



Hazardous and Contaminated Materials Management Plan

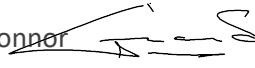
Parkes to Narromine Inland Rail Project


Project # 808 – J013

The background of the cover is a photograph of railway tracks receding into the distance, overlaid with a large, semi-transparent 'INLink' watermark in a bold, grey, sans-serif font. The image is framed by yellow and grey abstract shapes and dashed white lines.

Job No.: 808 - J013

Principal: Australian Rail Track Corporation, (ARTC)

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Hazardous and Contaminated Materials Management Plant (HCMMP)

Parkes to Narromine Inland Rail
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Glossary of Terms

Term	Definition
ARTC	Australian Rail Track Corporation
CEMF	Construction Environmental Management Framework
CEMP	Construction Environmental Management Plan
CLM Act	<i>Contaminated Land Management Act 1997</i>
CoA	Conditions of Approval
CSSI	Critical State Significant Infrastructure
DPIE	Department of Planning, Industry and Environment
EIS	Environmental Impact Statement
ENM	Excavated Natural Material
EPA	Environment Protection Authority
EPL	Environment Protection Licence
ER	Environmental Representative
HCMMP	Hazardous and Contaminated Materials Management Plan
IBC	Intermediate Bulk Container
NOHSC	National Occupational Health and Safety Committee
NEPM	<i>National Environment Protection (Assessment of Site Contamination) Measure 1999, 2013 amendment</i>
P2N	Parkes to Narromine
PIRMP	Pollution Incident Response Management Plan

Term	Definition
PPE	Personal Protective Equipment
RMM	Revised mitigation measures
RtS	Response to Submissions
SDS	Safety Data Sheet
WMP	Waste Management Plan

1 Scope

1.1 Purpose

This Hazardous and Contaminated Materials Management Plan (HCMMP) provides measures to identify and manage potential impacts from hazardous and contaminated materials that may result from the construction phase of Inland Rail Parkes to Narromine (P2N) project (the Project) which will be undertaken by INLink (the Contractor).

Although one site was identified with the presence of chrysotile asbestos in the soil material (potentially due to the dilapidated building adjacent to the location), the chance of encountering further contaminated material is low. However, hazardous and chemicals will be used throughout construction. This HCMMP addresses the potential risks and impacts and provides control measures to minimise the impacts of hazardous and contaminated materials on the environment.

The Environmental Management System and project overview are outlined in Section 1 of the Construction Environmental Management Plan (CEMP). This HCMMP will be submitted to Department of Planning, Industry and Environment (DPIE) along with, or subsequent to, the submission of the CEMP.

2 Objective

2.1 Environmental Objectives

Best practice measures for hazardous and contaminated materials management, as well as relevant regulatory authority's regulations, guidelines and the Conditions of Approval (CoA) have been employed to minimise the impact from construction activities.

The following objectives apply to the construction phase of the Project:

- Prevent adverse impacts on workers, community and the natural environment from all hazardous and contaminated materials (e.g. contaminants and hydrocarbon/chemical storage and use)
- Follow guidelines set out in the statutory requirements for managing contaminated land and the transport of contaminated goods and hazardous substances
- Provide spill response procedures and subsequent investigation requirements
- No degradation to the receiving environment as a result of disturbance of contaminated land
- No contamination of soil, air or water as a result of spillages or other impacts arising from construction activities
- Controls and procedures are implemented during construction activities to avoid, minimise or manage potential adverse impacts from contaminated materials within and adjacent to the Project corridor.

2.2 Environmental Targets

The following environmental targets for this HCMMP include the following:

- Minimise or avoid impacts from hazardous and contaminated materials by ensuring appropriate storage and handling, and minimise use of the material to only the amount required
- Ensure hazardous and contaminated materials management training is provided to all personnel in the form of inductions before they begin work on site
- Avoid off site pollution to land or water within and adjacent to the Project corridor from hazardous and contaminated materials
- All contaminated soils to be remediated appropriately by a suitably qualified professional and results to be recorded and maintained
- Address complaints from the local community related to management of contaminated material from the local community in a timely manner
- Implementation of the incident notification process including consultation with DPIE, Environmental Protection Authority (EPA) and local council.

3 References

3.1 Key Legislative Requirements

Legislation applicable to the management of potential hazardous and contaminated materials during the construction phase of the Project include:

- *Contaminated Land Management Act 1997* (CLM Act)
- *National Environment Protection (Assessment of Site Contamination) Measure 1999, 2013 amendment* (NEPM 2013)
- *Protection of the Environment Operations Act 1997* (POEO Act).

3.2 Standards and Guidelines

Standards and guidelines applicable to the management of potential hazardous and contaminated materials during construction of the Project include:

- Parkes to Narromine Waste Management Plan (4-2400-0000-EEC-PL-0003_A)
- Parkes to Narromine Contaminated and Hazardous Substances Management Plan (4-2400-0000-EEC-PL- 004_A)
- Contaminated Land Management: Guidelines for the NSW Site Auditor Scheme (3rd edition) (EPA 2017)
- Contaminated Sites: Guidelines for Consultants Reporting on Contaminated Sites (OEH 2011a)
- Contaminated Sites: Guidelines on the Duty to Report Contamination under the Contaminated Land Management Act 1997 (EPA 2015a)
- Contaminated Sites: Sampling Design Guidelines (EPA 1995)
- Managing Land Contamination Planning Guidelines SEPP 55 – Remediation of Land (Department of urban Affairs and Planning)
- Dangerous Goods (Road and Rail Transport) Regulation 2009

- National Code of Practice for the Storage and Handling of Workplace Dangerous Goods NOHSC 2017 (Safe Work Australia 2001)
- Australian Code for the Transport of Dangerous Goods by Road and Rail Dangerous Goods Code (National Transport Commission 2016)
- AS 1940—Storage and handling of Flammable & Combustible Liquids
- How to Safely Remove Asbestos Code of Practice (Safe Work Australia 2016)
- Waste Classification Guidelines (EPA 2014)
- Model Code of Practice: Labelling of workplace hazardous chemicals (Safe Work Australia 2015).

3.3 State and Commonwealth Approval Requirements

Under Part 5.1 of the NSW Environmental Planning and Assessment Act, a declared Critical State Significant (CSSI) Infrastructure project is assessed and must be approved by the Minister for Planning.

Table 3-1 outlines the Conditions of Approval (CoA) (June 2018) for the Project from the DPIE related to management of hazardous and contaminated materials during construction.

Table 3-1 – Conditions of Approval

CoA	Details	Where addressed	How addressed
A5	Where the terms of this approval require a document to be prepared or a review to be undertaken in consultation with identified parties, consultation must be carried out in accordance with the Communications Strategy required by Condition B1. Evidence of the consultation undertaken must be submitted to the Secretary with the document.	Section 3.6	Consultation has been carried out with Environment Protection Authority (EPA). Attachment F contains the evidence of consultation.
A5a)	The evidence must include: Documentation of the engagement with the party (ies) identified in the condition for approval that has occurred prior to submitting the document for approval.	Section 3.6	Consultation has been carried out with EPA as outlined in Section 3.6. Attachment F contains the evidence of consultation.
A5b)	The evidence must include: A log of the points of engagement or attempted engagement with the identified party (ies) and a summary of the issues raised by them.	Section 3.6 Attachment F	The log of comments from EPA are identified within Attachment F.
A5c)	The evidence must include: Documentation of the follow-up with the identified party (ies) where feedback has not been provided to confirm that they have none or have failed to provide feedback after repeated requests.	Section 3.6 Attachment F	Feedback from EPA is identified within Attachment F.

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CoA	Details	Where addressed	How addressed						
A5d)	The evidence must include: An outline of the issues raised by the identified party (ies) and how they have been addressed.	Section 3.6	No issues were raised from EPA.						
A5e)	The evidence must include: A description of the outstanding issues raised by the identified party (ies) and the reasons why they have not been addressed.	Section 3.6	No issues were raised from EPA.						
A19d)	For the duration of the works until the completion of construction, the approved ER must: Review documents identified in Conditions C1, C4, and C13 and any other documents that are identified by the Secretary, to ensure they are consistent with requirements in or under this approval and if so: make a written statement to this effect before submission of such documents to the Secretary (if those documents are required to be approved by the Secretary); or make a written statement to this effect before the implementation of such documents (if those documents are required to be submitted to the Secretary / Department for information or are not required to be submitted to the Secretary / Department)	Section 5.9	The ER has reviewed the identified documents. The works as described in this HCMMP will not commence until approval is received from DPIE.						
A19e)	For the duration of the works until the completion of construction, the approved ER must: Regularly monitor the implementation of the document listed in Conditions C1, C4 and C13 to ensure implementation is being carried out in accordance with the document and the terms of this approval.	Section 0	Inspections and audits will be undertaken in accordance with this condition, as outlined in Section 0.						
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. <table border="1" data-bbox="338 1603 895 1890"> <thead> <tr> <th></th> <th>Required CEMP Sub-plan</th> <th>Relevant government authorities to be consulted for each CEMP Sub-plan</th> </tr> </thead> <tbody> <tr> <td>(h)</td> <td>Hazardous and Contaminated Materials</td> <td>EPA (as appropriate)</td> </tr> </tbody> </table>		Required CEMP Sub-plan	Relevant government authorities to be consulted for each CEMP Sub-plan	(h)	Hazardous and Contaminated Materials	EPA (as appropriate)	Section 3.6	This HCMMP has been prepared in consultation with the EPA and is consistent with the CEMP referred to in the EIS.
	Required CEMP Sub-plan	Relevant government authorities to be consulted for each CEMP Sub-plan							
(h)	Hazardous and Contaminated Materials	EPA (as appropriate)							
C5	The CEMP Sub-plans must state how:								

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CoA	Details	Where addressed	How addressed
C5 (a)	The environmental performance outcomes identified in the EIS and Submissions Report, as modified by these conditions, will be achieved.	Section 2.2 Section 5.1	The environmental performance targets are outlined in Section 2.2 and will be achieved through the implementation of this HCMMP, including the mitigation measures presented in Section 5.1.
C5 (b)	The mitigation measures identified in the EIS and Submissions Report, as modified by these conditions will be implemented.	Section 5.1	The mitigation measures relevant to hazardous and contaminated material are outlined in Section 5.1 and will be applied through the implementation of this HCMMP, including the preparation of Site Environmental Plans.
C5 (c)	The relevant terms of this approval will be complied with; and	This plan	The relevant terms of this approval will be complied with through the preparation and implementation of this HCMMP.
C5 (d)	Issues requiring management during construction, as identified through ongoing environment risk analysis will be managed.	Section 4.2 Section 4.4	The environmental risk assessment is outlined in Section 4.2. The ongoing risk assessment process is outlined in Section 3.2 of the CEMP and Section 4.4 of this plan, with identified risks managed through Site Environmental Plans.
C6	The CEMP Sub-plans must be endorsed by the ER and then submitted to the Secretary for approval no later than one month before the commencement of the construction activities to which they apply.	Section 3.6 CEMP – Attachment H	This HCMMP will be approved by DPIE in accordance with this condition before the commencement of construction activities, as outlined in Section 3.6. This HCMMP has been endorsed by the ER. Refer to Attachment H in the CEMP for the ER endorsement letter.
C7	Any of the CEMP Sub-plans may be submitted to the Secretary along with, or subsequent to, the submission of the CEMP.	Section 3.6	This HCMMP will be submitted to DPE along with, or subsequent to, the submission of the CEMP.

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CoA	Details	Where addressed	How addressed
C12	Construction must not commence until the CEMP and all CEMP Sub-plans have been approved by the Secretary. The CEMP Sub-plans, as approved by the Secretary, including any minor amendments approved by the ER, must be implemented for the duration of the construction. Where the CSSI is being staged, construction of the at stage is not to commence until the relevant CEMP and sub-plans have been endorsed by the ER and approved by the Secretary.	Section 3.6	As outlined in Section 3.6, construction will not commence until this HCMMP has been approved by the Secretary. This HCMMP, as approved by DPIE, including any minor amendments approved by the ER, will be implemented for the duration of construction.
C10	The Construction Hazardous and Contaminated Materials Management Sub-plan must include an unexpected finds protocol which outlines the activities that would be undertaken should previously undetected soil contamination be identified.	Attachment A	An Unexpected Finds Protocol is included as Attachment A in this HCMMP and provides the protocol for when unexpected soil contamination is identified during construction.
E72	In the event that soils suspected to be contaminated are unexpectedly found, the Proponent must engage a suitably experience and qualified contaminated land consultant to undertake further investigations to determine the type and extent of any contamination. The investigation must be undertaken in accordance with guidelines made or approved under the <i>Contaminated Land Management Act 1997 (NSW)</i> . The results of the investigation must be documented in a Site Contamination Assessment Report.	Section 5.1.2 Attachment A	This condition is outlined in Section 5.1.2. Attachment A identifies the steps to be followed when unexpected soil contamination is identified during construction.
E73	Where results of the site investigations indicate that the contamination poses unacceptable risks to human health or the environment under either the present or proposed land use, the Proponent must engage a suitable experienced and qualified contaminated land consultant to develop and implement any necessary remediation measures. The remediation measures must be document in a Remediation Report.	Section 5.1.2 Attachment A	This condition is outlined in Section 5.1.2. Attachment A identifies the steps to be followed when unexpected soil contamination is identified during construction.
E74	If remediation is required under Condition E73, a Site Audit Statement and Site Audit Report must be prepared by a NSW EPA Accredited Site Auditor. Contaminated land must not be used for the purpose approved under the terms of this approval until a Site Audit Statement is obtained that declares the land is suitable for that purpose and any conditions on the Site Audit Statement have been complied with.	Section 5.1.2 Attachment A	This condition is outlined in Section 5.1.2. Attachment A identifies the steps to be followed when unexpected soil contamination is identified during construction.

CoA	Details	Where addressed	How addressed
E75	A copy of the Site Audit Statement and Site Audit Report must be submitted to the Secretary and relevant council(s) for information no later than one (1) month before the commencement of operation.	Section 5.1.2 Attachment A	A copy of any required Site Audit Statement and Site Audit Report will be submitted to DPIE and relevant council(s) before the commencement of operation.
E76	Nothing in Conditions E72 to E75 prevents the Proponent from preparing a single Site Contamination Report or Remediation Report or obtaining a single Site Audit Statement and Site Audit Report for the entire CSSI.	Section 5.1.2	Section 5.1.2 outlines that the preparation of a Site Contamination Report or Remediation Report or obtaining a single Site Audit Statement and Site Audit Report for the entire CSSI may occur throughout the duration of construction.

Part 5.4 Division 1 of the Protection of Environment Operations (POEO) Act 1997 Sections 124-132 outlines requirements to prevent environmental impacts and stipulates offences and penalties applicable to those identified. These conditions form the Environment Protection Licence (EPL) (October 2018). Those related to the preparation of an SWMP are outlined Table 3-2 below.

Table 3-2 –Environmental Protection Licence Requirements

Ref ID	Details	Where addressed
A3.1	Works and activities must be carried out in accordance with the proposal contained in the licence application, except as expressly provided by a condition of this licence.	CEMP and Sub Plans
L1.1	Except as may be expressly provided in any other condition of this licence, the licensee must comply with section 120 of the Protection of the Environment Operations Act 1997.	Section 5.1.3
O2.1	All plant and equipment installed at the premises or used in connection with the licensed activity: <ul style="list-style-type: none"> a) Must be maintained in a proper and efficient condition; and b) Must be operated in a proper and efficient manner 	Section 5.1.3
O4.1	All chemicals, fuels and explosives must be handled and stored in a bunded area which complies with the specifications of the relevant Australian Standard and legislative requirements.	Section 5.1.3
O4.1	Contingency and emergency management plans must be developed and implemented for the spill of any chemical and fuel.	Section 5.1.3 Section 5.7 Attachment C

3.4 Response to Submissions Requirements

Revised mitigation measures (RMMs) from the Response to Submissions (RtS) which are applicable to this HCMMP are listed in Table 3-3 below.

Table 3-3 – Revised Mitigation Measures (RMMs)

Ref ID	Details	Where addressed
C14.1	Hazardous materials and dangerous goods would be stored, handled, and transported in accordance with relevant regulatory requirements and relevant Australian Standards, including SEPP 33 thresholds. This would include a requirement to provide a minimum bund volume of 110% of the largest single stored volume within the bund.	Section 5.1
	A risk management strategy would be developed to manage the potential for risks in situations where the minimum distance from sensitive receivers cannot be achieved, or the quantity of hazardous materials exceed SEPP 33 threshold levels.	Attachment D

3.5 Construction Environmental Management Framework Requirements

The Construction Environmental Management Framework (CEMF) sets out the environmental management requirements for construction. The CEMF provides a link between the planning approval phase, detailed design and the construction environmental management documentation. The CEMF is an important internal management tool that will be referenced in isolation, however, does not form part of the CEMP or CoA requirements. The CoA will take precedence where there are inconsistencies between the CoA and the CEMF.

The CEMF requirements in relation to the preparation of this HCMMP are outlined in Table 3-4.

Table 3-4 – Construction Environmental Management Framework

Ref ID	Details	Where addressed
9.3	The construction contractor must develop and implement a Hydrocarbon and Chemical Management Plan which must include, as a minimum:	–
a)	The hydrocarbon and chemical management and mitigation measures as detailed in the Project approval documentation and Project conditions of approval;	Section 5.1
b)	The requirements of the applicable EPL conditions or regulatory requirements;	Section 3.3
c)	The responsibilities of key project personnel with respect to the implementation of the plan;	Section 5.2
d)	Details of relevant equipment, controls and management measures to be implemented to prevent and minimise impacts on personnel, the community and the environment associated with hydrocarbon and chemical management;	Section 5.1

Ref ID	Details	Where addressed
e)	A procedure for spill response, and any associated required training or competency in this procedure;	Attachment C
f)	Identification and documentation of any competencies, training, experience or qualification of personnel undertaking works under this plan; and,	Section 5.6
g)	Compliance record generation and management.	Section 5.8
9.4	<p>The Contractor's should implement a program of regular inspections, which must include appropriate checks of storage locations of hazardous and dangerous goods. Compliance records must be retained by the Contractor. These must include:</p> <ul style="list-style-type: none"> a) Inspections undertaken in relation to hydrocarbon and chemical management and storage areas; b) Any required competencies, training, qualifications or experience required to undertake these works 9i.e. engineering qualifications to confirm that bunding has been built / installed to specification); and c) Records of any impacts avoided or minimised through construction methods. <p>These records must be made available to ARTC as per any conditions of the contract or identified reporting requirements.</p>	Section 0
9.5	<p>Examples of hydrocarbon and chemical mitigations include:</p> <ul style="list-style-type: none"> a) Hazardous materials and dangerous goods will be stored, handled and transported in accordance with relevant regulatory requirements and Australian Standards 9i.e. AS 1940), including SEPP33 thresholds; b) Storage areas will be in an appropriate location (away from ignition sources and weather impacts), signed and secured against vandalism; c) Hazardous materials and dangerous goods will be appropriately labelled as per Model Code of Practice: Labelling of workplace hazardous chemicals (Safework Australia, 2015); d) A risk management strategy should be developed to manage the potential for risks in situation where the minimum distance from sensitive receivers cannot be achieved, or the quantity of hazardous materials exceed SEPP33 threshold levels; e) A procedure for spill response, and any associated required training and competency in this procedure, plus any emergency response processes or additional procedures it may trigger; f) Appropriate advice on the management and disposal of any waste generated through the response to and clean-up of spills; and g) Appropriate and fully equipped spill kits must be available in locations where chemicals are used and stored. Spill kit storage areas are to be appropriately signed and visible. 	Section 5.1 Attachment C Attachment D
13.3	The construction contractor must develop and implement a Construction Waste Management Plan in accordance with Parkes to Narromine: Waste Management Plan (4-2400-0000-EEC-PL-004) and its sub-plan, Parkes to Narromine: Contaminated and Hazardous Material Management Plan (4-2400-0000-EEC-PL-003).	Waste Management Plan

3.6 Stakeholder Consultation and Approval

In accordance with the CoA, this HCMMP has been developed in consultation with the Environment Protection Authority (EPA).

This HCMMP as a Sub-plan to the CEMP is required to be approved by the DPIE no later than one month before the commencement of construction activities. This HCMMP has been endorsed by the Environmental Representative (ER) prior to the commencement of construction as required by the CoA. Construction did not commence until this HCMMP has been approved by DPIE. This HCMMP as approved by the DPIE, including any minor amendments approved by the ER, is being implemented for the duration of construction.

Consultation was undertaken in accordance with the Communications Strategy. This consultation is intended to assist in development and finalisation of the plan. Table 3-5 summarises relevant stakeholder review and response to review.

Table 3-5 – Summary of Consultation

Agency	Requirement	Status	Response	Date
EPA	Consultation	Completed	<ul style="list-style-type: none">Email receivedNo comments to be included in HCMMP	26 October 2018
DPIE	Approval	Complete	<ul style="list-style-type: none">Comments in the DP&E review table included in the HCMMP	14 February 2019
ER	Endorsement	Completed	<ul style="list-style-type: none">Endorsement received after comments from ER addressed and verified	2 November 2018

4 Key Risks

4.1 Existing Environment

4.1.1 Sensitive Receivers

The majority of the Project site passes through rural land. Sensitive receivers are concentrated in the main towns of Parkes, Peak Hill and Narromine, with scattered residential receivers located on rural properties surrounding the Project. Thirty sensitive receivers (residences only) have been identified within 200 m of the Project site. According to the EIS, the closest residential receiver is located about 45 m from the Project site. Other sensitive receivers with regard to potential health impacts and amenity could include schools, medical clinics, hospitals, and flora and fauna.

4.1.2 Existing Contamination

There are no sites listed on the EPA Contaminated Sites Register or list of notified sites within close vicinity to the Project site. Three sites listed on ARTC's contaminated sites register are located within close vicinity to the Project site (refer to Attachment E). These sites have been leased from ARTC for use as service stations, grain or fuel storage. The sites are located described as:

- Parkes – Locomotive Depot (approximately 2000 m south-west of the Newell Highway and Henry Parkes Way junction)
- Peak Hill – Incitec Hulk Storage Depot (approximately chainage 498.0)
- Narromine – NSW Grain Board.

Based on the land uses immediately surrounding the Project site and the findings of the desktop assessment, potential sources of contamination in the vicinity of the site are considered to include:

- Agricultural activities which may be associated with hydrocarbons, pesticides and hazardous materials from demolition, deterioration of old buildings and/or landfilling.
- Unknown fill and waste materials which may be associated with various hazardous materials, including asbestos, heavy metals, pesticides and hydrocarbons
- Imported fill and ballast within the rail corridor which may be associated with asbestos, hydrocarbons, heavy metals and polycyclic aromatic hydrocarbons
- Industrial activities adjacent to the rail corridor which may be associated with hydrocarbons, oils, chemical storage, heavy metals and hazardous building materials

The targeted site investigations found no visual or olfactory evidence of contamination in any of the test pits. Illegal dumping of waste materials was observed, including storage containers that may contain, or have contained, chemicals or fuel. All samples except one had laboratory results below the limit of detection and below the relevant human health screening criteria.

One site recorded the presence of chrysotile asbestos in sandy gravel fill material. This site (refer to Map 6 in Attachment E - reference TP33) is in the existing rail corridor about 5 km south-west of Narromine. The potential source of asbestos was considered to be the dilapidated building located adjacent to the site. Soils in the vicinity of this location are classified as special waste (asbestos) in

accordance with the *Waste Classification Guidelines* (EPA, 2014). Soil sampled at the other test pit locations along the rail corridor are consistent with a general solid waste classification.

The Contamination Assessment undertaken as part of the EIS, confirmed that the soils are suitable to remain within the Project site for re-use. Based on the findings of the Contamination Assessment, the Project site does not require notification under Section 60 of the CLM Act.

Maps of soils and contamination for the Project are presented in Attachment E.

4.2 Environmental Risk Assessment

An environmental risk assessment was undertaken as part of the EIS for the Project. The assessed risk levels for the majority of potential risks related to this plan were between medium and high. Risks with an assessed level of medium or above are as follows:

- Impacts from the transport, storage and use of hazardous substances and dangerous goods
- Potential for the proposal to exacerbate bushfire risk (as a result of the storage of dangerous goods, and construction site issues such as smoking or hot works)
- Impacts from spills or accidents during the transport, storage, and use of hazardous substances and dangerous goods.

Potentially contaminated land from previous land use may be present along and in the vicinity of the Project site. There is the potential for this contamination to have a deleterious impacts if the land is disturbed through the construction process.

These potential impacts include:

- Direct contact and / or inhalation by site workers, users and visitors
- Impacts to surrounding environmental receivers (including surrounding ecosystems and flora and fauna, where present)
- Mobilisation and migration of surface and subsurface contaminants via leaching, runoff and/or subsurface flow, impacting nearby soils, surface water, and groundwater.

4.3 On-Going Risk Assessment

A risk management approach will be used to determine the severity and likelihood of an activity's impact on the environment and to prioritise its significance. This process considers potential regulatory and legal risks as well as taking into consideration the concerns of community and other key stakeholders.

The objectives of risk assessment are to:

- Identify activities that have the potential to adversely affect the local environment and/or human health
- Qualitatively evaluate and categorise each risk item
- Assess whether risk issues can be managed by environmental protection measures
- Quantitatively evaluate and categorise each risk item
- Assess whether risk issues can be managed by environmental protection measures.

Risk assessments for the Project are based on AS/NZS ISO 31000:2009, the Australian and New Zealand Standard for Risk Assessments. The purpose of risk evaluation is to separate risk to be tolerated from those to be treated, by determining the severity of each risk and developing a prioritised list of risks that require treatment. The severity of each risk is determined from the Project Risk Level Matrix.

A risk register has been developed (Risk and Opportunities Register Attachment C of the CEMP) and includes a list of activities associated with the Project, related aspects and corresponding risks. Measures to minimise the identified environmental risks are also provided (Section 3 of the CEMP). Attachment D of this plan further outlines the Risk Management Strategy related to situations where the minimum distance from sensitive receivers cannot be achieved, the quantity of hazardous materials exceeds SEPP 33 threshold levels, a new activity is being undertaken involving the materials and as deemed necessary for any other observed risk.

On-going risk assessment will be implemented throughout the construction program in accordance with Section 3.2 of the CEMP which will ensure new and changed environmental issues are identified and appropriately addressed.

4.4 Impact Identification

Based on the results of the site investigations, there is minimal potential for contamination to be encountered during construction. However, as identified in Section 4.2, potential impacts to the Project as a result of hazardous and contaminated materials being stored or handled on the Project site may occur. The following sections detail these potential impacts to the Project.

4.4.1 Storage and Handling of Dangerous Goods and Hazardous Materials

The storage and handling of dangerous goods and hazardous materials have the potential to impact the surrounding community and environment. This is due to the operation and movement of construction plant and vehicles, resulting in the potential contamination of air, soils, surface water and/or groundwater.

Dangerous goods and hazardous materials that may be used during construction are listed in Table 4-1. In general, low volumes of dangerous goods would be stored in construction compounds adjacent to the rail corridor. The quantity of goods stored will be commensurate with the demand for those goods, to ensure there are no excess goods.

All dangerous goods and hazardous materials will be accompanied by a Safety Data Sheet (SDS) and will be stored in accordance with the SDS. This will include the evaluation of the compatibility with other dangerous good and hazardous materials. There will always be enough storage areas to accommodate all dangerous goods and hazardous materials.

Table 4-1 – Dangerous Goods and Hazardous Materials

Dangerous good	Storage method	Quantity	Location
Petrol	20 litre drums	200L	Site Wide
Diesel	20 litre drums	500L	Site Wide
Lubricating and hydraulic oils and greases	20 litre drums	100L	Site Wide
Cement	Bags on pallets	100 bags	Site Wide
Acetylene	Cylinders (up to 55kg)	40 bottles	Site Wide
Epoxy glue	Small containers	100 kg	Site Wide
Premix concrete	Bags on pallets	50 bags	Site Wide
Shotcrete accelerator	1,000 L intermediate bulk containers (IBCs)	1000L	Site Wide
Acids	1,000 L IBCs	1000L	Site Wide
Bases	1,000 L IBCs/ Tanker	120T	Site Wide
Pesticide and Herbicide	20 litre drums	40L	Site Wide

Spills will be managed in accordance with the Spill Response Procedure in Attachment C and the Emergency Response Plan.

4.4.2 Bushfire

Potential ignition sources during construction include amongst others, cigarettes, domestic rubbish and the generation of sparks through hot works (i.e. welding or an excavator bucket contacting rock or rail track).

Fuel leaks and spills from plant and machinery, and the storage of dangerous goods during construction, could also provide a fuel source for bushfires. The impacts associated with potential hazards will be minimised through the mitigation measures (refer to Section 5.1), while the impacts of an incident will be managed through implementation of Pollution Incident Response Management Plan (PIRMP).

4.4.3 Petroleum Hydrocarbons and Asbestos

Exposure to petroleum hydrocarbons and asbestos during excavation could cause health and safety impacts to workers or the community. This may be through inhalation and/or direct contact with these materials.

Health and safety impacts associated with potential exposure to contaminated and hazardous materials will be managed by:

Hazardous and Contaminated Materials Management Plan

Parkes to Narromine Inland Rail Project



- Testing requirements (as per the Inspection Test Plans (ITP) – Quality Management Plan) of existing materials on the rail corridor to determine if the material can be reused as fill and / or structural material
- Management of any contaminated ballast during the installation of the rail infrastructure
- Safety management plan that will address potential exposure concerns including the potential for an asbestos management plan to be undertaken by a suitable qualified person and implemented during the works.

Petroleum hydrocarbons and asbestos has been identified in the EIS as having the potential to occur, however if other contaminants are uncovered the will be managed as per Section 5.2 of the HCMMP.

5 Management

5.1 Mitigation and Management Measures

5.1.1 Transport, Storage and Handling of Hazardous Materials

Hazardous materials and dangerous goods will be stored, handled, and transported in accordance with relevant regulatory requirements and relevant Australian Standards, including SEPP 33 thresholds. Hazardous materials and dangerous goods will be transported, stored and used as per the SDS. The SDS will be kept at the location of the hazardous material, and any PPE that is required will be used as per the SDS.

Chemicals, fuels and lubricants will be stored in bunded, secure, protected area with an impermeable floor to minimise the impact of any spillage or contamination on the site and adjoining areas. The floor of bunds will be above the 1 in 20-year flood event and top of bunds will be above the 1 in 100-year flood event level. The bunds will provide a minimum bund volume of 110% of the largest single stored volume within the bund.

The storage areas of hazardous materials will not be located within 50 m of natural or built drainage lines, flood prone areas, or on slopes steeper than 1:10. The storage facilities will be under cover, where practical. If storage facilities are not under cover, the bunded areas will be managed to prevent rain water impacting on the volume of the bund. The storage areas will be located appropriately away from ignition sources and weather impacts, and will be signed and secured against vandalism.

The quantity of chemicals stored on site will be limited and managed appropriately at the ancillary facilities. Chemicals used on site, e.g. jerry cans, paints, curing chemicals etc, will be brought back to the ancillary facilities at the end of each shift. Empty chemical containers will be disposed of in accordance with the EPA Waste Classification Guidelines.

5.1.2 Management of Unexpected Finds of Contamination

Unexpected soil contamination could include:

- Unexpected staining or odours
- Potential asbestos containing materials
- Underground storage tanks, buried drums or machinery, etc.

In the event that unexpected contaminated soil is found, a suitably experienced and qualified contaminated land consultant will undertake further investigations to determine the type and extent of contamination. The investigation will be undertaken in accordance with guidelines made or approved under the CLM Act. The results of the investigation will be documented in a Site Contamination Assessment Report.

Where the results of the site investigations indicate that the contamination poses unacceptable risks to human health or the environment under either the present or proposed land use, a suitably experienced or qualified contaminated land consultant will develop and implement any necessary remediation measures. The remediation measures will be documented in a Remediation Report.

If remediation is required, a Site Audit Statement and Site Audit Report will be prepared by a NSW EPA Accredited Site Auditor. Contaminated land will not be used for the purpose approved under the

terms of this approval until a Site Audit Statement is obtained that declares the land is suitable for the purpose and any conditions on the Site Audit Statement have been complied with.

If relevant, preparation of a single Site Contamination Report or Remediation Report or obtaining a single Site Audit Statement and Site Audit Report for the entire CSSI may be required. For further detail, refer to Attachment A for the Unexpected Finds Protocol.

5.1.3 Additional Measures

Mitigation measures to manage impacts of hazardous and contaminated materials during construction are outlined in Table 5-1.

Table 5-1 – Mitigation and Management Measures

Ref ID	Details	Responsibility	Source
GENERAL			
HC01	Training will be provided to all Project personnel, including relevant sub-contractors on contamination requirements and identification of potentially contaminated materials through inductions, toolboxes and targeted training.	Environmental Manager Construction Manager	Good practice
HC02	General servicing of vehicles and equipment will only be undertaken in designated areas or compounds.	Environmental Manager Construction Manager	Good practice
HC03	Emergency spill kits will be kept on site at all times. All staff will be made aware of the location of spill kits and trained in their use.	Environmental Manager	Good practice
HC04	If a spill occurs, the Spill Response Procedure in Attachment C will be followed.	All site personnel	CEMF – Section 9.5 (e)
HC05	Appropriate and fully equipped spill kits will be available in locations where chemicals are used and stored. Spill kit storage areas are to be appropriately signed and visible.	Environmental Manager	CEMF – Section 9.5 (g)
HAZARDOUS MATERIALS			
HC06	Regular inspections of hazardous and contaminated materials, storage facilities and onsite activities where chemicals are used or transported will be undertaken, as outlined in Section 5.4.	Environmental Manager	Good practice
HC07	All plant and equipment will be inspected daily for leakages of fuel, oil or hydraulic fluid. Any leaks will be repaired and records of plant inspections will be maintained.	Construction Manager	Good practice
HC08	Any hazardous materials that are to remain on site will be surveyed and recorded on a Hazardous Material Register.	Environmental Manager	Good practice

Ref ID	Details	Responsibility	Source
HC09	Materials classified as hazardous waste will be treated, or an immobilisation approval obtained, in accordance with Part 10 of the Protection of the Environment Operations (Waste) Regulation 2014 prior to off site disposal.	Environmental Manager	Good practice
HC10	Synthetic mineral fibres will be handled and disposed of in accordance with the National Code of Practice for the Safe Use of Synthetic Mineral Fibres.	Construction Manager	Good practice
HC11	Hazardous materials will be stored, handled and transported in accordance with relevant regulatory requirements and relevant Australian Standards, including SEPP 33 thresholds, its SDS and Section 5.1.1.	Environmental Manager Construction Manager	Good practice
HC12	Hazardous materials and dangerous goods will be appropriately labelled as per <i>Model Code of Practice: Labelling of workplace hazardous chemicals</i> (Safework Australia, 2015).	Environmental Manager Construction Manager	CEMF – Section 9.5 (c)
HC13	Refuelling will only be undertaken within designated refuelling points, and at least 50 m from waterways, drainage lines and sensitive areas. Where this is not practical, additional spill containment measures will be implemented.	Environmental Manager Construction Manager	Good practice
HC14	Where demolition of any building is required, a hazardous materials building assessment will be undertaken to identify the issues of concern and the management requirements in accordance with Clause 1.6 of AS 2601 - 2001 The Demolition of Structures.	Environmental Manager	Good practice
CONTAMINATED MATERIALS			
HC15	The Unexpected Finds Protocol will be implemented following the identification of unexpected contaminated soil, as outlined in Attachment C.	Environmental Manager Construction Manager	CoA C10
HC16	All potentially contaminated spoil will be stockpiled on a bunded, impermeable surface, covered to prevent wind blow and potential erosion.	Environmental Manager	Good practice
HC17	Testing and classification will be undertaken in accordance with the Waste Classification Guidelines prior to off site disposal of an appropriately licensed facility.	Environmental Manager	Good practice
HC18	Control measures will be implemented immediately to divert surface runoff away from contaminated land and to capture and manage any surface runoff contaminated by exposure to contaminated land.	Environmental Manager Construction Manager	Good practice

Ref ID	Details	Responsibility	Source
HC19	Specific control measures provided in any future contamination management reports will be followed for all works undertaken at the service station site, including at buildings and external areas.	Environmental Manager Construction Manager	Good practice
HC20	Prior to removal of any building, the presence of asbestos will be confirmed.	Environmental Manager Construction Manager	Good practice
	The removal, handling and disposal of any asbestos containing materials will be undertaken by an appropriately licensed contractor, and in accordance with: <ul style="list-style-type: none"> - Code of Practice for the Safe Removal of Asbestos 2005 - Code of Practice for the Management and Control of Asbestos in Workplaces 2005. 	Environmental Manager Construction Manager	Good practice

5.2 Roles and Responsibilities

All site personnel are responsible for ensuring that their own or the actions of others do not cause environmental nuisance or harm at any level. Table 5-2 below outlines the roles and responsibilities of the site personnel.

Table 5-2 – Roles and Responsibilities

Personnel	Responsibilities
Field Supervisor	<ul style="list-style-type: none"> • Implementing mitigation measures for all activities or work areas under their control.
Environmental Manager	<ul style="list-style-type: none"> • Routine surveillance and monitoring • Communication of the requirements of this plan • Coordination of visual monitoring • All other responsibilities related to hazardous and contaminated materials identified within this Sub-plan and overall CEMP • Immediate notification of state and government agencies (e.g. EPA if there is a contamination soil event).
Project Manager	<ul style="list-style-type: none"> • Overseeing the implemented of this plan and overall CEMP.
Suitably Qualified Contamination Specialist	<ul style="list-style-type: none"> • Provision of safe working environment • Provide onsite supervision of all potential contamination works • Engage suitably qualified and competent staff and/or contractors to manage works in areas impacted with contamination • Provide advice on handling, management and treatment of potentially contaminated material • Provide validation of excavation, waste classification and other advice in relation to contamination • Other activities that may be required by the Principal Contractor from time to time.

5.3 Environmental Incidents, Non-Compliance and Complaints

Environmental incidents and non-compliances will be managed in accordance with Section 6 of the CEMP.

In the event of a complaint or incident, an investigation will be undertaken to determine the cause of the problem, through which processes or activities will be modified if required. Consultation with stakeholder groups and reporting to relevant State and Commonwealth Regulatory Authorities may also be required to be undertaken as a result of a complaint or incident with regard to a potential impact of hazardous and contaminated materials. Complaints will be managed as per Section 6.3 of the CEMP.

In the event of encountering unexpected contamination, remedial measures as per the Unexpected Finds Protocol will be implemented as provided in Attachment A.

Incidents where material harm to the environment is caused or threatened will be managed in accordance with a Pollution Incident Response Management Plan (PIRMP) and Emergency Response Plan. In the event of any non-compliance (an occurrence, set of circumstances or development that is a breach of the approval conditions [CoA or EPL] but is not an incident), the non-compliance will be managed by the Environmental Manager and if required corrective action/s shall be raised. All corrective actions and improvements shall be entered into the Corrective or Improvement Actions Database and will be closed out as soon as practical (to be reviewed during the using the Weekly Environmental Checklist).

5.4 Inspections and Auditing

General inspections and auditing will be undertaken in accordance with Section 7 of the CEMP.

The Environmental Team has and will continue to undertake environmental inspections to develop and evaluate the effectiveness of environmental controls. This will include:

- Daily visual inspections
- Weekly inspections using the Weekly Environmental Checklist
- Monthly reporting will be recorded through Project Monthly Reports
- Annual independent audit
- ER regular monitoring of the implementation of the documents listed in the CoA.

Regular inspections will continue to be undertaken in relation to waste and contaminated materials and include the following:

- Effectiveness of the mitigation measures
- Records of any waste and contaminated materials monitoring, or sampling completed as triggered by these plans (including field observations, field measurements and laboratory results)
- Any environmental incidents, hazards or near-misses documented in relation to waste or contaminated materials management
- Community complaints in relation to waste or contaminated materials management, and the construction contractor's response

- Contaminated materials volumes managed, and their associated management approach
- Contaminated materials tracking, disposal and associated regulatory documentation
- Contaminated materials management objectives, and tracking against these
- Records of any impacts avoided or minimised.

5.5 Communication

Stakeholder group, community and Regulatory Authority consultation on mitigation measures outlined in this plan should be undertaken in accordance with consultation requirements outlined in Section 8 of the CEMP.

5.6 Training and Awareness

General training and awareness will be undertaken in accordance with Section 8 and 9 of the CEMP.

All employees and contractors working on site will undergo site induction training relating to hazardous and contaminated materials issues present at the site. The induction training will address elements related to contamination identification and management including:

- Existence and requirements of this HCMMP
- Relevant legislative requirements
- Identification of potential contamination
- Storage and use of hazardous substances
- Unexpected Finds Procedure
- Specific responsibilities for the identification and management of contamination.

Training will also include toolbox talks and pre-start meetings in which the topics of the site induction will be revisited. Toolbox training regarding identification of hazardous and contaminated materials will be regularly provided to maintain awareness of site environmental issues. Toolbox training will also be provided on practices and controls to avoid incidents from hazardous and contaminated materials and on the rapid response to and reporting of all environmental incidents.

5.7 Emergency Planning and Response

Emergency planning and response will be undertaken in accordance with Section 10 of the CEMP.

Where any unauthorised impact of hazardous and contaminated materials within the project area are identified construction, activities resulting in impacts will be ceased immediately and appropriate mitigation measures identified and implemented.

All such impacts, their identified source and corrective actions are to be documented and managed in accordance with this HCCMP and the CEMP and recorded in the Corrective and Improvement Action Database. If applicable state and or commonwealth Regulatory Authorities are to be notified of impacts immediately.

The PIRMP will be used to ensure that management and comprehensive and timely communication regarding pollution incidents is undertaken in accordance with the relevant authorities.

5.8 Record Keeping

The results of any incidents, responses and unexpected finds throughout construction will be documented and kept on record. These records will be stored on the INLink internal system for the duration of the Project.

Compliance records will be retained and include the following:

- Inspections which will be undertaken regularly in relation to hydrocarbon and chemical management and storage areas
- Any required competencies, training, qualifications or experience required to undertake these works (i.e. engineering qualifications to confirm that bunding has been built/installed to specification)
- Records of any impacts avoided or minimised through construction methods. These records must be made available to ARTC as per any conditions of the contract or identified reporting requirements.

5.9 Document Review

General document review has been and will be undertaken in accordance with Section 11 of the CEMP.

This HCMMP will be reviewed utilising the Corrective and Improvement Action Database simultaneously to review of the overarching CEMP with any amendments cited and cross checked against each plan.

For the duration of the works until the completion of construction, the approved ER must:

- Review documents identified in the CEMP, Sub-plans, Construction Monitoring Programs and any other documents that are identified by the Secretary, to ensure they are consistent with requirements in or under this approval and if so:
 - Make a written statement to this effect before submission of such documents to the Secretary (if those documents are required to be approved by the Secretary); or
 - Make a written statement to this effect before the implementation of such documents (if those documents are required to be submitted to the Secretary / Department for information or are not required to be submitted to the Secretary / Department).



Attachment A Unexpected Finds Protocol

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The purpose of this procedure is to detail the actions to be taken when unexpected contaminated soils / water / subsurface infrastructure is encountered during excavation / construction activities. It is applicable to all activities conducted by construction personnel that have the potential to uncover / encounter contaminated soils / water / subsurface infrastructure.

Upon encountering potentially contaminated materials, all work in that area is to cease, the area is to be made safe and the Environmental Manager is to be notified. If it is suspected that the material could be contaminated, a suitably qualified and experienced contaminated land consultant will be engaged to undertake further investigations to determine the type and extent of any contamination. This would be in accordance with the guidelines made or approved under the *Contaminated Land Management Act 1997 (NSW)*. Results of this investigation would be documented in a Site Contamination Assessment Report.

The following types of unexpected contamination may be encountered within the rail corridor:

- Uncontrolled fill areas where various deleterious materials maybe present within the fill or rail ballast profile (i.e. where asbestos, plastic / brick / ceramic / metals fragments are present, and soils stained by petroleum hydrocarbons, industrial solvents and electrical transformer fluids).
- Surface soils / ballast / rail sleeper impacted by petroleum hydrocarbons, organophosphorus compounds or organophosphate pesticides.
- Illegal dumping of waste at the construction site (e.g. building and demolition waste, general waste and putrescibles).

Assessing Risk Classification of Soil

Where potentially contaminated material is uncovered, the Environmental Manager will need to determine the likelihood of this classification. The Environmental Manager will need to consider the following checklist:

- Unusual odour from soils not detected in other similar areas
- Discolouration or staining of soil or rock
- Seepage of unusual liquids from soil or rock
- Unusual odours or sheens on groundwater and/or surface water
- Unusual metal objects
- Unexpected underground storage tanks, buried drums or machinery etc.
- Presence of waste or rubbish above or below ground
- Potential asbestos containing material
- Unusual colour in soil
- Unusual colour in groundwater and/or surface water.

Should none of these factors or any other reason be detected to identify or suspect contamination, then the Environmental Manager is to document this decision and the justification. This information is to be provided to the Construction Manager. Should any one of these factors be identified, then the Environmental Manager is to consider the material to be possibly contaminated.

If such contamination is discovered, the following procedure will be implemented:

- Excavation will cease in the vicinity of the discovery
- Environmental Manager will be notified immediately
- Contractor will engage a suitably experienced and qualified contaminated land consultant to undertake an assessment of the unexpected find and determine the type and extent of contamination
- Results of the investigation will be documented in a Site Contamination Assessment Report
- EM to advise EPA and other relevant agencies of progress results
- Excavation will not recommence until the extent of the contamination has been assessed and if the nature and extent of the contamination requires for this plan to be updated
- Excavated material will be separated from other materials and stockpiled for assessment
- Sampling of the materials will be undertaken in accordance with the relevant guidelines
- If potential asbestos containing material is encountered, a suitably qualified asbestos assessor will be engaged immediately
- If the contamination poses unacceptable risks to human health or the environment, a suitably experienced or qualified contaminated land consultant will develop and implement any necessary remediation measures
- Remediation measures will be documented in a Remediation Report
- If remediation is required, a Site Audit Statement and Site Audit Report will be prepared by a NSW EPA Accredited Site Auditor
- If the material requires offsite disposal, the material will be classified in accordance with NSW EPA (2014) 'Waste Classification Guidelines Part 1: Classifying Waste' by a suitably qualified environmental consultant
- Waste disposal will be undertaken as per Waste Management Plan (WMP).

Unexpected finds may include dumping of unidentified spoil material that may be identified during or after the completion of the project. If dumping of material is discovered, material must be contained, and Principal Contractor must be informed immediately.

The Environmental Manager will advise when works can commence again in that area once it is determined that no further action is required, i.e. the contamination has been removed or a management process has been established.

Any unexpected finds shall be documented in the validation report to be prepared at the completion of the work.

A copy of the Unexpected Finds Register is provided in Attachment B.

Incident Notification

Environmental Incidents will be investigated and reported upon in accordance with the Incident and Accident Management Standard and Section 6 of the CEMP. Any environmental incidents will be

immediately reported to the Environmental Representative or Project Manager, who will report the incident to the ARTC as per project requirements.

In the event of serious or material environmental harm INLink will notify the relevant regulatory authorities as per NSW requirements as outlined in the Incident and Accident Management Standard. Where necessary, INLink will also notify the respective property owners or occupiers within 24 hours of the incident occurring.

In accordance with Condition A36, DPIE will be advised in writing to compliance@planning.nsw.gov.au immediately after becoming aware of an incident and in any event within 24 hours of becoming aware of any incident. The notification will include the application number, time, date and details of the incident. If statutory notification is given to the EPA as required under the POEO Act, such notification will also be provided to DPIE within 24 hours after the notification was given to the EPA.

An incident will be reported if any of the following scenarios occur or have the potential to occur:

- Serious environmental harm
- Material environmental harm
- Prosecution by a regulatory authority
- Environmental approval condition breach
- Environmental monitoring parameter breach.

Incidents will be reported both verbally and in writing. Details of any environmental incident will be investigated and entered into the BMD Incident and Accident Database. Additionally this information will be forwarded to ARTC. Verbal notification will be provided immediately (no longer than two hours), and written notification will be forwarded as per project requirements. All Incidents and Accidents shall be recorded in the BMD Incident and Accident database. Where Class 1 or Class 2 environmental incidents occur, a Flash Report shall be generated through the Incident and Accident Database to alert senior management.



Attachment B
Unexpected Finds Register

AMTlink



Attachment C Spill Response Procedure

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Spill Response Procedure

Accidental spills (i.e. chemical, fuel, oils) on site have the potential to result in contamination of land and water. Spills on the Project site are considered environmental incidents. It is important to ensure all spills (for hazardous liquid substances) are treated with caution.

Any environmental incidents will be immediately reported to the Environmental Manager or Project Manager.

The steps taken in the event of a spill are detailed below. The procedure is implemented in accordance with the Emergency Response Plan.

No.	Response	Action Sequence
1	Safety and Detection	<ul style="list-style-type: none"> Assess safety of situation for yourself and others If you cannot identify the substance, evacuate immediately and follow step 4 If there is a risk of fire or explosion, evacuate immediately and follow step 4 Shut off ignition source(s) if safe to do so
2	Trace Source	<ul style="list-style-type: none"> Put on appropriate PPE Trace the source of the spill Determine if spill is continuing
3	Stop or Control	<ul style="list-style-type: none"> Stop or control the leakage by shutting valves, plugging holes, moving mobile equipment – only if it is safe to do so
4	Emergency Notification	<ul style="list-style-type: none"> Refer to Pollution Incident and Emergency Response Management Plan for contact details – these will be prominently displayed around the site compound and office.
5	Secure Area	<ul style="list-style-type: none"> Divert traffic and people away from the immediate area Evacuate if necessary
6	Contain	<ul style="list-style-type: none"> Contain the leakage using temporary bunds, booms etc.
7	Recover Product	<ul style="list-style-type: none"> Recover any free liquid into purpose-built tankers if possible Recover absorbent booms etc.
8	Clean Up	<ul style="list-style-type: none"> Clean-up the spill by pumping, absorbing, chemically treating DO NOT SPREAD OR DILUTE SPILLS WITH DEGREASERS, DETERGENTS OR WATER
9	Dispose	<ul style="list-style-type: none"> Dispose of the spilt product in an environmentally responsible manner Contaminated soil should be removed to an appropriate facility following consultation with the Environmental Manager (Refer to Waste Management Plan (WMP))
10	Report	<ul style="list-style-type: none"> Report the incident to your Supervisor who will then notify the Environmental Manager (see contacts list in PIRMP). The Environmental Manager is responsible for notifying the appropriate agencies and groups
11	Replace Used Equipment	<ul style="list-style-type: none"> Any equipment or materials consumed in the clean-up operation should be replaced as soon as possible
12	Monitor	<ul style="list-style-type: none"> Monitor the spill site to validate clean up and impact on the environment



Attachment D
Risk Management Strategy

AMTlink

Risk Management Strategy

This Risk Management Strategy has been developed to manage the potential risks in situation where the minimum distance from sensitive receivers cannot be achieved, the quantity of hazardous materials exceeds SEPP 33 threshold levels, a new activity is being undertaken involving the materials and as deemed necessary for any other observed risk.

This strategy adheres to the following legislations:

- *Contaminated Land Management Act 1997* (CLM Act)
- *National Environment Protection (Assessment of Site Contamination) Measure 1999, 2013 amendment* (NEPM).

All risks must be identified and managed in accordance with the above legislation.

Risk Identification

Initially, the risk must be identified with its distance from sensitive receivers noted and / or the quantity of hazardous materials measured. Risks may include, but not be limited to, the following:

- Hot works
- Works near watercourses
- Transport and handling of hazardous and contaminated materials
- Works near identified contaminated sites (locations outlined in Section 4.1 and Attachment E); and
- Dust generation.

The storage and handling of dangerous goods and hazardous materials have the potential risk to the surrounding community and environment if leaks and spills occur, resulting in the potential contamination of air, soils, surface water and / or groundwater. The following table outlines the dangerous goods that may be used during construction, assesses their risk and provides control measures to minimise each risk.

Dangerous Good	Storage method	Quantity	Location	Risk Assessment	Control Measure
Petrol	20 litre drums	200L	Site Wide	High	As identified within the Safety Data Sheet
Diesel	20 litre drums	500L	Site Wide	High	As identified within the Safety Data Sheet
Lubricating and hydraulic oils and greases	20 litre drums	100L	Site Wide	Medium	As identified within the Safety Data Sheet
Cement	Bags on pallets	50 Bags	Site Wide	Low	As identified within the Safety Data Sheet

Dangerous Good	Storage method	Quantity	Location	Risk Assessment	Control Measure
Acetylene	Cylinders (up to 55kg)	40 Bottles	Site Wide	Low	As identified within the Safety Data Sheet
Epoxy glue	Small containers	100 kg	Site Wide	Low	As identified within the Safety Data Sheet
Premix concrete	Bags on pallets	100 bags	Site Wide	Low	As identified within the Safety Data Sheet
Shotcrete accelerator	1,000 L intermediate bulk containers (IBCs)	1000L	Site Wide	Low	As identified within the Safety Data Sheet
Acids	1,000 L IBCs	1000L	Site Wide	Low	As identified within the Safety Data Sheet
Bases	1,000 L IBCs	120T	Site Wide	Medium	As identified within the Safety Data Sheet
Pesticide and Herbicide	20 L drums	40L	Site Wide	Low	As identified within the Safety Data Sheet

All staff are required to report any identified risks to the Environmental Manager who will then assess the situation and implement the appropriate control measures. This includes engaging a specialist sub-consultant if necessary to further assess the situation. Additional mitigation measures may be developed by the Environmental Manager, in consultation with the specialist, EPA and relevant Councils, and will be included in the updated HCMMP or WMP if required.

The following risk matrix outlines the rationale behind the risk assessment level given to activities.

Permanent or long-term serious environmental harm / life threatening or long-term harm to health and wellbeing.	Consequence	Severe	Medium	High	High	Extreme	Extreme
Serious environment harm / high-level harm to health and wellbeing.		Major	Medium	Medium	High	High	Extreme
Medium level of harm to health and wellbeing or the environment over an extended period of time.		Moderate	Low	Medium	Medium	High	High
Low environmental impact / low potential for health and wellbeing impacts.		Minor	Low	Low	Medium	Medium	High
No or minimal environmental impact, or no health and wellbeing impacts.		Low	Low	Low	Low	Medium	Medium

Description of risk ratings

Risk level	Description
Extreme	Totally unacceptable level of risk. Stop work and/or take action immediately.
High	Unacceptable level of risk. Controls must be put in place to reduce to lower levels.
Medium	Can be acceptable if controls are in place. Attempt to reduce to <i>low</i> .
Low	Acceptable level or risk. Attempt to eliminate risk but higher risk levels take priority.

Rare	Unlikely	Possible	Likely	Certain
Likelihood				
Could happen but probably never will	Not likely to happen in normal circumstances	May happen at some time	Expected to happen at some time	Expected to happen regularly under normal circumstances

If risks are identified as medium or above, the following must be considered:

- Stop work
- Ask a manager, supervisor or specialist to identify appropriate controls;
- Discuss with a colleague to assist
- Change the conditions of the task
- Do the job in another way.

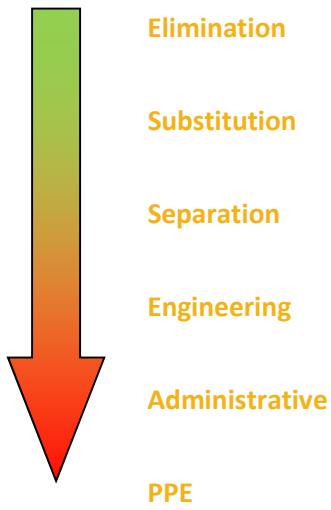
The above controls should be implemented upon initial recognition of a medium-high risk as a first step. Further investigation should be undertaken regarding the risk, with the Environmental Manager being responsible for the following:

- Engaging a specialist consultant to assess the risk
- Ensuring the area is marked off from people passing through it, if required
- Undertaking remediation of the area, if required.

No work should continue following the identification of a medium-high risk until it has been given clearance to do so by the Environmental Manager.

The hierarchy of controls should be used to determine the most appropriate controls to mitigate the hazards. This is illustrated below:

Most Effective



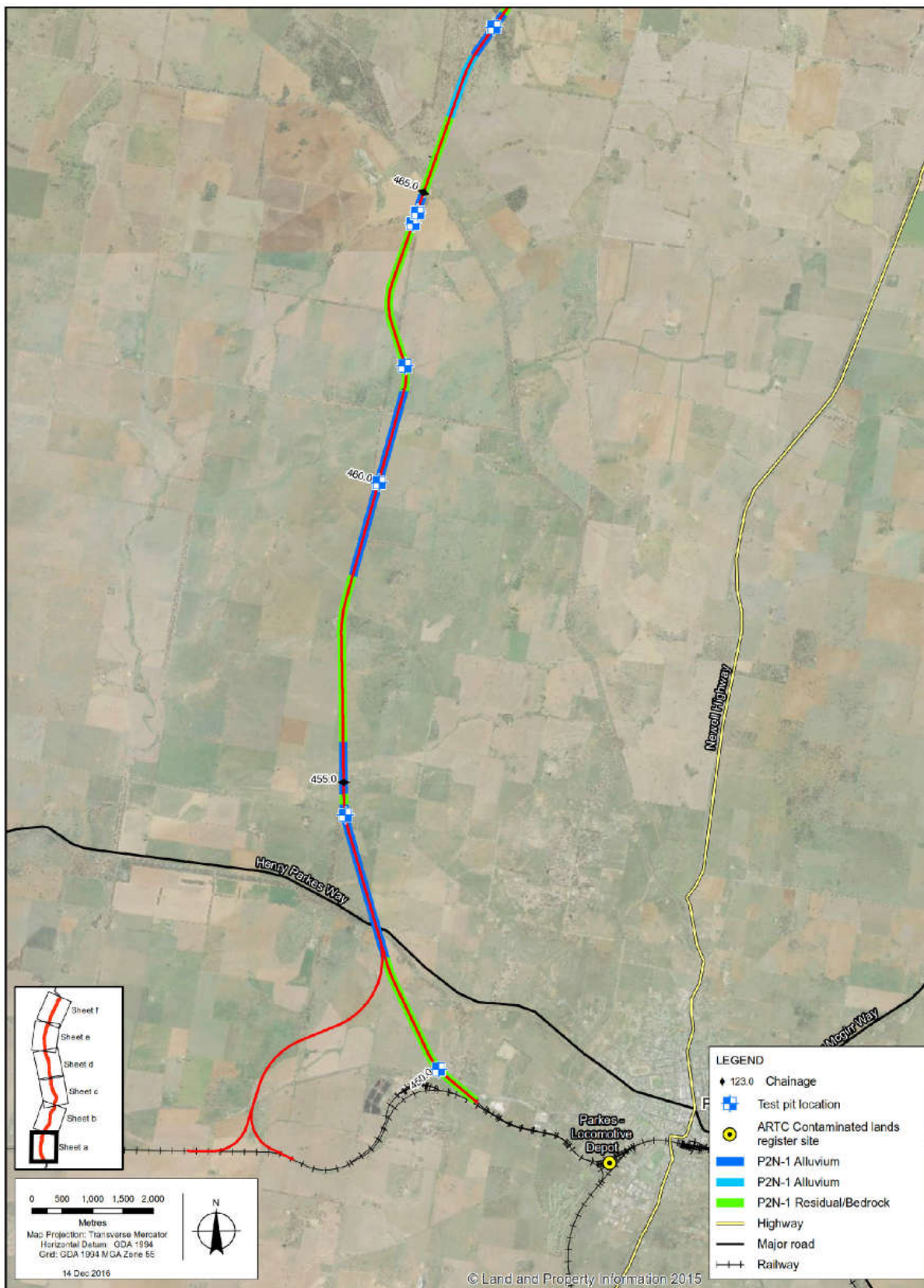
Least Effective



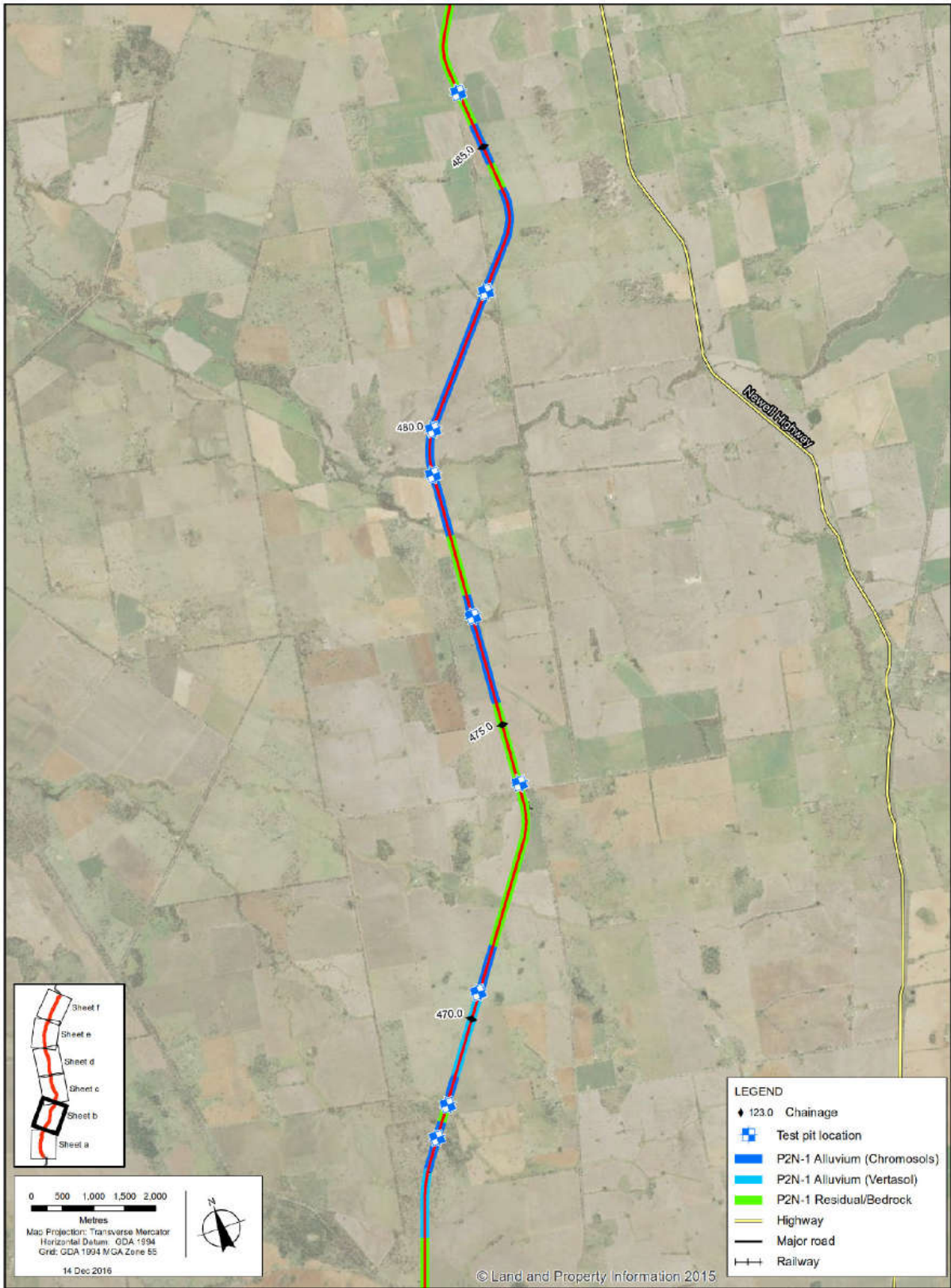
Attachment E

Soils and Contamination Maps

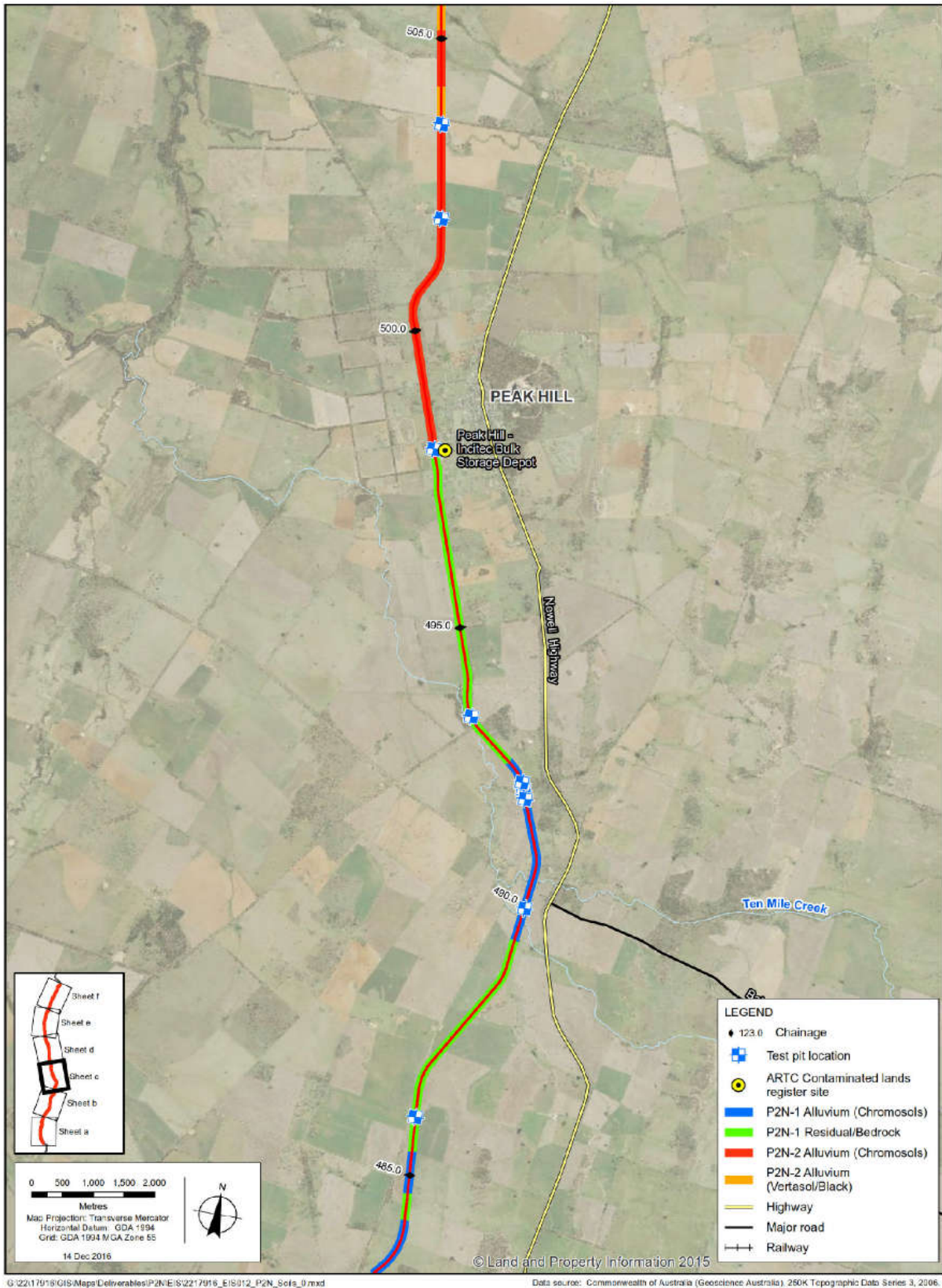
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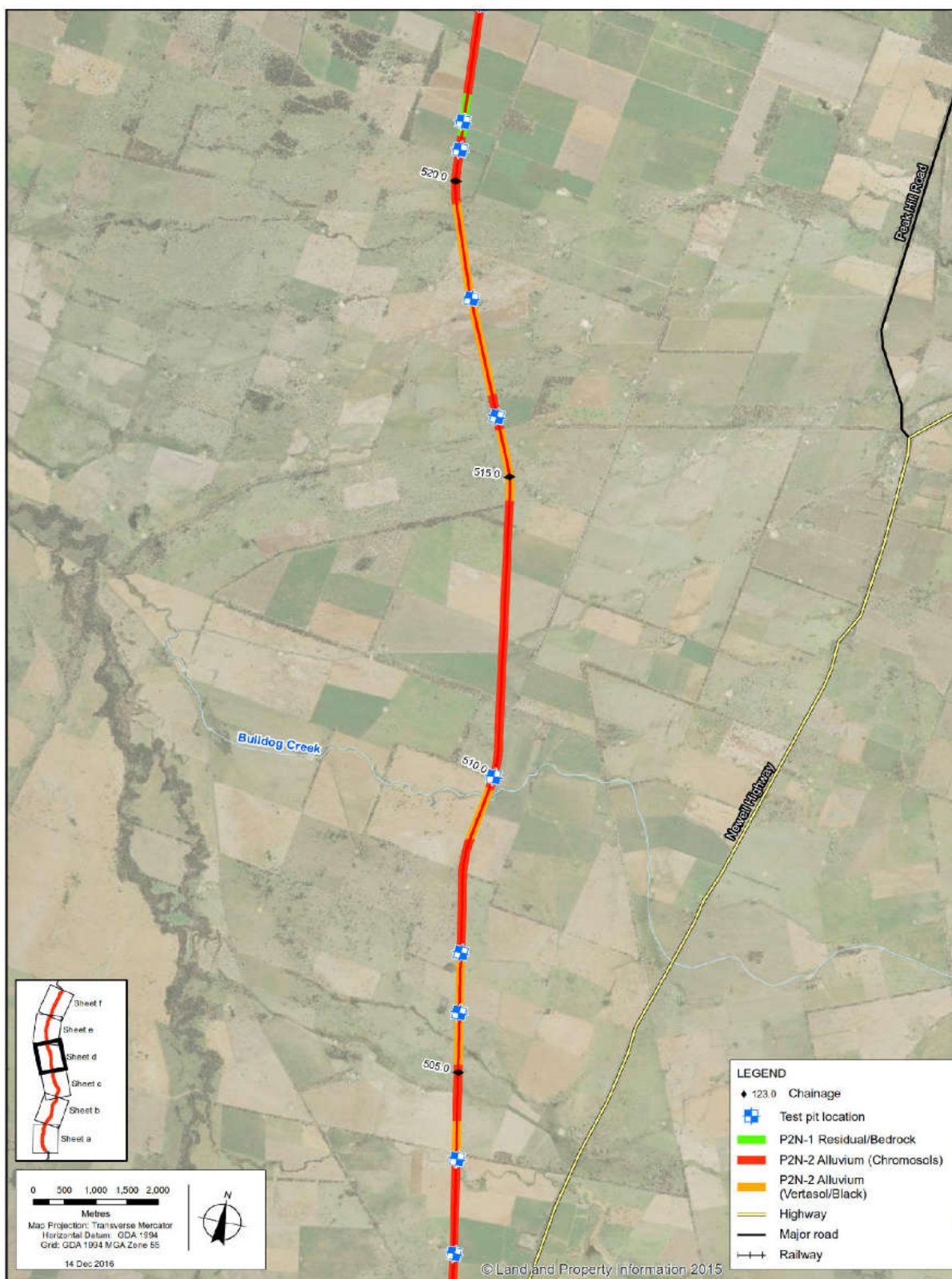
Soils and Contamination – Map 1



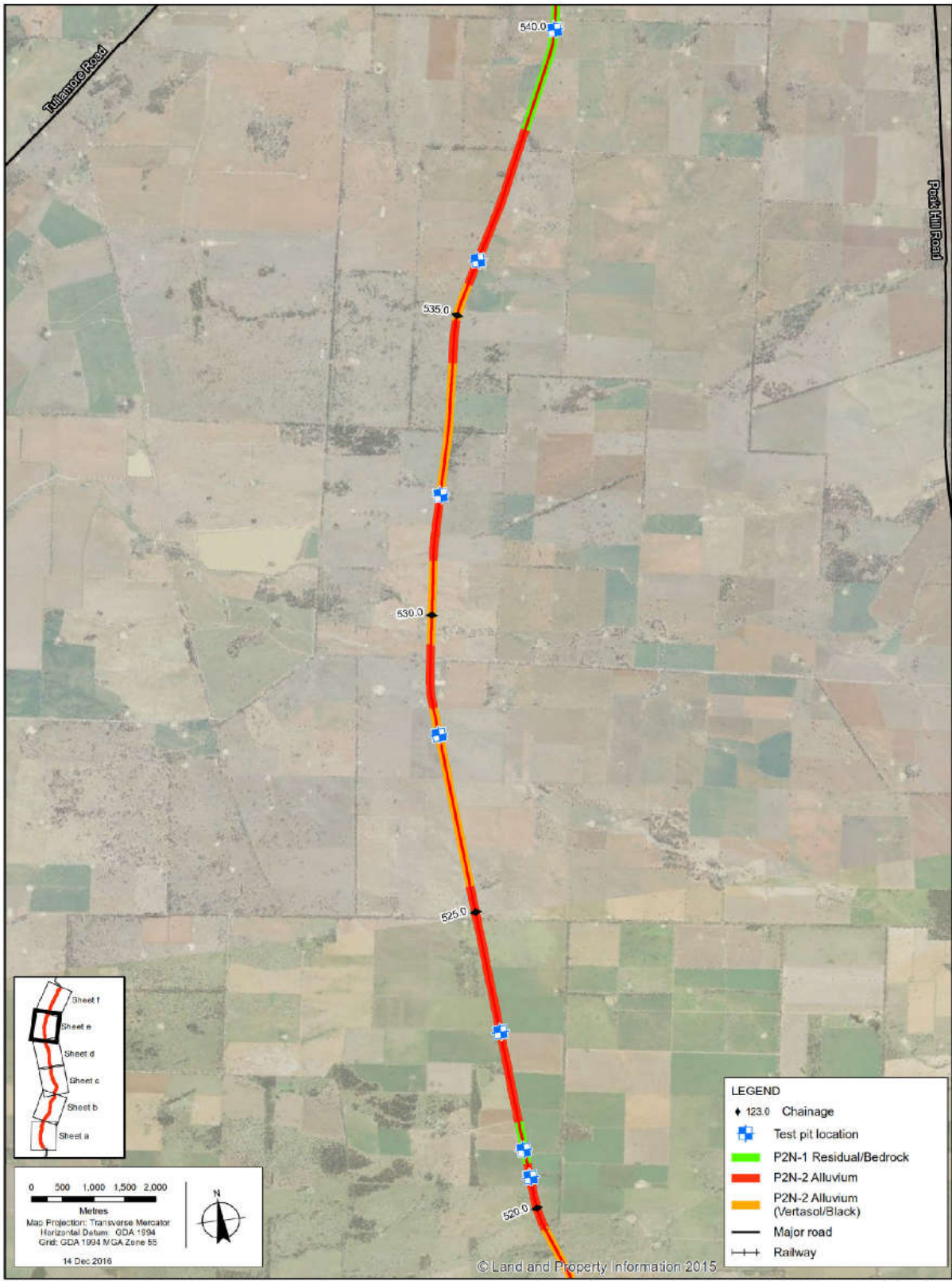
Soils and Contamination – Map 2



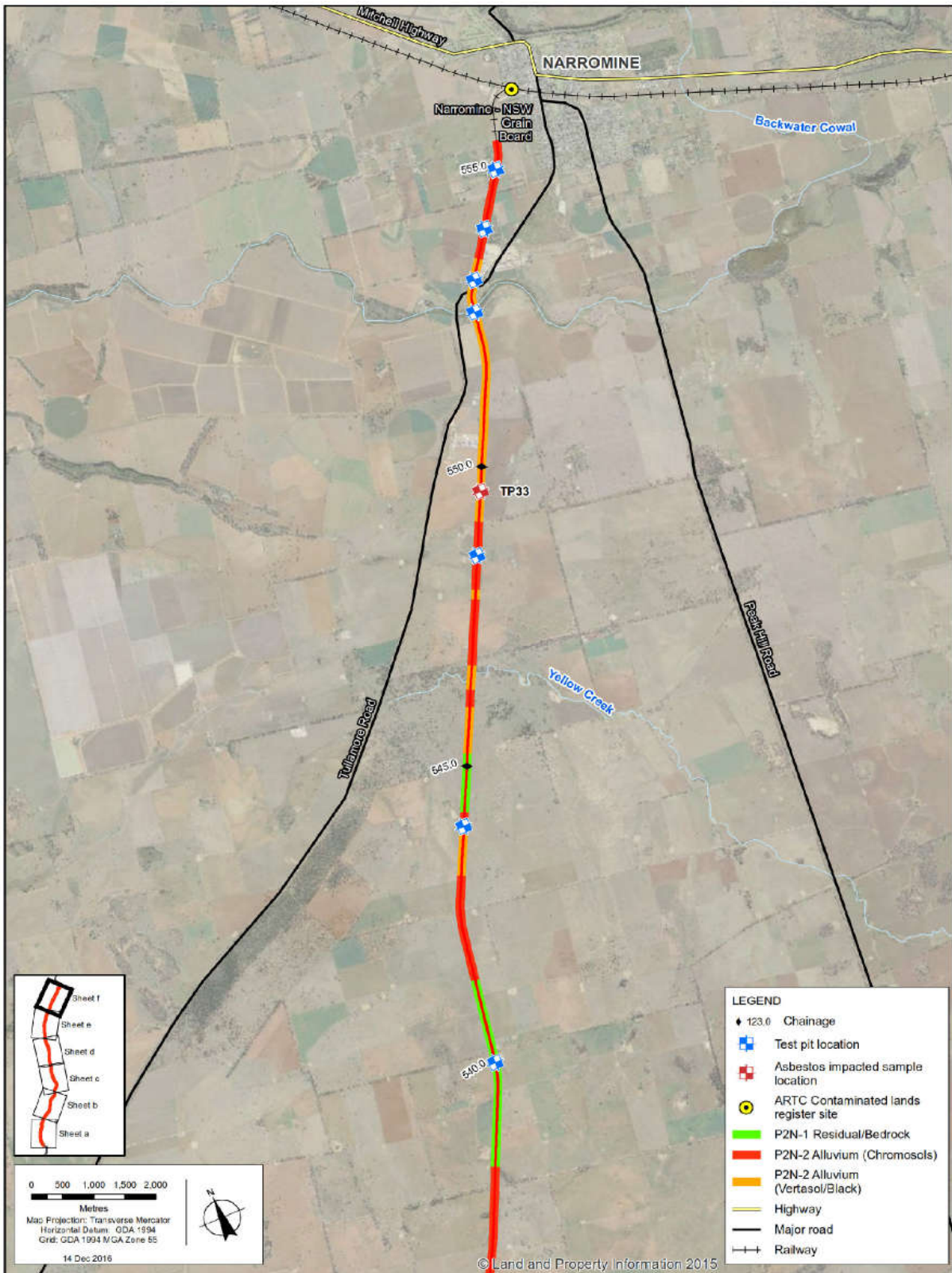
Soils and Contamination – Map 3



Soils and Contamination – Map 4



Soils and Contamination – Map 5



Soils and Contamination – Map 6



Attachment F Evidence of Consultation

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Sydney 2000

Inland Rail - Parkes to Narromine (SSI 7475)

ER approval of minor revisions to CEMP & Sub Plans

Dear Roisin,

Condition of Approval (CoA) A19 (j) provides the Environmental Representative (ER) with the authority to approve minor amendments to the Construction Environmental Management Plan (CEMP) and its sub plans prepared under Conditions C1 & C2 (CEMP), and C4 (sub plans) of the Project Approval (SSI 7475) for the Parkes to Narromine Inland Rail Project.

I have reviewed the changes in the following revisions to the CEMP and sub plans and consider that they are minor amendments of an updating or administrative nature and are consistent with the CoA and versions of the CEMP and sub plans approved by the Secretary of the Department of Planning, Infrastructure and Environment.

Therefore, in accordance with the provisions of CoA A19 (j), I approve the following revisions to the CEMP and sub plans:

- CEMP, Revision 4, 28 January 2020;
- Waste Management Plan, Revision 3, 10 January 2020;
- Heritage Management Plan, Revision 3, 9 January 2020;
- Hazardous and Contaminated Materials Management Plan, Revision 2, 2 December 2019;
- Flora and Fauna Management Plan, Revision 5, 6 February 2020;
- Primary Erosion and Sediment Control Plan, Revision 2, 16 November 2019;
- Landscape and Visual Amenity Management Plan, Revision 3, 9 January 2020; and
- Flood Emergency Management Plan, Revision 1, 30 September 2019.



Should you have any queries or require further information please do not hesitate to contact me on 0417 170 645 or at sfermio@wolfpeak.com.au

Yours sincerely,



Steve Fermio

Environmental Representative – Parkes to Narromine Project

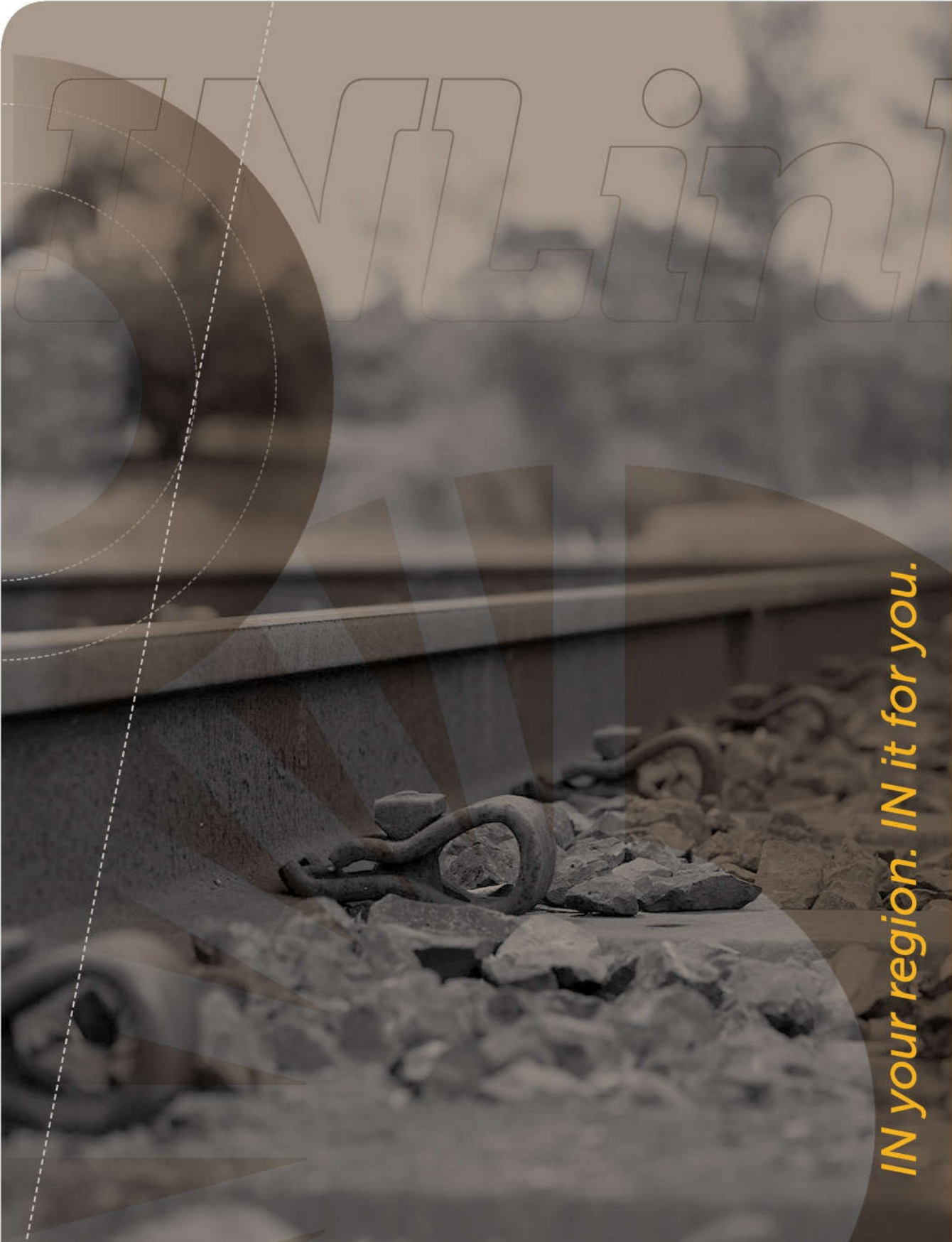
25 February 2020



Hazardous and Contaminated Materials Management Plan

Parkes to Narramine Inland Rail Project





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