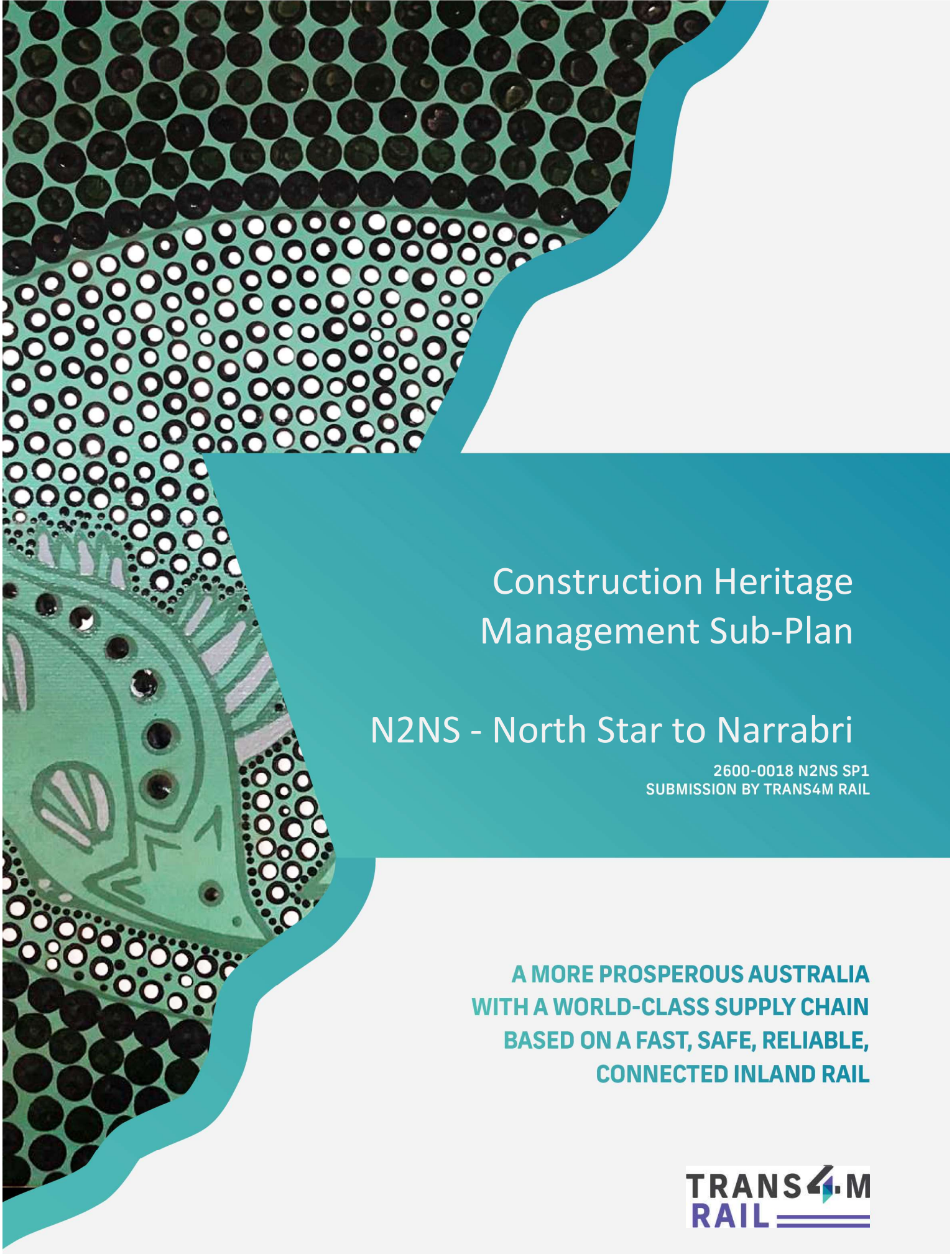

Construction Heritage Management Sub-Plan

N2NS - North Star to Narrabri

2600-0018 N2NS SP1
SUBMISSION BY TRANS4M RAIL

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Document Control

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Title	Environment Manager	Project Director
Signature	Refer Aconex Workflow	Refer Aconex Workflow
Date		

Revision History

REVISION	DATE ISSUED	DESCRIPTION
A	20/11/2020	Internal for Internal Review
B	24/11/2020	External Stakeholder review
C	10/12/2020	Issued for Review
D	15/12/2020	Updated following RAP and Council Consultation. Issued for DPC review.
E	13/02/2021	Issued for ER review
F	22/02/2021	Issued for Review. Updated following ER review
G	08/03/2021	Revised with ER comments & ref to ARTC reports
H	29/03/2021	Amended to address comments

Table of Contents

Appendices

Glossary

Specific terms and acronyms used throughout this plan are listed and described in the table below.

Term / Acronym / Abbreviation	Definition
ACHAR	Project EIS Technical Report 8: Aboriginal Cultural Heritage and Archaeological Assessment (Umwelt 2017) and the Addendum ACHAR (Niche 2020).
ARTC	Australian Rail Track Corporation
ARTC ACHMP	ARTC Aboriginal Cultural Heritage Management Plan
AHIMS	Aboriginal Heritage Information Management System
ASIRfs	Aboriginal Site Impact Recording forms
CEMP	Construction Environmental Management Plan
CoA	Conditions of Approval
CSEMP	Community and Stakeholder Engagement Management Plan
CSSI	Critical State Significant Infrastructure
DPC	Department of Premier and Cabinet
DPIE	Department of Planning Industry and Environment
ECM	Environmental Control Map
EIS	Environmental Impact Statement
EMS	Environmental Management System
EPA	Environmental Protection Authority
EPBC	Environmental Protection and Biodiversity Conservation Act
EPL	Environment Protection Licence
EP&A	Environmental Planning and Assessment Act (1979)
ESCP	Erosion and Sediment Control Plan
ER	Environmental Representative
GIS	Geographic Information System
HMP	Heritage Management Plan
HSEQS	Health, Safety, Environment, Quality and Sustainability
IMS	Integrated Management System
IR	Inland Rail
ISCA	Infrastructure Sustainability Council of Australia
LALC	Local Aboriginal Land Council
LGA	Local Government Area
N2NS	Narrabri to North Star (Separable Portion 1)
NVMP	Noise and Vibration Management Plan
RAP	Registered Aboriginal Party
REF	Review of Environmental Factors
RMM	Revised Management Measure
SEARs	Secretary's Environmental Assessment Requirements
SEMP	Site Establishment Management Plan

Term / Acronym / Abbreviation	Definition
SPIR	Submissions Preferred Infrastructure Report
TfNSW	Transport for NSW

Compliance Matrix

Table 1: SSI7474 - Conditions of Approval

REQUIREMENT REFERENCE	DETAILS	WHERE ADDRESSED
A1	a) The CSSI may only be carried out in accordance with the terms of this approval and generally in accordance with the description of the CSSI in the Inland Rail – Narrabri to North Star Environmental Impact Statement, Volumes 1-7 (prepared by GHD and dated November 2017), the Inland Rail – Narrabri to North Star Submissions Preferred Infrastructure Report (ARTC, dated December 2019) and (updated BDAR, RtS on the SPIR and RFI responses).	CEMP – Sections 3 and 4
A2	The CSSI must be carried out in accordance with all procedures, commitments, preventative actions, performance criteria and mitigation measures set out in in the documents listed in Condition A1 unless otherwise specified in, or required under, this approval.	CEMP – Section 3.1
A3	In the event of an inconsistency between the documents listed in Condition A1 or any other document required under this approval, and a term of this approval, the term of this approval prevails to the extent of the inconsistency. Note: For the purpose of this condition, there will be an inconsistency between a term of this approval and any document if it is not possible to comply with both the term and the document.	CEMP - Section 3.1 and 4.3
A4	The Proponent must comply with the written requirements or directions of the Planning Secretary, including in relation to: a) the environmental performance of the CSSI; b) any document or correspondence under the terms of this approval in relation to the CSSI (including the provision of such documentation or correspondence); c) any independent appointment or dismissal made in relation to the CSSI; d) any notification given to the Planning Secretary under the terms of this approval; e) any audit of the construction or operation of the CSSI; f) the terms of this approval and compliance with the terms of this approval (including anything required to be done under this approval); g) the carrying out of any additional monitoring or mitigation measures; and in respect of ongoing monitoring and management obligations, compliance with an updated or revised version of a guideline, protocol, Australian Standard or policy required to be complied with under this approval.	The CEMP

REQUIREMENT REFERENCE	DETAILS	WHERE ADDRESSED
A5	Where the terms of this approval require a document or monitoring program to be prepared, or a review to be undertaken, in consultation with identified parties, evidence of the consultation undertaken must be submitted to the Planning Secretary in accordance with the Department's Post Approval Guidance: Defining Engagement Terms (DPIE, 2020). The evidence must include: a) documentation of the engagement with the party identified in the condition of approval that has occurred before submitting the document for approval; b) log of the dates of engagement or attempted engagement with the identified party and a summary of the issues raised by them; c) documentation of the follow-up with the identified party where engagement has not occurred to confirm that they do not wish to engage or have not attempted to engage after repeated invitations; d) outline of the issues raised by the identified party and how they have been addressed; and e) description of the outstanding issues raised by the identified party and the reasons why they have not been addressed.	Section 2
A6	Any document that must be submitted, or approval that must be obtained, within a timeframe specified in or under the conditions of this approval may be submitted within a later timeframe agreed with the Planning Secretary. This condition does not apply to the immediate written notification required in respect of an incident under Condition A41. The Proponent must provide supporting evidence so that the Secretary can consider the need, environmental impacts and consistency of any request. Note: Inaction and/or expedience will not be supported as justifications for need unless it can be demonstrated that there are beneficial environmental impacts associated with the request.	Noted
A16	Ancillary facilities that are not identified by description and location in the documents listed in Condition A1 can only be established and used in each case if: (c) they have no impacts on heritage items (including areas of archaeological sensitivity), threatened species, populations or ecological communities beyond the impacts approved under the terms of this approval.	Section 4.4, Table 6
A21	Facilities including lunch sheds, office sheds, material lay down sites, stockpile areas, areas used to assemble infrastructure, and portable toilet facilities can be established and operated where they satisfy the following criteria: (b) have been assessed by the ER to have - (iii) no impacts on biodiversity, soil and water, and heritage items beyond those already approved under other terms of this approval.	Appendix D of the SEMP – Minor Ancillary Facility Checklist
A41	During construction, DPIE must be notified in writing immediately after the Proponent becomes aware of an incident. The notification must identify the CSSI (including the application number and the name of the CSSI if it has one), and set out the time, date, location and nature of	CEMP – Section 10.2 This HMP - Section 5.14

REQUIREMENT REFERENCE	DETAILS	WHERE ADDRESSED
	the incident. A description of whether the incident was a result of any actual or potential non-compliance with this approval should be provided within one week of the notification. The requirement to notify DPIE under this condition excludes incidents which are required to be notified to the Office of the National Rail Safety Regulator. Subsequent notification must be given and reports submitted in accordance with the requirements set out in Appendix B – WRITTEN INCIDENT NOTIFICATION AND REPORTING REQUIREMENTS.	
C4	The following CEMP Sub-plans must be prepared in consultation with the relevant government agencies and relevant councils identified for each CEMP Sub-plan and be consistent with the CEMP referred to in the EIS: (e) Heritage — DPC Heritage, RAPs and relevant councils	This HMP Section 2
C5	The CEMP Sub-plans must state how: a) the environmental performance outcomes identified in the documents listed in Condition A1, as modified by these conditions, will be achieved; b) the mitigation measures identified in the documents listed in Condition A1, as modified by these conditions will be implemented; c) the relevant terms of this approval will be complied with; and d) issues requiring management during construction (including coordination of concurrent activities of other projects as well as concurrent activities in this CSSI), as identified through ongoing environmental risk analysis, will be managed.	a) Table 3 b) Section 5 c) Section 3 d) Section 4
C6	The CEMP Sub-plans must be developed in consultation with relevant government agencies identified in Condition C4. Details of all information requested by an agency to be included in a CEMP Sub-plan as a result of consultation, including copies of all correspondence from those agencies, must be provided with the relevant CEMP Sub-Plan.	Section 2.2
C11	The Heritage Management Sub-plan must include: a) identification of the Aboriginal objects that must be avoided and the protective measures to be put in place; b) procedures for salvaging and safe keeping the Aboriginal objects identified in the documents listed in Condition A1, and their long-term management; c) measures to avoid or minimise disturbance to Aboriginal heritage where areas, objects or places of moderate to high significance are found to be present. Where impacts cannot be avoided, details on	NOTE: ARTC are responsible for identification, salvage and safe keeping of Aboriginal objects and detailed design for Moree Station. a) Sections 5.8 and 5.8.4 b) Section 5.8 c) Sections 4.2 and 5.8

REQUIREMENT REFERENCE	DETAILS	WHERE ADDRESSED
	the methodology for archaeological excavation and/or salvage works (including Survey Areas 15 and 55);	
	d) a process for inspecting trees for evidence of cultural scarring in areas that were not subject to archaeological survey and measures to avoid impact. If impact is unavoidable, works shall be undertaken under the guidance of an appropriately qualified heritage specialist;	d) Section 5.8
	e) the involvement of a suitably qualified and skilled heritage architect or consultant to provide input to the detailed design of works to and near Moree Railway Station;	e) Sections 2, 5.2 and 5.9.1
	f) measures to prevent vibration and direct impacts to the Moree Railway Station;	f) Section 5.9.1 and the Noise and Vibration Management Plan
	g) measures to minimise impacts on and retain the legibility of the concrete post and panel platform at Moree Railway Station;	g) Sections 5.2 and 5.9.1
	h) an interpretation strategy for Edgeroi, Bellata and Gurley Railway Stations;	h) Section 5.9.1
	i) all practical options for offering components of the Croppa Creek rail bridge to the local community;	i) Section 2
	j) measures to retain the existing North Star station sign in situ (or re-instated following construction) alongside the rail corridor in North Star Community Park; and	j) Section 5.9.1
	k) an Unexpected Heritage Finds and Human Remains Procedure, with the requirement that DPC Heritage are contacted and consulted upon the discovery of human remains, prepared by a suitably qualified and experienced heritage specialist.	k) Sections 5.8.6 and 5.8.7
	The Proponent must consult with the Registered Aboriginal Parties in the development of the Sub-plan with respect to Aboriginal objects. Note: Human remains that are found unexpectedly during works are under the jurisdiction of the NSW State Coroner and must be reported to the NSW Police immediately.	Section 2.1 Section 5.8.7
C13	Construction must not commence until the CEMP and all CEMP Sub-plans have been approved by the Secretary. The CEMP and CEMP Sub-plans, as approved by the Secretary, including any minor amendments approved by the ER, must be implemented for the duration of construction. Where the CSSI is being staged, construction of that stage is not to commence until the relevant CEMP and sub-plans have been endorsed by the ER and approved by the Secretary.	CEMP – Section 2 HMP - Section 1
E61	Spoil mounds are to comply with the following requirements: (c) not result in heritage impacts beyond that described in the documents listed in Condition A1.	SEMP HMP - Table 10
E65	The Proponent must not destroy, modify or otherwise physically affect any heritage items, including Aboriginal objects, outside of the CSSI construction boundary.	HMP Section 4.4
E66	The Proponent must not harm, modify, or otherwise impact human remains uncovered during the construction of the CSSI.	HMP - Section 4.8.7

REQUIREMENT REFERENCE	DETAILS	WHERE ADDRESSED
E67	Identified impacts to heritage items must be minimised through both design and construction. The measures for ensuring this are to be detailed in the Construction Heritage Management Sub-Plan required by Condition C4.	ARTC ACHMP; This HMP Sections 5.8 and 5.9.1
E68	The Proponent must undertake Heritage Photographic Archival Recordings (of heritage items and potential heritage items associated with the existing rail line (including culverts/underbridges with timber components and former rail station sites) which have been identified for demolition in the EIS and Submissions Report. The photographic recording of items with a statutory listing must be undertaken in accordance with NSW Heritage Division guidelines. The photographic recording of items with potential heritage significance but no statutory listing may be undertaken in accordance with ARTC's Archival Recording Standard.	Section 5.9.2
E69	The design of any proposed works or alterations to TfNSW assets, including but not limited to railway stations at Edgeroi, Bellata, Gurley and Moree must be developed in consultation with and endorsed by TfNSW prior to the commencement of works affecting these assets.	Section 2 Appendix A
E70	Prior to the commencement of investigation activities within the expanded construction footprint identified in the SPIR, the Proponent must prepare a methodology for archaeological investigation in consultation with DPC Heritage and Registered Aboriginal Parties (RAPs).	2020 *ARTC N2NS Addendum to ACHAR*
E71	Prior to the commencement of any construction works within areas identified as requiring archaeological investigation by the methodology required by Condition E70 the Proponent must: a) Undertake archaeological investigations; and b) report on the results of the archaeological investigation, including, but not necessarily be limited to: i. consideration of measures to avoid or minimise disturbance to Aboriginal objects where objects of moderate to high archaeological or cultural significance are found to be present; ii. where impacts cannot be avoided, recommendations for any further investigations or salvage; iii. management and mitigation measures to ensure there are no additional impacts due to preconstruction and construction activities; and iv. demonstration of additional consultation with the Registered Aboriginal Parties about items i) to iii).	a) ARTC ACHMP Section 5.3 referenced in Section 5.8.2 this HMP b) ARTC 2020 *ARTC N2NS Addendum to ACHAR* and forthcoming document on excavations
E72	The methodology required by Condition E70 and the report required by Condition E71 must be provided to the Planning Secretary for information and its results incorporated into the Construction Heritage Management Sub Plan required by Condition C4.	Section 1

Table 2: Revised Mitigation Measures

REQUIREMENT REFERENCE	DETAILS	WHERE ADDRESSED
	Aboriginal Heritage	

REQUIREMENT REFERENCE	DETAILS	WHERE ADDRESSED
C9.1 Unexpected Finds and Human Skeletal Material	If potential Aboriginal items, objects, or human remains are uncovered, works within the immediate area of the item would cease, and the unexpected finds procedure would be implemented.	This HMP Section 5.8.6 and 5.8.7
	During pre-work briefings, employees would be made aware of the unexpected finds procedures and obligations under the National Parks and Wildlife Act 1974.	This HMP Section 5.4.1
C10.1 Accidental Impacts	To minimise the potential for accidental impacts, the boundary of Moree, Edgeroi, Bellata, and Gurley stations, Edgeroi Woolshed, and the surveyor's trees, would be marked on plans and clearly defined during construction.	This HMP Section 5.9.1
C10.2 Unexpected Finds and Human Skeletal Material	In the event that unexpected archaeological remains, relics, potential heritage items, or human remains are discovered during construction, all works in the immediate area would cease, and the unexpected finds procedure would be implemented.	This HMP Section 5.9.6

Table 3: Performance Outcomes

REQUIREMENT REFERENCE	DETAILS	WHERE ADDRESSED
10 Heritage	Impacts on heritage are managed in accordance with relevant legislation, including the EP&A Act, the Heritage Act 1977, and relevant guidelines.	Section 3
	The potential impacts identified are mitigated by photographic/archival recording	Completed by ARTC, referenced in Section 5.9.2
12 Noise and Vibration - Structural	The proposal minimises impacts to structures by: ▸ Controlling vibration at the source ▸ Controlling vibration on the source to receiver transmission path ▸ Implementing practicable and reasonable measures to minimise vibration impacts of construction activities on structures.	Referenced in Section 5.9.1

1 Purpose

This Heritage Management Plan (HMP) forms part of the Construction Environmental Management Plan (CEMP) for the Narrabri to North Star Separable Portion 1 (N2NS) and addresses both Aboriginal and non-Aboriginal heritage. The CEMP details the key mitigation measures that will be implemented by Trans4m Rail in order to minimise and manage construction impacts on heritage items during construction of the N2NS project

This HMP addresses the relevant requirements of the Project Planning Approval, the Revised Mitigation Measures (RMMs), applicable legislation, the Environmental Impact Statement (EIS), contractual requirements and all applicable guidelines and standards specific to heritage management for the Project. It has been developed based on the findings of the Environmental Impact Statement (EIS) and subsequent additional investigations undertaken by ARTC which provided a comprehensive assessment and analysis of Aboriginal and non-Aboriginal heritage elements of the Project. The HMP is consistent with the ARTC Inland Rail Environment and Sustainability Policy, ARTC Environmental Policy and Trans4m Rail's Environment and Heritage Policy.

Construction will not commence until the CEMP and sub-plans and the Construction Monitoring Programs are endorsed by the Environmental Representative (ER) and approved by the Secretary of the Department of Planning, Industry and Environment (DPIE). The CEMP and Construction Monitoring Programs will be submitted to the Secretary for approval no later than one month prior to the commencement of construction as required by Ministerial Conditions of Approval (CoAs) C7 and C17. In relation to CoAs E70, E71 and E72, Trans4m Rail will not commence construction in areas identified as requiring archaeological investigation within the expanded construction footprint until such time as the investigations from CoA E71 are complete. These investigations will be undertaken by ARTC. The results from these investigations will be incorporated into this HMP.

1.1 Scope

The HMP builds on the heritage assessment undertaken for the Environmental Impact Statement (EIS), and Submissions Preferred Infrastructure Report (SPIR) which assessed impacts of construction on Aboriginal and non-Aboriginal heritage. The Construction Impact Zone was expanded during the SPIR process and hence RMM D8.6 required ARTC to undertake additional Aboriginal heritage assessments for areas that were not previously assessed as part of the EIS. The results of this assessment are also addressed in this HMP.

Trans4m Rail and our heritage experts OzArk Environment & Heritage (OzArk) identified a suite of reasonable and feasible heritage management and mitigation measures to be implemented immediately prior to and during construction of N2NS. This HMP summarises these management and mitigation measures.

1.2 Objectives and targets

The key objective of this HMP is to ensure that all CoAs, RMMs and licence/permit requirements relevant to heritage are adhered to thus minimising impacts to Aboriginal and non-Aboriginal heritage. Supporting objectives and targets to achieve this are outlined in Table 4.

Table 4: Heritage Objectives and Targets

Objective	Targets
Maximise awareness of Aboriginal and non-Aboriginal heritage values for all involved in the Trans4m Rail project.	Heritage training is included in induction material and provided to all Trans4m Rail team, including sub-contractors.
	At least four targeted heritage training events are provided to all Trans4m Rail team, including sub-contractors throughout the project.
	Site specific heritage toolbox talks provided prior to works commencing at sites with high heritage values.
	Targeted training in the form of toolbox talks or specific training will be provided to personnel with a key role in heritage management.

Objective	Targets
Ensure appropriate controls and procedures are implemented prior to and during construction activities to avoid or minimise potential adverse impacts to Aboriginal and non-Aboriginal heritage inside or outside the construction footprint.	Ensure significant heritage sites are identified on Environmental Control Maps.
	Minimise impacts on heritage items during site establishment using a variety of means, including exclusion fencing.
	Minimise damage to features of heritage conservation significance from vibration.
Where possible, ensure appropriate measures are implemented during construction to minimise impact to ground surfaces which are known or predicted to contain Aboriginal heritage or to built structures with historic significance.	Collection/archival recording of artefacts where impacts to items/sites of heritage significance cannot be avoided.
Consult with relevant stakeholders throughout the course of works about decisions that are relevant to the heritage significance of sites, artefacts and elements.	Consult with relevant agencies and groups (as specified in the final Conditions of Approval) in the finalisation of the HMP.
	If sites or artefacts are encountered during works, Registered Aboriginal Parties will be consulted regarding appropriate management.
Identify, investigate, record and assess the significance of any unexpected Aboriginal archaeological resources or non- Aboriginal significant heritage items before any action, including salvage or harm, can take place.	Ensure an Unexpected Finds Protocol is developed and broadly available to construction teams and forms part of heritage inductions package. This will ensure the appropriate procedures are followed in the event of an unanticipated / chance find.
	Ensure pre-construction planning and works locate sites of heritage significance on plans.
	Ensure all the Trans4m Rail team, including sub-contractors, working in areas with significant heritage value are aware of the requirements of the HMP.

1.3 Environment and Heritage Policy

Trans4m Rail believes that respect for the Project location, its' surroundings and the communities in which it operates is essential for project success, as well as compliance with all environmental, sustainability and community requirements. This commitment is described in Trans4m Rail's Environment Policy which can be found in Appendix A of the CEMP.

1.4 Project Description

The N2NS Project is one of 13 projects that make up the Inland Rail Project. The route is within the Narrabri, Moree Plains and Gwydir Local Government Areas (LGAs) in northwest NSW. N2NS extends approximately 173km from north of Narrabri Junction, terminating at North Star and the project is generally within the existing rail corridor. Works over the Gwydir Floodplain are excluded from the N2NS Project. This construct only contract will be delivered by Trans4m Rail (an unincorporated Joint Venture between SEE Civil Pty Ltd and John Holland Pty Ltd). Further detail on the project, including construction scope of works and construction schedule can be found in Section 2 of the CEMP.

2 Community and Stakeholder Engagement

Trans4m Rail's Community and Stakeholder Engagement Management Plan (CSEMP) provides a clear framework for active communication and stakeholder engagement management. The Plan outlines how Trans4m Rail will meet best practice community and project outcomes by keeping the community and other stakeholders informed, minimising potential impacts and responding to the needs and requirements of

stakeholders. The CSEMP contains procedures and strategies to manage community and stakeholder engagement activities as they align to the Project delivery program. To the extent practicable, Trans4m Rail will provide stakeholders with open and transparent consultation.

CoA A5 and C4 require that the HMP be prepared in consultation with:

- The Department of Premier and Cabinet (DPC) Heritage Group;
- Registered Aboriginal Parties (RAPs);
- Narrabri Shire Council;
- Moree Plans Shire Council; and
- Gwydir Shire Council

As required by CoA C6, details of all information requested by an agency to be included in a CEMP Sub-plan as a result of consultation, including copies of all correspondence from those agencies can be found in Appendix A. Appendix A also provides an assessment of where comments have been addressed in the HMP.

In addition, CoA C11(i), requires that all practical options for offering components of the Croppa Creek rail bridge to the local community. Trans4m Rail will therefore undertake the following activities in the months leading up to the dismantling of the Croppa Creek rail bridge:

- The local community will be consulted during a Community Session held at Croppa Creek to determine any interest in retaining and utilising components of the bridge;
- Project flyers will be left at the Croppa Creek General Store; and
- Development of a register to capture any interest in components of the Croppa Creek bridge.

It should also be noted that in relation to CoA E69, ARTC have undertaken consultation with Transport for NSW in relation to:

- Decommissioning the Edgeroi Station;
- Retaining the Bellata Station; and
- Decommissioning the Gurley Station.

NOTE: No physical works or alterations are proposed to be undertaken on the Edgeroi, Bellata or Gurley Stations.

With regard to works at Moree Station, Trains NSW are undertaking the design works for the upgrade of the station, including the platform, for Trans4m Rail / ARTC to construct. This design process will integrate the relevant CoA;s (C11(e) – (g)), Inland Rail's operational requirements and Trains NSW's station requirements. Trains NSW has been provided the completed heritage assessment reporting and have appointed Heritage Advisors to integrate the previous findings and the obligations arising under CoA C11 with the design objectives. The design tasks include the platform lengthening in a sensitive manner to minimise effect on the post and panel construction. ARTC cannot provide this information as it will be a function of Trains NSW's design process. We note that the work impacts only on the southern extremity of the eastern platform face, such that the remainder of this platform remains unchanged and would remain visible. The western face of the platform is not affected by these works

Physical works on the Moree Station will not proceed until TfNSW has endorsed the design and provided written confirmation that the works may proceed.

2.1 Aboriginal Community Consultation

EIS Technical Report 8 (Aboriginal Cultural Heritage, Umwelt 2017)), Section 3 and the Addendum ACHAR Section 2 (Niche 2020) documents the extensive consultation with Registered Aboriginal Parties (RAPs) and other organisations and individuals that was undertaken during preparation of the EIS and for the subsequent assessment of the expanded impact footprint. 47 groups or individuals registered to be consulted. These include the following 19 organisations[1]:

[1] The names of individuals registrations have been omitted for privacy reasons

- Gomeroi Service Provider P/L (a named applicant of the Gomeroi people registered Native Title Claim)
- Gamarada Consulting Australia
- Kawal Cultural Services
- Wurrumay Consultant
- Huckada Dreamin Heritage Group
- Kulila Site Consultants
- National koori Site Management
- Dhinawan-Dhigaraa Culture and Heritage P/L
- T&G Culture Consultants
- Bigundi Biame Gunnedarr Traditional People
- AT Gomilaroi Cultural Consultancy
- Cacatua General Services
- AGA Services
- DFTV Enterprises
- Toomelah Local Aboriginal Land Council
- Moree Local Aboriginal Land Council
- Gringai Aboriginal Corporation
- Gomery
- Narrabri Local Aboriginal Land Council.

There were also registrations by a further 28 individuals whose names have been omitted for privacy reasons.

RAPs were involved with the field investigations undertaken to date by ARTC and their consultants, selected through an EOI process. Participation in surveys occurred through 2016 and again in 2020 for the expanded footprint. These same groups will have had the opportunity to participate in archaeological test and salvage excavations, as well as salvage via artefact collection. This work will be undertaken by ARTC in the pre-construction phase.

RAPs will be notified in the event of an unexpected find of an Aboriginal object or human remains as per **Section 5.8.6** of this HMP.

As part of the development of this HMP, further consultation has been undertaken with all RAPs, through distribution of a draft HMP to the RAPs requesting comment / input. A copy of the HMP was sent electronically to each of the Councils on 24th November 2020.

In addition, ARTC and Trans4m Rail facilitated workshops on:

- ARTCs Aboriginal Cultural Heritage Assessment;
- ARTC's Aboriginal Cultural Heritage Management Plan; and
- Trans4m Rail's draft Construction Heritage Management Plan.

RAPs were invited to attend workshops held in:

- Moree on the 1st December 2020; and
- Narrabri on 2nd December.

A video conference meeting on 3rd December was also offered to RAPs in the Toomelah district.

Minutes from the Moree and Narrabri meetings can be found in **Appendix A**. No stakeholders attended the Toomelah meeting.

An email was sent from Trans4m Rail to all RAPs on 10th December 2020 noting that comments on the HMP would be appreciated. RAP groups AGA Services and Cacatua General Services responded that they had discussed all information supplied and that both groups were in support of the information.

No further comments from RAPs have been received.

2.2 Agency Consultation

Consultation on this HMP was undertaken with the following agencies / organisations:

- DPC;
- Narrabri Shire Council;
- Moree Plans Shire Council; and
- Gwydir Shire Council.

Introductory videoconference meetings were held with the three Local Governments on 8th September 2020. The purpose of these meetings was to:

- Introduce Trans4m Rail and provide an overview of the N2NS project;
- Provide an overview of the CoA requirements for the HMP, Construction Environmental Management Plan and associated sub-plans for N2NS;
- Provide an overview of the CoA conditions regarding consultation for the above plans; and
- Provide an indicative schedule as to when the plans would be sent to the respective Local Governments.

Follow up meetings were held with Narrabri (9th October 2020) and Gwydir (23rd October 2020) Councils to provide them with an updated indicative schedule. Trans4m Rail met with Moree Plains Shire Council on a weekly basis throughout October and November 2020 on a range of planning and approvals topics, including the HMP, Construction Environmental Management Plan and associated sub-plans.

A copy of the HMP was sent electronically to each of the Councils on 24th November 2020 and to DPC on 15th December following the close of consultation period with the RAPs and Councils.

2.3 Consultation Summary

Table 5 summarises stakeholder feedback process on the HMP. Comments received and how they have been addressed can be found in **Appendix A**.

Table 5: Summary of Consultation

STAKEHOLDER	REQUIREMENT	STATUS	RESPONSE	DATE
RAPs	Consultation	Completed	Email with comments received from AGA Services and Cacatua General Services.	24th November 2020 11th December 2020
Narrabri Shire Council	Consultation	Completed	Email/report with comments received.	24th November 2020 8th December 2020 5th February 2021
Moree Plains Shire Council	Consultation	Completed	Email with comments received.	24th November 2020 8th December 2020
Gwydir Shire Council	Consultation	Completed	No response	24th November 2020 8th December 2020
DPC	Consultation	Completed	No response. Refer below	Refer below

The following summarises the efforts made to consult with DPC's Heritage Group:

- Phone calls were made to DPC on 14th September, 17th September, 18th November, 19th November and 16th December 2020 and 4th January, 5th January and 8th January 2021;
- In discussions with DPC on 18th and 19th November 2020, DPC requested that consultation occur with RAPs and Councils initially, the HMP be updated to address any comments and then be sent to DPC for review. This request was discussed with DPIE and ARTC and Trans4m Rail agreed to the process;
- HMP was sent to DPC via Aconex on 16th December 2020 following consultation with RAPs and Councils; and
- DPIE also tried to contact DPC on three separate occasions in February 2021.

3 Legal and Compliance requirements

This section details all Infrastructure Approvals for the Project including Minister's CoAs, RMMs and the Secretary's Environmental Assessment Requirements (SEARs) environmental performance outcomes (EPOs) and where they are addressed within this Plan.

3.1 Legislation

Legislation considered during the development of the HMP includes:

- *Heritage Act*, 1977
- *Environmental Planning and Assessment Act*, 1979
- *National Parks and Wildlife Amendment (Aboriginal Objects and Aboriginal Places) Regulation*, 2010
- *Environment Protection and Biodiversity Conservation Act*, 1999 (Cwth)
- *Aboriginal and Torres Strait Islander Heritage Protection Act* 1984 (Cwth)

3.2 Guidelines

Guidelines and standards relating to the management of Aboriginal and non-Aboriginal heritage include:

- Unexpected Heritage Items Heritage Procedures 02 (RMS 2015)
- Code of Practice for the archaeological investigation of Aboriginal objects in NSW (DECCW 2010)
- Aboriginal cultural heritage consultation requirements for proponents 2010 (DECCW 2010)
- Due Diligence Code of practice for protection of Aboriginal objects in NSW (DECCW 2010)
- Guide to investigating, assessing and reporting on Aboriginal cultural heritage in NSW (OEH 2011)
- Guide to Aboriginal Heritage Impact Permit processes and decision making (OEH 2010)
- Assessing Heritage Significance (NSW Heritage Office 2001)
- Levels of Heritage Significance (NSW Heritage Office 2008)
- Assessing Significance for Historical Archaeological Sites and Relics (NSW Heritage Branch, Department of Planning 2009)
- Investigating Heritage Significance (NSW Heritage Office 2001)
- NSW Government's Aboriginal Participation in Construction Guidelines (2007)
- How to Prepare Archival Recording of Heritage Items (Heritage Branch 1998)
- Photographic Recording of Heritage Items Using Film or Digital Capture (Heritage Branch 2006)
- Guidelines for the Management of Human Skeletal Remains under the Heritage Act 1977.

3.3 Conditions of Approval, Mitigation Measures and Performance Outcomes

As discussed in Section 4 of the CEMP, the N2NS project is a Controlled Action under the EPBC Act (1999) and a CSSI under the EP&A Act (1979). Under Section 45 of the *EPBC Act* (i.e. the bilateral agreement between the NSW and Federal Governments), the Project has been assessed by DPIE for both State and Federal approvals. The Project has been approved with conditions by both the NSW Minister for Planning and Public Spaces and the Federal Minster for Agriculture, Water and Environment. These conditions of approval relevant to the construction phase and where they have been addressed in this HMP can be found in the Compliance Matrix at the beginning of this document.

Heritage management and mitigation measures were identified in the EIS. Following consideration of the issues raised in stakeholder and community submissions on the EIS and additional assessments undertaken, mitigation measures were updated and included in the SPIR. RMMs relevant to heritage and where they have been addressed in this HMP can also be found in the Compliance Matrix at the beginning of this document.

The SEARs identified a number of desired performance outcomes (EPOs) for the N2NS project. Based on the outcomes of the EIS and the implementation of the RMMs, EPOs have been established for the proposal. EPOs

relevant to heritage and where they have been addressed in this HMP can also be found in the Compliance Matrix at the beginning of this document.

This HMP was endorsed by the Environmental Representative on the 9th March 2021 and the endorsement letter can be found in Appendix A.

4 Heritage Risk Assessment

4.1 Existing heritage environment

A summary of the key findings from the EIS heritage specialist assessments and the additional heritage assessments is outlined below. Further detail can be found in the technical reports undertaken for this project, as follows:

- The N2NS EIS and associated technical reports
  - Technical Report 8 (Aboriginal Cultural Heritage, Umwelt 2017),
  - Technical Report 9 (Non-Aboriginal Heritage Impact Statement, Umwelt 2017);
- Addendum Historic Heritage Assessment and Statement of Heritage Impact: Moree, Gurley, Bellata and Edgeroi Stations (Kelleher Nightingale Consulting 2020);
- Interpretation Plan: ARTC N2NS SP1 Historical Heritage Assessment (Niche 2020); and
- Addendum Aboriginal Cultural Heritage Assessment (Niche 2020).
- Aboriginal Cultural Heritage Management Plan: Narrabri to North Star – Separable Portion 1 (Niche 2020)

Further archaeological excavation and salvage is currently being undertaken by ARTC to ensure that all heritage management actions required under the Conditions of Approval are completed prior to construction commencing.

It should be noted that avoidance of impacts to Aboriginal ad non-Aboriginal Heritage items has been prioritised throughout the design phase of the Project. Where impacts cannot be avoided the impact has been minimised as much as reasonably practicable, in accordance with the relevant CoAs.

4.2 Aboriginal heritage

4.2.1 Archaeological context

- A review of key environmental factors associated with the project demonstrates that the portions of the project associated with water resources would have provided an environmental context attractive to Aboriginal people and that the north-eastern portion of the project may have provided access to lithic (i.e. stone tool) resources. However, historical land use of the proposal site and surrounds has the potential to have significantly impacted any archaeological deposits that may be present.
- It was predicted that stone artefact scatters and scarred trees were the most likely site types to be identified within the project site. Stone artefact scatters were likely to be most frequent and potentially larger in size in proximity to reliable sources of water. Quarry sites were also possible where suitable rock outcrops are present. Within the project site, the potential for quarry sites is greatest in the section between Croppa Creek and North Star where geological mapping indicates rock types suitable for artefact manufacture (silcrete, basalt, dolerite and porcellanite) may be present.
- It is noted that the project site has been subject to significant disturbance. Within the existing rail corridor, the construction and maintenance of the existing rail line is likely to have resulted in the removal/relocation of archaeological evidence that may have been present (if any). Similarly, in adjoining farmland within the project site and additional assessment areas outside the existing rail corridor, clearance, grazing and cultivation of the landscape will have impacted on archaeological potential, likely compromising the integrity of any archaeological sites that may have been present.

4.2.2 Aboriginal heritage within the N2NS CIZ

- 31 new Aboriginal sites[2] were identified by the field surveys associated with the project, 29 of which are within the CIZ (18 from the 2017 assessment and 11 from the 2020 assessment). Of these sites, 17 are isolated artefacts, 11 are artefact scatters and one a modified tree.
- Two previously recorded sites are also within the CIZ, being an artefact scatter (02-4-0073) and a modified tree 10-6-0049. A further modified tree (10-6-0048) is located outside but within 20m of the CIZ.
- Four areas of moderate or higher archaeological potential (two from the 2017 assessment and two from the 2020 assessment) were identified within the N2NS SP1 CIZ. These are (from south to north):
  - Survey unit 15 (near Toukey Creek rest area)
  - Survey unit 55 (Croppa Creek)
  - Survey unit 66B, site N2NS IA1 #2-4-0073, Mungle Creek)
  - Survey unit 65B, site NNS AS12 AHIMS #11-1-0060, Yallaroi Creek).

4.2.3 Aboriginal heritage impacts and management

Based on currently available information there are 31 archaeological sites within the CIZ[3]. Of these it is considered that the proposal is likely to result in harm to 29 archaeological sites as follows:

- Isolated finds: NNS IA2-14 and 16-19; and
- Artefact scatters NNS AS1-2 and 4-12; 02-4-0073

The salvage surface collection of these sites will be undertaken by ARTC prior to the commencement of this HMP.

In addition, the proposal may result in disturbance to areas of moderate or higher archaeological potential within Survey Units 15 and 55. These survey units will have been test excavated by ARTC prior to the commencement of this HMP, as per the ARTC ACHMP Section 5.1 and 5.3.

The one modified tree within the CIZ should be able to be avoided using mitigation measures during construction, including fencing and worker induction as detailed in Section 5.8.3.

No construction works will be undertaken outside the CIZ boundary to ensure that project does not result in inadvertent impacts to sites / objects outside the approved disturbance footprint.

4.3 Non-Aboriginal heritage

The potential non-Aboriginal heritage resource of the project generally reflects the documented history of the surrounding region and the extant Narrabri to North Star rail alignment. The individual surviving component elements such as the extant steel truss underbridges, timber constructed underbridges and remnant evidence of former stations, is considered to generally be of local significance.

With the exception of Moree, Edgeroi, Bellata and Gurley railway stations the majority of the former stations have been previously removed with only occasional earthen embankments or loading banks remaining as evidence of their former locations.

The only locally listed heritage item within the CIZ is Moree Station, which is listed on both the Moree Plains Local Environmental Plan 2011 and Railcorp's section 170 heritage register. Moree Station is considered by the Moree Plains LEP to have State significance.

The main potential for indirect impacts relates to vibration generated by construction. Given the proximity of construction to Moree Station, the former Edgeroi Woolshed (a potential heritage item considered to be of local significance although located outside the CIZ), and remaining structures associated with Edgeroi, Bellata, and

[2] 19 sites in the Umwelt 2017 report and 12 in the Niche 2020 report.
[3] 29 newly recorded sites and 3 previously recorded sites.

Gurley stations, there may be the potential for indirect impacts caused by vibration. This is addressed in Sections 6.3, 7.4, 11.4 and 11.5 of Trans4m Rail's Noise and Vibration Management Plan.

Two surveyors trees were recorded, one at Milguy and the other at Tikitere. Both are situated outside the CIZ boundary by 7 and 15 metres respectively.

4.4 Risk management

Table 6 provides an assessment of risk from construction activities to Aboriginal and non-Aboriginal**.**

Table 6: Heritage Risk Assessment

CONSTRUCTION ACTIVITY/ ASPECT	POTENTIAL IMPACT	RISK LEVEL PRIOR TO MITIGATION	INDICATIVE MITIGATION MEASURES	RISK LEVEL FOLLOWING MITIGATION	DOCUMENTS / PROCEDURES / TRAINING REQUIRED
ABORIGINAL HERITAGE					
▸ Early works including non-substantial construction activities e.g. services relocations ▸ Planned salvage of Aboriginal heritage items ▸ Clearing of vegetation ▸ Initial removal of topsoil ▸ Construction of site compounds and stockpile areas ▸ Temporary access roads	Disturbance of known or unidentified items or places of Aboriginal heritage significance	High	▸ Planned salvage of all known Aboriginal sites within the CIZ will be undertaken by ARTC ahead of construction commencing. ▸ Test excavation of areas of potential will be undertaken by ARTC ahead of construction commencing. ▸ Modified trees at Bellata-HW17-ST-1: 10-6-0049 and N2NS ST2: 10-6-0049, are located within the CIZ boundary. These sites will be fenced from construction impacts. ▸ Modified trees at Toukey Creek-HW17-ST-1: 10-6-0050 and Bobbiwaa Creek-HW17-ST-1: 19-3-0159 are located outside the CIZ boundary. These sites do not need to be fenced as there will be no construction impacts outside the CIZ. ▸ For unanticipated finds, an unexpected finds procedure has been developed and included in this HMP to provide a consistent method for managing any unexpected heritage items discovered during construction, including potential Aboriginal heritage items or objects, and human skeletal remains. This is outlined in Section 5.8.6. ▸ The unexpected finds procedure defines requirements relating to potential human skeletal remains This is outlined in Section 5.8.7 and the flow chart in Appendix B of this HMP. ▸ During pre-work briefings, employees will be made aware of the unexpected finds procedures and obligations under the *National Parks and Wildlife Act 1974*.	Medium	▸ This Heritage Management Sub-plan ▸ AMS ▸ ECMs ▸ ENVP15-Heritage Discovery and Protection ▸ Toolbox Talk - Heritage ▸ Induction

CONSTRUCTION ACTIVITY/ ASPECT	POTENTIAL IMPACT	RISK LEVEL PRIOR TO MITIGATION	INDICATIVE MITIGATION MEASURES	RISK LEVEL FOLLOWING MITIGATION	DOCUMENTS / PROCEDURES / TRAINING REQUIRED
			▸ Ancillary facilities that are NOT identified by description and location in the documents listed in Condition A1 of the CoA must be assessed to ensure they have no impacts on Aboriginal Heritage items or areas beyond the impacts approved under the terms of the Project approval. This assessment will be undertaken via the completion and approval of a Consistency Assessment, as detailed in Section 4.3 of the CEMP. ▸ No-Go Zones and Environmentally Sensitive Area signage will be established on-site to demarcate the approved construction impact zone to ensure that works do not destroy, modify or otherwise physically affect any heritage items, including Aboriginal objects, outside of the CSSI construction boundary. All Project personnel (incl sub-contractors) will be Inducted and Toolboxed prior to works commencing, which will include a briefing of the site's approved construction impact zone, the No-Go Zone demarcation and any heritage areas or items in close proximity to the works.		
NON-ABORIGINAL HERITAGE					
▸ Early works including non-substantial construction activities e.g. services relocations	Impacts on listed heritage items or items with heritage values due to demolition, altered historical arrangements and access, visual amenity, landscape and vistas, curtilage, subsidence and	Medium	▸ To minimise the potential for accidental impacts, the boundary of Moree, Edgeroi, Bellata, and Gurley stations, Edgeroi Woolshed, and the surveyor's trees, would be marked on plans and clearly defined during construction. ▸ In the event that unexpected historic archaeological remains, relics, potential heritage items are discovered during construction, all works in the immediate area	Low	▸ Construction Heritage Management Sub-plan ▸ AMS ▸ Construction Noise and Vibration

CONSTRUCTION ACTIVITY/ ASPECT	POTENTIAL IMPACT	RISK LEVEL PRIOR TO MITIGATION	INDICATIVE MITIGATION MEASURES	RISK LEVEL FOLLOWING MITIGATION	DOCUMENTS / PROCEDURES / TRAINING REQUIRED
▸ Planned salvage of Aboriginal heritage items ▸ Clearing of vegetation ▸ Initial removal of topsoil ▸ Construction of site compounds and stockpile areas ▸ Temporary access roads	architectural noise treatment		would cease, and the unexpected finds procedure would be implemented, as per **Section 5.9.6** this HMP. ▸ Ancillary facilities that are NOT identified by description and location in the documents listed in Condition A1 of the CoA must be assessed to ensure they have no impacts on non-Aboriginal Heritage items or areas beyond the impacts approved under the terms of the Project approval. This assessment will be undertaken via the completion and approval of a Consistency Assessment, as detailed in Section 4.3 of the CEMP. No-Go Zones and Environmentally Sensitive Area signage will be established on-site to demarcate the approved construction impact zone to ensure that works do not destroy, modify or otherwise physically affect any heritage items, including non-Aboriginal objects, outside of the CSSI construction boundary. All Project personnel (incl sub-contractors) will be Inducted and Toolboxed prior to works commencing, which will include a briefing of the site's approved construction impact zone, the No-Go Zone demarcation and any heritage areas or items in close proximity to the works.		Management Plan ▸ ECMs ▸ ENVP15-Heritage Discovery and Protection ▸ Toolbox Talk - Heritage ▸ Induction
	Damage to heritage items from vibration during construction or operation	High		Medium	
	Disturbance of known or unidentified places of non-Aboriginal heritage significance	High		Medium	

In addition to the above Trans4m Rail risk assessment, Table 26.3 of the N2NS EIS summarises potential residual impacts for the project with a description of how they would be managed. For Aboriginal heritage, the residual impact is that construction may result in the disturbance/ destruction of identified and unidentified Aboriginal archaeological sites. Recommended potential mitigation measures are:

- Detailed design and construction planning would minimise direct impacts to items/sites of Aboriginal heritage significance
- Completion of all Aboriginal heritage excavation and salvage actions by ARTC prior to construction commencing
- Implementation of this Aboriginal heritage management plan once construction commences
- Sites within the proposal site would be avoided where practicable

These mitigation measures are incorporated in Trans4m Rail's management and mitigation measures detailed in **Section 5**.

5 Environmental Management Framework

5.1 Trans4m Rail Environmental Management System

Trans4m Rail will be utilising an Environmental Management System (EMS) (which is certified to ISO AS/NZS14001) to enhance its' environmental performance. This is discussed in detail in Section 8.1 of the CEMP.

5.2 Heritage Responsibilities

As noted in **Table 1** of the Compliance Matrix, ARTC are actively managing the identification, salvage, storage and management of known heritage artefacts. Specifically, ARTC are responsible for:

- Identifying Aboriginal objects and developing and implementing measures for excavating/salvaging and safe keeping of these objects (i.e. CoAs C11 a, b and c);
- Undertaking inspections of trees for evidence of cultural scarring (i.e. CoA C11 d);
- Providing heritage input into the detailed design of the Moree Railway Station including recommending measures to retain the legibility of the concrete post and panel platform (i.e. CoAs C11 e and g);
- Developing a heritage interpretation strategy for Edgeroi, Bellata and Gurley Railway Stations (CoA C11 h);
- Offering components of the Croppa Creek rail bridge to the local community (CoA C11 i); and
- Developing measures to retain the existing North Star station sign in situ (or re-instated following construction) alongside the rail corridor in North Star Community Park (CoA C11 j).

Trans4m Rail's responsibilities lie with managing the discovery of any unexpected finds in accordance with the Unexpected Finds procedure (see Section 5.9) and constructing the project with regard to heritage values and in accordance with ARTC's detailed design.

5.3 Roles and Responsibilities

Section 8.4 of Trans4M Rail's CEMP details roles and responsibilities for environmental management (including Heritage Management). Trans4m Rail's Environment Manager has overall responsibility for the implementation of environmental matters on the Project and the Site Supervisor is responsible for field implementation of environmental requirements and control measures (including Heritage requirements and control measures). It is important to note that all personnel are responsible for ensuring heritage values are protected.

In addition, Trans4m Rail will engage appropriate heritage specialists to:

- Provide advice and guidance to manage and minimise potential impacts to any heritage values through a variety of means;
- Provide advice on methods and locations for installing equipment used for vibration, movement and noise monitoring at heritage-listed structures;
- Provide ongoing and timely advice in relation to unanticipated finds throughout construction (see **Section 5.8.6** and **5.9.6**.
- Prepare heritage impact assessment reports (if further are needed).

5.4 Competence, Training and Awareness

All personnel performing heritage management activities for and on behalf of Trans4m Rail will be trained, qualified and competent. Personnel performing specified assigned tasks shall be qualified on the basis of appropriate education, training, skills and/or experience, as appropriate. Section 6.5 of the CEMP details competence, training and awareness and includes:

- Inductions;
- Tool box talks; and
- Daily pre-start meetings.

5.4.1 Cultural heritage inductions

All workers on the project shall undergo cultural heritage induction to ensure that they are aware of the heritage places and sites within the CIZ and their appropriate management as documented in this HMP. The induction will be developed and delivered by the Trans4m Rail Environment Manager or delegate.

The heritage induction will include the following elements:

- A short review of the heritage sites present within and in close proximity of the CIZ;
- A presentation of the heritage management measures being applied to these sites / places, to include
  - Images of heritage exclusion fencing; and
  - How to identify Aboriginal or historic objects /sites such that if an unanticipated find is encountered, workers will have an understanding of what they may look like.

5.5 Hold Points - Heritage

Hold Points will be implemented on this Project for the purpose of minimising the likelihood of an incident when undertaking specific construction activities that have a greater environmental risk. Section 8.6 of the CEMP discusses Hold Points. Hold Points specific to heritage management include:

- Entering and undertaking works within the vicinity of a sensitive no-go area such as a heritage item, protected vegetation/habitat and contaminated area;
- Unexpected finds of heritage or contaminated land; and
- Developing a site Environmental Control Map highlighting sensitive areas and clearly identifying construction boundaries and No Go Zones.

5.6 Environmental and Sustainability Inspections

Section 8.8 of Trans4m Rail's CEMP details environmental and sustainability inspections, including inspections related to the HMP. Table 7 lists the details of each type of environmental and sustainability inspection to be undertaken on the Project.

Table 7: Inspection Schedule

Activity	Frequency	Responsibility	Record
Site inspection	Daily	Supervisor/s	Site Diary
Environmental and Sustainability	Weekly	Environment Coordinator/s	Environmental and Sustainability checklist
High Risk Activity Inspections	As required	Construction Manager	High Risk activity inspection checklist
Subcontractor HSEQ Deliverables	Pre-mob and monthly thereafter	Commercial Representative	Subcontract Management Pack

5.7 Compliance Monitoring and Reporting

The Trans4m Rail Environment Team will undertake environmental inspections, audits and reporting to develop and evaluate the effectiveness of environmental controls. This will include:

- General observations for the daily management of erosion and sediment controls shall be documented in site dairies by the Site Supervisor;
- Regular inspection of heritage controls shall be undertaken by the Environmental Coordinator and Site Supervisor using the Weekly Environmental Management Inspection Checklist and uploaded to Project Pack Web;

- Effectiveness of heritage controls shall be regularly reviewed by the Environmental Coordinator for adequacy having regard for changing circumstances;
- Monthly reporting to Inland Rail on heritage management will be recorded through Project Monthly Reports;
- Six monthly independent audits by a suitably qualified professional;
- ER regular monitoring of the implementation of the documents listed in the CoA; and
- The broader EMP auditing process is discussed further in Section 8.10 of Trans4m Rail's CEMP.

5.8 Aboriginal Heritage Management

There are 32 archaeological sites within the CIZ[4]. Of these it is considered that the proposal is likely to result in harm to 29 archaeological sites as follows:

- Isolated finds: NNS IA2-14 and 16-19
- Artefact scatters NNS AS1-2 and 4-12; 02-4-0073

These sites will have been salvaged via surface collection by ARTC prior to construction commencing.

In addition, the proposal may result in disturbance to areas of moderate or higher archaeological potential within Survey Units 15, 55, 65B and 66B. These survey units will have been test excavated by ARTC prior to construction commencing.

The two modified trees within the CIZ should be able to be avoided using mitigation measures during construction, including fencing and worker induction as detailed below in **Section 5.8.3.**

Table 8 details all identified Aboriginal sites and zones of archaeological potential within the CIZ, colour coded to their management category and listed from south to north.

Table 8: Aboriginal site management

Sites that will have undergone test excavation

Sites that require fencing / mitigation to ensure no inadvertent impacts

Sites that have been salvaged via surface collection prior to construction

EIS Map Ref	Site Name	AHIMS number	Site Type	Mitigation	Responsibility
Add A45	NNS IA14	19-3-0210	Isolated Find	Surface collection	ARTC
Add A32	Bellata-HW17-ST-1	10-6-0049	Modified Tree	Fence with a buffer zone	Trans4m Rail
A14	NNS IA2	10-6-0052	Isolated Find	Surface collection	ARTC
A15	NNS IA3	10-6-0051	Isolated Find	Surface collection	ARTC
A15	NNS AS1	10-6-0060	Artefact Scatter	Surface collection	ARTC
Add A30	Zone 15 near Toukey Creek (includes site 10-6-0060)		Moderate Archaeological Potential	Test Excavation	ARTC
A16	NNS IA4	10-6-0059	Isolated Find	Surface collection	ARTC
A17	NNS IA5	10-6-0053	Isolated Find	Surface collection	ARTC
A22	NNS AS2	10-6-0056	Artefact Scatter	Surface collection	ARTC
Add A22	NNS ST2	10-6-0068	Scarred Tree	Fence with a buffer zone	Trans4m Rail
Add A20	NNS IA16	10-6-0069	Isolated Find	Surface collection	ARTC
Add A20	NNS AS8	10-6-0071	Artefact Scatter	Surface collection	ARTC
A34	NNS IA6	10-6-0054	Isolated Find	Surface collection	ARTC
A36	NNS IA7	11-1-0042	Isolated Find	Surface collection	ARTC

[4] 29 newly recorded sites and 3 previously recorded sites.

EIS Map Ref	Site Name	AHIMS number	Site Type	Mitigation	Responsibility
A37	NNS IA13	11-1-0047	Isolated Find	Surface collection	ARTC
A37	NNS IA12	11-1-0046	Isolated Find	Surface collection	ARTC
A39	NNS IA8	11-1-0045	Isolated Find	Surface collection	ARTC
A41	NNS IA9	11-1-0044	Isolated Find	Surface collection	ARTC
Add A11	NNS IA19	11-1-0057	Isolated Find	Surface collection	ARTC
Add A11	NNS IA18	11-1-0058	Isolated Find	Surface collection	ARTC
A43	NNS AS4	11-1-0040	Artefact Scatter	Surface collection	ARTC
Add A10	NNS AS11	11-1-0061	Artefact Scatter	Surface collection	ARTC
Add A8	Zone 55 Croppa Creek (no site)		Moderate Archaeological Potential	Test Excavation	ARTC
Add A6	NNS AS12	11-1-0060	Artefact Scatter	Surface collection	ARTC
Add A6	Zone 65B Yallaroi Creek tributary (includes site 11-1-0060)		Moderate Archaeological Potential	Test excavation	ARTC
Add A6	NNS AS10	11-1-0062	Artefact Scatter	Surface collection	ARTC
Add A6	NNS IA17	11-1-0059	Isolated Find	Surface collection	ARTC
A52	NNS IA10	11-1-0043	Isolated Find	Surface collection	ARTC
A53	NNS IA11	10-6-0055	Isolated Find	Surface collection	ARTC
A53	NNS AS7	02-4-0091	Artefact scatter	Surface collection	ARTC
A54	N2NS IA1	02-4-0073	Artefact scatter	Surface collection	ARTC
Add A2	Zone 66B Mungle Creek (includes site 02-4-0073)		Moderate Archaeological Potential	Test excavation and surface collection with vegetation clearance if needed	ARTC
A55	NNS AS6	02-4-0090	Artefact scatter	Surface collection	ARTC
A55	NNS AS5	11-1-0041	Artefact scatter	Surface collection	ARTC
Add A1	NNS AS9	02-4-0073	Artefact scatter	Surface collection	ARTC

**Add A#* refers to reference maps from the Addendum ACHAR

ARTC are responsible for the identification of culturally modified trees in areas that require further archaeological investigation as specified in CoA E71. Where construction will involve clearance of mature native trees in these areas, any such trees subject to clearance should be inspected for any evidence of cultural scarring/modification. The identification and recording of culturally modified trees will be consistent with that specified in Aboriginal scarred trees in New South Wales, a field manual (DEC and Andrew Long 2005). This manual notes that the accuracy of a scarred tree identification will depend on the experience and understanding of the recorder, and the opportunity provided by the tree to reveal any evidence of cultural intervention. If a previously unknown culturally modified tree is identified it should be recorded in accordance with Requirement 23 of the Code of Practice for Archaeological Investigation of Aboriginal Objects in New South Wales. Site recording will be undertaken by an appropriately qualified and experienced archaeologist in consultation with RAPs. Following the completion of recording and significance assessment, the site card for the modified tree will be submitted to the AHIMS register and, if required, managed according to the procedure outlined below:

- As the preferred management option, all modified trees are to be avoided where practicable and conserved in situ; or
- Where avoidance is not possible, salvage and conservation of the tree(s), or the scarred portion of the tree's trunk, at a location outside the Project area will be undertaken. This option involves the removal of either the entire trunk and canopy of the tree, or the section of the trunk that includes the complete scar and transportation of the scar it to the designated keeping place location.

The selection and adoption of a management strategy should be made in consultation with the RAPs.

5.8.1 Salvage via Surface Collection of registered Aboriginal sites

The 29 sites being impacted by the proposal are all artefact sites, broken into isolated finds and artefact scatters as follows:

- 17 isolated finds: NNS IA2-14 and 16-19
- 12 artefact scatters NNS AS1-2 and 4-12; 02-4-0073.

These sites will have been salvaged by ARTC prior to the commencement of construction. Surface collection of Aboriginal objects will be salvaged in accordance with the following methodology:

- Surface collection will be undertaken by a qualified and experienced archaeologist with the involvement of RAPs;
- All visible surface archaeological material will be flagged, and general photographs of the area taken throughout the collection process;
- Surface salvage will cease after a 'reasonable search effort' has been made where a reasonable search effort is defined as comprising a pedestrian walk-over of the entire site within the impact footprint with a spacing of no more than 2 m between surface salvage participants;
- Additional recording will be made if the nature or the spatial size of the site differed from the original recording;
- The location of all individual artefacts will be recorded using a hand-held GPS;
- Artefacts will be collected and placed in labelled bags with reference to site, assigned unique artefact number and associated GPS location; and
- Artefacts will be retained for recording and analysis.

Any Aboriginal objects salvaged under the ACHMP may be temporarily stored at the office of the ARTC Aboriginal heritage consultant or laboratory during analysis and recording. Such objects will be stored in a secure location and returned to ARTC as soon as practical after the completion of analysis and recording. Any Aboriginal objects salvaged under the ACHMP may be temporarily stored in a secure facility at the ARTC office, prior to transfer to their long-term storage location.

Based on the outcomes of consultation with the RAPs HMP, the following is planned for the long-term safe keeping and management of Aboriginal objects recovered.

Post-construction of the rail, any artefacts recovered under the ACHMP will be reburied on Country. Three locations will minimally be chosen to rebury artefacts within Toomelah, Moree and Narrabri Country. The precise reburial locations/s will be decided upon by ARTC at a future date with the decision to be based on a number of key considerations such as land access and where no future ground disturbance is planned. The location of the reburial sites will be provided to RAPs through the continued consultation process for the project as outlined in Section 4 of this ACHMP. Reburial will be undertaken and recorded in accordance with Requirement 26 of the Code of Practice for Archaeological Investigation of Aboriginal Objects in NSW. Following the reburial process, the record will be submitted to AHIMS with a site update record card for the site(s) in question.

If, however, the reburial of artefacts is determined to be infeasible at a later stage during the Project the long-term deposition of artefacts will require an agreement by RAPs to a Care and Control Agreement under the National Parks and Wildlife Act 1974 (NPW Act). Under section 85A(1)(c) of the NPW Act, the Director General of the Department of Premier and Cabinet may transfer such Aboriginal objects to a person or persons for safekeeping. Any changes to the Keeping Place of Aboriginal objects salvaged under this HMP will be determined in consultation with the RAPs. This may include (but is not limited to) the permanent transferral of Aboriginal objects to another Keeping Place and/or location for storage and/or display (such as a local museum, historical society or educational institution).

5.8.2 Test Excavations

Four survey units 15, 55, 65B and 66B were assessed as having archaeological potential in various forms. Where detailed design will result in ground surface disturbance in these zones, test excavations, followed by salvage excavations where required, will be completed by ARTC prior to construction commencing.

The key aims and objectives of the archaeological excavation will be to:

- Increase ground surface visibility and/or investigate the nature, significance and extent of any subsurface archaeological deposits;
- Mitigate harm by collecting a representative sample of Aboriginal objects in a controlled way;
- Provide a representative sample of Aboriginal objects which may be utilised, subject to the procedures outlined in below and in consultation with the RAPs, for educational purposes or for additional lithic analysis; and
- Provide a representative sample of artefacts and/or archaeological material to address key research questions for the Project area and region.

Aboriginal cultural heritage sites and/or areas of archaeological potential that are considered to have research potential will undergo a two-stage program of archaeological excavation. This program will include initial sub-surface testing phase followed, when warranted, by a controlled salvage excavation and investigation as follows:

1. Initial sub-surface testing involving one or more linear transects of hand excavated, regularly spaced test pits; and

2. Controlled salvage excavation of specific areas of high research potential identified as identified during phase 1.

If the results of the initial sub-surface testing program reveals that the site/area is of low scientific significance in accordance with the Burra Charter (Australia ICOMOS 2013) and the Guide to Investigating, Assessing and Reporting on Aboriginal Cultural Heritage in NSW (OEH 2011), then archaeological excavation will cease here. If test excavations, for instance, identify high levels of sub-surface disturbance (i.e. deposits with poor spatial integrity) and/or few sub-surface artefacts, further investigation via more detailed controlled salvage and investigation would not be warranted due to the low potential to contribute new and/or useful information to the regional archaeological record. Such a decision will be made in consultation with ARTC, the archaeologist and the RAPs involved during the testing program.

Where the results of initial test excavations deem that controlled salvage excavation is warranted (e.g. due to the identification of moderate or higher research value), the following process will be implemented at a scale appropriate to the extent and nature of the site as determined in consultation with a suitably qualified and experienced archaeologist and the attending RAPs:

- Excavation will be undertaken by a suitably qualified archaeologist(s) with the assistance of RAPs;
- All excavation will be undertaken by hand using trowels, shovels and mattocks where appropriate;
- It may be necessary in some situations to excavate mechanically (in a controlled manner) if, for instance soils are cemented or for safe work methods for excavating at depth or in unstable soil profiles (such as stepping out or shoring) depending on the stability of the sediment, depth of culturally sterile of deposits or depth of proposed impact;
- Open area excavation will progress in units measuring 1 m2. Excavation pits may be expanded if one or more of the following triggers are identified
  - The recovery of high numbers of artefacts as identified based on a literature review of the region,
  - The recovery of spatially accurate mapping of significant features such as, but no limited to, hearths or knapping floors/events,
  - The recovery of significant diagnostic artefact types such as, but not limited to, backed artefacts, retouched artefacts, ground or grinding tools, ochre or rare artefact types within the region;
- The placement of excavation pits will be decided upon by the archaeologist in consultation with attending RAPs;

- Excavation will cease at the base of artefact bearing layers (i.e. sterile deposit), which is expected to the B horizon; or
  - to refusal at rock should this occur in the absence of B horizon or base of artefact layer; or
  - to groundwater, where present; or
  - at any point if it is found to be unsafe to continue whether due to contamination or some other hazard that is identified during the excavation process;
- The expansion of salvage pits will cease with the absence of a trigger for expansion, as identified above;
- Soil, geomorphic, environmental and/or dating samples will be collected as required to address the key research questions for the Project and region;
- All excavation pits will be assigned an alpha-numeric identifier to be used in all recording associated with the pit and the location of each excavation pit mapped accurately to a known datum;
- The first excavation pit will be excavated and documented in 5 (cm) spits at each area (i.e. site or area of archaeological potential) being investigated. Based on the evidence of the first excavation unit, excavation will proceed in 10 cm spits or according to natural sediment profile/stratigraphic units (whichever is smaller) at the discretion of the leading archaeologist;
- Excavation will cease at culturally sterile units or bedrock in all instances and/or if the deposits are found to be highly disturbed beyond the depth at which disturbance from the proposed activity is predicted to occur;
- Photographic and/or scale-drawn records of exposed soil profiles in open area excavations will be made;
- If an archaeological feature such as a hearth is uncovered, the entire feature will be excavated and recorded with photographs and scale plans drawn;
- All excavated soils will be wet or dry-sieved (dependent on composition) through 5 mm and/or 3 mm sieves, as deemed appropriate by a qualified archaeologist, and in accordance with the Code of Practice for Archaeological Investigation of Aboriginal Objects in New South Wales;
- All cultural material recovered during the excavation (whether in-situ or at the sieves) will be bagged and labelled with appropriate provenance data;
- Excavation will be documented using a standard recording form for each excavation pit/square and will minimally include details such as site name, date, recorder, square identifier, and number of spits;
- The excavation pits will be backfilled upon completion and recording;
- Any artefacts recovered during test excavations will be analysed and a catalogue of the artefacts will be prepared in accordance with Requirement 26 of the Code of Practice for Archaeological Investigation of Aboriginal Objects in New South Wales; and
- In areas where surface salvage and/or archaeological excavation has occurred, unmitigated harm to Aboriginal objects, with the exception of human remains and cultural modified trees, would occur within the current and approved CIZ.

The above methodology may be modified if appropriate, at the discretion of the suitably qualified and experienced leading archaeologist and in consultation with the proponent and attending RAPs.

5.8.3 Site Conservation

There are two sites within the CIZ that require the implementation of mitigation measures to ensure that no inadvertent impacts occur to them. These are both modified trees shown in **Table 8** in purple, Bellata-HW17-ST-1: 10-6-0049 and NNS ST2: 10-6-0068. Both will be required to be fenced off for the duration of the construction phase. High visibility fencing is appropriate to ensure no inadvertent impacts.

A further two modified tree sites are located outside the CIZ boundary: Toukey Creek-HW17-ST-1: 10-6-0050 and Bobbiwaa Creek-HW17-ST-1: 19-3-0159. These sites do not need to be fenced unless construction impacts are anticipated outside the CIZ.

It should be noted that Trans4m Rail will not destroy, modify or otherwise physically affect any heritage items, including Aboriginal objects, outside of the CIZ.

5.8.4 Monitoring in areas of CIZ not previously assessed

The culmination of survey effort from the original EIS surveys and Addendum surveys did not result in all areas of Aboriginal site potential within the CIZ being surveyed. Niche (2020) present and map the survey units that were slated for additional survey but where survey could not be achieved. There are 23 survey units, as presented in Table 9.

If surface or ground disturbing works are required within these survey units beyond the existing disturbed rail corridor, then an archaeological monitoring program will be implemented involving RAPs and heritage specialist/s when visibility may be greater following clearing associated with the proposed works. This work will be undertaken by ARTC and will occur following clearing associated with the proposed works. In the case of areas where crops or lack of permission to access land prevented previous survey/assessment, archaeological monitoring will occur prior to any ground disturbance. In the case of areas where dense vegetation prevented previous assessment/survey, archaeological monitoring will be undertaken at the time of vegetation clearing and/or surface grading.

The monitoring team will include a suitably qualified archaeologist and representatives of the RAPs. Specific details that will be recorded during the monitoring program include (but are not limited to):

- The date of monitoring;
- The location of the area being monitored;
- The personnel involved in the monitoring;
- An overview of results including a description of any objects (if found);
- Whether any follow-up actions are required to be considered (e.g. recommendations, implementation of management or initiation of the Contingency Plan, etc.); and
- Any other relevant information.

Table 9: Survey units not assessed during survey and to be monitored if disturbance is required.

Survey Unit	Waterway association
4b west	Boggy Creek south
6b west	10 Mile Creek north
7b east & west	10 Mile Creek south
8b west	Galathera Creek Crops
16b east	Toukey Creek north and adjoining gently inclined slopes
22b east	Gurley Creek Dense vegetation
23b east & west	Tycannah Creek 1
24b east	Tycannah Creek 2
45b east & west	Gently inclined slopes
48b east & west	Drainage line (first order)
50b east	Gently inclined slopes
51b west	Bunna Creek south
52b all	Gil Gil Creek and adjoining lower slopes
54b west	Croppa Creek south and adjoining gently inclined slopes
55b east	Croppa Creek and adjoining slopes and terraces
60b south west	Yallaroi Creek
60b north west	Yallaroi Creek
61b east & west	Tackinbri Creek tributary
65b west	Gently inclined slopes
66c north & south	Mungle Creek south - tributary
67b east & west	Gently inclined slopes

Survey Unit	Waterway association
74b west	Spring Creek
75b north & south	Coolleearllee watercourse

5.8.5 Additional survey in areas of mature vegetation

As noted in **Section 5.8.4**, ARTC are responsible for undertaking all investigations in areas that were not subject to archaeological survey (i.e. in areas where access was not feasible at the time of the EIS or additional surveys). ARTC have developed a procedure for managing the potential recording of new culturally modified trees, as presented in Appendix D.

All efforts will be made to avoid impact to any newly identified modified trees, as per the protocols in **Section 5.8.3**. In the unlikely event that this not be possible, then consultation with the RAPs will be required to develop an acceptable tree removal salvage protocol as presented in Appendix D.

5.8.6 Unexpected finds procedure within the approved Construction Impact Zone

This unexpected finds procedure has been prepared by a suitably qualified and experienced heritage specialist[5].

Further Aboriginal or non-Aboriginal Heritage sites or objects may be recorded within the approved CIZ. Changes in the nature of the landscape and visibility factors since the 2017 EIS heritage investigations and the select 2020 heritage surveys means that Aboriginal and non-Aboriginal Heritage objects may have been revealed where they were presently not seen before. Such a scenario will probably only occur in relation to low-density artefact scatters or isolated finds.

Should items that are believed to be Aboriginal or non-Aboriginal Heritage objects be discovered, the following steps should be adhered to:

1. All work in the immediate vicinity of the find (preferably within a 5 metre radius) will cease to ensure no further impacts to the objects / site.
2. The Trans4m Rail Environmental Representative and the ARTC Cultural Heritage Manager are to be notified immediately to determine the whether works can proceed in the surrounding area with the appropriate safeguards in place.
3. Advice will first be sought from the project's qualified archaeologist (or Heritage Consultant) to determine whether the find constitutes an Aboriginal or non-Aboriginal Heritage item or object. If the object is confirmed as being of Aboriginal or non-Aboriginal Heritage then the archaeologist (in consultation with RAPs, where relevant) will determine the significance and the anticipated impact of the find. No works will re-commence within the stop work zone until the find has been appropriately assessed. DPC Heritage will be notified of the find and consulted regarding the management of the find.
4. If the newly identified Aboriginal or non-Aboriginal heritage item or site will be impacted, then the archaeologist will propose an appropriate management strategy in accordance with this HMP. This would entail:
    a. Salvage of the object as per the and recording of attributes as per the *Code of Practice for Archaeological Investigation of Aboriginal Objects in New South Wales* (the Code, DECCW 2010b), Requirement 19. This includes providing a unique site identifier and completing artefact recording.
    b. GPS location and photographs to be taken to document the nature of the find location and the find itself.
    c. Objects recovered through this process should be temporarily stored at the Trans4m Rail site office and kept in a locked cabinet until they can be transferred to the care of the ARTC Cultural

[5] This procedure was prepared by Dr Jodie Benton, OzArk Environment & Heritage.

Heritage Management team. Eventually at project completion the artefacts and heritage items will be reburied on country in accordance with Requirement 26 of the Code.

5. Once the unanticipated artefact / site has been salvaged in this manner, works may resume with concurrence of the Trans4m Rail Environmental Representative.
6. An AHIMS site card is required to be completed and submitted to Heritage NSW in compliance with Section 89A of the NSW *National Parks and Wildlife Act 1974*. It will also be necessary to then submit and Aboriginal Site Impact Record form (ASIRf) once the site has been salvaged.

Refer to Appendix C for Unexpected Finds (Aboriginal and non-Aboriginal Heritage) Procedure – Flow Chart.

5.8.7 Human remains procedure

Should bone be encountered that is suspected of being human skeletal material, then the following steps should be undertaken, also shown in the simple flow chart presented in as Appendix B.

1. All work in the immediate vicinity of the find will cease to ensure no further impacts to the objects / site.
2. The Trans4m Rail Environmental Representative and the ARTC Cultural Heritage Manager are to be notified immediately to determine the whether works can proceed in the surrounding area with the appropriate safeguards in place.
3. If substantial doubt as to human origin, gain advice from the project's qualified archaeologist or other specialist to determine whether the remains are human.
4. If the remains are confirmed as human then the NSW Police and Heritage NSW (DPC Heritage) must be notified immediately. This will enable definitive identification by authorities.
5. If the remains are less than 100 years, then the NSW Police and Coroner will take responsibility for the subsequent process.
6. If the remains are more than 100 years and likely Aboriginal, then the RAPs and Heritage NSW will dictate the appropriate course of action.

5.8.8 Methodology for additional Archaeological Investigations

The original archaeological survey strategy, as previously employed and endorsed during the technical studies for the N2NS Project EIS in 2016 was adopted for the additional survey works for additional assessment activities. The original survey strategy was designed to satisfy requirements for archaeological survey as per the *Code of Practice for Archaeological Investigation of Aboriginal Objects in NSW* (DECCW 2010a) and addressed the following requirements:

- Survey was designed and implemented to ensure that an adequate sample of all the landforms present within the Subject Area is obtained.
- Previously identified archaeological sites present within the Subject Area and potentially subject to impact by the project were located and recorded where possible.
- Additional field survey focussed on areas located in previously identified 'greatest potential landform areas' for both the additional project footprint areas and the original project footprint area that were not subject to field survey.

The survey methodology is outlined below:

- Areas selected for survey were walked by the survey participants at intervals determined with reference to ground surface visibility and levels of exposure.
- Survey participants consisted of both archaeologists and RAP representatives, with the number of participants decided based on the size and sensitivity of the area subject to survey (see Table 7of the ACHAR for details of survey participants).
- A hand-held non-differential GPS unit was used to record all tracks and appropriate site data for the survey with spatial data recorded in terms of Datum and grid co-ordinates (i.e. Zone, Easting, Northing) as per Requirement 8b of the Code of Practice for Archaeological Investigation of Aboriginal Objects in NSW (DECCW 2010a).

- Representative photographs were taken of survey units, different visibility levels, exposures and disturbed areas.
- All Aboriginal cultural heritage sites, artefacts and/or features identified during the survey were flagged and their location recorded using a hand-held non-differential GPS unit. The context of flagged sites, artefacts and/or features were additionally photographed, and the following details recorded on recording forms: description, photographic recording and the context of the recorded site sketched.
- Different types and levels of exposure were recorded. Exposure was defined as an estimate of the area which has a likelihood of revealing buried artefacts and/or deposits. Exposure is represented as a percentage of land for which erosion and exposure was sufficient to reveal archaeological evidence on the surface of the ground. Or as Burke and Smith (2004: 78-80) phrase it: exposure refers to what reveals. Exposure types are based on the results of erosional processes (e.g. sheet wash, gullying, blow-outs, animal tracks or pads, vehicle or walking tracks etc).
- Archaeological visibility was recorded, defined as the amount of bare ground on the exposures which might reveal artefacts or other archaeological materials. As Burke and Smith (2004: 78-80) phrase it: visibility refers to what conceals. Visibility is affected by vegetation, leaf litter, stone ground, introduced material etc.
- Effective survey coverage area was also recorded (the area of the survey unit multiplied by the visibility percentage and exposure percentage and given in either square meters or hectares) as per requirement 9 of The Code of Practice for Archaeological Investigation of Aboriginal Objects in NSW (DECCW 2010a).
- Information recorded during the survey therefore included (but was not limited to):
  - Landform, gradient and aspect
  - Vegetation, geology and soils
  - Occurrence of Aboriginal resources (food and medicine plants, prey animals, stone and water)
  - Average ground surface visibility
  - Extent of any exposures
  - Any information provided by RAPs in relation to cultural values
  - The nature of any site, PAD or landscape feature of Aboriginal cultural value
  - The nature of any artefacts observed
- All sites and artefacts located were recorded to relevant standards.

As detailed in Section 4.5 of the ACHAR, a total of 12 new Aboriginal cultural heritage sites were identified during the survey of which, 11 are located within the current expanded construction impact zone for the project and the remaining one located within 150 m of the assessment area. The sites included a modified tree (n=1), isolated artefacts (n=6) and open camp sites (in the form of artefact scatters) (n=5). One previously identified site was no longer visible (AHIMS ID# 11-1-0040) while the boundary of two previously recorded sites were extended (AHIMS ID# 02-4-0073 and AHIMS ID# 02-4-0091) and one of them (N2NS IA1; AHIMS ID# 02-4-0073) changed from an isolated artefact to an open camp site of moderate archaeological potential. A summary of new and/or updated Aboriginal cultural heritage sites identified and recorded during this assessment is provided in Table 14 and their locations shown on figures in Appendix 1 of the ACHAR. All Aboriginal cultural heritage sites recorded and assessed during this Addendum ACHA will be added to (or updated on) the AHIMS register

Prior to works commencing these new locations / sites and associated mitigation measures will be added to the ECM specific for the site.

5.9 Historic Heritage Management

The impacts of the project to the non-Aboriginal heritage resource are primarily to railway stations, culverts and underbridges and former grain sidings. EIS Volume 7 (Umwelt 2017) and the addendum SOHI (Kelleher Nightingale 2020) addresses the management and mitigation measures to be implemented in respect of these impacts as described below. These are already complete. Only site protection measures are required under this HMP.

5.9.1 Site protection

The Moree, Edgeroi, Bellata and Gurley railway Stations were identified as having historic heritage significance associated with specific elements that are to be protected during the construction programme.

Through the design process, the Bellata, Gurley and Edgeroi's Stations have been avoided and will have their platforms and associated buildings and station signs retained *in situ* as intact examples of station buildings constructed as part of the rail line. Ongoing input from heritage specialists is required during detailed design to ensure the sympathetic treatment of the proposed safety fence and new platform awnings. This is ARTCs responsibility in consultation with Trans4m Rail.

Moree Station island platform and station building are to be protected from accidental impacts during construction works using high visibility fencing and inductions. ARTC have engaged specialist heritage consultants (in conjunction with TfNSW) to assist with the detailed design of Moree Station and design is being developed in collaboration with ARTC. Trans4m Rail is responsible for protection of the platform during the construction phase.

In terms of indirect vibration, the potential for impacts resulting from exceedances of appropriate structural vibration values will be managed in accordance with Trans4m Rail's Noise and Vibration Management Plan.

ARTC have completed an Interpretation plan for Edgeroi, Bellata and Gurley Railway Stations [*Interpretation Plan: ARTC N2NS SP1 Historical Heritage Assessment* (Niche 2020)]. The aim of this plan is to provide a sense of heritage and history through re-use or creative interpretation of the elements. The key interpretation principles for the heritage sites are detailed below:

- Enhancing the understanding and enjoyment of the stations and heritage places and the greater historic rail line for present and future generations;
- Providing strategic intent for the interpretation of the elements exploring the identified cultural values;
- Being practical, visible and operational for the client and viewer;
- Creating evocative, energetic and respectful interpretation outcomes;
- Having regard to the audience;
- Utilise up to date technology to provide engaging interpretative material; and
- Being unique to the place.

This Interpretation Plan aims to create a strategy that provides local communities with a tangible link to their regional rail history.

Consultation with local groups that have knowledge or interest in the rail history of the Narrabri to North Star region resulted in four proposed interpretive options for the salvaged rail elements. These are the retention and development of the Mehi River Bridge and area as a heritage place (outside the scope of N2NS SP1), the use of audio and video to enhance the interpretation of the sites, the use of perspective art to bring past events to the present and the reuse of salvaged heritage elements to be incorporated into the designs of the interpretation elements. It is proposed that interpretive signage with historical imagery and/or text be located at the sites, to allow members of the general public to understand the contextual history of the sites and the great regional rail history.

Separately, construction methodology or works around the North Star station will ensure the station sign is retained in situ or reinstated following construction

The Milguy and Tikitere Surveyors Trees are outside the CIZ and hence not subject to impact from the project. To ensure no inadvertent impacts, the CIZ boundary in their vicinity should be clearly defined during construction to ensure no accidental impacts occur during construction.

5.9.2 Archival photographic recording

Photographic recording creates an archival record of a heritage place or object to document it for future generations (Heritage Office 2006). The photographic recording is to be undertaken with consideration of Heritage Division, *OEH guidelines Photographic Recording of Heritage Items Using Film or Digital Capture* (2006).

The Heritage Photographic Archival Recordings, as required under CoA E65, is being managed by ARTC in conjunction with a Heritage Consultant. Upon completion of the Recordings, (Document titled - *Photographic Archival Recording and Research Report: Narrabri to North Star SP1* (Niche Environment and Heritage 2020), ARTC will provide a copy of the Recordings to DPIE for information purposes.

5.9.3 Additional research

Some addition historical research was recommended for Edgeroi Woolshed and Anzac Day Crossing. This was completed by ARTC in 2020 and reported in *Photographic Archival Recording and Research Report: Narrabri to North Star SP1* (Niche Environment and Heritage 2020). There are no further research requirements to be managed under this HMP.

5.9.4 Interpretation Plan

As discussed in the EIS Volume 7, an interpretation strategy for the Narrabri to North Star rail lines was recommended. Interpretation of certain elements of the proposal (Edgeroi, Bellata and Gurley Railway Stations and the Anzac Day Crossing) were to be included in any interpretation strategy developed.

To this end, ARTC - Inland Rail commissioned the *Interpretation Plan: ARTC N2NS SP1 Historical Heritage Assessment* (Niche 2020), Appendix E, which satisfies this requirement. This plan proposes the use of audio and video to enhance the interpretation of the sites, the use of perspective art to bring past events to the present and the reuse of salvaged heritage elements to be incorporated into the designs of the interpretation elements. The Plan proposes that interpretive signage with historical imagery and/or text be located at the sites, to allow members of the general public to understand the contextual history of the sites and the great regional rail history.

5.9.5 Salvaged Elements

As per the N2NS Interpretation Plan, the use of salvaged materials, such as rail sleepers, is recommended in the construction of the interpretive signage and associated landscaping.

To this end, as the construction progresses, communication between those tasked with enacting the Interpretation Plan (ARTC) and those managing site works should occur to ensure that aspect of the plan can be realised.

5.9.6 Unexpected Finds (non-Aboriginal)

In the unlikely event that unexpected archaeological remains or potential heritage items not identified in the EIS are discovered during construction of the proposal, all works in the immediate area should cease, the remains and potential impacts should be assessed by a qualified archaeologist or heritage consultant. If considered of significance, the discovery should be reported to ARTC who will undertake consultation with, if necessary, Heritage NSW in accordance with Section 146 of the *Heritage Act 1977 (NSW).* RAPs will also be notified by Trans4m Rail of significant unexpected finds.

If an archaeological relic is located as part of the proposal a S146 Discovery of a Relic notification form must be completed and submitted to the Heritage NSW.

Unexpected Heritage Find will be managed in accordance with Appendix C - Unexpected Finds (Aboriginal and non-Aboriginal Heritage) Procedure – Flow Chart.

5.10 Reporting and Communication

Reporting will include monthly internal project reports and Construction Monthly Environment and Heritage Reports to ARTC. Compliance monitoring and reporting are discussed in further detail in Sections 8.9 and 8.11 of Trans4m Rail's CEMP.

5.11 Environmental Control Maps

Trans4m Rail will use Environmental Control Maps (ECMs) to aid in the identification and protection of significant heritage features associated with the project. The ECMs will include:

- Specific measures included in the relevant work method statements to prevent adverse heritage impacts; and
- Relevant drawings showing
  - Location and scope of works to be managed,
  - Heritage constraints and 'no go' zones,

- Location and nature of environmental controls,
- Nature and frequency of monitoring for identified potential adverse impacts, and
- Procedures for notification of incidents or hazards.

ECMs are further discussed in Section 8.12 of the CEMP.

5.12 Environmental Management Procedures, Forms and Other Documents

The Project's EMS procedures, project specific procedures, forms and other documents provide instructions and records related to both environmental and non-environmental activities throughout the Project. These are discussed in detail in Section 8.13 of the CEMP.

5.13 Communication and Complaints Management

Trans4m Rail's CSEMP and Section 8 of the CEMP details communication and complaints management processes and procedures. The CSEMP identifies key stakeholder groups that will be consulted and engaged with during the Project and outlines the communication tools that will be used to consult and engage with these groups. During construction, any comments, feedback or complaints relating to heritage issues will be addressed through the Complaints Management System. The Complaints Management System includes a complaints register within the stakeholder database Consultation Manager. The complaints register will be developed in accordance with AS 4269: Complaints Handling.

5.14 Incidents, Emergencies and Non-Conformity

In the event of an incident relating to an impact to heritage or heritage or other related incidents, an Incident and Emergency Response Plan will be implemented. Heritage related incidents are managed in accordance with Trans4m Rail's Incident and Event Management procedure (T4MR-MPR-SQE-010), ARTC's Project Environmental Incident and Reporting Procedure (5-9020-0000-EEC-PR0001) and project approvals or licences. Incidents, emergencies, response plans and non-conformities are discussed in detail in Section 9 of the CEMP.

5.15 EMP Review and Revision Process

This HMP is a 'live' and 'working' document. As required by Trans4m Rail's EMS requirements, the Environment Manager will conduct regular reviews of the HMP at intervals of not less than six months and ensure that the HMP is formally reviewed and updated at least annually, or earlier as change requirements dictate. The CEMP and sub-plans review and revision process is discussed in detail in Section 10 of the CEMP.

In the event that comments are received from DPC Heritage or from any additional RAPs, these will be considered and included in the next review of the CHMP.

6 Environmental Management Measures

Further to the high-level mitigation measures identified in Table 6, Table 10 details the mitigation measures that will be implemented by Trans4m Rail to manage construction risks to heritage.

Table 10: Heritage Mitigation Measures

ID	Source	Measure/ Requirement	Resources	When to Implement	Responsibility
CH1	Condition C4 and C5	A Construction HMP will be prepared and implemented as part of the CEMP in consultation with the relevant registered Aboriginal parties. The HMP will include measures to manage, minimise and mitigate potential impacts on Aboriginal cultural heritage by the Project. The HMP will also include a procedure for the management of unexpected potential Aboriginal objects and skeletal remains discovered during construction.	HMP Unexpected Heritage Items Procedure	Pre-construction Construction	Environment Manager
CH2	RMM C9.1	All employees and/or contractors working on site will be provided with site training with regards to Aboriginal cultural heritage site awareness, key mitigation and management requirements and their responsibilities pertaining to the Aboriginal Heritage provisions of the *National Parks and Wildlife Act 1974* prior to commencing works on site. Training will include unexpected heritage items procedures for heritage places, Aboriginal objects and human remains and that it is an offence under Section 86 of the NPW Act to harm or desecrate an Aboriginal object.	Induction training	Pre-construction Construction	Environment Manager Construction Manager Site Supervisor
CH3	Condition C11a and E65	All known Aboriginal cultural heritage objects within immediate vicinity of the construction work zones will be identified in the SEMP and on Environmental Control Maps (ECMs) included in the CEMP. Preserved heritage objects and places will be shown on relevant site plans and communicated to the	SEMP ECM	Pre-construction Construction	Environment Manager Construction Manager

ID	Source	Measure/ Requirement	Resources	When to Implement	Responsibility
		relevant workforce. ECMs will be available to all personnel working on site.			
CH4	Condition C11b	Prior to the commencement of construction, salvage via surface collection should be conducted at the 29 sites being impacted by the proposal as follows: ▸ 17 isolated finds: NNS IA2-14 and 16-19 ▸ 12 artefact scatters NNS AS1-2 and 4-12; 02-4-0073. Site descriptions and locations can be found in the EIS Technical Report 8: Aboriginal Cultural Heritage and Archaeological Assessment (Umwelt 2017) and the Addendum ACHAR (Niche 2020).	EIS Technical Report 8: Aboriginal Cultural Heritage and Archaeological Assessment Addendum ACHAR	Pre-construction	ARTC
CH5	Condition C11c	Four survey units 15, 55, 65B and 66B were assessed as having archaeological potential in various forms. Where detailed design will result in ground surface disturbance in these zones, test excavation will be completed prior to construction commencing.	EIS Technical Report 8: Aboriginal Cultural Heritage and Archaeological Assessment	Pre-construction	ARTC
CH6	Condition C11k	Should potential Aboriginal objects (other than those discussed in the EIS or Addendum survey) be identified, works would cease within 5 metres of the potential object, the area would be cordoned off and the Unanticipated Finds procedure followed. This requires that the object/s be assessed by an appropriately qualified person to determine whether it is an Aboriginal object. If it is not an Aboriginal object, works may proceed. If it is an Aboriginal object, the procedure should be followed. Relevant Aboriginal stakeholder/s (e.g. LALCs, Elders Groups) will be consulted.	HMP **Section 5.8.6**	Construction	Environment Manager Construction Manager Site Supervisor All site personnel
CH7	Condition C11k	A suitably qualified and experienced Aboriginal archaeologist will be engaged to provide guidance on the management of Aboriginal cultural heritage sites	HMP **Section 5.8.6** Suitably qualified archaeologist	Pre-construction Construction	Environment Manager

ID	Source	Measure/ Requirement	Resources	When to Implement	Responsibility
		and impacts during pre-construction and construction activities. Guidance would include assessment of any unexpected finds and new heritage impacts.			
CH8	Condition C11a, E67	All reasonable steps will be taken not to harm, modify or otherwise impact any Aboriginal object associated with the N2NS SP1 project.	Induction training HMP **Section 5.8.3** and 5.8.6 Unexpected Heritage Items Procedure	Pre-construction Construction	Environment Manager Construction Manager
CH9	Condition C11k and E66, REMM C9.1 and C10.2	Should any Aboriginal human remains (or potential human remains) be discovered during the Project, works potentially affecting the find will cease immediately, and the Unexpected Unanticipated Finds protocol Heritage Items Procedure will be followed. The site of the discovery will be demarcated and communicated to workers as a no-go area. Human remains that are found unexpectedly during works are under the jurisdiction of the NSW State Coroner and will be reported to the NSW Police immediately. Management will include notification of the Metropolitan Narrabri or Moree LALC and a commitment to not recommence works in the area unless authorised by the OEH DPC Heritage NSW and/or the NSW Police Force.	HMP **Section 5.8.7 and Appendix B and C** Induction training	Construction	Environment Manager Construction Manager Site Supervisor All site personnel
CH10		Aboriginal cultural heritage management measures from this HMP and the relevant EMS procedures will be included in relevant Activity Method Statements (AMS). ECMs will be regularly reviewed to ensure that they are effective.	AMS	Pre-construction Construction	Environment Manager Construction Manager

ID	Source	Measure/ Requirement	Resources	When to Implement	Responsibility
CH11		Following completion of all work in relation to Aboriginal heritage items, a Heritage Report including the details of the surface salvage and archaeological excavations (with artefact analysis and identification of a final repository for finds), must be prepared in accordance with any guidelines and standards required by DPC Heritage NSW.		Pre Construction	ARTC
CH12	Condition C11c and E67	All activities will be planned and carried out to avoid, where practicable, or minimise potential impacts to heritage items.	HMP Technical Report 9 of the EIS, ECMs	Construction	Environment Manager Engineers Site Supervisor
CH13	Condition C11e, f and g PO 10 PO 12	Moree Railway Station ▸ Retain in situ. ▸ Undertake photographic archival recording (complete). ▸ Protect island platform during construction The potential for impacts resulting from exceedances of appropriate structural vibration values will be managed in accordance with the Trans4m Rail's Noise and Vibration Management Plan. Prior to works commencing, all construction personnel will be toolboxed regarding the significance of the Moree Railway Station and the measures in place to protect the station. This will include the protection of the existing structure from direct and indirect impacts and maintaining the legibility of the concrete post and panel platform at Station. Physical works on the Moree Station will not proceed until TfNSW has endorsed the design and provided written confirmation that the works may proceed.	HMP Technical Report 9 of the EIS Addendum SOHI NVMP ECMs	Construction	Environment Manager Engineers Construction Manager Site Supervisor
CH14	Condition E68	**Edgeroi, Bellata and Gurley Stations**	HMP	Construction	Environment Manager

ID	Source	Measure/ Requirement	Resources	When to Implement	Responsibility
	REMM C10.1 PO 10	▸ Undertake photographic archival recording (complete) ▸ The station platforms and associated buildings and station signs should be retained *in situ* as an intact example of station buildings constructed as part of the rail line. ▸ Station area should be protected from direct (accidental) impacts during construction works.	Technical Report 9 of the EIS Addendum SOHI NVMP ECMs		Construction Manager Site Supervisor
CH15	Condition C11j	**North Star Station** Station sign should be retained in situ (or re-instated following construction) alongside the rail corridor in North Star Community Park.	HMP Technical Report 9 of the EIS Addendum SOHI NVMP ECMs	Construction	Environment Manager Construction Manager Site Supervisor
CH16	REMM C10.1	**Edgeroi Woolshed** ▸ Undertake photographic archival recording (complete) The rail corridor, proposal site and boundary should be clearly defined during construction in this area to ensure no direct (accidental) impacts occur to the former woolshed.	HMP Technical Report 9 of the EIS Addendum SOHI NVMP ECMs	Construction	Environment Manager Construction Manager Site Supervisor
CH17	**PO 12**	**North Star (timber and corrugated Iron buildings fronting Edward Street)** Mitigation measures detailed in Australian Rail Track Corporation Inland Rail - Narrabri to North Star Noise and Vibration Assessment (GHD 2017) should be implemented where appropriate.	HMP Technical Report 9 of the EIS Addendum SOHI NVMP ECMs	Construction	Environment Manager Engineers Construction Manager Site Supervisor
CH18	Recommendation of the EIS	**Surveyor Tree Milguy (7 metres outside CIZ)** The proposal site boundary should be clearly defined during construction in the area of the surveyor's tree to	Technical Report 9 of the EIS ECMs	Construction	Environment Manager Construction Manager Site Supervisor

ID	Source	Measure/ Requirement	Resources	When to Implement	Responsibility
	Technical Report 9	ensure no direct (accidental) impacts occur during construction.			
CH19	Recommendation of the EIS Technical Report 9	**Surveyor Tree Tikitere (15 metres outside CIZ)** The proposal site boundary should be clearly defined during construction in the area of the surveyor's tree to ensure no direct (accidental) impacts occur during construction.	Technical Report 9 of the EIS ECMs	Construction	Environment Manager Construction Manager Site Supervisor
CH20	Condition E61	**Spoil mounds** are to comply with the following requirements: (c) not result in heritage impacts beyond that described in the documents listed in Condition A1.	SEMP	Construction	Environment Manager Construction Manager Site Supervisor
CH21	CoA C11(j)	Prior to works commencing, the existing North Star station sign will be carefully removed, safely stored for the duration of the works and reinstated at the completion of construction (alongside the rail corridor in North Star Community Park).	ECMs	Prior to construction	ARTC
CH22	CoA C11(d)	Prior to clearing (or physical works) commencing, trees within any areas that were not subject to archaeological survey will be inspected for evidence of cultural scarring. This will typically be undertaken during the pre-clearing survey. If scar trees are identified, these will be managed in accordance with Section 5.8.6 and Appendix C - Unexpected Finds (Aboriginal and non-Aboriginal Heritage) Procedure – Flow Chart. If an impact is unavoidable, then works shall be undertaken under the guidance of an appropriately qualified heritage specialist. Refer to Appendix D – Scar Tree Assessment Protocol will be used to determine significance.	ECMs App D – Scar Tree Assessment Protocol	Prior to construction	ARTC
CH23	CoA C11(e) – (g)	The relevant CoA's (C11(e) – (g)) have been provided to the design team from TfNSW (Trains NSW) and the		Prior to design commencing	ARTC

ID	Source	Measure/ Requirement	Resources	When to Implement	Responsibility
		heritage Advisor to ensure these requirements are incorporated into the design.			
CH24	CoA11 (i)	Trans4m Rail will undertake the following activities in the months leading up to the dismantling of the Croppa Creek rail bridge: ▸ The local community will be consulted during a Community Session held at Croppa Creek to determine any interest in retaining and utilising components of the bridge; ▸ Project flyers will be left at the Croppa Creek General Store; and ▸ Development of a register to capture any interest in components of the Croppa Creek bridge.	ECM Register of Interest	Prior to dismantling of the Croppa Creek Bridge	T4MR Construction Manager
CH25		Indirect impacts to the Moree, Edgeroi, Bellata and Gurley Railway Stations resulting from vibration will be minimised via the implementation of the mitigation measures and monitoring requirements detailed in Trans4m Rail's Noise and Vibration Management Plan.	CNVMP ECM	Construction	T4MR Construction Manager
CH26		No-Go Zones and Environmentally Sensitive Area signage will be established on-site to demarcate the approved construction impact zone to ensure that works do not destroy, modify or otherwise physically affect any heritage items, including Aboriginal objects, outside of the CSSI construction boundary. All Project personnel (incl sub-contractors) will be Inducted and Toolboxed prior to works commencing, which will include a briefing of the site's approved construction impact zone, the No-Go Zone demarcation and any heritage areas or items in close proximity to the works.	Induction Pre-start Toolbox	Prior to construction	T4MR Construction Manager

ID	Source	Measure/ Requirement	Resources	When to Implement	Responsibility
CH27	E72	Prior to works commencing, the new cultural heritage locations and mitigation measures (as detailed in Section 4.5 of the ACHAR) will be incorporated into the ECM specific for the site.	ECM	Prior to commencement	Environmental Manager

7 Sustainability

The N2NS Project will pursue an Infrastructure Sustainability Council of Australia (ISCA) rating under the IS Rating Scheme V1.2. This plan relates to Her-1 Heritage Assessment and Management and Her-2 Monitoring of heritage. Trans4m Rail will be aiming for a credit response Level 2 for Her-1 and Level 2 for Her-2. ISCA benchmarks are shown in Table 11.

Table 11: ISCA Scorecard Heritage Benchmarks

	Level 1	Level 2	Level 3
BENCHMARK	**Her-1 Heritage Assessment and Management**		
	Community heritage values have been identified through consultation and integrated into studies. AND	The requirements for Level 1 are achieved. AND	NA
	Measures to minimise adverse impacts to heritage during construction and operation have been identified and implemented.	Community and key stakeholders have participated in the heritage studies. AND	
		Heritage values beyond those listed in government registers have been identified and implemented. AND	
		Heritage values beyond those listed in government registers have been identified, considered and addressed. AND	
		Heritage has been interpreted to promote local heritage values.	
	Her-2 Monitoring of Heritage		
	Monitoring of heritage is undertaken at appropriate intervals during construction and operation.	The requirements for Level 1 are achieved. AND	NA
		Monitoring and modelling demonstrates maintenance of heritage values.	

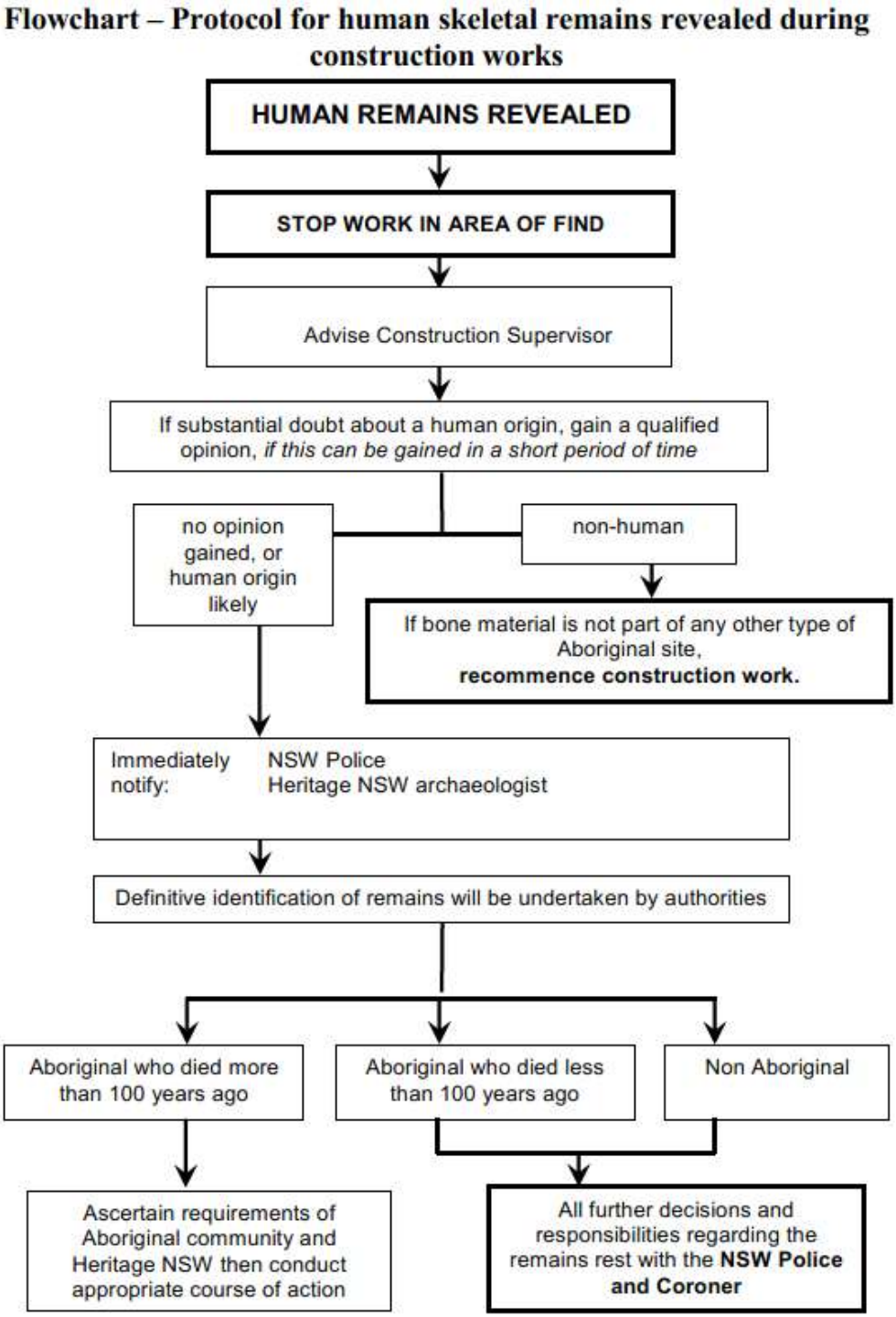
Appendix A **Evidence of Consultation**

Consultation Response

STAKEHOLDER	COMMENT	HOW ADDRESSED
AGA Services and Cacatua General Services	"AGA Services and Cacatua General Services have discussed all information supplied and both groups are in support of the information."	Noted
Moree Plains Shire Council	"The general approach appears to be sound."	Noted
	"With respect to specific sites, consideration should be given to the steel bridge in Moree with respect to the former Aboriginal camp located there. It is Council's understanding that a new bridge is proposed to be constructed at the location of the existing steel bridge. This area holds significance to the local community and should be reviewed with both the Aboriginal community and Council."	The steel bridge is outside of the N2NS SP1 project area. It will form part of the SP2 works.
Narrabri Shire Council	The CHMP does not include complete consultation details with the Aboriginal community and government agencies, presumably because consultation was not complete at the time of this review. It is noted in Section 2.1 these details will be incorporated into this document as it progresses. These details will nonetheless need to be added to Appendix A and summarised in Section 2.	All comments from the consultation process have been addressed and are now incorporated in this HMP.
	It is noted in Section 2 that further consultation details are available in the 2017 assessment. However, there is minimal consultation detail in the CHMP since the assessment was sent out and followed up in mid-2017. The CHMP should include a summary of consultation details in Section 2 between mid-2017 and the present in addition to providing a consultation log for this period in Appendix A in accordance with CoA A6.	The 2017 consultation predates the HMP and was undertaken by Inland Rail on investigations/studies undertaken by them. Results of that consultation is included in the respective documents. Requirements CoA A5, A6 and C4 require consultation on this HMP and elements of this specific consultation are included in this **Section 2** of this document.
	There is reference in this section to archaeological excavation currently underway. The OEH's 2017 Recommendation 1 called for no excavation. Presumably, the detailed design of the proposal was deemed to have impact on relatively undisturbed subsurface soils in areas of moderate to high archaeological potential as referenced in Section 7.4.3 of the SPIR, and therefore excavation was undertaken. This issue is outside the scope of the CHMP. However, the details of the test-excavation need to be included in a management plan (CoA C11). This commitment is made in Item 6 of Appendix K to the SPIR. The compliance matrix in the HMP indicates that the information is included in a Preconstruction HMP and it is stated in Section 5.7.2 of the HMP states that test-excavation is not further considered in that document. This is suitable provided that the Pre-construction HMP does contains the required details and is available along with the CHMP.	To assist in understanding this issue, it is important to note that there are two HMP documents. One is an ARTC ACHMP (previously referred to as the Pre-Construction HMP) that includes all the salvage and archaeological excavation process and methods, and this HMP which come into effect for construction, i.e. after all salvage and archaeological excavations are complete. At the time of writing this HMP, these works had not been completed. Once available, these results will be incorporated in relevant Trans4m Rail management plans.
	It is Council's opinion that the final statement of point 3 '…compromising the integrity of any archaeological sites that may have been present' should be preceded by the term 'likely' so that it reads '…likely compromising the integrity of any archaeological sites that may have been present'. Agricultural practices do not necessarily compromise site integrity and this assertion is made prior to the results of the test-excavation. This is not a requirement for the CHMP	Sentence amended to include "likely".

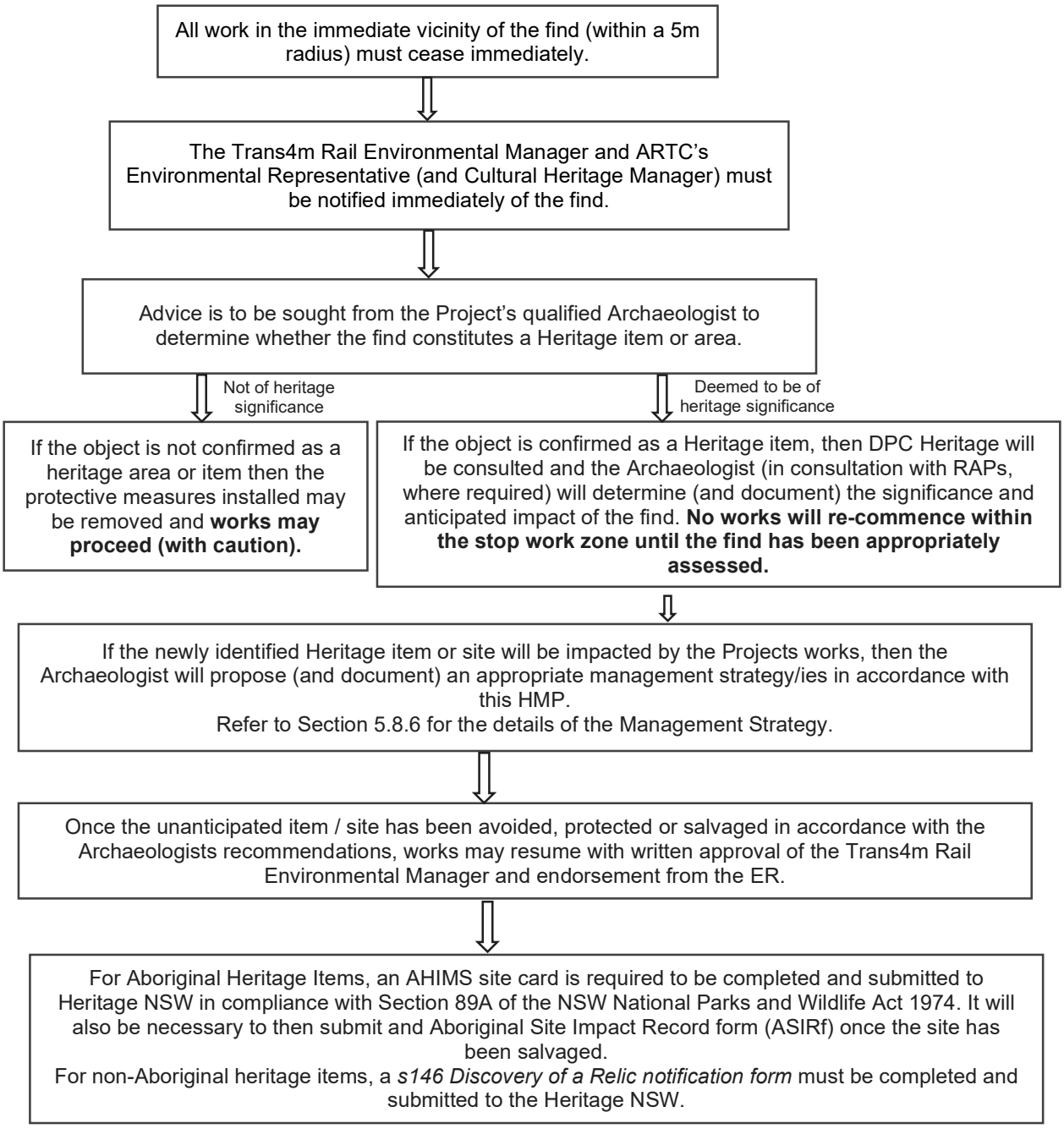
STAKEHOLDER	COMMENT	HOW ADDRESSED
	and will be resolved by the test-excavation. It is just a minor suggestion for enhanced accuracy and to avoid conflict with the justification for test-excavation.	
	The CHMP should specifically nominate the responsibility for the creation and delivery of a heritage induction. The elements of the induction listed in this section are appropriate but ideally would be included as an appendix in this CHMP. In addition to specific heritage constraints, the induction should include a reminder that all construction-related impacts are to be confined to the assessed areas. Informal, temporary work areas such as spoil heaps can impact heritage if outside the assessed areas. The induction should be easily understood when delivered by a non-specialist.	Section 5.3.1 updated to note that the induction will be developed and delivered by the Trans4m Rail Environment Manager or delegate. Site inductions and works Activity Method Statements include a note that all construction-related impacts are to be confined to the assessed areas.
	It is suggested that simplified maps be included in the HMP that clearly show sites and areas to be avoided. The boundaries of Moree, Edgeroi, Bellata, and Gurley stations, Edgeroi Woolshed, and the surveyor's trees should also be marked on maps within the CHMP as required by REMM C10.1. These maps (ECMs) are available in other documents such as the EIS, but the management plan should be an all-in-one document for the construction crew. Accessing multiple heritage reports is not practical for the purposes of construction.	Appendix B of the Construction Environmental Management Plan contains maps identifying sites of heritage significance. ECMs will be developed for each work package that identifies sites to be avoided and areas yet to be surveyed/investigated by ARTC.
	The two modified trees (Toukey Creek-HW17-ST-1: 10-6-0050 and Bobbiwaa Creek-HW17-ST-1: 19-3-0159) are not shown in Table 7 as referenced in this section.	These sites are outside the CIZ and will not be impacted. They are referenced in Table 6 and in Section 5.8.3.
	The call for this requirement is reiterated in the CHMP but the CHMP does not detail a specific measure to be implemented. If the proponent has not yet engaged a heritage consultant to undertake the additional survey then they need to do so and have the details added to the CHMP. The author of the CHMP was likely constrained by the lack of available information.	As noted above, additional investigations, test excavations, etc. are being undertaken by ARTC.
	The CHMP fulfills all necessary CoAs for the sub-plan, pending ongoing additions. Community consultation details need to be updated at the closing of the next stage of consultation and further summary updates could be added with regard to the additional fieldwork. A community consultation update will be necessary prior to submission.	Noted and as mentioned above, all comments from the consultation process have been addressed and are now incorporated in this HMP.
	The comments made in this review largely pertain to the usability of the CHMP. The CHMP should include all necessary information for the construction phase of the proposal without reliance on other heritage documentation. There are appropriate references to the relevant source documents from which certain information can be obtained, but it is not practical to rely upon a suite of documents during construction. Specifically, simplified heritage maps and perhaps the heritage induction could be included.	As noted above, heritage maps will be developed and included in ECMs for each work package.

Appendix B **Unexpected Finds Protocol – Human Remains**



Appendix C **Unexpected Finds (Aboriginal and non-Aboriginal Heritage) Procedure – Flow Chart**

On discovering something that could be an unexpected heritage item (Aboriginal or non-Aboriginal Heritage), the following procedure must be followed. These steps are summarised below and explained in detail in Section 5.8.6.NOTE: If the find is human remains, please refer to Appendix B Unexpected Finds Protocol – Human Remains Procedure.



Appendix D **Scar Tree Assessment Protocol**

Question	Explanation
Is the scar located on a mature nature tree? And what context is the scarred tree associated with?	• Scars of Aboriginal origin occur on native trees that have grown naturally in that environment – with common examples including red gum, box, stringybark or messmate trees (though numerous local variations exist). • The most promising locations for Aboriginal scarred trees include areas where original, pre-clearance forest or woodland have been preserved such as road, river, creek and other water reserves, where logging or tree removal has been limited. • Aboriginal scars will not occur on exotic trees, plantation trees or trees which have been regrown in logged forests.
What impacts have occurred in the vicinity of the scar?	• If in doubt about the cultural origin of a scar it is very important to check other trees in the vicinity to see whether the same features occur elsewhere, and the form that they take. This can help eliminate from enquiry any natural or incidental scars that may mimic the features of cultural scars through the regular shape of their apertures or other distinguishing features.
How old is the tree on which the scar occurs, and how long has the scar been there?	• Generally speaking, Aboriginal and other historical scars in NSW will only exist on trees older than 65 years. Tree aging is a technical skill which involves assessing the girth of the tree, the state of the crown, the extent of any damage and the position of the tree in its local environment.
Can you identify the form and size of the original scar on the tree?	• Consider the scar as it would have appeared at the time of its creation by noting the age of the tree, the age of the scar, any recent impacts to the tree (i.e. lighting, fire, broken branches, insect impacts etc.) and what effect these things could have had on the scar and its current appearance.
What impacts have occurred to the tree, and can you work out the order in which they have occurred?	• The process of dieback can extend the damaged area up and down the tree, drastically changing the shape and size of the scar. If tool marks or an early line of overgrowth are preserved it may be possible to identify phases of dieback and regrowth. • In some cases, damage or distortion due to more recent fire or lightning damage may accompany the original scarring.
Is the tree providing enough opportunity to determine the origin of the scar from a surface inspection only?	• In some instances, it may not be possible to accurately determine the origin of the scar in the field. If there is any doubt about the Aboriginal origin of a scar, additional specialist advice should be sought. This may involve technical information on the age of the tree, the use of the land or advice on how to read the evidence displayed by the scar and its overgrowth. • The age and extent of overgrowth can also be used to assess a scar's age, as this indicates the length of time a tree has had to repair the damage.

Appendix E **Interpretation Plan: ARTC N2NS SP1 Historical Heritage Assessment (Niche, 2020)**

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Interpretation Plan

ARTC N2NS SP1 Historical Heritage Assessment;

Narrabri to North Star

Prepared for ARTC – Inland Rail

Prepared by Niche Environment and Heritage | 13 November 2020

niche-eh.com

Excellence in your environment

Document control

Project number	Client	Project manager	LGA
6233	ARTC-Inland Rail	John McLellan Gillen	Narrabri Shire Council & Moree and District Council

Version	Author	Review	Status	Date
D1	John McLellan Gillen	Renée Regal	REV01	15 Oct 2020
Final	John McLellan Gillen	Renée Regal	Final	13 Nov 2020

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1. Introduction

Niche Environment and Heritage Pty Ltd (Niche) was commissioned by Australian Rail Track Corporation (ARTC) – Inland Rail (the Client) to prepare an Interpretation Plan for heritage items from various locations along the between Narrabri and North Star.

This report should be read in conjunction with the following documents:

- Photographic Archival Recording and Research Report: Narrabri to North Star SP1 (Niche Environment and Heritage 2020)

1.1 Report Scope

ARTC- Inland Rail aim to use the interpretation of any heritage values associated the heritage sites to develop a concept plan with relevant local stakeholders.

The heritage sites that require interpretation, which this report will focus on, are:

- Edgeroi Station
- Bellata Station
- Gurley Station
- Mehi River Underbridge
- Gwydir River Underbridge and;
- ANZAC Day crossing, Crooble,
- Due to the significance and history of the place, it is also recommended that interpretation of Edgeroi Woolshed be included.

This strategy covers the following:

- Identification of key historical themes associated with these sites and the Narrabri to North Star line in general.
- Identification of potential audiences and people associated with these sites and;
- Recommendations for appropriate media and general locations for interpretation that will take into account the opportunities and constraints arising from any heritage significance of the heritage items.

1.2 Purpose and Limitations

The purpose of this Interpretation Plan is to present options for interpretation, potential locations, functional uses and some general implementation recommendations specific to the requested heritage items. The aim is to provide innovative interpretation strategies that respond to the influences of these sites along the Narrabri to North Star rail line within the Narrabri, Moree, North Star and wider regional communities.

There were some important limitations to the assessment. These were:

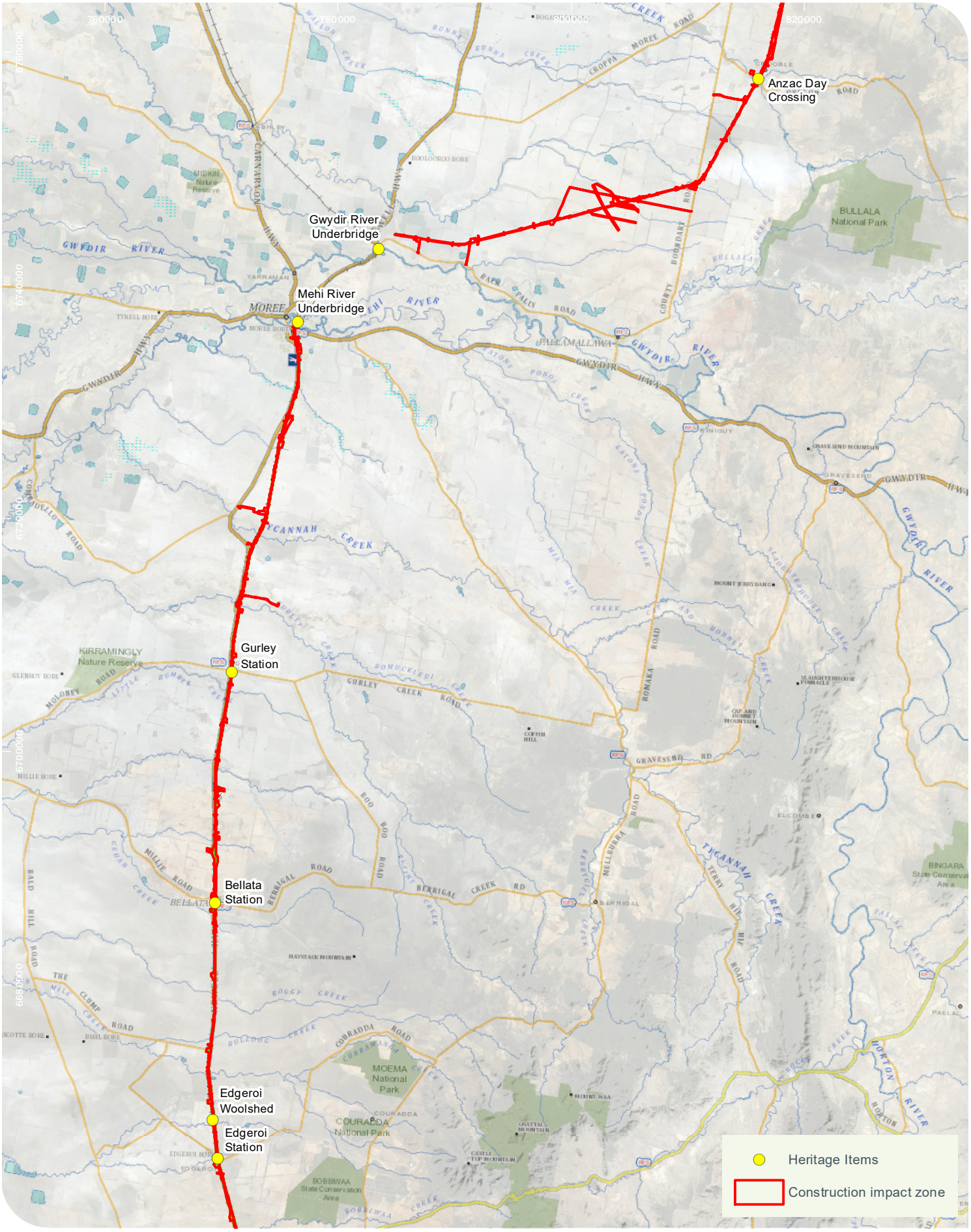
- Some of the railway stations were in a state of disuse; and as such some of the elements had been removed. This will have impacted the potential heritage significance of the items.
- The exact location of ANZAC Day crossing could not be confirmed as during community consultation with Don and Moya Quast, it was stated that the location was not known to them. However, it is possible that the crossing is located at the corner of Gil Gil Road and Crooble road as represented in Figure 2.

1.3 Acknowledgements

This Interpretation Plan has been written by John McLellan Gillen (Historical Heritage Consultant, Niche).

Niche wish to thank the following people and associations for providing input and into the plan:

- Narrabri & District Historical Society Gaol & Museum Bruce Hall
- Moree & District Historical Society
- Don and Moya Quast, Moree (former residents of Crooble)
- Matthew the Protection Officer and;
- Brodie Hartfiel-Lees and the ARTC-Inland Rail team for all their support.



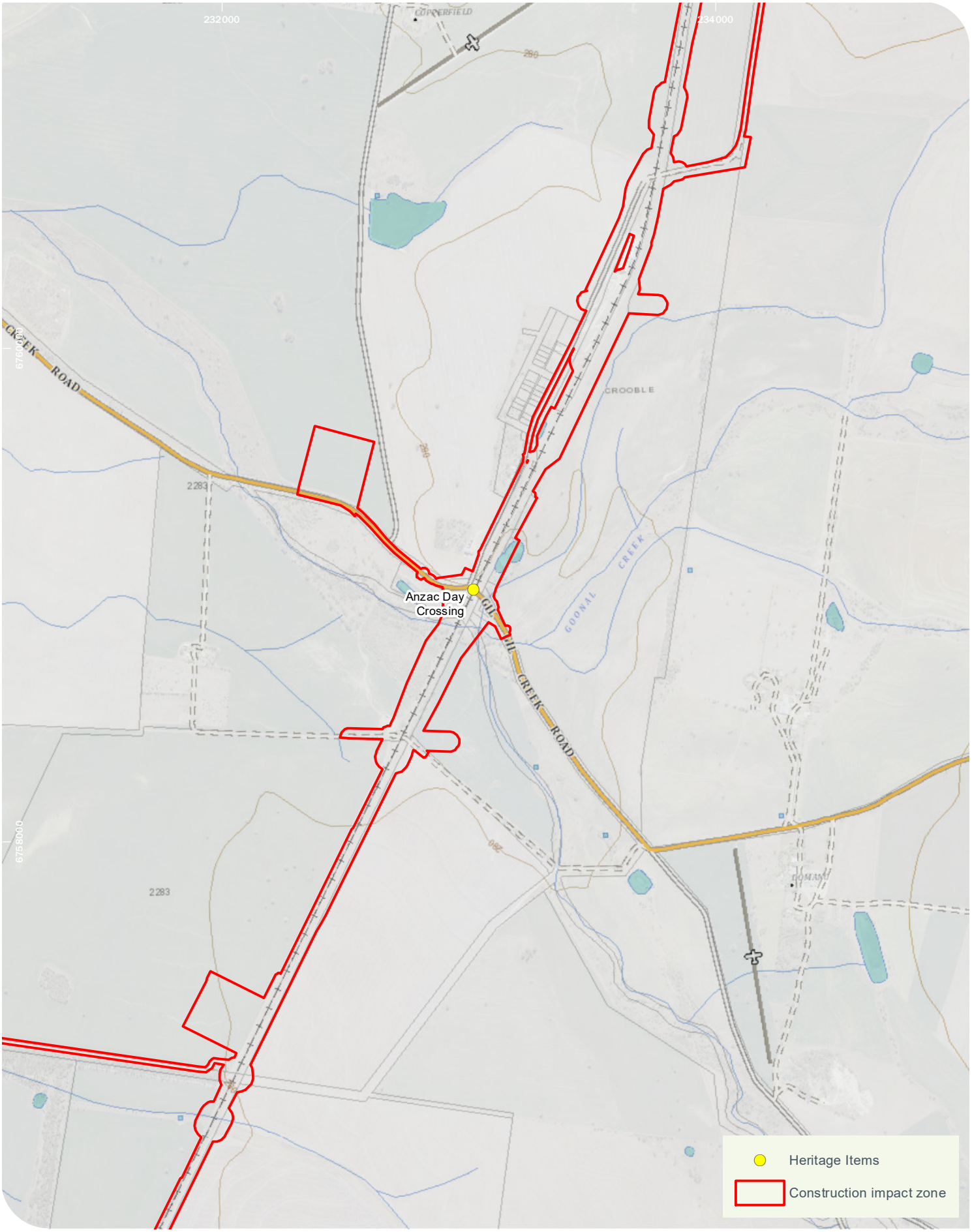
niche Environment and Heritage

0 10
km
GDA 1994 MGA Zone 55

Location Heritage Items
Interpretation Plan N2NS SP1

Niche PM: John McLellan Gillen
Niche Proj. #: 6233
Client: ARTC – Inland Rail

Figure 1



niche Environment and Heritage

0 400
m
GDA 1994 MGA Zone 56

Location Heritage Item
Interpretation Plan N2NS SP1

Niche PM: John McLellan Gillen
Niche Proj. #: 6233
Client: ARTC – Inland Rail

Figure 2

2. Heritage Interpretation in Conservation

The International Council on Monuments and Sites Charter for the Interpretation and Presentation of Cultural Heritage Sites identifies interpretation in heritage as: "the full range of potential activities intended to heighten public awareness and enhance understanding of cultural heritage site." (ICOMOS 2008:3). The chief aim of which, is not instruction but provocation (Tilden 1977).

The Charter has seven established principles upon which heritage interpretation should be based, as outlined below in Table 1.

Table 1: Interpretation principles as outlined by the ICOMOS Charter

Principle	Objective
Principle 1: Access and Understanding	Facilitate understanding and appreciation of cultural heritage sites and foster public awareness and engagement in the need for their protection and conservation.
Principle 2: Information Sources	Communicate the meaning of cultural heritage sites to a range of audiences. This is completed through careful, documented recognition of significance, through accepted scientific and scholarly methods; including living cultural traditions.
Principle 3: Attention to Setting and Context	Safeguard the tangible and intangible values of cultural heritage sites in their natural and cultural settings and social contexts.
Principle 4: Preservation of Authenticity	Respect the authenticity of cultural heritage sites. This is done by communicating the significance of their historic fabric and cultural values whilst protecting sites from the adverse impact of intrusive interpretive infrastructure, visitor pressure and inaccurate or inappropriate interpretation.
Principle 5: Planning for Sustainability	To contribute to the sustainable conservation of cultural heritage sites. This is done through promoting public understanding and participation in ongoing conservation efforts and ensuring long-term maintenance of the interpretive infrastructure. Regular reviews of a sites interpretive contents will contribute to this principal.
Principle 6: Concern for Inclusiveness	This principal will encourage inclusiveness in the interpretation of cultural heritage sites, by facilitating the involvement of stakeholders and associated communities in the development and implementation of interpretive programmes.
Principle 7: Importance of Research, Training, and Evaluation	To develop technical and professional guidelines for heritage interpretation and presentation, including technologies, research, and training. Such guidelines must be appropriate and sustainable in their social contexts.

The interpretation of heritage is designed to effectively communicate historic themes and stories and oral histories. In order to provide sympathetic interpretation, a series of best practice guidelines in Australia and NSW have been developed.

In 2005, the NSW Heritage Office prepared guidelines to assist heritage practitioners in interpreting heritage items. Those guidelines defined interpretation as:

> *"...all the ways of presenting the significance of an item. Interpretation may be a combination of the treatment and fabric of the item; the use of the item; the use of interpretive media such as events, activities, signs and publications, or activities, but not limited to these"* (NSW Heritage Office 2005:3).

This is based on Article 24.1 of the Burra Charter (Australia ICOMOS 2013), which states:

"Significant associations between people and place should be respected, retained and not obscured. Opportunities for the interpretation, commemoration and celebration of these associations should be investigated and implemented."

The abovementioned documents highlight the importance of interpretation as a conservation management technique. The documents identify heritage significance as a central focus of interpretation.

2.1 Approach

Typically, the preparation of an integrated, multi-faceted interpretation plan is a three-stage process, as outlined below.

Stage 1: Interpretation Plan (this report)

- Introduction – context of report; the Project Site; approach
- Application of Interpretation – interpretation as a conservation process; interpretation principles
- Historical Overview and Significance Assessment – summary of the historical research and analysis to determine context; assessment of significance of the site; identification of themes and stories.
- Site Inventory – description of the site; identification of connections to places, events, items, key people; identification of existing and target or potential visitation; identification of interpretive resources available.
- Development of Interpretation Policy – identify opportunities to use interpretation to maintain significance, integrity and authenticity of the place; identify the target audience.
- Interpretation Plan – identify potential interpretive media and locations; detail development and implementation tasks and responsibilities.

Stage 2: Develop Content

Development of media, materials and content:

- integrate interpretation into planning process
- develop interpretive media and stories
- develop key texts and illustrations
- overview of design, production, fabrication and construction
- produce a staged summary of tasks, timing and responsibilities; and
- prepare recommendations for maintenance and review.

Stage 3: Implementation

Implement Interpretation Plan:

- produce detailed design of interpretive media
- evaluate interpretive media
- finalise image permissions and copyrights
- produce interpretive media
- install interpretive media
- finalise maintenance plan; and
- finalise review plan.

2.2 Key Interpretation Principles for the Project Site

The interpretation of the history and heritage of the sites will provide a tangible link to the history of the Narrabri to North Starr rail line. The aim of this plan is to provide a sense of heritage and history through re-use or creative interpretation of the elements.

The key interpretation principles for the heritage sites, outlined in section 1.1, are detailed below:

- Enhancing the understanding and enjoyment of the stations and heritage places and the greater historic rail line for present and future generations.
- Providing strategic intent for the interpretation of the elements exploring the identified cultural values.
- Being practical, visible and operational for the client and viewer
- Creating evocative, energetic and respectful interpretation outcomes
- Having regard to the audience
- Utilise up to date technology to provide engaging interpretative material and;
- Being unique to the place.

This Interpretation Plan aims to create a strategy that provides local communities with a tangible link to their regional rail history.

3. Assessment of Significance for the heritage sites

The NSW Heritage Manual, prepared by the former NSW Heritage Office and Department of Urban Affairs and Planning, provides the framework for assessing significance in NSW. These guidelines incorporate the five aspects of cultural heritage value identified in the Burra Charter: The Australia ICOMOS Charter for Places of Cultural Significance 1999 (Burra Charter) into a framework currently accepted by the NSW Heritage Council.

The below significance assessment is a summary of the significance of the sites listed within the scope, which is expanded in the Photographic Archival Recording and Research Report (Niche Environment and Heritage 2020) to which this plan is attached to.

The Mehi River and Gwydir River Underbridges are of local significance as significant components of the infrastructure remain and they are good examples of steel bridges that were constructed on a Pioneer Line using American bridge technology. Although part of a decreasing resource there are other similar examples, both regionally and throughout NSW.

The remains of the Edgeroi Woolshed are considered to be of local significance; as evidence remains of a substantial woolshed that has historical associations with one of the large, early Land Grants through to the Solider Settlement period and is an important landmark in the area. The ANZAC Day Crossing of the Boggabilla Line at Crooble is considered to have significant associations, as a regional meeting point prior to the departure for war.

'Where appropriate in terms of significance and level of proposed impacts…interpretation of certain elements of the proposal (the Mehi and Gwydir River Underbridges, Edgeroi,
*Bellata and Gurley Railway Stations and the ANZAC Day Crossing) should be included in an interpretation strategy developed for the proposal' (*ARTC- Inland Rail 2017 p.iii)

4. Local community consultation

Consultation was undertaken with local groups with a knowledge of the area, or an interest in the Narrabri to North Star railway history. The stakeholder groups consulted, and their response is detailed in Table 2 below.

Table 2: Stakeholder groups consulted for this Interpretation Plan

Organisation	Individual	Response
Moree & District Historical Society	Michael McNamara, Researcher	Michael provided an in-depth history of all of the railway stations within the Moree Plains Shire district which included historical images. Michael also stressed that the area where the Mehi River Bridge is located also contained an Aboriginal camp (Steel Bridge Campsite) which is part of the history of the place and wanted this information included in any interpretation plans. Unfortunately, Michael had not heard of ANZAC Day Crossing at Crooble. The Moree & District Historical Society have expressed that it is their preferred option to retain the Mehi River Bridge due to its location to the town and its Historical and Aboriginal heritage relevance. The Steel Bridge Campsite was constructed by Bill Grose who has connection to the Society. They have also stated that they wish to be involved in the content creation and implementation stages of the Interpretation Plan of all the sites within their district.
Narrabri & District Historical Society Gaol & Museum	Helen Bain, Senior Historian/Researcher	The Narrabri & District Historical Society provided a full history of the Edgeroi Pastoral Station, Edgeroi railway station and Bellata railway station as well as local knowledge of the Edgeroi Woolshed in the height of it use and the general history of the district. The Narrabri & District Historical Society have stated that they wish to be involved in the content creation and implementation stages of the Interpretation Plan of all the sites within their district.
Local Residents of Moree and Crooble	Don and Moya Quast	Don and Moya Quast lived and grew up in Crooble before moving to Moree in retirement. They both provided a detailed account of the station as well as the surround elements (such as the pump and weir) that kept the trains going. Unfortunately, Don and Moya did not know the location of ANZAC Day Crossing however, Don believed it was at the corner of Gil Gil Creek Road and Crooble

Organisation	Individual	Response
		Road as he remembers having to expand it to allow trucks to turn. Don and Moya did not express a desired interpretation preference.
Moree Plains Shire Council	Council representative	The Moree Plains Shire Council have not responded to correspondences at the time of this report.
Gwydir Shire Council	Council representative	The Gwydir Shire Council have not responded to correspondences at the time of this report.
Narrabri Shire Council	Council representative	The Narrabri Shire Council have stated that they wish to be involved in all stages of the Interpretation Plan. The Narrabri Shire Council agrees that it would be fantastic to have interpretation about the history of the stations and settlements along the line and do request input into any options. Regarding interpretation for Edgeroi sites, they have agreed that Bellata could be a suitable location as issues of public safety were discussed for other interpretation signage in Edgeroi. Therefore, the Council would like to discuss any sites that are proposed for heritage signs in the region. It would be Council's preference, however, that historic information regarding Edgeroi be placed somewhere in the town itself. However, there is already historic signage/information within Sugar's Park, Bellata, and it is also the preferred site for the proposed Waterloo Creek State Heritage Register information panel (listing currently with the NSW Heritage Council). Therefore, there needs to be an agreed strategic approach to multiple and very different stories and themes proposed for the one park if this option is sought. Lastly, the Narrabri Shire Council has stated that all proposed template designs be supplied to Council, including what logos and generic information would be on each sign, for review and comment prior to any production.

Consultation with local groups identified that the those in the Narrabri and Moree Plains Shire Councils have a strong connection and interest in their regional histories. All groups consulted were very interested in the project and the possibilities of interpretive plans.

5. Historic Themes

5.1 Themes

The significance and history of a place is often multi-faceted and complex, and it is often impractical to communicate every aspect. In preparing to interpret a place, it is important to present the past in an informative, interesting and accessible manner which is appropriate to the identified audiences. The themes presented below have been derived from the historical overview presented in Sections 3 and in consultation with the community who have a knowledge, or interest in the local rail history.

A national framework of historic themes was developed by the Australian Heritage Commission in 2001 which aims to:

> "*assist in structuring research and to emphasise the historical values of a place to reverse the prevalence of fabric-based assessment by identifying historical processes that might be used in assessing and interpreting heritage significance*."

The Themes identified below relate to the Narrabri to North Star rail line as a whole and specific features such as bridges and culverts. Two primary national themes were determined, with four sub-themes recognised by activity.

Subsequent to the development of the Australian Historic Themes Framework, the NSW Heritage Branch (now Heritage Division of the Office of Environment and Heritage) developed historical themes specific to the New South Wales landscape that link to the national heritage framework. Four New South Wales historical themes apply to the salvaged rail elements (Table 3).

Table 3: Australian historic themes in relation to the heritage items within close proximity to the Project Site

Australian Theme	Australian Sub-theme	NSW Theme	Key Stories relating to the Themes of the Project Site
Developing local, regional and national economies	Communication	Rail track	Narrabri to Moree, Moree to North Star rail line
	Industry	Rail line	Narrabri to Moree, Moree to North Star rail line
	Transport	Railway station, bridge	Mehi River and Gwydir River Bridges
Building settlements, towns and cities	Pastoralism	Shearing shed	Edgeroi Woolshed at Woolenget Station

6. Identifying the Audiences

Integral to establishing an effective and engaging interpretation is the identification of the primary audience. The primary target audience for this project has been identified as members of the general public within the Moree Plains and District Council, Gwydir Shire Council and the Narrabri Shire Council districts. The elements of interpretation should look to engage with the transient general public as well as people with a specific interest, or knowledge in the rail history of the region.

As such, the primary themes for interpretation material should reflect both the interest of the primary audiences and the potential site constraints.

7. Interpretation Options

7.1 Interpretive Resources

In order to interpret the heritage significance of the heritage sites, it is essential to identify resource materials; actual and documented, that have the capacity to inform the potential audience about their significance values. The interpretive data should also engage the public with connection to local rail history.

Available interpretive resources for the project could include:

- Historic maps and plans
- Historic photographs
- Additional historical research – which could be prepared by Niche

7.2 Interpretive Recommendations

7.2.1 Interpretive Aims or Objectives

As a result of the community consultation process, four potential interpretive measures outlined below are suggested for consideration for the heritage items.

These interpretive measures make connections with the heritage places and members of the general public thereby allowing visitors to have a better understanding of the context of the sites and therefore a greater appreciation of the value of the regional history.

The potential measures presented below are considered to be practical, visible, operational, relevant and understandable.

7.3 Interpretation Initiatives

Four potential initiatives to be included in the interpretation plan are listed below:

1. As per Section 6.2.1.3 of the ARTC- Inland rail report 2017 in conjunction with the site inspection, the preferred option is to retain the Mehi River Underbridge. Therefore, the interpretation initiative for this site is to develop the area around the bridge with heritage interpretation that compliments the current footpaths and cycle paths.
2. To include interpretive signage for each location which should include a history of the area and site as well as historic photographs and, where appropriate, perspective frames to connect the history to the present,
3. Audio and video of the Mehi River Underbridge and Edgeroi Woolshed which could include interactive 3D models of the sites. The use of Quick Response (QR) codes at relevant signage, which link to ARTC website pages of the items, will allow the public to see these audio and videos.
4. The use of salvaged materials, such as rail sleepers, in the construction of the interpretive signage and associated landscaping.

The Mehi River Bridge in Moree currently has pedestrian footpaths and cycle paths that proceed from River Street, under the bridge and connects with Gosport Street. It is recommended that the Mehi River Bridge possibly be retained, as per Section 6.2.1.3 of EIS Technical Report 9 (2017), as it provides a better example of the components of infrastructure of a Pioneer Line.

However, it has been stated by ARTC- Inland Rail that it is their preferred option to remove the Mehi River Bridge and the Gwydir River Bridge. If one is to be kept, it is ARTC- Inland Rail's preference to remove the Mehi River Bridge. This is because the bridges would not be suitable for modern railway usage and would constitute a sizable effort to retain one or both of them. The recommendation of the EIS Technical Report 9 (2017) outlines that although not heritage listed, these structures are becoming a decreasing heritage resource and provide good examples of the engineering of the Pioneer Lines in New South Wales. Therefore, the possibility of retaining one of these bridges should be explored. As well as this, the site around the Mehi River Bridge has connections to Contact period Aboriginal Heritage (Steel Bridge Campsite) which adds value to both the Aboriginal heritage of the site and the historical value.

Therefore, it is recommended that the Mehi River Underbridge be converted into pedestrian use with the paths complementing and connecting with the current paths. Interpretive signage should be at various stages of the path and include a metal plaque on the bridge base.

However, as considerable efforts may be made to develop the Mehi River bridge into this type of usage, another option is to retain the steel bridge *in situ* and implement interpretive signage at the site.

Examples of interpretive reuse of historic bridges into pedestrian bridges can be seen in Table 4.

Table 4: Interpretive reuse of historic bridges

Examples of interpretive reuse of rail elements	Description	Potential application
 Plate 1: Fitzgerald Bridge, Aberdeen (Source: Niche) 	These examples show the reuse of a historic bridge in pedestrian use.	This interpretation concept could be incorporated with the current pedestrian paths located in the area of Mehi River Bridge to enhance the significance of the site.

Examples of interpretive reuse of rail elements	Description	Potential application
Plate 2: Fitzgerald Bridge, Aberdeen (Source: Niche)  Plate 3: Shot of replaced sleepers with asphalt, Fitzgerald Bridge, Aberdeen (Source: Niche)		
 Plate 4: Example of pedestrian walkway signage at historic bridge (Source: Niche)  Plate 5: Example of pedestrian walkway connecting to historic bridge path (Source: Niche)	These examples demonstrate the use of signage that should be implemented at the site.	These types of signage could be implemented with more interpretive signage to develop the area as a historic part of Moree and encourage the public to engage with history of the site.

Examples of interpretive reuse of rail elements	Description	Potential application
 Plate 6: Example of signage at Fitzgerald Bridge, Aberdeen (Source: Niche)  Plate 7: Example of plaque at Fitzgerald Bridge, Aberdeen (Source: Niche)		

7.4 Interpretive signage

At all potential areas of interpretation listed above, it is suggested that signage utilising historical imagery and/or text is incorporated to allow for a visual representation of the history of the salvaged elements.

The location and construction of the signage would be chosen to best reflect the industrial history and current reuse of the salvaged items. Design consideration must be given to the robustness, installation, longevity and maintenance of any proposed measures. Locations need to be considered in terms of their effectiveness of communication, accuracy, relationships, and constraints of the chosen interpretation sites.

Therefore, Table 5 outlines the recommendations that the following heritage items include interpretive signage at these proposed locations:

Table 5: Recommended sites to include interpretive signage and their proposed locations

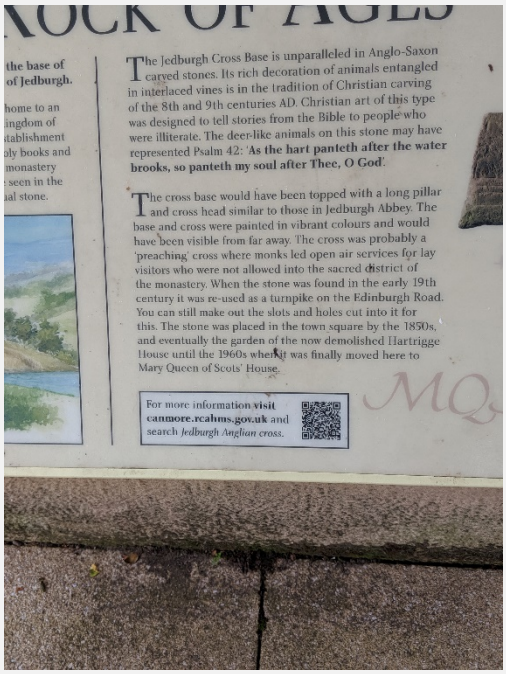
Site	Interpretation signage	Proposed location
Edgeroi Station	Yes	Sugar's Park, Bellata. Beside current signage.
Bellata Station	Yes	Sugar's Park, Bellata. Beside current signage.
Gurley Station	Yes	Near the current memorial signage adjacent to the Royal Hotel, Gurley.
Mehi River Underbridge	Yes	Within area of current development and beside current signage.
Gwydir River Underbridge	Yes however, preferred bridge to be removed, if necessary.	Interpretive signage of the Gwydir River Bridge should be located with the Mehi River Underbridge signage.
ANZAC Day Crossing, Crooble	Yes	At the ANZAC Memorial Hall located in Crooble. Adjacent to the current ANZAC memorial signage at the front of the building.
Edgeroi Woolshed, Woolenget Station	Yes	Located facing the shearing shed where Woolenget Station would have been and accessible from the main road.

The proposed location of interpretive signage for Edgeroi and Bellata Station's is due to more infrastructure currently located at Bellata for the transient general public. Signage should include histories and historic images of both sites. The location of the ANZAC Day Crossing signage is due to the exact location remaining unknown however, locating the signage at the current ANZAC memorial at the ANZAC memorial hall will enhance the significance of the area.

Due to the significance of the Edgeroi Woolshed, it is recommended that similar interpretive signage be placed facing the shearing shed where Woolenget Station would have stood. Audio and video should also be used as part of the interpretation of Edgeroi, Bellata and Gurley Stations as well as Mehi River Bridge and the Edgeroi Woolshed. Less is known of ANZAC Day Crossing and therefore audio and video would be difficult to do. It is also recommended that copies of all audio and video be given to relevant local historical societies.

The interpretive signage could include QR codes which the general public can use with smart devices to access the audio and video of the sites through ARTC website pages. Example of this type of media use is outlined in Table 6. As well as this, where appropriate, interpretive signage should include perspective frames with historical images, or sketches based on them, in which the general public can align with the heritage item to bring past histories to the present. Examples of this are also listed in Table 6.

Table 6: Elements to include in interpretive signage

Interpretive imagery examples	Description	Application
 Plate 8: QR code on historic sign, Jedburgh, Scotland (Source: John M Gillen)  Plate 9: QR code on interpretive signage, Jedburgh, Scotland (Source: John M Gillen)	Examples of the implementation of QR codes and perspective artwork in interpretive signage.	The QR code can be linked to ARTC websites which provide additional audio and visual interpretation for the sites. The perspective frames can be used in conjunction with historical images to bring past histories to the present.

Interpretive imagery examples	Description	Application
 Plate 10: Roman Gardens, Chester, England (Source: IS Group)  Plate 11: A slave dwelling interpretive signage with perspective art (Source: IS Group)		

7.4.1 Incorporation of Historical Imagery or Text

The use of historical information in signage will provide a visual means for the general public to engage with the salvaged rail elements and their contextual history. Examples of suitable imagery and information for the signage can be found in *Photographic Archival Recording and Research Report: Narrabri to North Star SP1* (Niche Environment and Heritage 2020) to which this plan is appended.

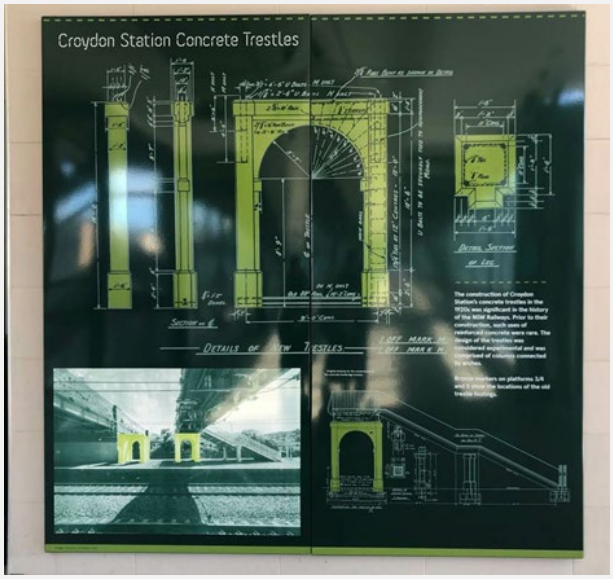
The reuse of rail elements such as rail sleeper and track will enhance the significance of the signage, connect the tangible elements of the site to the signs and ensure their longevity.

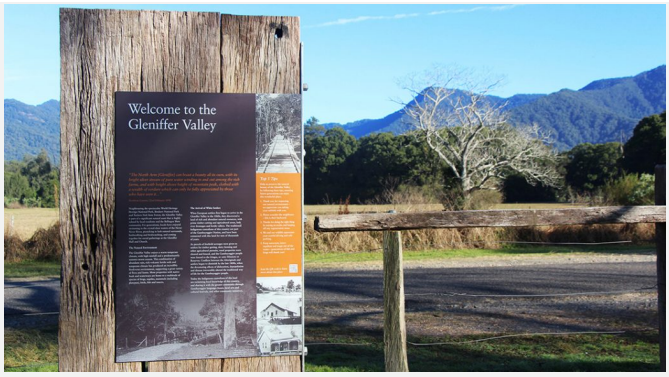
7.4.2 Example of signage options

Table 7 below illustrates examples of similar use of historical information in interpretive signage.

Table 7: Historical imagery or text examples

Interpretive imagery examples	Description	Location
 Plate 12: Tumut rail station interpretive signage (Source: The Interpretive Design Company)	Interpretive signage including historical images, maps and text could be used to illustrate the historical context of the salvaged rail elements.	Signage could be located near or on any informal seating created from the salvaged elements. Signage could be placed from a vantage point overlooking or facing any of the sites.

Interpretive imagery examples	Description	Location
 Plate 13: Glebe Point Road Tram mural with oral histories: corner of Glebe Point Road and Hereford Street, Glebe (Source: The Interpretive Design Company)  Plate 14: Croydon Railway Station Wall Mural showing historical imagery with overlays and heritage text (Source: The Interpretive Design Company)		

Interpretive imagery examples	Description	Location
 Plate 15: Gleniffer Valley, NSW showing the reuse of salvaged heritage elements for signage (Source: Interpretation Australia)		

7.5 Summary of Interpretive Options

Consultation with local groups that have a knowledge, or interest in the rail history of the Narrabri to North Star region resulted in four proposed interpretive options for the salvaged rail elements. These are the retention and development of the Mehi River Bridge and area as a heritage place, the use of audio and video to enhance the interpretation of the sites, the use of perspective art to bring past events to the present and the reuse of salvaged heritage elements to be incorporated into the designs of the interpretation elements.

It is proposed that interpretive signage with historical imagery and/or text be located at the sites, to allow members of the general public to understand the contextual history of the sites and the great regional rail history.

It is recommended that the Mehi River Bridge be retained, as per Section 6.2.1.3 of ARTC Inland Rail 2017, as it provides a better example of the components of infrastructure of a Pioneer Line.

However, it has been stated by ARTC- Inland Rail that it is their preferred option to remove the Mehi River Bridge and the Gwydir River Bridge. If one is to be kept, it is ARTC- Inland Rail's preference to remove the Mehi River Bridge. This is because the bridges would not be suitable for modern railway usage and would constitute a sizable effort to retain one or both of them. The recommendation of the EIS Technical Report 9 (2017) outlines that although not heritage listed, these structures are becoming a decreasing heritage resource in the region and provided good examples of the engineering of the Pioneer Lines in New South Wales. Therefore, the possible retention of one of these bridges should be explored. As well as this, the site around the Mehi River Bridge has connections to Contact period Aboriginal Heritage (Steel Bridge Campsite) which adds value to both the Aboriginal heritage of the site and the historical value.

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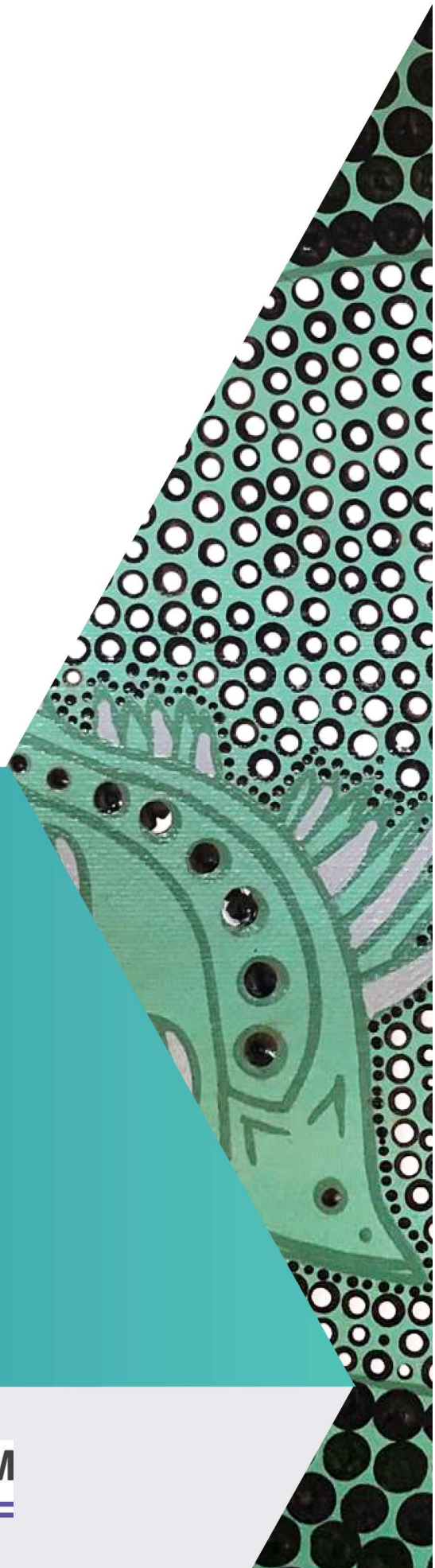
Project management

Environmental offsetting
Offset strategy and assessment (NSW, QLD, Commonwealth)
Accredited BAM assessors (NSW)
Biodiversity Stewardship Site Agreements (NSW)
Offset site establishment and management
Offset brokerage
Advanced Offset establishment (QLD)



ABOUT THE ARTIST:

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