	Early application to Heritage Victoria for relocation (prior to construction) alleviates any potential delays resulting from unexpected finds and does not compromise the collection of data.	Moderate	Rare	Low

Risk No.	Impact pathway	Description of consequences	Planned Controls to Manage Risk	Initial Risks			Controls Recommended to Reduce Risk	Residual Risks		
				Consequence	Likelihood	Risk Rating		Consequence	Likelihood	Risk Rating
CHH10	Construction encounters DSE locally listed Sisters Rock Graffiti Site Registered site extent partially within proposed alignment: Ch. ~22500-22750	Damage to previously listed local historical site (DSE).	Detailed mapping of the extent of the graffiti. Notification to DSE of site extent.	Minor	Unlikely	Low	Construction avoids graffitied rocks.	Minor	Unlikely	Low
CHH11	Construction immediately adjacent to H7423-0071 Armstrong Brick Structure Ruins Ch. ~5150- 5700	Present design places the construction adjacent to this previously registered historical archaeological site (HI). Surface evidence of site not detectable, but potential for as yet unidentified subsurface archaeological deposits may exist.	Maintain current design to avoid impact.	Moderate	Rare	Low	Maintain current design to avoid impact.	Moderate	Rare	Low
CHH12	Construction encounters H7423-0062 Garden Gully Road Ruin H7423-0063 Garden Gully Road House Site No.1 Registered site extents partially within proposed alignment. Ch. ~6000-6400	Potential damage to two previously registered historical archaeological sites (HI). Surface evidence of sites not detectable, but potential for as yet unidentified subsurface archaeological deposits may exist.	Involvement of a suitably qualified archaeologist during construction in recognition that the potential for as yet unidentified subsurface archaeological deposits may exist.	Moderate	Unlikely	Medium	In consultation with Heritage Victoria implement low level monitoring by a suitably qualified archaeologist: -site inspection on first day of work to confirm that proposed construction footprint intersects the periphery of the registered site extent. -on call during construction -one scheduled visit to site during works.	Moderate	Rare	Low
CHH13	Construction encounters previously unregistered and unassessed historical cultural heritage sites.	Alteration to design could cause damage to, or completely destroy site previously unregistered and unassessed historical cultural heritage sites.	Avoidance or Approval would be obtained from relevant authorities prior to damaging, disturbing or otherwise impacting cultural heritage sites.	Major	Unlikely	Medium	An EMP would be prepared to include contingency measures that manage the unexpected discovery of historical cultural heritage sites and features, in accordance with the <i>Heritage Act 1995</i> (Vic).	Major	Rare	Medium

7. Mitigation Measures

7.1 Construction

VicRoads would require the construction contractor to develop and implement a Construction Environmental Management Plan (CEMP) for the Project. VicRoads standard environmental protection measures and some additional Project specific controls identified below have been incorporated into the Environmental Management Framework for the Project. VicRoads would require the construction contractor to incorporate all of these measures into the CEMP.

VicRoads standard environmental protection measures for historical cultural heritage that would be adopted for this Project include the following contract specification clauses:

1200.15

(b) *Permits and Approvals*

The permits and/or approvals identified in Table 1200.151 have already been obtained, or are being obtained by the Principal. The terms and conditions of these permits and approvals shall be observed by the Contractor.

Table 1200.151 – Heritage Permits and Approvals Obtained by the Principal

<i>Site</i>	<i>Permit / Approval Number</i>	<i>Issuing Authority</i>
<i>Non-Indigenous (Historical)</i>		
<i>TBC</i>	<i>TBC</i>	<i>TBC</i>

© A Table 1200.152 listing known Cultural Heritage sites.

(f) *Monitoring*

Additional, Project specific controls are also recommended to reduce risks to historical cultural heritage. If historical heritage sites are found during any works the following steps should be applied:

1. The person who identified the find would immediately notify the person in charge.
2. The person in charge must then suspend any relevant works at the location of the discovery and to a distance within 50 m of the relevant site extent and isolate the find via the installation of safety webbing, or other suitable barrier and the material to remain *in situ*.
3. The person in charge of works should notify a suitably qualified archaeologist of the find within 24 hours of the discovery.
4. Relevant management actions would be determined by the suitably qualified archaeologist in relation to the *Heritage Act 1995* and in consultation with Heritage Victoria. The resultant recommendations would follow a similar process to the recommendations outlined in Figure 2, Section 4.1.7 of this report.

7.2 Summary

Table 10 presents a summary of the mitigation measures that have been identified to avoid, reduce or minimise impact risk. The measures comprise both relevant requirements of the VicRoads standard environmental protection measures as well as the additional measures identified by this impact assessment. The aim is to achieve the EES Objectives described in Section 2 of this report.

Table 10 Environmental Management Measures

Risk No.	Risk Description	Management Measures	Responsibility
CHH1	Construction encounters, H7423-0080 (Former) Junction Township site, Armstrong, an historical heritage feature or site (HI)	Approval obtained from Heritage Victoria prior to damaging, disturbing or otherwise impacting cultural heritage sites	VicRoads
CHH2	Construction encounters H7423-0072 Armstrong Hotel Ruins, an historical heritage feature or site (HI)	Approval obtained from Heritage Victoria prior to damaging, disturbing or otherwise impacting cultural heritage sites	VicRoads
CHH3	Construction encounters H7423-0083 Former Armstrong Primary School site, an historical heritage feature or site (HI)	Approval obtained from Heritage Victoria prior to damaging, disturbing or otherwise impacting cultural heritage sites	VicRoads
CHH4	Construction encounters H7423-0060 Armstrong No.1 ruins site, an historical heritage feature or site (HI)	Approval obtained from Heritage Victoria prior to damaging, disturbing or otherwise impacting cultural heritage sites	VicRoads
CHH5	Construction encounters H7423-0065 (Former) Armstrong Alluvial Gold Mining Area No.1, an historical heritage feature or site (HI)	Approval obtained from Heritage Victoria prior to damaging, disturbing or otherwise impacting cultural heritage sites	VicRoads
CHH6	Construction encounters H7423-0066 (Former) Armstrong Alluvial Gold Mining Area No.2, an historical heritage features or site (HI)	Approval obtained from Heritage Victoria prior to damaging, disturbing or otherwise impacting cultural heritage site.	VicRoads
CHH7	Construction encounters H7423-0082 McKay Family Homestead site, an historical heritage feature or site (HI)	Approval obtained from Heritage Victoria prior to damaging, disturbing or otherwise impacting cultural heritage sites	VicRoads
CHH8	Construction encounters H7423-0081 (Former) Allanvale Tollgate site, an historical heritage feature or site (HI)	Approval obtained from Heritage Victoria prior to damaging, disturbing or otherwise impacting cultural heritage sites	VicRoads

Risk No.	Risk Description	Management Measures	Responsibility
CHH9	Construction encounters (Former) Great Western Lead Mine, an historical heritage feature or site (HI and DSE listed)	Approval obtained from Heritage Victoria and DSE prior to damaging, disturbing or otherwise impacting cultural heritage sites	VicRoads
CHH10	Construction encounters Sisters Rock Graffiti Site, a locally listed historical heritage DSE site	Detailed mapping of the extent of the graffiti prior to damaging, disturbing or otherwise impacting the cultural heritage site. Notification to DSE of site extent.	VicRoads
CHH11	Construction immediately adjacent to H7423-0071 Armstrong Brick Structure Ruins (HI), surface evidence of site not detectable, but potential for as yet unidentified subsurface archaeological deposits may exist.	Maintain current design to avoid impact.	VicRoads
CHH12	Construction encounters H7423-0062 Garden Gully Road Ruin H7423-0063 Garden Gully Road House Site No.1 (HI), surface evidence of site not detectable, but potential for as yet unidentified subsurface archaeological deposits may exist.	In consultation with Heritage Victoria implement low level monitoring by a suitably qualified archaeologist: -site inspection on first day of work to confirm that proposed construction footprint intersects the periphery of the registered site extent. -on call during construction -one scheduled visit to site during works.	VicRoads
CHH13	Construction encounters previously unregistered and unassessed historical cultural heritage sites	An EMP would be prepared to include contingency measures that manage the unexpected discovery of historical cultural heritage sites and features. Subsequent avoidance or approval from relevant authorities prior to damaging, disturbing or otherwise impacting cultural heritage sites would be sought.	VicRoads

8. Conclusion

The EES Scoping Requirements relevant to the non-Aboriginal (historical) cultural heritage assessment are as follows:

- ▶ To protect historical cultural heritage.
- ▶ To identify relevant historical information within the vicinity of the project area and provide a thematic history of the area.
- ▶ To provide an inventory of any historical cultural heritage places of significance in and within the vicinity of the project area. Survey work may be required to ensure that the inventory is a thorough listing of all historical heritage places in and within the vicinity of the project area.
- ▶ To establish the cultural heritage significance of any known or newly recorded sites in consultation with Heritage Victoria and the Ararat Rural City Council and Northern Grampians Shire Council.
- ▶ To identify and assess the potential effects of the project on known and recorded sites, including whether the project would affect the setting and context of heritage places.
- ▶ To identify measures to avoid, mitigate or manage potential effects on known and recorded places of cultural heritage significance. Include details of any proposed measures such as project redesign, site protection measures, site recording and documentation, funding options and relocation procedures, if necessary, and any requirements under either the Ararat or Northern Grampians Planning Schemes and the *Heritage Act 1995*.
- ▶ To identify the residual effects of the project on historical cultural heritage and values in or nearby to the project area.

In order to meet these objectives, the following investigations were undertaken.

A desktop review was conducted to:

- ▶ determine the level of prior cultural heritage assessment (for example the 2008 Noble et. al. report 'Western Highway: Burrumbeet to Stawell, Cultural Heritage Due Diligence') of the study area and the surrounding region;
- ▶ determine the presence of registered historical heritage places within the study area and the surrounding region; and
- ▶ determine the environmental context of the study area with regard to landform.

Spatial datasets were consulted to inform the existing conditions assessment and assess the impact of the alignment on registered and potential National and Commonwealth Heritage Listed places, Heritage Inventory (HI) places, local planning schemes Heritage Overlay (HO) places, Victorian Heritage Register (VHR) places and other historical heritage registers (e.g. DSE). This was achieved by implementing the following:

- ▶ site inspection of previously registered sites and confirmation of their extents, and the
- ▶ integration of georeferenced parish maps, in consultation with local historical societies, community members, and local councils.

The results of the site inspection were discussed with Heritage Victoria in a workshop on 24 April 2012.

- ▶ Three existing HI sites were unable to be located during the survey (H7423-0062 Garden Gully Road Ruin, H7423-0063 Garden Gully Road House Site and H7423-0071 Armstrong Brick Structure Remains) and their site registration was updated to reflect this.
- ▶ Two existing HI sites (H7423-0061 Armstrong No.2, H7423-0064 Garden Gully Road House Site No.2) had their place extents amended following survey and reregistered with Heritage Victoria. As a result, their site extents are outside the proposed alignment. (See Maps 12-14 Appendix B).
- ▶ One existing HI site (H7423-0073 Armstrong Graves) was incorporated in to the site registration H7423-0072 Armstrong Hotel Ruins as the survey determined the features to be garden beds forming part of the former Armstrong Hotel complex rather than grave sites as previously recorded.
- ▶ Five of the previously unregistered sites required listing on the HI as four new individual sites: H7423-0080 (Former) Junction Township site, Armstrong, H7423-0083 Former Armstrong Primary School site, H7423-0081 (Former) Allanvale Tollgate site and H7423-0082 (Former) McKay Family Homestead site.
- ▶ Two of the previously unregistered sites (St. Ethel's Winery and Salinger's Winery) and required a submission to Council recommending inclusion on the Heritage Overlay (HO). Both sites are outside the proposed alignment (See Map 14 Appendix B).
- ▶ One DSE listed site not included in the Impact Assessment Survey, Sisters Rock Graffiti Site also has its registered extent partially within the proposed alignment.

A total of ten sites have been identified and assessed as being affected by the construction and operation of the proposed alignment of Section 3. Nine sites are registered with the Heritage Inventory (HI) and two are listed as locally significant with DSE. Seven sites have their site extents partially within proposed alignment and three have extents entirely within the proposed alignment. The proposed construction footprint intersects the periphery of two registered HI site extents that were unable to be located during the Impact Assessment Survey, and is immediately adjacent to one. These three sites are also considered in the Impact Assessment and Mitigation Measures in recognition that the potential for as yet unidentified subsurface archaeological deposits may exist.

The risks presented by the adverse impacts identified can be managed and mitigated through implementing appropriate mitigation measures outlined in Chapter 7 of this report.

The key outcomes in terms of management and legislative obligations/approvals can be defined in four categories based on risk description, as follows:

Risk Category 1

Where construction encounters a locally significant historical site (i.e.. DSE local listing), a submission to the relevant authority of site's actual extent (DSE) prior to damaging, disturbing or otherwise impacting cultural heritage site.

Risk Category 2

Where construction encounters a known HI listed historical archaeological site, approval is to be sought from Heritage Victoria prior to damaging, disturbing or otherwise impacting the cultural heritage site, alleviating any potential delays resulting from unexpected finds and does not compromise the collection of data.

Risk Category 3

Where construction encounters the site extent of potential, as yet unidentified, subsurface archaeological deposits from a previously registered historical archaeological site (HI), then consultation with Heritage Victoria to implement low level monitoring by a suitably qualified archaeologist is recommended.

Risk Category 4

An Environment Management Plan (EMP) should be prepared to include contingency measures that manage the unexpected discovery of historical cultural heritage sites and features. If the sites cannot be avoided, approval from relevant authorities prior to damaging, disturbing or otherwise impacting cultural heritage sites should be sought.

Based on the risks and impacts identified, historical heritage is impacted by the proposed alignment but these impacts can be mitigated. The proposed alignment has a moderate overall impact on known historical cultural heritage.

9. References

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- ▶ VPRS 625 Selection Files, Sections 19 and 20, Land Act 1869*
 - ▶ VPRS 626 District Selection Files, Sections 19 and 20, Land Act 1869*
 - ▶ VPRS 627 Land Selection Files, Section 31, Land Act 1869*
 - ▶ VPRS 629 Land Selection Files, Section 33, Land Act 1869*
 - ▶ VPRS 5920 Pastoral Run File