

Sunrise Project Project Execution Plan Modification



Appendix J

Environmental Review of Rail Siding Electricity Transmission Line

SUNRISE PROJECT

PROJECT EXECUTION PLAN MODIFICATION

ENVIRONMENTAL REVIEW OF RAIL SIDING ELECTRICITY TRANSMISSION LINE



JUNE 2021 Project No. CTL-20-08 Document No. 01081085-004

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1 INTRODUCTION

1.1 OVERVIEW OF THE SUNRISE PROJECT

The Sunrise Project (the Project) is a nickel, cobalt and scandium open cut mining project situated near the village of Fifield, approximately 350 kilometres (km) west-northwest of Sydney, in New South Wales (NSW) (Figure 1).

SRL Ops Pty Ltd owns the rights to develop the Project. SRL Ops Pty Ltd is a wholly owned subsidiary of Sunrise Energy Metals Limited (SEM)¹.

Development Consent (DA 374-11-00) for the Project was issued under Part 4 of the NSW *Environmental Planning and Assessment Act 1979* (EP&A Act) in 2001. Six modifications to Development Consent (DA 374-11-00) have since been granted under the EP&A Act.

The Project includes the establishment and operation of the following:

- mine and processing facility;
- limestone quarry;
- rail siding;
- borefield, surface water extraction infrastructure and water pipeline;
- gas pipeline;
- accommodation camp; and
- associated transport activities and transport infrastructure (e.g. the Fifield Bypass, road and intersection upgrades).

Construction of the Project commenced in 2006, which included components of the borefield, however construction of other Project components is yet to commence.

1.2 OVERVIEW OF THE MODIFICATION AND THE ELECTRICITY TRANSMISSION LINE

SEM has continued to review and optimise the Project design as part of preparations for the Project execution. The outcomes of this review are outlined in the Project Execution Plan (Clean TeQ, 2020). The Project Execution Plan identified a number of changes to the approved mine and processing facility, accommodation camp, rail siding and road transport activities.

The Project Execution Plan Modification (the Modification) includes these Project Execution Plan changes to allow for the optimisation of the construction and operation of the Project.

Of relevance to this environmental review, the Modification would include the relocation of the rail siding approximately 500 metres (m) south of the approved location (Figure 2).

A new 22 kilovolt (kV) electricity transmission line (ETL) would be required to provide power to the modified rail siding. The ETL would be subject to separate assessment under Part 5 of the EP&A Act and any relevant notification requirements (e.g. under clause 42 of the *State Environmental Planning Policy (Infrastructure) 2007*).

The currently proposed alignment of the ETL and the associated corridor is shown on Figure 3, and would be approximately 1,000 m long and 20 m wide. The Study Area referred to in this environmental review comprises a 20 m corridor along the ETL alignment, however excludes the portion of the ETL located within the modified rail siding surface development area (Figure 3)

The proposed ETL alignment considered in this environmental review would be refined, if required, through consultation with Essential Energy (or the relevant electricity supply authority) and relevant landholders during assessment under Part 5 of the EP&A Act.

1.3 PURPOSE OF THIS DOCUMENT

This document has been prepared by SEM and presents the outcomes of an environmental review of the construction and operation of the ETL. Specifically, it identifies:

- the key environmental and land use constraints within the Study Area; and
- the potential environmental and approval issues associated with the ETL.

The purpose of this document is to assist the consent authority to consider the likely impacts of the ETL. If the Modification to Development Consent (DA 374-11-00) is approved, the potential environmental impacts of the ETL would be examined to meet the requirements of Part 5 of the EP&A Act.

¹ SEM was previously Clean TeQ Holdings Limited (Clean TeQ).





CTL-20-08 Rail_ETL_EnvRev_202B

Figure 2



CTL-20-08 Rail_ETL_EnvRev_203A

2 DESCRIPTION OF THE ELECTRICITY TRANSMISSION LINE

2.1 PROPOSED ALIGNMENT

The proposed ETL alignment considered in this environmental review has been determined in consideration of minimising potential environmental impacts. Land ownership within and surrounding the Study Area is shown on Figure 4.

The proposed ETL alignment considered in this environmental review would be refined through consultation with Essential Energy and the relevant landholders during the assessment process under Part 5 of the EP&A Act (Section 1.2).

2.2 PROPOSED DESIGN

Ownership of the ETL would likely be transferred to Essential Energy on completion of construction. Hence, design and construction of the ETL would be in accordance with relevant Essential Energy construction and design standards.

The ETL would consist of three conductor wires which would transfer electricity at 22 kV (Plate 1).



Plate 1 Example of a Typical 22 kV Rural Electricity Transmission Line with Three Conductor Wires

The wires would be attached to approximately 10 m high poles. Each pole would be spaced at a distance ranging from approximately 50 m to 150 m.

2.3 PROPOSED CONSTRUCTION METHODS

The anticipated sequence of works during construction of the ETL would include:

- installing pre-construction mitigation measures, such as erosion, sediment and water quality controls, and fencing sensitive areas;
- locating and relocating utilities, services and signage (if required);
- clearing vegetation along the easement;
- erecting poles;
- stringing conductor wires;
- testing and commissioning;
- rehabilitating topsoil and revegetation; and
- restoring the ETL corridor (e.g. general clean up and temporary environmental controls).

During construction, a site compound would be used containing basic amenities, plant and material storage areas. The site compound is expected to be located within the surface development area of the modified rail siding (Figure 2).

Construction works that would generate audible noise at any sensitive receiver would be undertaken between 7.00 am and 6.00 pm Monday to Friday and 8.00 am and 1.00 pm on Saturday. Audible works outside these hours may be undertaken where the following requirements are met:

- the works are emergency works, unplanned or unavoidable and the affected residents have been notified as far as reasonably practicable; or
- the works fall into one of the following categories and the affected residents are provided with a notification letter at least five days prior to the works:
 - the delivery of oversized plant or structures that cannot be undertaken during standard hours;
 - maintenance and repair of essential public infrastructure that is unable to occur during standard hours;
 - it is a requirement of a regulatory authority; and/or
 - where there is a demonstrated and justified need to operate outside the recommended standard operating hours.





2.4 PROPOSED ACCESS

During operation, access to the ETL corridor would be provided by Scotson Lane (Figure 2).

2.5 OPERATION AND MAINTENANCE REQUIREMENTS

Once the ETL is constructed, periodic maintenance would be required consisting of attendance on-site by small work groups utilising light vehicles and small to medium plant. Likely maintenance and operation activities associated with the ETL would include but not be limited to:

- vegetation trimming to maintain electrical safety clearances and an asset protection zone;
- unplanned fault and breakdown repairs;
- insulator and conductor repair;
- pole maintenance and replacement where pole integrity is reduced; and
- staff attendance for routine inspection, operation, audit and maintenance activities.



3 ENVIRONMENTAL REVIEW

A desktop assessment of the Study Area has been conducted to review the potential environmental impacts associated with the ETL as outlined in the sections below.

3.1 LAND USE

The Study Area is located within the Parkes Local Government Area (LGA) on land zoned RU1 – Primary Production under the *Parkes Local Environmental Plan 2012* (Parkes LEP).

The ETL would be consistent with the objectives and land use zoning of the Parkes LEP. However, it is proposed that the ETL would be authorised pursuant to the *State Environmental Planning Policy* (*Infrastructure*) 2007.

Current land uses in the Study Area include livestock grazing and cropping within Lot 40, DP 752116, a road reserve (Scotson Lane), and a travelling stock reserve (Crown land) (Figure 4). A portion of the Study Area would also be located within the modified rail siding surface development area (Lot 1, DP 630504)

Consultation with Essential Energy and relevant landholders would inform the final ETL alignment and design, and would seek to mitigate potential impacts on existing land users.

The ETL would not form a physical barrier as people, animals and machinery would continue to be able to move along and across the proposed route.

3.2 NOISE AND VIBRATION

The normal noise and vibration environment near the Study Area is primarily influenced by traffic flows on The Bogan Way and infrequent train movements on the Bogan Gate Tottenham Railway.

The closest residential receiver to the Study Area is SEM owned and is located approximately 350 m to the northwest (Figure 4). The closest private residential receiver to the Study Area is located approximately 1.1 km to the west.

Impacts to the noise and vibration environment are likely to be associated with construction, rather than operation, of the ETL.

Construction activities would be temporary and transitory, would occur during standard hours (Section 2.3) and would comply with Essential Energy's management principles for construction noise and vibration.

3.3 AIR QUALITY

Direct potential impacts to local air quality would be limited to dust and emissions from vehicles, plant and equipment generated during the construction phase, and to a lesser extent, during ETL maintenance activities. Given the nature of the works, it is unlikely that there would be an odour impact.

Construction activities would be temporary and transitory and would comply with Essential Energy's management principles for construction air quality.

3.4 HYDROLOGY

The Study Area is within the catchment of an unnamed drainage line located to the south-east of the Study Area (Figure 3) which flows to Yarrabandai Creek approximately 12 km to the south-west.

Potential surface water impacts would be minimised by the use of erosion and sediment control measures during construction of the ETL.

3.5 SOILS

Elevations within the Study Area range from approximately 260 m Australian Height Datum (AHD) to approximately 265 m AHD.

A review of the Department of Planning, Industry and Environment (DPIE) (2021a) eSPADE database found that there is no soil landscape mapping available for the Study Area. The *Australian Soil Classification Soil Type Map of NSW* (DPIE, 2021b) indicates the Study Area is mapped as 'Chromosols'.

The Study Area is outside the extent of mapped potential acid sulfate soils (DPIE, 2021a).

Erosion and sediment control measures would be implemented in accordance with *Managing Urban Stormwater Soils and Construction* (the Blue Book) (Landcom, 2004) to mitigate potential impacts on soils.



3.6 CONTAMINATION

The Study Area is not listed on the contaminated land register maintained by the NSW Environmental Protection Authority (EPA) (EPA, 2021).

Current land uses in the Study Area includes livestock grazing, cropping, existing electrical infrastructure and road reserve.

The Land Contamination Assessment prepared for the modified rail siding (Ground Doctor, 2021) found that the potential for historical land uses at the modified rail siding (livestock grazing and cropping) to have caused significant land contamination is considered low.

Given the proximity of the Study Area to the modified rail siding, and the similar historical land uses, it is considered that the chance of significant land contamination occurring in the Study Area is low.

Notwithstanding the above, further consideration of the potential for existing contamination within the Study Area would be completed as part of the assessment process under Part 5 of the EP&A Act.

Mitigation measures would be implemented to minimise the potential for contamination to occur, and to manage any unexpected contamination identified during construction.

3.7 FLORA AND FAUNA

The majority of the Study Area is characterised by areas of cleared land and road reserves, except for the portion located within the travelling stock reserve.

The NSW State Vegetation Type Mapping (DPIE, 2015) indicates that the portion of the Study Area located within the travelling stock reserve is comprised of Plant Community Type 244 (Poplar Box grassy woodland on alluvial clay-loam soils) (Figure 5).

A review of ecological database records was undertaken for the Study Area, including a review of threatened flora and fauna records from the following sources:

- *Birdlife Australia Atlas Database* (Birdlife Australia, 2021);
- BioNet Atlas (DPIE, 2021b);

- Protected Matters Search Tool (Commonwealth Department of Agriculture, Water and the Environment, 2021); and
- Atlas of Living Australia Atlas (Atlas of Living Australia, 2021).

Based on the information currently available, it is expected that the ETL would not significantly affect threatened species or ecological communities, or their habitats with the implementation of appropriate avoidance and mitigation measures.

Notwithstanding the above, a more detailed assessment of the ETL under Part 5 of the EP&A Act would comply with the relevant requirements of the NSW *Biodiversity Conservation Act 2016* and the Commonwealth *Environment Protection and Biodiversity Conservation Act 1999.*

Vegetation clearance during construction and easement maintenance would occur in accordance with Essential Energy requirements.

3.8 BUSHFIRE

Land within the Study Area is not mapped as bush fire prone land (NSW Rural Fire Service, 2021).

Notwithstanding, the ETL would be designed and constructed to comply with Essential Energy's guidelines to minimise the risk of causing a bush fire and vegetation safety clearances.

3.9 ABORIGINAL CULTURAL HERITAGE

The Study Area is located in an area administered by the Condobolin Local Aboriginal Land Council.

A desktop assessment of the NSW Biodiversity and Conservation Division's (BCD) Aboriginal Heritage Information Management System was conducted for the Study Area. This search found there are no previously recorded Aboriginal cultural heritage sites within or immediately adjacent to the Study Area (BCD, 2021).

Given the above, it is expected that the ETL would not significantly impact Aboriginal cultural heritage with the implementation of appropriate avoidance and mitigation measures.

The ETL would comply with the requirements of the NSW National Parks and Wildlife Act 1974.



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Figure 5

3.10 HISTORIC HERITAGE

A desktop assessment was conducted using the NSW State Heritage Inventory (Heritage NSW, 2021) and the Parkes LEP. This assessment concluded there are no State or Local Heritage listed items in the Study Area.

As the Study Area is located away from existing buildings, it is not expected that historic heritage would be found or impacted during construction.

3.11 VISUAL AND LANDSCAPE CHARACTER

The ETL would be located in an area with existing electrical infrastructure.

Visual modifications as a result of the ETL would include:

- vegetation clearing, minimised through the use of existing cleared land;
- vertical poles (approximately 10 m high);
- horizontal cables between poles;
- earthmoving equipment and elevated work platforms during short term construction activities.

ETL's are a common visual component in the broader local landscape, with existing power lines adjacent the Study Area and visible from The Bogan Way.

The vertical poles would provide the most significant contrast with the existing setting. The greatest visual effect from power poles and wires is when viewed against the skyline, where their outline becomes clearly delineated. As the topography is generally flat, the power line would primarily be viewed against a landscape background and, therefore, would have only a low-level contrast.

3.12 TRAFFIC AND ACCESS

The ETL would cross Scotson Lane. Scotson Lane is an unsealed local road that provides a link between Numalla Road and The Bogan Way.

The Parkes Shire Council is the relevant roads authority for Scotson Lane. The ETL would be designed in accordance with the Parkes Shire Council and Essential Energy design standards, including minimum clearances of public roads. A traffic control plan would be prepared for construction activities in accordance with Australian Standard 1742.3 *Manual of uniform traffic control devices – Traffic control for works on roads*.

During operation, the ETL would only be visited by vehicles on an intermittent basis for general maintenance purposes.

3.13 SOCIAL AND ECONOMIC

Construction projects such as the ETL create opportunities for suppliers, contractors and consultants which creates flow on benefits for local communities.

Short-term impacts on the community during the construction phase of the ETL may include increased traffic intensity and noise.

However due to the small scale of the ETL, it is considered that the local socio-economic impacts of the ETL construction would be minimal.

The ETL would allow for the operation of the modified rail siding, which would have an operational workforce of approximately 10 personnel, and allow for the distribution of products from the mine and processing facility.

3.14 ELECTRIC AND MAGNETIC FIELD CONSIDERATIONS

Electric and magnetic fields (EMF) are part of the natural environment and are present in the atmosphere, with static magnetic fields created by the Earth's core. EMF is also produced wherever electricity or electrical equipment is in use. ETL's, electrical wiring, household appliances and electrical equipment all produce EMF.

Detailed consideration of EMF impacts would occur as part of an assessment under Part 5 of the EP&A Act, although it is noted that the closest private residential receiver is approximately 1.1 km from the Study Area. On this basis, EMF impacts of the ETL are not expected to be significant.

It is anticipated that Essential Energy would implement measures to reduce magnetic field exposure, including where relevant:

- using a compact phase configuration (e.g. ABC, delta construction); and
- balancing loads across phases.



4 CONCLUSION

The final alignment of the ETL would require further consultation with relevant stakeholders, analysis of design constraints, impact assessment and review of opportunities to reduce potential impacts during assessment under Part 5 of the EP&A Act.

However, based on the above environmental review, it is considered that the likely impacts of the ETL would not be significant and are acceptable.



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