

**Division / Business Unit:**

Hunter Valley

**Function:**

External Party Works

**Document Type:**

Work Instruction

# External Party Works

## Understanding ARTC Requirements

### PRO-WI-009

#### Applicability

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ARTC Hunter Valley & Central Northwest NSW

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#### Publication Requirement

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Internal & External Only

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#### Primary Source

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PEO-GL-001 Business Rules for Working in the ARTC Corridor

RLS-PR-003 Protocol for Entering the ARTC Rail Corridor

RLS-PR-006 Pre-Worksite Protection Plan Procedure

WHS-WI-315 Personal Protective Equipment

PRO-WI-10 External Party Works Internal ARTC Requirements

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#### Document Status

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**Amendment Record**

<b>Amendment Version #</b>	<b>Date Reviewed</b>	<b>Clause</b>	<b>Description of Amendment</b>
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## 1 Introduction

### 1.1 Purpose

The purpose of this work instruction is to assist External Parties in understanding ARTC requirements where there is a need to enter ARTC Land or Rail Corridor or Adjacent.

### 1.2 Scope

This guideline applies to all relevant stakeholders required to review and provide clearance for, including but not limited to customer requests, access or works on, over or under the rail corridor by external parties e.g. new connections, over/ under bridges, under bores etc.

### 1.3 Responsibilities

The External Works/ Third Party Manager is responsible for reviewing the currency of this document.

## 2 Reference Documents

The following documents support this guideline:

### 2.1 ARTC Documents

Reference ID	Description	Document Location
EPL 3142	Environmental Protection Licence	<a href="https://www.artc.com.au/uploads/Environment-Protection-Licence-NSW.pdf">https://www.artc.com.au/uploads/Environment-Protection-Licence-NSW.pdf</a>
Various	ARTC's Network Rules & Procedures	<a href="https://www.artc.com.au/customers/operations/rules-procedures/">https://www.artc.com.au/customers/operations/rules-procedures/</a>
PEO-GL-001	Business Rules for Working in the ARTC Rail Corridor	<a href="https://www.artc.com.au/uploads/PEO-GL-001.pdf">https://www.artc.com.au/uploads/PEO-GL-001.pdf</a>
RLS-PR-003	Protocol for Entering the ARTC Rail Corridor	<a href="https://dev.artc.com.au/library/RLS-PR-003.pdf">https://dev.artc.com.au/library/RLS-PR-003.pdf</a>
RLS-PR-006	Worksite Protection Plan Procedure	<a href="http://www.artc.com.au/library/RLS-PR-006.pdf">http://www.artc.com.au/library/RLS-PR-006.pdf</a>
WHS-WI-315	Personal Protective Equipment	<a href="http://www.artc.com.au/library/WHS-WI-315.pdf">http://www.artc.com.au/library/WHS-WI-315.pdf</a>
EPP-00-01	Drone Management	<a href="https://extranet.artc.com.au/docs/eng/plant-equip/procedures/EPP-00-01.pdf">https://extranet.artc.com.au/docs/eng/plant-equip/procedures/EPP-00-01.pdf</a>

Reference ID	Description	Document Location
RSK-PR-001	Risk Management	<a href="https://www.artc.com.au/uploads/RSK-PR-001.pdf">https://www.artc.com.au/uploads/RSK-PR-001.pdf</a>
WHS-PR-001	Work Health and Safety	<a href="http://www.artc.com.au/library/WHS-PR-001.pdf">http://www.artc.com.au/library/WHS-PR-001.pdf</a>

## 2.2 External References

Description	Document Location
ISEPP	<a href="https://www.planning.nsw.gov.au/infrastructuresepp">https://www.planning.nsw.gov.au/infrastructuresepp</a>
WHS Health and Safety Act	<a href="https://www.legislation.gov.au/Details/C2018C00293">https://www.legislation.gov.au/Details/C2018C00293</a>
Rail Safety Act	<a href="https://www.legislation.nsw.gov.au/#/view/act/2012/82a/full">https://www.legislation.nsw.gov.au/#/view/act/2012/82a/full</a>
Rail Safety Regulation	<a href="https://legislation.nsw.gov.au/#/view/regulation/2012/617">https://legislation.nsw.gov.au/#/view/regulation/2012/617</a>
Rail Safety National Law	<a href="https://www.onrsr.com.au/about-onrsr/Rail-Safety-National-Law">https://www.onrsr.com.au/about-onrsr/Rail-Safety-National-Law</a>

### 3 Definitions

The following terms and acronyms are used within this document:

Term or acronym	Description
AIP	Agreement in Principle
ARTC Land	Any and all land owned, leased or controlled by ARTC which may extend outside the rail corridor.
ARTC Consent	<i>Written approval provided by ARTC Property by way of a fully executed Licence or Conditions and/ or Consent letter where applicable.</i>
BCA	Building Code Australia
Clearance Request	ARTC Property have accepted the application selected the appropriate licencing approval and provided ARTC External Party to review and process the application.
Competent Rail Safety Worker	Worker responsible to keep the worksite and workers safe. Known as: Protection Officer in NSW and Queensland Track Force Protection Coordinator in Victoria Track Worker in Charge of Protection in South Australia and Western Australia
DA	Development Application.
Danger Zone	Everywhere within 3 metres horizontally from the outermost rail and any distance above or below 3 metres.
DBYD	Dial Before You Dig
DSS	Detailed Site Survey
EIA	Environmental Impact Assessment.
EIS	Environmental Impact Statement.
Emergency Works	Work that need to be completed with 24hrs and affecting the community/business / can affect life or death situation / Will impact ARTC Operations
EPL	Environmental Protection Licence.
External Party	Any individual, organisation or entity other than ARTC wishing to enter ARTC Land for access or to conduct works that do not form part of ARTC's core business or directly engaged by ARTC.
IA	Interface Agreement.
ISEPP	Infrastructure State Environmental Planning Policy
Major Works	External Party access, construction, installation and/or commissioning of a major nature with high impact or potential to have a high impact on the rail corridor and/ or ARTC Land. This includes construction or relocation of facilities, utilities and sidings.
Minor Works	External Party access, construction, installation and/ or commissioning of a minor nature with minimal impact to the Rail Corridor. This includes surveys, inspections, geotechnical

Term or acronym	Description
	investigations, routine maintenance, rectification works, installation of minor pipelines, power cables and communication lines etc.
Planning Approval Pathway	All prescribed activities require approval in accordance with Environmental Planning and Assessment Act 1979 (EP&A Act), Environmental Planning and Assessment Regulation 2000 (EP&A Reg) and a number of State Environmental Planning Policies (SEPPs) and Local Environmental Plans (LEPs). Further information can be obtained via the state relevant <a href="#">Planning</a> Department website.
Passive Level Crossing	A level crossing protected by signs or devices, none of which are activated during the approach or passing of a train.
Rail Corridor	Everywhere within 15 metres of the outermost rails or <ul style="list-style-type: none"> <li>• the boundary fence where boundary fences are provided and are closer than 15 metres, or</li> <li>• if the property boundary is less than 15 metres, the property boundary, or</li> <li>• a <u>permanent structure</u> such as a fence, wall or level crossing separating the operating rail corridor from leased or non-operational land.</li> </ul>
REF	Review of Environmental Factors.
RIM	Rail Infrastructure Manager
RISI /TSA/SARC	Rail Industry Safety Induction (Sydney Trains/TFNSW) equivalents TSA -Track Safety Awareness SARC- Safely access the rail corridor
RIW	Rail Industry Worker
RSW	Rail Safety Worker
SFAIRP	So Far As Is Reasonably Practicable – The likelihood and consequences of a risk must be weighed against the availability, effectiveness and cost of measures to eliminate or reduce the risk.
SFOS	Signalling Function Operational Specification
SME	Subject Matter Expert
SOC	Statement of Competency
Stakeholder	The relevant ARTC officer or nominee/ delegate with the appropriate competencies and authority for reviewing and assessing the application.
SWMS	Safe Work Method Statements or equivalent.
TFNSW	Transport For NSW
Urgent Works	Works that need to be completed greater than 24hr but less than 20 days and similar in nature to emergency works.
VOC	Verification of Competency
Works Deed / Major Works Licence	A document which represents an agreement between the parties that grants contractual rights and details the terms and conditions upon which the licensee will have access to the licensed land for the purpose of facilitating the construction of the works and regulates the manner in which the works are to be carried out within the licensed land.



## 4 ARTC Obligations

ARTC has an obligation under various Leases, Legislation and Acts to assist External Parties, as far as reasonably practicable, to complete their works safely with minimal disruption to ARTC in a timely manner.

ARTC has an obligation under relevant rail and workplace safety legislation to ensure the safety of its railway operations.

### 4.1 Internal ARTC Stakeholder Requirements

The relevant internal stakeholders are to complete a review of the proposal in relation to their field of expertise and provide clearance in a timely manner.

The licensing procedure is managed by ARTC Property.

### 4.2 Responsibility

External Works team is responsible for completing a desktop review of the application and obtaining clearances from the relevant stakeholders, including but not limited to:

- General Managers or delegate
- Principal Advisor Safety or delegate
- Property Advisor Systems & Heritage (if applicable)
- Principal Advisor Environment & Community or delegate and
- Subject matter experts/Rail Maintenance & Project delivery Teams

## 5 Safety Assurance

Any works planned and undertaken around and on ARTC rail assets should be done using a robust safety assurance regime. External Parties must demonstrate that all risks have been identified and analysed during the planning, design and construction stages and that the risks have been appropriately eliminated, controlled and managed throughout.

External Parties will need to demonstrate that safety risks have been eliminated, so far as is reasonably practicable (SFAIRP). Refer to section 46 of the Railway Safety National Law.

The process for safety assurance includes, but is not limited to:

- Safety change assessment, analysis, demonstration and reporting
- Safety in design workshops with attendance from SMEs if required Risk management in consultation with key affected stakeholders

## 6 Construction Risk Management

All parties that undertake construction work need to comply with Work Health and Safety (WHS) Act and regulations. This includes the following:

- Work carried out on or near energised electrical installations or services.
- Work carried out on, in or adjacent to a road, railway, shipping lane or other traffic corridor in use by traffic other than pedestrians.

Construction work carried out near ARTC' infrastructure or operations is defined as **high risk**. For these 'high risk' works there is a requirement to prepare, keep and comply with WHS Risk Management and review a safe work method statement (SWMS) for the work.

## 7 External Party Documentation

The Applicant is responsible for supplying all relevant information to allow ARTC to review and assess the potential risks to ARTC. All supplied information should comply with the current WHS & Rail Safety Standards/ Legislation.

Key Documentation	Context
External Works Application	Complete the application and provide location/ worksite information as accurately as possible within the ARTC Land where the work is proposed.
Scope of works/ Methodology Designs, Method Statement, Scope Brief	ARTC is required to assess the entire scope, not just the works within the rail corridor as other works may still impact ARTC.
Workers/ Personnel Role & National Competencies/ Licences	Personnel working within the rail corridor are required to provide evidence of the relevant competencies to undertake the work the individuals are engaged to conduct such as high risk licences, national competencies to use plant or equipment, VOCs that comply with current legislation, asset authority specifics/ accreditations and completed ARTC Contractor Induction. ARTC Approved RIW Roles can be found here <a href="https://www.artc.com.au/work/contractors/rswc/">:https://www.artc.com.au/work/contractors/rswc/</a>
WHS Documentation i.e. SWMS, JSA, Crane Lift Plans	Supply all SWMS or equivalent for the activities that are planned to be undertaken on ARTC Land.  SWMS for works within the rail corridor must reference risks around interactions with trains.  <b>All</b> activities within the rail corridor are considered high risk due the rail traffic environment. This includes simple tasks such as surveying or ground maintenance.
Rail Safety Documentation	Supply a Worksite Protection Plan prepared by a Competent Rail Safety Worker which demonstrates knowledge of the specific worksite location.
Statutory Approvals (Planning Approvals)	Demonstrate/ provide evidence of the appropriate approvals to conduct the works or exemptions to the planning approvals.

## 8 How the ARTC network rules links into the External Party Application

ARTC *RLS-PR-003 Protocol for Entering the Rail Corridor* procedure references External Parties and communication protocols required to enter the ARTC Corridor. As key requirement is to contact ARTC Property to obtain authorisation to achieve this an application is required to be submitted.

### RLS-PR-003- Clause 1.6 Definitions

External Parties	Any individual, organisation or individual other than ARTC wishing to enter the corridor for access or to conduct works that do not form part of ARTC's core business	For example, Sydney trains, Utilities providers, councils, rail contractors who are not engaged by ARTC i.e. engaged by a Mine or another Asset Authority is considered External Party under this definition
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### Section 3 Communication Protocol 3.1

Any person wishing to access the ARTC Rail Corridor for **external party** works must contact ARTC Property Management and obtain appropriate authorisation.

This authorisation is obtain by submitting a External party application, so ARTC can review the risk profile of work you will be undertaking on within ARTC managed corridor and ensure you meeting the legislative requirements

### 8.1 Delegation of Authority

**ARTC Property** are the only delegates to provide consent for External Parties to enter ARTC Land.

**ARTC Network Control** are the only delegates to authorise the implementation of the ARTC Network Rules (Rail Safety) which permits access in the Rail Corridor.

### 8.2 Clearance Requests

Clearance requests can be for a number of External Party requests needing stakeholder review and clearance, including but not limited to:

- Minor Works (Intrusive);
- Minor Works (Non-intrusive) or Access only;
- Agreement in Principle to location and methodology;
- External Party Works reviews (Design, DA, EIA, REF, BMP); and
- Separable Stages of Works (Works Deed/Major Works Licence / Lessors).

### 8.3 Clearance Review

The relevant ARTC Stakeholders are to complete a review of the application and provide a response with the following possible outcomes, including but not limited to:

- proposal may be accepted.
- proposal may be accepted, subject to conditions or amendments; or
- proposal may be rejected.

Reviews need to consider future expansion of the rail corridor (duplication), local conditions including reasons for current or future use (stockpiles, laydown areas, earthworks etc.), impacts to existing infrastructure (culverts, drainage, services etc.), sensitive areas (environmental, heritage etc.) and ongoing maintenance access.

### 8.4 ARTC Review Considerations

These are the common issues that ARTC considers in assessing work in and around the rail corridor. Some of these issues may or may not be relevant to each proposal.

These issues and any local conditions affecting the work may result in specific technical requirements being incorporated within the appropriate Access Deed/ Agreement.

- Clear definition of property/title boundaries, existing easements on land and for tunnels
- Acoustic/vibration treatment of development (generally within 60 metres of the nearest rail) to mitigate noise and vibration arising from rail operations
- Stray currents and electrolysis
- Geotechnical, structural and foundation engineering including effects on tunnels, bridges, tracks, embankments, retaining walls, cuttings, rock bolts and anchors  
Setbacks from the rail corridor for building outlines and balconies
- Derailment protection of structures adjacent to track (within 20 metres of rail line)
- Use of lights and reflective materials
- Dilapidation surveys, and therefore, access to the rail corridor, may be required prior to, during and after any works being undertaken
- Service Searches, e.g., Dial Before You Dig (DBYD) and Detailed Service Search (DSS) to identify the presence of underground, surface and aerial rail and other services, including but not limited to transmission lines, communication and signals cables, pipelines, utility services
- Demolition and excavation impacts on rail infrastructure (vibration, falling material)
- Works near electrical infrastructure including craneage, concrete pump and other aerial movements adjacent to rail with potential to reach over rail and encroach within electrical safety clearances.
- Environmental factors (including contamination)
- Erection and dismantling of scaffolding on or near Rail Facilities
- Stormwater egress to/under Rail Corridor (during and after construction)
- Physical access to the Rail Corridor and associated safety requirements and documents (Rail Safety – maintaining separation of people and equipment from trains, and OH&S) as well as compliance with relevant standards, acts and legislations
- Requirements for track possessions and/or power outages

- Graffiti, screening and landscaping
- Any support required from ARTC such as resources to complete physical
- Works as this not generally common practice.
- Design and construction works are completed by appropriately qualified personnel
- Boundary Fencing between the development site and Rail Facilities
- Consideration of easements, and licensing and leasing of RailCorp land
- General access for Rail Party's to their Facilities for maintenance and work purposes (e.g., road closures) as well as a review of any other projects or maintenance works in the area
- Future maintenance of structures adjacent to rail property that may impact on Rail property and/or require Rail Corridor access
- Future Rail development and operational requirements

## 8.5 Clearance Timelines

The ARTC Rail Corridor must endeavour respond to clearance requests in accordance with the following timelines:

- Urgent or Emergency Works response within 24 hours
- External Party application from entities who have Master Access Deeds with 10 working days
- External Party application response within 20 working days
- External Party application associated with Major Works agreements such as Works Deed/Major Works Licence /Lessors Works may have varying durations.  
*Please refer to the executed agreement (Consent).*

If the above is unachievable then ARTC should advise the External Party as soon as possible of the circumstances.

## 8.6 Corridor Notification

- If the works are approved, ARTC Property will:
  - Provide the External Party with the contact details for the relevant Area Manager and Network Controller Officer and
  - Notify the relevant Area Manager and External Works Manager. Once the works are approved, the External Party Licensee must comply with the requirements set out in the ARTC Consent including all conditions.

If the works are not approved, ARTC Property will:

Notify the External Party of the proposal status.

## 8.7 After Application is Accepted by ARTC

It is the responsibility of the Licensee to ensure the workgroup is fully aware of the conditions imposed on the accepted scope of works. These will be listed on the ARTC Consent provided by ARTC Property. It's also a requirement that the work group have this document on them at all times while in ARTC corridor / land.

Failure to adhere to these conditions may result in the ARTC Consent being withdrawn until further notice and works will be instructed to cease until ARTC has investigated the departure from the conditions outlined in the conditions of approval.



## 10 Workers Competency Requirements

### 10.1 External Party Works Rail Related Activities

Workers involved in activities related to rail infrastructure i.e.

- Rail track construction or maintenance
- Station buildings or platforms
- Signalling equipment
- Rail bridges, rail overhead power and rail services utilities

Are required to have a Rail Industry Worker (RIW) account and relevant individual competencies which support the nominated role. This requirement is applicable to all workers entering ARTC controlled corridors including, Sydney Trains and Transport for NSW (TFNSW) employees and agents. Additional information can be found at [Business Rules for Working in ARTC Rail Corridor](#).

### 10.2 Minimum Rail Competency

- Valid Category 3 Medical
- ARTC Contractor Induction
- Track Awareness/ Rail Industry Safety Induction/ Safely Access Rail Corridor
- National Construction Induction.

### 10.3 Minimum Roles Required

- ARTC Operator (Refers to Rail Network Operator. This does not mean you are plant operator. It is the rail operator i.e. ARTC, CRN, TFNSW etc.)
- National - Around the Track Personnel.

### 10.4 ARTC RIW Roles examples

Engaged role during the activity	RIW roles required
General Worker / Non specific Role	<ul style="list-style-type: none"><li>• National Around the track personnel</li><li>• ARTC Operator</li></ul>
Hi Rail Excavator Operator	<ul style="list-style-type: none"><li>• ARTC Operator</li><li>• National - Rail Bound Plant Operator</li></ul>
Project Manager	<ul style="list-style-type: none"><li>• ARTC Operator</li><li>• ARTC Project Manager</li><li>• National - Around the Track Personnel</li></ul>
Track Designer	<ul style="list-style-type: none"><li>• ARTC Operator</li><li>• ARTC Designer (Track)</li></ul>
Rail Labourer	<ul style="list-style-type: none"><li>• ARTC Operator</li><li>• National - Around the Track Personnel</li></ul>

Engaged role during the activity	RIW roles required
	<ul style="list-style-type: none"> <li>National - Rail Labour</li> </ul>
Competent Rail Safety Worker & Track Certifier	<ul style="list-style-type: none"> <li>ARTC Operator</li> <li>National - Around the Track Personnel</li> <li>ARTC Protection Officer Level 1 - 4</li> <li>National - Track Certifier</li> </ul>

## 10.5 RIW Competency View

ARTC will review RIW accounts for element validity. Elements may have expired or been blocked as a result of an incident or investigation.

Competency	Roles																																																																																																												
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## 10.6 Non-Rail Activities

For all activities which are non-rail related, undertaken by entities such as Local Government Councils, utility providers/ asset owners such as:

- Utility under bores
- Overhead power lines
- Road maintenance
- Survey activities

Rail competencies and RIW accounts are **not** required unless personnel involved enter the rail corridor more than four (4) times per year.

### 10.6.1 Minimum Requirements

- ARTC National Induction
- National Construction Induction
- High Risk Licences – relevant to task
- National Plant Operator Competencies or
- VOCs that comply with:

[Federal Government - Fact sheet for VOC Mobile Plant](#)

### 10.6.2 Activities Non Rail related

Workers role while undertaking work in rail corridor	Competencies ARTC will request to sight
Service Locator	<ul style="list-style-type: none"> <li>• ARTC Contractor Induction</li> <li>• National Construction Induction</li> <li>• RIICCM202D – Identify, locate and protect underground services</li> <li>• ARTC Service Locating Certificate if locating ARTC Services</li> </ul>
Vacuum Truck/ Sucker Truck Operators	<ul style="list-style-type: none"> <li>• ARTC Contractor Induction</li> <li>• National Construction Induction</li> <li>• MSMWJ306 - Operate a Vacuum Loading System</li> <li>• MSMWJ304 - Operate a High-pressure Water Jetting System or</li> <li>• VOC which meets the legislative requirements outlined in the link within section 3.2.1</li> </ul>
Crane Operator	<ul style="list-style-type: none"> <li>• ARTC Contractor Induction</li> <li>• National Construction Induction</li> <li>• Crane Operator Licence</li> <li>• High Risk Licence – Crane Licence</li> </ul>
Electrician	<ul style="list-style-type: none"> <li>• ARTC Contractor Induction</li> <li>• National Construction Induction</li> </ul>

Workers role while undertaking work in rail corridor	Competencies ARTC will request to sight
	<ul style="list-style-type: none"> <li>• Electrical Licence</li> </ul>
Cable Joiner	<ul style="list-style-type: none"> <li>• ARTC Contractor Induction</li> <li>• National Construction Induction</li> <li>• UET30409 - Certificate III in ESI - Cable Jointing</li> <li>• Asset owner accreditation training</li> </ul>
Driller/ Borer Operator	<ul style="list-style-type: none"> <li>• ARTC Contractor Induction</li> <li>• National Construction Induction</li> <li>• Confined spaces Competency</li> <li>• Drill Rig VOC or</li> <li>• RIIOGD403E - Conduct Drilling Operations or</li> <li>• RII31619 - Certificate III in Trenchless Technology</li> <li>• MEM31719 Cert III – Engineering Fabrication Trade (Boilermaker)</li> </ul>
High Voltage Linesman	<ul style="list-style-type: none"> <li>• ARTC Contractor Induction</li> <li>• RIIWHS204E - Work safely at heights or equivalent</li> <li>• Electrical Licence</li> <li>• High Risk Licence – Hoist licence boom-type elevating work platform (for over 11m) or</li> <li>• Elevated Work Platform ticket (under 11m)</li> <li>• Power Asset Authority applicable training</li> </ul>
Vegetation Controller/ Tree Lopper/ Arborist	<ul style="list-style-type: none"> <li>• ARTC Contractor Induction</li> <li>• National Construction Induction</li> </ul> <p>One or multiples of the following:</p> <ul style="list-style-type: none"> <li>• AHC30816 Certificate III in Arboriculture (Climbing)</li> <li>• FWPCOT2237 &amp; FWPCOT2239 Maintain Chainsaw and Trim and Cut Felled Trees (Forestry)</li> <li>• AHC50516 Diploma of Arboriculture</li> <li>• UET20312 - Certificate II in ESI - Powerline Vegetation Control</li> <li>• AHC31910 - Certificate III in Weed Management</li> <li>• RIIWHS204D - Work safely at heights or equivalent</li> </ul>

# 11 Major Works

## 11.1 Stakeholder Responsibilities

The External Party takes responsibility for:

- gaining all relevant approvals including the Planning Approval Pathway including Heritage.
- preparing the tender documentation
- managing the tender process and
- managing the design, construction and commissioning phases.

ARTC only intervenes at appropriate stages, either to review the progress made by the External Party or to decide on the continuation of the project into the next stage.

## 11.2 ARTC Responsibilities

The ARTC External Party Team acts as an advisor to the External Party to ensure the proposal is in accordance with ARTC Standards and Network Rules and Procedures with consideration for impacts on current operations and customers including future expansion of the rail corridor.

The ARTC External Works team is responsible for preparing the submission and obtaining clearances from the relevant stakeholders, including the coordination and management of the project.

- The General Manager (or delegate).
- The Principle Safety Advisor (or delegate) is responsible for the safety aspects.
- The Manager Maintenance (or delegate) is responsible for the maintenance and technical issues.
- The Property Manager is responsible for access and legal documents (Consent).

## 11.3 Project Stages

### Stage 1 – Concept Assessment – Agreement in Principle

The External Works team will prepare a submission for decision to the appropriate delegate within ARTC when the below is provided to ARTC:

- The External Works application
- Concept design
- Private siding/ loop connections
- The External Party applications
- Track and civil concept design
- Signalling Functional Specification with an Integrated Operational Specification

### Stage 2 – Works Deed / Major Works Licence / Lessors

Enter into a Commercial / Legal Agreement with ARTC.

### Stage 3 – Construction

The works will be broken out into key stages (similar to construction staging). Each stage will be reviewed and accepted for a period of time by ARTC. ARTC Property will issue the relevant ARTC Consent providing authorisation to commence work within ARTC Land.

The ARTC Consent will contain a number of conditions which the Licensee and/ or their contractor will be required to adhere to. Failure to work within those constraints can result in the authorisation being withdrawn.

**Stage 4** Not relevant for External Parties unless ARTC enters into a Joint funded project.

**Stage 5 Construction Phase** - Refer to relevant ARTC Consent for further details

**Stage 6 Project Close-out (Practical Completion)**- Refer to relevant ARTC Consent for further details

## **11.4 Project Completion**

Refer to relevant ARTC Consent for further details

## 12 Environmental

### 12.1 Development Applications and Planning Approval

Adjoining land-owners are typically notified of any Development Applications (DA) submitted to a local Council and this would apply to RailCorp (or ARTC as its Agent). However, Councils also have a statutory obligation to refer certain DAs for comment or concurrence under **State Environmental Planning Policy (Infrastructure) 2007 (ISEPP)** to the relevant rail authority or electricity supply authority (such as RailCorp/ARTC). The ISEPP also refers to guidelines which must be taken into account by Councils in their assessment of DAs where development is proposed in, or adjacent to railway corridors.

For certain developments near rail corridors, the ISEPP requires Councils to obtain the concurrence of the rail authority before Council can grant its development approval.

Any concurrence conditions issued by the rail authority must be imposed by Council. Before it grants its concurrence, the rail authority has a statutory obligation to take into account:

- the safety and structural integrity of the rail corridor and rail infrastructure in the rail corridor;
- the safe and effective operation of rail services and rail infrastructure and;
- what measures are proposed, or could reasonably be taken, to avoid or minimise those potential effects.

Concurrence under the ISEPP is required as follows:

- Development involving access via level crossings (Clause 84).
- Excavation in, above, below or adjacent to rail corridors (Clause 86).

The ISEPP also requires Councils to refer certain DAs for review and comment that do not fall within the requirements of triggering concurrence including:

- Development in close proximity to electrical infrastructure (Clause 45);
- Development adjacent to Corridors (Clause 85);
- For the RailCorp area of responsibility, ARTC will be exercising the Secretary's concurrence and referral function under the ISEPP; and
- ARTC is also the relevant authority for the assessment of developments being proposed as State Significant Developments (SSD), State Significant Infrastructure (SSI) or being determined under a Part 5 Review of Environment Factors (REF).

In the assessment of proposed developments ARTC will assess proposed developments in accordance with the relevant applicable standards (e.g. ARTC, Australian Standards, BCA) and planning instruments (e.g. Development Near Rail Corridors and Busy Roads – Interim Guideline).

Pre-DA consultation is available from the ARTC Property /External Works Team.

The Pre-DA consultation may include but not limited to review of design documents, impact to ARTC assets, geotechnical investigation, survey access and adequacy of information to lodge the DA.

### 12.2 Environmental / Community Issues

For any Environmental or community concerns please direct them to our communication portal for further information.

<https://www.artc.com.au/community/environment/>

Call: 1300 550 402

Email: [Enviroline@artc.com.au](mailto:Enviroline@artc.com.au)

## **13 Emergency Access to the Rail Corridor**

In the event a ARTC receives an enquiry from an external party and it falls within the definition of emergency works, ARTC Property team are to liaise directly with the ARTC Area Manager to confirm support with the process in enabling the external party to undertake the works primarily the rail safety aspect.

### **13.1 Emergency Services**

There will be occasions where emergency services are required to enter the rail corridor as result of incident emergencies or criminal events.

Emergency Services have authority in accordance with various Acts including but not limited to State Emergency Services Act 1989 No 164, to enter, access and take control of an area for the purpose of exercising any functions conferred or imposed under such Act. Should the emergency be taking place within ARTC land or the rail corridor, Network Control would be notified, and all trains will be stopped to that area. Network Control will make the necessary contact the local Area Manager and/or team.

If the Emergency Service requires access only in order to reach the target area, this permitted without contacting ARTC.

## 14 Frequently Asked Questions

	Scenario	Response	Note
1	Can the External Party applicant submit an application without all the information?	Yes	Although ARTC will not start processing until its complete.
2	Can the External Party applicant enter the rail corridor if they Rail Competencies/ have Competent Rail Safety Worker <b>without</b> ARTC Consent from ARTC Property?	No	You can only enter ARTC Land if you have the relevant ARTC Consent from ARTC Property. Or directly engaged by ARTC through a legal agreement.
3	Do External Party applicants need a Competent Rail Safety Worker if they are within the fenced rail corridor?	Yes	
4	Do External Party applicants need a Competent Rail Safety Worker if the rail corridor is not fenced off from the rest of the land even if its 100m wide?	Yes	As there is the potential to enter the operational environment.
5	Do External Party applicants need a Competent Rail Safety Worker when entering ARTC Land that is fenced off from the operational corridor and there is no potential to enter or impact the Rail Corridor?	No	
6	Do External Party applicants need to obtain consent to fly a drone over or within ARTC Land/ rail corridor?	Yes	As it may have the potential to land on track in front of a train or fail and land on the property. Please request our Drone Guide. Or refer to <a href="#">Drone Management Procedure</a>
7	Do External Party applicants require consent from ARTC to do water sampling under a rail bridge, in a fenced or unfenced location?	Yes	Contact the relevant ARTC Property Officer to confirm ARTC's land boundary limits to confirm if there are any further requirements.
8	Do External Party applicants need consent if they are completing activity within a vessel in a water course that passes under the rail bridge and they do not need to get out of the boat?	No	No In principle no although, in the event of an incident occurring and evacuating the boat is required, ARTC should be made aware of the activity.
9	If External Party applicant installs delineation within the rail corridor and temporary fencing, do they still need a Competent Rail Safety Worker?	Yes	ARTC Network Rules requires a Competent Rail Safety Worker to be present when ever in the rail corridor.

	Scenario	Response	Note
10	If an External Party applicant installs delineation within the rail corridor and temporary fencing, is the worksite still considered part of the rail corridor?	Yes	The delineation is not a permanent structure. It is only a form of adjacent line protection which requires monitoring by a Competent Rail Safety Worker.
11	Can personnel remain inside the rail corridor when the Competent Rail Safety Worker is absent?	No	
12	The rail corridor access gate has padlocks on it. Can the External Party applicants have key?	No	Only Authorised Competent Rail Safety Workers have access to these keys.
13	What clothing must be worn?		<p>Task appropriate personnel protective equipment should be worn at all times including:</p> <ul style="list-style-type: none"> <li>• Hi-vis orange shirt or vest (with reflective tape when working at night)</li> <li>• Long pants</li> <li>• Long sleeved shirt with sleeves rolled down</li> <li>• Steel or carbon fibre capped ankle length boots.</li> </ul> <p>Red or green apparel or equipment must not be used/ worn in the rail corridor.</p>
14	Does the orange vest or shirt require a reflective cross on the back?	Yes	When working at night or in low light conditions.
15	Can External Party applicants do additional scope or change methodology to what was submitted on the initial application without advising ARTC?	No	ARTC will need to review to ensure the change hasn't introduced any new risks.
16	The Corridor Access licence has expired can External Party applicants extend it?	Yes	Contact ARTC Property. Additional fees may be incurred.
17	Can the External Party applicant change workers after ARTC Consent has been issued?	Yes	As long as they are provided to ARTC in advance of the works and ARTC have confirmed the changes are acceptable.
18	Does the External Party applicant need to do the ARTC National Contractor Induction	Yes	<p><b>This is a mandatory requirement.</b> Please follow the link below to complete.</p> <p><a href="https://www.artc.com.au/work/contractors/inductions/">https://www.artc.com.au/work/contractors/inductions/</a></p>
19	Does the External Party applicant need to complete Track Safety Awareness/ Rail Industry Safety	No	If you don't enter the rail corridor more than 4 times a year. You will still need a Competent Rail Safety Worker with you at all times.

	Scenario	Response	Note
	Induction if their work is not rail related?		
20	Is the rail corridor boundary fence a true reflection of the rail corridor?	No	Please contact ARTC Property for confirmation. You may be able to determine approximate boundaries by conducting a search on <a href="https://maps.six.nsw.gov.au/">https://maps.six.nsw.gov.au/</a> however it should be noted that these images are an approximation only and to determine the true boundary, a survey should be conducted by an authorised surveyor.  There are occasions where the rail corridor or ARTC Land may be up to and over 200m wide and may or may not have a fence. There are other locations where the fence is on the road reserve and another 10m off the operational track.
21	Can the External Party applicant find ARTC Signal & Communication cable on Dial Before You Dig?	No	ARTC can provide records indicating the location of services, but the proponent will need to verify them using an ARTC authorised service locator.
22	If there is another rail authority's asset within ARTC Corridor (i.e. cables or pits), will the ARTC Consent include authorisation for locating or touching these assets?	No	You will need to seek Consent from the relevant authority separately.
23	Does the External Party applicant need to consult ARTC if they are placing temporary traffic lights next to ARTC Land, in the rail corridor or on the approach to a level crossing?	Yes	Traffic lights can be confused for signals by the rail operator.  Traffic lights may conflict with the safety controls on the level crossing i.e. Flashing lights on the level crossing indicating a train is coming while the temporary traffic light indicates green to road users.
24	Can the External Party applicants transit heavy plant or long vehicles over level crossings on a non-registered heavy/ oversize vehicle route?	No	You will need to have additional controls in place such as a Competent Rail Safety Worker unless agreed otherwise with ARTC.
25	Is the rail corridor always fenced off?	No	There are some areas of the network which are not fenced.
26	Does the External Party applicant need to consider ARTC's Environmental Licence?	Yes	All works within ARTC Land is required to be undertaken in accordance with the ARTC EPL. Refer to the EPA
27	Can ARTC provide the Planning Approval Pathway for my works?	No	ARTC are not an approving authority for External Parties.
28	If the External Party applicants is not entering the Rail Corridor, but	Yes	

	Scenario	Response	Note
	need to under bore under the railway do I need ARTC Consent?		
29	Do all rail corridors belong to ARTC?	No	Some rail corridors are owned and managed by private companies and require their consent to enter their land.
30	Can the External Party applicant wear steel toe cap sport shoes?	No	ARTC requires you to wear steel or carbon fibre capped ankle length boots.
31	Is red or green clothing permitted in the rail corridor?	No	Red or green clothing is not permitted in the rail corridor including hats, bags and umbrellas.
32	Does the External Party applicant need an RIW Card if the activity is non-rail related?	No	You may be able to enter the rail corridor under an exemption and if you do not enter the rail corridor more than 4 times per year.
33	Does the External Party applicant need an RIW Card if they enter the rail corridor more than 4 times a year if the activity is non-rail related?	Yes	If you are entering the rail corridor <b>more than 4 times</b> a year, you will require an RIW card/ account.
34	Does the External Party applicant need an RIW Card if they enter the rail corridor for rail related activity?	Yes	
35	Is the RIW Card the same as a RISI?	No	RISI (Rail Industry Safety Induction) is a component of obtaining the RIW Card. Refer to: ARTC PEO-GL-001
36	Can the External Party applicant enter the rail corridor without a Competent Rail Safety Worker?	No	
37	Does ARTC provide a Competent Rail Safety Worker for External Parties?	No	It is the External Party's responsibility to engage a Competent Rail Safety Worker. ARTC can supply a list of registered providers.
38	Can the External Party applicant create a RISI free zone within the rail corridor?	No	This is Sydney Trains Term and is not used in ARTC. If your work is related to rail you are required to have a RISI/ TSA. If your work is <u>not related</u> to rail and you don't have RISI/ TSA, you must always have a Competent Rail Safety Worker with you as outlined under the exemption requirements of RLS-PR-003.
39	Can the External Party applicant "stop trains" for greater than 45min so they can conduct the approved works?	Yes	<b>Hunter Valley - Coal Network</b> - This can be achieved but only if its during <b>scheduled outages/ possessions</b> .

	Scenario	Response	Note
			<p>Refer to the <a href="https://www.artc.com.au/work/hunter-valley-possession-management/">https://www.artc.com.au/work/hunter-valley-possession-management/</a></p> <p><b>Hunter Valley - Central North West</b> - This may be achieved with sufficient advanced planning.</p> <p>If you require greater than 4hrs closure, this requires 6 months notice to determine if ARTC can accommodate the request.</p>
40	Is the ARTC corridor always considered 15m from the nearest running rail?	No	Some parts of the ARTC rail corridor can be up to 200m or wider.
41	Does the External Party applicant need a Competent Rail Safety Worker even if the work is outside the corridor fence boundary and nothing can reach the Danger Zone (i.e. <u>cannot foul the tracks</u> ) in the event plant or machinery falls/ rolls over etc.	No	If material or plant lands in the rail corridor, but outside the danger zone (i.e. cannot foul the tracks), you will not be able to recover the items until a Competent Rail Safety Worker is on site to assist.
42	Does the External Party applicant need a Competent Rail Safety Worker even if the work is outside the rail corridor fence boundary and material/ plant can reach the Danger Zone (i.e. <u>can foul the tracks</u> ) in the event it falls/ rolls over etc.	Yes	
43	Can the External Party applicant find out what the rail kilometrage is without entering the rail corridor?	Yes	<p>Culverts and bridges have railway kilometrage written on them as do level crossing signs and buildings.</p> <p>ARTC Network Information Books will provide an indication:  <a href="https://www.artc.com.au/customers/operations/nib/">https://www.artc.com.au/customers/operations/nib/</a></p> <p>If you are near the rail corridor fence line, the ARTC Phone App KM2ME may provide a km (Apple only)  <a href="https://ios.artc.com.au/km2me/">https://ios.artc.com.au/km2me/</a></p> <p>Please note you cannot access ARTC Land, including a level crossing to determine this information.</p>
44	Can the External Party applicant drive any type of plant or vehicle over a level crossing?	No	<p><b>Passive Level Crossing</b></p> <p>These types of crossings are rated for certain types of vehicles i.e. cars, small trucks, semi's or b-doubles.</p>

	Scenario	Response	Note
			<p>These types of crossings are assessed on sighting distance in all directions vs train speed vs vehicle types, which all have different durations to travel over the crossing.</p> <p><b>Examples:</b></p> <p>A driver of a grader would have significantly less sighting than a car driver due to the position of the driver when they come to a stand at the stop sign.</p> <p>An excavator has a slower speed to a car</p> <p>A truck carrying power poles will take longer to cross than a car etc.</p> <p><b>Active Level Crossing</b></p> <p>You should not drive a piece of plant (i.e. excavator) over a level crossing if its operating speed is less than a standard vehicle. The duration from when the level crossing is activated by the train, is a calculation of the vehicles travelling speed to provide sufficient time for the vehicle to clear i.e. 60km/h car/ truck vs 5km/h excavator. A slower vehicle may get caught on the level crossing as a train is approaching possibly providing insufficient distance/ time to stop and be clear of the rail/ train.</p>
45	Can the External Party applicant place temporary traffic lights near a level crossing or near a Train Signal?	No	<p>If you place temporary traffic lights close to an active level crossing, members of the public may disregard the level crossing warning system.</p>  <p>If you place your temporary traffic lights near a train signal location and the road is adjacent to the rail corridor, train drivers at night may see them and stop the trains assuming its a train signal as the large trains will start to break 1km+ away and wont realise until they get up close.</p>
46	Can work on the station platform or structure adjacent to the	No	Exceptions if the work:

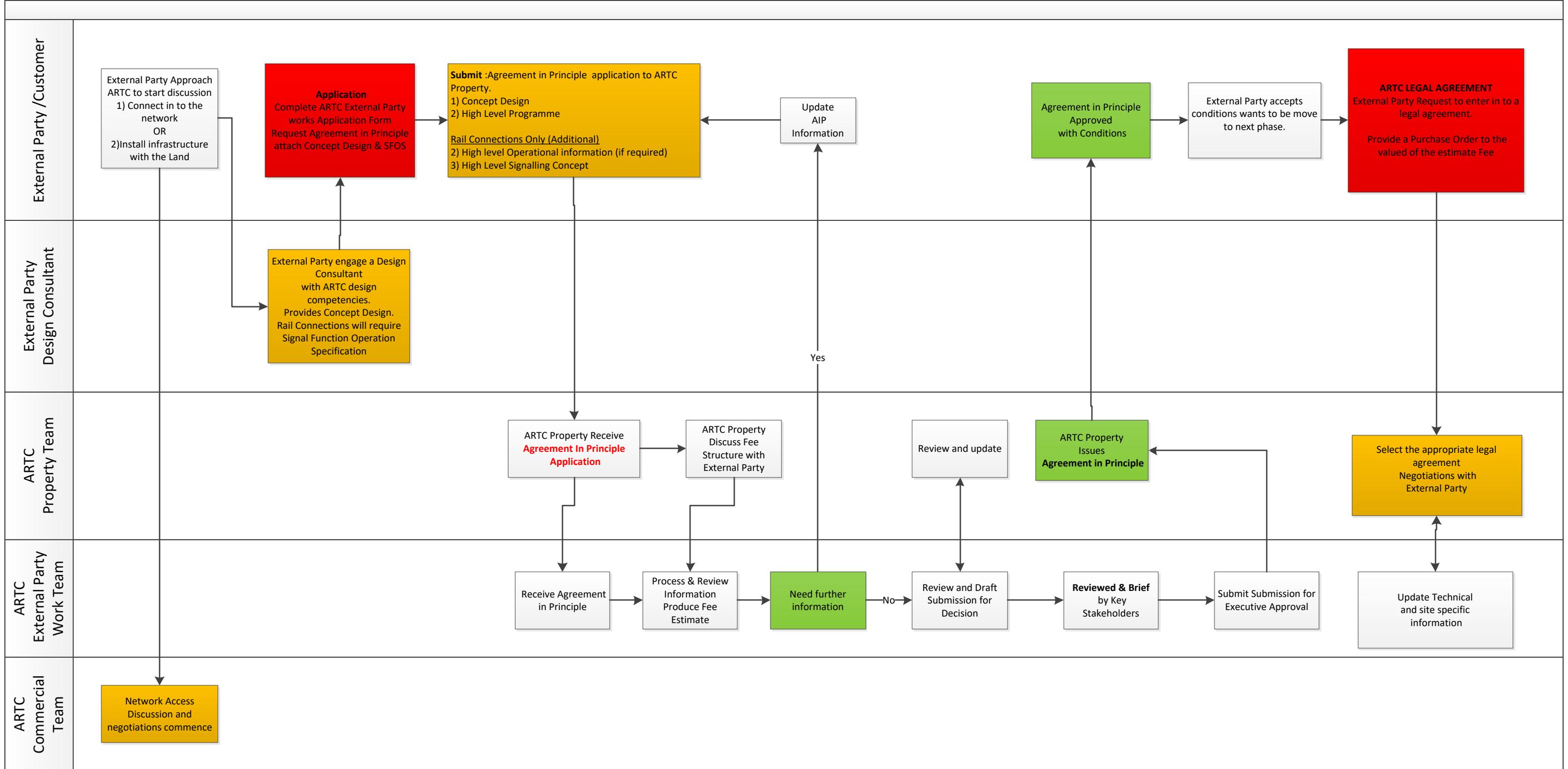
	Scenario	Response	Note
	operational track without having to obtain ARTC Consent?		<p>Is fully contained in the building/structure</p> <p>If the ladders / elevated platform doesn't present a potential to fall on track and fully behind the yellow line.</p> <p>If the materials such as guttering / long material don't have the potential to go beyond the yellow line.</p> <p>If in doubt or unsure consult with ARTC Property to confirm whether consent is required</p>
47	<p>Does the External Party applicant need ARTC's consent when installing / modifying infrastructure that goes over the rail corridor?</p> <p>Example: replacing lights on poles on a walkway that crosses the rail corridor.</p>	Yes	Materials or tools may fall on track or strike trains. ARTC needs to understand the controls in place to manage the risks
48	Can the External Party applicant install / repair water supply for livestock or irrigation pipe within the rail corridor without ARTC Consent	No	<p>Any infrastructure installed within ARTC Property requires consent and may incur an annual fee if it is a water supply for the livestock on the adjacent property.</p> <p>If the pipe is already in existence we recommend confirming its legality to be within the rail corridor it its then you will be provided the opportunity to legalise it or it may be removed at any point ARTC will not be responsible for any damage on the pipe.</p>
49	Can the External Party applicant repair water utility main pipe within the rail corridor without ARTC Consent	No	<p>If its a planned repair and not urgent then follow the External Party Process,</p> <p>If its emergency works then it will follow a different approval process to enable the works Please make contact with ARTC Property for further information.</p>

**15 Appendix 1 – General Application Process flow chart**



## 16 Appendix 2 – Major External Works Process Flow Chart

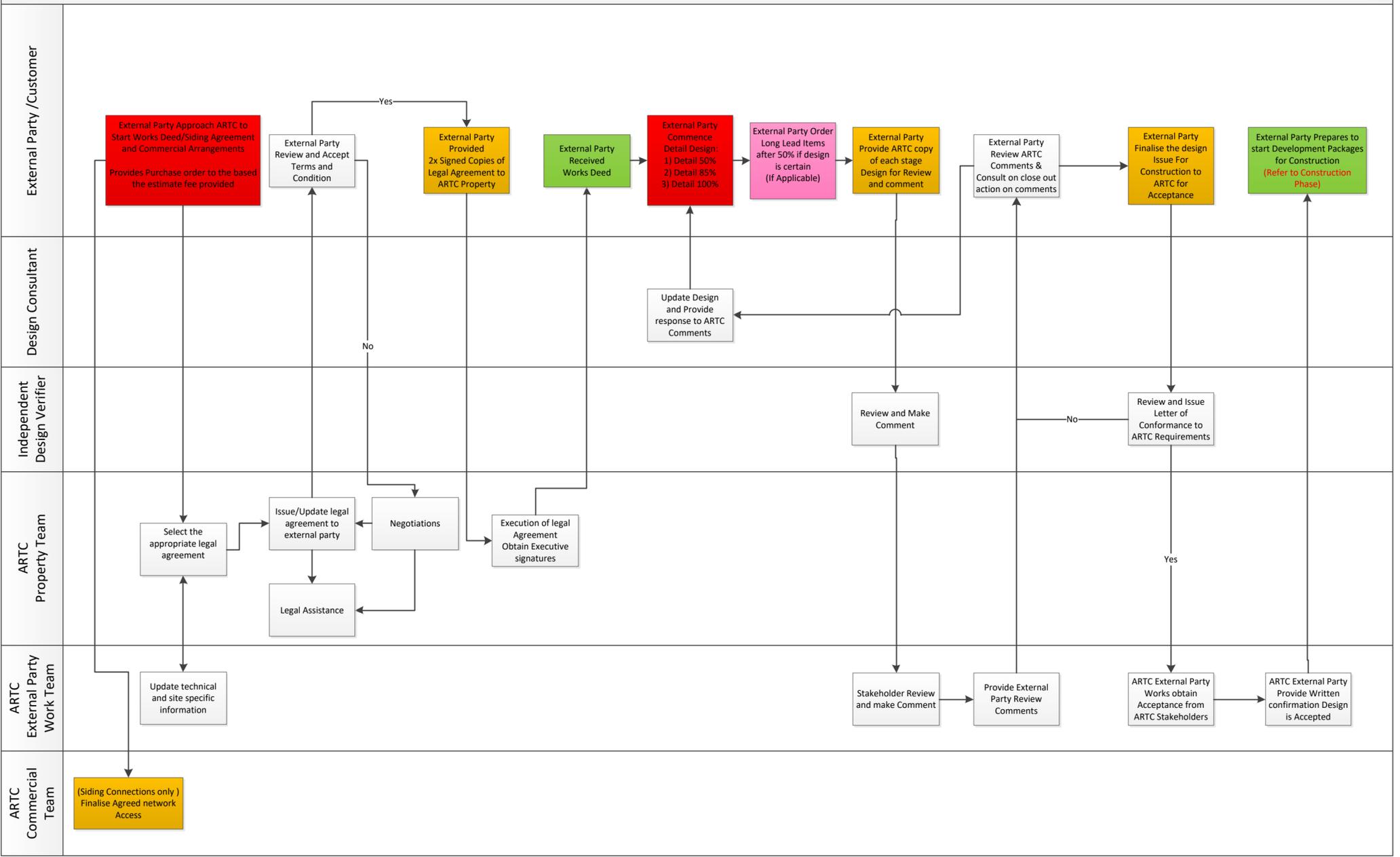
# EXTERNAL PARTY - MAJOR WORKS AGREEMENT IN PRINCIPLE



# EXTERNAL PARTY - MAJOR WORKS LEGAL AGREEMENT & DESIGN



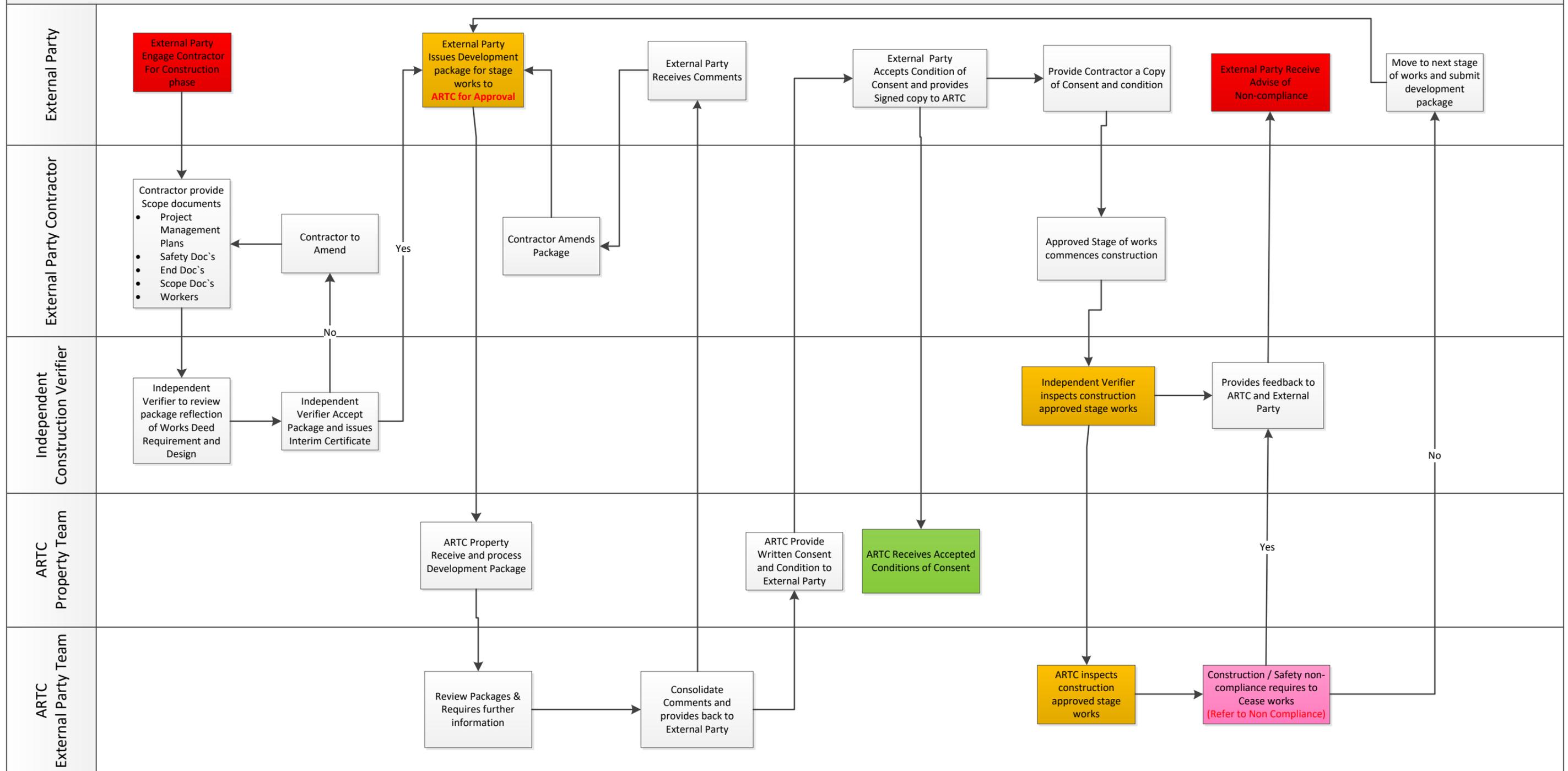
Phase



# EXTERNAL PARTY - MAJOR WORKS CONSTRUCTION PHASE DEVELOPMENT PACKAGES PROCESS



Phase



## 17 Appendix 3 - Rail Services Searching

# External Works Locating ARTC Cables Guide

ARTC

<p><b>Brief</b></p>	<p>Listed below are extracts from ARTC Signalling standards which apply to work on ARTC signalling infrastructure and requirement regarding ARTC service searches.</p> <p>With regards to existing signalling services the Alliances are required to provide general cable drawings in accordance with ESC-11-01 Section 19, SCP-06 Section 9 and ESD-25-01. Cable locating is not an exact science and site conditions change over time therefore any cable plans must be treated as a guide only.</p> <p>Additionally, cable plans are not available for much of the Hunter and Central North West therefore it is vital that those undertaking cable locating hold current appropriate ARTC signalling competencies and have significant experience in locating ARTC signal cabling, while also being familiar with ARTC signal cabling installation methodology and standards.</p>
<p><b>Companies</b></p>	<p><b>Services companies with full competency</b></p> <ul style="list-style-type: none"> <li>• AOTC (Athol Whitten)</li> <li>• Downer Engineering</li> <li>• Electro Star</li> </ul> <p><b>Services companies that require Signalling Support</b></p> <ul style="list-style-type: none"> <li>• Chris Bates and Associates</li> </ul> <p><b>Signalling Support company's</b></p> <ul style="list-style-type: none"> <li>• Aldridge</li> <li>• John Holland Rail</li> <li>• JMDR</li> <li>• SJM</li> <li>• SIGTEC</li> <li>• UTS Rail</li> <li>• <b><i>But not limited too</i></b></li> </ul> <p>Contact ARTC for the latest list competent people / companies</p>
<p><b>Searching for ARTC Services</b></p>	<ul style="list-style-type: none"> <li>• <b>Option 1</b> – Engage a service search locator who hold both of the competencies i.e. ARTC Signalling Electrician &amp; National Services/utilities Locating Competency.</li> <li>• <b>Option 2</b> – Engage Services Location with ARTC SOC but needs Signalling support. <i>(advantage of these people is that they are familiar with our corridor and where our services are.)</i></li> <li>• <b>Option 3</b> – The Nominated service /utility locator obtains the ARTC competency</li> </ul> <p><b>Note :</b>  <i>ARTC does not provide Signalling Support for these activities, but we can provide a list of contractors who do.</i></p> <p><i>The <u>only time ARTC will provide to support</u> is when there is potential redundant cable and ARTC will come out and verify.</i></p>

# External Works Locating ARTC Cables Guide



<p><b>Poor Practice</b></p>	<p>The nominated Utilities Service Locator <u>must not</u> try and locate/ trace ARTC services from a Cable pit. They must locate the source of the cable and trace it from there, failure to do this will result in cables being missed or result in tracing a redundant cable that has picked up a stray current from another cable.</p> <p>Additionally they <u>should not</u> just connect on the cable coming out of the bottom of Location cabinet as there maybe cables feeding out of the cabinet that may be redundant and be picking up stray current providing a false reading.</p> <p>The Nominated person needs to positively identify each live service leaving the point of origin by opening the signalling/Comms cabinet / building and trace them to the Asset i.e. Signal, Aerial etc.</p>
<p><b>Training</b></p>	<p><b>National Training Competency</b> RIICCM202D/ RIICCM202A - Identify, locate and protect underground services</p> <p><b>ARTC Competency</b> Signalling electrical Competency – <a href="https://extranet.artc.com.au/eng_signal_form.html#training">https://extranet.artc.com.au/eng_signal_form.html#training</a></p> <p><b>Trade Assistant - Minimum</b> EST2002F-10 - Trades and Assistants - Site Access and Work Competency EST2002F-20 - Competency Assessment Checklist - Trades and Assistants Site Access and Work Competency</p>
<p><b>Standards</b></p>	<p><b>Extract EST-20-03</b></p> <p><i>All signals staff working on ARTC Signalling Infrastructure must take action to gain a Statement of Competency. This covers all staff working on design (including checking and updating), construction, testing and commissioning and maintenance. Those involved in project management or design management of signalling project work also require the appropriate Statement of Competency.</i></p> <p><i>You need to have this Statement of Competency with you when you are working on ARTC signalling infrastructure tasks. A copy of the Statement of Competency shall also be included for each signals worker in the Installation and Testing Work Package and the Commissioning Work Package for new works.</i></p> <p><i>If you do not have a <b>current</b> Statement of Competency, you <b>cannot</b> work on ARTC infrastructure.</i></p> <p><b>Extract SMP-01</b></p> <p><i>4) Only signalling maintainers using authorised practices, test equipment, tools, materials and equipment are to maintain the installed signalling system or its components. Test equipment and tools in use are to be in proper working order.</i></p> <p><i>5) Persons who are not suitably accredited shall not have access to enclosures housing vital signalling equipment except under the supervision of a signalling maintainer or as permitted in accordance with stipulated conditions.</i></p> <p><i>6) Only suitably accredited signalling maintainers, or persons directly supervised by the signalling maintainers, are to disconnect or connect to the signalling system equipment and circuits.</i></p>

# External Works Locating ARTC Cables Guide

	<p><b>Extract ESC-11-01</b></p> <p><b>1.19 Location of Existing Services/Cabling</b> The construction area is likely to contain numerous existing buried utility services e.g. water, gas, electricity, communications etc, not all of which are fully documented.</p> <p>The location of all utility services and existing ARTC cabling within a one metre distance of any proposed installation work shall be determined by the Contractor prior to commencing the work.</p> <p>In the case of existing ARTC cabling, the Cable Search form (ESC1101F-01) contained in <b>Appendix A</b> shall be used.</p> <p>Where utility services are involved, the search requirements relevant to each of the utility service providers shall be used.</p>
<p><b>SOC Example</b></p>	<p><b>Note some competencies require the individual to be supervised by Signalling electrician with ARTC competencies. And will be identified in the competency table.</b></p>
<p><b>RIW</b></p>	<p>Currently RIW / Onsite track easy does not have a current role for Locating service.</p> <p>Most of the rail services locators have “ARTC Signalling Tradesperson” Role on there account</p>
<p><b>Redundant Services</b></p>	<p>In the event a redundant service is discovered during excavations we will attend the site and confirm whether the service is ARTC’s and if its redundant, in the event the Signalling support the external party has engaged is uncertain.</p>
<p><b>Signalling Support</b></p>	<p>ARTC does not provide Signalling support for this activity.</p> <p>The External Party is responsible for engaging signalling electrician if you service search individual requires to be supervised.</p>
<p><b>Deliverables</b></p>	<p>Services Search records provided with in 14 days of search</p>

# External Works Locating ARTC Cables Guide

	<ul style="list-style-type: none"> <li>• On the records to it needs to identify approximate depth</li> <li>• Type of service</li> <li>• Offset from nearest track and which track</li> </ul>
<b>Non-ARTC Rail Assets within ARTC corridor.</b>	ARTC cannot provide consent to search for Non ARTC assets i.e. Sydney Trains fibre. you will require to obtain consent from Sydney trains/ Asset owner.
<b>Historic Records</b>	ARTC does have some records but not for all locations
<b>Non-Destructive services locating with Vacuum truck</b>	<p>Locating services in the rail corridor using the Vacuum loading System</p> <p><b>National Training Competencies</b></p> <ul style="list-style-type: none"> <li>○ MSMWJ306 - Operate a vacuum loading system</li> <li>○ MSMWJ304 - Operate a high-pressure water jetting system,</li> </ul> <p>Or contractor will need to</p> <p><b>Government Extract -VoC Requirements for Mobile Plant Operators</b></p> <p>What IS required: The following can be used as evidence of competency:</p> <ul style="list-style-type: none"> <li>• High-Risk Work Licence issued by a State or Territory under the National Certification System as per the legislation; or</li> <li>• Where a High-Risk Work Licence is not required by legislation:</li> <li>• Licence or Certificate of Competency issued under previous State or Territory legislation for which there is no longer a High Risk Work Licence required e.g. load shifting equipment; or</li> <li>• Statement of Attainment or Certificate issued by a Registered Training Organisation (RTO) for the successful completion of the appropriate unit of competency in the Nationally Recognised Training (NRT) package; or</li> <li>• evidence of formal VOC assessment against defined competency standards, which should:             <ul style="list-style-type: none"> <li>○ be completed, or confirmed as having been completed, by the accredited company to an acceptable level, such as the relevant NRT, internal VoC process, or equivalent;</li> <li>○ Include a detailed and documented assessment standard;</li> <li>○ be completed by a person (or persons) who meets the documented competency as defined by the company to conduct a VoC assessment; and</li> <li>○ be evidenced by a signed, completed VoC assessment.</li> </ul> </li> </ul> <p><b>1.2 What is NOT evidence:</b></p>

# External Works Locating ARTC Cables Guide

- a letter signed by an employer or supervisor claiming that the worker is competent will not, on its own, be accepted as evidence of competence.

### 1.3 What is NOT required:

- a further VoC assessment in addition to evidence of a High Risk Work Licence, RTO issued Certificate of Competency, or other accepted processes in section 1.1 of this Fact Sheet; or
- refresher training unless required by the legislation or RTO, or deemed necessary by the company.

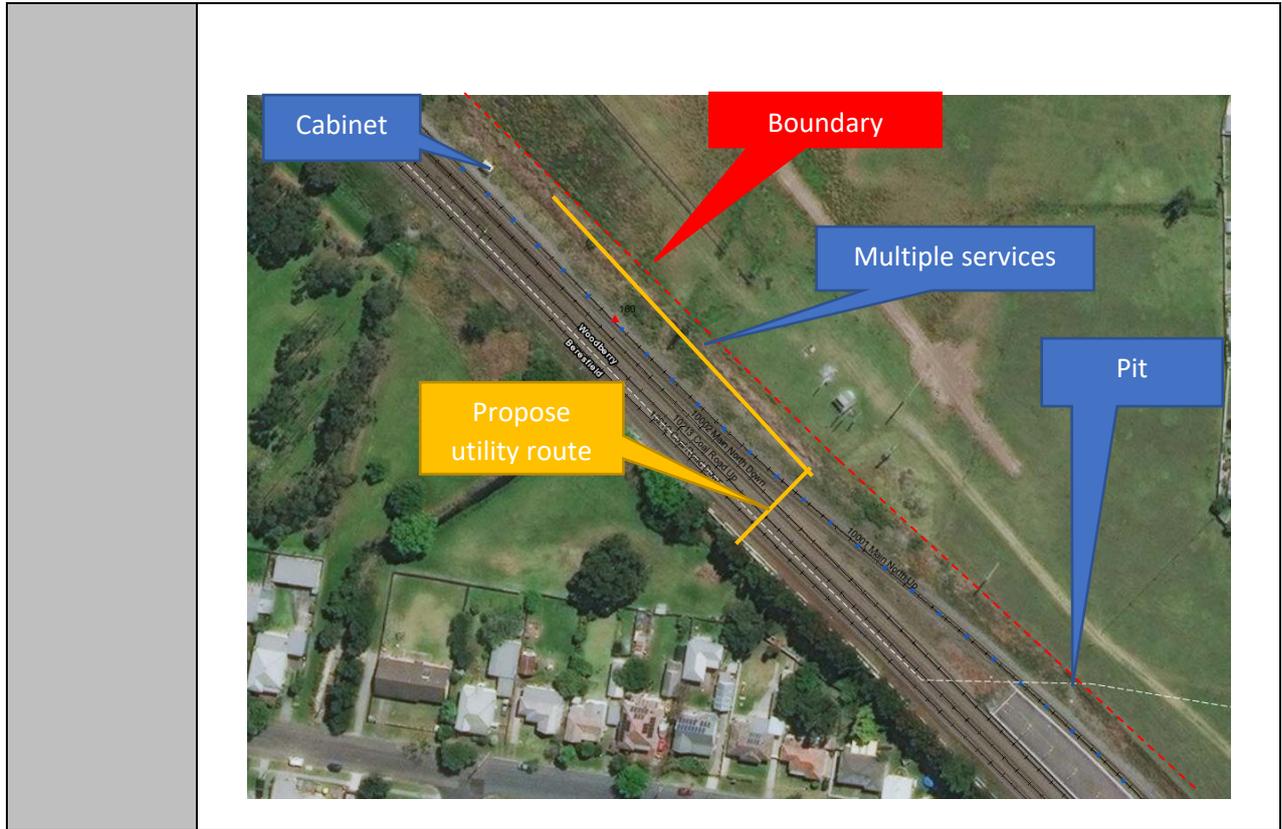
*This fact sheet was last updated 22 January 2018. The Office of the Federal Safety Commissioner (OFSC) has prepared this fact sheet for general information only, and it does not replace professional advice.*

### Investigation Method

- If the activity requires you to excavate from the track to the land boundary then you will require to slot trench 3m from the track to the fence line to ensure you have picked all rail services up as some services may not necessarily be laid in the same service trench
- You can not assume that the cable run is in a uniform distance from track or stay in the same trench
- Not all services will be in conduits and maybe are directly buried
- The services locator must trace every cable from the pit / location cabinet either side of the proposed works



# External Works Locating ARTC Cables Guide



## 18 Appendix 4 – External Party Drone Guide

## Drone Usage Guide

<https://extranet.artc.com.au/docs/eng/plant-equip/procedures/EPP-00-01.pdf>

*It is the responsibility of the Third Party to read the full procedure provided above and not purely this guide and does not negate the responsibility of complying this ARTC Procedures or CASA requirements.*

Key Requirements		
EPP-00-01 Section 7	<p><b>Third Party Drone Operations</b></p> <p>ARTC may be approached by a third party regarding the proposed flight of a drone over ARTC property for a third-party purpose. The person operating a drone for a third-party purpose must meet the <b><u>licencing requirements of section 6 and agree in writing to comply with all relevant sections of this procedure.</u></b></p>	
EPP-00-01 Section 6	<p><b>Engagement of External Drone Operators</b></p> <p>Any proposed drone operator to be engaged for an ARTC purpose must show evidence of current CASA licensing for drone flight operations. The contracted drone pilot must hold a current RePL and be current on the aircraft type. The drone operating company must hold a current ReOC with a minimum of 7kg certification. The contractor's Aviation Reference Number (ARN) must be provided for the contracted flight programme.</p> <p>Where the drone flight will be over the rail corridor, the drone operator must be briefed on rail safety requirements by a Protection Officer, and if not a holder of a Rail Industry Worker (RIW) track awareness competency, must be accompanied by a Protection Officer. This applies whether the drone is launched from within the rail corridor or not.</p> <p>Where drone operations are to take place away from the rail corridor (such as at a communications tower site or at a Provisioning Centre), an ARTC staff member with responsibility for safety must concur with the proposed flight plan. CASA requirements must be adhered to at all times.</p>	
EPP-00-01 Section 3	<p><b>ARTC Insurance Requirements</b></p> <p>The Public Liability and Professional Indemnity Insurance held by ARTC allows for ARTC owned drone operations for an ARTC purpose. The insurance requires that ARTC comply with all Australian laws and regulations, and that certain operational limitations be observed. These operational limitations align with the operational limitations imposed by CASA, noting an insurance limit of a 1 km horizontal distance limit from the drone operator, compared to the CASA limit of Visual Line of Sight in Day Meteorological Conditions. The stricter insurance limit shall apply to drones flown for an ARTC purpose.</p> <p><u>Drones permitted by ARTC to be flown for a third-party purpose over ARTC property are not covered by ARTC insurance, hence the <b>CASA VLOS limit shall apply to such flights.</b></u></p> <p>Compliance with this procedure is deemed as complying with ARTC's insurance requirements.</p> <p>Contractors or third parties conducting drone flights over the ARTC rail corridor <b>shall provide</b> evidence of public risk insurance with an APRA-approved Australian insurance company for at least \$20 million and where required provide professional indemnity insurance for at least \$1 million.</p>	

<b>Key Requirements</b>		
EPP-00-01 Section 4	<p><b>CASA Requirements</b></p> <p>CASA limitations on drone operations are as follows:</p> <ul style="list-style-type: none"> <li>A. Advisory Circular 101-10 Remotely Piloted Aircraft Systems – Operation of Excluded RPA provides a series of exemptions from CASA approval requirements.</li> <li>B. Operations outside the CASA requirements must be justified by an approved Safety Case.</li> <li>C. CASR 101.070 restricts operations above 400 feet (121.9 metres) from the launch point of the drone.</li> <li>D. CASR 101.73 requires that drone operations be conducted within visual line of sight of the operator.</li> <li>E. CASR 101.75 sets approval requirements to operate a drone within 3 Nautical Miles (NM) (5.5 km) of an aerodrome with controlled airspace. This can be considered as an aerodrome with air traffic control coverage.</li> <li>F. CASR 101.095 requires that drone operations be conducted in Daylight Visual Meteorological Conditions, or otherwise a Safety Case must be approved by CASA.</li> <li>G. CASR 101.097 prohibits autonomous launch or release of a drone without approval. A pilot must be in control of the launch or release of the drone.</li> <li>H. CASR 101.238 prohibits drone operations within 30m of a person not directly involved in the operation and not within areas where police, fire, public safety or emergency operations are being conducted without the approval of a person in charge of the operation.</li> <li>I. CASR 101.245 allows operations near people who are not involved in the drone operations to be reduced from 30m to 15m with their prior written consent.</li> <li>J. CASR 101.280 requires that drone operations not be conducted over populous areas.</li> <li>K. CASR 101.F.3 establishes the requirements for remote pilot licences for certain drone operations, known as the CASA Remote Pilot Licence (RemPL).</li> <li>L. CASR 101.F.4 establishes requirements for the authorisation of drone operations.</li> </ul>	
EPP-00-01 Section 5	<p><b>Drone Piloting Requirements</b></p> <p>All persons piloting a drone of mass greater than 2.0 kg for an ARTC purpose are to be licensed with a CASA Remote Pilot Licence (RemPL) in accordance with CASR 101.F.3. and be current on the aircraft type.</p> <p>All drone flights over ARTC owned or leased land for a third-party purpose are to be conducted by a person holding a CASA RemPL and they are to be current on the aircraft type. A CASA Aviation Reference Number (ARN) is to be provided to ARTC.</p> <p>All drone flights for an ARTC purpose set out at Section 2 that are conducted by a non-ARTC employee require that the pilot hold a current RemPL licence and be current on the aircraft type.</p> <p>Evidence of a current CASA RemPL licence and the relevant ARN are to be recorded on the PreWork Brief for each drone flight for which a RemPL licence is required.</p> <p>Operation of drones of less than 2.0 kg mass (Very Small RPA) or less than 100 g mass (Micro RPA) by an ARTC employee does not require a CASA RemPL licence, provided that:</p> <ul style="list-style-type: none"> <li>A. The drone flight is for an ARTC purpose as set out in Section 2 of this procedure.</li> <li>B. The drone pilot complies with the limitations set out in this procedure.</li> </ul> <p><b>The responsible manager must:</b></p> <ul style="list-style-type: none"> <li><del>a. satisfy themselves that the drone operator can suitably control the drone, and not pose a risk to people or assets. This can be achieved via a training course or on the job training.</del></li> <li><del>b. maintain a register of those ARTC employees that are authorised to operate ARTC owned drones under their control.</del></li> </ul>	

<b>Key Requirements</b>		
EPP-00-01 Section 10	<p><b>Protection Officer Responsibilities</b></p> <p>Within ARTC rail corridors, the Protection Officer has ultimate responsibility for the safety of the worksite, inclusive of the drone operations. If the Protection Officer becomes concerned that worksite safety may be compromised by the drone operations, they have the authority to suspend drone operations until worksite safety can be re-established.</p>	
EPP-00-01 Section 9.3	<p><b>Worksite Protection Plan</b></p> <p>In the event of an incident involving a drone, investigators will need to establish that the drone flight was adequately planned. All drone flights for an ARTC or third-party purpose over the rail corridor are to be planned and risk assessed, with the details recorded in the Worksite Protection Plan and briefed as part of the Pre-Work Brief. If the flight is intended to be conducted in a shutdown, and no Work Group will be near the intended flight path, the flight details need only be recorded in the drone logbook as set out in Section 7.2.</p> <p>In all cases, the CASA limit of not flying any drone within 30m horizontal distance of people not involved in controlling the drone must be adhered to, with one exception. If the drone is planned to be flown between 15m and 30m horizontal distance of people who are not controlling the drone, this needs to be added to the Worksite Protection Plan and signed by each person who will be near the drone as part of the Pre-Work Brief. Risks associated with distracting Work Groups need to be assessed and controlled.</p> <p>Flights of Very Small RPA and Micro RPA can be undertaken at any reasonable distance from people that are protected from being struck by the drone by reason of them being in a train, other enclosed vehicle or building/structure.</p>	
EPP-00-01 Section 9.4	<p><b>Flight Planning</b></p> <p>The detail in flight plans should be tailored to the task at hand, so that the flight achieves its intended aims, and safety is never compromised. The flight plans should aim to document and communicate the minimum necessary information only. The details of the drone flight plan must be documented on the Worksite Protection Plan, where one exists. For flights away from the rail corridor, the flight plan can be annotated in the drone logbook. Any flights over private land should be undertaken after seeking the express permission of the landholder.</p>	
EPP-00-01 Section 9.5	<p><b>Pre-Flight Checklist</b></p> <p>The drone operator must check that there is no damage to the drone that would impact flight performance. The drone battery should be checked for any distortion or cracking. The drone manufacturer's instructions must be followed to ensure that the control software is ready to use and that all control links between the controller and the drone are established. Just prior to flight, Pre-Flight Planning the drone operator shall ensure that no assumptions regarding weather or distance from uninvolved people have changed and react accordingly.</p>	

<b>Key Requirements</b>		
EPP-00-01 Section 11	<p><b>Drone Operation Limitations</b></p> <p>The following limitations apply to drone operations for an ARTC or third-party purpose over and above those required by CASA:</p> <ul style="list-style-type: none"> <li>A. The operation of drones weighing more than 2 kg over a level crossing are prohibited unless the drone operator can ascertain that no public use of the level crossing can occur during the approach and overflight of the level crossing by the drone. For Very Small RPA and Micro RPA, no overflight of the level crossing can take place until it is clear of pedestrians, cyclists and motorcyclists.</li> <li>B. No drone operation is permitted to continue where wind speed (constant or gusts) causes a loss of drone position control.</li> <li>C. No drone operation over ARTC tracks that adjoin tracks with overhead electrical wires in the Sydney, Melbourne and Adelaide areas without approval from the relevant adjoining Rail Infrastructure Manager.</li> <li>D. No drone operation near overhead electrical wires or powerlines without the drone operator having successfully completed ARTC Electrical Safety Awareness training.</li> <li>E. When operating the drone, the drone operator and the drone must remain outside the approach distance for Ordinary Persons for AC and DC power lines per Table 1 of the NSW Workcover document "Work near Overhead Power Lines Code of Practice 2006" available from <a href="http://www.safework.nsw.gov.au">www.safework.nsw.gov.au</a>. The distances are 3.0 m up to 132,000 V AC or 1,500 V DC, 6.0 m between 132,000 V AC and 330,000 V AC, and 8.0 m above 330,000 V AC.</li> <li>F. No drone overflight of crewed trains where the drone mass exceeds 2.0 kg.</li> <li>G. No drone of mass exceeding 2.0 kg overflight of operational tracks without a method of Safeworking that precludes trains from entering the drone flight area for the duration of the flight plan, except where the drone flight area is below the level of the tracks (e.g. bridge inspection).</li> <li>H. The details of the drone operator, inclusive of CASA RePL and ARN details where applicable, must be included on the Pre-Work Brief for flights over the rail corridor.</li> <li>I. Any drone near misses, incidents or accidents that occur when being used for an ARTC purpose are to be reported using the normal incident reporting procedures and are the responsibility of the relevant worksite supervisor. If the near miss, incident or accident involves another aircraft, the incident is also to be immediately reported to the ATSB by the Business Unit Safety Advisor per CASA AC 101-10 section 3.5.</li> <li>J. Any unlawful activities captured as still photographs or video by the drone should be reported to the responsible manager as soon as possible.</li> </ul>	

<b>Key Requirements</b>		
EPP-00-01 Section 11	<p><b>Safety Risks to be considered</b></p> <p>Risk assessment of drone operations must consider the following risks:</p> <ul style="list-style-type: none"> <li>A. The risk of injury arising from a fall from heights (risk avoided by substitution of drone operations instead of inspection at height).</li> <li>B. The risk of injury to persons arising from the drone coming into contact with them.</li> <li>C. The risk of distraction of ARTC workers or rail traffic crews when a drone flies in their vicinity, leading to a loss of situational awareness to the task at hand.</li> <li>D. The risk of damage to assets arising from the drone coming into contact with them.</li> <li>E. The risk of accidental knocking out of power to Rail infrastructure or adjacent properties where Powerlines cross across ARTC corridor and are exposed. (Non-electrified track areas)</li> <li>F. The risk to ARTC's insurance coverage if drone operations are not carried out in accordance with this procedure.</li> <li>G. The risk to ARTC's reputation if a drone incident results in an injury or fatality to persons, or damage or destruction of assets.</li> <li>H. The risk of fire or explosion of the drone battery.</li> <li>I. The risk of damage to the drone, or loss of the drone.</li> </ul>	
EPP-00-01 Section 9.2	<p><b>Check of NOTAMs</b></p> <p>Air Services Australia issues advisory notices of temporary restrictions on flight areas, known as NOTAMs.</p> <p>The NAIPS website (<a href="https://www.airservicesaustralia.com/naips/Account/LogOn">https://www.airservicesaustralia.com/naips/Account/LogOn</a>) to be checked as part of the pre-flight planning for any posted NOTAMs for the area where the drone is planned to be flown.</p> <p>A NOTAM check would not be necessary for flights such as inspections under bridges or flights at heights below local features such as towers or buildings.</p>	

## **19 Appendix 5 – Utility ULX / Under Bore Requirements**

# External Party Works Underbores / ULX Requirements



		Document Reference
Applicable Standards	<p><b>Australian Standards</b> AS4799 -Installation of underground Utility Services AS 5100.2.2017 – Design Loads</p> <p><b>ARTC Standards</b> ETG-17-01 Installation of Utilities Services ARTC Heavy Haul – Signalling ARTC ESC 11-01 Construction of Cable Routes</p> <p>Other Standards SPC 207 Railcorp Track Monitoring (ARTC Version underdevelopment)</p>	
Required information on drawings	<p><b>Minimum:</b></p> <ul style="list-style-type: none"> <li>• Type of service proposed</li> <li>• Location (Rail kilometrage)</li> <li>• Affected rail tracks.</li> <li>• Size of Bore</li> <li>• Size of Pipe Case / Conduits</li> <li>• Material type of pipe/encasement</li> <li>• Method of boring and location of jacking and boring</li> <li>• Pits Location &amp; Size <i>(must be 3 metres from toe of embankment)</i></li> <li>• Vertical and horizontal alignment of bore <i>(90° is preferred angle to track)</i></li> <li>• Rail corridor land boundaries</li> <li>• ARTC Assets (Signalling Cables etc)</li> <li>• Any new assets such as Valves or Pits <i>(Note: its preferred all are kept outside the rail boundaries)</i></li> <li>• Land Lots identified on the plan view</li> <li>• Street Names</li> <li>• Other services</li> <li>• Vertical and Horizontal clearances from assets</li> <li>• And Not limited to the above</li> </ul>	AS 4799 Clause 2.3.3
Launching and Receiving Pits	<p>Generally excavation of launching and receiving pits should be done outside the rail corridor.</p> <p><b>Exceptions</b> may be made where the rail corridor is very wide (eg in a station yard) or where excavation outside the corridor will cause undue inconvenience to the public (eg adjoining a public road where road closures would be caused</p> <p>Need to advise proposed shoring technique i.e benching or shoring box etc. and recovery plan.</p> <p><i>Please confirm land boundaries do not assume the fence line is the land boundary complete due diligence the land boundaries do vary over the ARTC network and can be over 100m wide in locations</i></p>	AS 4799  Clause 3.2.3.2

# External Party Works Underbores / ULX Requirements



	To be kept 6 metres from toe of embankments & top of cuttings or 10 metres from the nearest track.	
Bore Size	<p>Bore diameter must be no more than 50mm larger than the pipe or encasing pipe for any type of bore.</p> <p>Bores of 250mm diameter and larger will require geotechnical testing of the formation to be carried out.</p>	
Encased Bores & Rail loading	<p>Boring must not proceed more than 600mm ahead of the casing pipe. The danger is that through lack of support, excessive loose material will be excavated creating a void in the formation.</p> <p>Rail Loading refer to AS 5100.2.2017</p> <p><b>Heavy Haul Network Areas (Hunter Valley)</b> 350LA</p> <p><b>Non-Heavy haul Other ARTC Area's</b> 300LA</p>	AS 5100.2
Un-encased Bores	Un-encased bores over 100mm diameter can only be bored when no trains are running. The pipe or encasing pipe & backfill grout (where required) must be in place to provide support before the first train passes over.	
Geotechnical Investigation	<p>As a general rule one test pit and Dynamic Cone Penetrometer reading (DCP) is adequate for single track and test pits &amp; DCPs in cess areas on both sides are required for double track.</p> <p>For four track areas a pilot bore is more convenient than test pits because it can be done with lower level safe working supervision (track possession not required). Pilot bores should be aligned to the top of the proposed bore and not used as a centre guide for the main bore. DCPs should be part of all geo-techs.</p> <p>Large Underbores (Water/Gas/Stormwater etc.) Geo-technical investigation outcomes will determine whether the bore can be conducted outside Major Shutdown or during live tracks</p>	
Non-bored Installations	<p>Services and pipelines shall be laid at <b>3m clear of all railway structures</b>, cattle pits and stops, drains, signalling equipment, overhead masts, poles underground cables buildings, points and crossings, bridges and culverts.</p> <p><b>Compaction</b></p>	AS 4799 3.2.4

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	<p>The backfill of trenches shall comply with and be compacted to, the same specifications as the materials in which the trench was excavated. Compaction and moisture content testing to be as per 10.3.3.</p> <p>In the absence of any such specification, trenches shall be backfilled with material which matches the adjacent/excavated materials and be compacted to 95% standard compaction in accordance with AS1289. Compaction and moisture content testing to be as per</p> <p><b>Quality Control.</b> The Maximum loose layer thickness to be 300 mm. Compaction testing to be 1x test per layer per 200 linear metres or one test per layer for trenches ≤ 200 linear metres. All results are to be greater than the specified compaction and within the specified moisture content range</p>	<p>ARTC heavy haul Clause 10.3</p>
<p>Bored Installation</p>	<p><b>Non Flammable</b></p> <ul style="list-style-type: none"> <li>• <b>Heavy Haul Network (30t Axles Loads) Min Vertical 2m</b> from Top of the lowest Rail / Track. <i>(*Formation renewals in this location can be to a depth of 1.8m so extra depth and cover is required)</i></li> <li>• <b>Non-heavy Haul Networks</b> – Min 1.6m from top of lowest Rail/Track</li> <li>• Non-Flammable Pipeline to have minimum 600mm cover under Surface drainage channels.</li> </ul> <p><b>Flammable</b></p> <ul style="list-style-type: none"> <li>• <b>Heavy Haul Network (30t Axles Loads) Min Vertical 3m</b> from Top of the lowest Rail / Track. <i>(*Formation renewals in this location can be to a depth of 1.8m so extra depth and cover is required)</i></li> <li>• <b>Non-heavy Haul Networks</b> – Min 2m from top of lowest Rail/Track</li> <li>• Pipeline to have minimum 1200mm ground cover &amp; Concrete Cover Slab under Surface drainage channels</li> </ul>	<p>ARTC Heavy Haul Guidelines</p> <p>ARTC ETG-17-01 -4.2</p> <p>AS4799. Fig 4.1</p> <p>AS4799 Figure 5.1</p>
<p>Bore Alignment to track</p>	<p>Pipeline should be installed to located so as to cross the track as close to 90degree`s +/-5 a practicable.</p> <p>Where ever possible not in rocky or wet terrains where deep cuts are required.</p> <p>Services may be permitted to run alongside the corridor but will be down to the discretion of the ARTC As per the standards.</p>	<p>AS 4799.</p> <p>Clause 3.2.2 &amp; 3.2.3</p>
<p>Workers Competencies</p>	<p><b>Drill Specific</b></p> <p>It is the individual's responsibility to ensure that state licensing and trade requirements are held before work is carried out.</p> <p>the units of competency required for the National - Drilling Rig Operator role are optional based on what type of</p>	<p>Rail industry Worker</p> <p>National Track and Civil Matrix</p>

# External Party Works Underbores / ULX Requirements



	<p>work is being undertaken. However at least one of these requirements must be met. The choices include:</p> <ol style="list-style-type: none"> <li>1. RIINHB304D Conduct Air Drilling,</li> <li>2. RIINHB307D Conduct Conventional Core Drilling,</li> <li>3. RIINHB323D Conduct Horizontal Directional Drilling,</li> <li>4. RIIOGD403D Conduct Drilling Operations</li> <li>5. RIINHB313D Cable Tool drilling</li> <li>6. RIINHB310D surface directional drilling</li> </ol> <p>No licence required to operate an undertrack/road bore machine. Must be able to provide proof of competency that you have been working in that capacity i.e. Internal training;</p> <p>Statement of Attainment or Certificate issued by a Registered Training Organisation (RTO) for the successful completion of the appropriate unit of competency in the Nationally Recognised Training (NRT) package; or evidence of formal VoC assessment against defined competency standards, which should: be completed, or confirmed as having been completed, by the accredited company to an acceptable level, such as the relevant NRT, internal VoC process, or equivalent; include a detailed and documented assessment standard; be completed by a person (or persons) who meets the documented competency as defined by the company to conduct a VoC assessment; and be evidenced by a signed, completed VoC assessment.</p> <p><b>What is NOT evidence:</b> a letter signed by an employer or supervisor claiming that the worker is competent will not, on its own, be accepted as evidence of competence.</p> <p><b>Other Competencies we will be looking for</b></p> <ul style="list-style-type: none"> <li>• Construction Induction (WorkCover card or equivalent)</li> <li>• ARTC Contractor Induction – (If the work is in the corridor)</li> <li>• High Risk Licences (if Applicable)</li> <li>• Plant VOC for Excavators Front, End Loaders etc</li> <li>• Track Safety Awareness for people entering the rail corridor</li> <li>• Crane tickets If applicable</li> <li>• Heavy Vehicle Licences <i>(exemption can be applied for certain workers)</i></li> <li>• Rail Safety Competencies I.e. Protection Officer</li> </ul> <p><i>Not limited too</i></p>	
Under ground services	<p>The railway loading shall be in accordance with AS 5100. The minimum depth of cover for all services under track shall be 1.6m below rail level. (Applicable for non-heavy haul networks only)</p>	<p>ETG 17-01 4.2</p> <p>ESC 11-01 Clause 6.16</p>

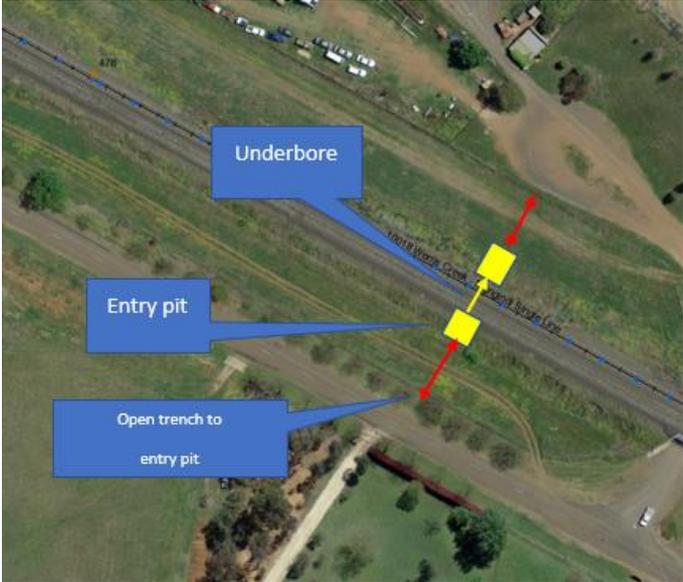
# External Party Works Underbores / ULX Requirements



	<p>Trenching or tunnelling under track is not permitted without specific permission from Manager Standards &amp; Systems.</p> <p>When approval is given to place the pipe under a bridge, the trench shall be excavated no closer than 1m to the foot of any abutment or pier to the depth specified above, but not at such depth as to undermine the bridge footing.</p> <p>When approval is given to install a pipe through a concrete culvert, the pipe shall be located closely adjacent to the culvert wall and as close to the soffit as possible. The pipe is to be located by grouting under and over the pipe to present a smooth surface to the water passing through the culvert. The pipe is to return underground at each end of the culvert as quickly as practical.</p> <p>In addition to markers, a plastic warning tape is to be laid in every trench 100mm above the telecommunications cable to act as a warning during subsequent excavation or fire break grading.</p> <p>For pipes carrying water mains, the carrier pipe shall be encased in a pipe complying with AS 4799.</p>	
Approvals / Environmental	<ul style="list-style-type: none"> <li>• Confirm you have DA approvals or Exemptions under which Act</li> <li>• Confirm contamination results</li> <li>• Confirm Environmental approvals are in place</li> <li>• Confirm planned impact areas are not in sensitive environmental areas like heritage designated area etc.</li> <li>• Adjacent stakeholders</li> </ul>	
Underbores completed inside or outside a Major track closure	<p>There are several variables that will determine this:</p> <ul style="list-style-type: none"> <li>• Size of the bore</li> <li>• Method of boring</li> <li>• Geotechnical conditions &amp; Predicted settlements etc.</li> <li>• Depth of Underbore</li> <li>• Sensitivity of location</li> <li>• Location of entry and exit pits</li> <li>• Amount of rail traffic in the location</li> <li>• Proximity to sensitive assets</li> <li>• Train axle loads in the location</li> </ul> <p><b>Hunter Valley Possession requirements</b>  <a href="https://extranet.artc.com.au/eng_heavy-haul_pos-man.html">https://extranet.artc.com.au/eng_heavy-haul_pos-man.html</a></p>	
Settle Management Plan SPC 207	<p>Settlement management plan may be required depending on the following:</p> <ul style="list-style-type: none"> <li>• Predicted settlement geotechnically</li> <li>• Size of bore/depth</li> <li>• Sensitivity of location in relation to rail assets</li> </ul>	
	Open Trenches in the rail corridor ( <i>but not under the track</i> )	

# External Party Works Underbores / ULX Requirements



<p>Open trenching before rail embankment /track in wide rail corridor locations</p>	<p>the trench (excavate, moisture condition, replace, and roller compact to 95% Standard Compaction at +-2% of OMC). Fill should be over placed so as to leave a small mound (~200 mm high) to accommodate future subsidence. Area should also be graded so as to not pond water and to direct surface water away from the trench and embankment toe</p> 	
<p>Safety Documents</p>	<ul style="list-style-type: none"> <li>• Safe Work Method Statement – reflect the works: Excavations, Boring, should reference Rail Specific hazards</li> <li>• Emergency recovery plan if entry and exit pits are considered a confined space. Or deemed required.</li> <li>• (Rail Safety) Draft Safeworking Protection Plan</li> <li>• Vehicle Movement Plan</li> <li>• Traffic Management Plan</li> <li>• Mud map of how the site will be laid out i.e. stockpiles evacuation points, access points, etc.</li> </ul> <p><i>Not Limited too</i></p>	
<p>Environmental</p>	<ul style="list-style-type: none"> <li>• Construction Environmental Management Plan</li> <li>• Sediment control plan</li> </ul> <p><i>Not Limited too</i></p>	