

CHAPTER

18

Cultural heritage

INLAND
RAIL 

HELIDON TO CALVERT ENVIRONMENTAL IMPACT STATEMENT

**ARTC**

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18. Cultural heritage

18.1 Summary

This chapter addresses the Indigenous and non-Indigenous cultural heritage values of the Project, outlining the Project's existing environment, potential impacts, potential mitigations and provides a significance impact assessment.

Indigenous cultural heritage will be identified, assessed and managed in accordance with the approved Cultural Heritage Management Plan (CHMP) developed in 2018 between ARTC and the relevant Aboriginal Party (CLH017009) pursuant to the *Aboriginal Cultural Heritage Act 2003* (Qld) (ACH Act).

The assessment of non-Indigenous heritage values and impacts has been undertaken by a team of appropriately qualified heritage specialists and used a combination of register searches and historical and archival research to identify areas of high cultural heritage potential in proximity to the Project. Through this process, 42 Areas of Interest (AOI) were identified in the cultural heritage study area, which is defined as the permanent operational and temporary construction disturbance footprint plus 50 m on either side (refer Figure 18.1). Included among these AOI are 8 places listed on the Queensland State Heritage Register, as well as 14 local heritage places listed by the Lockyer Valley Regional Council (LVRC) and 6 listed by Ipswich City Council (ICC).

Of these 42 AOI, 41 were inspected within the constraints posed by land access restrictions, and any heritage elements identified. An assessment of heritage significance was then undertaken against standard criteria as defined in the Queensland Heritage Act 1992 (Qld) (QH Act), which found 26 AOI to be of local heritage significance, and 11 of State heritage significance.

Likely impacts to each AOI were identified based on proximity to the Project, and hence the potential for direct or indirect impacts. Broadly, direct impacts are those that occur within the permanent operational and temporary construction disturbance footprint and may result, for example, in the demolition or substantial alteration of a building, or the disturbance of an archaeological site. Indirect impacts are those that occur adjacent to the permanent operational and temporary construction disturbance footprint and might include accelerated dilapidation of buildings due to increased vibration or dust deposition.

A series of mitigation or management measures were developed to ameliorate potential negative impacts on the heritage values of AOI. These include measures such as:

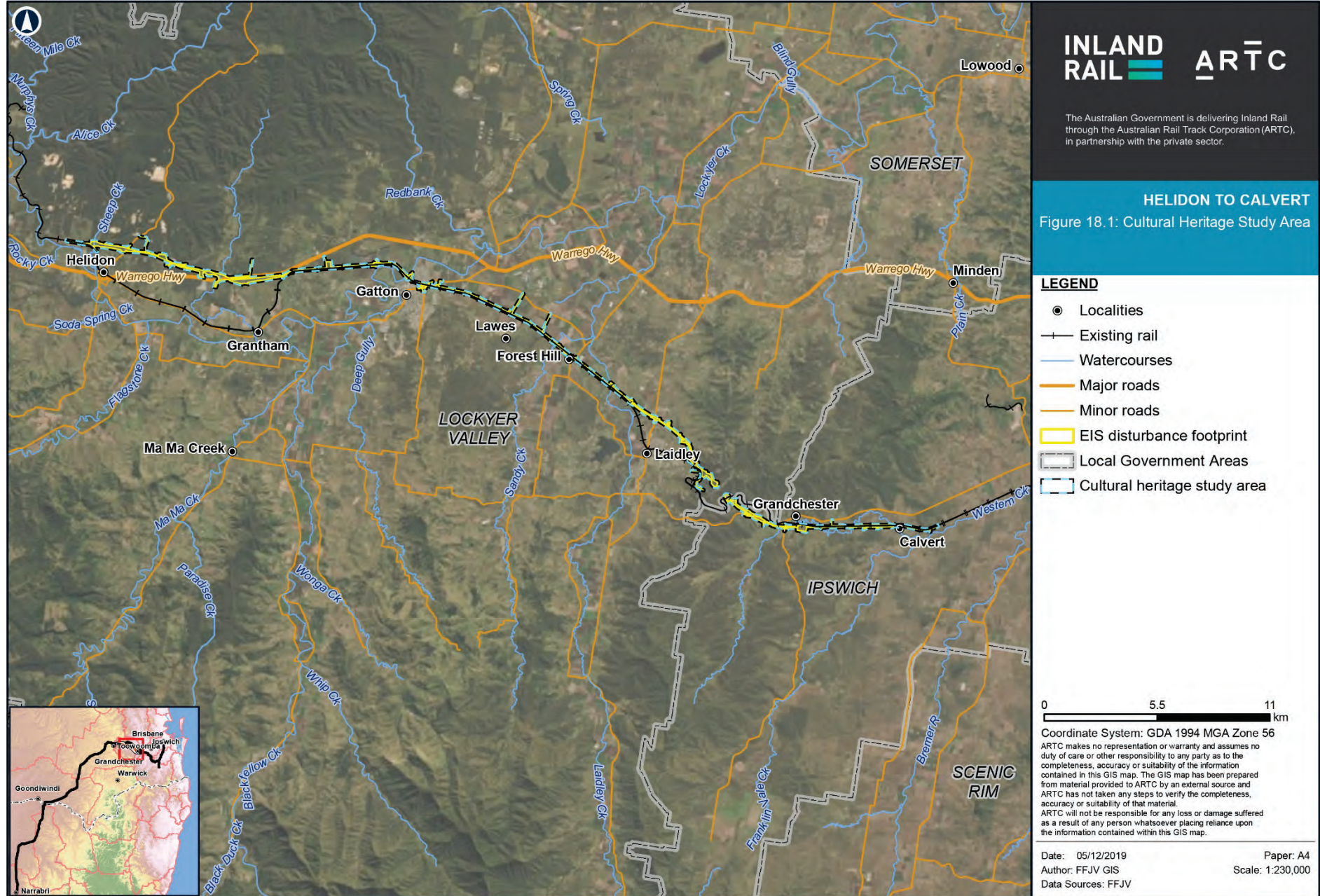
- ▶ Avoidance
- ▶ Archival recording of structures
- ▶ Archaeological survey to map all elements of complex sites, and identify areas of possible subsurface deposit
- ▶ Archaeological excavation or surface collection
- ▶ Procedures for dealing with chance finds of potential heritage value.

The potential Project impacts on each AOI were assessed both before and after the implementation of mitigation. This assessment was conducted using the guidelines prepared by the International Council on Monuments and Sites (ICOMOS), the peak professional body working for the conservation of cultural heritage places (ICOMOS, 2011).

These assessments found that approximately 44 per cent of unmitigated impacts would be moderate, large or very large, but with the proposed mitigation, this figure would be reduced to less than five per cent (refer Table 18.1).

TABLE 18.1: SUMMARY SIGNIFICANCE OF IMPACT BEFORE AND AFTER MITIGATION

Significance of impact	Before mitigation		After mitigation	
	AOI	Per cent	AOI	Per cent
Neutral	9	21.95%	20	48.78%
Slight	14	34.15%	20	46.34%
Moderate	5	12.20%	2	4.88%
Large	11	24.39%	0	0
Very large	3	7.32%	0	0
Total	42	100.00%	42	100.00%



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HELIDON TO CALVERT
Figure 18.1: Cultural Heritage Study Area

LEGEND

- Localities
- Existing rail
- Watercourses
- Major roads
- Minor roads
- ▭ EIS disturbance footprint
- ▭ Local Government Areas
- ▭ Cultural heritage study area

0 5.5 11 km

Coordinate System: GDA 1994 MGA Zone 56
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18.2 Introduction

The purpose of this chapter is to provide sufficient information for an informed decision on the potential impacts of the Project on cultural heritage within the cultural heritage study area and to identify appropriate mitigation measures to address such impacts.

Section 11 of the Terms of Reference (ToR) for the Helidon to Calvert (H2C) Project (the Project) requires that:

‘The construction and operation of the Project should aim to ensure that the nature and scale of the Project does not compromise the cultural heritage significance of a heritage place or heritage area.’

In accordance with the requirements of the ToR (refer Section 18.3) and relevant legislation, this cultural heritage assessment seeks to:

- ▶ Identify known and potential non-Indigenous cultural heritage values
- ▶ Assess the significance of these values
- ▶ Assess the Project’s potential impacts on these values
- ▶ Recommend measures to manage or mitigate impacts on cultural heritage values.

Indigenous cultural heritage will be managed under an approved CHMP. A CHMP for the Project was developed between ARTC and the relevant Aboriginal Party in 2018 (CLH017009). This CHMP was approved under the ACH Act and consequently meets all the requirements for the identification, assessment and management of Indigenous cultural heritage under the Project’s ToR. Accordingly, this EIS defers to the CHMP in all matters related to the management of Indigenous cultural heritage.

18.2.1 Authorship

In accordance with the ToR requirements, this assessment has been undertaken by qualified cultural heritage professionals:

- ▶ Dr Kate Quirk PhD (Archaeology), BA (Hons) (Senior Heritage Specialist)
- ▶ Dr Susan Lampard PhD (Archaeology), BA (Hons) (Senior Heritage Specialist)
- ▶ Luke Kirkwood BA/BSc (Hons) (Principal Heritage Specialist).

18.3 Terms of Reference requirements

The ToR describes the matters the proponent must address in the EIS for the Project. The matters relating to cultural heritage are provided in Table 18.2. Appendix B: Terms of Reference Compliance Table provides a cross-reference for each ToR against relevant sections in this EIS.

TABLE 18.2: TERMS OF REFERENCE—CULTURAL HERITAGE

Terms of Reference requirements	Where addressed
Information requirements	
11.177. Unless section 86 of the <i>Aboriginal Cultural Heritage Act 2003</i> (ACH Act) applies, the proponent must develop a CHMP in accordance with the requirements of Part 7 of the ACH Act. The EIS should provide details of the CHMP and any associated agreements that has been developed or reached or steps taken up to that point to develop or reach such a plan or agreement.	A CHMP has been developed and approved for the Project under agreement with ARTC. The details of this agreement are discussed in Sections 18.6.1, 18.8.1, 18.9.1, 18.10.1, 18.11.1, 18.12.1, and 18.13.1
11.178. For non-Indigenous historical heritage, undertake a study of, and describe, the known and potential historical cultural and landscape heritage values of the area potentially affected by the project. Any such study should be conducted by an appropriately qualified cultural heritage practitioner. Provide strategies to mitigate and manage any negative impacts on non-indigenous cultural heritage values and enhance any positive impacts	Sections 18.8.2, 18.9.2, 18.10.2, 18.10.3, 18.11.2, 18.12.2, and 18.13.2 Appendix D: Study Team Appendix S: Non-Indigenous Cultural Heritage Technical Report, Sections 4 to 9

18.4 Study terminology

The following terms are adopted for this assessment:

- ▶ EIS investigation corridor: the area up to 1 km on either side of the temporary construction and permanent operational disturbance footprints—register searches and analysis of historical mapping has been undertaken over this area.
- ▶ Temporary construction and permanent operational disturbance footprint: the area of all ground-disturbing works, including construction and operational activities
- ▶ Cultural heritage study area: the area of impact assessment, including the permanent operational and temporary construction disturbance footprint plus 50 m on either side, to capture indirect impacts from factors such as increased dust, vibration, or flooding. Fifty metres is considered optimal, based on the experience of the authors on similar projects.

18.5 Legislation, policies, standards and guidelines

The relevant Commonwealth and State legislation and local government planning schemes, policies, plans and guidelines that regulate and manage cultural heritage are outlined in Table 18.3.

Further information on relevant Commonwealth and State legislation and local government planning schemes, policies, plans and guidelines relevant to the Project are outlined in Chapter 3: Project approvals.

TABLE 18.3: CULTURAL HERITAGE REGULATORY CONTEXT

Legislation, policy or guideline	Relevance to the Project
Commonwealth legislation	
<i>Environment Protection and Biodiversity Conservation Act 1999</i> (Cth) (EPBC Act)	<ul style="list-style-type: none"> ▶ Provides protection for items listed on the World, National and Commonwealth Heritage List ▶ Provides framework for consideration of impacts to heritage as part of Commonwealth or Commonwealth supported activities. ▶ On 17 March 2017, the Commonwealth Minister for the Department of the Environment and Energy (Cth) (DotEE) (now the Department of Agriculture, Water and Environment (DAWE)) determined the Project is a 'controlled action' under the EPBC Act (reference number EPBC 2017/7883) due to potentially significant impacts on listed threatened species and communities.
State legislation	
<i>Queensland Heritage Act 1992</i> (Qld) (QH Act)	<ul style="list-style-type: none"> ▶ Principal piece of State legislation that protects non-Indigenous heritage ▶ Items of importance to the people of Queensland are nominated for State Heritage Listing ▶ Allows for the protection of items of local heritage significance in a local government register ▶ Protects historical archaeological discoveries that may be an important source of information about an aspect of Queensland's history.
<i>Aboriginal Cultural Heritage Act 2003</i> (Qld) (ACH Act)	<ul style="list-style-type: none"> ▶ Principal piece of State legislation that protects Indigenous heritage ▶ Seeks to provide effective recognition, protection and conservation of Aboriginal cultural heritage ▶ Requires that every person who carries out an activity 'takes all reasonable and practical measures to ensure the activity does not harm Aboriginal cultural heritage (the cultural heritage duty of care)' ▶ Establishes a database of reported Aboriginal cultural heritage places but does not guarantee that the 'information is up-to-date, comprehensive or otherwise accurate' ▶ Mandates the development and approval of a CHMP for any project requiring an EIS and confirms that acting under an approved CHMP will ensure compliance with the cultural heritage duty of care in relation to Aboriginal cultural heritage covered by the CHMP ▶ Confirms that acting under an approved CHMP will ensure compliance with the cultural heritage duty of care in relation to Aboriginal cultural heritage covered by the CHMP.

Legislation, policy or guideline

Relevance to the Project

<i>Planning Act 2016</i> (Qld)	<ul style="list-style-type: none">▶ Provides the overall development assessment and management framework for Queensland, and is supported by the <i>Planning Regulation 2017</i>▶ Sets out State Development Assessment Provisions (SDAP) for matters of interest to the State▶ SDAP Code 14 pertains to development of State Heritage places.
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Cultural heritage planning frameworks, strategies and statutory guidelines

Local Heritage Register (LHR)	<ul style="list-style-type: none">▶ All local governments in Queensland are required to identify places of local cultural heritage significance in either a planning scheme or LHR, and to develop provisions for the management of such heritage.
<i>The Burra Charter: The Australia ICOMOS Charter for Places of Cultural Significance</i> (ICOMOS, 2013)	<ul style="list-style-type: none">▶ Internationally adopted standards for heritage conservation practice.
<i>Assessing cultural heritage significance: Using the cultural heritage criteria</i> (DEHP, 2013)	<ul style="list-style-type: none">▶ Document prepared by Queensland Department of Environment and Heritage Protection (DEHP) (now Department of Environment and Science (DES))—provides guidance on applying the QH Act criteria to significance assessments of State and local heritage places.
<i>Cultural Heritage Management Plan Guidelines</i> (DATSIP, 2005)	<ul style="list-style-type: none">▶ Document prepared by Department of Aboriginal and Torres Strait Islander Partnerships (DATSIP) (now the Department of Seniors, Disability Services and Aboriginal and Torres Strait Islander Partnerships (DSDSATSIP))—provides guidance on the development of CHMP.

18.6 Methodology

18.6.1 Indigenous heritage

The Indigenous cultural heritage ToR requires a CHMP to be developed with the relevant Aboriginal Party or Parties for the Project, and then be approved by the Chief Executive of DATSIP (now DSDSATSIP).

This process was undertaken by ARTC between February 2018 and June 2018 with the Yuggera Ugarapul People in accordance with the requirements of Part 7 of the ACH Act and the *Cultural Heritage Management Plan Guidelines* (DATSIP, 2005). The resulting CHMP (CLH017009) will serve to identify, assess and manage the Indigenous cultural heritage related to the Project.

To provide the wider community with an appreciation of the Indigenous cultural heritage values of the cultural heritage study area, however, a search of the DATSIP (now DSDSATSIP) Aboriginal and Torres Strait Islander Cultural Heritage Database and Register was undertaken to identify:

- ▶ Aboriginal Parties and/or Cultural Heritage Bodies for the Project
- ▶ Any registered Indigenous cultural heritage within the cultural heritage study area.

In developing the CHMP, ARTC engaged with the relevant Aboriginal Parties to establish methods for investigating Indigenous cultural heritage that may be

affected by the Project. These methods include implementing detailed surveys over the cultural heritage study area to identify any significant Aboriginal objects, significant Aboriginal areas or evidence of archaeological or historic significance of Aboriginal occupation of an area and manage these accordingly under the CHMP.

18.6.2 Non-Indigenous heritage

The historical heritage assessment has been informed by legislative and Project ToR requirements, as well as the guideline *Assessing cultural heritage significance: Using the cultural heritage criteria* (DEHP, 2013), which provides a framework for identifying and managing historical significance under the QH Act.

In keeping with this framework, the key elements of the assessment were:

- ▶ Background research
- ▶ Non-Indigenous cultural heritage inspection
- ▶ Significance assessment
- ▶ Impact assessment
- ▶ Management recommendations.

More detail on the methodology and results of the non-Indigenous heritage assessment is available in the technical report, provided in Appendix S: Non-Indigenous Cultural Heritage Technical Report.

18.6.2.1 Background research

Background research for the assessment included:

- ▶ Review of the relevant Commonwealth, State and local heritage registers to identify previously registered heritage and archaeological sites, incorporating:
 - ▶ World Heritage List; National Heritage List; Commonwealth Heritage List; Register of the National Estate (non-statutory)
 - ▶ Queensland State Heritage Register (SHR)
 - ▶ Heritage registers of relevant local governments (Ipswich City Council and Lockyer Valley Regional Council)
 - ▶ Department of Environment and Science's Cultural Heritage Information Management System (CHIMS) (non-statutory)
 - ▶ Queensland Rail (QR) heritage register (non-statutory)
 - ▶ Queensland World War II (WWII) heritage register (non-statutory)
- ▶ Collation and review of other relevant previous heritage assessments and relevant documents held by State organisations, such as the State Library of Queensland, Queensland State Archives, National Archives of Australia
- ▶ Examination and review of current and historical mapping and aerials relevant to the Project
- ▶ Consultation with relevant key stakeholders, including The Historical Society of Beaudesert, Queensland Transport Museum and Ipswich Rail Museum (refer Appendix C: Consultation Report).

Consideration of non-statutory places was included to demonstrate that a comprehensive due diligence has been undertaken. Non-statutory registers may 'provide an indication of the known and potential historical cultural and landscape heritage values of the area', as required by the ToR (refer Section 18.3). Non-statutory registers are an indication of the types of places considered important by the community (or sections thereof), but which have not gone through the process of listing on statutory registers. It is interesting to note, for example, that the Victoria Tunnels on the Little Liverpool Range (which will not be impacted) are arguably of State heritage significance but are so far listed only on the non-statutory CHIMS database. There is no legislative requirement to protect non-statutory places, but impacts may cause community concern if not appropriately managed.

Similarly, while the Project is exempt from complying with the local planning scheme (refer Chapter 3: Project approvals), items of local heritage significance are identified within heritage registers of the relevant local governments. In response to the ToR, which require consideration of social and economic matters at a local level, locally listed items have been addressed and mitigated, where required.

18.6.2.2 Site inspections

Given the extent of the Project, it was neither practical nor feasible to inspect the entire alignment. Instead, a targeted survey strategy was used, which focused on areas of highest heritage potential (refer Table 18.4). These AOI included:

- ▶ Registered heritage places (statutory and non-statutory)
- ▶ Previously identified but unregistered places
- ▶ New places identified during historical research, consultation or site inspections.

Land access could not be obtained for any of the 36 privately owned AOI, and so inspection was necessarily limited to observations from adjoining public areas for these sites (refer Table 18.4). Within this constraint, 41 of the 42 AOI were inspected as conditions allowed and any heritage elements recorded using Global Position System (GPS), written notes and photography. Lack of land access has not impacted the validity of the findings.

Geo-technical investigations identified a sheep/cattle dip on Lot and Plan 135/CC3234. This item was excluded from heritage investigations as it would not meet the significance thresholds (refer Section 18.6.2.3).

It should be noted that Grandchester was known as Bigges Camp until 1865. Identification of AOIs has included consideration of the Bigges Camp phase of occupation in the vicinity of Grandchester.

TABLE 18.4: PROJECT INSPECTION AREAS OF INTEREST

Site ID	Description	Lot/plan	Land access
H2C-19-H01	Helidon Railway Culvert	452/SP117138	No
H2C-19-H02	House	1/RP175514	No
H2C-19-H03	House	29/CA314	No
H2C-19-H04	House	30/CA314	No
H2C-19-H05	House	34/CA314	No
H2C-19-H06	Lockyer Creek Bridge	N/A	No
H2C-19-H07	Gatton Railway Station	381/SP121744	Yes (public areas only)
H2C-19-H08	Gatton Station Master's Residence	385/SP121744	No
H2C-19-H09	Boer War Memorial	381/SP121744	Yes
H2C-19-H10	Weeping Mother Memorial	155/CC2253	Yes
H2C-19-H11	Commercial Hotel	2/RP99478	No
H2C-19-H12	Royal Hotel	1/RP98977	No
H2C-19-H13	Gatton Post and Telegraph Office	24/RP147633	No
H2C-19-H14	House	3/SP269075	No
H2C-19-H15	University of Queensland (Gatton)	TSP250832	No
H2C-19-H16	Cottage	35/RP7798	No
H2C-19-H17	House	2/RP114066	No
H2C-19-H18	House	4/SP285416	No
H2C-19-H19	Forest Hill Railway Station	22/SP131010	No
H2C-19-H20	Forest Hill School of Arts	1/F5304	No
H2C-19-H21	Forest Hill War Memorial	N/A	Yes
H2C-19-H22	Railway platform building (relocated)	1/CP867703	Yes
H2C-19-H23	Lockyer Hotel	1/RP7811	No
H2C-19-H24	National Bank (former)	8/RP198696	No
H2C-19-H25	Forest Hill Hotel	1/RP7805	No
H2C-19-H26	Cottage	1/RP25631	No
H2C-19-H27	Outbuildings	3/RP25631	No
H2C-19-H28	Homestead Complex	1/RP25670	No
H2C-19-H29	Homestead Complex	1/RP209381	No
H2C-19-H30	House Ruin	112/CH31344	No
H2C-19-H31	House	272/CH31129	No
H2C-19-H32	Homestead complex	93/CH31278	No
H2C-19-H33	General Store (former)	1/RP56146	No
H2C-19-H34	House	8/CC3515	No
H2C-19-H35	Railway platform buildings (relocated)	19/SP161916	Yes
H2C-19-H36	Grandchester Railway Complex	209/SP136979	No
H2C-19-H37	Grandchester Community Hall	216/CC3251	No
H2C-19-H38	House	10/CC3471	No
H2C-19-H39	Railway residence	15/CC3614	No
H2C-19-H40	Railway house	14/CC3614	No
H2C-19-H41	Calvert Community Hall (former)	1/RP64636	No
H2C-19-H42	Grandchester Archaeological Complex	215/CH31279 86/CH31279	No

18.6.2.3 Significance assessment

The significance of historical heritage places is assessed in accordance with the QH Act and *Assessing cultural heritage significance: Using the cultural heritage criteria* (DEHP, 2013a). A place may be considered to be of heritage significance if it meets one or more of the criteria stipulated in the QH Act (Section 35), as outlined in Table 18.5.

TABLE 18.5: QUEENSLAND STATE HERITAGE SIGNIFICANCE ASSESSMENT CRITERIA

Criterion	Description
A—historical	The place is important in demonstrating the evolution or pattern of history
B—rarity	The place demonstrates rare, uncommon or endangered aspects of cultural heritage
C—research	The place has potential to yield information that will contribute to an understanding of history
D—representativeness	The place is important in demonstrating the principal characteristics of a particular class of cultural places
E—aesthetic	The place is important because of its aesthetic significance
F—creative/technical	The place is important in demonstrating a high degree of creative or technical achievement at a particular period
G—social	The place has a strong or special association with a particular community or cultural group for social, cultural or spiritual reasons
H—associational	The place has a special association with the life or work of a particular person, group or organisation of importance

These criteria may be fulfilled at a number of thresholds, ranging from world to local, depending on the importance of the place, and the contribution it makes to our understanding of the past (refer Table 18.6).

TABLE 18.6: LEVELS OF CULTURAL HERITAGE SIGNIFICANCE

Significance	Description
World	Heritage values contribute to our understanding of the pattern and evolution of world history and heritage and the place is considered to be of outstanding value to humanity
National	Heritage values make an outstanding contribution to our understanding of the pattern and evolution of Australia’s history and heritage
State	Heritage values contribute to our understanding of the wider pattern and evolution of Queensland’s history and heritage
Local	Heritage values contribute to our understanding of the pattern and evolution of local history and heritage

Source: DEHP, 2013

18.6.2.4 Impact assessment

The potential impacts on the heritage values are assessed using criteria developed from the *Guidance on Heritage Impact Assessments for Cultural World Heritage Properties* (ICOMOS, 2011), along with the standard impact assessment methodology used for the Project (refer Chapter 4: Assessment methodology).

Under the ICOMOS guidelines, two key elements are required to assess impacts on heritage places: the value of the place, and the extent of the change to this value. The value of the place is a measure of its importance, also referred to as its significance. As outlined in Section 18.6.2.3, places can be of differing levels of importance, or significance: local, State, national or world significance (refer also ICOMOS (Australia) 2013). Places of local significance are important only to their immediate community, places of State significance to the wider region, and places of national significance to the country as a whole. Places of world significance are important to all of humanity, possessing one or more Outstanding Universal Values. The more valuable a place is, the more vulnerable it is to change. Hence value, or significance as it is used here, is a measure of sensitivity.

The differing significance of a place’s heritage values and their relative sensitivity to impact is summarised in Table 18.7.

TABLE 18.7: LEVELS OF CULTURAL HERITAGE SENSITIVITY

Sensitivity	Justification	Status
Extreme	Attributes that convey Outstanding Universal Values of World Heritage Place	Fulfils criteria for local, State, national and international listing
Very High	Exceptional, rare or outstanding attributes demonstrating important themes in national or international history and heritage	Fulfils criteria for local, State, national or potentially international listing
High	Attributes demonstrating important themes in state history and heritage	Fulfils criteria for local and State listing
Moderate	Attributes demonstrating important themes in local history and heritage	Fulfils criteria for local listing and may fulfil criteria for State listing
Low	Attributes demonstrating minor themes in local history and heritage	May fulfil criteria for local listing and does not fulfil criteria for State listing
Negligible	Attributes that have no heritage significance	Does not fulfil criteria for local or State listing

The degree of impact an activity will have on a heritage place is assessed in terms of the magnitude of change to the acknowledged heritage values of a place as summarised in Table 18.8. These impacts may be direct, such as the demolition of heritage buildings, or indirect, such as changes to the views or setting of a heritage place. In some cases, indirect impacts might also cause physical damage to a heritage place, such as excessive vibration causing structural damage, or excessive pollution causing damage to surfaces.

TABLE 18.8: DETERMINING MAGNITUDE OF CHANGE

Magnitude	Example criteria
Major	Change to all or most significant aspects of the place, such that its heritage values are substantially reduced or destroyed
Medium	Change to some significant aspects of the place, such that some of its heritage values are partially reduced
Low	Minor change to significant aspects of the place, such that some of its heritage values are slightly reduced
Negligible	Changes to insignificant aspects of the places, such that its heritage values are not reduced
No Change	No change

The final assessment of the significance of impact on a heritage place is a factor of the cultural heritage sensitivity of the place, combined with the predicted magnitude of change, as outlined in Table 18.9. A prediction of impact significance can be made both before and after the implementation of identified mitigation measures, allowing effectiveness to be assessed and understanding of potential residual impacts.

TABLE 18.9: ESTIMATING IMPACT SIGNIFICANCE

Significance of impact		Magnitude of change				
		Major	Medium	Low	Negligible	No change
Cultural heritage sensitivity	Extreme	Very large	Large/very large	Moderate/large	Slight	Neutral
	Very high	Very large	Large/very large	Moderate/large	Slight	Neutral
	High	Large/very large	Moderate/large	Slight/moderate	Slight	Neutral
	Moderate	Moderate/large	Moderate	Slight	Neutral/slight	Neutral
	Low	Slight/moderate	Slight	Neutral/slight	Neutral/slight	Neutral
	Negligible	Slight	Neutral/Slight	Neutral/Slight	Neutral	Neutral

18.7 Consultation

Aboriginal community consultation acknowledges the right of Aboriginal people to be involved, through direct participation, on matters that directly affect their heritage. Involving Aboriginal people in all facets of the assessment process ensures that they are given adequate opportunity to share information about cultural values, and to actively participate in the development of appropriate management and/or mitigation measures.

The successful identification, assessment and management of Indigenous cultural heritage values is dependent on an inclusive and transparent consultation process. Aboriginal community consultation for the current assessment was undertaken in accordance with the *Cultural Heritage Management Plan Guidelines* (DATSIP, 2005). Consultation with the Yuggera Ugarapul People will be ongoing, as per the approved CHMP. This will ensure that cultural heritage matters continue to be identified, managed and addressed for the Project. Stakeholder consultation, including with Aboriginal people, is addressed further in Chapter 5: Stakeholder engagement.

A summary of consultation undertaken for the CHMP is provided in Table 18.10.

TABLE 18.10: INDIGENOUS CONSULTATION SUMMARY

Organisation	Response received	Method	Summary
Yuggera Ugarapul People	Yes	Meetings and written notices	Consultation and negotiation completed in accordance with Part 7 of the ACH Act resulting in approved CHMP

Consultation has included negotiations about the CHMP with the aim of identifying a process for:

- ▶ Undertaking cultural heritage surveys for the Project
- ▶ Including the Traditional Owners, associated with the area, in assessment of Indigenous cultural heritage values and the protection and management of Indigenous cultural heritage
- ▶ Mitigating, managing and protecting identified cultural heritage and objects during both construction and operation.

Details of the CHMP are confidential to the signatories and are not provided within this chapter.

18.8 Description of existing heritage conditions

This section includes a description of each relevant Indigenous and non-Indigenous value or condition, informed by desktop research and field investigations.

18.8.1 Indigenous cultural heritage

A search of the DATSIP (now DSDSATSIP) Database on 21 September 2020 (Search ID 76581) returned the following details of the Aboriginal Party and the CHMP with ARTC for the Project (refer Table 18.11 and Table 18.12).

TABLE 18.11: ABORIGINAL PARTY FOR THE PROJECT

QC ref number	QUD ref number	Name
QC2017/005	QUD213/2017	Yuggera Ugarapul People

TABLE 18.12: CULTURAL HERITAGE MANAGEMENT PLANS WITH ARTC

CHL number	Sponsor	Party	Approved
CLH017009	ARTC Inland Rail	Yuggera Ugarapul People	5 June 2018

The DATSIP (now DSDSATSIP) search also indicates there are 12 reported Indigenous cultural heritage sites within the EIS investigation corridor, but none within the cultural heritage study area (refer Table 18.13). The majority of these sites consist of artefact scatters and scarred/carved trees, followed by cultural sites, landscape features, resource areas, Aboriginal historical places and burials.

TABLE 18.13: DATSIP (NOW DSDSATSIP) DATABASE SITES WITHIN THE EIS INVESTIGATION CORRIDOR

Site type	Count	Percent of the total (%)
Artefact scatter	4	33.33
Scarred/carved tree	3	25.00
Cultural site	1	8.33
Landscape feature	1	8.33
Resource area	1	8.33
Aboriginal historical place	1	8.33
Burial	1	8.33
Total	12	100.00

18.8.2 Non-Indigenous heritage

18.8.2.1 Register searches

A search of all relevant statutory and non-statutory heritage registers on 6 August 2019, indicates that there are no World Heritage List, National Heritage List or Commonwealth Heritage List places within the EIS investigation corridor (refer Table 18.14). However, there are nine State Heritage Register places within the EIS investigation corridor, eight of which are in the cultural heritage study area (refer Table 18.15) and 79 local heritage places, 20 of which are in the cultural heritage study area (refer to Table 18.17).

Additionally, there are 16 non-statutory listings, including eight Register of the National Estate places, four QR Heritage Asset Register places, two Cultural Heritage Information Management System places, and one WWII historic heritage place within the EIS investigation corridor, half of which are also in the cultural heritage study area (refer Table 18.18). Aside from the ammunition facility (WWII Historic Places #748), the Lockyer Creek Rail Bridge (QR) and the Victoria Tunnel and Ascent (CHIMS #2420), all of these non-statutory places are captured in the State or local listings.

TABLE 18.14: SUMMARY REGISTER SEARCHES

Register	Within the EIS investigation corridor ¹	Within cultural heritage study area ²
World Heritage List	0	0
National Heritage List	0	0
Commonwealth Heritage List	0	0
Register of the National Estate (non-statutory)	8	6
State Heritage Register	9	8
Cultural Heritage Information Management System (non-statutory)	2	0
LVRC Local Heritage Register	62	14
ICC Local Heritage Register	17	6
Queensland World War II Historic Places (non-statutory)	1	0
Queensland Rail Heritage Asset Register	4	3

Table notes:

1 The area up to 1 km either side of the proposed alignment

2 The permanent operational and temporary construction disturbance footprint plus 50 m on either side

TABLE 18.15: STATE HERITAGE PLACES WITHIN THE EIS INVESTIGATION CORRIDOR

Name	ID	Proximity to Project
Forest Hill War Memorial	600649	Cultural heritage study area
Boer War Memorial	600510	Cultural heritage study area
Weeping Mother Memorial	600511	Cultural heritage study area
Grandchester Sawmills	600730	Within the EIS investigation corridor
Shop, 3 Victoria Street, Forest Hill	600651	Cultural heritage study area
UQ, Gatton Campus	601672	Cultural heritage study area
Grandchester Railway Complex	600729	Cultural heritage study area
Lockyer Hotel	600650	Cultural heritage study area
Forest Hill Hotel	600652	Cultural heritage study area

TABLE 18.16: LOCAL HERITAGE PLACES WITHIN THE EIS INVESTIGATION CORRIDOR

Place type	Number
Bank	1
Cemetery	2
Civic Centre	1
Educational	1
Forest Hill Hotel	1
Gatton Railway Station	1
Hall	2
Hotel	3
House	44
Memorial	2
Monument	1
Post Office	1
Railway	4
Railway footbridge	1
Religious	5
Sawmill	1
School	1
Shop	4
Shops	2
Water tower	1
Total	79

TABLE 18.17: LOCAL HERITAGE PLACES WITHIN THE CULTURAL HERITAGE STUDY AREA

Place	Location	Area	Source
Memorial	Littleton Park, 24 Old College Road	Gatton Town	LVRC
Gatton Post Office	Crescent Street	Gatton Town	LVRC
Hotel	1 Railway Street, Gatton (Cnr Crescent Street)	Gatton Town	LVRC
Hotel	2 Railway St (Cnr Crescent Street)	Gatton Town	LVRC
House	4 Gaul Street, Gatton	Gatton Town	LVRC
Educational	UQ Gatton Campus, Lawes	Special Sites	LVRC
Gatton Railway Station	Railway Street	Gatton Town	LVRC
Station Master's Residence	Hickey Street	Gatton Town	LVRC
Boer War Memorial and Park	Crescent Street	Gatton Town	LVRC
Railway footbridge	Railway Street	Helidon	LVRC
Forest Hill Railway	Railway Street	Forest Hill	LVRC
National Bank (former)	Victoria Street	Forest Hill	LVRC
Lockyer Hotel	Victoria Street	Forest Hill	LVRC
Forest Hill Hotel	Victoria Street	Forest Hill	LVRC
House	Wilson Street	Calvert	ICC
Calvert Community Hall	Wilson Street	Calvert	ICC
Dwelling, main house and detached kitchen	Lot 10 Grandchester Mt Mort Road	Grandchester	ICC
Hall, whole lot	Grandchester Community Hall	Grandchester	ICC
Dwelling, main house	Lot 21 Neumann Road	Calvert	ICC
Railway Station and Station Master's Residence	Grandchester Railway Station	Grandchester	ICC

TABLE 18.18: NON-STATUTORY HERITAGE PLACES WITHIN THE EIS INVESTIGATION CORRIDOR

Place	Register	ID	Proximity to the Project
Grandchester Sawmill	CHIMS	25304	EIS investigation corridor
Victoria Tunnel and Ascent, Little Liverpool Range	CHIMS	2420	EIS investigation corridor
Forest Hill Railway Station	QR	N/A	Cultural heritage study area
Gatton Railway Station	QR	N/A	Cultural heritage study area
Grandchester railway complex	QR	N/A	EIS investigation corridor
Lockyer Creek Rail Bridge	QR	N/A	Cultural heritage study area
Boer War Memorial	RNE	16126	Cultural heritage study area
Forest Hill War Memorial	RNE	16143	Cultural heritage study area
Gatton World War One Memorial	RNE	16125	Cultural heritage study area
Grandchester Railway Complex	RNE	8581	EIS investigation corridor
Grandchester Sawmills	RNE	8595	EIS investigation corridor
Lockyer Hotel	RNE	8702	Cultural heritage study area
Main Range Railway	RNE	19547	Cultural heritage study area
Shop, 3 Victoria Street, Forest Hill	RNE	8704	Cultural heritage study area
Ammunition Facility	WWII Places	748	EIS investigation corridor

18.8.3 Site inspection results

As noted, land access could not be obtained for any of the 36 privately owned AOI, and so inspection was necessarily limited to observations from adjoining public areas. Within this constraint, it was possible to inspect all 42 AOI (refer Table 18.19 and Figure 18.2a to Figure 18.2o) as conditions allowed, recording any heritage elements using GPS, written notes and photography.

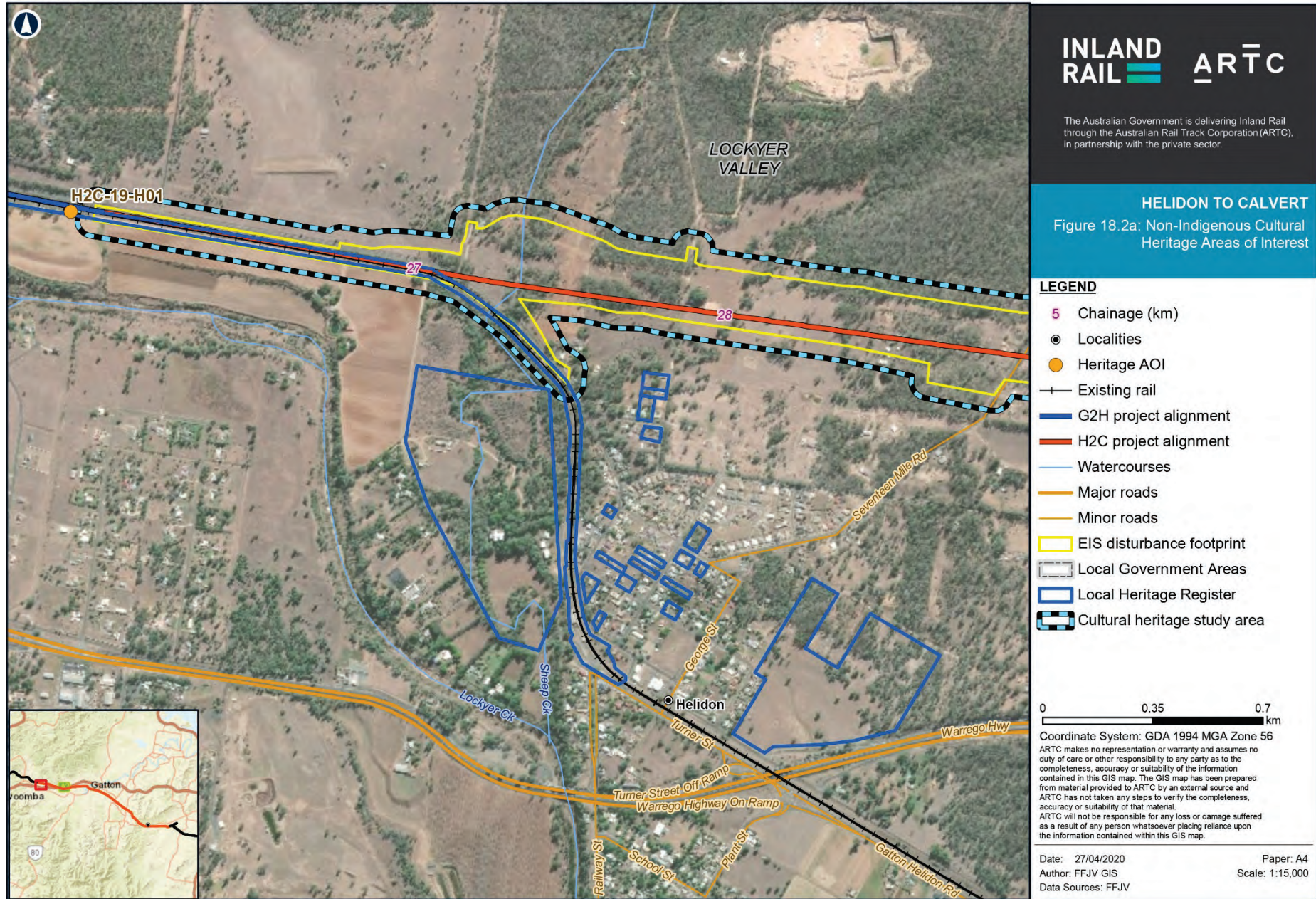
A full description of each AOI is provided in the non-Indigenous heritage technical report (refer Appendix S: Non-Indigenous Cultural Heritage Technical Report).

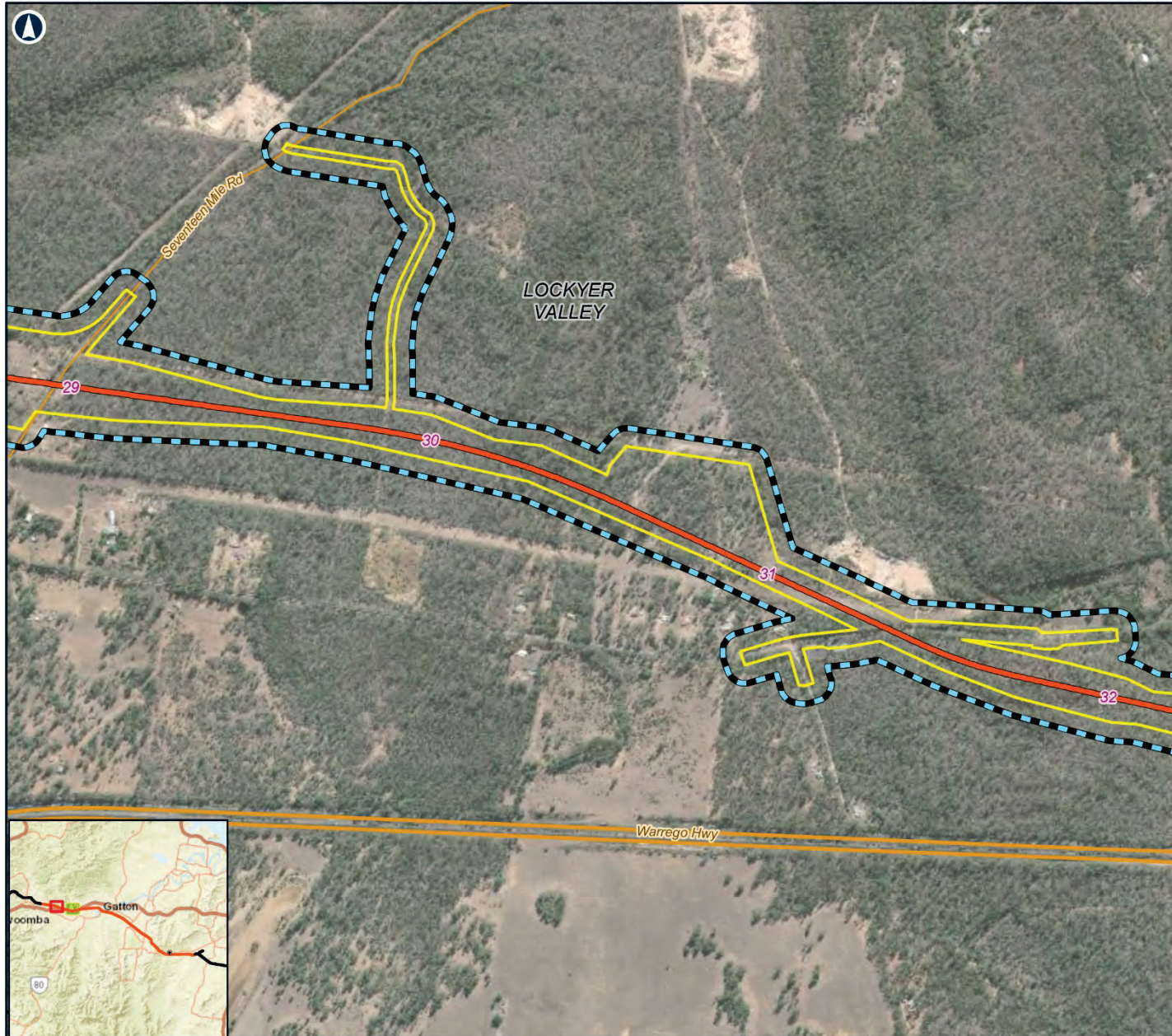
TABLE 18.19: NON-INDIGENOUS SITE INSPECTION RESULTS

Site ID	Site name	Site description	Lot/plan	Proximity to Project
H2C-19-H01	Helidon railway culvert	Original (c.1866) box culvert located at Ch 117.0 km on the Main Line from Brisbane to Toowoomba.	452/SP117138	Permanent operational and temporary construction disturbance footprint
H2C-19-H02	House	Early 20th century bungalow and two sheds on Sandy Creek Road, Grantham.	1/RP175514	Cultural heritage study area
H2C-19-H03	House	Early 20th century bungalow and old timber shed on Smithfield Road, Gatton.	29/CA314	Permanent operational and temporary construction disturbance footprint
H2C-19-H04	House	Early 20th century bungalow and large corrugated iron shed at the corner of Smithfield Road and Raymont Road, Gatton.	30/CA314	Permanent operational and temporary construction disturbance footprint
H2C-19-H05	House	Early 20th century bungalow and a number of outbuildings at the intersection of Smithfield Road and Burgess Road, Gatton.	34/CA314	Permanent operational and temporary construction disturbance footprint
H2C-19-H06	Lockyer Creek Bridge	Early 20th century metal truss rail bridge on the Main Line, spanning Lockyer Creek on the western side of Gatton.It's	N/A	Permanent operational and temporary construction disturbance footprint
H2C-19-H07	Gatton Railway Station	Railway station opened in 1866 as a part of the Main Line. Present buildings date to the 20th century, and include a passenger station, platform shelter, footbridge and weighbridge. Listed on the LVRC LHR.	381/SP121744	Permanent operational and temporary construction disturbance footprint
H2C-19-H08	Gatton Station Master's Residence	Early 20th century bungalow constructed as accommodation for employees of the adjacent Gatton Railway Station. Listed on the LVRC LHR.	385/SP121744	Permanent operational and temporary construction disturbance footprint
H2C-19-H09	Boer War Memorial	Boer War memorial erected in 1909 in a small park in front of the Gatton Railway Station. Listed on the SHR (SHR#600510).	381/SP121744	Cultural heritage study area
H2C-19-H10	Weeping Mother Memorial	First World War Memorial erected in 1922 in a park to the north of the Gatton Railway Station. Listed on the SHR (SHR#600511).	155/CC2253	Cultural heritage study area
H2C-19-H11	Commercial Hotel	Two-storey brick hotel constructed in 1927 on the corner of Railway Street and Crescent Street, Gatton. Listed on the LVRC LHR.	2/RP99478	Cultural heritage study area
H2C-19-H12	Royal Hotel	Two-storey brick hotel constructed in 1914 on the corner of Railway Street and Crescent Street, Gatton. Listed on the LVRC LHR.	1/RP98977	Cultural heritage study area Permanent operational and temporary construction disturbance footprint

Site ID	Site name	Site description	Lot/plan	Proximity to Project
H2C-19-H13	Gatton Post and Telegraph Office	Arts and crafts style post and telegraph office constructed c.1908 on Crescent Street, Gatton. Listed on the LVRC LHR.	24/RP147633	Cultural heritage study area
H2C-19-H14	House	Colonial dwelling on Chadwick Road, Gatton. Has undergone a number of alterations.	3/SP269075	Cultural heritage study area
H2C-19-H15	The University of Queensland (Gatton)	Late 19th century agricultural college located at Lawes, east of Gatton. Listed on the SHR (SHR#601672).	TSP250832	Permanent operational and temporary construction disturbance footprint
H2C-19-H16	Cottage	Small colonial timber cottage on Dodt Road, Lawes.	35/RP7798	Cultural heritage study area
H2C-19-H17	House	Large colonial dwelling on Greyfriars Road, Lawes.	2/RP114066	Permanent operational and temporary construction disturbance footprint
H2C-19-H18	House	Early-mid 20th century timber dwelling on Railway Road, Forest Hill. Has undergone a number of alterations and is in a state of dilapidation.	4/SP285416	Cultural heritage study area
H2C-19-H19	Forest Hill Railway Station	Railway station established in 1866 as a part of the Main Line. No original station buildings remain. Listed on the LVRC LHR.	22/SP131010	Permanent operational and temporary construction disturbance footprint
H2C-19-H20	Forest Hill School of Arts	Decorative timber hall constructed in 1915 on Railway Street, Forest Hill.	1/F5304	Cultural heritage study area
H2C-19-H21	Forest Hill War Memorial	First World War Memorial, erected in 1921 on Gordon Street, Forest Hill. Listed on the SHR (SHR# 600649).	N/A	Permanent operational and temporary construction disturbance footprint
H2C-19-H22	Railway platform building (relocated)	Early 20th century timber railway platform shelter. Relocated from the adjacent Forest Hill Station to a park on Victoria Street.	1/CP867703	Cultural heritage study area
H2C-19-H23	Lockyer Hotel	Two-storey timber hotel constructed in 1906 on Victoria Street, Forest Hill. Listed on the SHR (SHR#600650).	1/RP7811	Permanent operational and temporary construction disturbance footprint
H2C-19-H24	National Bank (former)	Single-storey timber commercial building constructed in 1909 on Victoria Street, Forest Hill. Listed on the SHR (SHR#600651).	8/RP198696	Cultural heritage study area
H2C-19-H25	Forest Hill Hotel	Two-storey timber hotel constructed in 1898 on William Street, Forest Hill. Listed on the SHR (SHR#600652).	1/RP7805	Cultural heritage study area
H2C-19-H26	Cottage	Small colonial cottage with detached kitchen on Hall Road, Forest Hill. Several timber and corrugated iron outbuildings to the rear.	1/RP25631	Permanent operational and temporary construction disturbance footprint
H2C-19-H27	Outbuildings	Series of corrugated iron and timber farm buildings on Hall Road, Forest Hill. Adjacent house is a modern addition.	3/RP25631	Permanent operational and temporary construction disturbance footprint
H2C-19-H28	Homestead complex	Homestead complex on Luck Road, Laidley. Includes an early 20th century timber bungalow, a colonial cottage, and a number of	1/RP25670	Cultural heritage study area

Site ID	Site name	Site description	Lot/plan	Proximity to Project
		outbuildings. Some outbuildings feature slab construction.		
H2C-19-H29	Homestead complex	Homestead complex, including creamery, yards and a colonial dwelling on Luck Road, Laidley.	1/RP209381	Cultural heritage study area
H2C-19-H30	House ruin	Remains of a dwelling on Rosewood Laidley Road, Grandchester.	112/CH31344	Permanent operational and temporary construction disturbance footprint
H2C-19-H31	House	Dilapidated timber hipped roof dwelling with the remains of two brick chimneys on Rosewood Laidley Road, Grandchester.	272/CH31129	Cultural heritage study area
H2C-19-H32	Homestead complex	Homestead complex, including creamery, yards and an early 20th century dwelling on Doonans Road Grandchester, Queensland.	93/CH31278	Cultural heritage study area
H2C-19-H33	General Store (former)	Early 20th century single storey timber commercial building on Grandchester Mt Mort Road, Grandchester.	1/RP56146	Permanent operational and temporary construction disturbance footprint
H2C-19-H34	House	Colonial dwelling with detached kitchen on Grandchester Mt Mort Road, Grandchester.	8/CC3515	Cultural heritage study area
H2C-19-H35	Railway platform buildings (relocated)	Two small timber platform buildings at the Grandchester cricket oval, most likely relocated from the adjacent Grandchester Railway Station. Both are currently used by the cricket club.	19/SP161916	Cultural heritage study area
H2C-19-H36	Grandchester railway complex	Original termination of the Main Line railway, opening in 1865. Station building constructed in the same year, with adjacent water tank added in 1876. A number of other original or early buildings have been removed. Listed on the SHR (SHR#600729).	209/SP136979	Cultural heritage study area
H2C-19-H37	Grandchester Community Hall	Mid-20th century timber community hall on School Road, Grandchester. Listed on the Ipswich LHR.	216/CC3251	Cultural heritage study area
H2C-19-H38	House	Colonial dwelling with steep, short ridge hipped roof and detached kitchen. Listed on the Ipswich LHR.	10/CC3471	Permanent operational and temporary construction disturbance footprint
H2C-19-H39	Railway residence	Colonial timber cottage on Neumann Road, Calvert. Listed on the Ipswich LHR.	15/CC3614	Permanent operational and temporary construction disturbance footprint
H2C-19-H40	Railway house	Early 20th century timber bungalow on Wilson Street, Calvert. Appears to have been relocated from elsewhere. Listed on the Ipswich LHR.	14/CC3614	Permanent operational and temporary construction disturbance footprint
H2C-19-H41	Calvert Community Hall (former)	Mid-20th century timber community hall on Wilson Street, Calvert. Now used as a dwelling. Listed on the Ipswich LHR.	1/RP64636	Permanent operational and temporary construction disturbance footprint
H2C-19-H42	Grandchester archaeological complex	Surface scatter of handmade bricks in association with ground surface modifications.	215/CH31279 86/CH31279	Cultural heritage study area









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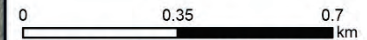
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HELIDON TO CALVERT

Figure 18.2b: Non-Indigenous Cultural Heritage Areas of Interest

LEGEND

- 5 Chainage (km)
-  Existing rail
-  H2C project alignment
-  Major roads
-  Minor roads
-  EIS disturbance footprint
-  Local Government Areas
-  Cultural heritage study area

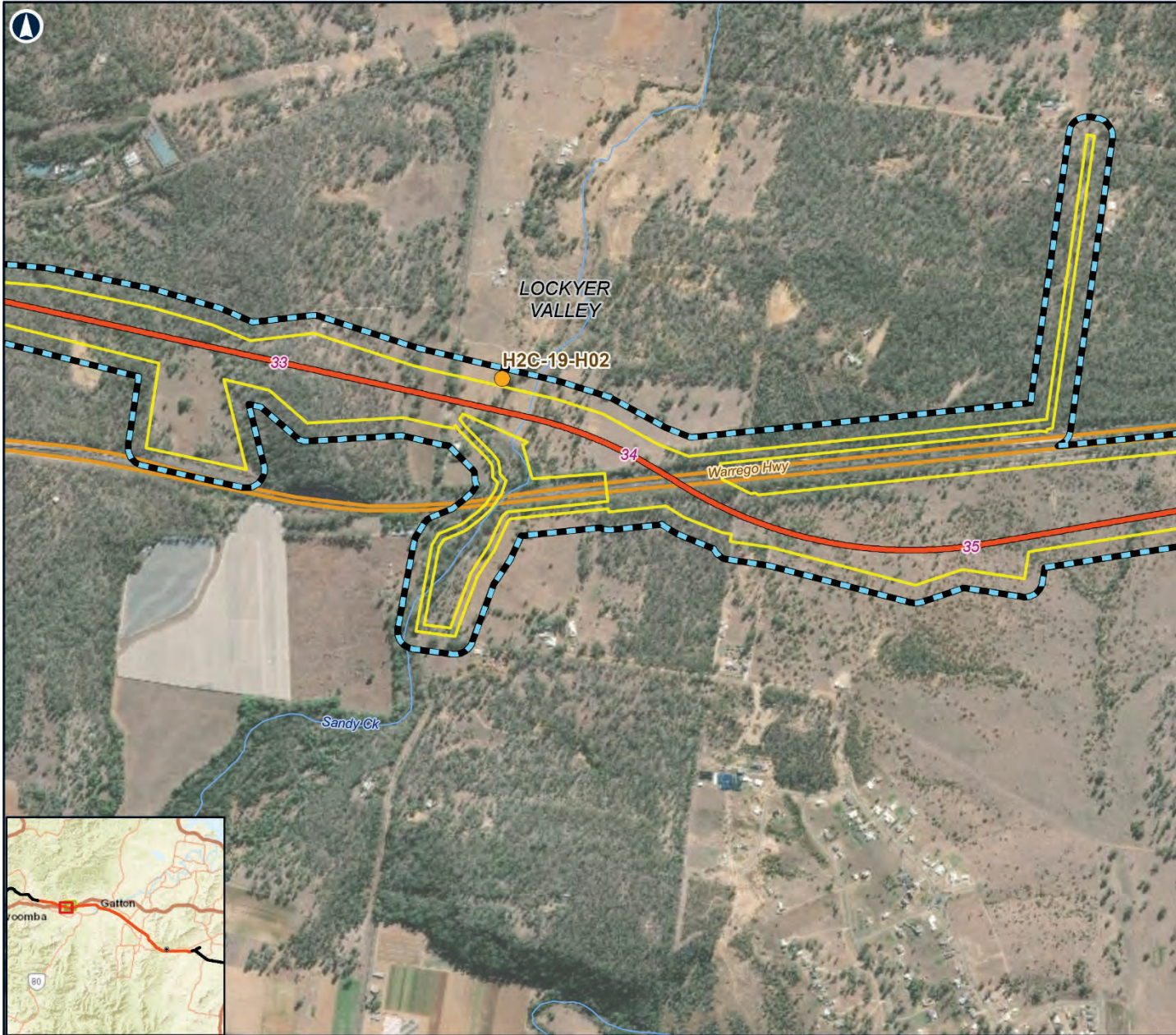


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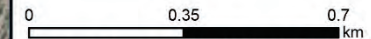
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HELIDON TO CALVERT Figure 18.2c: Non-Indigenous Cultural Heritage Areas of Interest

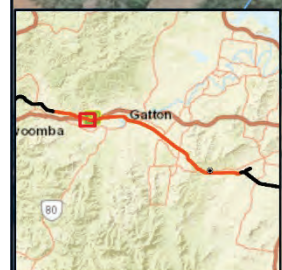
LEGEND

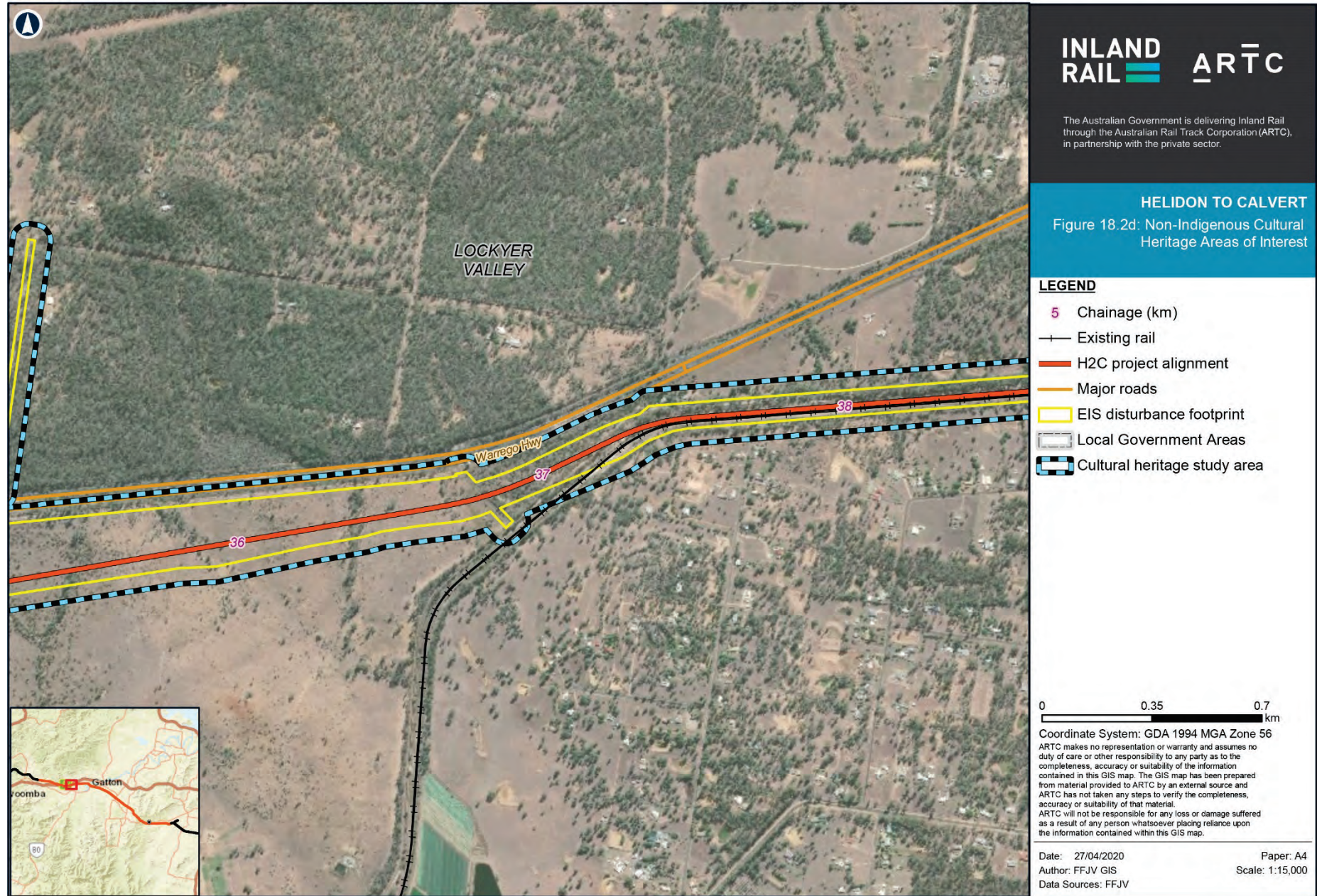
- 5 Chainage (km)
- Heritage AOI
- H2C project alignment
- Watercourses
- Major roads
- EIS disturbance footprint
- Local Government Areas
- Cultural heritage study area



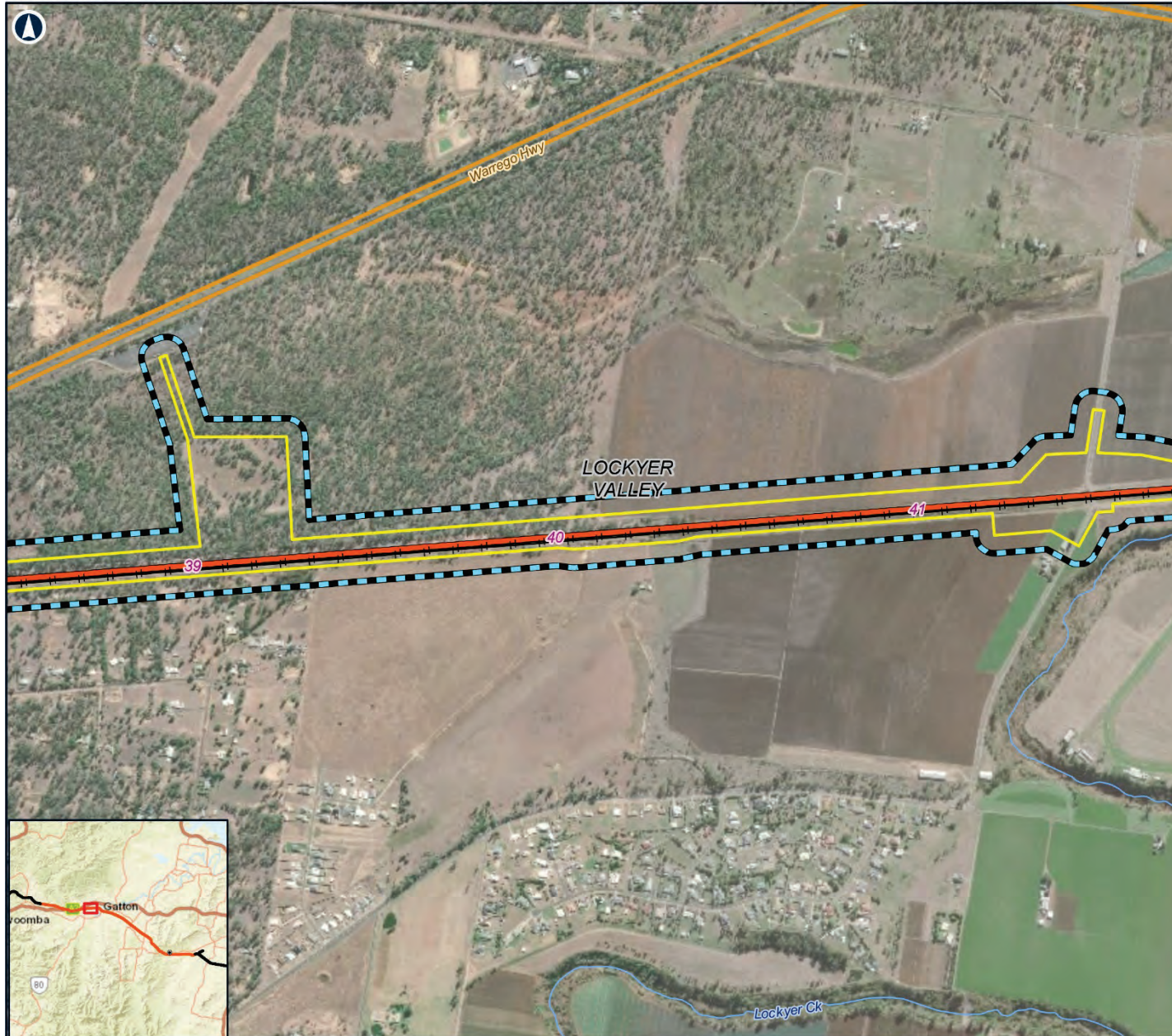
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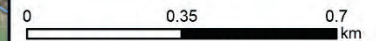
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HELIDON TO CALVERT Figure 18.2e: Non-Indigenous Cultural Heritage Areas of Interest

LEGEND

- 5 Chainage (km)
- Existing rail
- H2C project alignment
- Watercourses
- Major roads
- EIS disturbance footprint
- Local Government Areas
- Cultural heritage study area

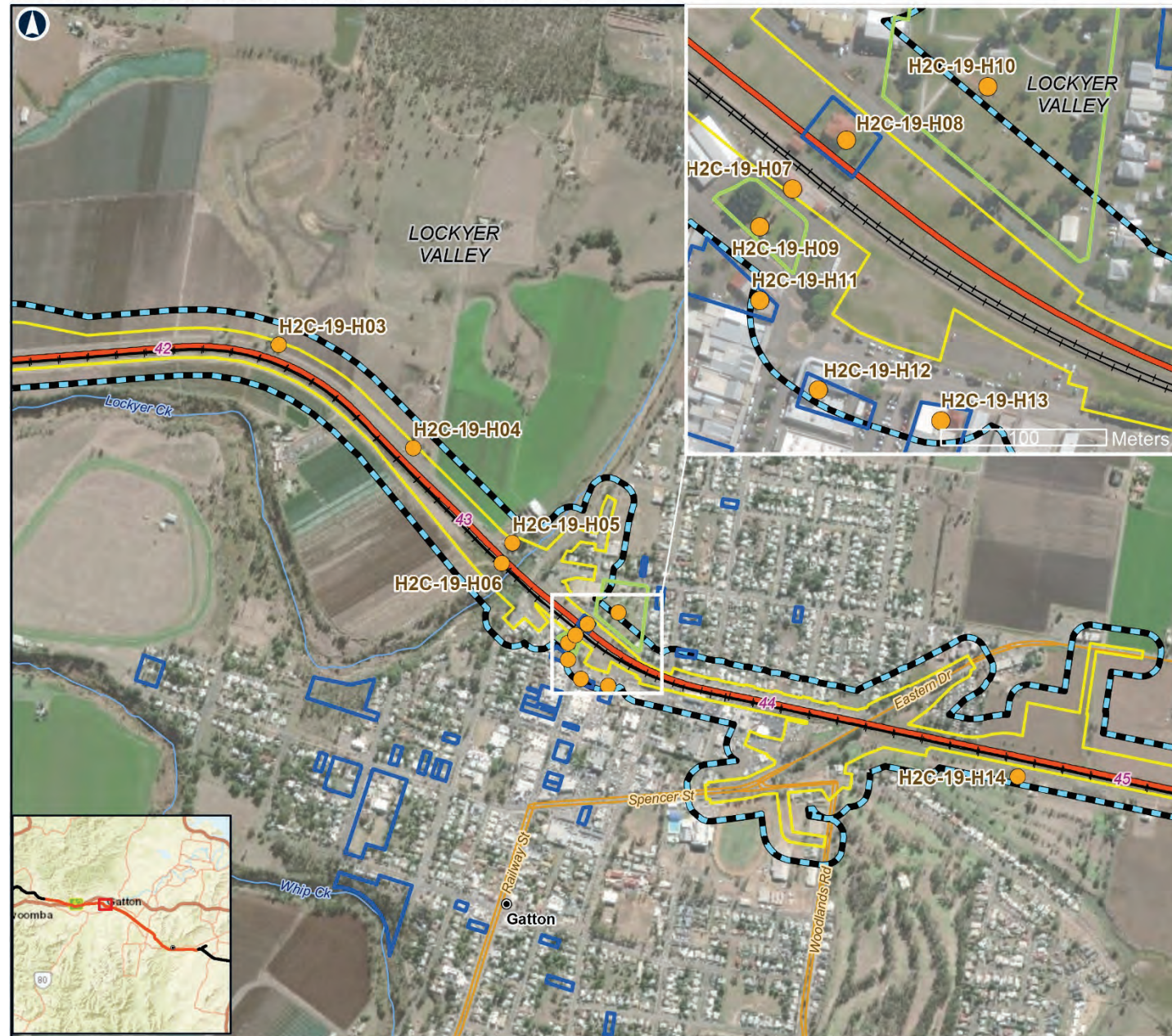


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 Figure 18.2f: Non-Indigenous Cultural Heritage Areas of Interest

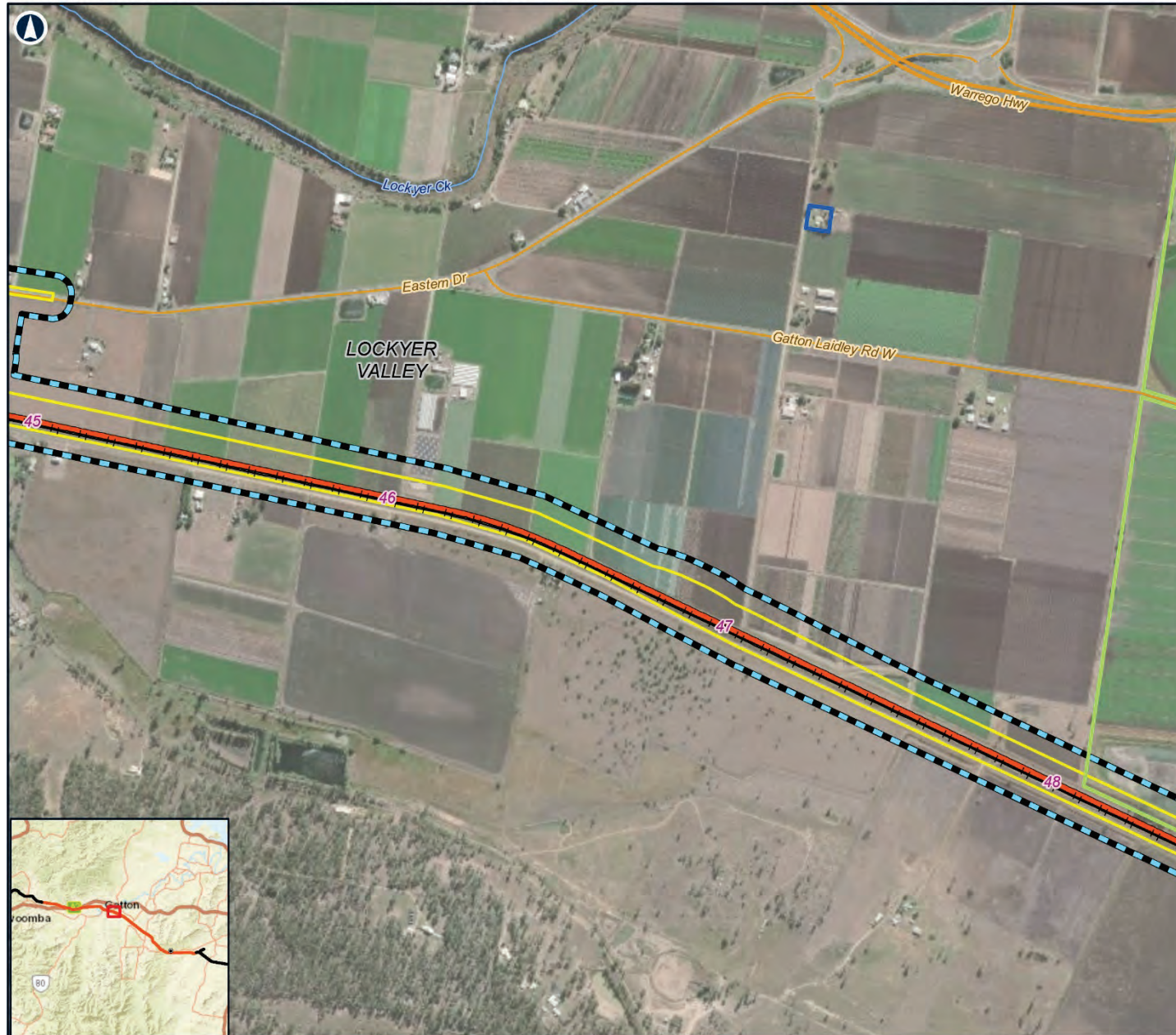
LEGEND

- 5 Chainage (km)
- Localities
- Heritage AOI
- Existing rail
- H2C project alignment
- Watercourses
- Major roads
- Minor roads
- EIS disturbance footprint
- Local Government Areas
- Local Heritage Register
- State Heritage Register
- Cultural heritage study area

0 0.35 0.7 km

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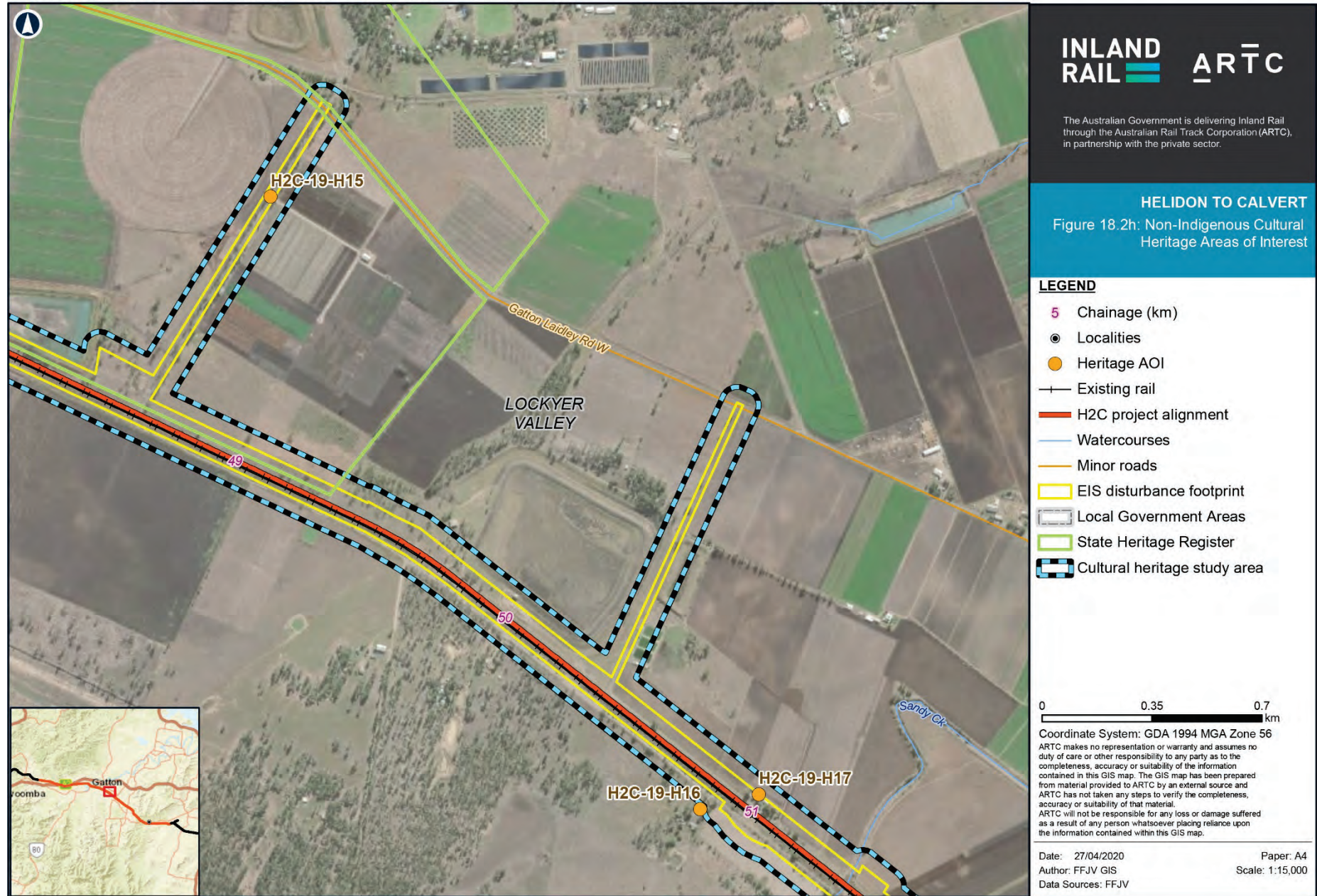
HELIDON TO CALVERT
 Figure 18.2g: Non-Indigenous Cultural Heritage Areas of Interest

- LEGEND**
- 5 Chainage (km)
 - Existing rail
 - H2C project alignment
 - Watercourses
 - Major roads
 - Minor roads
 - EIS disturbance footprint
 - Local Government Areas
 - Local Heritage Register
 - State Heritage Register
 - Cultural heritage study area

0 0.35 0.7 km

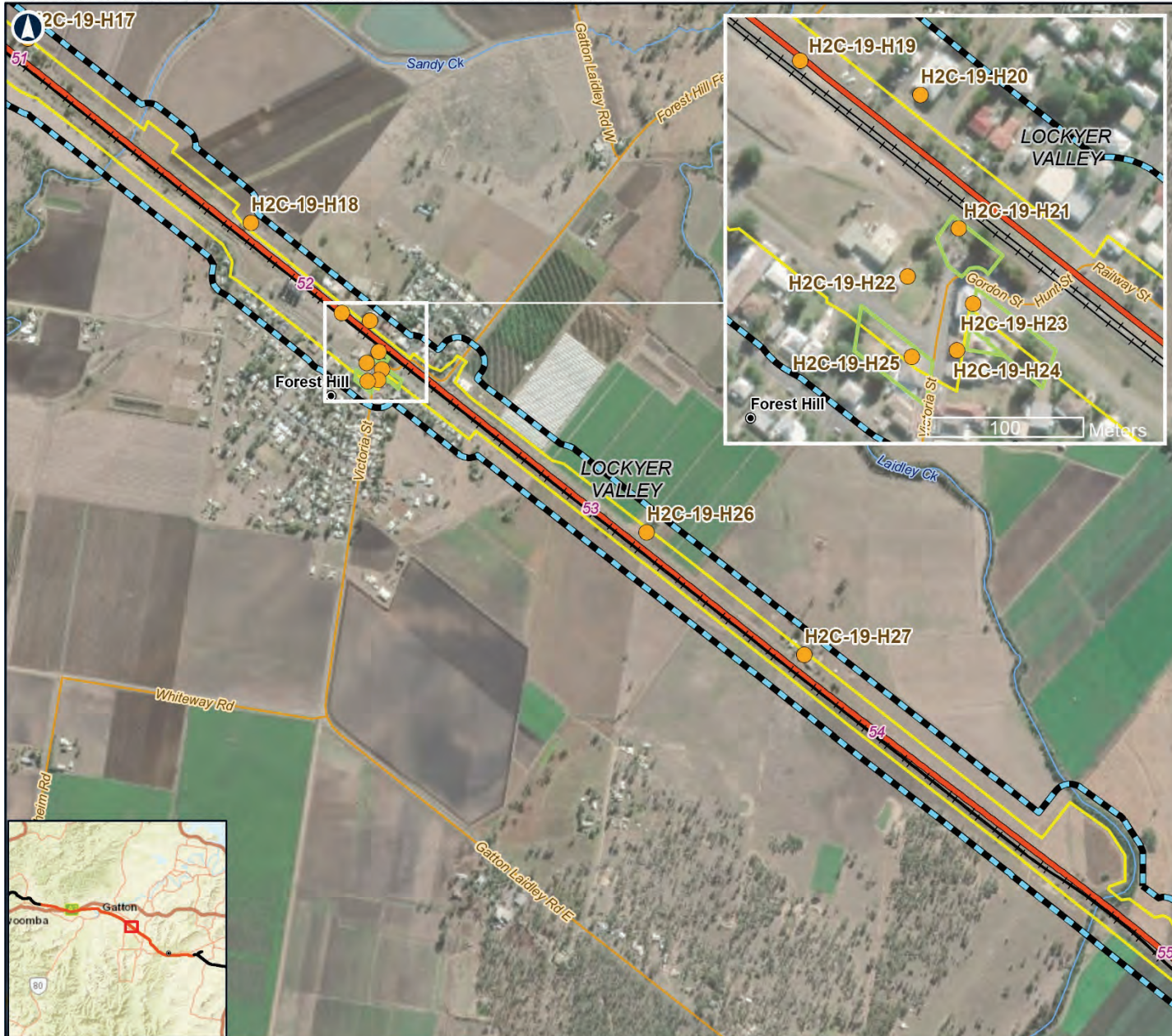
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HELIDON TO CALVERT Figure 18.2i: Non-Indigenous Cultural Heritage Areas of Interest

LEGEND

- 5 Chainage (km)
- Localities
- Heritage AOI
- Existing rail
- H2C project alignment
- Watercourses
- Minor roads
- EIS disturbance footprint
- Local Government Areas
- State Heritage Register
- Cultural heritage study area

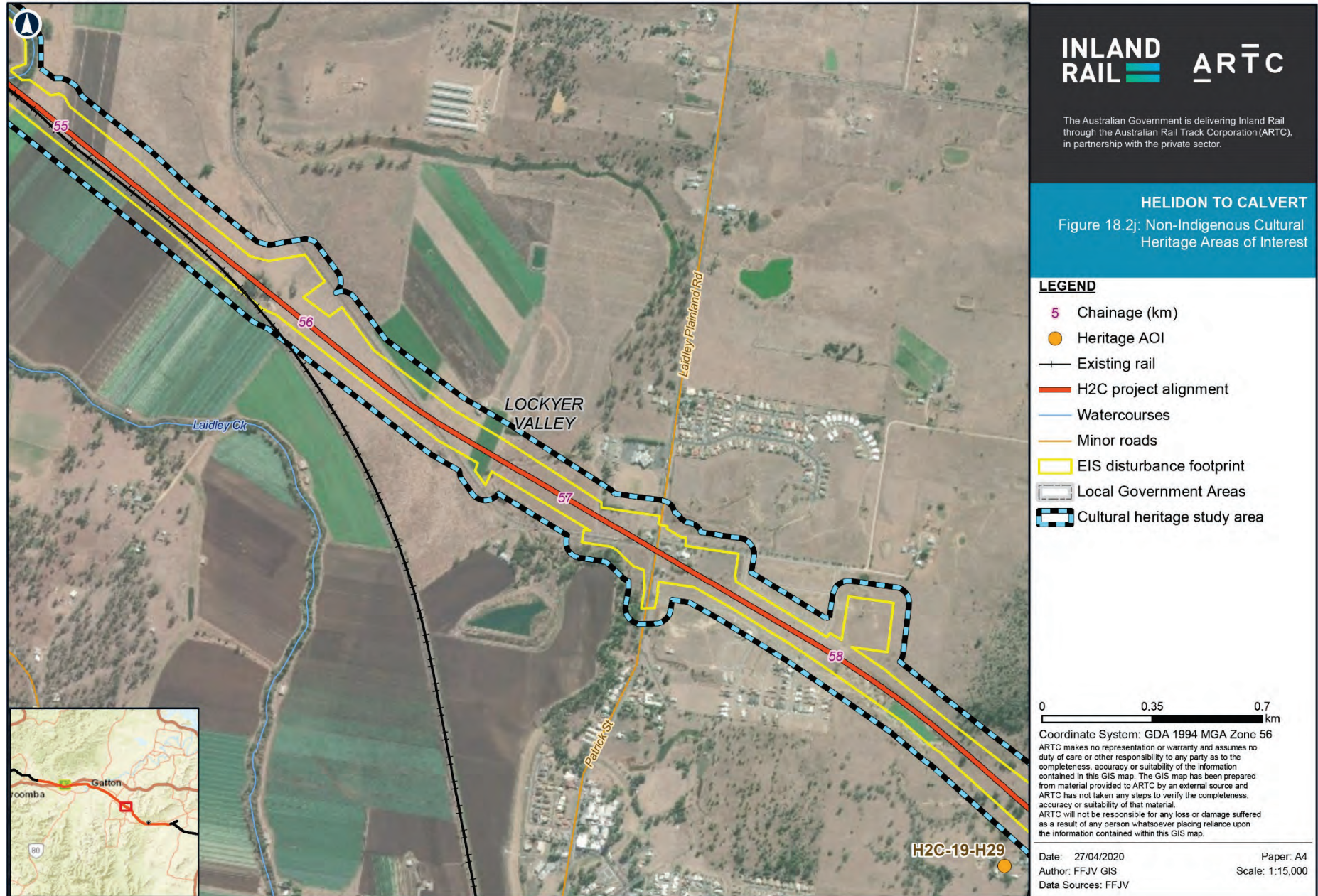
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Coordinate System: GDA 1994 MGA Zone 56

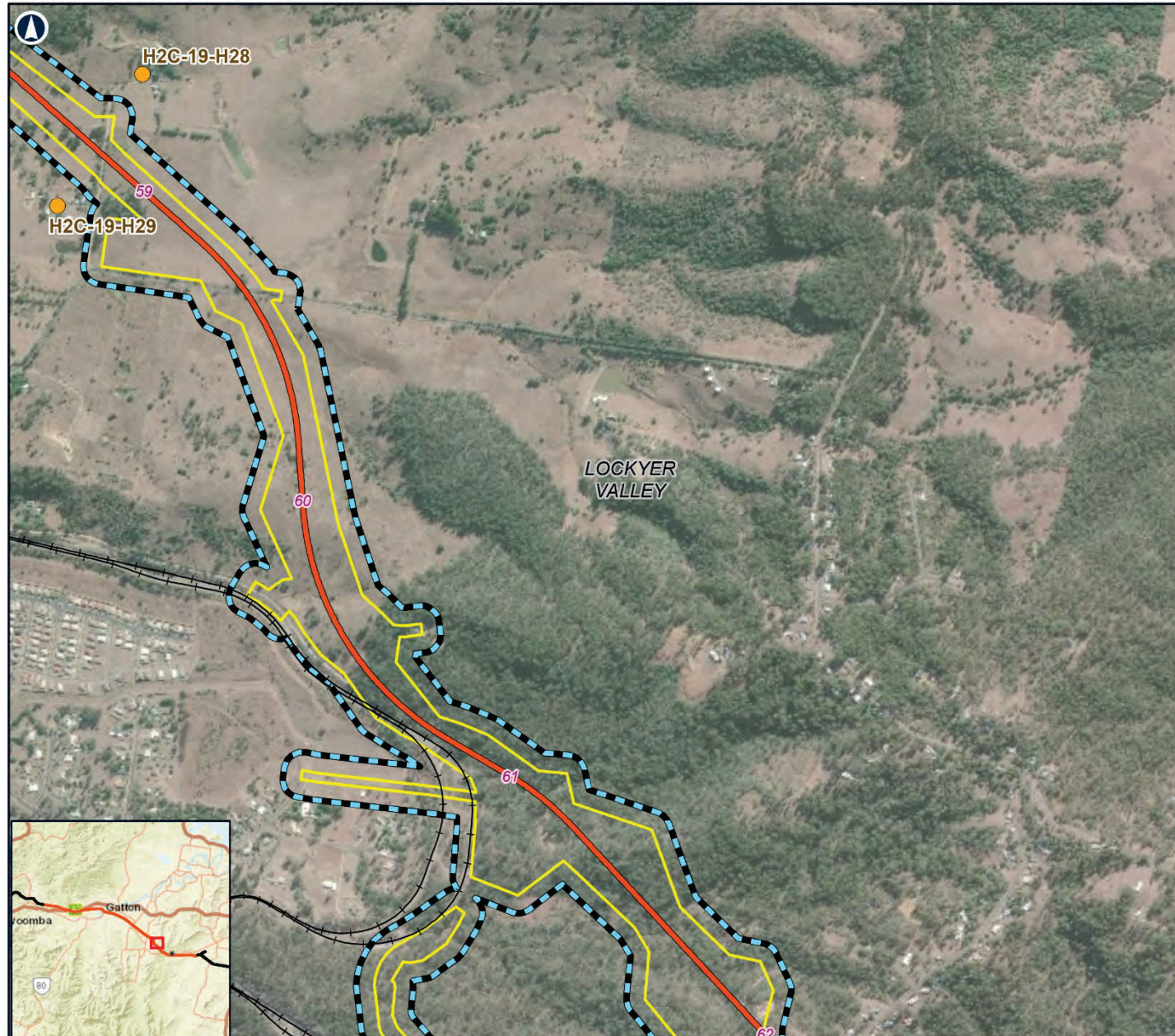
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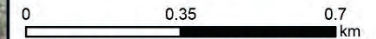
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HELIDON TO CALVERT Figure 18.2k: Non-Indigenous Cultural Heritage Areas of Interest

LEGEND

- 5 Chainage (km)
- Heritage AOI
- Existing rail
- H2C project alignment
- EIS disturbance footprint
- Local Government Areas
- Cultural heritage study area

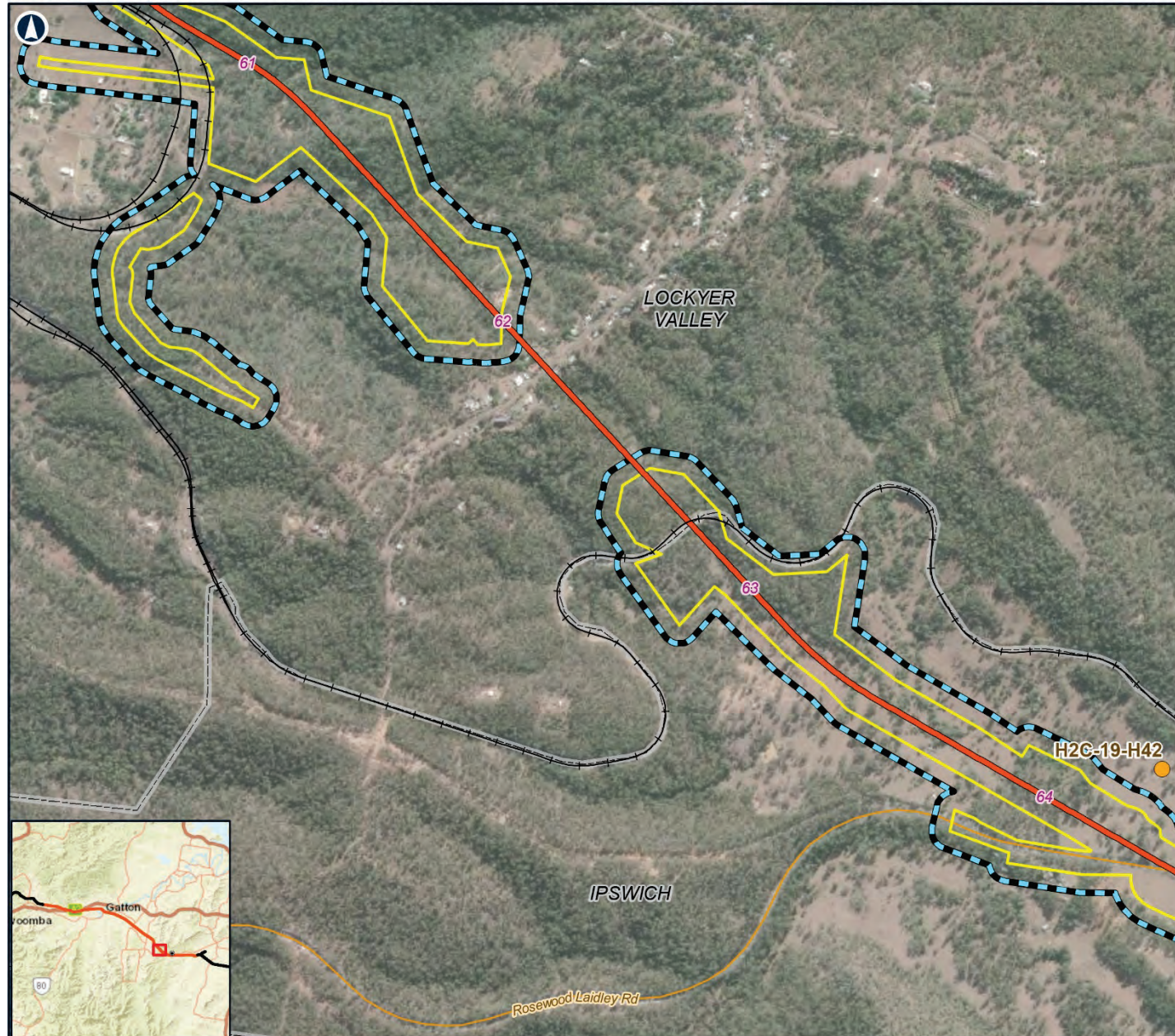


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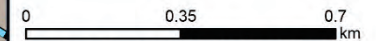


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HELIDON TO CALVERT
 Figure 18.2I: Non-Indigenous Cultural Heritage Areas of Interest

LEGEND

- 5 Chainage (km)
- Heritage AOI
- Existing rail
- H2C project alignment
- Minor roads
- EIS disturbance footprint
- Local Government Areas
- Cultural heritage study area

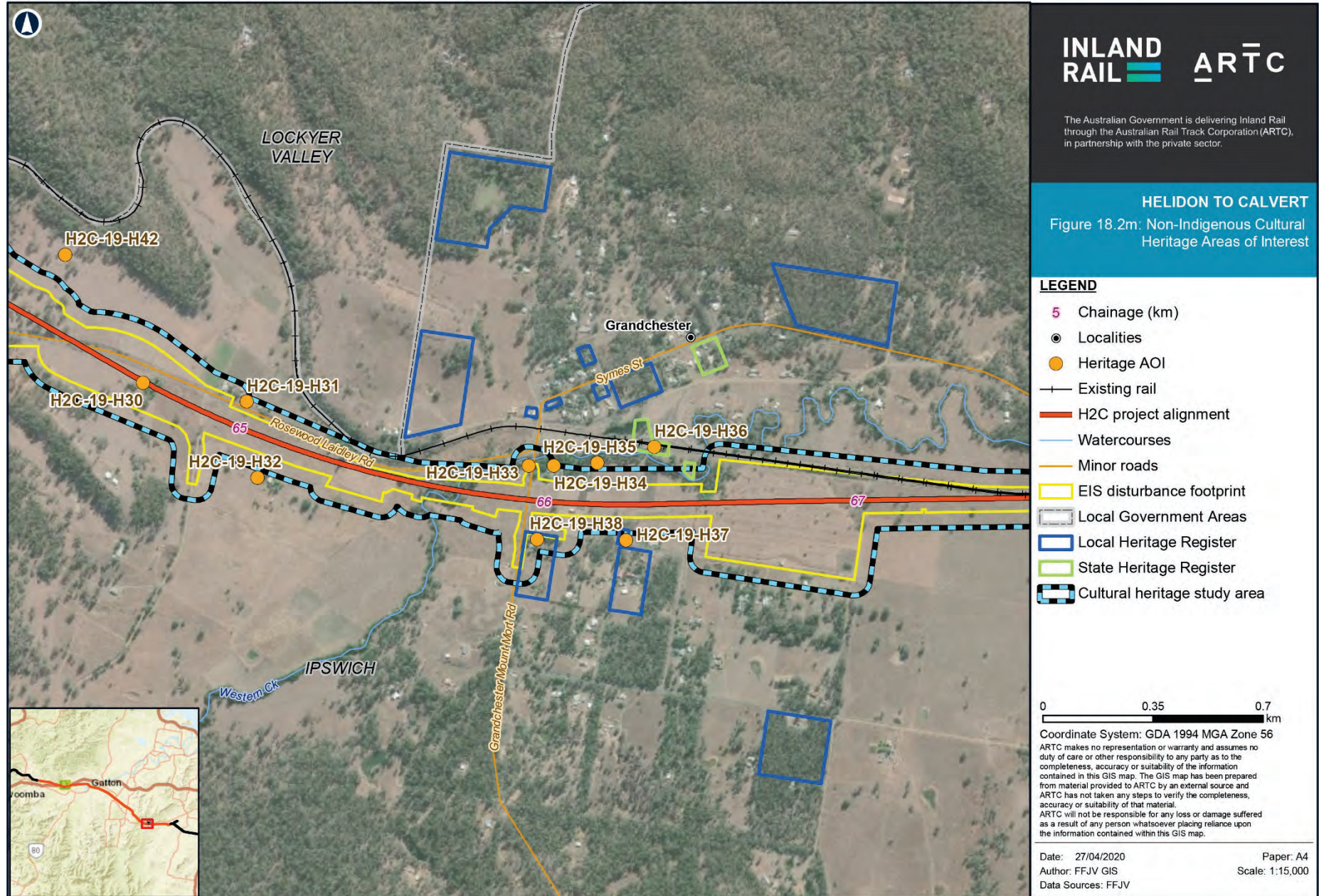


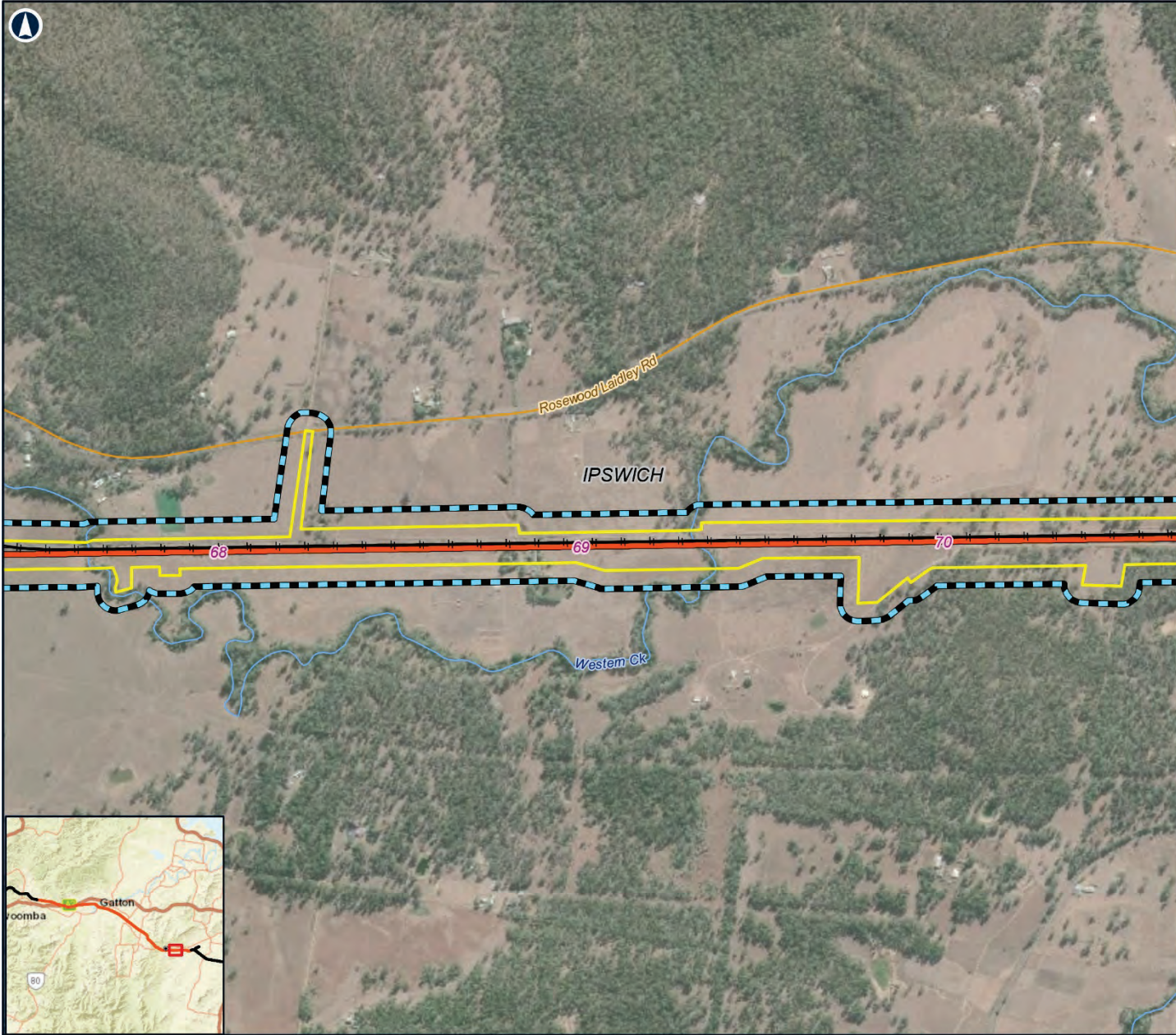
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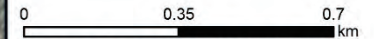
INLAND RAIL ARTC

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HELIDON TO CALVERT Figure 18.2n: Non-Indigenous Cultural Heritage Areas of Interest

LEGEND

- 5 Chainage (km)
-  Existing rail
-  H2C project alignment
-  Watercourses
-  Minor roads
-  EIS disturbance footprint
-  Local Government Areas
-  Cultural heritage study area

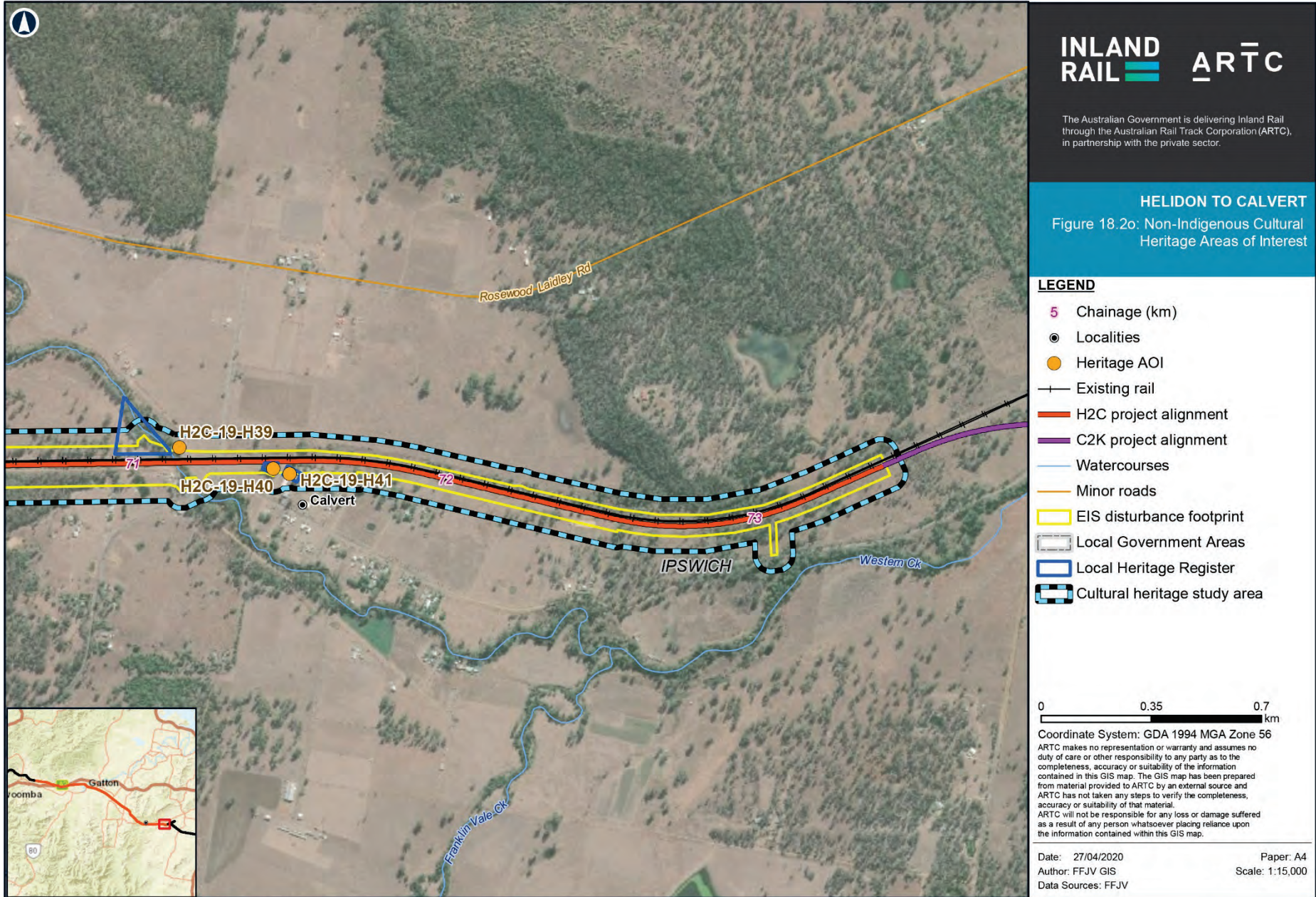


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18.9 Significance assessment

An assessment of significance is undertaken to explain why a particular site is important and to enable the appropriate site management and any curtilage to be determined. Cultural significance is defined in the Burra Charter (ICOMOS (Australia), 2013) as meaning 'aesthetic, historic, scientific or social value for past, present or future generations' (Article 1.1). Cultural significance may be derived from a place's fabric, association with a person or event, or for its research potential. The significance of a place is not fixed for all time, and what is of significance to us now may change as similar items are located, more historical research is undertaken and community tastes change.

18.9.1 Indigenous heritage

The significance of Indigenous cultural heritage identified in the cultural heritage study area will be assessed and managed under CHMP CLH017009.

18.9.2 Non-Indigenous heritage

As discussed in Section 18.6.2.3, the QH Act prescribes eight criteria that may be used to measure the heritage value of a place and determine its significance: historical, rarity, research, representativeness, aesthetic, creative/technical, social and associational. A place need only fulfil one of these criteria to be considered to be of heritage significance (DEHP, 2013a).

The relative heritage significance of places in Queensland is measured as a series of thresholds representing the importance of the place: world, national, State and local. As defined by DES (DEHP, 2013a), local heritage places contribute to our understanding of important themes in local history, while State heritage places contribute to our understanding of themes and processes that are of broader relevance. Places need to be of at least regional relevance to be considered of State significance (DEHP, 2013a).

A total of 42 non-Indigenous AOI were identified during background research. Of these AOI, 41 were subsequently inspected within land access constraints. The significance of the heritage elements recorded at each of these sites was assessed against the QH Act criteria, and the threshold indicators provided by DES (DEHP, 2013a) (Section 18.6.2.3).

As summarised in Table 18.20, this assessment found that 26 of the AOI are of local heritage significance and 11 of the AOI are of State heritage significance. It should be noted that while elements of the railway line have been identified as being of significance, particularly stations, culverts and similar pieces of infrastructure, the line as a whole is not of heritage significance.

A full significance assessment of each AOI is provided in Appendix S: Non-Indigenous Cultural Heritage Technical Report.

TABLE 18.20: SUMMARY ASSESSMENT INDICATING THRESHOLD OF SIGNIFICANCE

Site	Heritage listing	A—historical	B—rarity	C—research	D—representativeness	E—aesthetic	F—creative/technical	G—social	H—associational
H2C-19-H01	None*	State	State	Not met	Not met	Not met	Not met	Not met	Not met
H2C-19-H02	None	Not met	Not met	Not met	Not met	Not met	Not met	Not met	Not met
H2C-19-H03	None	Local	Not met	Not met	Local	Local	Not met	Not met	Not met
H2C-19-H04	None	Local	Not met	Not met	Not met	Not met	Not met	Not met	Not met
H2C-19-H05	None	Local	Not met	Not met	Not met	Local	Not met	Not met	Not met
H2C-19-H06	QR	Local	Not met	Not met	Not met	Local	Not met	Not met	Not met
H2C-19-H07	LHR, QR	Local	Local	Not met	Local	Local	Not met	Local	Not met
H2C-19-H08	LHR	Local	Local	Not met	Not met	Local	Not met	Not met	Not met
H2C-19-H09	SHR	State	State	Not met	State	State	Not met	State	State
H2C-19-H10	SHR	State	State	Not met	State	State	Not met	State	State
H2C-19-H11	LHR	Local	Not met	Not met	Not met	Local	Not met	Local	Not met
H2C-19-H12	LHR	Local	Not met	Not met	Not met	Local	Not met	Local	Not met
H2C-19-H13	LHR	Local	Not met	Not met	Not met	Local	Not met	Local	Not met
H2C-19-H14	None	Local	Not met	Local	Not met	Not met	Not met	Not met	Not met

Site	Heritage listing	A—historical	B—rarity	C—research	D—representativeness	E—aesthetic	F—creative/technical	G—social	H—associational
H2C-19-H15	SHR	State	Not met	State	State	State	Not met	State	Not met
H2C-19-H16	None	Local	Not met	Local	Not met	Not met	Not met	Not met	Not met
H2C-19-H17	None	Local	Not met	Local	Local	Local	Not met	Not met	Not met
H2C-19-H18	None	Not met	Not met	Not met	Not met	Not met	Not met	Not met	Not met
H2C-19-H19	LHR	Not met	Not met	Not met	Not met	Not met	Not met	Not met	Not met
H2C-19-H20	None	Local	Local	Not met	Local	Local	Not met	Local	Local
H2C-19-H21	SHR	State	Not met	Not met	State	State	Not met	State	Not met
H2C-19-H22	None	Local	Local	Not met	Local	Local	Not met	Not met	Not met
H2C-19-H23	SHR	State	Not met	Not met	State	State	Not met	Not met	Not met
H2C-19-H24	SHR	State	Not met	Not met	State	State	Not met	Not met	State
H2C-19-H25	SHR	State	Not met	Not met	State	State	Not met	Not met	Not met
H2C-19-H26	None	Local	Not met	Local	Local	Not met	Not met	Not met	Not met
H2C-19-H27	None	Not met	Not met	Not met	Not met	Not met	Not met	Not met	Not met
H2C-19-H28	None	Local	Local	Local	Not met	Not met	Not met	Not met	Not met
H2C-19-H29	None	Local	Not met	Local	Not met	Not met	Not met	Not met	Not met
H2C-19-H30	None	Not met	Not met	Not met	Not met	Not met	Not met	Not met	Not met
H2C-19-H31	None	Local	Not met	Local	Not met	Local	Not met	Not met	Not met
H2C-19-H32	None	Local	Not met	Local	Not met	Not met	Not met	Not met	Not met
H2C-19-H33	None	Local	Not met	Local	Not met	Not met	Not met	Not met	Not met
H2C-19-H34	None	Local	Not met	Local	Local	Not met	Not met	Not met	Not met
H2C-19-H35	None	State	State	Not met	Not met	Not met	Not met	Local	Not met
H2C-19-H36	SHR	State	State	Not met	State	Not met	Not met	Not met	Not met
H2C-19-H37	LHR	Local	Not met	Not met	Local	Not met	Not met	Local	Not met
H2C-19-H38	LHR	Local	Local	Local	Local	Local	Not met	Not met	Not met
H2C-19-H39	LHR	Local	Not met	Local	Local	Local	Not met	Not met	Not met
H2C-19-H40	LHR	Local	Not met	Not met	Not met	Not met	Not met	Not met	Not met
H2C-19-H41	LHR	Local	Not met	Not met	Not met	Not met	Not met	Local	Not met
H2C-19-H42	None	State	Local	State	Local	Not met	Not met	Not met	Local

Table note:

* Within the curtilage of a separate LHR place

18.10 Potential impacts

Potential impacts on cultural heritage values can be divided into two main types: direct and indirect.

Direct impacts occur if a cultural heritage place or site is located directly in a development area and/or would be physically impacted by development. Such impacts include the demolition or substantial alteration of a building, or the disturbance of an archaeological site.

Indirect impacts, alternatively, are those that alter the surrounding physical environment in such a way that a cultural heritage place or site is affected. Indirect impacts might include extra vibration from construction activities or subsequent traffic load, as well as additional water runoff or sediment deposition due to changing hydrology. The effects of direct or indirect impacts are measured in terms of the extent to which they alter the heritage values of a cultural heritage place.

A description of Project activities that have the potential to impact heritage values is provided in Chapter 6: Project description.

18.10.1 Indigenous cultural heritage

Indigenous cultural heritage will be protected and managed through agreed mitigation strategies following the Project Activity Survey undertaken by the Traditional Owners in line with the terms and conditions of CHMP CLH017009. Any conditions of approval will be incorporated into the cultural heritage requirements of the draft Outline Environmental Management Plan (draft Outline EMP) (refer Chapter 23: Draft Outline Environmental Management Plan).

18.10.2 Non-Indigenous cultural heritage

18.10.2.1 Assessing sensitivity

The degree of impact an activity will have on a heritage place is partly a factor of the place's heritage significance: the more significant a place is, the more sensitive it will be to change. An assessment of the sensitivity of each heritage place within the cultural heritage study area is provided in Table 18.21 in accordance with the methodology provided in Section 18.6.2.3.

TABLE 18.21: SENSITIVITY OF IDENTIFIED HERITAGE SITES

Site ID	Description	Heritage listing	Assessed significance	Number of criteria met	Sensitivity
H2C-19-H01	Helidon railway culvert	None*	State	2	Moderate
H2C-19-H02	House	None	None	None	Negligible
H2C-19-H03	House	None	Local	3	Moderate
H2C-19-H04	House	None	Local	1	Low
H2C-19-H05	House	None	Local	2	Moderate
H2C-19-H06	Lockyer Creek Rail Bridge	QR	Local	2	Moderate
H2C-19-H07	Gatton Railway Station	LHR, QR	Local	5	Moderate
H2C-19-H08	Gatton Station Master's Residence	LHR	Local	3	Moderate
H2C-19-H09	Boer War Memorial	SHR	State	6	High
H2C-19-H10	Weeping Mother Memorial	SHR	State	6	High
H2C-19-H11	Commercial Hotel	LHR	Local	3	Moderate
H2C-19-H12	Royal Hotel	LHR	Local	3	Moderate
H2C-19-H13	Gatton Post and Telegraph Office	LHR	Local	3	Moderate
H2C-19-H14	House	None	Local	2	Moderate
H2C-19-H15	UQ (Gatton campus)	SHR	State	5	High
H2C-19-H16	Cottage	None	Local	2	Moderate
H2C-19-H17	House	None	Local	4	Moderate
H2C-19-H18	House	None	None	None	Negligible
H2C-19-H19	Forest Hill Railway Station	LHR	None	None	Negligible

Site ID	Description	Heritage listing	Assessed significance	Number of criteria met	Sensitivity
H2C-19-H20	Forest Hill School of Arts	None	Local	6	Moderate
H2C-19-H21	Forest Hill War Memorial	SHR	State	4	High
H2C-19-H22	Railway platform building (relocated)	None	Local	4	Moderate
H2C-19-H23	Lockyer Hotel	SHR	State	3	High
H2C-19-H24	National Bank (former)	SHR	State	4	High
H2C-19-H25	Forest Hill Hotel	SHR	State	4	High
H2C-19-H26	Cottage	None	Local	3	Moderate
H2C-19-H27	Outbuildings	None	None	None	Negligible
H2C-19-H28	Homestead complex	None	Local	3	Moderate
H2C-19-H29	Homestead complex	None	Local	2	Moderate
H2C-19-H30	House ruin	None	None	None	Negligible
H2C-19-H31	House	None	Local	3	Moderate
H2C-19-H32	Homestead complex	None	Local	2	Moderate
H2C-19-H33	General store (former)	None	Local	2	Moderate
H2C-19-H34	House	None	Local	3	Moderate
H2C-19-H35	Railway platform buildings (relocated)	None	State	2	High
H2C-19-H36	Grandchester railway complex	SHR	State	3	High
H2C-19-H37	Grandchester Community Hall	LHR	Local	3	Moderate
H2C-19-H38	House	LHR	Local	5	Moderate
H2C-19-H39	Railway residence	LHR	Local	4	Moderate
H2C-19-H40	Railway house	LHR	Local	1	Low
H2C-19-H41	Calvert Community Hall (former)	LHR	Local	2	Moderate
H2C-19-H42	Grandchester archaeological complex	None	State	5	High

Table note:

* Within the curtilage of a separate LHR place

18.10.3 Potential impacts and magnitude of change

Direct impacts to heritage are most likely to occur during site preparation as a part of the construction phase. At this time, clearing and stripping activities will require the demolition of heritage structures and the destruction of archaeological sites within the Project footprint. The heritage places that are within this footprint are listed in Table 18.22 along with the potential nature of impact and magnitude of change.

TABLE 18.22: HERITAGE PLACES AT RISK OF DIRECT IMPACT

Site ID	Description	Potential impact	Likely magnitude of change
H2C-19-H01	Helidon railway culvert	Removal of all heritage elements	Major
H2C-19-H03	House	Removal of house	Major
H2C-19-H04	House	Removal of house	Major
H2C-19-H05	House	Removal of house	Major
H2C-19-H06	Lockyer Creek Rail Bridge	Removal of bridge	Major
H2C-19-H07	Gatton Railway Station	Removal of footbridge, platform shelter and weighbridge	Medium
H2C-19-H08	Gatton Station Master's Residence	Removal of house	Major
H2C-19-H15	UQ (Gatton campus)	Removal of siding, alteration to original entrance and road, removal of plantings	Low
H2C-19-H17	House	Removal of house, disturbance of archaeological deposits	Major
H2C-19-H19	Forest Hill Railway Station	Removal of remaining station elements	Negligible
H2C-19-H21	Forest Hill War Memorial	Removal of memorial	Major
H2C-19-H23	Lockyer Hotel	Removal of building	Major
H2C-19-H26	Cottage	Removal of dwelling, disturbance of archaeological deposits	Major
H2C-19-H27	Outbuildings	Removal of buildings	Negligible
H2C-19-H30	House ruin	Removal of built and archaeological elements	Negligible
H2C-19-H33	General Store (former)	Removal of building, disturbance of archaeological deposits	Major
H2C-19-H38	House	Removal of building, disturbance of archaeological deposits	Major
H2C-19-H39	Railway residence	Removal of building, disturbance of archaeological deposits	Major
H2C-19-H40	Railway house	Removal of building	Major
H2C-19-H41	Calvert Community Hall (former)	Removal of building	Major

Indirect impacts may occur during any phase of the Project, when construction, operation, or decommissioning activities result in excessive dust, noise or vibration that may potentially damage a heritage place. Places at risk of indirect impacts are listed in Table 18.23, along with the potential nature of impact and magnitude of change.

TABLE 18.23: HERITAGE PLACES AT RISK OF INDIRECT IMPACT

Site ID	Description	Potential impact	Likely magnitude of change
H2C-19-H02	House	Dust from construction and operation may speed dilapidation. However, elements most likely impacted—such as the roofing iron—are not original.	Negligible
H2C-19-H07	Gatton Railway Station	Dust and vibration from construction and operation may speed dilapidation of passenger station.	Low
H2C-19-H09	Boer War Memorial	Dust and vibration from construction and operation may speed dilapidation of memorial.	Low
H2C-19-H10	Weeping Mother Memorial	Dust from construction and operation may speed dilapidation of memorial.	Low
H2C-19-H11	Commercial Hotel	Dust from construction and operation may speed dilapidation. However, elements most likely impacted—such as the roofing iron—are not original.	Negligible
H2C-19-H12	Royal Hotel	Dust from construction and operation may speed dilapidation. However, elements most likely impacted—such as the roofing iron—are not original.	Negligible
H2C-19-H13	Gatton Post and Telegraph Office	Dust from construction and operation may speed dilapidation. However, elements most likely impacted—such as the roofing iron—are not original.	Negligible
H2C-19-H14	House	Dust from construction and operation may speed dilapidation. However, elements most likely impacted—such as the roofing iron—are not original. Archaeological deposits unlikely to be impacted.	Negligible
H2C-19-H16	Cottage	Dust from construction and operation may speed dilapidation. Building in poor condition and maybe more susceptible to impact.	Low
H2C-19-H18	House	Dust from construction and operation may speed dilapidation. However, elements most likely impacted—such as the roofing iron—are not original.	Negligible
H2C-19-H20	Forest Hill School of Arts	Dust and vibration from construction and operation may speed dilapidation.	Low
H2C-19-H22	Railway platform building (relocated)	Dust from construction and operation may speed dilapidation. However, elements most likely impacted—such as the roofing iron—are not original.	Negligible
H2C-19-H24	National Bank (former)	Dust from construction and operation may speed dilapidation. Building in poor condition and maybe more susceptible to impact.	Low
H2C-19-H25	Forest Hill Hotel	Dust from construction and operation may speed dilapidation. However, elements most likely impacted—such as the roofing iron—are not original.	Low

Site ID	Description	Potential impact	Likely magnitude of change
H2C-19-H28	Homestead complex	Dust from construction and operation may speed dilapidation. Rear building appears in poor condition and maybe more susceptible to impact.	Low
H2C-19-H29	Homestead complex	Dust from construction and operation may speed dilapidation.	Negligible
H2C-19-H31	House	Dust from construction and operation may speed dilapidation. Building in poor condition and maybe more susceptible to impact. Archaeological deposits unlikely to be impacted.	Low
H2C-19-H32	Homestead complex	Dust from construction and operation may speed dilapidation of buildings. Archaeological deposits unlikely to be impacted.	Negligible
H2C-19-H34	House	Dust from construction and operation may speed dilapidation. Archaeological deposits unlikely to be impacted.	Low
H2C-19-H35	Railway platform buildings (relocated)	Dust from construction and operation may speed dilapidation. Buildings may fall into disuse and dereliction if works result in the closure of the cricket ground.	Low–Major
H2C-19-H36	Grandchester railway complex	Dust from construction and operation may speed dilapidation.	Low
H2C-19-H37	Grandchester Community Hall	Dust from construction and operation may speed dilapidation. However, elements most likely impacted—such as the roofing iron—are not original.	Negligible
H2C-19-H421	Grandchester archaeological complex	Archaeological deposits unlikely to be impacted.	Negligible

Table note:

1 Further investigation required to determine extent of potential archaeological value

18.10.4 Assessment of significance of unmitigated impact

The significance of predicted unmitigated impacts to each of the sites is assessed in Table 18.24, using the rankings established in the previous sections.

TABLE 18.24: ASSESSMENT OF SIGNIFICANCE OF UNMITIGATED IMPACTS

Site ID	Description	Sensitivity	Magnitude of change	Significance of impact
H2C-19-H01	Helidon railway culvert	Moderate	Major	Large
H2C-19-H02	House	Negligible	Negligible	Neutral
H2C-19-H03	House	Moderate	Major	Large
H2C-19-H04	House	Low	Major	Moderate
H2C-19-H05	House	Moderate	Major	Large
H2C-19-H06	Lockyer Creek Rail Bridge	Moderate	Major	Large
H2C-19-H07	Gatton Railway Station	Moderate	Medium	Moderate
H2C-19-H08	Gatton Station Master’s Residence	Moderate	Major	Large
H2C-19-H09	Boer War Memorial	High	Low	Slight

Site ID	Description	Sensitivity	Magnitude of change	Significance of impact
H2C-19-H10	Weeping Mother Memorial	High	Low	Slight
H2C-19-H11	Commercial Hotel	Moderate	Negligible	Slight
H2C-19-H12	Royal Hotel	Moderate	Negligible	Slight
H2C-19-H13	Gatton Post and Telegraph Office	Moderate	Negligible	Slight
H2C-19-H14	House	Moderate	Negligible	Slight
H2C-19-H15	UQ (Gatton campus)	High	Low	Moderate
H2C-19-H16	House	Moderate	Low	Slight
H2C-19-H17	House	Moderate	Major	Large
H2C-19-H18	House	Negligible	Negligible	Neutral
H2C-19-H19	Forest Hill Railway Station	Negligible	Negligible	Neutral
H2C-19-H20	Forest Hill School of Arts	Moderate	Low	Slight
H2C-19-H21	Forest Hill War Memorial	High	Major	Very Large
H2C-19-H22	Railway platform building (relocated)	Moderate	Negligible	Neutral
H2C-19-H23	Lockyer Hotel	High	Major	Very Large
H2C-19-H24	National Bank (former)	High	Low	Slight
H2C-19-H25	Forest Hill Hotel	High	Low	Slight
H2C-19-H26	Cottage	Moderate	Major	Moderate
H2C-19-H27	Outbuildings	Negligible	Negligible	Neutral
H2C-19-H28	Homestead complex	Moderate	Low	Slight
H2C-19-H29	Homestead complex	Moderate	Negligible	Neutral
H2C-19-H30	House ruin	Negligible	Negligible	Neutral
H2C-19-H31	House	Moderate	Low	Slight
H2C-19-H32	Homestead complex	Moderate	Negligible	Neutral
H2C-19-H33	General Store (former)	Moderate	Major	Large
H2C-19-H34	House	Moderate	Low	Slight
H2C-19-H35	Railway platform buildings (relocated)	High	Low–Major	Slight–Very Large
H2C-19-H36	Grandchester railway complex	High	Low	Slight
H2C-19-H37	Grandchester Community Hall	Moderate	Negligible	Neutral
H2C-19-H38	House	Moderate	Major	Large
H2C-19-H39	Railway residence	Moderate	Major	Large
H2C-19-H40	Railway house	Low	Major	Moderate
H2C-19-H41	Calvert Community Hall (former)	Moderate	Major	Large
H2C-19-H42	Grandchester archaeological complex	High	Negligible	Neutral

18.11 Potential mitigation

To further manage and mitigate project risks, a number of proposed mitigation measures have been identified. The measures address Project specific issues and opportunities, address legislative requirements, accepted government plans, policy and practice.

Table 18.25 lists the proposed mitigation measures, identifies the relevant Project phases, the aspect to be managed, and the proposed mitigation measure. These measures are then factored into the assessment of residual significance (Table 18.28).

The Heritage Management Sub-plan detailed in Chapter 23: Draft Outline Environmental Management Plan provides further context and the framework for implementation of proposed mitigation and management measures.

TABLE 18.25: CULTURAL HERITAGE MITIGATION MEASURES

Delivery phase	Aspect	Proposed additional mitigation measures
Detailed design	All heritage	<p>Detailed design to:</p> <ul style="list-style-type: none"> ▶ Avoid direct impacts to identified places/sites/items of Indigenous and non-Indigenous heritage significance where practicable ▶ Respond to the outcomes of any further cultural heritage surveys.
	Non-Indigenous heritage, vibration	<p>Tailor construction methodology to limit vibration impacts</p> <p>Vibration at heritage places to be kept below a target of 2.5 mm/sec (peak particle velocity) wherever possible (with reference to DIN 4150 [Deutsches Institut für Normung, 1999]).</p>
Pre-construction	All heritage	<p>Construction planning avoids directly impacting on identified places/sites/items of Indigenous and non-Indigenous heritage significance where practicable. If places/sites/items cannot be avoided, photographic/archival recording of culverts/underbridges with timber components, former rail station sites and other contextual locations/structures of heritage significance will occur in accordance with outcomes of any further Project cultural heritage surveys.</p> <p>Artefacts will be collected prior to construction in accordance with the Heritage Management sub-plan detailed in Chapter 23: Draft Outline Environmental Management Plan.</p> <p>The Heritage Management sub-plan details mitigation and management measures to be implemented during construction in relation to cultural heritage. It is expected to include:</p> <ul style="list-style-type: none"> ▶ Requirements for site induction, training, heritage monitors, inspections, audits, corrective actions, notification and classification of environmental incidents, record keeping, monitoring and performance objectives for handover on completion of construction ▶ Heritage management actions to be undertaken by a suitably qualified person ▶ Specific requirements for cultural heritage sites/items that cannot be avoided during construction ▶ Unexpected finds procedure, including assessment by a suitably qualified person and notification obligations under the applicable legislation ▶ Procedure for encountering potential burial sites or potential human skeletal material including notification obligations under applicable legislation ▶ Any other requirements necessary to comply with conditions of approval, subsequent approvals, regulatory requirements or ARTC cultural heritage management plans/agreements.
	Vibration	<p>Building condition/dilapidation surveys will be undertaken at all heritage structures identified during detailed design as being subject to potential vibration impacts. Surveys will occur before and after undertaking vibration generating works (e.g. pile-driving), with the potential for monitoring during the construction activities as per the Construction Noise and Vibration Plan's Sub-plan. The following will be considered:</p> <ul style="list-style-type: none"> ▶ Tailor construction methodology to limit vibration impacts to heritage structures ▶ Vibration at heritage places to be kept below 2.5mm/sec (peak particle velocity) wherever possible (in accordance with DIN4150 [Deutsches Institut für Normung, 1999]).

Delivery phase	Aspect	Proposed additional mitigation measures
Pre-construction (continued)	Vibration (continued)	<ul style="list-style-type: none"> ▶ Pre-construction and post-construction condition dilapidation surveys to be undertaken at all heritage places at risk of vibration impact ▶ Vibration to be monitored at places where thresholds exceedances are possible ▶ Where vibration exceedances occur, change design/construction methodology where possible to reduce impact.
	Non-indigenous built heritage	<p>If impacts cannot be avoided, refer to following measures for built heritage impacts:</p> <ul style="list-style-type: none"> ▶ Archival recording <ul style="list-style-type: none"> ▶ Undertake archival photographic recording in accordance with Archival Recording of Heritage Places (DEHP, 2013b) ▶ Copies of archival records to be lodged with the John Oxley Library (or local libraries and/or historical societies as appropriate) ▶ Relocation <ul style="list-style-type: none"> ▶ Relocation of heritage items is generally undesirable, as setting forms an intrinsic part of heritage value (ICOMOS, 2013) <p>Where impacts cannot be managed in any other way, it may be appropriate to relocate buildings or items of moveable heritage to another location, such as a local historical society. The approach will be defined in the Heritage Management Sub-plan.</p>
	Non-indigenous archaeological heritage	<p>If impacts to non-Indigenous cultural heritage places cannot be avoided, the following pre-construction measures may be implemented by suitably qualified historical archaeologists:</p> <ul style="list-style-type: none"> ▶ Archaeological survey <ul style="list-style-type: none"> ▶ Undertake archaeological survey to map elements of complex sites and identify areas of possible subsurface deposit ▶ Archaeological excavation <ul style="list-style-type: none"> ▶ If warranted by results of archaeological survey, undertake a two-stage archaeological excavation: <ul style="list-style-type: none"> – Stage 1: test excavation to confirm subsurface deposit – Stage 2: salvage excavation of subsurface deposits (if required and if possible) ▶ Archaeological surface collection <ul style="list-style-type: none"> ▶ Collect archaeological artefacts on the ground surface ▶ Depending on nature of site may be undertaken in conjunction with, or in place of, excavation.
Construction and commissioning	All heritage	<p>Where impacts can be avoided to known Indigenous or non-Indigenous heritage, appropriate precautionary measures, such as informing relevant staff and contractors of the nature and location of the items and need to avoid impacts, detailing location on site maps, along with temporary protective fencing and signage will be implemented for those sites within close proximity of the area of works.</p> <p>Works will not be performed on potential heritage items without required approvals and appropriate management plans.</p> <p>If a suspected Aboriginal or historical heritage item, site or AOI is identified, any works that may impact the item or site will stop, and the unexpected finds procedure in the Heritage Management Sub-plan will be followed.</p> <p>Any responses to chance finds will only be undertaken by archaeologists qualified and experienced in the relevant discipline.</p> <p>In the event of the discovery of potential human remains, all work in the area will cease and the relevant statutory process for the notification and management of human remains will be instigated, in accordance with the Heritage Management Sub-plan and other relevant plans.</p>

Delivery phase	Aspect	Proposed additional mitigation measures
Construction and commissioning (continued)	Non-Indigenous built heritage	Vibration monitoring will be undertaken at vibration-sensitive receptors where the potential for building/structural damage risk is identified during the detailed design phase or as part of pre-construction building surveys. Vibration monitoring will be undertaken by a suitably qualified person, in accordance with relevant standards and guidelines. Where monitoring is required occur at a heritage structure, placement of equipment will be carried out on advice from a suitably qualified person (heritage practitioner). Any damage that occurs at heritage places as a result of vibration or other Project activity will be repaired in accordance with Burra Charter principles (Article 1.4).
	Non-Indigenous Archaeological heritage	Depending on the outcome of archaeological assessments undertaken during preconstruction, ground-breaking activities may be subject to archaeological monitoring by a suitably qualified person. In the case of unexpected archaeological finds anywhere in the Project, the protocol included in the Heritage Management Sub-plan is to be followed.

18.11.1 Indigenous heritage

In addition to the mitigation measures in Table 18.25, impacts to Indigenous cultural heritage will be identified, assessed and managed under the CHMP (CLH017009).

Aboriginal Cultural Heritage will be protected and managed through agreed mitigation strategies following the Project Activity Assessment by way of survey. This survey will be undertaken by the Traditional Owners in line with relevant terms and conditions of the CHMP.

Where any identified Indigenous heritage cannot be avoided the measures and procedures identified in Table 18.26 will apply.

TABLE 18.26: INDIGENOUS HERITAGE MITIGATION MEASURES

Timing	Mitigation and management measures
Pre-construction	Cultural heritage will be managed through a CHMP, in accordance with the ACH Act, which includes the following management measures: <ul style="list-style-type: none"> ▶ A cultural heritage induction for Inland Rail project staff ▶ Developing a cultural heritage awareness program ▶ Provisions for managing unexpected finds of cultural material/sites (including burials).
Pre-construction and construction	Cultural heritage to be managed in accordance with the CHMP. This might include: <ul style="list-style-type: none"> ▶ Undertaking comprehensive cultural heritage surveys for both early works and Project activities with the Traditional Owners ▶ Undertaking archaeological survey (including excavations where necessary) ▶ Generating survey reports to provide detailed assessment and management recommendations ▶ Assessing significance of any cultural heritage ▶ Recording (where Project activities may have a direct impact on cultural heritage values) Archaeological investigations will only be undertaken by archaeologists qualified and experienced in Aboriginal heritage, in consultation with the Aboriginal Parties, in accordance with the CHMP. Monitoring (during project activities to ensure impacts to known cultural heritage are appropriately mitigated).
Construction and commissioning	Cultural heritage values to be managed in accordance with the CHMP. This will include: <ul style="list-style-type: none"> ▶ Constraining of all surface disturbance to areas which have been previously surveyed for cultural heritage ▶ Establishing buffer zones around areas of heritage value that are to be retained ▶ Monitoring of ground-breaking where warranted by the presence of known or potential archaeological values. In the case of unexpected archaeological finds anywhere in the Project, the protocol included in the Heritage Management Sub-plan is to be followed. Archaeological investigations will only be undertaken by archaeologists qualified and experienced in Aboriginal heritage, in consultation with the Aboriginal Parties, in accordance with the CHMP.
Commissioning and operations	Surface disturbance will be contained to areas which have been surveyed for cultural heritage (prior to any surface disturbance occurring).

18.11.2 Non-Indigenous heritage

The accepted methodology for managing impacts on heritage places is to avoid wherever possible, minimise as far as is practical, and then mitigate where avoidance and minimisation is not possible (ICOMOS, 2011). This impact assessment assumes the implementation of all standard ARTC mitigation measures, with additional proposed measures to reduce heritage impacts outlined in Table 18.27 as applied to the heritage places in Table 18.28.

Reference to the local planning scheme is made in relation to items listed on local government heritage registers. While the Project is exempt from local planning scheme requirements, the planning scheme provides a benchmark of the heritage protections expected by the local authority and community and, as such, should be followed where practicable. This responds to the ToR (refer Section 18.3) for the Project, which requires consideration of the social impacts at a local level.

TABLE 18.27: PROPOSED MANAGEMENT AND MITIGATION MEASURES

Measure	Description
Avoidance	<ul style="list-style-type: none"> ▶ Consider options to alter disturbance footprint and avoid direct or indirect impacts.
Management and minimisation Vibration impacts	<ul style="list-style-type: none"> ▶ Tailor construction methodology to limit vibration impacts (refer Chapter 15: Noise and vibration for further detail) ▶ Vibration at heritage places to be kept below a target of 2mm/sec where possible (with reference to DIN4150) ▶ Pre-construction and post-construction condition/dilapidation surveys to be undertaken at all heritage places at risk of vibration impact ▶ Vibration to be monitored at places where thresholds exceedances are possible ▶ Where vibration exceedances occur, change design/construction methodology where possible to reduce impact ▶ If impacts cannot be avoided, refer to following measures for built heritage impacts.
Management and minimisation Built heritage impacts	<ul style="list-style-type: none"> ▶ Archival recording <ul style="list-style-type: none"> ▶ Undertake archival photographic recording in accordance with DEHP (2013b) guideline, <i>Archival Recording of Heritage Places</i> ▶ Copies of archival records to be lodged with the John Oxley Library (or local libraries and/or historical societies as appropriate) ▶ Repair <ul style="list-style-type: none"> ▶ Repair any damage to heritage structures in a way that conserves the heritage values of the place (refer Burra Charter Article 1.4) if possible ▶ Relocation <ul style="list-style-type: none"> ▶ Relocation of heritage items is generally undesirable, as setting forms an intrinsic part of heritage value (ICOMOS (Australia), 2013) ▶ However, if impacts cannot be managed in any other way, it may be appropriate to relocate buildings or items of moveable heritage to another location, such as a local historical society (where agreed prior).
Management and minimisation Archaeological impacts	<ul style="list-style-type: none"> ▶ Archaeological survey <ul style="list-style-type: none"> ▶ Undertake archaeological survey to map elements of complex sites and identify areas of possible subsurface deposit ▶ Archaeological excavation <ul style="list-style-type: none"> ▶ If warranted by results of archaeological survey, undertake a two-stage archaeological excavation: <ul style="list-style-type: none"> – - Stage 1—test excavation to confirm subsurface deposit – - Stage 2—salvage excavation of subsurface deposits (if required and if possible) ▶ Archaeological surface collection <ul style="list-style-type: none"> ▶ Collect archaeological artefacts on the ground surface ▶ Depending on nature of site may be undertaken in conjunction with, or in place of, excavation ▶ Archaeological monitoring <ul style="list-style-type: none"> ▶ If warranted by results of archaeological survey, archaeologists to monitor ground-breaking works to identify any subsurface deposits ▶ Archaeological chance finds <ul style="list-style-type: none"> ▶ In the case of unexpected archaeological finds protocol included in Heritage Management Sub-plan and CHMP is to be followed.

TABLE 18.28: PROPOSED MITIGATION MEASURES FOR EACH NON-INDIGENOUS HERITAGE PLACE

Site ID	Description	Listings	Significance of impact	Mitigation
H2C-19-H01	Helidon railway culvert	None	Large	<ul style="list-style-type: none"> ▶ Avoid site ▶ Archival recording of built elements If avoidance is not possible: <ul style="list-style-type: none"> ▶ Archaeological survey to identify extent of culvert and any additional features ▶ Depending on results of survey, archaeological monitoring or excavation
H2C-19-H02	House	None	Neutral	None
H2C-19-H03	House	None	Large	<ul style="list-style-type: none"> ▶ Avoid site ▶ Archival recording If avoidance is not possible: <ul style="list-style-type: none"> ▶ Consider relocation to residential area with heritage or character protection provisions
H2C-19-H04	House	None	Moderate	<ul style="list-style-type: none"> ▶ Avoid site ▶ Archival recording If avoidance is not possible: <ul style="list-style-type: none"> ▶ Consider relocation to residential area with heritage or character protection provisions
H2C-19-H05	House	None	Large	<ul style="list-style-type: none"> ▶ Avoid site ▶ Archival recording If avoidance is not possible: <ul style="list-style-type: none"> ▶ Consider relocation to residential area with heritage or character protection provisions
H2C-19-H06	Lockyer Creek Rail Bridge	QR	Large	<ul style="list-style-type: none"> ▶ Avoid site ▶ Archival recording If avoidance is not possible: <ul style="list-style-type: none"> ▶ Discuss any additional measures with infrastructure owner
H2C-19-H07	Gatton Railway Station	LHR	Moderate	<ul style="list-style-type: none"> ▶ Avoid heritage elements where possible ▶ Manage indirect impacts ▶ Archival recording If avoidance/management is not possible: <ul style="list-style-type: none"> ▶ Consider relocating heritage elements to another QR property ▶ Comply with local planning scheme heritage provisions where relevant (complete an impact assessment)
H2C-19-H08	Gatton Station Master's Residence	LHR	Large	<ul style="list-style-type: none"> ▶ Avoid heritage elements where possible ▶ Manage indirect impacts ▶ Archival recording If avoidance/management is not possible: <ul style="list-style-type: none"> ▶ Consider relocating building to a QR property or a residential area with heritage or character protection provisions ▶ Comply with local planning scheme heritage provisions where relevant (complete an impact assessment)
H2C-19-H09	Boer War Memorial	SHR	Slight	<ul style="list-style-type: none"> ▶ Manage indirect impacts ▶ Archival recording If any direct impacts are anticipated: <ul style="list-style-type: none"> ▶ Seek exemption certificate under the QH Act or development approval under the Planning Act, as required

Site ID	Description	Listings	Significance of impact	Mitigation
H2C-19-H10	Weeping Mother Memorial	SHR	Slight	<ul style="list-style-type: none"> ▶ Manage indirect impacts ▶ Archival recording <p>If any direct impacts are anticipated:</p> <ul style="list-style-type: none"> ▶ Seek exemption certificate under the QH Act or development approval under the Planning Act, as required
H2C-19-H11	Commercial Hotel	LHR	Slight	<ul style="list-style-type: none"> ▶ Manage indirect impacts ▶ Archival recording ▶ If any direct impacts are anticipated: ▶ Comply with local planning scheme heritage provisions where relevant (complete an impact assessment)
H2C-19-H12	Royal Hotel	LHR	Slight	<ul style="list-style-type: none"> ▶ Manage indirect impacts ▶ Archival recording ▶ If any direct impacts are anticipated: ▶ Comply with local planning scheme heritage provisions where relevant (complete an impact assessment)
H2C-19-H13	Gatton Post and Telegraph Office	LHR	Slight	<ul style="list-style-type: none"> ▶ Manage indirect impacts ▶ Archival recording ▶ If any direct impacts are anticipated: ▶ Comply with local planning scheme heritage provisions where relevant (complete an impact assessment)
H2C-19-H14	House	None	Slight	<ul style="list-style-type: none"> ▶ Manage indirect impacts ▶ Archival recording ▶ If any direct impacts are anticipated: ▶ Archaeological survey and possible excavation
H2C-19-H15	UQ (Gatton campus)	SHR	Moderate	<ul style="list-style-type: none"> ▶ Seek exemption certificate under the QH Act or development approval under the Planning Act, as required ▶ Avoid heritage elements where possible ▶ Archival recording of existing road and plantings ▶ If required, re-establish avenues of plantings, especially Canary Island date palms (<i>Phoenix canariensis</i>) (or appropriate alternative)
H2C-19-H16	Cottage	None	Slight	<ul style="list-style-type: none"> ▶ Manage indirect impacts ▶ Archival recording <p>If any direct impacts are anticipated:</p> <ul style="list-style-type: none"> ▶ Archaeological survey and possible excavation
H2C-19-H17	House	None	Large	<ul style="list-style-type: none"> ▶ Avoid site ▶ Archival recording <p>If avoidance is not possible:</p> <ul style="list-style-type: none"> ▶ Archaeological survey and possible excavation ▶ Consider relocating building to a residential area with heritage or character protection provisions
H2C-19-H18	House	None	Neutral	None
H2C-19-H19	Forest Hill Railway Station	LHR	Neutral	<ul style="list-style-type: none"> ▶ Comply with local planning scheme heritage provisions where relevant
H2C-19-H20	Forest Hill School of Arts	None	Slight	<ul style="list-style-type: none"> ▶ Manage indirect impacts ▶ Archival recording

Site ID	Description	Listings	Significance of impact	Mitigation
H2C-19-H21	Forest Hill War Memorial	SHR	Very Large	<ul style="list-style-type: none"> ▶ Avoid site ▶ Archival recording If avoidance is not possible: <ul style="list-style-type: none"> ▶ Seek exemption certificate under the QH Act or development approval under the Planning Act, as required ▶ Engage heritage mason to advise on conservation and relocation processes ▶ Consult with local community regarding suitable location for memorial ▶ Re-instate memorial in appropriate setting
H2C-19-H22	Railway platform building (relocated)	None	Neutral	None
H2C-19-H23	Lockyer Hotel	SHR	Very Large	<ul style="list-style-type: none"> ▶ Avoid site ▶ Archival recording If avoidance is not possible: <ul style="list-style-type: none"> ▶ Seek exemption certificate under the QH Act or development approval under the Planning Act, as required
H2C-19-H24	National Bank (former)	SHR	Slight	<ul style="list-style-type: none"> ▶ Manage indirect impacts ▶ Archival recording
H2C-19-H25	Forest Hill Hotel	SHR	Slight	<ul style="list-style-type: none"> ▶ Manage indirect impacts ▶ Archival recording
H2C-19-H26	Cottage	None	Moderate	<ul style="list-style-type: none"> ▶ Avoid site ▶ Archival recording If avoidance is not possible: <ul style="list-style-type: none"> ▶ Archaeological survey and possible excavation ▶ Consider relocating building to a residential area with heritage or character protection provision
H2C-19-H27	Outbuildings	None	Neutral	None
H2C-19-H28	Homestead complex	None	Slight	<ul style="list-style-type: none"> ▶ Manage indirect impacts ▶ Archival recording
H2C-19-H29	Homestead complex	None	Neutral	None
H2C-19-H30	House ruin	None	Neutral	<ul style="list-style-type: none"> ▶ Archaeological survey to confirm heritage assessment ▶ Archaeological mitigation if required
H2C-19-H31	House	None	Slight	<ul style="list-style-type: none"> ▶ Manage indirect impacts ▶ Archival recording If any direct impacts are anticipated: <ul style="list-style-type: none"> ▶ Archaeological survey and possible excavation
H2C-19-H32	Homestead complex	None	Neutral	If any direct impacts are anticipated: <ul style="list-style-type: none"> ▶ Archaeological survey and possible excavation
H2C-19-H33	General Store (former)	None	Large	<ul style="list-style-type: none"> ▶ Avoid site ▶ Archival recording If avoidance is not possible: <ul style="list-style-type: none"> ▶ Archaeological survey and possible excavation ▶ Consider relocating building to a residential area with heritage or character protection provisions

Site ID	Description	Listings	Significance of impact	Mitigation
H2C-19-H34	House	None	Slight	<ul style="list-style-type: none"> ▶ Manage indirect impacts ▶ Archival recording <p>If any direct impacts are anticipated:</p> <ul style="list-style-type: none"> ▶ Archaeological survey and possible excavation
H2C-19-H35	Railway platform buildings (relocated)	None	Slight–very large	<ul style="list-style-type: none"> ▶ Archival recording ▶ Manage indirect impacts <p>If any direct impacts are anticipated, or if buildings are likely to fall into disuse as a result of the Project:</p> <ul style="list-style-type: none"> ▶ Consider relocation of the buildings, preferably to a QR property, and preferably to the adjacent Grandchester Station if possible ▶ Consult with QR heritage office regarding options to manage the building
H2C-19-H36	Grandchester railway complex	SHR	Slight	<ul style="list-style-type: none"> ▶ Archival recording ▶ Manage indirect impacts <p>If any direct impacts are anticipated:</p> <ul style="list-style-type: none"> ▶ Seek exemption certificate under the QH Act or development approval under the Planning Act, as required
H2C-19-H37	Grandchester Community Hall	LHR	Neutral	<ul style="list-style-type: none"> ▶ Archival recording ▶ Manage indirect impacts <p>If any direct impacts are anticipated:</p> <ul style="list-style-type: none"> ▶ Comply with local planning scheme heritage provisions where relevant (complete an impact assessment)
H2C-19-H38	House	LHR	Large	<ul style="list-style-type: none"> ▶ Avoid site ▶ Archival recording <p>If avoidance is not possible:</p> <ul style="list-style-type: none"> ▶ Archaeological survey and possible excavation ▶ Consider relocating building to a residential area with heritage or character protection provisions ▶ Comply with local planning scheme heritage provisions where relevant (complete an impact assessment)
H2C-19-H39	Railway residence	LHR	Large	<ul style="list-style-type: none"> ▶ Avoid site ▶ Archival recording <p>If avoidance is not possible:</p> <ul style="list-style-type: none"> ▶ Archaeological survey and possible excavation ▶ Consider relocating building to a residential area with heritage or character protection provisions ▶ Comply with local planning scheme heritage provisions where relevant (complete an impact assessment)
H2C-19-H40	Railway house	LHR	Moderate	<ul style="list-style-type: none"> ▶ Avoid site ▶ Archival recording <p>If avoidance is not possible:</p> <ul style="list-style-type: none"> ▶ Comply with local planning scheme heritage provisions where relevant (complete an impact assessment)
H2C-19-H41	Calvert Community Hall (former)	LHR	Large	<ul style="list-style-type: none"> ▶ Avoid site ▶ Archival recording <p>If avoidance is not possible:</p> <ul style="list-style-type: none"> ▶ Comply with local planning scheme heritage provisions where relevant (complete an impact assessment)
H2C-19-H42	Grandchester archaeological complex	None	Large	<ul style="list-style-type: none"> ▶ Avoid site <p>If avoidance is not possible:</p> <ul style="list-style-type: none"> ▶ Archaeological survey and possible excavation

18.12 Impact assessment

18.12.1 Indigenous heritage

Impacts to Indigenous cultural heritage will be identified and managed under CHMP CLH017009.

18.12.2 Non-Indigenous heritage

The significance of predicted post-mitigation impacts to each of the sites is assessed in Table 18.29 using the rankings established in the previous sections.

TABLE 18.29: ASSESSMENT OF SIGNIFICANCE OF MITIGATED IMPACTS

Site ID	Description	Sensitivity	Magnitude of change after mitigation	Significance of impact after mitigation
H2C-19-H01	Helidon Railway Culvert	Moderate	Medium	Moderate
H2C-19-H02	House	Negligible	Negligible	Neutral
H2C-19-H03	House	Moderate	Low	Slight
H2C-19-H04	House	Low	Low	Slight
H2C-19-H05	House	Moderate	Low	Slight
H2C-19-H06	Lockyer Creek Rail Bridge	Moderate	Medium	Moderate
H2C-19-H07	Gatton Railway Station	Moderate	Low	Slight
H2C-19-H08	Gatton Station Master's Residence	Moderate	Low	Slight
H2C-19-H09	Boer War Memorial	High	Negligible	Slight
H2C-19-H10	Weeping Mother Memorial	High	Negligible	Slight
H2C-19-H11	Commercial Hotel	Moderate	Negligible	Neutral
H2C-19-H12	Royal Hotel	Moderate	Negligible	Neutral
H2C-19-H13	Gatton Post and Telegraph Office	Moderate	Negligible	Neutral
H2C-19-H14	House	Moderate	Negligible	Neutral
H2C-19-H15	The University of Queensland (Gatton campus)	High	Negligible	Slight
H2C-19-H16	Cottage	Moderate	Negligible	Neutral
H2C-19-H17	House	Moderate	Low	Slight
H2C-19-H18	House	Negligible	Negligible	Neutral
H2C-19-H19	Forest Hill Railway Station	Negligible	Negligible	Neutral
H2C-19-H20	Forest Hill School of Arts	Moderate	Negligible	Neutral
H2C-19-H21	Forest Hill War Memorial	High	Low	Slight
H2C-19-H22	Railway platform building (relocated)	Moderate	Negligible	Neutral
H2C-19-H23	Lockyer Hotel	High	Low	Slight
H2C-19-H24	National Bank (former)	High	Negligible	Neutral
H2C-19-H25	Forest Hill Hotel	High	Negligible	Neutral
H2C-19-H26	Cottage	Moderate	Low	Slight
H2C-19-H27	Outbuildings	Negligible	Negligible	Neutral
H2C-19-H28	Homestead complex	Moderate	Negligible	Neutral
H2C-19-H29	Homestead complex	Moderate	Negligible	Neutral
H2C-19-H30	House ruin	Negligible	Negligible	Neutral
H2C-19-H31	House	Moderate	Negligible	Neutral
H2C-19-H32	Homestead complex	Moderate	Negligible	Neutral
H2C-19-H33	General Store (former)	Moderate	Low	Slight
H2C-19-H34	House	Moderate	Negligible	Neutral

Site ID	Description	Sensitivity	Magnitude of change after mitigation	Significance of impact after mitigation
H2C-19-H35	Railway platform buildings (relocated)	High	Low	Slight
H2C-19-H36	Grandchester railway complex	High	Negligible	Slight
H2C-19-H37	Grandchester Community Hall	Moderate	Negligible	Neutral
H2C-19-H38	House	Moderate	Low	Slight
H2C-19-H39	Railway residence	Moderate	Low	Slight
H2C-19-H40	Railway house	Low	Low	Slight
H2C-19-H41	Calvert Community Hall (former)	Moderate	Low	Slight
H2C-19-H42	Grandchester archaeological complex	High	Negligible	Neutral

18.13 Cumulative impacts

18.13.1 Indigenous heritage

ARTC has undertaken consultation and negotiation in accordance with Part 7 of the ACH Act with the relevant Aboriginal parties for the Project. There is currently an approved CHMP (CLH017009) that outlines the process to identify, assess and manage Indigenous cultural heritage values across the Project and this will be implemented throughout all Project delivery phases.

18.13.2 Non-Indigenous heritage

The potential for cumulative impacts emerges when concurrent or consecutive activities bring about incremental change to heritage places and values. These changes may not be captured in an assessment for any single project, and instead need to be considered on a wider physical and temporal scale (ICOMOS, 2011).

The results of cumulative impact assessments undertaken for cultural heritage sites and places must be interpreted with caution, not least because they are based (in part) on heritage datasets that are inevitably incomplete and contain various inconsistencies and errors. Godwin (2011), in particular, has questioned the value of cumulative impact assessments to cultural heritage management in Australia, arguing that the 'fundamentals' necessary for undertaking such assessments simply do not exist. The fundamentals Godwin is referring are robust regional and national data sets for measuring proposed impacts and the determination of acceptable scientific and cultural impact thresholds.

In the case of H2C, the Projects most relevant to the cumulative impact assessment are considered to be two adjoining ARTC proposed rail developments: Calvert to Kagaru (C2K) and Gowrie to Helidon (G2H).

Assessment of the potential impacts of the adjacent C2K Project and G2H Project was undertaken and an analysis of the number of heritage sites impacted is presented in Table 18.30. The analysis suggests that the three packages will have a similar extent of impact with the cumulative impact of both Projects proceeding being the sum of the impacts of each package. No further cumulative cultural heritage impacts are anticipated.

TABLE 18.30: SUMMARY HERITAGE CUMULATIVE IMPACTS FOR C2K AND H2C

Category	C2K			H2C			G2H			Total		
	# Sites	# Impacted	% Impacted	# Sites	# Impacted	% Impacted	# Sites	# Impacted	% Impacted	# Sites	# Impacted	% Impacted
Bridge	5	0	0	7	5	71	1	0	0	13	5	38
Cemetery	0	0	0	3	0	0	0	0	0	3	0	0
Church	0	0	0	4	0	0	0	0	0	4	0	0
Dairy	3	3	100	0	0	0	0	0	0	3	3	100
Dip	2	0	0	0	0	0	0	0	0	2	0	0
Hall	0	0	0	4	3	75	1	0	0	5	3	60
Homestead	6	2	33	0	0	0	3	0	0	9	2	22
Hotel	0	0	0	4	4	100	0	0	0	4	4	100
House	2	0	0	51	6	12	1	0	0	54	6	11
Hut	7	3	43	1	1	100	0	0	0	8	4	50
Industrial	1	1	100	6	1	17	0	0	0	7	2	29
Memorial	0	0	0	4	3	75	0	0	0	4	3	75
Mill/factory	0	0	0	0	0	0	1	0	0	1	0	0
Multiple structures	20	5	25	42	14	33	6	4	67	68	23	34
Post Office	0	0	0	2	1	50	0	0	0	2	1	50
Railway	4	1	25	12	9	75	8	2	25	24	12	50
School	0	0	0	4	1	25	0	0	0	4	1	25
Shop	0	0	0	6	2	33	0	0	0	6	2	33
Single structure	6	2	33	99	28	28	20	5	25	125	35	28
Trail	0	0	0	0	0	0	1	1	100	0	0	0
Windmill	0	0	0	5	1	20	1	1	100	5	1	20
Total	56	17	30	254	79	31	42	12	29	352	108	31

18.14 Conclusions

This chapter addresses the Indigenous and non-Indigenous cultural heritage values of the Project, outlining the Project's existing environment, potential impacts, potential mitigations and providing a significance impact assessment.

ARTC has undertaken consultation and negotiation with the Yuggera Ugarapul People, Aboriginal Party for the Project, in accordance with Part 7 of the ACH Act for the Project. A CHMP (CLH017009) was developed to identify, assess and manage Indigenous cultural heritage values across the Project, and was approved by the Chief Executive of DATSIP (now DSDSATSIP) on 5 June 2018.

The assessment of non-Indigenous heritage values and impacts has been undertaken by a team of appropriately qualified heritage specialists and has used a combination of registers searches and historical and archival research, combined with field investigations and inspections, to identify areas of high cultural heritage potential within the cultural heritage study area. Through this process, 42 AOI were identified, inspected, and assessed against standard significance criteria (refer Table 18.29). Potential Project impacts on these places were assessed using ICOMOS standard guidelines both before and after the implementation of mitigation measures (refer Table 18.29).

The assessment concluded that, with appropriate measures, Project impacts could be reduced to moderate for two places, and neutral/slight for the remainder. In general, mitigation includes an archival recording and interpretation. Impacts to the Helidon railway culvert and Lockyer Creek Rail Bridge remain as moderate despite the application of these mitigation measures. The significance of the impact after mitigation remains moderate due to the heritage significance of these items—both items are of State significance and therefore their removal from Queensland cannot be mitigated below a moderate impact without retaining the items in-situ.

The Project will be able to enhance understanding of the historical development of the Project alignment through the preparation and implementation of an interpretation plan (included within the Heritage Management Sub-plan). By disseminating information to the public regarding the history and heritage items within and adjacent to the Project, the heritage significance will be mitigated, enhanced and/or preserved.