

Prepared for 210458

# **Statement of Heritage Impact**

Demondrille Signal Box

October 2023

Project Number: 210458



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# **Table of contents**

Acro	nyms and	abbreviations	v
Exec	utive sun	ımary	vii
1.	Introdu	ction	1
1.1	Backgro	und	1
1.2	Location		1
1.3	Proposa	l objective and rationale	4
1.4	Approac	h	4
1.5	Report s	tructure	5
2.	Legislat	ive and non-statutory considerations	6
2.1	Environr	nent Protection and Biodiversity Conservation Act 1999	6
2.2	NSW He	ritage Act	6
	2.2.1	State Heritage Register	6
	2.2.2	State agency heritage registers	8
	2.2.3	Conservation Management Plans	8
	2.2.4	Signal Box Strategy	8
2.3	NSW Environmental Planning & Assessment Act 197910		10
	2.3.1	Harden Local Environment Plan 2011	10
2.4	The Bur	ra Charter	11
3.	Historic	al and physical overview	13
3.1	Heritage	items subject to this report	13
3.2	Site visit		21
	3.2.1	T1145 – Demondrille redundant signal box	21
3.3	Current	condition of Demondrille Signal Box	21
3.4	Compar	ative analysis	26
3.5	August 2	2023 meeting with Heritage NSW	27
4.	Heritag	e significance	28
4.1	Introduction		28
4.2	Heritage	assessment criteria	28
4.3	Heritage	assessment	29
	4.3.1	Demondrille redundant signal box	32
4.4	Statement of significance		33
	4.4.1	Demondrille, railway relics	33
	4.4.2	Demondrille redundant signal box	33
5.	Propose	ed works assessment	34

Demondrille Signal Box

# NGH

5.1	Proposed development	34
5.2	MJM Consulting Engineers 2003 structural assessment	35
5.3	Determining applications for demolition (s63(3) of the Act)	36
5.4	Heritage impact considerations	37
5.5	Heritage impact questions	40
	5.5.1 T1145 – Demondrille redundant Signal Box	40
5.6	Scope of works assessment	42
5.7	Summary of impacts	45
6.	Conclusion and recommendations	. 49
6.1	Conclusion	49
6.2	Recommendations49	
7.	References	. 50

## **Figures**

Figure 1-1 Location map of the project area, Demondrille Railway Station2
Figure 1-2 Detailed project area, Demondrille Railway Station3
Figure 2-1 All heritage listings in proximity to the project area12
Figure 3-1 Demondrille signal box, c.1962. Note the position of the box between the up and down lines (Source: Australian Railway Historical Society)14
Figure 3-2 Demondrille signal box, c.1995. Note the position of the box between the up and down lines (Source: Australian Railway Historical Society)15
Figure 3-3 Interiors of Demondrille signal box, 29 September 1992 (Source: Australian Railway Historical Society)
Figure 3-4 Demondrille signal box, c.1995 (Source: Australian Railway Historical Society)
Figure 3-5 Demondrille signal box, c.1995 (Source: Australian Railway Historical Society)16
Figure 3-6 Demondrille signal box, c.1995. Note the deterioration of the paint on the weatherboard (Source: Australian Railway Historical Society)
Figure 3-7 Demondrille signal box, c.1995. Note the deterioration of the paint on the weatherboard (Source: Australian Railway Historical Society)
Figure 3-8 Demondrille signal box, c.2000. Note the significant deterioration of the paint on the weatherboard (Source: Australian Railway Historical Society)18
Figure 3-9 Interiors of Demondrille signal box, 14 March 2005 (Source: Australian Railway Historical Society)
Figure 3-10 Demondrille signal box in c.2014 (2014 Asbestos Register)
Figure 3-11 Demondrille signal box bracing installed by ARTC to prevent the collapse of the building (2019 Asbestos Register)
Figure 3-12 Plan of Demondrille Railway Station. Note the North Box located on the left side of the plan20

Demondrille Signal Box

# NGH

Figure 5-1 Graph showing the relationship between the degree of adverse impact versus change, showing	J
when Standard Exemptions and the material threshold apply (Image: Heritage NSW 'Material Threshold	
Policy', 3)	.36

## **Plates**

Plate 3-1 vandalism	Severe weathering on the exterior of the signal box. Lower windows have been boarded up due t damage	o 21
Plate 3-2	Upper storey windows and roof of signal box. Some details remain, including the terracotta finials	21
Plate 3-3	Significant weathering of the weatherboard, set atop brick and steel foundations	22
Plate 3-4	Upper storey windows and eaves	22
Plate 3-5 have been	External stairs to reach the second storey originally located on the northern side of the structure n mostly removed	22
Plate 3-6 have been	External stairs to reach the second storey originally located on the northern side of the structure n mostly removed	22
Plate 3-7	Current interiors of building with steel supports	22
Plate 3-8 glass due	Lower level window frames are still present behind the boarding up. Windows contain cracked to vandalism	22
Plate 3-9	Current deteriorated condition of the external elements of the building	23
Plate 3-10	Current deteriorated condition of the external elements of the building	24
Plate 3-11	Vandalism that has occurred to the building due to it being publicly accessible (ARTC 2023)	25

## **Tables**

Table 1-1	List of Proposed works at Demondrille Signal Box	.4
Table 1-2	Heritage sites subject to this heritage impact assessment	.4
Table 2-1	Places listed under the NSW Heritage Act	.7
Table 2-2	Locations listed on the State Agency Heritage Register	.8
Table 2-3	Heritage Assessment Legend utilised in the BCS 2010 strategy	.9
Table 2-4	Heritage Assessment for Demondrille Signal Box as outlined in the in the BCS 2010 strategy	10
Table 2-5	LEP listed heritage items within close proximity to the project area	11
Table 3-1	Type I signal boxes across NSW	26
Table 4-1 criteria	Demondrille redundant signal box NGH assessment against the seven NSW Heritage Significanc	e 32
Table 5-1	Asbestos Register / Management Plan Action Plan for the presence of ACM within a structure	34
Table 5-2	List of Proposed works at Demondrille Railway Station	35
Table 5-3	Scale of impact to state heritage significance	37
Table 5-4	Assessment of the proposed options within the project area	39

Demondrille Signal Box

# NGH

Table 5-5 Heritage impact questions to address development proposals on heritage items relevant to the	ıe
proposed works in the Harden site area	40
Table 5-6 Heritage Impact Assessment Gradings	42
Table 5-7 Options considered for Demondrille Signal Box	43
Table 5-8 Summary of issues considered for Demondrille Signal Box	46

## Appendices

Appendix A	MJM Consulting Engineers 2023 Demondrille Signal Box report	. A-I
Appendix B	ACM reports for Demondrille Railway Station	B-I
Appendix C	NSW Railway Museum Response to donation of items	C-I
Appendix D	Additional information provided to Heritage NSW on 13.11.2023	D-II
Appendix E	Demondrille Site Plans	E-III
Appendix F	Demondrille Maintenance Schedule	F-IV
Appendix G	Demondrille Demolition Plans	G-V



# Acronyms and abbreviations

ACM	Asbestos Containing Material
AHD	Australian Heritage Database
Burra Charter	The Australia ICOMOS Charter for Places of Cultural Significance. 2013
Cultural Significance	Aesthetic, historical, scientific, social or spiritual value for past, present or future generations
CHL	Commonwealth Heritage List
DCP	Development Control Plan
EP&A Act	Environmental Planning & Assessment Act 1979
EPBC Act	Environmental Protection and Biodiversity Conservation Act 1999. Legal framework for the protection and management of places of national environmental significance
Fabric	Physical material of the <i>place</i> including components, fixtures, contents, and objects
НА	Heritage Assessment
Heritage Significance	A term used to describe the inherent cultural and historical value of an item
HIA	Heritage Impact Assessment
HCA	Heritage Conservation Area
ICOMOS	International Council on Monuments and Sites
LEP	Local Environment Plan
LGA	Local Government Area
NHL	National Heritage List
NPW Act	National Parks & Wildlife Act 1974 (NSW)
NSW	New South Wales
OEH	(NSW) Office of Environment and Heritage (former)
Place	Site, area, land, landscape, building or other works, and may include components, contents, spaces and views
Reconstruction	Means returning a <i>place</i> to a known earlier state and is distinguished from <i>restoration</i> by the introduction of a new material into the <i>fabric</i>
Restoration	Means returning the existing <i>fabric</i> of a <i>place</i> to a known earlier state by removing accretions or by assembling existing components without the introduction of a new material
SHI	State Heritage Inventory
SHR	State Heritage Register
SOHI	Statement of Heritage Impact
RNE	Register of the National Estate

Demondrille Signal Box



UNESCO	United Nations Educational, Scientific and Cultural Organisation
WHL	World Heritage List

# **Executive summary**

#### **Background assessment**

NGH Pty Ltd (NGH) was commissioned by Australian Rail Track Corporation (ARTC) to prepare a Heritage Assessment and Statement of Heritage Impact (SOHI) report (this document) for the proposed demolition of a redundant signal box, located within the State Heritage Register (SHR) curtilage of Demondrille Junction railway ruins and signal box (Listing No: 01128), Murrumburrah NSW 2587. This SOHI report aims to establish the significance of the signal box, analyse the heritage impact of the proposed works, and provide mitigation measures where appropriate in order to minimise the heritage impact the proposed works may have overall on the SHR listed Demondrille Junction Railway Ruins and Signal Box.

## Determining applications for demolition (S63(3) of the Act

Under the *NSW Heritage Act 1977* (the Act), the Heritage Council of NSW or an instrumentality with delegated authority must consider the term "materially affect/effect" when exercising functions regarding the determination of an application to demolish an item (s63(3)).

Under s63(3)(c), an application to demolish a building or work within a SHR listed place can be approved if the building or work is not itself an item of State heritage significance and the opinion is formed that demolition will not have a "materially detrimental effect" on heritage significance.

OR

(a) it is of the opinion that the building or work constitutes a danger to the users or occupiers of that building or work, the public or a section of the public...

While buildings or works that are not of State heritage significance can be demolished under the Act when the application does not reach the material threshold, this does not guarantee approval. The application should be able to demonstrate other benefits that will mitigate any adverse impacts to the significance of the SHR listed place.

## Proposal objective and rationale

During a Stage 1 desktop assessment conducted separately to this project for priority asbestos buildings, it was noted that the heritage significance of any heritage asset should be established prior to undertaking any stage of asset management, and the conclusions of that significance assessment be taken into account in decision making.

It has been identified that within the SHR listed Demondrille Junction Railway Ruins and Signal Box a redundant signal box has been marked for demolition due to the dilapidated state of the building and the presence of P1 hazardous ACM within the building and associated safety and human health risks (Section 5.1 of this report).

The purpose of this report is to therefore establish the significance of the site, determine what contribution the signal box has to the overall significance of the station, and then provide recommendations that aim to help avoid, minimise or mitigate impacts to the identified heritage values of the heritage items.

The following table outlines the location, type of works proposed, what heritage listing curtilage the works are located within, and what type of approval will be required for the works to be undertaken at Demondrille Railway Station:

Executive Summary Table 1 List of Proposed works at Demondrille Railway Station

Demondrille Signal Box

# NGH

Location	Proposed works	Heritage Listing	Type of approval required
T1145 - Demondrille redundant signal Box	Asbestos removal and clearance, and demolition	Within SHR 01128 curtilage	s.60 Approval

### Statement of significance and impact assessment conclusion

The following statement of heritage significance for the Demondrille Junction railway ruins and signal box is taken from the 2009 update to the s.170 register for the item. It is noted that the SHI database does not contain a Heritage Assessment or Statement of Significance for Demondrille Station. As a result, the following statement from the 2009 s.170 register update has been utilised as the NGH assessment of the heritage item against the NSW Heritage Significance criteria in Section 4.3.1 supports the existing heritage significance statement, and so no new assessment of significance is required for this report.

#### **Demondrille railway relics**

The following statement of heritage significance is taken from the 2009 S.170 listing for the item:

The relics at Demondrille are a reminder of former railway operations at this site, however the place has a very low level of intactness and is not readily accessible to the public.

Date significance updated: 29 Jun 09

#### Demondrille redundant signal box

The following statement of heritage significance is taken from the 2010 BCS signal box strategy:

The Demondrille Junction Signal Box is historically significant through its association with the Demondrille railway junction, which was an important railway location as the junction on the Main Southern Line of the Harden -Cowra - Blayney branch line and an important steam locomotive servicing centre. It is also associated with the duplication of the Main Southern Line in 1922. The building represents a Type I signal box of standard 1920s railway design.

The building is now isolated however, with few physical remains of the precinct extant and the most significant features removed. This limits the ability to interpret the site and the role of the signal box in the precinct (BCS 2010, 69).

#### Impact assessment conclusion

Demondrille North Signal Box is currently located within the curtilage of the SHR listed Demondrille Junction railway ruins and signal box (SHR: 01128) and is a contributory item to the overall precinct as the remaining signal box within the curtilage. It is identified on the SHI database that during the last site visit to the building (2019) the signal box was noted as derelict (also noted as derelict in the 2009 study of the site). This condition assessment was confirmed by NGH during the 2022 site visit undertaken for this report, with the structure noted as unsafe to access due to fear of collapse.

The signal box has not been utilised since station closure in 1974 and little maintenance has been undertaken. As a result, the structure has undergone significant weathering and deterioration, with numerous holes noted in the roofing material. During the NGH site visit it was noted that both internally and externally the structure appeared to be structurally unsound and that later steel support structures have been added around the building due to its significant deteriorated condition. The derelict nature of the building was

Demondrille Signal Box



confirmed by the 2023 MJM Engineering Report. The building, even if maintained would likely suffer the same outcome due to poor building practices (2023 MJM) and the associated safety concerns of the potential collapse have been deemed unacceptable.

The building shows significant signs of vandalism, and the location of the building is in an area that is easily accessed by the public (but not necessarily visible) which would allow for ongoing damage to occur to the structure. If ARTC were to place a fence around the structure in order to avoid any further access or vandalism by the public, the fencing would have to be significant in order to reduce the ongoing safety issue and risk of collapse. It has further been identified that a fence would be impracticable as the signal box is within the danger zone of the railway track and any fence would be 3 sided, (not complete). The 2 road overbridges in close proximity to the signal box would prove to make corridor fencing near impossible to keep vandals out.

It has been assessed that the removal of the ACM within the structure is necessary due to the significant risk to human health it poses (P1 risk). This material cannot be left in situ due to the ongoing risk of land contamination from asbestos degradation, which could be made more significant if the building was to collapse due to its poor condition. The removal of the ACM would require the complete removal of the roof and gables. Replacement with a new roof at this point in time is not considered feasible, as the building is in such a poor state that the removal of the roof would likely further exacerbate structural issues, and a new roof would not be able to be supported on the current deteriorated frame. Removal of the ACM and no replacement of the material would weaken the structural stability of the building and further expose it to external and internal weathering. Given the current condition of the building is already severely deteriorated, further significant weathering will result in swift deterioration.

Restoration and/or stabilisation of the structure to solve the deterioration issues is not considered to be feasible due to the lack of use of the structure and the current condition of the materials which would result in modern materials having to be utilised for the majority of the reconstruction (2023 MJM Engineering), and the lack of adaptive reuse options of the building due to its location. If the building was to be fully reconstructed but not utilised, future deterioration would occur due to lack of the need for ongoing maintenance, and opportunities for vandalism of the new structure would also be significant.

Whilst the demolition of the building will result in the loss of the structure, the controlled removal of the structure will allow for an archival recording to be undertaken of the structure prior to its removal, as well as the possibility for retaining some materials for further use and/or interpretation if they are deemed to be in a suitable condition.

### Recommendations

NGH has formulated the following recommendations regarding the proposal demolish the Demondrille redundant Signal Box located within the SHR Demondrille Junction railway ruins and signal box curtilage:

- 1. A copy of the engineering report, and this SOHI document should accompany a s.60 application to Heritage NSW for demolition of the redundant signal box structure.
- 2. Prior to demolition, an archival recording of the site in line with the relevant Heritage NSW guidelines should be undertaken to capture the existing physical aspects of the site, where safety considerations allow.
- 3. If appropriate, during demolition works, a qualified engineer should be on site to examine the materials as they are removed from the structure and make an assessment as to whether they are in an appropriate condition to store and reuse later. If an engineer cannot be engaged to attend at the time of demolition due to timing of railway possessions, then all elements from the building should be stored and an engineer should be engaged to examine the materials post removal from the structure. Elements to consider being salvaged include any remaining original internal elements from the

Demondrille Signal Box



second storey of the signal box. ARTC should label and store these items until appropriate ongoing management options are identified by Heritage NSW.

- 4. The remainder of the Demondrille SHR rail precinct should be reviewed to determine the presence and condition of other items (relics) related to the listing. Consideration should be made as to what elements warrant ongoing listing and whether further investigation is required to update the heritage significance of the listing.
- 5. An update to the S170 register should be undertaken post the additional assessment.

# 1. Introduction

### 1.1 Background

NGH Pty Ltd (NGH) was commissioned by Australian Rail Track Corporation (ARTC) to prepare a Heritage Assessment and Statement of Heritage Impact (SOHI) report (this document) for the proposed demolition of a redundant signal box due to the building having been identified as being dilapidated and including asbestos containing material (ACM). The signal box is located within the State Heritage Register (SHR) curtilage of Demondrille Junction railway ruins and signal box (Listing No: 01128), Murrumburrah NSW 2587. This SOHI report analyses the heritage impact of the proposed works and provides mitigation measures where appropriate in order to help minimise the heritage impact the proposed works may have overall on the SHR listed Demondrille Railway Station.

The heritage and future development of Demondrille is currently controlled by the Harden Local Environment Plan (LEP) 2011, however the region is currently undergoing an update, with the new Hilltops LEP and DCP expected to come into effect at some point in the near future. When completed, the Hilltops LEP and DCP will replace the Young LEP 2010, Boorowa LEP 2012 and Harden LEP 2011 and will provide one consistent LEP and DCP covering the entire Hilltops Local Government Area. ARTC are their own approval body for works on their assets under their State Agency Exemptions, and Heritage NSW would provide relevant Section 60 planning approvals for works outside of the State Agency Exemptions.

Background historical information regarding the sites was mostly obtained through a synthesis of existing heritage listings and heritage studies.

This SOHI report has been prepared in accordance with the following guidelines:

- NSW Heritage Office (now Heritage NSW) publication Statements of Heritage Impact (2002);
- NSW Heritage Office (now Heritage NSW) publication Assessing Heritage Significance (2001); and
- Australia ICOMOS *Burra Charter*. The Charter sets the standard of practice for providing advice or making decisions about of undertaking works at places of heritage or cultural significance, including owners, managers and custodians (ICOMOS 2013).

A site visit was carried out by NGH Principal Heritage consultant, Jakob Ruhl on 3 March 2022, to determine the existing physical aspects of the project area.

This assessment addresses built heritage concerns only.

#### 1.2 Location

Demondrille Railway Station (subject of this assessment) is a historic railway station located at Murrumburrah NSW, approximately 110km north-west of Canberra, ACT and 110km north-east of Wagga Wagga NSW. Located within the Hilltops Local Government Area (LGA) and is the junction of the branch line to Cowra and Blayney with the Main South line.

Demondrille Signal Box

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Figure 1-1 Location map of the project area, Demondrille Railway Station

Demondrille Signal Box

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21 -458 Demondrille Railway Precinct Heritage Assessment Location of the Project Area







Figure 1-2 Detailed project area, Demondrille Railway Station

## **1.3** Proposal objective and rationale

NGH was initially engaged by ARTC in January 2021 to complete Stage 1 of a heritage impact assessment scope of works as part of the ARTC Asbestos Remediation project. Stage 1 was a desktop heritage management assessment which aimed to provide clear advice regarding the heritage constraints involved in the removal of asbestos at 40 rail assets, and provided recommendations regarding whether or not the proposed works would trigger an exemption or permit application under the *NSW Heritage Act (1977*).

During the Stage 1 desktop assessment, it was noted that the heritage significance of any heritage asset should be established prior to undertaking any stage of asset management, and the conclusions of that significance be taken into account in decision making.

It has been identified that within the SHR listed Demondrille Railway Station a redundant signal box has been marked for demolition due to the dilapidated state of the building and the presence of P1 hazardous ACM within the building (Section 5.1 of this report).

The purpose of this report is to therefore establish the significance of the site, determine what contribution the signal box has to the overall significance of the station, and then provide recommendations that aim to help avoid, minimise or mitigate against impacts to the identified heritage values of the heritage items.

Table 1-1 outlines the location, type of works proposed, what heritage listing curtilage the works are located within, and what type of approval will be required for the works to be undertaken at Demondrille Railway Station:

Table 1-1 List of Proposed works at Demondrille Signal Box

Location	Proposed works	Heritage Listing	Type of approval required
T1145 - Demondrille redundant signal Box	Demolition	Within SHR 01128 curtilage	s.60 Approval

## 1.4 Approach

The purpose of this report is to assess the significance of Demondrille Railway Station signal box and to determine the individual building's contributions to the heritage significance of the site and to assess if the proposed works are acceptable, in terms of heritage.

Table 1-2 Heritage sites subject to this heritage impact assessment

Heritage site	Proximity to the proposal location	Rationale for inclusion in this report
Demondrille Junction railway ruins and signal box	The project area	The proposed works will be located within the SHR curtilage for this item which will result in an impact to the SHR listing.

The assessment has been prepared in accordance with the Heritage NSW guideline, *Assessing Heritage Significance* (2002), in addition to any further requirements that need to be considered in order to satisfy legislative and management obligations.

The report specifically includes the following:

• Review of existing heritage assessments and condition of the heritage items.

Demondrille Signal Box



- Searches of national and state heritage databases. This includes the Australian Heritage Database (National and Commonwealth Heritage Lists), and the NSW State Heritage Inventory.
- Search of the LEP.
- Review of relevant literature.
- Site visit.
- Assessment of the heritage significance of the site and heritage items (if not done previously).
- Recommendations are provided accordingly that would help to avoid, minimise or mitigate impacts to the identified heritage values of the heritage items.

### 1.5 Report structure

This report:

- Outlines the background of the current study/proposal (Section 1).
- Discusses issues such as statutory heritage listings and legislative requirements (Section 2).
- Provides a brief summary in terms of an historical and physical overview of the place (Section 3).
- Provides a description and evaluates the significance of affected items (Section 4).
- Provides a description of the proposed works and assesses the potential impacts arising from the proposal (Section 5).
- Makes recommendations regarding the items in response to those impacts (Section 6).

Note, it is outside of the scope of this report to provide a detailed historical account of the area. We have relied upon previous historical information from secondary sources.

# 2. Legislative and non-statutory considerations

Places of heritage value can be subject to different levels of recognition and protection. This protection (at local, state and national levels) includes specific measures for the protection of heritage items. The text below provides a summary of the legislative framework at each level of government.

## 2.1 Environment Protection and Biodiversity Conservation Act 1999

The Commonwealth *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act) provides a legal framework for the protection and management of places of national environmental significance. The heritage lists addressed by the EPBC Act include the United Nations Educational, Scientific and Cultural Organisation (UNESCO) World Heritage List (WHL), National Heritage List (NHL) and the Commonwealth Heritage List (CHL).

All WHL properties in Australia are protected and managed under the EPBC Act. The NHL protects places that have outstanding value to the nation. The CHL protects items and places owned or managed by Commonwealth Government agencies. The Commonwealth Department of Agricultural, Water and the Environment is responsible for the implementation of national policy, programs and legislation to protect and conserve Australia's environment and heritage and to promote Australian arts and culture. The Minister's approval is required for controlled actions which would have a significant impact on items and places included on the WHL, NHL or CHL.

The Australian Heritage Database (AHD) includes the NHL, which includes the natural, historic and Indigenous places that are of outstanding national heritage value to the Australian nation. The AHD also contains the CHL, which comprises those places on Commonwealth lands and waters, or under Australian Government control which could possess heritage value. Items on both lists are protected under the EPBC Act. The AHD also includes places listed as World Heritage value by UNESCO. There are no items listed on the NHL, CHL or WHL within or in proximity to the project area.

References to the Register of the National Estate (RNE) were removed from the EPBC Act in 2012. The RNE is no longer a statutory list but remains an archive of information about more than 13,000 places throughout Australia and includes two entries for the Murrumburrah region, neither of which are associated with the railway station. Entries on the RNE, while providing a contribution to understanding the character and heritage values of the project area, do not carry statutory weight (unless they are also included on a statutory list) and do not require assessment in relation to this project.

## 2.2 NSW Heritage Act

#### 2.2.1 State Heritage Register

Natural, cultural and built heritage is protected in NSW under the *Heritage Act 1977*. Administration of the Act is currently managed by Heritage NSW, Community Engagement Group of the Department of Premier and Cabinet.

The Act creates the State Heritage Register (SHR) which provides permanent protection for State Significant heritage items and places. Items of State heritage significance are defined as a place, building, work, relic, moveable object or precinct which is of historical, scientific, cultural, social, archaeological or natural significance to the State (Section 4A (1) of the Act). The effect of SHR listing is that a person cannot damage, destroy, alter or move an item, building or land without approval from the Heritage Council. Information about items included on the SHR can be found in the NSW State Heritage Inventory (SHI), an electronic database of statutory listed heritage items in NSW.

Demondrille Signal Box



The Heritage Council of NSW, constituted under the *Heritage Act 1977*, is appointed by the Minister for Heritage and is responsible for heritage in NSW. The Council reflects a cross-section of community, government, and conservation expertise with Heritage NSW being the operational arm of the Council.

The 2001, NSW Heritage Manual Update, published by the NSW Heritage Office (now 'Heritage NSW') provides guidelines for 'Assessing Heritage Significance'. The Manual includes specific criteria for assessing heritage significance and the significance assessment within this report has been completed in accordance with these guidelines.

When items are listed on the SHR applications to carry out works on those items need to be made to the Heritage Council under Section 60 of the Act.

Under Section 63 of the *Heritage Act 1999*, the Heritage Council of NSW is unable to approve the demolition of a whole building or work, except under certain circumstances, outlined in Section 63(3).

Section 63(3) of the Heritage Act 1999 reads as follows:

(1) Except as provided by subsection (2), the approval body may determine an application for approval by granting approval to that application, either unconditionally or subject to conditions, or by refusing approval.

(1a) The determination of an application for approval in relation to integrated development is subject to Division 5 of Part 4 of the Environmental Planning and Assessment Act 1979.

- (2) Where-
  - (a) an application for approval is made to demolish the whole of a building or work, or

(b) an application for approval is made which would, if it were approved, necessitate the demolition of the whole of a building or work, the approval body shall determine that application by refusing approval.

(3) Nothing in subsection (2) prevents the approval body from approving an application referred to in that subsection if—

(a) it is of the opinion that the building or work constitutes a danger to the users or occupiers of that building or work, the public or a section of the public, or

(b) it is a condition of the approval that the building or work be relocated on other land, or

(c) the building or work is situated (whether wholly or partly) in a place or precinct that is an item of State heritage significance, but is not itself such an item, and the approval body is of the opinion that the demolition of the whole of the building or work will not have a materially detrimental effect on the heritage significance of the place or precinct.

A search of the study area and surrounds indicated one item listed on the SHR in the Murrumburrah region. As the proposed works are located within the Demondrille Junction railway ruins and signal box curtilage, it will be considered within this report.

Item name	Location and proximity to the proposal site	Impacted by the proposal? LGA	SHR listing ID
Demondrille Junction railway ruins and signal box	The project area	Hilltops	01128

Table 2-1 Places listed under the NSW Heritage Act

Demondrille Signal Box



#### 2.2.2 State agency heritage registers

Under Section 170 of the Heritage Act, State agencies and authorities in NSW are required to keep a register of heritage places for which they are responsible. The s.170 registers are also held in the SHI.

There is one s.170 listing associated with the railway site.

	1	P. C. J		01.1.1	A	11	D
Table 2-2	Locations	listed or	n the	State	Agency	Heritage	Register

Item Name	Address	Suburb	LGA	Government body responsible for the heritage site
Demondrille, Railway Relics	Young Road, Demondrille – the project area	Murrumburrah	Hilltops	ARTC

Under section 57 (2) of *The Heritage Act (1977)* State Agency Specific Exemptions have been approved for ARTC to grant an exemption from section 57(1). The State Agency Exemptions awarded to ARTC allow approved works to be undertaken on behalf of ARTC without the need for Heritage NSW approval or exemption. The ARTC exemptions aim to allow activities related to usual maintenance and some other related activities to occur at railway sites listed on the SHR without the need for further approval and notification.

In order to determine if a State Agency Specific Exemption is appropriate for the works, an assessment should be undertaken, and the relevant documentation saved in the event of future auditing.

Demolition applications fall outside of State Agency Exemptions and must be assessed by Heritage NSW.

#### 2.2.3 Conservation Management Plans

As outlined in the Heritage NSW publication Conservation Management Documents (2002), a Conservation Management Plan (CMP) states the conservation policy and the statement of significance of an item and looks in more detail at achieving the future viability of the item and retaining the maximum heritage significance in future development proposals.

There is no current CMP for Demondrille Junction railway ruins and signal box.

#### 2.2.4 Signal Box Strategy

In order to help manage the railway signal boxes across NSW, ARTC engaged b cubed sustainability Pty Ltd (BCS) in 2008 (with an update in 2010) to undertake a conservation strategy for the remainder of the extant boxes in NSW. The aim of this strategy was to help identify which boxes across NSW best reflected the heritage values of the collection as a whole and enable conservation resources to be focussed on those selected.

In 2007, ARTC centralised all railway signalling on the NSW main lines to be controlled from Junee and Broadmeadow, resulting in the decommissioning of all remaining attended railway signal boxes in regional NSW. As of February 2008, there were over 120 known extant railway signal boxes in NSW, and a number of these were identified as being listed on the NSW State Heritage Register (or other heritage registers) as one element in a railway heritage precinct. As the buildings were no longer required for operational purposes, alternative uses and management strategies were identified as being required in order to ensure that representative examples of different types of signal boxes were maintained across NSW.

As a rail infrastructure controller and manager in NSW, ARTC is subject to State and Commonwealth legislation and has various responsibilities with regard to the management of the heritage assets it controls,

Demondrille Signal Box



particularly under Section 170 of the Act, which sets out requirements for heritage assets managed by government bodies, and also those items listed on the NSW SHR.

The BCS (2010) report outlines a draft Heritage Policy which sets out its requirements for management of ARTCs heritage assets in accordance with its legal responsibilities. The policy articulates ARTC's commitment to the identification and appropriate management of heritage assets under its control.

ARTC's Heritage Policy Statement (draft) is as follows:

ARTC is committed to the appropriate management of heritage assets under its care and control.

ARTC will promote and deliver its Heritage Management Policy by maintaining a heritage register, by implementing relevant management strategies and procedures to guide personnel and contractors, and by adherence to statutory obligations. (p.76)

As part of management of the signal boxes, it is identified within the BCS strategy that ARTC is responsible for the consideration of the OH&S implications for all of its activities, including the management of sites or structures which may not be directly involved in the day-to-day operational requirements of the organisation.

The strategy identifies that a number of signal boxes have heritage significance and that those items should be conserved as part of an on-going heritage asset management portfolio, including maintenance, restoration, adaptation and interpretation, as appropriate. It is noted that some signal boxes have either little heritage significance, are of a duplicated example, in poor condition, have maintenance complications or safety/security restraints and that with their de-commissioning it may be appropriate to pursue de-listing and demolition of the structure. In these cases, it is proposed that delisting from the SHR is considered.

In assessing the heritage significance of the boxes, BCS (2010) employed the following grading system to determine the level of significance of signal boxes across NSW (BCS 2010, 73):

Heritage Assessment	Definition
High	Rare and/or excellent representative of type according to design. High degree of original fabric. Alterations do not detract from significance. Makes a significant contribution to the importance of the precinct to which it belongs.
Medium	Good example of type, not unique - other examples of Type exist. Lessened significance due to loss, of original fabric and/or infrastructure.
Low	Not particularly representative of type due to significant modification and/or deterioration which detracts from significance. A member of a rail precinct of low heritage significance without contributing significantly.

Table 2-3 Heritage Assessment Legend utilised in the BCS 2010 strategy

The BCS (2008) strategy defines the Demondrille signal box as an elevated weatherboard structure that is located at the junction of the Main Southern line and Cowra branch line, adjacent to a former locomotive servicing depot. The building is identified as not currently in use and managed by ARTC.

Originally built in 1922, the signal box structure was identified in the BCS (2010) strategy as being isolated with few extant remains in a fair condition but with poor intactness.

The significance of the Demondrille Junction Signal Box is outlined within the BCS strategy as:

The Demondrille Junction Signal Box is historically significant through its association with the Demondrille railway junction, which was an important railway location as the junction on the Main Southern Line of the Harden -Cowra - Blayney branch line and an

Demondrille Signal Box



important steam locomotive servicing centre. It is also associated with the duplication of the Main Southern Line in 1922. The building represents a Type I signal box of standard 1920s railway design.

The building is now isolated however, with few physical remains of the precinct extant and the most significant features removed. This limits the ability to interpret the site and the role of the signal box in the precinct (BCS 2010, 69).

The following table indicates the levels of significance assessed for the Demondrille Signal Box site as outlined within the BCS 2010 report.

Table 2-4 Heritage Assessment for Demondrille Signal Box as outlined in the in the BCS 2010 strategy

Signal Box	Level of Significance	Justification
Demondrille	Low	In a precinct of low integrity and condition.

The strategy report recommendations (BCS 2008, 81) highlight that Demondrille Signal Box should be further investigated to determine its level of significance and whether potential demolition or relocation would be appropriate due the following:

- 1. In precinct of poor integrity and condition
- 2. Isolated location
- 3. OH&S issues with maintenance.

### 2.3 NSW Environmental Planning & Assessment Act 1979

The *Environmental Planning & Assessment Act 1979* (EP&A Act) controls land use planning in NSW. The planning system established by the EP&A Act requires that local authorities prepare an LEP and associated DCP under Part 3. These planning instruments include provisions relating to the management and protection of heritage and in particular, the LEP contains a schedule of all known heritage items within an LGA which are subject to these protections.

Heritage items are added to the heritage schedule of a LEP often following identification and assessment from a local shire heritage study. The SHI also holds local heritage items listed by local councils in NSW. These items are given protection by the heritage provisions within the relevant plan, which then require consent of Council for certain developments.

#### 2.3.1 Harden Local Environment Plan 2011

The LEP identifies and protects heritage conservation areas and listed buildings/items, identifies environmentally sensitive land, and prescribes land use practices. Heritage items (if any) are listed and described in Schedule 5. Heritage conservation areas are shown on the Heritage Map as well as being described in Schedule 5.

There are a number of local heritage items within the Murrumburrah area, however this SOHI will only outline sites that have the potential to be directly impacted by the proposed works (refer to Figure 2-1).

Demondrille Signal Box



Table 2-5 LEP listed heritage items within close proximity to the project area

Item name	Location and proximity to the proposal site	Listing ID
Demondrille Junction railway ruins and signal box	The project area	11

### 2.4 The Burra Charter

The Australia ICOMOS (International Council on Monuments and Site) Charter for the conservation of places of cultural significance (the Burra Charter) (current edition 2013) sets a standard of practice for those who provide advice, make decisions about, or undertake works to places of cultural significance including owners, managers and custodians. The Charter is not a statutory document but does provide specific guidance for physical and procedural actions that should occur in relation to significant places. A copy of the charter can be accessed at http://icomos.org/australia. This SOHI has been prepared in accordance with the Burra Charter.

#### **Statement of Heritage Impact** Demondrille Signal Box

# NGH



Figure 2-1 All heritage listings in proximity to the project area

# 3. Historical and physical overview

The scope of works for this SOHI report did not require extensive historical research on the study area.

### 3.1 Heritage items subject to this report

#### **Demondrille Railway Station**

Demondrille Railway Station was constructed as a junction station located away from any significant development. Originally named Demondrille Junction, in 1940 the junction title was dropped.

The following summary of historical information regarding the Demondrille Railway Station is taken from the SHI database:

Demondrille Railway Junction was established in 1877 during construction of the Main Southern Line between Sydney and Albury. The location is important as it was chosen as the site of the branch line connecting the Main Southern Line with the Western Line. The branch line connection was made as a triangle to allow trains to access the Blayney Line from either the Sydney or Albury end, the first such use of such an arrangement in NSW (ARTC, 2008/10, 26).

The next important phase for the junctions was during the 1920s when the main line was duplicated, and a major steam locomotive servicing facility was built at the site with infrastructure including an impressive coal bunker with a timber trestle approach and supporting sidings. The facilities at this location were able to service the locomotives while still attached to their train on the main line and were integral to the operation of steam trains on the Main Southern Lin (ibid, 2008/10, 26).

Demondrille Station was established in 1885 as the location for the junction with the Murrumburrah to Blayney Branch line. The station underwent major upgrades between 1918 and 1922 when the Main Southern Line was duplicated (HNSW report, 18/11/2010).

Demondrille Station was closed in 1974. The Signal Box was decommissioned in 1974 (HNSW report, 18/11/2010).

Since Demondrille Station was closed in 1974 a majority of the infrastructure has been removed. The remaining elements are as follows:

- North (Junction) Signal Box;
- Remains of branch line island platform and dock (brick)
- Remains of branch line island platform and dock (brick;
- Tunnel under main lines;
- Station Master's House; and
- Gate posts (pair) (HNSW report 18/11/2010).

#### **Demondrille North Signal Box**

Two signal boxes were constructed at Demondrille, the north box (subject of this assessment) was the larger of the two boxes, as it controlled the junctions itself, and the south box, at ground level, for the exit back to the main line. The south box (built in 1922) was destroyed by a fire in 1943 and replaced with a smaller, single level "D0 Type" box in 1950. The box was only opened as required.

Demondrille Signal Box



Demondrille North Signal Box was constructed in 1922 during the duplication works and the second Demondrille deviation on the Main Southern Line.

The signal box was constructed as a "Type I" signal box, which consisted of a bungalow roof timber box with a hip roof and fibro slates and interior weatherboard cladding. No general arrangement drawing was prepared for this type but apart from the roof it was similar to the preceding Type E. Internally the ceiling was a hip-type rather than the flat ceiling of the Type E. Consequently, the function of the ceiling joists was performed by tie rods and tie rings. Toilets were normally to the rear of the landing, but a number (including Demondrille North) had the toilet beneath the landing.

The Demondrille North Box used the same design drawings as East Maitland, but there was a difference in that Demondrille North had a section of weatherboard splitting the windows on both the front and rear walls.

The main purpose of the signal box was to access the extensive locomotive servicing facilities and the Cowra branch. Following the demise of steam and the reduction of trains using the Cowra branch, facilities were gradually removed. For a time, the only access to the Cowra branch was by wheat trains during wheat season.

The signal box at Demondrille subject to this assessment has not been in use since its decommissioning in 1974. No works were undertaken on the structure to maintain the weatherboard building post its decommissioning, and as a result the building deteriorated.

The building was provided to ARTC in 2004 as redundant infrastructure and was classed by ARTC as already being in a dilapidated state. The SHI database assessment of condition in 2009 is that the signal box was in a derelict state. It is noted in the BCS (2010) strategy that there were OH&S issues accessing the building. Photos from the 2014 Asbestos Register display the condition of the building as dilapidated and it was noted that the structure was high risk due to the ACM and presented significant OH&S issues (Figure 3-10).

Between 2014 and 2019, access to the structure was restricted when the external stairs collapsed. In order to prevent further collapse of the structure, ARTC installed external bracing columns to hold the structure in place (Figure 3-10).

ARTC have attempted to maintain the structure in the same state it was received in 2004 and note that the timbers and asbestos fibro-cement sheeting comprising most of the structure are at the end of their life cycle.



Figure 3-1 Demondrille signal box, c.1962. Note the position of the box between the up and down lines (Source: Australian Railway Historical Society)

Demondrille Signal Box

# NGH



Figure 3-3 Interiors of Demondrille signal box, 29 September 1992 (Source: Australian Railway Historical Society)

Demondrille Signal Box

# NGH



Figure 3-4 Demondrille signal box, c.1995 (Source: Australian Railway Historical Society)



Figure 3-5 Demondrille signal box, c.1995 (Source: Australian Railway Historical Society)

Demondrille Signal Box

# NGH



Figure 3-6 Demondrille signal box, c.1995. Note the deterioration of the paint on the weatherboard (Source: Australian Railway Historical Society)



Figure 3-7 Demondrille signal box, c.1995. Note the deterioration of the paint on the weatherboard (Source: Australian Railway Historical Society)

Demondrille Signal Box

# NGH



Figure 3-8 Demondrille signal box, c.2000. Note the significant deterioration of the paint on the weatherboard (Source: Australian Railway Historical Society)



Figure 3-9 Interiors of Demondrille signal box, 14 March 2005 (Source: Australian Railway Historical Society)

Demondrille Signal Box

# NGH



Figure 3-10 Demondrille signal box in c.2014 (2014 Asbestos Register)



Figure 3-11 Demondrille signal box bracing installed by ARTC to prevent the collapse of the building (2019 Asbestos Register)





Figure 3-12 Plan of Demondrille Railway Station. Note the North Box located on the left side of the plan

## 3.2 Site visit

A site visit was carried out by NGH Principal Heritage consultant, Jakob Ruhl on 3 March 2022, to determine the existing physical aspects of the project area.

#### 3.2.1 T1145 – Demondrille redundant signal box

Demondrille signal box was noted to be in poor condition, set away from any other remaining elements of the original railway station. It was noted by ARTC that the structure was unsafe to enter due to structural conditions, and as a result internal photos of the building were only taken where it was safe to do so (Plate 7 and Plate 8). Internal steel support beams and columns have been added to the structure (exact date unknown but post end of use of the box) in order to help support the structure and prevent collapse (Plate 7), and the original internal fixtures of the building have been removed.

The signal box is a two-storey weatherboard structure with an asbestos tile roof. The building is significantly weathered (Plate 1 - Plate 4) and has undergone vandalism, resulting in damage to the lower windows as well as internals. The external northern stairs to access the upper storey of the structure have been mostly removed from the structure, with only small elements remaining (Plate 5 - Plate 6).

Whilst the overall condition of the building is average, the building retains its original form and a number of original elements including windows and some detailing fixtures (Plate 2).

## 3.3 Current condition of Demondrille Signal Box

ARTC have provided NGH with detailed images of the Demondrille Signal Box from June 2023 to help display the current condition of the structure.



Plate 3-1 Severe weathering on the exterior of the signal box. Lower windows have been boarded up due to vandalism damage



Plate 3-2 Upper storey windows and roof of signal box. Some details remain, including the terracotta finials

Demondrille Signal Box

# NGH



Plate 3-3 Significant weathering of the weatherboard, set atop brick and steel foundations



Plate 3-4 Upper storey windows and eaves



Plate 3-5 External stairs to reach the second storey originally located on the northern side of the structure have been mostly removed



Plate 3-6 External stairs to reach the second storey originally located on the northern side of the structure have been mostly removed



Plate 3-7 Current interiors of building with steel supports



Plate 3-8 Lower level window frames are still present behind the boarding up. Windows contain cracked glass due to vandalism

Demondrille Signal Box

# NGH



Plate 3-9 Current deteriorated condition of the external elements of the building.

Note the cladding that is pulling away from the walls and the deteriorated uprights. The external bracing columns are no longer effective at helping to maintain the building upright due to the restraints only being attached to deteriorated weatherboard cladding (ARTC 2023).

Demondrille Signal Box





Plate 3-10 Current deteriorated condition of the external elements of the building

Note: The external bracing beams are no longer effective at helping to maintain the building upright due to the restraints being only being attached to deteriorated weatherboard cladding. (ARTC 2023).
Demondrille Signal Box

## NGH



Plate 3-11 Vandalism that has occurred to the building due to it being publicly accessible (ARTC 2023)

Demondrille Signal Box



## 3.4 Comparative analysis

Type I signal boxes were constructed across NSW from 1912–1920s. This type of box was similar to Type E, except the roof and awning of the box was replaced by a hip (or bungalow) roof. The box was generally a tall two-storey building.

In determining the significance of the Demondrille signal box, a brief comparative analysis of other Type I signal boxes located across NSW has been undertaken below:

Location	Date	Construction materials	Details	Extant Y/N
Valley Heights	1914	Brick and timber	Heavily modified due to bush fire damage	Yes
Lithgow Coal Stage	1925	Weatherboard	Elevated timber framed traditional signal box of a standard design with a hipped corrugated iron roof	Yes
Canterbury	1915	Weatherboard	Fire damaged – out of use	Yes
Harden North	1912	Weatherboard	Elevated structure. Lever frame intact. Not in use.	Yes
Harden South	1913	Weatherboard	Elevated structure. Lever frame intact. Not in use.	Yes
Moss Vale	1915	Weatherboard	Elevated structure. Lever frame intact. Not in use.	Yes
Picton	1916	Weatherboard	Elevated structure. Lever frame intact. Not in use but occupied by RailCorp staff for office accommodation.	Yes
Yass Junction	1915	Weatherboard	Elevated structure. Lever frame intact. Not in use but leased to a rail preservation group for "train spotting".	Yes
Wallerawang East	1915	Brick	Preserved as part of a historic railway station precinct	Yes
Maitland	1956	Weatherboard and fibro	Elevated structure with hipped roof. No longer in use but leased to a rail preservation group.	Yes

Demondrille Signal Box



## 3.5 August 2023 meeting with Heritage NSW

NGH attended a meeting with ARTC and Heritage NSW to discuss the project and the potential issues surrounding the proposed demolition of the structure on Wednesday 23 August 2023.

Post the meeting, Heritage NSW provided the following (summarised) advice regarding the site and the appropriate approach moving forward with the project:

In preparing any documentation for such an application, it is recommended that ARTC include:

- 1. Documentation providing evidence that the Signal Box's current condition is not the result of "demolition by neglect", such as schedules of any regular maintenance the structure has received; (Section 3.1 of this report)
- 2. Comparative Analysis against other similar types of assets across the country regional network; (Section 3.4 of this report)
- 3. Evidence supporting any safety risks associated with the structure's current condition, including any condition or structural engineer's reports as well as any environmental contamination reports (as per Section 63(3)(a) of the Heritage Act); (Section 5.1, 5.2 and Appendix A and Appendix B of this report)
- 4. Options analysis for the structure, including consideration of relocation (as per Section 63(3)(b) of the Heritage Act); (Section 5.6 and 5.7 of this report)
- 5. Considered impact mitigation measures beyond archival recording, such relocation or investigation of the possible reuse of salvageable components such as the leaver (sic) frames in other signal boxes or by community railway preservation organisations, such as Transport Heritage NSW (Section 5.6 and 5.7 of this report).

## 4. Heritage significance

## 4.1 Introduction

'Heritage significance' is a term used to describe the inherent cultural and historical value of an item. Significance may be contained within the fabric of a building or other place, in its setting and its relationship with other nearby items.

The main aim in assessing significance is to produce a succinct statement of significance, which summarises an item's heritage values. The statement is the basis for policies and management structures that will affect the item's future (NSW Heritage 2001).

Heritage NSW recommends assessment of heritage items in a number of situations, which include:

- Making decisions about whether to retain an item.
- Considering changes to an item.
- Preparing a heritage study.
- Preparing a conservation management plan.
- Considering an item for listing on the SHR or on the schedule of heritage items in a local environmental plan, or.
- Preparing a statement of environmental effects or a heritage impact statement as part of the development and building approval process.

The following assessment of significance is based on the NSW heritage assessment criteria. The criteria encompass the four values in the Australia ICOMOS Burra Charter (2013), which are commonly accepted as generic values by Australian heritage agencies and professional consultants:

- Historical significance.
- Aesthetic significance.
- Scientific significance.
- Social significance.

The above are expressed as criteria in a more detailed form than this to:

- Maintain consistency with the criteria of other Australian heritage agencies.
- Minimise ambiguity during the assessment process.
- Avoid the legal misinterpretation of the completed assessments of listed items.

### 4.2 Heritage assessment criteria

#### Assessments of significance

The following assessment follows the guidelines set out by Heritage NSW and the principles of the Australia ICOMOS Burra Charter.

The guidelines for *Assessing Heritage Significance (Heritage Office* (former), 2001) states that an item will be considered to be of state and/or local heritage significance if it meets one or more of the NSW Heritage Assessment Criteria, below:

To undertake an assessment of an item against the NSW heritage assessment criteria, the guidelines recommend that the following steps be undertaken:

• Investigate the historical context of the item or study area;

Demondrille Signal Box



- Investigate the community's understanding of the item;
- Establish local historical themes and relate them to the State themes;
- Investigate the history of the item; and
- Investigate the fabric of the item.

### 4.3 Heritage assessment

In the following sections, Demondrille Railway Station Signal Box is assessed against the seven NSW Heritage Significance criteria listed in Section 4.2 per the guidelines provided below.

#### Criterion (a) – Historical:

An item is important in the course, or pattern, of NSW's cultural or natural history (or the cultural or natural history of the local area)

Guidelines for the inclusion or exclusion of an item as being of state or local heritage significance against criterion (a)

**Guidelines for INCLUSION:** 

- shows evidence of a significant human activity
- is associated with a significant activity or historical phase
- maintains or shows the continuity of a historical process or activity

#### **Guidelines for EXCLUSION:**

- has incidental or unsubstantiated connections with historically important activities or processes
- provides evidence of activities or processes that are of dubious historical importance
- has been so altered that it can no longer provide evidence of a particular association

#### Criterion (b) – Associative:

An item has strong or special association with the life or works of a person, or group of persons, of importance in NSW' s cultural or natural history (or the cultural or natural history of the local area)

Guidelines for the inclusion or exclusion of an item as being of state or local heritage significance against criterion (b)

#### Guidelines for INCLUSION:

- shows evidence of a significant human occupation
- is associated with a significant event, person, or group of persons

#### **Guidelines for EXCLUSION:**

- has incidental or unsubstantiated connections with historically important people or events
- provides evidence of people or events that are of dubious historical importance
- has been so altered that it can no longer provide evidence of a particular association

Demondrille Signal Box



#### Criterion (c) - Aesthetic/Technical

An item is important in demonstrating aesthetic characteristics and/or a high degree of creative or technical achievement in NSW (or the local area)

Guidelines for the inclusion or exclusion of an item as being of state or local heritage significance against criterion (c)

#### **Guidelines for INCLUSION:**

- shows or is associated with, creative or technical innovation or achievement
- is the inspiration for a creative or technical innovation or achievement
- is aesthetically distinctive
- has landmark qualities
- exemplifies a particular taste, style or technology

#### Guidelines for EXCLUSION:

- is not a major work by an important designer or artist
- has lost its design or technical integrity
- its positive visual or sensory appeal or landmark and scenic qualities have been more than temporarily degraded
- has only a loose association with a creative or technical achievement

#### Criterion (d) – Social:

An item has strong or special association with a particular community or cultural group in NSW (or the local area) for social, cultural or spiritual reasons

Guidelines for the inclusion or exclusion of an item as being of state or local heritage significance against criterion (d)

#### Guidelines for INCLUSION:

- is important for its associations with an identifiable group
- is important to a community's sense of place

#### Guidelines for EXCLUSION:

- is only important to the community for amenity reasons
- is retained only in preference to a proposed alternative

#### **Criterion (e) - Research**

An item has potential to yield information that will contribute to an understanding of NSW's cultural or natural history (or the cultural or natural history of the local area)

Guidelines for the inclusion or exclusion of an item as being of state or local heritage significance against criterion (e)

Demondrille Signal Box



#### Guidelines for INCLUSION:

- has the potential to yield new or further substantial scientific and/or archaeological information
- is an important benchmark or reference site or type
- provides evidence of past human cultures that is unavailable elsewhere

#### Guidelines for EXCLUSION:

- the knowledge gained would be irrelevant to research on science, human history or culture
- has little archaeological or research potential
- only contains information that is readily available from other resources or archaeological sites

#### **Criterion (f) - Rarity**

An item possesses uncommon, rare or endangered aspects of NSW's cultural or natural history (or the cultural or natural history of the local area)

Guidelines for the inclusion or exclusion of an item as being of state or local heritage significance against criterion (f)

#### Guidelines for INCLUSION:

- provides evidence of a defunct custom, way of life or process
- demonstrates a process, custom or other human activity that is in danger of being lost
- shows unusually accurate evidence of a significant human activity
- is the only example of its type
- demonstrates designs or techniques of exceptional interest
- shows rare evidence of a significant human activity important to a community

#### Guidelines for EXCLUSION:

- is not rare
- is numerous but under threat

#### Criterion (g) - Representative:

An item is important in demonstrating the principal characteristics of a class of NSW's cultural or natural places; or cultural or natural environments. (or a class of the local areas)

## Guidelines for the inclusion or exclusion of an item as being of state or local heritage significance against criterion (g)

Guidelines for INCLUSION:

- is a fine example of its type
- has the principal characteristics of an important class or group of items
- has attributes typical of a particular way of life, philosophy, custom, significant process, design, technique or activity

Demondrille Signal Box



- is a significant variation to a class of items
- is part of a group which collectively illustrates a representative type
- is outstanding because of its setting, condition or size
- is outstanding because of its integrity or the esteem in which it is held

#### Guidelines for EXCLUSION:

- is a poor example of its type
- does not include or has lost the range of characteristics of a type
- does not represent well the characteristics that make up a significant variation of a type

### 4.3.1 Demondrille redundant signal box

Table 4-1 Demondrille redundant signal box NGH assessment against the seven NSW Heritage Significance criteria

Seven NSW Heritage Significance criteria	S.170/NGH 2022 Assessment	Meets/Does not meet criterion at a State or Local level of significance
(a) Historical	The Demondrille Junction Signal Box is historically significant through its association with the Demondrille railway junction, which was an important railway location as the junction on the Main Southern Line of the Harden - Cowra - Blayney branch line and an important steam locomotive servicing centre. It is also associated with the duplication of the Main Southern Line in 1922.	Demondrille redundant signal box meets criterion (a) at a state level.
(b) Associative	Demondrille redundant signal box does not have any specific associations with a significant event, person, or group of persons (NGH 2023).	Demondrille redundant signal box does not meet criterion (b) at a local or State level.
(c) Aesthetic/Technical	The building represents a Type I signal box of standard 1920s railway design. The building is in poor condition and does not include any significant deviations from the standard style (NGH 2023).	Demondrille redundant signal box does not meet criterion (c) at a state level.
(d) Social	Demondrille redundant signal box is not important for its associations with an identifiable group or to a particular community's sense of place (NGH 2023)	Demondrille redundant signal box does not meet criterion (d) at a local or State level.
(e) Research	Demondrille redundant signal box has little archaeological or research potential and does not hold additional information that can't be gained from other sources (NGH 2023).	Demondrille redundant signal box does not meet criterion (e) at a local or State level.
(f) Rarity	There are eight Type I signal boxes currently located within	Demondrille redundant

Demondrille Signal Box



Seven NSW Heritage Significance criteria	S.170/NGH 2022 Assessment	Meets/Does not meet criterion at a State or Local level of significance
	heritage curtilages across NSW: Demondrille, Harden North, Harden South, Maitland, Moss Vale, Picton, Wallerawang, and Yass Junction (NGH 2023).	signal box does not meet criterion (f) at a local or State level.
(g) Representative	Not particularly representative of type due to significant modification and/or deterioration which detracts from significance (NGH 2023).	Demondrille redundant signal box does not meets criterion (g) at a local or State level.

## 4.4 Statement of significance

The following statement of heritage significance for the Demondrille Junction railway ruins and signal box is taken from the 2009 update to the s.170 register for the item. It is noted that the SHI database does not contain a Heritage Assessment or Statement of Significance for Demondrille Station. NGH attempted to contact Heritage NSW to determine the current listed Significance for the SHR listed site but did not receive a response. As a result, the following statement from the 2009 s.170 register update has been utilised as the NGH assessment of the heritage item against the NSW Heritage Significance criteria in the preceding section supports the existing heritage significance statement, and so no new assessment of significance is required for this report.

### 4.4.1 Demondrille, railway relics

The following statement of heritage significance is taken from the 2009 S.170 listing for the item:

The relics at Demondrille are a reminder of former railway operations at this site, however the place has a very low level of intactness and is not readily accessible to the public.

Date significance updated: 29 Jun 09

#### 4.4.2 Demondrille redundant signal box

The following statement of heritage significance is taken from the 2010 BCS signal box strategy:

The Demondrille Junction Signal Box is historically significant through its association with the Demondrille railway junction, which was an important railway location as the junction on the Main Southern Line of the Harden -Cowra - Blayney branch line and an important steam locomotive servicing centre. It is also associated with the duplication of the Main Southern Line in 1922. The building represents a Type I signal box of standard 1920s railway design.

The building is now isolated however, with few physical remains of the precinct extant and the most significant features removed. This limits the ability to interpret the site and the role of the signal box in the precinct (BCS 2010, 69).



## 5. Proposed works assessment

### 5.1 Proposed development

It has been identified that within the SHR listed Demondrille Railway Station the Signal Box has been marked for demolition due to the current dilapidated state and lack of use. It has been identified that there is hazardous ACM within the building that requires removal (Appendix B).

As part of the ARTC Asbestos Register and Management Plan, ACM and asbestos is regularly tested across sites and management strategies are put into place in relation to the level of potential risk the material presents at a site. The following table (Table 5-1) outlines the Asbestos Register / Management Plan Action Plan utilised by ARTC and the relevant priority and recommended action for each risk. Table 5-2, below, includes reference to which priority each area of asbestos is assigned in order to help determine the appropriate ongoing management of the site.

Action Plan Risk	Priority	Recommended action
Category 1	P1	Products or materials that pose an immediate or elevated risk to employees or the public in their current state. Immediate actions should be taken for these materials to be removed by a licensed asbestos removal contractor. Alternative management strategies must be considered where removal of ACM is not practicable.
Category 2	P2	Products or materials that pose a medium health risk to employees and the general public in its current state. ACM has the potential for deterioration or disturbance. Remove within 12 months or at scheduled maintenance, control under asbestos management plan until removed.
Category 3	Р3	Products or materials that pose a negligible health risk to employees or the general public if undisturbed. ACM is stable in its current position and maintained under control of the asbestos management plan.
Category 4	P4	Products or Materials presumed to contain asbestos until inspected and verified and status confirm. Treat as ACM and control under asbestos management plan until item is confirmed not to contain asbestos.
Category 5	Р5	No asbestos detected or present, no action required.

Table 5-1 Asbestos Register / Management Plan Action Plan for the presence of ACM within a structure

Demondrille Signal Box



It has been identified that within the SHR heritage listed Demondrille Railway Station, one building has been marked for demolition due to the presence of hazardous ACM within the structure as well as the dilapidated condition of the box. The following table (**Error! Reference source not found.**) outlines the location, type of works proposed, the ACM that has been identified within the building, what heritage listing curtilage the works are located within, and what type of approval will be required for the works to be undertaken at Demondrille Railway Station

#### Table 5-2 List of Proposed works at Demondrille Railway Station

Location	Proposed works	External elements of ACM identified	Internal elements of ACM identified	Heritage listing	Type of approval required
T1145 - Demondrille redundant signal Box	Demolition	<ul> <li>Roof Shingles (P1 risk)</li> <li>Eaves (P1 risk)</li> <li>Foot plate (P1 risk)</li> </ul>	<ul> <li>Electrical Backing Board (P4 risk)</li> </ul>	Within SHR 01128 curtilage	s.60 Approval

## 5.2 MJM Consulting Engineers 2003 structural assessment

MJM Consulting Engineers (MJM) were engaged by ARTC in 2023 to undertake a visual assessment of the extant Demondrille Signal Box in order to help determine whether the building remains structurally stable. Visually the building has appeared derelict for a number of years, and there has been concerns raised about the ongoing safety of the structure as the building can be accessed by the public. ARTC have determined that in consideration of the location of the structure next to the railway tracks, the possibility of the Signal Box collapsing onto the tracks and causing significant delays with the freight network and ACM land contamination are high and the risk of human injury is significant.

MJM undertook the assessment in August 2023 which has been summarised below. A full copy of the report is included in Appendix A.

- The sub-floor area is approximately 400mm lower than the surrounding ground levels. There is a lack of adequate site surface drainage to shed water away from the building, therefore the soils to the sub-floor area appeared damp at the time of the inspection;
- Eaves gutters are either missing in some locations or ineffective. The result is that the majority of the roof catchment is discharging directly onto the ground surface in close proximity to the external footprint of the building;
- Generally, the building is in very poor condition. The external timbers are extremely weathered and have lacked maintenance for an extended period of time;
- The external wall on the northeast elevation was measured at approximately 50mm out of plumb over the length of a 1,200mm level. Given the overall height of approximately 5.5m, this equates to approximately 230mm out of plumb overall. This extent of out of plane would render the building structurally unstable.
- Previous attempts at remedial works have been made, however, are flawed in the following manner:
  - The threaded rods would normally be used to act in tension, however, given the direction of building rotation the rods would be acting in compression and would not be adequate.
  - The threaded rods and associated plates have been attached to the external cladding only and not to the structural frame. The cladding is damaged at the location of the installed rods.

Demondrille Signal Box



- Overall remediation of the building would be difficult and require extensive replacement works given the extent of damaged / aged timbers and the extent of vertical out of plane;
- Many of the construction methods used at the time of construction would be non-compliant to current standards and therefore it would be unlikely that ongoing works to the building would be able to be warrantied; and
- Upgrading and/or remediation of connections would prove very difficult given the current load paths and moisture content of the timbers which are damaged.

## 5.3 Determining applications for demolition (s63(3) of the Act)

Under the *NSW Heritage Act 1977* (the Act), the Heritage Council of NSW or an instrumentality with delegated authority must consider the term "materially affect/effect" when exercising functions regarding the determination of application to demolish an item (s63(3))

Under s63(3)(c), an application to demolish a building or work within a SHR listed place can be approved if the building or work is not itself an item of State heritage significance and the opinion is formed that demolition will not have a "materially detrimental effect" on heritage significance.

While buildings or works that are not of State heritage significance can be demolished under the Act when the application does not reach the material threshold, this does not guarantee approval. The application should be able to demonstrate other benefits that will mitigate any adverse impacts to the significance of the SHR listed place.

The Heritage NSW *Material Threshold Policy* (Heritage NSW, 2020) outlines where the material threshold applies, irrespective of the degree of change proposed. It also indicates when Standard Exemptions and approvals are required to demonstrate the difference in where the material threshold applies. In this context, the word 'material' relates to the *degree of impact* to the State heritage significance of an SHR listed place.



Figure 5-1 Graph showing the relationship between the degree of adverse impact versus change, showing when Standard Exemptions and the material threshold apply *(Image: Heritage NSW 'Material Threshold Policy', 3)* 

The material threshold is reached where an application, if approved, would have a major adverse impact on the state heritage significance of an SHR listed place. For an application to be considered below the material threshold, the adverse impacts to State heritage significance must be minor or moderate. Table 5-3, below,

Demondrille Signal Box



outlines the scale of impact to the State Heritage Significance of an item and outlines the material threshold. This scale is addressed with regard to the project area in Section 5.6.

Table 5-3 Scale of impact to state heritage significance

Impact	Definition
Total loss of significance	Major adverse impacts to the extent where the place would no longer meet the criteria for listing on the SHR.
Adverse impact	Major (that is, more than minor or moderate) adverse impacts to State heritage significance.
	Moderate adverse impacts to State heritage significance
	Minor adverse impacts to State heritage significance
Little to no impact*	An alteration to State heritage significance that is so minor that it is considered negligible.
	* Little to no impact (as opposed to no impact) acknowledges that any change will result in some level of impact/alteration to State heritage significance.
Positive impact	Alterations that enhance the ability to demonstrate the State heritage significance of an SHR listed place.

Proposed works that meet the Material Threshold must be considered by the Heritage Council and appropriate advertising undertaken before approval for the works can be approved.

## 5.4 Heritage impact considerations

The Heritage Office guideline, *Principles of Conservation Work on Heritage Places*, outlines the following principles that should be considered when planning work to a heritage item. These principles are:

#### • 2.1 Continue to Use the Place

The building should continue to be used, preferably for the purpose for which it was built, or for a use with which it has a long association.

#### • 2.2 Repair Rather than Replace

Keep as much of the historic fabric as possible. Heritage items are by definition authentic examples of the architecture and lifestyle of previous generations and should be respected as evidence of our past.

#### • 2.3 Make Reversible Alterations

If alterations must be made to significant building fabric, they should be as reversible as possible.

#### • 2.4 Make a Visual Distinction Between Old and New

Whilst being sympathetic and respectful to old material, detail of new work should generally be distinguishable from the old.

#### • 2.5 Avoid Precise Imitation of Architectural Detail

New additions should generally not imitate the precise architectural detail of historic buildings.

Demondrille Signal Box



#### • 2.6 Ensure Alterations are Sympathetic

Generally, new additions should be sympathetic to the existing building. In this context, "sympathetic" means that new work is compatible with the character of the earlier building and with its context.

#### • 2.7 Respect the Ageing Process

There is no reason why old buildings, like old people, should not look old. There may be no reason to repair cracks that are structurally sound, to recoat worn surfaces, or to remove patina, or even to excessively clean surfaces where the coating of time is not destructive or concealing detail.

#### • 2.8 Respect Previous Alterations

If there are previous alterations, these may also contribute to the building's significance and should be respected.

#### • 2.9 Discontinue Previous Unsound Practices

Previous unsound practices or details should not be continued, whether in original work or subsequent repairs.

#### • 2.10 Stabilise Problem Areas

The correction of severe structural problems, such as leaning walls, warped beams or uneven floors may cause damage which lessens the authenticity of the building. It is usually better to secure and stabilise the problem area, as this may be sufficient to restore the structural stability of the building.

#### • 2.11 Respect the Building's Context and Location

The early context or setting is generally part of the building's significance. If the building is deprived of any of its early context, significance may be lost.

#### • 2.12 Ensure New Buildings fit into the Streetscape

Where a gap in an existing streetscape or series of buildings is to be filled by a new building, the bulk and height should not exceed the height of buildings next door.

#### • 2.13 Maintain Views

Significant views of the building should be identified and maintained.

#### • 2.14 Respect Contents

The removal of significant contents of a heritage building, such as furniture and furnishings, should be avoided, unless this is the only way they can survive.

#### • 2.15 Seek Design Excellence

These principles provide a safe, respectful approach to heritage buildings, but they cannot be guaranteed to produce fine architecture. They should not prevent inventive, interpretive, contemporary design solutions of high architectural quality. New work may be quite different in spirit and appearance from the existing fabric, but still sympathetic to its heritage values.

Table 5-4 provides an assessment of the proposed three options against the considerations listed above.

Demondrille Signal Box



#### Table 5-4 Assessment of the proposed options within the project area

Consideration	
Proposed Works	Asbestos Removal, Clearance and Demolition
2.1 Continued Use	The demolition of the building will result in the structure no longer being able to be in use. It is however noted that the Signal Box is currently redundant and not in use as is.
2.2 Repair rather than replace	N/A the demolition of the building will result in no repairs being required. The circumstances of the structure have gone beyond repair. The building is in an imminent state of collapse and would, if that eventuated, impede transport infrastructure as the collapse would block major rail lines.
2.3 Make reversible alterations	The demolition of the building will not be a reversible change to the signal box. However, there remains sufficient material evidence to record and archive the building as it currently stands.
2.4 Make a visual distinction between old and new	N/A the demolition of the building will not result in a need for a visual distinction between old and new.
2.5 Avoid precise imitation of architectural detail	N/A the demolition of the building will not result in a need for imitation of any architectural detail.
2.6 Ensure alterations are sympathetic	N/A the demolition of the building will not result in any alterations being undertaken to the structure.
2.7 Respect the ageing process	N/A the demolition of the building will not result in any alterations being undertaken to halt or change the aging process.
2.8 Respect previous alterations	The demolition of the building will result in the removal of the entire structure, including any previous alterations.
2.9 Discontinue previous unsound practices	N/A no previous unsound practices impacting the building have been identified.
2.10 Stabilise problem areas	N/A No problem areas will be stabilised with the demolition of the structure. Serious efforts have previously been made to stabilise the deterioration and deformation of the structure. These have been flawed and the structural members of the building should have been connected to the stabilising columns/ restraints as opposed to cladding as has been the case.
2.11 Respect the buildings context and location	The building, within a cutting, is visually accessible, however suitably concealed to accommodate vandalism.
2.12 Ensure new buildings fit into the streetscape	N/A no new building is part of the proposed works at this site.
2.13 Maintain views	The building has been identified to be located in an area with no significant views to or from the structure.

Demondrille Signal Box



Consideration	
2.14 Respect contents	The internal elements on the ground floor of the building have been removed. The second storey of the building could not be accessed due to the dilapidated condition of the structure and the removal of the external stairway. If any interior elements remain on the second storey, then they should be removed and stored prior to demolition.
2.15 Seek design excellence	N/A the demolition of the building will not result in a need for design excellence.

### 5.5 Heritage impact questions

The following questions are presented in the NSW Heritage Manual document *Statements of Heritage Impact* to address development proposals on heritage items (NSW Heritage Office 2002).

#### 5.5.1 T1145 – Demondrille redundant Signal Box

The proposed works at Demondrille redundant signal box include the demolition of the structure. It has been determined that there is P1 ACM within the building that is significant and requires removal. Given the derelict condition of the building, ACM removal and replacement has been identified as not possible without total reconstructive works to the building. This would involve the demolition of the structure and a full rebuild.

This has not been assessed as a feasible option by ARTC as the building has not been in use since the closure of the station in 1974, and the structure is removed from areas it can easily be publicly viewed or visited (vandals have been accessing the site across the railway tracks).

The following assessment utilises questions presented in the NSW Heritage Manual document *Statements of Heritage Impact* to address development proposals on heritage items (NSW Heritage Office 2002) that are relevant to the proposed works in this area of the Harden site.

Table 5-5 Heritage impact questions to address development proposals on heritage items relevant to the proposed works in the Harden site area

Heritage Impact Questions	NGH Assessment
What aspects of the proposal respect or enhance the heritage significance of the subject item?	By undertaking the proposed demolition of the building prior to the structure collapsing, the controlled removal of the structure will allow for an archival recording to be undertaken of the structure prior to its removal, as well as the possibility for retaining some moveable heritage materials for further use and/or interpretation if they are deemed to be in a suitable condition.
What aspects of the proposal could have a detrimental effect on the heritage significance of the subject item?	The proposed works will result in the demolition and removal of the signal box, one of the few remaining extant elements at Demondrille Railway Junction, albeit not a rare item across the NSW rail network.
Have more sympathetic solutions been considered and discounted? Why?	The proposed works at Demondrille redundant signal box include the demolition of the structure due to P1

Demondrille Signal Box

# NGH

Heritage Impact Questions	NGH Assessment
	ACM within the building. It has been determined by ARTC that the ACM within the structure is significant and requires removal due to the safety hazard it presents. Given the derelict condition of the building, ACM removal and replacement has been identified as most likely not possible without total reconstructive works to the building (MJM 2023 Engineering Report). This would involve the demolition of the structure and a full rebuild to ensure the structure is stable enough to support the weight of a new roof. This has not been assessed as a feasible option by ARTC as the building has not been in use since the closure of the station in 1974, and the structure is removed from areas it can easily be publicly viewed or visited. The remainder of the station is currently also in ruins, with the majority of railway infrastructure removed. Proceeding with a complete rebuild would not be an acceptable heritage outcome as it would not be authentic and not be accessible for interpretation, nor useable for its own sake.
DEMOLITION OF A BUILDING OR STRUCTURE	
Have all options for retention and adaptive re- use been explored?	Options for retention of the building would involve the removal and replacement of the ACM within the structure with a modern alternative. Given the current dilapidated state of the structure, the removal and replacement of the roof is not possible. Adaptive reuse of the building could not take place
	until the building has been stabilised. No options for reuse have been identified considering its removed location from safe public access. There is evidence that the structure is in a state of imminent collapse. Unplanned collapse would have a major impact on NSW rail operations.
Can all of the significant elements of the heritage item be kept, and any new development be located elsewhere on the site?	No new building is proposed for the site of the redundant signal box. By undertaking the proposed demolition of the building prior to the structure collapsing, the controlled removal of the structure will allow for an archival recording to be undertaken of the structure prior to its removal, as well as the possibility for retaining any moveable heritage materials for further use and/or interpretation if they are deemed to be in a suitable condition. ARTC have contacted the NSW Rail Museum to discuss donation of the signals and other moveable

Demondrille Signal Box

## NGH

Heritage Impact Questions	NGH Assessment
	heritage items located within the signal box, but the NSW Rail Museum have determined that they already have a significant number of similar materials and cannot accept the items. Reuse of these items within the rail network is not possible as this type of system is no longer in use.
Is demolition essential at this time or can it be postponed in case future circumstances make its retention and conservation more feasible?	The removal of the ACM from the structure has been assessed as necessary, as it has been categorised as a P1 safety risk to staff and visitors at the site. The building is at risk of collapse and is at risk to the rail network and operators. The land surrounding the signal box is currently at risk of further significant contamination if the building continues to deteriorate and/or collapse.
	Removal of the ACM from the structure will result in the roof and associated elements being removed. This work will further weaken the structural integrity of the building, and a new roof would not be able to be installed without significant structural work to the building.
	Further postponement of demolition will likely lead to uncontrolled collapse and a risk to public and property. The building is not in stable enough condition to consider future circumstances.
Has the advice or a heritage consultant been sought? Have the consultant's recommendations been implemented? If not, why not?	Yes, the advice of a heritage consultant has been sought (this document), and the advice sought has been implemented following their review of the Draft document.

## 5.6 Scope of works assessment

The components of the proposed works are listed below and assessed for the potential impact on the identified heritage values and significance of the subject item and surrounds (Table 5-5). The definitions of the assessment gradings are provided in Table 5-6.

Table 5-6 Heritage Impact Assessment Gradings

#### Heritage Impact Assessment Gradings

**Positive** – the proposal would enhance the heritage values and/or contribute to the preservation of the heritage item/s.

Nil/Neutral - no impact would result on the heritage significance of the item/s.

**Low** – the proposal would impact minimally upon a heritage item or area but without impacting upon its significance.

Demondrille Signal Box

**Adverse** – the proposal would impact directly upon identified heritage values of an item or area. However, the implementation of mitigation measures would reduce the impact and not alter the heritage significance of the item or area.

**High** – the proposal represents the excessive overall impact on the heritage item or area, directly reducing or removing the heritage significance of the item or area.

As per Section 63 of the *Heritage Act 1977*, demolition of a contributory building within an SHR listed curtilage is not permitted except under certain circumstances. In consideration of this, the following table (Table 5-7) lists all options considered for this project:

#### Table 5-7 Options considered for Demondrille Signal Box

Option	Analysis	Heritage Impact
Do nothing	Doing nothing and allowing the building to remain in situ and untouched has been assessed as not being a viable option. The 2022 MJM Consulting engineering report has determined that the building is structurally unstable and at risk of collapse. As the building is accessible to the public (Plate 11), there is a high risk of injury to individuals who may access the structure.	Nil/Neutral with high impacts in the event of an uncontrolled collapse
	<ul> <li>The collapse of the structure will result in the following:</li> <li>Significant contamination of the surrounding land with ACM</li> </ul>	
	<ul> <li>Potential injury to railway staff or members of the public as the building is publicly accessible (although not permitted)</li> </ul>	
	<ul> <li>Obstruction to the railway track. This could potentially cause a rolling stock accident. Threaten safety of operations and rolling stock occupants, including passenger trains.</li> </ul>	
	<ul> <li>Loss of the heritage structure and the ability to collect moveable heritage items.</li> </ul>	
Restoration Given the condition of the building, restoration would involve entire building having to be dismantled and reconstructed in location with mostly modern materials. This would result in reconstruction of the structure which would result in signific cost for a building that has not been in use since 1974 and t are no relevant adaptive reuse options given its remote loca As noted in the 2023 MJM engineering report, the potential restoration of the building is as follows:		Adverse
	Many of the construction methods used at the time of construction would be non-compliant to current standards and therefore it would be unlikely that ongoing works to the building would be able to be warrantied. Furthermore, upgrading and/or remediation of connections would prove very difficult given the current load paths and moisture content of the timbers which are damaged at some locations.	

Demondrille Signal Box

## NGH

Option	Analysis	Heritage Impact
	<ul> <li>Within the 2010 BCS Signal Box strategy the significance of the Demondrille Junction Signal Box is outlined as:</li> <li>The Demondrille Junction Signal Box is historically significant through its association with the Demondrille railway junction, which was an important railway location as the junction on the Main Southern Line of the Harden -Cowra - Blayney branch line and an important steam locomotive servicing centre. It is also associated with the duplication of the Main Southern Line in 1922. The building represents a Type I signal box of standard 1920s railway design.</li> <li>The building is now isolated however, with few physical remains of the precinct extant and the most significant features removed. This limits the ability to interpret the site and the role of the signal box in the precinct (BCS 2010, 69).</li> <li>The BCS strategy identifies the overall level of significance of the signal box as low in direct comparison to others across NSW.</li> </ul>	
Relocation	Relocation of the structure elsewhere would hold similar constraints to the potential restoration of the building. As the materials are significantly deteriorated, the entire structure would require replacement, with only the signalling levers likely to be salvageable. The structure would be required to be reconstructed using modern materials, a significant cost that cannot be justified for the buildings lack of adaptive reuse options and decades long lack of use. Other examples of this type of signal box are also extant across the railway network. As assessed in Section 4 of the report it is the railway junction as a whole that holds significance, and the removal of the signal building and its relocation and restoration elsewhere would still result in an adverse heritage impact.	Adverse
Partial demolition (removal only of ACM)	Removal of the ACM from the structure would result in the roof and associated elements being removed. This work would further weaken the structural integrity of the building and would increase the potential of an uncontrolled collapse of the remainder of the structure. Installation of a new roof to help stabilise the structure could not be undertaken without significant structural work to the building which would most likely involve full reconstruction as the MJM 2023 engineering report states the following: remediation of the building would be difficult and require extensive replacement works given the extent of damaged / aged timbers and the extent of vertical out of plane. Many of the construction methods used at the time of construction would be unlikely that ongoing works to the building would be able to be	Adverse

Demondrille Signal Box



Option	Analysis	Heritage Impact
	warrantied.	
Partial demolition (removal of ACM and retention of any items that will not continue to degrade)	It has been assessed by ARTC that the only components that have the potential to be able to be retained that are not likely to continue degrading are the footings of the building. Given the current condition of the remainder of the building leaving any additional elements in situ will result in continual degradation with no potential for salvage.	Adverse
	It has been identified that retention of the footings would have some reasonably significant operational constraints and impediment during routine rail access and maintenance activities due to its location within 3m of the operational rail line.	
Full demolition	The full demolition of the building would result in a significant adverse heritage impact to the SHR listing of Demondrille Railway Station as it would result in the loss of the extant signal box located within the curtilage. However, the demolition of the deteriorated structure would result in:	Adverse
	<ul> <li>Removal of the safety risk of the collapse being removed</li> </ul>	
	<ul> <li>Removal of the possibility of significant land contamination with ACM as well as the ability to remove the existing ACM contamination</li> </ul>	
	<ul> <li>Ability to complete an archival recording prior to removal</li> </ul>	
	<ul> <li>Ability to remove and store items of moveable heritage from the building prior to and during the works.</li> </ul>	

## 5.7 Summary of impacts

Demondrille North Signal Box is currently located within the curtilage of the SHR listed Demondrille Junction railway ruins and signal box (SHR: 01128) and is a contributory item to the overall precinct as the remaining signal box within the curtilage. It is identified on the SHI database that during the last site visit to the building (2019) the signal box was noted as derelict (also noted as derelict in the 2009 study of the site). This condition assessment was confirmed by NGH during the 2022 site visit undertaken for this report, with the structure noted as unsafe to access due to fear of collapse.

The signal box has not been utilised since station closure in 1974 and little maintenance has been undertaken. As a result, the structure has undergone significant weathering and deterioration, with numerous holes noted in the roofing material. During the NGH site visit it was noted that both internally and externally the structure appeared to be structurally unsound and that later steel support structures have been added around the building due to its significant deteriorated condition. The derelict nature of the building was confirmed by the 2023 MJM Engineering Report. The building, even if maintained would likely suffer the same outcome due to poor building practices (2023 MJM) and the associated safety concerns of the potential collapse have been deemed unacceptable.

The building shows significant signs of vandalism, and the location of the building is in an area that is easily accessed by the public (but not necessarily visible) which would allow for ongoing damage to occur to the

Demondrille Signal Box



structure. If ARTC were to place a fence around the structure in order to avoid any further access or vandalism by the public, the fencing would have to be significant in order to reduce the ongoing safety issue and risk of collapse. It has further been identified that a fence would be impracticable as the signal box is within the danger zone of the railway track and any fence would be 3 sided, (not complete). The 2 road overbridges in close proximity to the signal box would prove to make corridor fencing near impossible to keep vandals out.

It has been assessed that the removal of the ACM within the structure is necessary due to the significant risk to human health it poses (P1 risk). This material cannot be left in situ due to the ongoing risk of land contamination from asbestos degradation, which could be made more significant if the building was to collapse due to its poor condition. The removal of the ACM would require the complete removal of the roof and gables. Replacement with a new roof at this point in time is not considered feasible, as the building is in such a poor state that the removal of the roof would likely further exacerbate structural issues, and a new roof would not be able to be supported on the current deteriorated frame. Removal of the ACM and no replacement of the material would weaken the structural stability of the building and further expose it to external and internal weathering. Given the current condition of the building is already severely deteriorated, further significant weathering will result in swift deterioration.

Restoration and/or stabilisation of the structure to solve the deterioration issues is not considered to be feasible due to the lack of use of the structure and the current condition of the materials which would result in modern materials having to be utilised for the majority of the reconstruction (2023 MJM Engineering), and the lack of adaptive reuse options of the building due to its location. If the building was to be fully reconstructed but not utilised, future deterioration would occur due to lack of the need for ongoing maintenance, and opportunities for vandalism of the new structure would also be significant.

Whilst the demolition of the building will result in the loss of the structure, the controlled removal of the structure will allow for an archival recording to be undertaken of the structure prior to its removal, as well as the possibility for retaining some materials for further use and/or interpretation if they are deemed to be in a suitable condition.

Issue	Example	Potential impact	How could we mitigate?
Safety	Building accessible by the public and has had significant evidence of vandalism	The building has been assessed as structurally unstable (MJM 2023). Accessing the building and an uncontrolled collapse occurring could result in significant injury or death.	A fence could be installed around the structure, however given the remote location of the building, the structure is not monitored regularly to ensure that vandals have not scaled or damaged the fence to enter the site.
	ACM contamination	The ACM at the site has been assessed as a P1 risk and cannot be left in situ without significant contaminated land impacts and potential human impact.	The ACM cannot be left in situ in consideration of the deteriorated state of the roof (the ACM). Removal of the ACM would result in further deterioration of the building and would impact the structural stability of the building. Removal of the ACM and installation of a fence to help reduce potential

Table 5-8 Summary of issues considered for Demondrille Signal Box

Demondrille Signal Box

## NGH

Issue	Example	Potential impact	How could we mitigate?
			injury if the building were to collapse is not a suitable option. Installation of a fence would not necessarily deter vandals and this option would eventually result in an uncontrolled collapse with all moveable heritage items lost and/or potentially damaged.
	Collapse onto the track	This would result in significant delays to the freight network and also has the potential to cause human injury.	No specific mitigation measures can be currently put in place to prevent collapse onto the track.
Structural stability	Other options for retention have been explored but not feasible due to the assessed structural issues of the building (MJM 2023)	The building could not be occupied currently due to the structural instability.	Given the current state of the building, safe occupation of the structure could not occur unless the building was fully reconstructed with new materials.
Adaptive reuse	Lack of adaptive reuse options due to location	Lack of adaptive reuse of the building due to its remote location impacts the long- term management possibilities of the structure.	As the current building has undergone significant and ongoing vandalism due to its remote location, the building would have to be occupied and continually maintained in order to reduce this reoccurring. Given the current state of the building, occupation of the structure could not occur unless the building was reconstructed. Given the remote location of the building no adaptive reuse options have been determined.
Reconstruction	Full reconstruction of the building utilising original materials where possible and modern materials where the original materials are too degraded.	This would require the entirety of the building to be deconstructed as the sub floor has been noted as being below the surrounding area causing damp issues (MJM 2023). The building would be required to be wholly reconstructed utilising mostly modern materials as the original materials have	A reconstructed building would need to be occupied to stop ongoing vandalism, but no adaptive reuse options have been determined due to the remote location of the structure.

Demondrille Signal Box



Issue	Example	Potential impact	How could we mitigate?
		been identified as deteriorated.	

## NGH

## 6. Conclusion and recommendations

## 6.1 Conclusion

NGH has undertaken an assessment of the proposed demolition of the Demondrille redundant signal box located within the SHR curtilage for the Demondrille Junction railway ruins and signal box (SHR: 01128). The signal box has been determined to be a contributory factor to the listing as the remaining signal box in the curtilage.

It has been determined that the structure is in a significantly deteriorated condition, and the roof and associated gables of the building require removal due to the presence of P1 safety risk ACM. Despite being original material, the roof cannot remain in situ due to the health and safety risk the ACM presents to any staff or visitors to the site. It has been determined that the structure cannot be left as is and fenced off, as ongoing deterioration would result in the eventual collapse of the structure and subsequently result in significant contaminated land issues due to the ACM as well significant safety risk for any individuals on site and to the rail network operations.

This assessment has assessed the options of demolishing the building, removing the ACM and replacing it with like for like materials, as well as removing the ACM with no replacement of the materials. It has been assessed within this report that whilst the demolition of the building will result in a negative heritage impact to the SHR listing, it is the most appropriate management option for the site due to the current dilapidated nature of the structure and lack of suitable alternate options.

A copy of the engineering report, a detailed demolition methodology as well as this SOHI document should be submitted to Heritage NSW under a s.60 application for demolition.

## 6.2 Recommendations

NGH has formulated the following recommendations regarding the proposal demolish the Demondrille redundant Signal Box located within the SHR Demondrille Junction railway ruins and signal box curtilage:

- 1. A copy of the engineering report, and this SOHI document should accompany a s.60 application to Heritage NSW for demolition of the redundant signal box structure.
- 2. Prior to demolition, an archival recording of the site in line with the relevant Heritage NSW guidelines should be undertaken to capture the existing physical aspects of the site, where safety considerations allow.
- 3. If appropriate, during demolition works, a qualified engineer should be on site to examine the materials as they are removed from the structure and make an assessment as to whether they are in an appropriate condition to store and reuse later. If an engineer cannot be engaged to attend at the time of demolition due to timing of railway possessions, then all elements from the building should be stored and an engineer should be engaged to examine the materials post removal from the structure. Elements to consider being salvaged include any remaining original internal elements from the second storey of the signal box. ARTC should label and store these items until appropriate ongoing management options are identified by Heritage NSW.
- 4. The remainder of the Demondrille SHR rail precinct should be reviewed to determine the presence and condition of other items (relics) related to the listing. Consideration should be made as to what elements warrant ongoing listing and whether further investigation is required to update the heritage significance of the listing.
- 5. An update to the S170 register should be undertaken post the additional assessment.

## 7. References

Australia ICOMOS (2013) The Burra Charter (The Australia ICOMOS Charter for Places of Cultural Significance) Canberra.

b cubed sustainability Pty Ltd (2010) *Regional NSW Signal Boxes Heritage Conservation Strategy*. Report for Australian Rail Track Corporation.

Heritage NSW (2020) Material Threshold Policy.

NSW Heritage Division (2016)

http://www.environment.nsw.gov.au/heritageapp/ViewHeritageItemDetails.aspx?ID=4300172

NSW Heritage Branch (2001) Assessing Heritage Significance: A NSW Heritage Manual Update.

NSW Heritage Office (1996) Statements of Heritage Impact. Sydney, NSW.

NSW Heritage Office (2005) Design in context: guidelines for infill development in the historic environment.

NSW Heritage Office and Department of Urban Affairs & Planning (2002) Conservation Management Documents.

R.T. Taaffe (2019) Signal Boxes of New South Wales.



## Appendix A MJM Consulting Engineers 2023 Demondrille Signal Box report

## VISUAL CONDITION REPORT EXISTING SIGNAL BOX

Demondrille Railway Station Site, Murrumburrah NSW 2587



REPORT REFERENCE: 230297 (Demondrille)

Document Verification Schedule							
Client: ARTC Site Address: Demondrille Railway Station Site, Murrumburrah NSW 2587							
Rev.	Date	Prepa	red By	Checked By		Approved By	
Draft	28.08.23	Brendan Shumack	3-1 /hL.	Afzal Jamal	Qý_	Afzal Jamal	Qý_
Final	28.08.23	Brendan Shumack	3-1 /hL.	Afzal Jamal	Qj.	Afzal Jamal	Qj.



Demondrille Signal Box – Murrumburrah NSW

MJM Consulting Engineers

i

#### **1** Scope of the Visual Inspection and Condition Report

The objective of the Structural Inspection undertaken and this subsequent Visual Condition Report is to give our client an understanding of the overall condition of the subject structure.

The Structural Inspection undertaken is a visual inspection only and as such there are limitations to this inspection, since many components of the structure are not visible during the inspection. The structural inspection undertaken will not identify concealed conditions or latent defects. A representative sample of building components is viewed in areas that are accessible at the time of the inspection.

The assessment is made by considering loads, strength, stability, processes of design and construction through limited visual inspection only. No detailed calculations or modelling for the existing structure have been subsequently undertaken.

The Visual Condition Report reflects the condition of the subject structure at the time of the inspection only. The report is of a structural nature only and does not comment on cosmetic finishes such as painting, carpeting and the like.

#### 2 Limitations and accuracy of the Visual Condition Report

The client should be aware of the following limitations of this Visual Condition Report;

- i. A lack of maintenance or severe weather conditions can change the condition of a structure.
- ii. Temperature and moisture changes can produce changes in the soil that have the potential to cause defects within the structure, walls and footings at a later time.
- iii. The Structural Inspection and Visual Condition Report should not be considered a guarantee or warranty of any kind.
- iv. No structural drawings of the existing building have been provided.
- v. A geotechnical soil classification report has not been supplied for the subject site.
- vi. Destructive or non-destructive tests or dismantling of building components are not performed as part of the visual inspection.

#### 3 Background

A site visit to the structure at Demondrille Railway Station Site was conducted by Brendan Shumack (Assoc.Dip.Eng.Structural) of MJM Consulting Engineers at 10:30 am on 16<sup>th</sup> August, 2023 after receiving instruction from Jed Usback of ARTC. This inspection report has been reviewed and verified by Afzal Jamaludeen (B.Tech.Eng. Civil; Master.Tech. Structural Engineering) of MJM Consulting Engineers.

Weather conditions were average at the time of the inspection, and the estimated outside temperature was 12°C.

#### 4 Description of Structure

The structure is a double storey signal box building;

**Footings:** Footings were not exposed at the time of inspection, however due to the approximate age of the building it is assumed to be a shallow masonry footing system.

Interior floor system: Framed floor throughout (steel rail iron joists / timber boards).

External Walls: Timber clad framed.

Internal Walls: N/A.

External Floor System: N/A.

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1

**Roof Elements:** Only partially visible during inspection and appeared to consist of timber rafters with segmented roof cladding.

#### 5 Observations of the existing structure

#### 5.1 Internal

#### Ground floor area:

- Timber frame supported on foundation masonry and open steel "blocks" refer photo 01 & 02.
- Floor supports consist of rail iron joists supported by lower masonry. Majority of floorboards have been dislodged – refer photo 03 & 04.
- Ground surface to the underside of the floor is damp and sits approximately 400mm lower than the surrounding ground levels refer photo's 05 to 07.
- Previous remedial works have been undertaken to external wall, however, fixed to the external cladding only and not the structural frame refer photo 08.
- Main double bearers for lever arms supported by rail iron columns. Columns are supported by joists at floor level refer photo 09 & 10.
- First floor bearer is supported by struts to lower bearer for lever arms refer photo 11 & 12.
- Timber frame on the northern side is approximately 50mm out of plumb over the length of a 1200mm level refer photo 13.
- Rotation and separation of the stud connections are evident refer photo 14.
- Masonry supports at tie down location has deteriorated refer photo 15.
- Cracking to sub-floor masonry wall refer photo 16.

#### Note: Access to the upper floor level was not available at the time of the inspection.



Photo 01.



Photo 02.

2



Photo 03.



Photo 04.



Photo 05.



Photo 06.



Photo 07.



Photo 08.



Photo 09.



Photo 10.



Photo 11.



Photo 12.



Photo 13.



Photo 14.



Photo 15.



Photo 16.

#### 5.2 **External**

#### General Perimeter:

- External landing timbers are extremely weather damaged with connections compromised. Stair access • has been removed – refer photo's 17 to 19.
- Steel posts have been installed as an attempt to stabilise the building, however, the tension rods have ٠ been fixed to the cladding only - refer photo's 20 to 22.
- Eaves lining board are weather damaged and are out of plane with separation from the underside of the • rafters - refer photo's 23 to 25.
- Ends of timber rafters appear weather damaged with guttering dislodged refer photo 26. ٠
- Gutters are full of debris and have rotated outwards refer photo 27.
- Timber weather boards are extremely weather damaged and are dislodged at some locations refer ٠ photo 28 & 29.
- There is an overall lack of maintenance and adequate site surface drainage to the surrounds of the • building - refer photo 30 & 31.





Photo 18.



Photo 19.





Photo 21.



Photo 22.



Photo 23.



7

Photo 24.


Photo 25.



Photo 26.



Photo 27.



Photo 28.



Photo 29.



Photo 30.



Photo 31.

#### 5.3 Moisture considerations

Under floor access was partially available at the time of inspection through missing floorboards; the sub-floor was damp at the time of the inspection.

There were potential abnormal conditions observed externally at the time of inspection.

Eaves gutters are either missing in some locations or ineffective. The result is that the majority of the roof catchment is discharging directly onto the ground surface in close proximity to the external footprint of the building.

The sub-floor area is approximately 400mm lower than the surrounding ground levels. There is a lack of adequate site surface drainage to shed water away from the building, therefore the soils to the sub-floor area appeared damp at the time of the inspection with some moss growth indicating that the area does not dry out for long periods.



#### 6 Discussion in relation to the structural integrity of the building

Generally, the building is in very poor condition. The external timbers are extremely weathered and have lacked maintenance for an extended period of time.

The structural timbers exposed to weather are damaged with gutter and other fixings giving way. The aged timbers would have very little moisture within the timbers and therefore nail fixings have the tendency to pull out. The bottom plate of the timber stud frames is fixed directly to the top of clay masonry. This fixing provided little resistance to rotation and overturning with some brick work failing at the fixing locations.

The external wall on the northeast elevation was measured at approximately 50mm out of plumb over the length of a 1200mm level. Given the overall height of approximately 5.5m, this equates to approximately 230mm out of plumb overall. This extent of out of plane would render the building structurally unstable. Previous attempts at remedial works have been made, however, are flawed in the following manner:

- The threaded rods would normally be used to act in tension, however, given the direction of building rotation the rods would be acting in compression and would not be adequate.
- The threaded rods and associated plates have been attached to the external cladding only and not to the structural frame. The cladding is damaged at the location of the installed rods.

Overall remediation of the building would be difficult and require extensive replacement works given the extent of damaged / aged timbers and the extent of vertical out of plane. Many of the construction methods used at the time of construction would be non-compliant to current standards and therefore it would be unlikely that ongoing works to the building would be able to be warrantied. Furthermore, upgrading and/or remediation of connections would prove very difficult given the current load paths and moisture content of the timbers which are damaged at some locations.

#### MJM Consulting Engineers – Contact Details

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#### Griffith

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10



# Appendix B ACM reports for Demondrille Railway Station



ESP – ENVIRONMENTAL & SAFETY PROFESSIONALS Unit 6/6 Revelation Close Tighes Hill NSW 2297 Tel: (02) 4961 0790 Fax: (02) 4961 0795

# ARTC NSW ASBESTOS REGISTER Asbestos Materials Survey

ESP Job: 21988 - May 2014

Date Inspected: 08.05.2014

Inspected By: Environmental & Safety Professionals



# ARTC Identifier: Demonville Signal Box – Redundant GPS Coordinates: Km: 391.500





A division of Enviro-Net Australia Pty. Ltd. ABN 39 067 499 389 ACN 067 499 389 NATA Reg. 3110 Unit 2, 2B Parker Street, Footscray, Victoria 3011 Ph: (03) 9688 8000 Fax: (03) 9689 6470 Email: esp@esplabs.com.au www.environet.com.au

Safety Professionals

Melbourne Sydney Newcastle

#### ASBESTOS IDENTIFICATION REPORT

13<sup>TH</sup> MAY 2014 DATE:

ESP JOB NUMBER:	21988A
NAME:	ARTC
ADDRESS:	UNIT 5/33 NEWTON ROAD BROADMEADOW NSW 2292

ATTENTION: PAUL SAMARAS

SAMPLED FROM: MAIN SOUTH LINE

ESP - ENVIRONMENTAL & SAFETY PROFESSIONALS SAMPLED BY:

DECORTORIOS

8<sup>TH</sup> MAY 2014 DATE SAMPLED:

D MID (DED

Qualitative identification of asbestos types in bulk samples by polarised light microscopy, including dispersion staining, using ESP in-house Method No. 2 and methodology in accordance TEST METHOD: with AS4964.

LAD NUMBER	SAMPLE DESCRIPTION	RESULI
E34137	G8-1: 51 WHITTON LANE HARDEN REAR ENTRY WALLS – FIBRO CEMENT MATERIAL (20 x 40 x 3mm)	CHRYSOTILE ASBESTOS DETECTED
E34138	G8-2: DEMONVILLE SIGNAL BOX, ROOF - FIBRO CEMENT MATERIAL (80 x 60 x 5mm)	CHRYSOTILE ASBESTOS DETECTED CROCIDOLITE ASBESTOS DETECTED
E34139	G8-3: COOTAMUNDRA WEST SIGNAL BOX, EXTERNAL WALLS – FIBRO CEMENT MATERIAL (30 x 25 x 5mm)	CHRYSOTILE ASBESTOS DETECTED
E34140	G8-4: COOTAMUNDRA WEIGHBRIDGE HOVELL ST ROOF – FIBRO CEMENT MATERIAL (20 x 20 x 5mm)	CHRYSOTILE ASBESTOS DETECTED
E34141	G8-5: COOTAMUNDRA WEIGHBRID <mark>GE HOVELL</mark> ST WALL PLATE – FIBRO CEMENT MATERIAL (70 x 40 x 5mm)	CHRYSOTILE ASBESTOS DETECTED
E34142	G8-6: COOTAMUNDRA SIGNALS OFFICE HOVELL ST EXTERNAL WALLS – FIBRO CEMENT MATERIAL (30 x 50 x 5mm)	CHRYSOTILE ASBESTOS DETECTED
	G8-7: COOTAMUNDRA SIGNALS OFFICE HOVELL ST INTERNAL WALLS – FIBRO CEMENT MATERIAL (10 x 30 x 5mm)	CHRYSOTILE ASBESTOS DETECTED
ACCREDITATION NATA Accredited La Number: 3110 Accredited for complia	boratory nce with ISO/IEC 17025	R_140508_21988A_ARTC_ID_F1 Page 1 of 2

MS341\_140508\_21988\_ARTC\_Signal Box\_Demonville\_AMS\_F2





Page 1 of 25

Date: 13/9/2019

# ASBESTOS REGISTER / MANAGEMENT PLAN ARTC

# T.1145 – Demondrille NSW – Redundant Signal Box

GPS: No GPS Km: 391.500

**Developed by** 





Prepared for: ARTC	Reported By: McMahon Services Australia Pty Ltd
11 Sir Donald Bradman Drive	26 Duncan Road,Dry Creek SA 5094
Keswick Terminal SA 5035	ABN: 75 097 072 565
	+61 (08) 8203 3100



Page 2 of 25

Date: 13/9/2019

### 1 Approval & Record Revisions

#### Revision

Version	Section Amended	Prepared / Amendment	Date	Author/s
1	-	-		J. Stockdale

#### Distribution

#### ARTC

**Colin Ahrens** 

#### **Property Manger Adelaide**

11 Sir Donald Bradman Drive

Keswick Terminal SA 5035

Copies	Party	Recipients Name	Recipient Sign
	ARTC Adelaide		
1	McMahon Services Australia Pty Ltd		

This document was prepared for sole use of ARTC and the regulatory agencies that are directly involved in the project, the only intended beneficiaries of our work. No party shall rely on the information contained herein without prior written consent of ARTC or McMahon Services Australia Pty Ltd.

#### Approval

#### McMahon Services Australia Pty Ltd

26 Duncan Road, Dry Creek SA 5094

ABN: 75 097 072 565

+61 (08) 8203 3100

Shawn Griffiths Asbestos Division: Technical Department

#### Management Approval

Date:

John Flavel Divisional Manager: Asbestos Division



Page 3 of 25

Date: 13/9/2019

# 2 Index

Sect	Heading	Page	
1	Approval and Record Revisions	2	
2	Index	3	
3	Introduction	4 - 5	
4	Definitions	6	
5	Legislative Compliance	7	
6	Health Implication Associated with Asbestos	7 - 8	
7	Limitations	8 - 9	
8	Risk Identification	9-10	
9	Identification of Asbestos or ACM	10-12	
10	Asbestos Management in the Workplace	13-15	
11	Training and Competency	15-16	
12	Worker Responsibility	16	
13	Emergency and Incident Procedure	17	
14	Asbestos Management Plan and Register Review	17-18	
15	Air Monitoring	18	
Appendix 1 – Asbestos Register 19			
Append	dix 2 – Emergency Action Plan	20-21	
Append	dix 3 – Asbestos Site Photo's	22-24	
Append	Appendix 4 – Asbestos Sampling Reports 25		



Page 4 of 25

### 3 Introduction

This plan is focused on preventing injury and illness, achieving continuous improvement through monitoring and review, improvement of health and safety management systems and initiatives and complying with relevant health and safety legislation.

The company ARTC as the person conducting business undertaking has a legal obligation under the Commonwealth Work Health and Safety Act 2011; to provide a safe workplace to all workers. ARTC has a legal obligation to ensure that its work activities do not adversely affect the work health safety of other people.

The purpose of the Asbestos Management plan is to address ARTC legal obligations to section eight of the Commonwealth Work Health Safety Regulation 2011, in relation to the control of asbestos or ACM contained on the site.

This Asbestos Management Plan has been established to ensure that safety and health of all workers, subcontractors, visitors and other parties is maintained and is to be read in conjunction with the site Asbestos Register.

This Asbestos Management Plan shall include:

- the identification of asbestos and ACM and the locations of signs and labels;
- decisions, and reasons for the decisions, about the management of asbestos at the workplace, for example safe work procedures and control measures;
- procedures for detailing accidents, incidents or emergencies of asbestos at the workplace;
- procedures, including a timetable for reviewing and, if necessary, revising the asbestos management plan and asbestos register;
- workers carrying out work involving asbestos, for example consultation, information and training responsibilities;
- an outline of how asbestos risks will be controlled, including consideration of appropriate control measures;
- a timetable for managing risks of exposure, for example priorities and dates for any reviews, circumstances and activities that could affect the timing of action;
- identification of each person with responsibilities under the asbestos management plan and the person's responsibilities;

Asbestos Register / Management Plan		S E R	AHON VICES
	Page 5 of 25		Date: 13/9/2019



#### Figure 1. General principles of an asbestos management plan

Source: NOHSC 2018(2005)



Page 6 of 25

Date: 13/9/2019

# 4 Definitions

Item	Definition
Airborne Asbestos	Any fibres of asbestos small enough to be made airborne. For the purpose of air monitoring airborne fibres, only respirable fibres are counted.
Asbestos	The fibrous forms of those mineral silicates belonging to the serpentine or amphibole groups of rock-forming minerals, including actinolite asbestos, grunerite (or amosite) asbestos (brown), anthophyllite asbestos, chrysotile asbestos (white), crocidolite asbestos (blue) and tremolite asbestos.
Asbestos-containing material (ACM)	Any material, object, product or debris that contains asbestos.
Asbestos-contaminated dust or debris (ACD)	Dust or debris that has settled within a workplace and is (or assumed to be) contaminated with asbestos.
Asbestos Register	A register recording the date on which the asbestos or ACM was identified and the location, type and condition of the asbestos or ACM. Alternatively, the register is to state that no asbestos or ACM is identified at the workplace.
Asbestos Related Work	Work undertaken in connection with a work process in which exposure to asbestos may occur and includes any work process involving the use, application, removal, mixing or other handling of asbestos or asbestos containing material
Asbestos removalist	A person conducting a business or undertaking who carries out asbestos removal work.
Asbestos Removal Work	work involving the removal of asbestos or ACM
	Removal work to be performed in-line with requirements defined in relevant state and territory jurisdictions.
Competent person	A person who has acquired, through training, qualification or experience, the knowledge and skills to carry out the task.
Exposure standard	for asbestos is a respirable fibre level of 0.1 fibres/ml of air measured in a person's breathing zone and expressed as a time weighted average fibre concentration calculated over an eight-hour working day and measured over a minimum period of four hours in accordance with:
	the Membrane Filter Method
	a method determined by the relevant regulator.
Friable asbestos	Material that is in a powder form or that can be crumbled, pulverised or reduced to a powder by hand pressure when dry, and contains asbestos.
GHS	Globally Harmonised System of Classification and Labelling of Chemicals.
In-situ asbestos	Asbestos or ACM fixed or installed in a structure, equipment or plant but does not include naturally occurring asbestos.
NATA-accredited laboratory	A testing laboratory accredited by the National Association of Testing Authorities (NATA), Australia, or recognised by NATA either solely or with someone else.
Naturally occurring asbestos (NOA)	The natural geological occurrence of asbestos minerals found in association with geological deposits including rock, sediment or soil.
Non-friable asbestos	Material containing asbestos that is not friable asbestos, including material containing asbestos fibres reinforced with a bonding compound.
Respirable asbestos	an asbestos fibre that:
	<ul> <li>is less than 3 microns (μm) wide</li> </ul>
	<ul> <li>is more than 5 microns (μm) long</li> </ul>
	has a length to width ratio of more than 3:1.



Page 7 of 25

Date: 13/9/2019

# 5 Legislative Compliance

The asbestos management plan and asbestos register shall be developed and controlled as defined in the following legislation.

	Asbestos Register	Management Plan
Commonwealth WHS Act 2011		
Commonwealth WHS Regulations 2017		
Workers Compensation (Dust Diseases) Regulation 2013		
Code of Practice How to Manage and Control Asbestos in the Workplace		
National Occupational Health and Safety Commission (NOHSC) Approved Criteria for Classifying Hazardous Substances [NOHSC:1008 (1999)]		

# 6 Health Effects associated with Asbestos Exposure

The inhalation of airborne asbestos fibres has been medically proven to pose cause and /or induce major medical diseases. The three most common forms of asbestos disease include:

1) Asbestosis

Asbestosis is a chronic chest disease that is caused by inhalation of high concentrations of asbestos fibres. The condition can develop 10 to 20 years after initial exposure. Asbestos fibres initially damage cell membranes in the lungs and, as a result, the lung tissue becomes hardened and scars. Shortness of breath after exercise is usually the first symptom of asbestosis. Other symptoms include persistent coughing, chest pain, phlegm, lung infections, pulmonary hypertension and heart failure.

2) Lung Cancer

Lung Cancer of the bronchial tubes, lungs and alveoli can develop after exposure to asbestos. Those who have been exposed to asbestos and who have smoked run a much larger risk of getting lung cancer.

An irritative cough with increasing sputum is the first symptom of lung cancer, followed by bloodtinged sputum, coughing up blood, chest pains and chest infections.

3) Mesothelioma

Mesothelioma is a cancer of the lung lining. It can result from low level exposure to asbestos and can take 30 to 45 years to develop after initial exposure. It is an aggressive and painful cancer, and sufferers rarely live longer than 12 to 18 months.

A dull, aching chest pain and shortness of breath are the early symptoms, followed by abdominal pain, abdominal swelling and loss of weight.



Page 8 of 25

### 7 Limitations

Asbestos is known to have been used in some 3,000 building products, the most common being in fibro cement products, vinyl flooring, electrical switchboards and insulation materials to hot water and steam pipes. However, asbestos can also be found in many other products located in inaccessible components of building, plant and equipment including the following areas:

- Interior parts of air conditioning systems
- Wall cavities, slabs, underside of floors
- Interior workings of plant and equipment
- Services, in ceiling or floor spaces or underground
- Wall "chased" lagged pipework
- Floor coverings subsequently overlaid
- Where asbestos products have been removed (e.g. vinyl floor coverings), the residue may exist under skirting boards and / or subsequently laid floor coverings.

Whilst this report provides approximate measurements and quantities of some materials found, we stress that they are approximate only. Accurate details would require a further visit to the site.

The work involved in preparing an Asbestos Register is based on visual inspection of the building and / or plant and equipment. As well, representative samples of suspect materials are collected and reasonable assumptions are made from those samples. These samples may not be a true representation of every element, part or component of the area of material concerned. Further, it is becoming increasingly apparent that some building materials containing asbestos have been removed and replace by non-asbestos containing materials, particularly cement sheeting.

In numerous cases only partial removal has occurred, leaving asbestos product remaining and this is often painted. While appropriate sampling has occurred that only sure determinant is to sample and analyse every section or piece in question. Full clarification would require a further visit to the site to obtain and analyse appropriate samples.

This asbestos register includes known asbestos building products detected in the course of the inspection. Additionally, where applicable, assumptions made on where asbestos is likely to be found are also stated. In some cases, builders have been known to mix asbestos into materials that would not normally contain asbestos (e.g. mortar, plaster, renders etc) and, unless state otherwise, these have not been sampled during the course of this survey. If any inaccessible area is suspected of having asbestos, it may need further verification. The decision regarding this will remain purely at the discretion of the Client.

There is no known instrument available for in-situ asbestos detection. Asbestos is a naturally occurring mineral of inert characteristics. For the above reasons, including the inaccessibility of many asbestos products, no guarantee can be given, expressed or implied, that the inspection will reveal all the asbestos containing materials that may be located in the workplace described in this report.

#### Important information regarding this Report

This report has been prepared by McMahon Services Australia Pty Ltd (McMahon) exclusively for the benefit and reliance of its Client. This report is not a certification, warranty or guarantee. It is a report scoped in accordance with the Client's instructions and prepared for the Client's purposes, having due regard to the assumptions that McMahon can be reasonably expected to make.

Asbestos Register /
Management Plan



Page 9 of 25

This report may not address issues which would need to be addressed with a third party if that party's particular circumstances, requirements and experience were known and may make assumptions about matters of which a third party is not aware. McMahon does not assume responsibility for the use of this report by any third party and such use is at the risk of that party.

This report is also based on information provided to McMahon by other parties. The report is provided strictly on the basis that the information that has been provided can be relied on and is accurate, complete and adequate. McMahon takes no responsibility and disclaims all liability whatsoever for any loss or damage that the Client may suffer resulting from any conclusions based on information provided to McMahon.

This report should be read in conjunction with any other asbestos related reports and or communication / documentation prepared for the property. No individual section of this report should be read in isolation without taking the whole report into account. If the report is to be copied for whatever reason the whole of the report should be included.

# 8 Risk Assessment / Calculation

Rating	Descriptor	Example Detail Description
1	Insignificant	No illness will result as asbestos is stable, therefore there is little likelihood of inhaling fibres above normal ambient levels.
		No asbestos detected or present, no action required.
2-3	Minor	Local fibre release only and in amounts and fibre size that are unlikely to cause latent asbestos related illness.
		Products or Materials presumed to contain asbestos until inspected and verified and status confirm.
4-6 Moderate		Asbestos may be unstable and could release fibres in the amount and size that may cause latent asbestos related illness.
		Products or materials that pose a negligible health risk to employees or the general public if undisturbed.
7-8	Major	Asbestos is unstable and will release fibres in the amount and size that will cause latent asbestos related illness.
		Products or materials that pose a medium health risk to employees and the general public in its current state. ACM has the potential for deterioration or disturbance.
9	Catastrophic	Asbestos is highly friable and unstable, fibres will be released in size range and amount that are highly likely to cause latent asbestos related illness.
		Products or materials that pose an immediate or elevated risk to employees or the public in their current state.

#### Consequence or Impact

#### Likelihood of Exposure

Rating	Descriptor	Description
9	Almost certain	Is expected to occur in most circumstances – i.e people regularly in the vicinity
7-8	Likely	Will probably occur in most circumstances
4-6	Possible	Might occur at some time
2-3	Unlikely	Could possibly occur at some time but unlikely
1	Rare	May occur only in exceptional circumstances



Page 10 of 25

Date: 13/9/2019

### **Risk Matrix / Calculator**

			Consequen	ce or Impact		
		9	7-8	4-6	2-3	1
7	9	Cat. 1	Cat. 1	Cat. 1	Cat. 2	Cat. 5
hoo	7-8	Cat. 1	Cat. 1	Cat. 1	Cat. 2	Cat. 5
ikeli	4-6	Cat. 1	Cat. 2	Cat. 2	Cat. 3	Cat. 5
	2-3	Cat. 2	Cat. 3	Cat. 3	Cat. 4	Cat. 5
	1	Cat. 2	Cat. 3	Cat. 4	Cat. 4	Cat.5

#### Action Plan

Risk	Priority	Recommended action
Category 1	P1	Products or materials that pose an immediate or elevated risk to employees or the public in their current state.
		Immediate actions should be taken for these materials to be removed by a licensed asbestos removal contractor. Alternative management strategies must be considered where removal of ACM is not practicable.
Category 2	P2	Products or materials that pose a medium health risk to employees and the general public in its current state. ACM has the potential for deterioration or disturbance.
		Remove within 12 months or at scheduled maintenance, control under asbestos management plan until removed.
Category 3	P3	Products or materials that pose a negligible health risk to employees or the general public if undisturbed.
		ACM is stable in its current position and maintained under control of the asbestos management plan.
Category 4	P4	Products or Materials presumed to contain asbestos until inspected and verified and status confirm.
		Treat as ACM and control under asbestos management plan until item is confirmed not to contain asbestos.
Category 5	P5	No asbestos detected or present, no action required.

# 9 Identification of ACM

- 9.1 An asbestos register (refer to appendix 1) shall be developed defining the presence of, type of and the integrity of the material when it is in situ. The asbestos register shall include:
  - Date of assessment and subsequent review date;
  - Details of the site;
  - Details of the assessor developing the register;
  - Details of the NATA certified laboratory engaged to test the samples;
  - Methodology of the sampling process;
  - Details of asbestos marking requirement (ie signage);
  - Assessment of exposure risk;





Page 11 of 25

Date: 13/9/2019

- Recommendation for maintenance of ACM;
- Test results;
- Map of site defining sample positions;
- Copy of testing result supplied by the laboratory;
- 9.2 The technician engaged by McMahon Services Pty Ltd to develop the register shall be competent to identify the presence of asbestos on a site and develop the register.

The person who is deem competent to identify asbestos and develop registers and asbestos management plans shall be;

- Highly trained to handle and take asbestos samples, have extensive knowledge and experience to identify suspected asbestos and be able to determine risk and controls measures
- familiar with building and construction practices to determine where asbestos is likely to be present;
- able to determine that material may be friable or non-friable asbestos and evaluate its condition.
- 9.3 When material, dust, debris or similar substance suspected of containing asbestos is identified, a sample shall be taken by a competent person who has received training and certification for working with asbestos. Samples shall be placed in an airtight container, appropriately labeled and immediately dispatched for analysis.

Analysis if the sample is to be carried out by a certified hygienist accredited by the national Association of Testing Authorities (NATA).

Any materials identified as possibly containing asbestos are to be recorded on an asbestos register.

The asbestos register is to contain the following information:

- The date on which the possible asbestos or ACM was identified;
- The location, type and condition of the potential asbestos or ACM;
- The competent person identifying the sample;
- Any presumptions made; and
- The result of the sample analysis undertaken
- 9.4 The asbestos register is to be reviewed and revised if necessary, by a competent person on a minimum of five yearly basis, or whenever one of the following occurs:
  - The asbestos management plan is reviewed;
  - Further asbestos or ACM is identified on the work site;
  - · Asbestos is removed from or disturbed, sealed of enclosed at the workplace;

#### 9.5 Labels & Signage

9.5.1 Signage

All areas of the workplace, including plant, equipment and components that contain ACM shall, where practicable, be signposted with cautionary warning signs to ensure that the asbestos is not knowingly disturbed without correct precautions being taken. Signs should be located at all main entrances to the workplace or all entrances to the areas where asbestos is present.

All warning signs shall comply with Australian Standards AS1319.194 – Safety Signs for the Occupational Environment.



#### Signage shall include (but not be limited to):



#### 9.5.2 Labeling

In addition to warning signs, where a risk assessment has identified that the ACM may be disturbed or there is a potential health risk, the ACM must be labeled to warn of the presence or asbestos. The location of the label should be consistent with the location of the ACM as outlined by information in the Asbestos Register. A competent person shall determine the number and positioning of labels required.

Labels used for this purpose must identify the material as containing the asbestos and should comply with Australian Standard *AS1216:1995* - *Class Labels for Dangerous Goods.* 

The following labeling standards shall be observed to identify ACM:

#### Asbestos Sheeting

Standard black on yellow "Asbestos" signs shall be fixed at regular intervals to roof and wall asbestos sheeting. The international asbestos label (red and black) shall be fixed to internal asbestos cement sheet products.

#### Asbestos Lagging Pipe Work

Standard yellow "asbestos" stickers shall be affixed to metal cladding at regular intervals in order to recognize the presence of asbestos.



Page 13 of 25

#### Asbestos Containing Gaskets

Flanges containing asbestos gaskets shall be painted with a luminous red paint, which should be applied with a brush

#### Asbestos Under Steelwork Panels or Similar

Where ACM are located under heavy steel panel work, a black on yellow sign denoting "Asbestos Under" shall be used.

#### Asbestos Vinyl Tiles

Standard black and yellow "Asbestos" stickers shall be fixed on or adjacent to identified asbestos vinyl floor tiles.

#### Asbestos Electrical Boards and Components

Standard black and yellow "Asbestos" stickers, signs or the international (red and black) shall be fixed onto or adjacent to the asbestos electrical boards and components.

Labels or signs fixed adjacent to the asbestos product must direct personnel to the asbestos product with appropriate wording

### **10** Asbestos Management in the Workplace

#### 10.1 General

- 10.1.1 Managing the risks associated with asbestos involves:
  - identifying asbestos and ACM at the workplace and recording this in the asbestos register
  - assessing the risk of exposure to airborne asbestos
  - eliminating or minimising the risks by implementing control measures
  - · reviewing control measures to ensure they are effective
- 10.1.2 When choosing the most appropriate control measure, the following hierarchy of controls must be considered:
  - eliminating the risk (for example, removing the asbestos)
  - substituting the risk, isolating the risk or applying engineering controls (for example, enclosing, encapsulation, sealing or using certain tools)
  - using administrative controls (for example, safe work practices)
  - using PPE.

A combination of these controls may be required in order to adequately manage and control asbestos or ACM. Chapter 6 of this Code provides more information on the different control measures that can be used.

General guidance on the risk management process is available in the Code of Practice: How to Manage Work Health and Safety Risks.



10.1.3 If products containing asbestos have been identified in this building(s), specific actions are required as follows:

#### "Friable/Damaged" asbestos products:

*Action required:* The product should be removed as soon as it is reasonably practicable to do so. Additionally, specific on-going procedures are required to be undertaken (see notes below).

#### "Stable" asbestos products:

Action required: The product is not required to be removed immediately; however specific ongoing procedures are required to be undertaken (see below).

10.1.4 Depending on the risks identified, a combination of the above control methods may be required to adequately control and manage the asbestos or ACM hazard

1	Leave and monitor	Can be used when asbestos or ACM's are stable and not prone to damage
2	Encapsulat e / seal	Can be used on stable asbestos and ACM's that are stable but have elements that are prone to damage. Encapsulating/sealing is a surface treatment that forms a barrier over the damage prone areas. This method cannot be used if it will create significant disturbance to the asbestos fibres.
3	Enclosure	Can be used on relatively stable asbestos or ACM that have elements that are prone to damage. This method involves containing the asbestos within a sealed area.
4	Removal	Can be used on unstable asbestos or ACM that is prone to damage. This method completely eliminates the hazard but is often not economically viable

There are four main methods by which asbestos shall be managed

#### 10.2 Specific asbestos management approaches

10.2.1 Accidental Damage to Asbestos-Containing Materials

If accidental damage occurs to any asbestos-containing material during the course of a minor works project, the worker / contractor must stop work immediately and advise the Workplace Manager. If accidental damage occurs to any asbestos-containing material during the usual course of workplace operations, all persons shall immediately vacate the room/area. This should be recorded in the company incident report.

The Workplace Manager, or in their absence, their nominee shall be immediately notified.

Repairs shall be performed by a person who is deemed competent and qualified in asbestos removal.

Workers will not reoccupy the room unless a clearance has been issued by an Occupational/Industrial Hygienist in writing.



Page 15 of 25

#### 10.2.2 Repairs to Asbestos-containing Materials

Following accidental damage if the local school community is concerned with the recommended repair methods, the Workplace Manager should seek advice from an approved asbestos removalist.

Repairs shall be performed by a person who is deemed competent and qualified in asbestos removal.

After completion of repair work the Workplace Manager shall be responsible for the review/updating of the asbestos register.

#### 10.2.3 Specific Control of Asbestos Identified on Site

a) Vinyl Tiles

Vinyl tile and vinyl sheet flooring manufactured prior to 1982, in many cases, contained asbestos. It is a safe practice therefore, in the event of renovation work or other activities disturbing such flooring, to assume that the material does in fact contain asbestos. Laboratory testing at the time of works would verify the existence or otherwise of asbestos. If the existence of asbestos has been positively identified within this report then no further testing would be required.

b) Piping

It was common practice until the late 1970s for small diameter hot water pipes to be concealed in walls and to be partially or totally insulated with brown or white asbestos. Confirmation or otherwise as to the presence of these "chased" pipes is simply not possible with a nondestructive visual inspection. Appropriate precaution must be observed if the wails are disturbed in the vicinity of concealed hot water pipes.

c) Pipe Lagging (Friable Asbestos)

In the event that the subject property has been found to contain products containing friable asbestos, e.g. pipe lagging, woven asbestos rope material, then please take note of specific recommendations within this section of the report. In broad terms, great care should be taken at all times not to disturb the friable asbestos, signage must at all times be present and, finally, removal should take place along the guidelines of our recommendations.

d) Roofing

If roof cladding contains asbestos (e.g. 'Deep 6" corrugated fibre cement), the following special restrictions apply:

- Limit access to the roof to suitably qualified persons.
- Prepare and review work plan before any work is undertaken on the roof.
- Incorporate the use of walk and work platforms if the external roof surface is accessed.
- Incorporate annual audit of the roof to monitor its condition (incorporate airborne monitoring tests into audit results).
- Any work on the roof must be conducted in accordance with the following;
  - (1) How to Manage and Control Asbestos in the Workplace. Commonwealth Code of Practice.
  - (2) Commonwealth Work, Health and Safety Act 2011
  - (3) Commonwealth Work, Health and Safety Regulations 2011



Page 16 of 25

# 11 Training and Competency

Workers shall be suitably qualified to perform licensed asbestos removal work

11.1 Induction

Contractors and workers will be provided with an adequate level of site specific training during the induction process to ensure that they are aware of the requirement of the asbestos management plan and also, that there are aware of any asbestos of ACM that may impact upon their work. Site specific inductions will include where necessary, a copy of the relevant sections of the asbestos register, asbestos management plan.

#### 11.2 Supervisor Training

Supervisors shall have the following competencies to perform their duties:

- a) Worker must be at least 18 years of age;
- b) Holds a certification in a VET course for the supervision of asbestos removal work;
- c) Evidence that the worker has at least 3 years of relevant industry experience.

#### 11.3 Worker Training

Workers shall have the following competencies to perform their duties:

 The worker shall hold certification in relation to the specified VET course for asbestos removal relevant to the class of licensed asbestos removal work to be carried out by the worker;

### **12 Worker Responsibility**

The SLT is ultimately responsible for ensuring that the asbestos management plan is being properly implemented and maintained onsite. Whilst monitoring of this plan is senior management responsibility, site workers must also be committed to working in accordance with this plan to ensure its full and efficient implementation.

It is important that consultation between management and workers takes place throughout development and implementation of this plan to make certain the goals are achieved.

- 12.1 Specific management responsibilities include the following:
  - Provide and maintain, so far as practicable, safe and healthy work environment and practices generally, and have written policies on the control of asbestos;
  - Comply with legal provisions;
  - Liaise where appropriate with workers on a continuous basis so that the existence and condition of asbestos in the working environment is known;
  - Provide adequate instruction and training for employees and supervision of health and safety measures;
  - Consult workers, their representatives and organisations and state regulator on the control of exposure of airborne asbestos;
  - Anticipate the need for the control of asbestos risks to be initiated in any particular case;
  - Provide appropriate protective clothing and equipment and hygiene procedures.
- 12.2 Specific worker responsibilities include the following:
  - Comply with instructions given for their own safety and health and that of others generally;



Page 17 of 25

- · Comply with all work procedures and instructions related to asbestos;
- Cooperate with supervision and management in their fulfilment of legislative obligations;
- Take care of their own safety and health and that of others, and abide by their duty of care provided by legislation;
- Report immediately to their supervisor any perceived safety and health risk;
- Wear and maintain in good order all protective clothing and apparatus provided by the manager or supervisor for personal protection and maintain same in good order;
- Ensure all equipment is in good working order;
- 12.3 The SLT have a number of specific duties including:
  - Consultation on health and safety matters generally and on measures that may need to be taken on asbestos in occupied areas, on machinery and equipment;
  - Keep themselves informed of advice given by competent persons in relation to inspections and meeting health and safety commitments;
  - Advising workers of their obligations and responsibilities under work health safety legislation

# **13 Emergency Procedure and Reporting Incidents**

13.1 Emergency Planning

Emergency procedure onsite shall cover actions to be taken when asbestos in inadvertently uncovered, catastrophic events occur or air monitoring indicates high levels on airborne asbestos fibre. The procedures contained in Appendix 2 shall be followed in an emergency.

It is important to remember that the first priority must always be the safety of any person either workers or others involved in the event. Uncovering of asbestos may occur due to human error or to catastrophic event. Catastrophic events may include but not limited to:

- Explosion
- Industrial accident
- Failure of construction structures;
- Failure of an asbestos control (ie encapsulation, equipment etc)
- Earthquake;
- Flood; and
- Fire.

#### 13.2 Incident Reporting

If workers are exposed to respirable asbestos fibres, or if air monitoring reveals that fibre levels in the air exceed 0.2 fibres/ml then following action must be undertaken:

- Notify state regulator;
- Notify executive management;



Page 18 of 25

Date: 13/9/2019

# 14 Asbestos Management Plan and Register Review

Both this asbestos management plan and the site asbestos register are to be reviewed at regular intervals by a competent person to ensure their ongoing relevance to works being undertaken.

- 14.1 The asbestos register shall be reviewed a minimum once every 5 years and if any of the following situations occur:
  - The asbestos management plan is reviewed;
  - Further asbestos or ACM is identified in the workplace;
  - Asbestos is removed from or disturbed, sealed or enclosed at the workplace.
- 14.2 The asbestos management plan must also be reviewed at a minimum basis of once every 5 years and if any of the following situations occur:
  - There is a review of the asbestos register or control measures;
  - Asbestos is removed from or disturbed, sealed or enclosed at the workplace;
  - A health and safety representative requests a review if they reasonably believe that any of the matters listed in the above pints affects or may affect the health and safety of a member of their work group and the asbestos management plan was not adequately reviewed.

### **15 Air Monitoring**

Air monitoring involves sampling airborne asbestos fibres to assist in assessing exposure to asbestos and the effectiveness of implemented control measures.

It must be conducted in accordance with the Guidance Note on the Membrane Filter Method for Estimating Airborne Asbestos Dust, 2nd Edition [NOHSC: 3003 (2005)].

Air monitoring is to be performed as defined in WHS Code of Practice – Safe Removal of Asbestos, to ensure the control measures are effective.

The competent person engaged to remove the asbestos shall be responsible for organising an occupational hygienist to develop the air monitoring program for the project.

The method of air monitoring shall be defined in the asbestos control plan for the project.



Page 19 of 25

Date: 13/9/2019

# Appendix 1 – Asbestos Register Location and Photo

Building Ref	Item	Location	Inspection date	Re- inspectio n	Sample ID	Photo No.	Material	M²	Condition	ACM Type	Control	Label Status	Risk Rating / Priority	Comments
Signal Box	1	External	19-8-2019	2024	E34138	2	Roof Shingles Asbestos	100m2	Poor	Non Friable	Manage		P1	Product/material poses immediate/elevated risk to employees/public in current state
Signal Box	2	External	19-8-2019			2	Walls Timber			Nil	No Action Required		P5	No asbestos detected or present, no action required.
Signal Box	3	External	19-8-2019			2	Concrete Slab			Nil	No Action Required		P5	No asbestos detected or present, no action required.
Signal Box	4	Internal	19-8-2019	2024		1	Electrical Backing Board Presumed asbestos material		Good	Non Friable	Manage	Label Affixed	P4	Product/material presumed to contain asbestos until inspected/verified and status confirm.

Asbestos Register / Management Plan		S	R	V		C		S
	Page <b>20</b> of <b>25</b>				Date	e: 13/9	/2019	

#### Appendix 2 – Emergency Action Plans

#### **Emergency Plan if Air Monitoring Limits Are Exceeded**





Page **21** of **25** 

Date: 13/9/2019

#### Emergency Plan When Suspected Asbestos Material is Un-covered or Disturbed



Asbestos Register /		McM	AHON
Management Plan		SER	VICES
	Page <b>22</b> of <b>25</b>		Date: 13/9/2019

# Appendix 3 – Asbestos Site Photo's





Page 23 of 25

Date: 13/9/2019





Page 24 of 25

Date: 13/9/2019





Page 25 of 25

Date: 13/9/2019

### Appendix 4 – Asbestos Sampling Report

Asbestos Identification Report No: MS.341

<b>)</b> (	esp	A division of Enviro-Net Australia Pty. Lt. ABN 39 657 499 359 ACN 607 499 359 NATA Reg. 311 Unit 2. 2B Parker Street. Footscray, Victoria 301 Phr. (03) 9658 5000 Fax. (03) 9683 647 Email: epipeiphios.com. www.environet.com.s
l E S	nvironmental & afety Professionals	Melbourn Sydne Newcast
	ASBESTOS IDENTIFICATION F	REPORT
DATE	13 <sup>TH</sup> MAY 2014	
ESP JOB NUMBER:	21988A	
NAME:	ARTC	
ADDRESS:	UNIT 5/33 NEWTON ROAD BROADMEADOW NSW 2292	
ATTENTION:	PAUL SAMARAS	
SAMPLED FROM:	MAIN SOUTH LINE	
SAMPLED BY:	ESP - ENVIRONMENTAL & SAFETY PROFES	SIONALS
DATE SAMPLED	8 <sup>TH</sup> MAY 2014	
TEST METHOD:	Qualitative identification of asbestos types in bulk	samples by polarised light microscopy,
	with AS4964.	sternou ivo. 2 and methodology in accordance
LAB NUMBER SA	with AS4964. MPLE DESCRIPTION	RESULT
LAB NUMBER SA E34137 G8 W/ (20	with AS4964. MPLE DESCRIPTION -1: 51 WHITTON LANE HARDEN REAR ENTRY LLLS - FIBRO CEMENT MATERIAL (x 40 x 3mm)	RESULT CHRYSOTILE ASBESTOS DETECTED
LAB NUMBER SA E34137 G8 W/ (20 E34138 G8 CE	with AS4964. MPLE DESCRIPTION -1: 51 WHITTON LANE HARDEN REAR ENTRY ALLS – FIBRO CEMENT MATERIAL x 40 x 3mm) -2: DEMONVILLE SIGNAL BOX, ROOF – FIBRO MENT MATERIAL (80 x 60 x 5mm)	RESULT CHRYSOTILE ASBESTOS DETECTED CHRYSOTILE ASBESTOS DETECTED CROCIDOLITE ASBESTOS DETECTED
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MS341\_140508\_21988\_ARTC\_Signal Box\_Demonville\_AMS\_F2



# Appendix C NSW Railway Museum Response to donation of items

From:	Mark Curran
То:	David Canterbury
Cc:	Ingrid Cook
Subject:	FW: [THNSW] Object donation - new submission
Date:	Thursday, 31 August 2023 11:08:47 AM
Attachments:	<u>~WRD3009.jpg</u>

#### FYI

From: Chris Fielder <Chris.Fielder@thnsw.com.au>
Sent: Thursday, August 31, 2023 10:51 AM
To: Mark Curran <MCurran@ARTC.com.au>
Subject: [EXT] RE: [THNSW] Object donation - new submission

**Warning:** This email was sent by a sender external to ARTC. Please exercise caution and ensure that this email was sent by a trusted sender.

If you believe this email is suspicious, please report it with the "Report Phishing" icon in Outlook, or forward to suspiciousemails@artc.com.au.

#### Hello Mark

Thank you for contacting the NSW Rail Museum. We already possess many intact types of lever frames etc (including two on display at Thirlmere) and so on this occasion cannot except any more into the collection.

Thanks again for contacting the NSW Rail Museum.

Mark Curran just submitted your form: Object donation on <u>THNSW</u>

#### **Message Details:**

First Name: Mark Last Name: Curran Address: 5/33 Newton Street, Braodmeadow, 2292 Email: <u>mcurran@artc.com.au</u> Phone: 0411161769

A: No

History: Demondrille Junction Signal Box - Points Levers. State listed signal box containing redundant points levers. The Demondrille Junction Signal Box is historically significant through its association with the Demondrille railway junction, which was an important railway location as the junction on the Main Southern Line of the Harden -Cowra - Blayney branch line and an important steam locomotive servicing centre. It is also associated with the duplication of the Main Southern Line in 1922. The building represents a Type I signal box of

#### standard 1920s railway design. File Upload Field: <u>Points Levers.jpg</u>

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Appendix D Additional information provided to Heritage NSW on 13.11.2023
13 November 2023



Andreana Kennedy heritagemailbox@environment.nsw.gov.au

Dear Andreana,

#### Re: Demondrille Railway Station s.60 Works Application

Thank you for providing us with information regarding our application and asking for further detail about the project. We note the update to the SOHI guidelines and will utilise the new template layout for all future applications for ease of assessment.

Regarding this assessment, can you please clarify what specific areas of the application require more detail to ensure we can appropriate address any agency comments. Based on the comments provided to date and for ease of assessment NGH have created the following table to demonstrate where we have addressed these issues within the NGH 2023 SOHI report provided as part of the application.

NGH have also included additional detail in this letter which is to be appended to the original report to help provide greater detail to the 'Heritage Impact Assessment' section of the report.

If you have any further questions, please contact me or David Canterbury on 0403 709 813. We would be pleased to discuss any aspect of this project with you further.

Yours sincerely,

frigit boot

Ingrid Cook Senior Heritage Consultant/Regional Manager 0432 866 454



#### HNSW comment and NGH response/location of relevant information:

Advice regarding what needs to be included in a SOHI report	Relevant section of the NGH 2023 SOHI report	
Identification of the impacted State Heritage Register item (name and number)	Section 1.1 (p.1) Section 1.3, Table 1-1 (p.4)	
Statement of significance for the item	Section 4.4 (p.33)	
Description and significance of the affected components. This should include a condition report, photographs and location on a map.	Figure 1-1 (p.2); Figure 1-2 (p.3); and Section 3 (p.13-25)	
The proposed works. The impact of the proposed works on the significance of the SHR item and what alternatives have been considered.	Section 5 (p.34-48) Additional information below to address additional demolition impact questions	
In the case of a demolition, a demolition plan is also required.	ARTC have requested for the demolition plans to be provided to Heritage NSW post tender and award of works.	
	ARTC is bound by NSW legislation to provide a safe network (Rail Safety National Law (NSW) No 82a of 2012 - NSW Legislation). ARTC has requested that demolition plans be provided as a condition of approval after s60 approval is confirmed.	
Please also provide any reports specific to the building associated with structural instability (structural engineer's report) and asbestos, eg. asbestos type, condition etc.	Appendix A – MJM Consulting Engineers report Appendix B – ACM reports for Demondrille Signal Box	
Any plans provided should be accompanied by schedule of plans.	No schedule of plans as no demolition plans completed.	
Please note S 63 of the Heritage Act 1977 regarding demolition works	Section 2.2.1 (p.7); and Section 5.6 (P. 43) Noted that this application will likely have to be advertised and a determination made by the Heritage Council.	
Please also refer to the pre-lodgement advice provided to ARTC's Mark Curran for this proposal by Sophie Butler and dated 25 August 2023.	Section 3.5 (p.27)	

#### Additional Information for the Consideration of demolition of a heritage item

Considerations for specific types of work: Demolition of a heritage item	NGH Response	
If demolition is proposed, why is it necessary?	Section 5 (p.34-48)	
Have options for retention and adaptive re-use been explored? If yes, set out why these options have been discarded?	Section 5.6, Table 5-7 (p.43-45)	
Has technical advice for demolition been obtained?	Section 5.2 (p.35-36); and Appendix A	
Identify and include advice about how significant elements, if removed by the proposal, will be salvaged and reused	Section 5.5.1, Table 5-5 (p.41-42) Appendix C ARTC have identified that currently they have not been able to find a museum with interest in the moveable heritage items (there is no potential reuse of the levers as it is a disused rail system). As a result, ARTC propose to transport the remaining levers that can be salvaged to the Cootamundra Provisioning Centre for storage until a suitable organisation or use is identified. This has been added to the scope of works.	

# NGH

#### Additional Information for the Heritage Impact Assessment

The below information provides greater context to HNSW to help with the assessment process for this application. Where a consideration has been made in the NGH 2023 SOHI the appropriate section of that report has been highlighted.

Heritage Impact Assessment: Matters for consideration	NGH Response	
Fabric and spatial arrangements	Section 4.3.1 (p.32-33)	
Describe the proposed alterations and additions to	Section 5 (p.34-48)	
Describe the proposed alterations and additions to the heritage item and potential impacts to significant fabric and/or spatial arrangements. Address impacts to aesthetic significance or the integrity of the place. Refer to Assessing heritage significance (Heritage NSW 2023) for further information.	The proposed works do not involve any additions to the signal box or to the listing as a whole. The proposed works involve the demolition of the signal box which will result in the removal of original fabric from the site. The signal box is the only remaining extant building within the listing, with the rest of the items within the curtilage being classified in the listing as ruins. Whilst the demolition of the building will impact the overall site and change to some degree the overall outlook of the listing, it should be noted that the signal box is located away from the other remaining railway items within the curtilage and there is limited interaction between the items on the site. Removal of the signal box will therefore not result in a significant broader visual or spatial arrangement impact across the site. The site has been assessed against the seven NSW Heritage Significance criteria within the NGH 2023 SOHI report, and the site/signal box do not meet the criteria to be considered as being of Aesthetic	
	structure and its removed location, the proposed demolition would have minimal impacts on the aesthetics of the site as a whole.	
Setting, views and vistas	Section 5 (p.34-48)	
Describe any impacts to the heritage item's setting including landscape, land use(s) and character. This is particularly relevant to new development and/or signage, flags, umbrellas, air conditioners, solar panels etc. Describe any impacts on significant views and vistas, including views to, from and within the heritage item. Include photographs or photomontages that indicate the potential visual	The proposed works will include the removal of the remaining building from the site. It has been identified that the site is located in an area that is not accessible to the public. The signal box itself is also located away from the remaining ruins subject of the listing, minimising the visual interaction between the items on the site.	

Landscape Describe the proposed landscape works, features and vegetation and consider how this may impact on the significance of the heritage item.	The proposed works will not include landscape works. Impacts do not apply to this heritage value.
<u>Use</u> Describe how the proposed use contributes to or conflicts with the significance of the heritage item and if the proposed use will result in future changes (e.g. for the Disability Discrimination Act (Commonwealth), compliance, services etc.)	Section 5.4, Table 5-4 (p.39) Section 5.5.1 (p.40-42) Section 5.6, Table 5-6 (p.42-45) The Demondrille Signal Box is not currently in use as it is in a dilapidated state and there are no adaptive reuse options identified. The MJM Consulting Engineers 2003 structural assessment (Appendix A of the SOHI report) has determined that the building is in very poor condition and not suitable for occupation. The engineering report highlights that the subfloor of the building was flawed in its initial construction, and as a result upgrading and/or remediation of the building would prove very difficult given the current load paths and moisture content of the timbers which are damaged.
Demolition If demolition is proposed, clearly describe the area of demolition, and assess the associated impacts, indicating whether the proposed demolition (whole/partial) will or will not have a major detrimental effect on the heritage significance of the heritage item. If any demolition is proposed to a heritage item listed on the State Heritage Register, the area of demolition must be clearly described, and the assessment must respond to s63(3)c of the Heritage Act	Section 5 (p.34-48) Determining applications for demolition – Section 5.3 (p.36) The proposed works will involve the demolition of the one extant building within the SHR curtilage for the Demondrille Junction railway ruins and signal box. The demolition will involve the removal of all elements of the signal box due to the presence of P1 ACM within the structure and the decayed condition of the building which has negligible reuse potential. The proposed scope of the demolition works includes retention and storage of moveable heritage items for safekeeping prior to a potential uncontrolled collapse of the structure.
<u>Curtilage</u> Describe impacts to the identified curtilage, including on layout, use(s), built and landscape elements such as open space, plantings (trees, shrubs, ground covers). Describe any previous subdivision and consider how it may result in future development or affect the identified curtilage.	Section 5 (p.34-48) The extant signal box is set away from any other remaining elements of the original railway station and therefore the overall impact to the general layout will be limited or negligible. The signal box and rest of the site is no longer in use and is not legally accessible or viewable by the public.

Moveable heritage	Section 5.5.1, Table 5-5 (p.41-42)
Describe any impacts to moveable heritage.	Appendix C
	It has been identified that there extant levers on the second floor of the signal box. This has not been confirmed as there is currently no safe access to the second floor due to the dilapidated condition of the structure, including decayed hazardous materials.
	The proposed demolition works will include salvage of the levers and other significant moveable heritage.
	ARTC have identified that currently they have not been able to find a suitable museum with interest in the moveable heritage items (there is no potential reuse of the levers as it is a disused rail system). As a result, ARTC propose to transport the remaining levers that can be salvaged to the Cootamundra Provisioning Centre for storage until a suitable organisation or use is identified. This has been added to the scope of works.
Aboriginal cultural heritage	Demondrille Junction railway ruins and signal box
If the heritage listing of the item identifies Aboriginal cultural heritage values an assessment of impacts	listing does not identify Aboriginal cultural heritage values.
to these values must be provided and an investigation conducted to confirm whether other relevant approvals (relating to Aboriginal cultural heritage) are required.	Impacts do not apply to this heritage value.
Historical archaeology	The proposed works will not include ground
Consider any impacts of the proposed works on the	disturbing works.
This information will determine if an archaeological assessment is required. If an archaeological assessment exists, refer to this report and describe any impacts on archaeology.	impacts do not apply to this neritage value.
Natural heritage	Demondrille Junction railway ruins and signal box is
If the heritage listing identifies the heritage item as a place of natural heritage values, describe impacts to the identified natural heritage values. Note that ecological advice or reports may be required	not a place of natural heritage. Impacts do not apply to this heritage value.
Conservation areas	Demondrille Junction railway ruins and signal box is
If the heritage item is part of a conservation area, describe how the proposed works may impact on the significance of the conservation area.	not part of a conservation area. Impacts do not apply to this heritage value.

<u>Cumulative impacts</u> Assess the cumulative impact of the proposed works, considering previous approvals and future applications. Indicate whether the proposed works as part of this application are one part of a broader scope of works (or if they are related to any other applications) and if relevant, include a master plan. How do the proposed works contribute to the cumulative impact/effect of works to the heritage item?	Section 3.4 (p.26) Section 4.3.1 (p.32-33) Section 5 (p.34-48) Demondrille station was decommissioned in 1974 and the site has not been utilised since due to its remote location. The site has not been maintained and when the Demondrille precinct was listed in the 1990s the site already had limited intactness. ARTC took control over the signal box in 2004, 30 years after the site was discontinued for use, and in 2009 it was determined that the building contained hazardous ACM, limiting the work that could be undertaken on the structure. As addressed in the NGH 2023 SOHI report, the comparative analysis of similar structures across the NSW Rail network has determined that there are a number of other extant, similar styles signal boxes that remain across the network. These other boxes are a good representative sample of the type and style of the signal box, some of which remain in use for railway purposes. The cumulative impact of the removal of the
	Demondrille signal box would have minimal cumulative impact on the heritage of the NSW rail network overall in consideration of the other example types.
<u>The conservation management plan</u> Assess the proposed works against any relevant policies of a conservation management plan (CMP) (for works to a State Heritage Register item)	There is no CMP for Demondrille Junction railway ruins and signal box. Impacts do not apply to this heritage value.
<u>Other heritage items in the vicinity</u> Describe any direct or indirect impacts to the significance of other heritage items in the vicinity.	There are no other listed heritage items in the vicinity. Impacts do not apply to this heritage value.
<u>Commonwealth/National heritage significance</u> For items on the Commonwealth Heritage List or National Heritage List, provide a separate assessment in accordance with national heritage assessment criteria and attach as an appendix to the SOHI.	Demondrille Junction railway ruins and signal box is not an item of Commonwealth/National heritage significance. Impacts do not apply to this heritage value.
World Heritage significance For properties on the World Heritage List, provide a separate assessment in accordance with UNESCO's World Heritage assessment criteria (outstanding universal values) and attach as an appendix to the SOHI.	Demondrille Junction railway ruins and signal box is not an item of World Heritage significance. Impacts do not apply to this heritage value.



# Appendix E Demondrille Site Plans









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N (5		
oved	STERET BOX	
SIBT	A 6	





# Signal Box and Station Masters House







![](_page_124_Picture_0.jpeg)

![](_page_125_Figure_0.jpeg)

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54/27 54/	7. 2.45 <i>fille</i>	26.1.45	DATE	AMENDED CHECKED	TRACK PLAP
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4

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Amended Jan. 1981 to 1952 Office of the Chief Signals and Communications Engineer, Sydney. 1945:-----

![](_page_127_Figure_0.jpeg)

DEPARTMENT OF RAILWAYS. N.S.W. Way and works branch.						
DEMONDRILLE JUNCTION						
STATION ARRANGEMENTS						
COMPILATION.	SCALE: I CRAIN TO HINCH					
drawn: K. <del>H</del> .	DATE APPROVED : 24- 9-35					
TRACED: K.H. 17.9.35.	Montall					
CHECKED :	CHIEF GIVIL ENGINEER.					
PRINCIPAL DESIGNING ENGINEER	Nº 888-27,210					

![](_page_128_Picture_1.jpeg)

# Appendix F Demondrille Maintenance Schedule

Year	Date	Inspection Record	Further Contex
2014	7/08/2014	W/O 1487427 07/08/2014 Visual Inspection of Miscellaneous Structure	Section 9 Structures (ETS-09-00) details the Inspection Of Redundant M
	Weekly	Visual inspection during routine track patrol (Hi Rail inspection)	"9.4.1.4 Redundant Structures - Where possible and reasonable to do s
	Annualy	Structure Clearance inspection	or isolated from the public and railway workers. Isolation actions can in
			Some structures may be partially removed, leaving some residual e
2015			redundant structures, structural elements and fittings shall be subj
	Weekly	Visual inspection during routine track patrol (Hi Rail inspection)	assessed as necessary to prevent an increased risk to the public and wo
	Annualy	Structure Clearance inspection	the structure's service life. Such inspection and maintenance activ
			implemented until the structures are r
2016			Structures Inspection Procedure ETP-09-02
	Weekly	Visual inspection during routine track patrol (Hi Rail inspection)	
	Annualy	Structure Clearance inspection	"Appendix J – Inspection of Miscellaneous Structures - There are no inte
			applicable, the elements that comprise Miscellaneous Structure
2017			required to make an assessment if the material causing the blockage w
	Weekly	Visual inspection during routine track patrol (Hi Rail inspection)	the inspector makes an assessment that the blockage will not be self-fl
	Annualy	Structure Clearance inspection	should be noted the above descriptions cannot cover every situation
			based on local knowledge and experience to identify the criticality of id
2018	13/04/2018	W/O 2835831 13/04/2018 Special Inspection of Miscellaneous Structure	during an inspection
	Weekly	Visual inspection during routine track patrol (Hi Rail inspection)	
	Annualy	Structure Clearance inspection	
2019			
	Weekly	Visual inspection during routine track patrol (Hi Rail inspection)	"Appendix K - Inspection of Deducdant Structures - Constally, the elev
	Annualy	Structure Clearance inspection	Appendix K – Inspection of Redundant Structures - Generally, the eler
2020			could be located in close proximity to operational tracks or anywhere
	Weekly	Visual inspection during routine track patrol (Hi Rail inspection)	must be inspected to ensure they do not incur any safety risk to the p
	Annualy	Structure Clearance inspection	typical things to look for during inspec
2021			• Structural integrity – ensuring that it will not fail or collapse under
	Weekly	Visual inspection during routine track patrol (Hi Rail inspection)	<ul> <li>Dangerous sites are properly</li> </ul>
	Annualy	Structure Clearance inspection	<ul> <li>All ladders attached to structures are at least 3m above ground level</li> </ul>
			<ul> <li>All water tanks and their openings are properly secured</li> </ul>
2022	13/04/2022	W/O 3982824 13/04/2022 Special Inspection of Miscellaneous Structure	• All water tanks are en
	Weekly	Visual inspection during routine track patrol (Hi Rail inspection)	<ul> <li>Track side access roads at bridge abutments or at other dangerous barriers, earth mounts or other suitable barricades to prevent ver-</li> </ul>
	Annualy	Structure Clearance inspection - LiDar inspection	Appropriate signage is displayed at all concerned structures, track
2023			follows:
	Weekly	Visual inspection during routine track patrol (Hi Rail inspection)	o "Access for Authorised Per
	Annualy	Structure Clearance inspection - LiDar inspection	o "Danger – Falling Obj
2024			o "Danger – No Pedestrian
	Weekly	Visual inspection during routine track patrol (Hi Rail inspection)	o "Danger – Do Not Cli
	Annualy	Structure Clearance inspection - LiDar inspection	o "Road Closed".

#### xt

#### 1iscellaneous Structures

so, redundant structures and fittings shall be removed include filling in, entry barricading, fencing and signage. elements in place. Until total removal or isolation, ject to inspections and the minimum maintenance orkers above that considered necessary SFAIRP during ions of redundant structures and fittings shall be removed or isolated."

tervention criteria for miscellaneous structures. Where res should be inspected in accordance with the e blockage is occurring in a waterway, the inspector is will be flushed away during a storm event. Only where flushing s/he should allocate a rectification program. It and the inspector is expected to exercise judgement dentified defects and deficiencies during an inspection n."

ments that comprise Redundant Structures should be dices A to F of this Procedure. Redundant structures within the railway corridor. All redundant structures public at large and/or normal train operations. Some ctions are as follows:

its own dead load, due to wind load, vibration, etc. ly fenced off.

I to prevent children from climbing up the structures. d to prevent entry of children into tanks. mpty.

s locations are adequately protected by road traffic ehicles being driven off the high embankments. side access roads, etc. Some typical signages are as

rsons Only". jects". n Access". limb".

![](_page_130_Picture_1.jpeg)

# Appendix G Demondrille Demolition Plans

![](_page_131_Picture_0.jpeg)

# **DEMOLITION WORK PLAN**

Project:

Australian Rail Track Corporation Demondrille Signal Box Demolition Murrumburrah NSW 2587

Project No: P24134

![](_page_132_Picture_0.jpeg)

Contractor & Client Information				
Contractor	RMA Contracting Pty Ltd	Client	Australian Rail Track Corporation	
Address	Unit 12, 6-20 Braidwood St	Address	33 Newton Street	
	Strathfield South NSW 2136		Broadmeadow NSW 2292	
Phone	02 9642 0011	Phone	1800 732 761	
ABN	28 092 116 704	ABN	75 081 455 754	
Key Contact	Serge Jelacic 0400 794 777	Key Contact	Bill Morrissey 0429 579 217	

Consultation				
Document created in consultation with:				
Project Manager	Serge Jelacic	Systems Manager/WHS	Naomi Marshall	
Site Supervisor	Aaron Baker	Project Administrator	Alesha Gosling	
Site Supervisor	Henry Sciascia			

DWP Review					
	R		sft.	1	20
Name	Alesha Gosling	Name	Serge Jelacic	Name	Naomi Marshall
Position	Project Administrator	Position	Project Manager	Position	Safety & Environmental Manger
Date	18/04/2024	Date	18/04/2024	Date	18/04/2024

Revision History					
Rev.	Description	Date	Author	Reviewed	Approved
А	Issued for review	18/04/2024	Alesha Gosling	Serge Jelacic	Serge Jelacic

![](_page_133_Picture_0.jpeg)

# Contents

1.	INT	RODUCTION	3
1	1.1	Site Information	3
1	.2	Scope of Works	3
2	LIC	ENSING & REGULATORY BODIES	4
3	BUI	ILDING DESCRIPTIONS & SEQUENCE OF ORIGINAL CONSTRUCTION	N.6
4	SE	RVICES & UNDERGROUND STRUCTURES	7
5	CO	NFINED SPACE	7
6	RE	TAINING STRUCTURES	7
7	HA	ZARDOUS MATERIALS, AIR MONITORING AND CLEARANCE	8
8	PE	RSONAL PROTECTIVE EQUIPMENT (PPE)	8
9	MA	JOR PLANT AND EQUIPMENT	9
10	D	DEMOLITION METHODS/SAFE WORK PROCEDURE	9
11	S	SITE PLAN	11
12	Р	PROTECTIVE MEASURES/SAFETY & ENVIRONMENTAL CONTROLS	12
13	V	VASTE CLASSIFICATION AND DISPOSAL	15
14	D	OCUMENTATION & PLANS	16
15	E	MERGENCY PROCEDURES	17

![](_page_134_Picture_0.jpeg)

# **1. INTRODUCTION**

RMA Contracting Pty Ltd (herein referred to as RMA) have been engaged by Australian Rail Track Corporation (herein referred to as ARTC) to perform the asbestos remediation and demolition of the Demondrille Signal Box.

## 1.1 Site Information

Subject property:

Demondrille Railway Station Site Murrumburrah NSW 2587

The disused Demondrille Signal Box is slated for demolition due to the building's advanced state of decay and the presence of hazardous asbestos containing materials (ACM), posing significant safety and health risks.

Demondrille North Signal Box currently sits within the precinct of the Demondrille Junction railway ruins and signal box, which is listed on the State Heritage Register. As the sole remaining signal box within this area, it contributes to the overall historical significance. However, recent assessments have deemed it derelict, with concerns over its structural integrity raised as far back as 2009 and confirmed during subsequent site visits citing safety hazards due to the risk of collapse.

The signal box was used as a mechanical signalling system hut and housed the controls that operated the areas signals and points. The signal box has been redundant for some time and is no longer in use. Since its closure in 1974, the signal box has seen little maintenance, leading to considerable weathering and deterioration. Both internal and external examinations reveal structural unsoundness, necessitating the addition of steel supports. Vandalism has further plagued the site, compounded by its accessibility to the public. Attempts to mitigate damage through fencing are deemed impractical due to the proximity to railway tracks and overbridges, which make effective enclosure challenging.

Australian Rail Track Corporation (ARTC) have determined the Demondrille site requires demolition as the most viable option. The scope involves the removal of all ACM followed by the demolition of the structure. Due to the proximity within the danger zone of railway tracks these works will be carried out during a Track Occupancy Authority in September 2024. However, propping and bracing of the structure will be carried out to ensure structure stability and prevent possible collapse prior to the scheduled ACM removal and demolition. The possible salvage of heritage listed items from within the structure will be determined at a later stage.

# 1.2 Scope of Works

- Installation of propping and bracing prior to site works commencing.
- Site establishment including installation of safety and environmental controls.
- Protection of assets including powerlines/poles and railway tracks.
- Disconnection of any remaining services including electrical, plumbing, and sewer.

P24134 Demolition Work Plan - Demondrille Signal Box Demolition

![](_page_135_Picture_0.jpeg)

- Removal of asbestos containing materials.
- Salvage of heritage signaling infrastructure within the building and transport to Cootamundra Provisioning Centre TBC.
- Demolition of signal box.
- Removal of masonry piers to ground level.
- Site demobilisation and general rubbish cleanup.

# 2 LICENSING & REGULATORY BODIES

#### Licensing

Work will be carried out under RMA's Unrestricted Demolition Licence and the associated asbestos removal work will be completed under our SafeWork NSW Class A asbestos removal licence. Copies of our licenses are available on site and upon request.

SafeWork NSW Class A Licence: AD211455 SafeWork NSW Unrestricted Demolition Licence: AD202713

#### Regulators

RMA will notify SafeWork NSW and Comcare of the intention to perform demolition and asbestos removal at the subject site 5 days prior to removal.

SafeWork Asbestos Removal Notification Number: TBA Comcare Asbestos Removal Notification Number: TBA Date Notification Submitted: TBA

SafeWork Demolition Notification Number: TBA Comcare Demolition Notification Number: TBA Date Notification Submitted: TBA

#### **Certificates of Competency**

Personnel operating excavators must have verification of competency. Demolition supervisors must have undertaken the relevant Demolition Supervision Course and be listed on the RMA Contracting SafeWork NSW Demolition Licence as a nominated supervisor.

Asbestos removal supervisor must be listed as a competent supervisor on the RMA Contracting SafeWork NSW Class A Asbestos Licence.

#### **Government Bodies**

*RMS* Road Occupancy Licence. Not required for this project

Department of Environment & Heritage Not applicable to this project.

![](_page_136_Picture_0.jpeg)

EPA

An EPA Waste Locate Consignment must be generated by the transporter for loads of asbestos greater than 10m<sup>2</sup> or 100kgs.

Should any waste be deemed as Restricted Solid Waste or Hazardous Waste additional EPA documentation will be required for each load.

#### Accreditation

RMA has a fully functioning Integrated Management System encompassing our Quality, Safety and Environmental Management Systems. RMA is accredited to ISO45001:2018 (Safety), ISO9001:2015 (Quality) and ISO14001:2015 (Environmental).

#### Legislative Requirements

Unless more explicit or more stringent requirements are written directly into this document, the following Acts, Regulations, Codes and Standards are the minimum requirements that RMA is required to comply with for this project.

The following documents are referenced within the Management Plans and shall be utilised as necessary in management of the works.

### Legislation

- Work Health and Safety Act 2011, Regulations 2017
- Protection of the Environment Operations Act 1997
- Protection of the Environment Legislation Miscellaneous Amendments Act 2017
- Protection of the Environment Operations (Waste) Regulation 2014
- Environmentally Hazardous Chemicals Regulation 2017

#### Standards

- AS 1319 1994 Safety Signs for the Occupational Environment
- AS/NZS 1800 1998 Occupational Protective Helmets Selection, care, use
- AS/NZS 1336:2014 Eye & Face Protection Guidelines
- AS/NZS 3760: 2010 In-Service Safety Inspection and Testing of Electrical Equipment
- AS/NZS 2161.1:2016 Occupational protective gloves Part 1: Selection, use and maintenance.
- AS/NZS 2161.2:2020 Occupational protective gloves General requirements
- AS/NZS 1270 2002 Acoustics hearing protectors
- AS 2210 Occupational Protective Footwear
- AS/NZS 1715 2009 Selection Use and maintenance of respiratory protection devices
- AS/NZS 1716-2012 Respiratory Protective Device
- AS 4260-1997 High efficiency particulate air (HEPA) filters Classification, construction, and performance
- AS/NZS 60335.2.69:2003 Household and Similar Electrical Appliances Safety Particular requirements for wet & dry vacuum cleaners, including power brush, for industrial and commercial use.

P24134 Demolition Work Plan - Demondrille Signal Box Demolition

![](_page_137_Picture_0.jpeg)

 NOHSC: 1003 1995 National Exposure Standards for Atmospheric Contaminants In The Occupational Environment.

#### **Codes of Practice**

- Code of Practice Demolition Work
- Code of Practice First Aid in the Workplace
- Code of Practice Hazardous Manual Tasks
- Code of Practice How to manage and control asbestos in the Workplace.
- Code of Practice How to Manage Work Health and Safety Risks
- Code of Practice How to safely remove asbestos.
- Code of practice Labelling of Workplace Hazardous Chemicals
- Code of Practice Managing Electrical Risks
- Code of Practice Managing Noise & Preventing Hearing Loss at Work
- Code of Practice Managing the Risk of Falls at Workplaces
- Code of Practice Managing the Risk of Hazardous Chemicals in the Workplace
- Code of Practice Managing the Risks of Plant in the Workplace
- Code of Practice Managing the Work Environment and Facilities
- Code of Practice Work Health & Safety Consultation Cooperation and Coordination

#### Guides

SAA/SNZ HB76 - Dangerous Goods – Initial Emergency Response Guide (Guide 37)

# 3 BUILDING DESCRIPTIONS & SEQUENCE OF ORIGINAL CONSTRUCTION

#### **Building Description**

The structure is a double storey timber framed signal box building constructed on masonry piers with timber cladding and asbestos roof sheets.

Framed floor throughout the internal of the building, steel rail iron joists and timber boards.

#### **Distances to boundaries & Building Height**

Height: ~6m North: >10m South: <1m East: >10m West: >10m

Heights and distances are approx.

#### Structural Support System

Timber framed structure with timber cladding and asbestos roof sheets.

![](_page_138_Picture_0.jpeg)

### **General Condition of Structures**

The structure has fallen into disrepair as a result of weathering and deterioration, and is now considered derelict, showing notable signs of vandalism, and is at risk of collapsing.

#### **Original Sequence of Construction**

- Construct masonry piers.
- Installation of floor, wall, and roof frames.
- Installation of timber cladding to walls.
- Installation of roof sheets.
- Installation of windows and doors.
- Fit out building.

# **4** SERVICES & UNDERGROUND STRUCTURES

#### Services Within the Work Area

Before the commencement of the asbestos removal and demolition activities, any services such as water, sewer, electricity, and telecommunications will be identified and marked. Services will be isolated/terminated and removed prior to work commencing.

RMA will perform a services search of the work area and will also engage an electrician to perform a check of the building for residual power.

If there are any existing services are to remain live within our work area these should be marked or tagged, and locations discussed during the pre-start meetings or toolbox talk. RMA will Install protective measures around the service if possible.

#### Above Ground Structures/Overhead Services

Safe approach distances will be maintained, and the buildings will be pulled down away from any overhead powerlines or structures.

#### **Underground Services or Structures**

A Dial Before You Dig enquiry will be lodged and the RMA Project Manager will review the plans and perform underground services searches if required.

If existing services are to remain live these should be marked or tagged, and locations discussed during the pre-start meetings or toolbox talk. Install protective measures around the service if possible.

# **5 CONFINED SPACE**

RMA have not identified any areas within this site as being classed as a Confined Space.

# **6 RETAINING STRUCTURES**

There are no structures within this site that are considered as a retaining structure.

P24134 Demolition Work Plan - Demondrille Signal Box Demolition

![](_page_139_Picture_0.jpeg)

# 7 HAZARDOUS MATERIALS, AIR MONITORING AND CLEARANCE

#### Asbestos

RMA will engage a licensed asbestos assessor (LAA)/occupational hygienist to conduct air monitoring and clearance inspections of the sites.

The air monitoring will work as a hold point for daily review of removal techniques and the controls in place. The results of the air monitoring must be made available to RMA Group management, personnel, and to ARTC.

A clearance certificate for asbestos removal must be issued for site by the onsite hygienist before demolition occurs.

RMA will follow our Unexpected Finds Protocol in the event hazardous building materials not listed are encountered.

# 8 PERSONAL PROTECTIVE EQUIPMENT (PPE)

Where personnel are working within the demolition work area, the following PPE must be worn:

- Hard hats
- Steel toe safety shoes
- Safety glasses
- Gloves.
- High visibility clothing
- Reflective tape (for night works or in low light conditions)

![](_page_140_Picture_0.jpeg)

# **9 MAJOR PLANT AND EQUIPMENT**

The following tools and equipment will be used for this project.

Plant and Equipment:	Inspection and Maintenance:		
Hand Tools i.e., hammers, pry bars, pincers	<ul> <li>Hand tools should be visually checked prior to use and only tools in good repair are to be used. If damaged or non-suitable tools are discovered, they must be removed from site immediately</li> </ul>		
Excavator	• Excavator must be inspected daily by the operator in accordance with the logbook. Servicing must be completed every 250-500hrs.		
EWP	• EWP must be inspected daily by the operator in accordance with the logbook. Servicing must be completed every 250-500hrs.		

# **10 DEMOLITION METHODS/SAFE WORK PROCEDURE**

This demolition work plan outlines the safety requirements applicable for conducting the demolition works in line with the Australian Standard 2601 The Demolition of Structures and as outlined in the scope of works.

The following methods must be implemented and adhered to during the demolition works.

#### Safe Work Procedure

#### Site Establishment

- Ensure all services (e.g., electrical, plumbing) to the building have been disconnected prior to commencing demolition. Written confirmations of disconnections are to be obtained from relevant trades.
- Temporary fencing is to be checked to ensure its stability and effectiveness. Ensure temporary fencing has been lined with shade cloth and all regulatory signage has been installed.
- Set up exclusion zones around the building to prevent access to the active demolition zone. Note: exclusion zones locations will vary depending on the area of the site being demolished.
- Inspect silt fencing and sediment controls to ensure they are adequate for the demolition works.
- Take possession of machinery and equipment. The excavator and EWP will be delivered to site by float and will be walked/driven off the truck within the work area.

![](_page_141_Picture_0.jpeg)

#### **Hazardous Materials**

Removal of hazardous materials is covered by the Asbestos Removal Control Plan and SWMS for Asbestos removal. All asbestos containing materials will be removed from the structure prior to the start of any demolition work.

A clearance certificate from the project hygienist is required before commencement of demolition.

#### **Signal Box Demolition**

- Confirm service terminations.
- Remove any loose items/fixtures and fittings and doors.
- Salvage heritage signaling infrastructure from within the building for transport to Cootamundra Provisioning Centre TBC.
- Demolish the building using the excavator and pushing and pulling the roof frame and walls to the ground.
- Remove masonry piers to ground level.
- Sort demolition waste to maximise materials for recycling. Stockpile materials appropriately.
- Load waste into trucks or bins depending on the waste streams.

![](_page_142_Picture_0.jpeg)

# **11 SITE PLAN**

![](_page_142_Figure_2.jpeg)

![](_page_143_Picture_0.jpeg)

# 12 PROTECTIVE MEASURES/SAFETY & ENVIRONMENTAL CONTROLS

#### Site Security Protection of Assets

Temporary fencing with lockable gates to be installed around RMA's work area to prevent any interaction with or access to the general public, visitors, or other site contractors. The fencing will be in place for the duration of the project and will be inspected daily for faults. The temporary fencing will be lined with shade cloth and signage installed at the entry points of the site.

The gates must remain closed at all times (unless permitting entry/exit) and the gates will be locked when the site is unmanned.

#### **ARTC Contractor Inductions**

All RMA personnel and subcontractors will be required to have completed the ARTC national contractor induction and provided proof to ARTC prior to attending the site.

#### Signage

The required legislative signage including RMA's site contact details must be visibly displayed on the front entry gates of the site. A 24hr contact number must be shown on the signage.

The following signage is expected to be installed on the temporary fencing of this site:

![](_page_143_Picture_10.jpeg)

#### **Exclusion zones**

Exclusion zones will be of a temporary nature and move as required for the works.

During demolition exclusion zones will be established as required to prevent injury from mobile plant as well as protection from falling rubble. These zones will be delineated by temporary fencing and warning signage. A spotter/s will be used to prevent entry into these zones during the demolition process.


## **Dust Suppression**

During the asbestos removal and demolition activities there will be a requirement to manage the generation and potential off-site release of dust.

RMA will ensure the Licensed Asbestos Assessor has installed air monitoring equipment on the site exclusion zone boundaries for the duration of the asbestos removal. The results of the air monitoring will be received before beginning the next shift. If any results return above the allowable limits works will cease and an investigation into the removal process will be performed.

Water will be used as a dust suppressant during asbestos removal and demolition works. RMA will ensure the amount of water used on this site is sufficient to suppress dust but will not be enough to generate run off. This will be controlled using equipment such as hand help pump spray bottles, and short bursts from high pressure water sprayers rather than hoses with a continuous water flow.

All waste loads in bins and trucks will be covered prior to being removed from site.

## Sediment & Erosion Control

It is RMA's aim to ensure erosion, sediment and water quality controls are integrated during asbestos removal and demolition activities, and that operational impacts on the environment are minimised. RMA will prevent sediment moving offsite by:

- diverting surface runoff away from disturbed soil and stockpiles.
- installing sediment and erosion controls before demolition/remediation starts.
- reusing topsoil where possible and stockpile separately.
- inspecting controls at least weekly and immediately after rainfall.
- rectifying damaged controls immediately.
- removing controls once surfaces have been stabilised, including removing trapped sediment in drainage lines.

RMA proposes to install sediment controls in any areas where material runoff may occur. Silt fencing will be installed at low points on the site where the natural flow of water may transport sediment during rain events. Stockpiling of material will be minimal, however if required, stockpiled materials will be covered with geofabric material or plastic and weighed down to prevent wind blowing across the stockpile.

Where possible, vehicle movements will be confined to designated tracks, pathways, and work areas to minimise disturbance to existing ground cover.

RMA will limit ground disturbance to the immediate demolition area to minimise the amount of run-off material that may occur during rain events. Excavations of underground services will be backfilled as quickly as possible to prevent sediment run off during rain events. To eliminate ponding and erosion, natural land formation will be restored as quickly as possible.

RMA will stop work in the immediate vicinity of unexpected contamination. Indicators of contamination include discoloured soil, strong chemical or petrol odours and leachate. RMA will contain disturbed material on an impermeable



surface and cordon areas off. The ARTC Project Manager will be notified immediately of any unexpected finds.

In heavy rainfall or waterlogged conditions, site works may need to cease temporarily to prevent the risk of tracking material offsite or creating loose ground material which may then run off site.

Daily weather patterns and weather forecasts are to be closely monitored during the works and scheduled around any heavy rainfall period. All required controls will be checked by the site supervisor on a daily basis throughout the project to ensure they are maintained in a fully functional condition. In the event of accumulation of sediment around any controls that may reduce their effectiveness, the sediment will be removed in such a manner as to not disturb or damage the control in any way. Damaged sediment controls will be replaced immediately or as quickly as practicable.

Portable site amenities will be located away from watercourses or drainage lines.

Plant and equipment must be maintained daily whilst on site to ensure items are leak free, and any necessary repairs made immediately upon discovering leaks. Alternatively, if equipment cannot be repaired onsite, remove the item and replace it with a leak-free item. If washing down of equipment is required, this should be completed within designated washout areas. Plant and equipment will be refuelled offsite where possible, or if onsite refuelling is required this will be performed on hard stand areas of the site.

If sediment or soil is tracked offsite this material will be swept up each day or prior to expected rainfall.

## Working Hours/Noise Management

RMA will ensure all work is completed within allowable work hours. If a need arises to work outside of the nominated hours, approval will be sought from ARTC.

Equipment will be selected for the project on the basis of its noise performance. All equipment shall be operated in an efficient manner to minimise the emission of background noise around the site.

RMA's site supervisor will Inform workers of project specific noise issues and mitigation measures during RMA site induction.

Machinery will be checked daily and will be maintained in good working order.

Review and implement any complaints and where reasonable implement additional mitigation measures. Maintain a record of any complaints.

## **Traffic Management**

Off-site/on-site traffic movements will be managed by RMA in accordance with the Vehicle Movement Plan prepared daily during the pre-start meeting.

P24134 Demolition Work Plan - Demondrille Signal Box Demolition



The vehicle movement plan will direct site traffic in a way that provides maximum safety and minimal disruption.

A spotter will be used to direct traffic flow during deliveries to/from site. Vehicles will enter and leave the site in a forward direction wherever possible.

# **13 WASTE CLASSIFICATION AND DISPOSAL**

All waste materials removed from site must be classified in accordance with the NSW EPA (2014) Waste Classification Guidelines Part 1: Classifying Waste.

## Waste Minimisation and Recycling

In order to maximise the amount of waste being recycled and minimise the amount of waste going to landfill, all waste will be separated into the various waste streams at the source during the duration of the works. The various waste streams and their final destination are shown below.

Asbestos	Landfill
Steel	Recycle
Timber	Landfill
General waste	Landfill

## **Preparation Prior to Disposal**

Prior to disposal of all materials there is some preparation required to ensure the materials are suitable for recycling or, in the case of hazardous materials are packaged in a form that will prevent spillage and possible contamination of other areas along the transport route.

## **Tip Dockets**

All disposal dockets will be kept, and copies issued to ARTC once received and recorded.

## Waste Streams:

Waste will be sorted prior to loading out to maximise reuse and recycling to reduce the amount of waste going to landfill. RMA must remove waste from the site on a regular basis.

## General waste

General waste generated throughout the project will be placed into a receptacle with a closable lid. General waste may contain food scraps etc. generated by onsite workers. General waste will be removed from the work area as necessary and will not be left to overflow or become odorous.

General waste will be transported to and disposed of at a licensed landfill.



## Asbestos Waste

Asbestos contaminated materials and PPE or other potentially contaminated items will be placed into asbestos waste bags or will be placed directly into trucks double wrapped in 200µm thick plastic. Asbestos waste must be kept damp to avoid dust generation.

Wherever possible asbestos waste will be removed from site daily and will not remain on site overnight. If the waste cannot be removed from site on the same day as removal it must be stored securely, covered with 200µm plastic, and labelled as containing asbestos waste. The site must be made secure, with perimeter and temporary fencing checked for security and the gates must be fitted with a chain and lock and **must** be locked when the site is unattended.

All asbestos waste must be disposed of at a waste facility that is authorised to accept asbestos waste.

Asbestos waste over 10m<sup>2</sup> or 100kgs must be accompanied by an EA IWTS movement.

All asbestos waste bags are to be labelled:

<u>CAUTION ASBESTOS</u> DO NOT INHALE DUST DO NOT OPEN OR DAMAGE BAG

## General Demolition Waste/Recyclable Material

Demolition waste will consist of concrete, timber and steel. Demolition waste will be separated to maximise reuse and recycling. Where possible waste will be broken down into small manageable pieces and will be placed into small bins/containers. Bins may have wheels for easy transportation. The bins/containers will be transported to the waste trucks for offsite disposal. Larger waste will be loaded into trucks using the excavator.

Demolition waste will be separated to maximise reuse and recycling. Demolition waste will be separated, stockpiled, and loaded into trucks.

Demolition/general trade ancillary waste will be transported to and disposed of at a licensed landfill. Alternatively, recyclable materials such as concrete, steel and timber will be taken to a recycling facility.

# **14 DOCUMENTATION & PLANS**

Prior to the commencement of demolition, a number of management plans will be prepared. The management plans will include:

- HSMP (Health & Safety Management Plan)
- ARCP (Asbestos Removal Control Plan)
- SWMS Propping & Bracing
- SWMS Site Establishment

P24134 Demolition Work Plan - Demondrille Signal Box Demolition



- SWMS Asbestos Removal
- SWMS Demolition

# **15 EMERGENCY PROCEDURES**

In the event that an emergency arises, a potentially dangerous situation is encountered, site work is to cease immediately, and the matter reported to the Project Manager.

**Emergency Equipment:** First Aid Kit located in the site compound. **First Aid Officer:** Aaron Baker 0438 403 177 and Henry Sciascia 0411 674 116

An emergency will include, but not be limited to

- Any site personnel involved in an accident or experiences adverse symptoms of exposure while onsite.
- A condition is discovered that suggests the existence of a situation more hazardous than anticipated and that the appropriate safety equipment is not available.
- A breach of the exclusion zone (Designated Work Area) by non-approved personnel.

The following procedures will be employed by contractor/consultant personnel in potentially hazardous areas.

- In the event that any site personnel experiences any adverse symptoms of exposure whilst onsite, work will be halted, and instruction or assistance sought from the Project Manager.
- In the event of an accident, the Site Supervisor and the injured person will compile an incident report, which will be submitted to the Project Manager within 24 hours of the incident. Follow-up actions will be carried out to correct the situation.
- In the event that an emergency situation arises, the Site Supervisor must address the problem and notify the Project Manager immediately.
- To minimise the impact of an emergency situation, at least one of the site personnel working onsite will be trained in basic First Aid procedures and all field personnel will have immediate access to a First Aid kit.
- Emergency phone numbers will be made available at the commencement of the project and displayed throughout the project in the nominated location onsite including the nearest hospital. In addition, the mobile phone numbers of the Site Supervisor and the Project Manager will be made available.
- If immediate evacuation is required due to an event occurring where it is unsafe to remain in the work area, personnel are to cease work immediately, leave the work area and proceed to the nominated evacuation point.

# NGH

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