

REVIEW OF ENVIRONMENTAL FACTORS (REF) DECISION REPORT

Proposed *NARRABRI TO TURRAWAN LINE UPGRADE*

Introduction

I have reviewed the Review of Environmental Factors (REF) for the proposal known as *Narrabri to Turrawan Line Upgrade (N2TLU)*. The REF has been prepared for the proposal by *Element Environment Pty Ltd* to satisfy ARTC's environmental assessment requirements under Part 5, Division 5.1 the *Environmental Planning and Assessment Act 1979* ("EP&A Act"). The REF is titled *Narrabri to Turrawan Line Upgrade Review of Environmental Factors* and is dated 29 March 2022 (final).

This Decision Report provides a summary of the key environmental considerations and the determination for the proposal consistent with requirements of Section 4.4 of the ARTC *Code of Practice for Environmental Impact Assessment of Development Proposals in New South Wales*.

Project Description

ARTC propose to upgrade approximately 35km of track between Narrabri and Turrawan (540.3km – 575km) which is currently capable of accommodating sub 25 tonne axle load (TAL) and has capability limitations resulting from the aging rail and poor track geometry. The proposal is known as the Narrabri to Turrawan Line Upgrade (N2TLU) and will enhance the quality and capability of the 35km connection between the Hunter Valley rail freight network, south of Turrawan, and Inland Rail at Narrabri North, to provide a consistent service offering between north-western NSW, Inland Rail and the ports of Newcastle and Sydney.

The proposal will deliver a corridor capable of an enhanced weight rating of 25 TAL at 80 kilometres per hour (km/h), thereby allowing longer and heavier freight trains travelling from north-western NSW to access international ports in Newcastle and Sydney.

The proposal will generally include:

- replacement of existing steel and timber sleepers with heavy duty concrete sleepers;
- replacement of the existing rail with new 60 kg/m rail for 8.1 km between the Whitehaven Coal balloon loop junction (540.38 km) and the northern end of Turrawan passing loop (548.490 km);
- replacement of the existing rail with cascaded 53 kg/m rail for 26.7 km in length between the northern end of Turrawan passing loop (548.490 km) and the future Inland Rail interface at Narrabri North (575.00 km);
- lifting of the track in some sections in order to accommodate approximately 100 mm of new ballast below the new concrete sleepers;
- potential sleeper and rail replacement at the Turrawan crossing loop, using recovered steel sleepers and recovered 53 kg rail;
- track formation works at bridge ends, where required;
- partial level crossing upgrades (including new concrete sleepers, steel crossing panels and partial track lift or lifting of level crossing, where feasible); and

- repair of existing culverts which are in poor condition along the proposal alignment and replacement of small diameter culverts, where required.

The proposal will include major upgrades to the following level crossings:

- Greylands Road, Turrawan.
- Turrawan Road Crossing, Turrawan.
- Sandy Creek Lane, Narrabri.
- Private level crossing at chainage 561.820 km.
- Old Turrawan Road, Narrabri.
- Fraser Road, Narrabri.
- Private level crossing at 573.885 km.

The proposal will also include minor upgrades to the following level crossings:

- McKenzie Road, Narrabri.
- Fitzroy Street, Narrabri.
- Old Cemetery Road, Narrabri.
- Stock Route, Narrabri at 570.360

The proposal area will predominately be in the rail corridor or on land for which ARTC has existing access agreements. In some instances, sections of the adjacent road reserve may be required to provide for temporary compound/storage areas. In some locations along the proposal alignment, access via private property will be required. Landowner consent for access via private property will be obtained in accordance with ARTC protocols.

Work is proposed to be conducted during standard construction hours as well as out of hours works during scheduled track possessions and be completed in stages between July 2022 and September 2023. EPL 3142 applies to this proposal (maintenance activity).

<p>Environmental Considerations</p> <p><i>Note: this table summarises key environmental issues by exception. It does not capture routine environmental issues / management measures documented in the REF.</i></p>	
<p>Biodiversity (Flora and Fauna)</p>	
<p>Key issues and management measures proposed</p>	<p>Minor</p> <p>The proposal is located within a highly disturbed and modified rail corridor, with segments of the proposal mapped as containing listed threatened ecological communities (TECs). Most work activities will not require ground disturbance or vegetation clearance due to confinement to previously disturbed areas, however the proposal will require the potential removal, trimming and/or disturbance of up to 84.2ha of native vegetation (12.5 ha of woodland and 71.8 ha of grassland) and 41.3 ha of exotic vegetation.</p> <p>A 'test of significance', pursuant to section 7.3 of the BC Act, and 'assessment of significance' under the EPBC Act have determined that the proposal will not result in significant impact upon endangered or threatened ecological communities, populations or species, nor potential habitat of threatened fauna.</p> <p>There are several waterways that are mapped as key fish habitat. Whilst the proposal will require temporary vehicular crossings through ephemeral drainage lines and waterways, the crossings will involve upgrade to existing accessways and</p>

	<p>will not result in direct disturbance to aquatic habitat, permanent disruption to water flow, or long-term impacts on the structure or function of waterways.</p> <p>Management measures are detailed in the REF and include pre-clearance surveys will be undertaken by an ecologist and/or spotter-catcher team prior to and during direct ground disturbance activities within the Five-clawed Worm-skink habitat areas, and a pre-clearance inspection will be carried out prior to branch trimming of mature trees to identify the presence of any hollows and fauna potentially residing inside.</p>
<p>Indigenous Heritage</p>	
<p>Key issues and management measures proposed</p>	<p>Negligible</p> <p>A search of the Aboriginal Heritage Information Management System (AHIMS) database confirmed that the proposal is located a sufficient distance from identified Aboriginal sites and as such will not result in harm to a registered Aboriginal object or site.</p> <p>Management measures are detailed in the REF and include in the event that previously undiscovered items of potential Aboriginal significance are identified or suspected, cease work in the immediate area of the identified potential Aboriginal object or archaeological find, secure the area and ensure the site is safe, ARTC are to be notified immediately of the find, provide temporary exclusion (pedestrian) fencing, and appropriate advice will be sought from a qualified archaeologist.</p>
<p>Noise and Vibration</p>	
<p>Key issues and management measures proposed</p>	<p>Minor</p> <p>The nearest sensitive receivers to the proposal with a potential to be impacted by adverse noise emissions are residential, commercial, educational and recreational land users near the rail line in Narrabri. Sensitive receivers outside of Narrabri include isolated residential dwellings associated with rural land uses. These sensitive receivers are typically situated more than 100m from the rail line.</p> <p>Some noise from construction will exceed the noise management levels which have been determined in accordance with the Interim Construction Noise Guidelines (ICNG). Noise impacts will however be intermittent, and no residents or businesses will be highly noise affected. There is potential for sensitive receivers to be impacted at night from construction noise, and may result in sleep disturbance for select residents up to 750m from the proposal alignment.</p> <p>Vibration levels at or above the relevant criteria for most commercial and residential structures are not expected, although it is likely that vibration from operating plant and equipment will be noticeable for occupants of adjoining residences and businesses. There is one heritage structure, Narrabri railway station, which has the potential to incur cosmetic and structural damage associated with vibration. Additionally, residential dwellings located within 25m of the proposal alignment may also be impacted.</p> <p>Where construction vibration has the potential to result in cosmetic or structural damage to these structures, following the selection of final plant and equipment, minimum offset distances will be reviewed. Where works will occur within the nominated minimum safe working distances and there is a risk of exceeding the cosmetic damage objective, a different construction method with lower source vibration levels will be considered and/or vibration monitoring will be undertaken at the commencement and through the works within the vicinity of the structures.</p> <p>With no material changes to operational conditions anticipated and improved acoustic performance of concrete sleepers relative to wooden sleepers, it is considered that operational rail noise levels will decrease by upwards of 2 dB due to the improvements facilitated by the proposal. The operational noise assessment concluded that compliance with the RING will be achieved.</p> <p>Management measures are detailed in the REF and include a pre and post work dilapidation survey will be carried out for the platform associated with Narrabri railway station, and all noise affected residents must be notified in accordance with EPL 3142.</p>

Non-Indigenous Heritage	
Key issues and management measures proposed	<p>Minor</p> <p>A search of heritage databases identified Narrabri railway station as occurring within the proposal area, with the station listed on the Transport Asset Holding Entity (TAHE) Section 170 Heritage and Conservation Register and Narrabri Local Environmental Plan 2012. The proposal will have a negligible impact on the significance of Narrabri railway station as the proposed work activities are consistent with maintenance and upgrade work commonly undertaken throughout the rail network.</p> <p>Management measures are detailed in the REF and include where feasible, maintain a sufficient buffer from identified heritage items, or implement protective exclusion fencing, or similar, in order to avoid damage or disturbance to the item.</p>
Community and Visual Impacts	
Key issues and management measures proposed	<p>Minor</p> <p>Any increases in traffic movements are anticipated to be intermittent and minor in nature. To reduce construction traffic, ARTC will deliver concrete sleepers and rail materials by rail where possible.</p> <p>The use of lighting will be required during night works, which will also have potential to result in light spill into adjacent residences and businesses.</p> <p>Potential impacts from construction activities on air quality are anticipated to be temporary and minor. The proposal will not result in substantial changes to the visual amenity of the locality, or the views of surrounding land uses.</p> <p>Management measures are detailed in the REF and include a road network dilapidation survey shall be prepared for the proposal, dust suppression controls (e.g. water carts, cease works) shall be implemented when necessary, to control dust on exposed soil surfaces of the site and access roads. Portable lighting will be directed downwards and away from adjacent sensitive receivers where feasible.</p>
Soil and Water	
Key issues and management measures proposed	<p>Minor</p> <p>Much of the Narrabri township is flood impacted from both 'regional flooding' and 'local flooding'. As the proposal will reinstate or increase the track profile, this may impact on water movement and flood levels. Flood modelling using conservative allowances of 100 mm of track lifting within the 1% annual exceedance probability indicates the proposal will result in alteration to existing regional and local flood events, including:</p> <ul style="list-style-type: none"> • a minor confined increase to existing flood levels in areas already inundated by the 1% AEP and roadways in confined areas of Narrabri. • a minor increase in land which will change from low to high flood hazard. <p>There are limited mitigation measures available to offset the impact of raising the railway given the existing extent of flood impact in the floodplain and the nature of the proposal, being within an existing rail corridor with established drainage infrastructure. The proposal will continue to be refined during detailed design and will be adjusted to avoid worsening flooding characteristics, where feasible and reasonable, and further flood modelling will be undertaken during detailed design to confirm compliance with quantitative design limits (QDLs) outlined in the REF.</p> <p>The proposal is not anticipated to intercept the underlying aquifer or groundwater resources despite being adjacent to waterways, as earthworks will be confined to a maximum depth of two metres within the existing operational rail track foundations (groundwater is >5m depth).</p> <p>A review of ASS maps did not indicate the potential for ASS at the proposal site.</p> <p>Management measures are detailed in the REF and include a flood verification report will be prepared by an appropriately qualified person within 3 months of the</p>

	commencement of construction of the proposal, and the design of the culvert structures and waterway crossings will allow for existing hydrological and flooding regimes to be maintained.
Contamination and Waste	
Key issues and management measures proposed	<p>Minor.</p> <p>A search of the EPA's Contaminated Land Records and ARTC contamination mapping identified no recorded contaminated sites within proximity to the proposal.</p> <p>No waste materials or potentially contaminated land was identified or observed within the proposal area during site inspections.</p> <p>Management measures are detailed in the REF and include in the event that contamination is identified or suspected, all work in the vicinity of the find shall cease and the area isolated appropriately. All waste will be assessed, classified, managed, re-used and/or disposed of in accordance with the Waste Classification Guidelines or applicable resource recovery exemption.</p>
Other	
Key issues and management measures proposed	There is a potential for cumulative impacts as a result of other developments that are proposed or currently underway (particularly in the Narrabri area), including Inland Rail projects.

Review of Environmental Factors (EP&A Regulation 2021 - section 171) and Matters of National Environmental Significance (EPBC Act 1999)	
Have the section 171 Environmental Factors and Matters of National Environmental Significance been considered?	Yes

REF Exhibition and Public Submissions	
Was the REF publicly exhibited, and were community or stakeholder submissions received?	<p>Yes</p> <p>The REF was publicly exhibited from 5 to 26 April 2022 with two submissions received. A response to submissions report has been prepared and accompanies the REF.</p>

Environmental Approvals and Licences Required	
Approval requirements	<p>The proposal can be assessed under Part 5 of the EP&A Act and determined by ARTC. EPL 3142 applies to this proposal (maintenance activity).</p> <p>A permit under Part 7 of the Fisheries Management Act is required.</p> <p>Approval under Section 138 of the Roads Act may be required.</p>

Operational Requirements	
Are there any operational requirements that apply to the proposal post-construction?	No

Reviewer notes
N/A

Conclusion

I have considered the requirements of Part 5, Division 5.1 of the EP&A Act and the ARTC *Code of Practice for Environmental Impact Assessment of Development Proposals in NSW*.

On behalf of ARTC I have determined that:

- The Proposal is subject to Part 5, Division 5.1 of the EP&A Act;
- The environmental impact assessment for the Proposal complies with the requirements of Part 5 of the EP&A Act and the Environmental Planning and Assessment Regulation 2021;
- An Environmental Impact Statement (EIS) is not required for the Proposal;
- A Species Impact Statement (SIS) is not required for the Proposal; and
- The Proposal should proceed subject to the environmental conditions as set out in Schedule 1.

I make these determinations in reliance on the documents I have reviewed and the advice I have received in relation to the Proposal as summarised above.

I note that I did not prepare the REF and that I am authorised by ARTC to make the determination set out in this Decision Report.

Approval Recommended by:

Name and position: Stuart Ross, Corporate Environment Manager

Date 31 May 2022

Signature 

Endorsed by: Applicable / Not applicable

Name and position: Peter Clements, Group Executive Safety and Environment

Signature 

Date 8.6.22

Approved by:

As the proposed Major Construction Project (MCP) would occur in the Hunter Valley (HV) network, a co-approval role with both MCP and HV has been adopted.

Name and position: Wayne Johnson, Group Executive Hunter Valley Network

Signature 

Date 17/6/22

Name and position: Mike Zambelli, Group Executive Major Construction Projects

Signature 

Date 18/06/2022

Note: Refer Schedule 1 for environmental conditions.

SCHEDULE 1 - ENVIRONMENTAL CONDITIONS

REFERENCE	ENVIRONMENTAL CONDITIONS
1.	GENERAL
1.1	The proposal must be carried out in accordance with the terms of this approval and generally in accordance with the proposal as described in the REF documents.
1.2	All works within the rail corridor must be undertaken in compliance with ARTCs Environment Protection Licence (EPL 3142).
1.3	All mitigation measures recommended in the REF and this Schedule (Schedule 1 Environmental Conditions) shall be applied to the proposal. These Schedule 1 Environmental Conditions will prevail where there is any inconsistency.
1.4	All necessary licences, permits and approvals required by legislation shall be obtained prior to the works commencing. Copies of these licences permits, and approvals shall be kept on site and complied with during works.
1.5	Where proposal construction has not commenced within twenty-four months of REF determination, a Consistency Review will be undertaken.
2.	CONSTRUCTION ENVIRONMENTAL MANAGEMENT PLAN
2.1	A construction environmental management plan (CEMP) shall be prepared addressing all REF mitigation measures, these Schedule 1 Environmental Conditions, and other environmental requirements as applicable.
3.	TRAINING
3.1	A site-specific environmental induction must be prepared and delivered to site personnel and is to include: <ul style="list-style-type: none">- environmentally sensitive areas and 'no go' zones;- emergency procedures,- complaints handling,- environmental incident recording and reporting, and- site specific environmental controls.
4.	INCIDENT NOTIFICATION
4.1	Environmental incidents shall be reported to ARTC Project Manager (and as applicable to the ARTC Network Controller) as soon as practicable.
5.	COMMUNITY COMPLAINTS

REFERENCE	ENVIRONMENTAL CONDITIONS
5.1	Details of all complaints are to be forwarded to ARTC Enviroline (1300 550 402 or enviroline@artc.com.au) for logging into the ARTC complaints database, unless a project specific contact number has been provided to the community.
6.	OTHER
6.1	ARTC documents ENV-GL-010 and ENV-GL-011 provide guidance on the compliant management of waste spoil and timber.