<Project Number>

EGW2002T-01

Simple Project Management Plan

Plan Date

Version X.X

|  |
| --- |
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Document Control

|  |  |
| --- | --- |
| Owner: | Australian Rail Track Corporation |
| Project: | <Project Number> |
| Document Title: | Simple Project Management Plan |
| Date Issued: |  |
| Revision: |  |
| Project Manager: |  |
| Approved by: |  |
| Date Approved: |  |

|  |  |  |
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| Revision History |  |  |
| Revision | Date Issued | To | Description | Approved by | Signature |
|  |  |  |  |  |  |
|  |  |  |  |  |  |

PMP Approval Checklist

* Environmental Management Plan included and reviewed
* Quality Management Plan included and reviewed
* Safety Management Plan included and reviewed

# Scope of Work

## Agreed Scope of Work

The table below provides a brief summary of the works of the project.

|  |  |
| --- | --- |
| Activity |  -  |
| Scope |   |
| Objective |  |

## Definitions

The table below provides relevant definitions:

|  |  |
| --- | --- |
| Item | Definition |
| Principal Contractor(if applicable) | A Principal Contractor is a person conducting a business or undertaking (PCBU) with WHS responsibilities for their aspects of the project. |
| Accredited Party | An accredited party is a rail transport operator, either a rail infrastructure manager or a rolling stock operator or both, who is accredited under Rail Safety legislation in the State in which they carry out railway operations.  |

# Project Budget

## Project Budget Summary

The total required budget for the project is: $ 1.00

|  |  |  |  |
| --- | --- | --- | --- |
| Project Number | Description | Quantity | Budget |
|  |  | 1.00 | $ 1.00 |
|  |  |  |  |
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## Project Estimate

Where appropriate a detailed Project Estimate is undertaken to verify the Annual Works Plan approved budget.

*This estimate to be removed when providing to Contractor.*



## Project Cash Flow

The Cash Flow for the project is shown in the table below:

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| July | Aug | Sept | Oct | Nov | Dec | Total |
| $ 1.00 | $ 1.00 | $ 1.00 | $ 1.00 | $ 1.00 | $ 1.00 | $ 1.00 |
| Jan | Feb | March | April | May | June |
| $ 1.00 | $ 1.00 | $ 1.00 | $ 1.00 | $ 1.00 | $ 1.00 |

*If the project is going to require longer than 12 months then this same format should be used however this budget and cash flow will be attached as an Appendix to this document and this section will summarise the salient points.*

## Project Cost Management Plan

*The Project Cost Management Plan should describe how the project budget will be monitored, reported and controlled. Key aspects for inclusion in this section are:*

For Capital and MPM Works Ledger Projects, ARTC’s EGP-20-01 Project Management procedure’s Phases I Concept Assessment to IV Project Approval, are approved and authorised through the finance budget process procedure, documented and approved within the Budget Investment Committee (BIC) framework.

Key dates, Budget reviews, CPI, Scope and Phasing Requirements for phases one to three are reviewed and contested by the BIC until approval in principle; where FIN-FM-068 BIC Project Evaluation Summaries are submitted to the relevant delegated authority as per EGP-20-01 for project approval Phase four. The Capital submission, as appropriate, is attached to this PMP as an appendix/folder divider.

Where feasible, fixed price contracts or agreements shall be utilised within the project to help monitor & control costs. Activities or phases within the project shall be combined where feasible to achieve competitive prices. Internal ARTC costs booked to the project shall also be monitored.

Contractor Dockets will be reviewed and signed off as per the PMP Checklist with monthly entries and forecasting managed in Ci Financials. Monthly financial reviews are carried out by the Financial Officer, Infrastructure Manager, Delivery Manager and Maintenance Planning Manager where significant deviations from budget shall be addressed. Any variations shall be managed by the Maintenance Planning Manager and monitored with the Budget Variation Register, approved by relevant delegated authority.

# Project Delivery Strategy

## General

*Detail the requirements for each phase of the works in the tables below for the various stages of work – Planning, pre-Construction and Construction*

*Consider rail safety accreditation requirements i.e. who holds appropriate accreditation for undertaking the works that will be carried out*

|  |
| --- |
| Project Delivery Strategy |
| Location:  | Insert field | Section (From - To) | Insert field |
| Track:  | Insert field | Kilometrage:  | Insert field |
| Planned Project Start Date: | Insert field | Planned Project End Date: | Insert field |
| Overall Scope of Work: | * Insert field
* Project Manager to elaborate
 |

|  |
| --- |
| Planning Phase |
| Planned Start Date: |  | Planned End Date: |   |
| Planning Scope: | * Project Manager to elaborate
 |
| Required staff and roles: |  |

|  |
| --- |
| Pre-Construction Phase |
| Planned Start Date: |  | Planned End Date: |   |
| Pre-Construction Scope: |   |
| Contract Required | Date Scope to be sent to contracts | Date product required |
|  |  |  |
|  |  |  |
|  |  |  |
| Plant Required | Company | Quantity | Date required |
|  |   |   |   |
|   |  |   |   |
|  |   |   |   |
|   |   |   |   |
|   |   |   |   |
| Material Required | Company | Quantity | Date required |
|  |  |  |  |
|  |  |  |  |
|  |  |  |  |

|  |
| --- |
| Construction Phase |
| Planned Start Date: |   | Planned End Date: |   |
| Scope: | * Insert field
* Project Manager to elaborate
 |
| Staff Skills Required | Names | Dates required | Summary of role |
| Work Group Leader |   |   |   |
| Site Supervisor |   |   |   |
| Protection Officer |   |   | Carry out Worksite Protection |
| Welders |   |   |   |
| Labourers |   |   |   |
| Signal Electricians |   |   |   |
| First Aider |   |   |   |
| Others |   |   |   |
| Contractors |   |   |   |
| Plant Required | Company | Quantity | Dates required |
|   |   |   |   |
|   |   |   |   |
|   |   |   |   |
|   |   |   |   |
|   |   |   |   |
| Material Required | Company | Quantity | Dates required |
|   |   |   |   |
|   |   |   |   |
|   |   |   |   |
|   |   |   |   |

|  |
| --- |
| The Worksite Supervisor shall ensure the following are in place prior to commencing the work* Worksite protection plan
* Pre-work brief
* Pre job plant inspection report.
* Competency tickets of all personnel to be working on site.
* Staff briefed on appropriate Work Method Statements
* Pre work site meeting with operators and field staff is held before works start so all are aware of the plan.

The Project Manager is to ensure the following documents are kept on site at all times* Worksite Protection Plan
* Pre-work brief
* Work Method Statements
* Briefing Books
* Copies of all service locations
* Environmental Impact Assessment EIA (either Review of Environmental Factors REF or Task Based Environmental Impact Assessment TBEIA) and / or Environmental Management Plan

The *<insert position>* shall arrange to provide suitable amenities as appropriate.The *<insert position>* shall arrange all other labour, plant and materials required for the Project.The Team Manager shall attend the pre-work brief and acquaint himself with site conditions and constraints.The Competent Rail Safety Worker shall book out track prior to commencing any work and book back track after completion of all work and certifying the track in accordance with ARTC’s Network Rules & Procedures.The Project Manager shall arrange repairs to all defective work if any found.The Project Manager shall ensure that all materials that are likely to foul the running lines are removed prior to handing track back to rail traffic.The Project Manager shall arrange for all necessary certifications to be conducted upon completion of the works.The Project Manager shall ensure that all unused materials are removed from the worksite and relocated to local Depot or tip by end of the following week. |

|  |
| --- |
| Post Work Phase |
| The following documents are to be submitted by the Worksite Supervisor at the end of each shift or end of project to the Project Manager or his nominated representative.* Production report.
* Daily Plant inspection Report.
* Pre-work brief form.
* Work site Protection Plan.
* IBA / Infrastructure Certification and Handover Form.
* Inspection and test plan.
* Track alignment before and after measurements.
* Plant hire dockets (certified).
 |

## Planned Possessions

(XX Corridor – TAA Number or Possession Number)

*Describe any ARTC equipment or possessions that will be required in the course of the work and when they will be required.*

Detail:

Comments:

Section:

## Interface Management Plan

*Describe the major interfaces that will need to be managed throughout the project. This section needs to identify and describe:*

* The interfaces between each major element of the capability
* How these interfaces will be managed during design, construction, testing and commissioning phases
* The roles of ARTC and all vendors in the management of the interfaces Project Quality Management Plan

# Project Quality Management Plan

## ARTC Project Management Related Procedures

ARTC follows its own Project Management Procedures to ensure Project Management quality. The key procedures for a major project include:

* Project Management Procedure (EGP-20-01)
* Finance Contracts Management procedure (FCO-PR-022)
* Risk Management Procedure (RSK-PR-001)
* Project Risk Management (RSK-WI-005)
* Rail Network Configuration Management (EGP-03-01)
* SMS - Manage Accreditation – Variation and Change

## Configuration Management Plan

The Configuration Management processes to be used on all ARTC projects are defined in the ARTC Configuration Management Procedure EGP-03-01.

### Summary of Configuration Changes

Summarise the configuration items to be created, changed, commissioned or de-commissioned from the project:

*For help in identifying configuration changes to be implemented refer to the Documents & Systems List tool*

|  |  |  |  |
| --- | --- | --- | --- |
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Configuration Management Process

*Describe:*

* who will perform the Configuration Management functions - in above table (may need to add extra columns)
* how the configuration items will be identified – what naming conventions or other standards will be applied
* any relationships with contractor Configuration Management systems, tools and roles
* the need for configuration auditing and how and when this will be undertaken during the project
* the process for verification of the configuration prior to commissioning

## Quality Management

Inspection and test plans (ITP’s) will identify hold / witness points and will form the basis of documenting quality control during construction of the works. There can be ITP’s for each discipline involved in the project.

The Project Manager shall provide the work team with the project documentation that describes the work to be undertaken and to capture the project key deliverables. The project documentation will be issued to the Worksite Supervisor prior to commencement of works on site. Records and data collected throughout the project duration shall be retained for archiving purposes.

## Material Supply

ARTC Delivery Team and the ARTC Procurement Team shall work together to arrange and deliver major materials required for the project. The quality of all civil, track and signalling materials are checked by suppliers. Contractor quality checks are also verified following the deliveries by ARTC to confirm supply quality.

Following installation, a range of quality and testing procedures will be completed in accordance with ARTC standards (e.g. weld testing, survey checks, visual inspections, engineering signoff etc).

Consideration shall also be given to disposal of waste materials.

In addition to the above, the ARTC Delivery Team is required to provide the ARTC Inventory Team with a material listing and associated drawings to determine spare parts holdings requirements at time of Project Approval Phase (4)

## Commissioning

Project Commissioning Plans will be produced in conjunction with the ARTC Project Manager where applicable. These plans will be used in conjunction with the Quality Plans to verify that the Works have been completed in accordance with the relevant standards.

Following certification of the Works by the Project Manager, ARTC’s relevant documentation will be completed. Utilise EGP2001T-13 Certificate of Practical Completion - Contractor,

*Describe in this section any details of the commissioning plans required or not required and how the commissioning of the overall capability will be undertaken.*

## Defects / Omissions and Handover Documentation

A walkthrough shall be carried out by the Project Manager, External Contractors (where applicable) and the Team Manager/Signal Engineer to note defects and omissions found. The defects and omissions shall be detailed on the “Defects/Omissions List” on the Project Handover Certificate. Any defects noted must be completed within an agreed timeframe of the post walkthrough.

A follow-up walkthrough shall be conducted prior to the Final Certificate being issued to ensure the works listed on the Project Handover Certificate are complete. The Team Manager/Signal Engineer or Representative and the Project Manager must be present at the handover meeting.

For Projects run through an ARTC Contract:

In addition to the above for projects where a Contractor has conducted the work through an ARTC Contract, a Project Handover Certificate shall be completed to allow release of bank guarantees if applicable. After the Defects Liability period a Final Certificate shall be completed by the Project Manager to allow the final release of bank guarantees if applicable.

# Human Resources Management Plan

*Describe the HR aspects of the project within this section.*

## HR Plan – Project Based Resources

Consideration should be given to the HR aspects of all ARTC resources assigned to the project. This should include:

* Establish clearly defined project role definitions
* Gain agreement and commitment to these roles and associated reporting relationships
* Establish the need for skills development which might include training, mentoring or on-the-job development
* Describe how performance will be monitored and managed – for example the use of appraisals or other forms of performance assessment instruments. This might include leaving responsibility for this with ARTC operational line management or alternative responsibilities allocated within the project team

The following ARTC resources will be utilised on the project:

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Project Role | Allocated to | Time Allocation | Role Summary | Required Skills Development |
| *ARTC Project Manager* |  | *Full Time**Duration of project* | *Ensure EGP-20-01 is followed**Deliver the changes required by the project**Ensure all procurement and contract related activities are conducted**Undertake Risk Management* *Ensure regulatory approvals are in place**etc*  | *Mentoring by?*  |
| *Signalling Engineer* | *?* | *50% from Month X 20?? to Month Y 20??* | *Develop signalling upgrade requirements**Oversee design of signalling upgrade**Test and approve signalling changes* | *Training on new signalling test equipment* |
| *Signal Electricians* |  |  |  |  |
| *Civil Certification* |  |  |  |  |
|  |  |  |  |  |
| *etc* |  |  |  |  |

The following table is a full break down of the roles and responsibilities of each part of the project (from Section 6.1):

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Phase  | Phase Description | Milestone Description | Responsibility | Comments |
| 1 | Planning | *Compile project folder* | *Project Manager* | *Full responsibility of Project Manager* |
|  |  | *Scope and estimate* | *Project Manager – with input from Team Manager or other expert* | *Will involve at least one site visit – possibly more. Developed by PM with input from TM or other expert. If there is not enough funding in the budget then PM and TM need to sort the variation (where money is to come from)* |
|  |   | *Investigation and Design* | *Project Manager – with input from Team Manager or other expert* | *As a result of good scoping – should only be minimal support required from TM* |
|  |  | *Risk Assessment / WH&S Risks / WMS / EIA* | *Project Manager and Team Manager* | *This is a joint function between the PM and TM and is dependent on the level of expertise of both parties. Responsibility of PM to document* |
|  |  | *Development of Project Management Plan* | *Project Manager* | *Full responsibility of the Project Manager* |
|  |  | *Set up Configuration Management/NAN* | *Project Manager* | *Full responsibility of the Project Manager* |
|  |   | *Project timelines* | *Project Manager – with input from Team Manager or other expert* | *To be done in consultation with Team Manager or other expert, but recorded by Project Manager* |
|  |   | *Ordering Materials and plant* | *Project Manager* | *Full responsibility of the Project Manager* |
|  |  | *Contracts finalised* | *Project Manager* | *Full responsibility of the Project Manager – No work to be done prior to execution of Contract or Letter of Engagement.* |
|  |  | *Regulatory approvals in place or notifications submitted* | *Project Manager* | *Full responsibility of the Project Manager – No work to commence until required regulatory approvals are in place or notifications submitted where required.* |
|  |  | *Site Supervision / Management* | *Project Manager and Team Manager* | *Joint responsibility to agree who is responsible for the site supervision / verification and the full scope of the role. Recorded, signed meeting minutes provide evidence.* |
|  |  | *Ci Financials and Accruals (Cost and scope Management)* | *Project Manager* | *Full responsibility of the Project Manager* |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| 2  | Pre-Construction works | *Site Meeting/s* | *Project Manager and Team Manager* | *Both for initial meeting – subsequent meetings will depend on the project and stage of works* |
|  |  | *Services Searches* | *Project Manager* | *Full responsibility of the Project Manager. May seek assistance for PO from Team Manager* |
|  |  | *Materials on site* | *Project Manager to sort with Team Manager* | *Full responsibility of the Project Manager. May seek assistance for PO from Team Manager* |
|  |  | *Rosters in place* | *Project Manager and Team Manager* | *To be done in consultation with Team Manager – if using his resources* |
|  |  | *SWMS training* | *Team Manager* | *Responsibility of Team Manager or other expert – records to be kept on file by Project Manager* |
|  |  | *Contractors inducted* | *Project Manager* | *Full responsibility of the Project Manager* |
|  |  | *Possession/s booked* | *Project Manager* | *Full responsibility of the Project Manager* |
|  |  | *Develop Works checklists* | *Project Manager – with input from Team Manager or other expert* | *To be done in consultation with Team Manager or other expert, but recorded by Project Manager* |
|  |  | *Ci Financials and Accruals (Cost and scope Management)* | *Project Manager* | *Full responsibility of the Project Manager* |
|  |  | *Use of External Protection Officers* | *Project Manager* | *Full responsibility of the Project Manager to make use of the Worksite Protection Officer Performance Assessment Guideline Process.* |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| 3 | Construction | *Contractors & staff briefed* | *Project Manager* | *Full responsibility of the Project Manager to check and ensure records are kept* |
|  |  | *Site Meetings* | *Project Manager (and Team Manager if required)* | *There should be regular site visits by the Project Manager throughout the construction phase. TM to be involved if required by the Project Manager or requested by the TM.* |
|  |  | *Inspection and Test Plan completed* | *Project Manager* | *Full responsibility of the Project Manager to ensure this is conducted by qualified staff and signed off – auditable document* |
|  |  | *Site Management / Supervision / Verification* | *Project Manager and Team Manager (if required)* | *This will be dependent on what has been agreed in the Planning phase – i.e. who is responsible for the various phases – recorded, signed meeting minutes provide evidence.* |
|  |  | *Contractor dockets reviewed and signed* | *Project Manager* | *Full responsibility of the Project Manager. If using PC staff then dockets signed by PC staff and forwarded to Project Manager* |
|  |  | *Invoice verification and payment* | *Project Manager* | *Full responsibility of the Project Manager* |
|  |  | *Ci Financials and Accruals (Cost and scope Management)* | *Project Manager* | *Full responsibility of the Project Manager* |
| 4 | Post Work | *Defects / Omissions list* | *Project Manager and Team Manager* | *Will involve a site walkthrough* |
|  |  | *Complete Handover of works / Certificate of Practical Completion* | *Project Manager and Team Manager* | *Will involve a site walkthrough* |
|  |  | *Finalise configuration management close-out, NAN, MST changes* | *Project Manager* | *Full responsibility of the Project Manager* |
|  |  | *Project Closeout – Financial* | *Project Manager* | *PM to sort out financial closeout of the project* |
|  |  | *Compile Project folder* | *Project Manager* | *Full responsibility of the Project Manager* |

## HR Plan – Operational Based ARTC resources

*Consideration should be given to the HR aspects of all ARTC resources whose role is impacted by the scope of work on the project. This should include:*

*Identify and list ARTC resources whose job will be impacted by the project either during the project life-cycle or as a result of the implementation of the project*

*Define the HR implications as a result of these impacts, if any*

*Consideration of ARTC individuals or departments who will acquire new or changed roles and responsibilities or lose their role entirely*

*Identify other elements of work for inclusion in the Project Scope to ensure the HR and organisational change aspects of these changes are effectively coordinated*

The following ARTC resources will be impacted by the project:

|  |  |  |
| --- | --- | --- |
| ARTC Role | Project Impact | Required Project Actions |
| *Cable Maintenance Team* | *2 Less staff will be required* | *Redeployment planning in conjunction with People, Culture and Development* |
| *Infrastructure Worker From Other PC* | *Extra resourcing support shall be needed from Taree PC during installation* | *Identify Staff required**Identify resultant deficiencies or roster requirements* |
| *etc* |  |  |

# Inventory Management Plan

*Describe the Inventory aspects of the project within this section.*

## Inventory Management Plan – Spare Parts Requirements

Consideration should be given to the Inventory impact of the project. This should include:

* Describing the potential impact to Inventory holding costs and maintenance exposure – for example the introduction of a new product may increase inventory costs to support maintenance requirements and result in product obsolescence, while the introduction of a new design may reduce whole of life costs and increase reliability.
* Establish a recommended spare parts listing, including estimated costs and supplier details for inventory evaluation.
* Incorporate agreed spares listing in overall cost evaluation within quotation or tender to ensure competitive tension, cost awareness and timely cataloguing and procurement.
* Provide the Inventory Team with a recommended spares parts listing, including approved bill of materials and associated drawings for material cataloguing and ongoing support purposes.

The following table is a listing of recommended spare parts to support the ongoing maintenance of the infrastructure, following project hand over.

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Component** | **Sub Component**  | **Product #** | **Product Description** | **Quantity** | **Unit Price** | **Supplier**  |
| e.g. Turnout  | Crossing  | *xxxxxxxxxx* | *SNX 300:10.5* | *1* | *$65,000* | *ABC* |
|  |  |  |  |  |  |  |
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# Project Schedule

## Phases and Milestone Definitions

The phases within the project are described in the following table:

|  |  |  |  |
| --- | --- | --- | --- |
| Phase  | Phase Description | Milestone Description | Responsibility |
| 1 | Planning | *Compile project folder* |  |
|  |  | *Set up Configuration Management/NAN* |  |
|  |  | *Scope and estimate* |  |
|  |   | *Investigation and Design* |  |
|  |  | *Risk Assessment / WH&S Risks / WMS* |  |
|  |  | *EIA Complete* |  |
|  |  | *Development of Project Management Plan* |  |
|  |  | *Approval of PMP by the Project Delivery Manager* |  |
|  |   | *Project timelines* |  |
|  |   | *Ordering Materials and plant* |  |
|  |  | *Contracts finalised* |  |
|  |  | *Regulator approvals or notifications* |  |
|  |  | *Site Supervision / Management* |  |
|  |  | *Ci Finance and Accruals (Cost and scope Management)* |  |
| 2  | Pre-Construction works | *Site Meeting/s* |  |
|  |  | *Services Searches* |  |
|  |  | *Materials on site* |  |
|  |  | *Rosters Sorted* |  |
|  |  | *SWMS training* |  |
|  |  | *Contractors inducted* |  |
|  |  | *Possession/s booked* |  |
|  |  | *Develop Works checklists* |  |
|  |  | *Project Reporting System and Accruals (Cost and scope Management)* |  |
|  |  | *Use of External Protection Officers* |  |
| 3 | Construction | *Contractors & staff briefed* |  |
|  |  | *Site Inspections* |  |
|  |  | *Site Meetings* |  |
| 4 | Post-Construction | *Defects and omissions* |  |
|  |  | *Practical completion* |  |
|  |  | *Works As Executed (WAE) documentation* |  |
|  |  | *Configuration management / NAN closed* |  |
|  |  | *Project close-out report* |  |

## Project Timelines

A construction/possession based timeline is to be developed and filed in the Project Folder (standard format to be utilised). The planned timeline shall be monitored and the actual timeline details to be recorded.

*A detailed work breakdown structure/timeline is required.*

# Contract Management Plan

*Delete if not applicable*

The contract management plan for the project is described in this section.

Value for money is a key principle which must be reviewed before committing to a contractual outcome and may extend beyond the individual project. Issues for consideration include:

* Value for money is not always the lowest price.
* Does the requirement obtain and maximise economies of scale?
* Are appropriate resources involved commensurate to the size and the risk of the project to ensure value is obtained?
* Is the balance between internal and external resources usage appropriate?
* What are the implications/precedent issues relative to other contractual arrangements?
* Appropriate planning and approvals prior to forming the contractual relationship and the measurement and monitoring of a contract throughout its full life will determine if value for money has been obtained.

Selecting the appropriate contract arrangement is fundamentally determined by the scope of work to be performed and the risk the procurement represents. The following Contract arrangements are available through the ARTC Contract Management Procedures:

* Obtain Single Source Offer;
* Obtain Simple Quotes;
* Utilise a Standing Offer; or
* Obtain Formal Tender.

When defining the Contract Management Plan describe the following:

* Major contracts required to deliver the project and approximate value of each
* Strategy to be used for each contract (e.g. fixed price, ceiling cost, time and materials)
* Contract approval and execution responsibilities
* Ongoing contract monitoring and compliance activities and responsibilities

## Contract 1

*Description of Contract….*

*Contract approval and execution process and time scales….*

*Contract compliance considerations such as*

* Audits
* Reporting needs
* References to any required Service Level Agreements (SLAs)
* Identify the need for and summarise any Contract penalty clauses

## Contract 2….etc

*Description of Contract….*

*Contract approval and execution process and time scales….*

*Contract compliance considerations such as*

* Audits
* Reporting needs
* References to any required Service Level Agreements (SLAs)
* Identify the need for and summarise any Contract penalty clauses

# Safety Management Plan

Safety management is a core principle of ARTC project management. The Principal Contractor for a construction project must prepare a written Safety Management Plan. This will include safety measures, including lead and lag indicators. External SMP will be reviewed by the contractor manager before works commence on site using EHS-FM-005 Safety Management Plan Checklist. EHS-FM-003 ARTC Safety Management Plan will be used where ARTC is PC.

## Rail Safety Accreditation

*The Project Manager shall determine and document that appropriate rail safety accreditation is held for undertaking the work. Safety Management System arrangements for works carried out by Contractors shall be agreed and documented.*

*The Project Manager shall determine if the change requires a variation to ARTC’s accreditation or whether the decision, event or change requires notification to the rail safety regulator (refer Manage Accreditation – Variation and Change). Where ARTC engages a contractor who also holds rail safety accreditation, SMS arrangements will be agreed and documented as required by RLS-FM-011 Rail Safety Accreditation Arrangements and RLS-FM-012 SMS Selection Tool.*

## Work Health & Safety

*Safety Management – The plan must address how Work Health and Safety requirements will be achieved as per COR-PR-017 Contractor Management Procedure. Additional guidance is available at:*

* [*Safe Design of Structures Code of Practice*](http://www.safeworkaustralia.gov.au/sites/SWA/about/Publications/Documents/698/Safe%20Design%20of%20Structures.pdf)
* [*Construction Work Code of Practice*](http://www.safeworkaustralia.gov.au/sites/SWA/about/Publications/Documents/696/Construction-Work-V2.pdf)
* Managing the Work Environment and Facilities Code of Practice

*Project Managers are responsible to ensure that Safe Design of Structures and Construction Work requirements are referred to in the applicable contracts. Where design of structures or construction work are carried out by ARTC staff, the Project Manager is responsible for ensuring that safety requirements are implemented.*

For construction work over $250,000.00, the following guidance is provided:

* EHS-FM-003 ARTC Safety Management Plan Template

*For further guidance on compliance with the WHS Act and its Regulations, contact the ARTC Corporate Work Health & Safety Manager.*

### Responsibilities

The following responsibilities will apply during construction of the project.

|  |  |  |
| --- | --- | --- |
| Organisation | Person Responsible | Safety Responsibility |
| *ARTC* |  | *Safety Related Document Reviews e.g. relevant Safety Management Plans and Safe Work Method Statements (SWMS).* |
|  |  | *Ensure all vendors establish and maintain all appropriate safety accreditations*  |
|  |  | *SWMS instructions* |
|  |  | *Arrange safety inspections and audits* |
| *Vendor abc* |  | *Follow agreed and contracted Safety procedures* |
|  |  | *Ensure all abc staff are appropriately trained and accredited* |
| *etc* |  |  |

The relevant SWMS for this project are listed below:

|  |  |  |
| --- | --- | --- |
| SWMS number | SWMS Name | Date of briefing (file in Project Folder) |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |

The ARTC contractor manager is responsible for ensuring that SWMS reviews are performed for all high-risk construction works. The contractor manager shall use EHS-FM-004 SWMS Checklist to support the review.

## Work Management Plan

### Communication

|  |  |
| --- | --- |
| Safeworking Communication system to be used | *E.g. Next G phones, Satellite phones* |
| Other Communications | *Perway Radios, UHF radios – Channel:???* |

### Site Specific Considerations

Identify which of the site specific and activity specific hazards below need to be controlled for the activities included in this Work Management Plan?

*(Note Safety Instructions clearly outline requirements for the below mentioned issues)\**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Confined Spaces | Yes/No | Isolated Work | Yes/No | Working On/ Near Roads | Yes/No |
| Uneven Surfaces | Yes/No | Work at Heights | Yes/No | Night/ Hot/ Cold/ Wet Weather | Yes/No |
| Working Near Plant/ Equipment  | Yes/No | Work near electrical or signalling equipment | Yes/No | Working On/ Near Track | Yes/No |
| Dust, asbestos, poor air quality | Yes/No |  |  |  |  |

Details of these specific hazards and the controls to be adopted must be detailed on the Pre-Work Briefing and discussed prior to commencing work.

### Amenities

|  |  |
| --- | --- |
| Site Office Location: |  |
| Toilet Location: |  |
| Meal Rooms: |  |
| Clean Water Location: |  |

### Electrical

|  |  |
| --- | --- |
| Are electrical permits required? If yes, attach order/s for power outages. | Yes / No |
| Permit Holders are detailed in Section 1 aboveIs electrical awareness required? | Yes / No |
| Do you need to use 5099 exemption certificate for close approach to electrical equipment?If so, certificate must be available on site, personnel trained and machines plagued. | Yes / No |

### Hazards from Services

Does Scope of Works include excavation, boring or grading? Yes/No

If Yes, service search must be carried out

The following services may affect the work:

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| o/head power | Yes/No | u/ground power | Yes/No | sewer | Yes/No |
| water | Yes/No | signals | Yes/No | petroleum | Yes/No |
| gas | Yes/No | communications | Yes/No | electrolysis protection | Yes/No |
| traction return negatives | Yes/No |  |  |  |  |

Results from service searches must be available on site at all times during the works process

### Fire Protection

|  |  |
| --- | --- |
| Location of fire fighting equipment: |  |
| Type of fire fighting equipment: |  |
| Hot Work Permit Required:  | Yes / No |
| Fire Ban and permit details:  |  |

### Chemicals/ Hazardous Goods

|  |  |
| --- | --- |
| Are Chemicals / Hazardous goods to be used on site?If yes, please specify | Yes/No  |
| List of Chemicals to be used:  |  |
| Storage Arrangements:  |  |
| SDS’s available on site?  | Yes/No  |

### Site Security

What controls will be implemented to prevent unauthorised access to the worksite and to ensure work activities do not affect pedestrians (incl. Commuters), road users or the general public?

*E.g. Signage erected warning off unauthorised Access*

### Emergency / Evacuation Procedures

For injured person, contact first aid officer. In case of an emergency Dial 000.

|  |
| --- |
| EMERGENCY CONTACT NUMBERS |
| POLICE | 000 |
| FIRE |
| AMBULANCE |
|  |
| Network Control  |  |
| OTHER EMERGENCY NUMBERS |
| Environment Agency |  |
| Water |  |
| Telecoms |  |
| Nearest Emergency Departments are:  |  |
| Other:       |  |
| Hospital Details, Directions/Map |  |
| Emergency Reference Point: Nearest Cross Street : |  |
| For chemical spill, follow instructions detailed in spill stations. |

*Evacuation details are discussed during the site induction and pre-work briefs.*

### Incident Reporting and Recording

The procedure for dealing with all incidents/injuries and near misses must be in accordance with ARTC’s Safety Management System.

The supervisor is to follow the procedures in these two documents for any near miss, injury or incident.

### Plant and Equipment

All plant to be used on site is to be inspected as required and documented. All plant & equipment maintenance shall be up to date and certified by the owner.

All portable electrical equipment will be tested and tagged monthly and will have earth leakage protection.

Any damaged plant or equipment is to be immediately reported to the supervisor and booked out of service. The supervisor is to inform the Team Manager and Project Manager as soon as possible.

### Inspection and Testing

Inspection and testing shall be carried out as defined in the Inspection and Test Plan for each discipline.

### Fatigue

The following controls are to be implemented to minimise the effects of fatigue: (e.g. detail max. shift lengths, rests between shifts etc)

*E.g. No shift greater than 12 hrs – regular breaks to be taken – Possession time allows a break for rest & meals*

### Hazards involving other Work Groups

What hazards from this work may affect other work groups on the site? (Or Vice-a-versa)

|  |  |
| --- | --- |
| Hazards | Controls |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |

### Safety Risk Identification and Mitigation

A Pre work brief shall be conducted prior to the start of every shift, or if the worksite location or environment changes. A site risk assessment of Rail safety and WHS risks is to be conducted as part of the pre work brief and mitigation measures put in place prior to work starting.

The work team shall be involved in the risk assessment and controls shall be put in place. All staff are to be fully briefed and sign off that they understand the site risks and controls put in place. The pre work brief shall be kept on site at all times and be filed in the Project Folder.

## Interface Management Plan

*Describe the major interfaces that will need to be managed throughout the project. This section needs to identify and describe:*

* The interfaces between each major element of the capability
* How these interfaces will be managed during design, construction, testing and commissioning phases
* The roles of ARTC and all vendors in the management of the interfaces in Project Management Plans

### Safety Legislation

All works will be carried out in accordance with the current safety legislation including:

* Commonwealth Work Health and Safety Act 2011;
* Commonwealth Work Health and Safety Regulations 2011;
* Rail Safety (Adoption of National Law) Act 2012;
* Rail Safety National Law National Regulations 2012;
* Queensland Transport (Rail Safety) Act 2010
* Queensland Transport (Rail Safety) Regulations 2010
* Western Australia Rail Safety Act 2010
* Western Australia Rail Safety Regulations 2011
* AS 4292 (1997) – Railway Safety Management

*Describe how these standards relate to the project and how compliance will be achieved and validated*

# Communications Management Plan

## Stakeholder Communications

### ARTC Internal Communications

*List the key staff involved in the project:*

* Project Manager -
* Team Manager -
* Signal Engineer -
* Work Group Leader Civil -
* Work Group Leader Signals -
* Consultant -
* Contractor -
* Protection Officer –
* Etc

### External Communications

*List the key Stakeholders affected by the project:*

* Grinder – Notice to Public and Media Notices
* Environmental Considerations – DPI & Fisheries Notices
* Etc

A project communications plan is shown in the figure below.

Stakeholders were provided with the opportunity to comment on the project as part of the above consultation. Refer to Community Engagement Framework document COR-PO-027.

*Consultation methods might include regular reports, email, face-to-face meetings, road shows, workshops etc*

Sample Project Communications Plan

| What Information? | Target Audience | When? | How? (Format/Medium) | Responsibility |
| --- | --- | --- | --- | --- |
| *Monthly Project Status report* | *Project Delivery Manager, Maintenance Planning Manager, Team Manager* | *2nd Friday of each month for the duration of the project* | *MS Word Document saved in online Project Folder* | *Project Manager* |
| *Accruals and Ci Finance updating* | *Finance Officer, Infrastructure Manager, Delivery Manager, Project Delivery Manager, Maintenance Planning Manager* | *By due dates as set by Finance Officer* | *Accruals in formatted spreadsheet and forecasting in Horizon* | *Project Manager* |
| *Scope and Budget Preparation* | *Team Manager* | *1st hold Point – to be set at start of project* | *Site meeting to be held with Team Manager to fully develop scope.* | *Project Manager* |
| *Project Status* | *Team Manager* | *Regular meetings (frequency/dates to be inserted here)* | *Site meeting or phone hook-up with Team Manager* | *Project Manager* |
| *Procurement Plan* | *Signal Engineer, Signal WGL, Inventory controller* | *Date to be set here* | *Meeting with minutes detailing materials, who will be ordering, relevant dates, etc* | *Project Manager* |
| *Field Reports* | *Project Manager* | *Dates to be set here* | *Face to face, email or phone hook-up* | *Site Supervisor / WGL / Signal Engineer* |
| *Project Close-Out* | *MPM* | *Annually, July* | *Face to face* | *Project Delivery Manager* |
| *Environmental Site Inspection* | *Project Delivery Manager* | *Monthly* | *Face to face, email or phone hook-up* | *Environmental Officer* |

# Environmental Management

## EIA and Risk Assessment

All works will be carried out in accordance with the ARTC Environmental Management System which is available on the ARTC Intranet -

<https://artcau.sharepoint.com/Noharm/environmentalmanagementsystem/Pages/default.aspx>

.

*Describe the type of EIA required for the works and identify how this will be obtained including consideration of approval timeframes and associated costs.*

*The environmental impacts for routine railway maintenance activities can typically be assessed using a Task Based Environmental Impact Assessment (TBEIA) and the Standard Environmental Management Measures (SEMMs). Construction activities and other activities that cannot be addressed using a TBEIA, require an environmental impact assessment (EIA) to be prepared in accordance with the relevant state legislation.*

*As a minimum, the Project Manager will be responsible for assessing the following potential environmental issues within the EIA:*

* Pollution including noise, dust, contamination, erosion and impact on waterways
* Public Amenity including noise, dust, traffic management and land use
* Damage to flora and/or fauna including vegetation disturbance and threatened species
* Damage to European or aboriginal heritage

If the Project Manager determines that a change to the scope of the project may impact on Environmental issues or approvals, the Approval Authority and Environment Advisor shall be consulted and appropriate action taken.

## External environmental approvals, licences and permits

*Describe the type of licences, permits and approvals required for the works and identify how this will be obtained.*

## Construction Environmental Management

The Works will be carried out in accordance with the ….

*Specify any relevant legislative or government standards here or applicable ARTC EMS Procedures or EIA completed:*

In particular, Contractors will be responsible for:

* Preparation of a Construction Environmental Management Plan (CEMP);
* Environmental inductions for all site personnel; and
* Auditing of the EMP to ensure compliance.

## Environmental Roles and Responsibilities

Identify who is responsible for key environmental management tasks i.e. environmental site controls and maintenance complaints management or incident response.

## Environmental Site Inspections

As outlined in the Communications Management Plan (Section 10), the ARTC Environment Advisor will develop a monthly environmental site inspection schedule. If this project is identified in the schedule then the schedule, checklist and report will be contained in Section 8 of the Project Folder.

*With Reference to ENV-PR-05, Identify when any Environmental Site Inspection will be completed and by whom.*

## Reporting

*Describe the type of Environmental reporting required for the works and identify how this will be completed including:*

The following reports will be required before, during and/or after the works:

E.g. Monthly Compliance reports, and

Close-out report.

# Training Plan

## Training ARTC Internal Project Resources

ARTC project team members will require training as follows:

*Specify all required training for ARTC project staff that is conditional on them commencing work on the project. This might include:*

* Safety related training
* Environmental related training (e.g. Incident Reporting)
* ARTC standards and procedures (e.g. risk management, configuration management)
* Tool and technologies

|  |  |  |  |
| --- | --- | --- | --- |
| ARTC Personnel | Required Training | Time Required | Training Method |
| *Eg. PC Staff* | *SWMS for welding* | *1 hour* | *Qualified welder to instruct/run through SWMS* |
|  |  |  |  |
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## Training of Maintenance and Support Teams

Prior to commissioning of the project ARTC will arrange to complete training of ongoing maintenance and support teams.

Required training is as follows:

*Specify all required training for all operational, maintenance and support teams that are required before implementation. This might include:*

* Operational staff e.g. drivers
* Infrastructure Workers
* Signalling engineers

|  |  |  |  |
| --- | --- | --- | --- |
| Personnel | Required Training | Time Required | Training Method |
| *Drivers* | *New signalling methods and infrastructure* | *3 days* | *Provided by ARTC project team in-house* |
| *ARTC IT Support team* | *Handover of new IT system* | *0.5 days* | *Walk through of functionality, Summary of systems documentation* |
| *etc* |  |  |  |

# Risk Management

This section of the document will form the Project Risk Management Plan (PRMP).

## Risk Management Activities

<Insert relevant introductory text, if appropriate>

<Project risk management activities may be depicted in an alternative manner if deemed appropriate, for example, providing a schedule with timeframes, listing activities in dot point or table, or a diagram that integrates project risk management activities with other project management activities etc. If this method is chosen, the diagram may be deleted>

<If deemed required, appropriate sub-headings may be included in this section, and further detail provided on any of the identified risk activities that are to be undertaken>

<Example Visio diagram below, if project is being managed in accordance with EGP-20-01 Project Management. Double click to open in Visio and amend. Delete if alternative method is used>



*Figure* <insert no> *– Overview of Project Risk Management Activities*

## Risk Management Methodology

Risk management activities conducted for the Project will be undertaken in compliance with:

* RSK-PR-001 Risk Management Procedure
* RSK-WI-005 Project Risk Management

The following arrangements will be applied specific to this project.

<Include any other additional information if deemed appropriate>

### Risk Matrix

Project Risks will be assessed utilising the following risk matrix

<Include customised risk matrix>

### Notification and Escalation of Identified Risks

Notification and escalation of identified project risks will be undertaken as depicted in Table 2.

<Include customised criteria in table where indicated in blue text>

|  |  |
| --- | --- |
| **RISK LEVEL** | **ESCALATION** |
| **Very High** | <Insert as appropriate> is informed immediately and <Insert as appropriate> is made aware of the risk as soon as practicable.Reported to <Insert as appropriate>. |
| **High** | <Insert as appropriate> is made aware of the risk.Reported to <Insert as appropriate>. |
| **Medium** | <Insert as appropriate> |
| **Low** | No escalation is determined to be required. Project risk management practices in place are sufficient to manage this risk. |

*Table 2: Notification and Escalation Requirements*

In the event that new ongoing risks are identified as a result of project activities or change impacts, notification and escalation will occur in accordance with requirements specified in RSK-PR-001 Risk Management.

In the event that a project risk is determined to have a High or Very High potential risk to ARTC as an enterprise, the risk will also be notified and escalated in accordance with requirements specified in RSK-PR-001 Risk Management, including notification to the Committee of the Whole Board for Risk.

<Amend wording as deemed appropriate. Add extra information if required>

### Risk Reviews

Risk Reviews will be conducted at:

* Project Gate Reviews / Hold Points
* Where significant changes are made to the project that may impact risk, including, but not limited to, changes to:
	+ project scope
	+ project / site conditions
	+ stakeholders
	+ project activities
	+ process or work methods
* Investigation / review of a major incident
* Where there is a change in the effectiveness of a control.

<Amend wording as deemed appropriate. Add extra information if required>

Risk reviews will be conducted by <insert description of how risk reviews are expected to be conducted>.

## Risk Management Resources, Roles & Responsibilities

### Nominated Project Risk Manager

The Nominated Project Risk Manager for the Project is <insert name, job title>.

The Nominated Project Risk Manager is responsible for the risk management activities described in this PRMP including:

* Risk Workshops
* Project Risk Registers within CGR Foundation
* Closure and transfer of risks at project close.

<Amend wording as deemed appropriate. Add extra information if required>

### Specialist Expertise

Specialist expertise is required as follows:

* <list requirements>

<Amend wording as deemed appropriate. Add extra information if required. If no specialist expertise is required, provide appropriate wording to indicate that requirements have been considered and no specialist expertise is required>

### Corporate Risk Team

Appropriate liaison will occur with the Corporate Risk Team, including:

* Creation of project register within a suitable location in the ERMS
* Transition of residual risks to other registers within the ERMS
* Training of users who require access to the ERMS
* <Include any other agreed liaison or assistance>

## Risk Summary

*Comment on when and how the Risk Assessment was done.*

*Summarise key risks in this section.*

Site risks are managed through the pre-work briefing where individual risks are identified and mitigation put into place.

Company or project business risks are mitigated by the project cost management plan, and BIC review of the 5 year plan and approval of the BIC Project Evaluation Summary by the delegated authority.

The Project Manager shall undertake a So Far As Is Reasonably Practical (SFAIRP) risk assessment in line with RSK-PR-001 during the planning phase.

Where the Annual Works Program Risk Assessment has already been conducted, relevant risks and controls can be added to the Project Risk Assessment to avoid duplication of effort.

## Project Site Risks

*Summarise Project Site Risks and mitigations here*

|  |  |
| --- | --- |
| Risk | Mitigation / Action |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |

## Risk during Design

*Summarise Design Risks and mitigations here*

|  |  |
| --- | --- |
| Risk | Mitigation / Action |
| *Time* | *Set agreed timeframe in brief and monitor throughout design process**Set up a detailed construction timeline and book possessions (if required)**Continually monitor for project time over run* |
| *Budget* | *Conduct a detailed estimate in the planning phase to determine if funding is sufficient* |
| *Resources* | *Book external resources early in project* |

## Risk during Construction

*Summarise Construction Risks and mitigations here*

|  |  |
| --- | --- |
| Risk | Mitigation / Action |
| *Time* | *Set agreed timeframe in the way of a detailed construction timeline and monitor during the process**Hold points to be identified early in process and followed / monitored**Continually monitor for project time over run* |
| *Budget* | *Ensure costs are monitored at set intervals throughout the process**Variation processes are to be followed* |
| *Resources* | *Rosters to be set to allow staff enough notice* |
| *Safety* | *A pre work brief to be conducted at the start of each shift to ensure all safety risks are identified and assessed, are controlled and monitored. This is to be formally relayed to staff at the briefing* |
| *Environmental* | *Task based Environmental Impact Assessments completed and reviewed by Environmental officer.**Any mitigation measures identified by the EIA or task based Environmental Impact Assessments to be in place before work starts**Ad-hoc or planned environmental site inspection plan in place* |
| *Contractual* |  |
| *Quality* |  |
| *Configuration* |  |

## Risk during Integration, Testing and Commissioning

*Summarise Integration and Testing Risks and mitigations here*

|  |  |
| --- | --- |
| Risk | Mitigation / Action |
| *Time* | *Set agreed timeframe in the way of a detailed construction timeline and monitor during the process**Hold points to be identified early in process and followed / monitored**Continually monitor for project time over run* |
| *Resources* | *Ensure qualified staff are rostered on for the Integration and Testing phase* |
| *Safety* | *A pre work brief to be conducted at the start of each shift to ensure all safety risks are identified and assessed, are controlled and monitored. This is to be formally relayed to staff at the briefing* |
| *Environmental* | *Environmental officer to be present during commissioning.**Any mitigation measures identified by the EIA or task based Environmental Impact Assessments to be in place before work starts**Ad-hoc or planned environmental site inspection plan in place* |
|  |  |

## Residual Risk following Project Completion

*Summarise residual risks remaining after project completion and implementation of risk treatment here*

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Risk | Action | Date | ARTC Responsibility | Sign |
|  | Transfer to appropriate register in the ERMS |  |  |  |
|  |  |  |  |  |

# Project Close-Out Report

## Purpose

The purpose of the Project Close-Out Report is to:

* Ensure that a formal acceptance of the works has been achieved
* Identify any outstanding works
* Ensure that all contractual issues have been finalised
* Ensure that all products are completed and base-lined in the Configuration Management System
* Ensure that all operational support processes are in place
* Ensure that all project risks are closed or transferred to an appropriate Risk Owner and register within the ERMS
* Ensure environmental compliance was achieved with any license or permit requirements and no residual environmental risk exists.

The report also assesses how well the project has performed against the original planned objectives including benefits realised, time estimates, estimated costs, quality requirements and project tolerances.

Note: Practical Completion occurs upon Commissioning of the Work into Use

## Work Acceptance

Provide a summary of the acceptance of the works.

Check and confirm that:

* All parties with operational responsibility for the operation, support and maintenance of the works have accepted the completion of the works
* There are no outstanding issues that will prevent the commissioning of the capability
* All safety aspects of the project have been satisfactorily completed
* All risks have been taken over by the operational control and support groups and all required risk actions are allocated operationally

*Utilise EGP2001T-13 Certificate of Practical Completion (Contractor) for works involving external parties.*

On practical completion:

* ARTC has not accepted the asset or works until a Practical Completion and Handover Certificate has been signed-off by the works provider and ARTC;
* the works provider remains responsible for maintenance and agrees with the Maintainer a procedure for emergency repairs and call outs;
* the defect liability period commences

*Note that at this stage the defect liability period does not apply to outstanding items.*

|  |  |  |  |
| --- | --- | --- | --- |
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## Handover Inspection

The inspection includes representatives from the Contractor, the Maintainer as well as the Project Manager and may include the ARTC Contract Manager. A Practical Completion & Handover Certificate is issued and the Maintainer takes responsibility for infrastructure. Utilise the EGP2001T-13 Certificate of Practical Completion (Contractor) if delivered via contractors, and EGP2001T-10 Infrastructure Certification and Handover,

## Defect Liability Period

A statement of responsibilities and authorities is to be arranged between ARTC and the Contractor and/or the Maintainer. This may include arrangements for attendance to and repair of defects, reports to ARTC, and cost arrangements between the Contractor and Maintainer for the recovery of callouts.

## Follow On Actions

*Identify all post implementation actions that will be required and who should be responsible for them.*

The follow on actions required after implementation and project closure are as follows:

|  |  |  |  |
| --- | --- | --- | --- |
| Action | Due Date | ARTC Responsibility | Sign |
| *Resolve regulatory approval subject to conditions* |  |  |  |
| *etc* |  |  |  |

## Contract Completion

This report will provide evidence that the project’s contractual aspects are all completed. This will typically include:

* All obligations from all contractors have been fulfilled
* What is to be done about any contractual elements not yet completed
* Any contractual close out activities that are required
* Handover of any ongoing contract management elements (e.g. ongoing support)

|  |  |  |  |
| --- | --- | --- | --- |
| Action | Date | ARTC Responsibility | Sign |
| *Practical Completion Certificate Submitted* |  |  |  |
| *Final Completion Certificate Submitted* |  |  |  |

## Assurance and Verification – Design

This report will provide evidence that all required design assurance and verification processes have been undertaken:

* Internal ARTC
* External independent bodies (regulatory or government bodies, independent engineering certifications etc.)
* Contractors

## Lessons Learnt

*Provide a list of the lessons learnt from the project:*

|  |  |  |  |
| --- | --- | --- | --- |
| Topic | Lesson Learnt Description | Method of Circulation of Learning | Responsibility |
| *Estimating* | *Initial contractor estimates for the time needed for signalling work were inadequate. Greater visibility is needed into the estimating metrics when assessing supplier tenders* | *Ensure this is reflected in ARTC Procurement Procedures* | *Project Manager* |
| *Risks* | *Risk assessment for civil work ignored weather factors resulting in significant wet weather delays* | *Ensure this is added to the risk factors to be considered for all projects involving engineering work* | *Risk Manager* |
| *WHS/Safety* | *WHS/Safety Management Plan failed to cover traffic from nearby factory.* | *Consider updating WHS/Safety Management Plan to include prompt to include traffic from local businesses* | *Corporate WHS Management Plan* |
|  |  |  |  |