

# Risk Management

RSK-PR-001

## Applicability

ARTC Network Wide SMS

## Publication Requirement

Internal / External

## Primary Source

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## Document Status

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## Amendment Record

Amendment Version #	Date Reviewed	Clause	Description of Amendment
1.0	26 May 2016	All	Rebranded and assigned new document number. All subsidiary document references updated and new documents included. Inclusion of Risk Management Information System processes and requirements. Roles and responsibilities updated. Inclusion of contemporary flowcharts/tables/matrix. Reordering and rewording for improved document flow and readability. Removal of duplicated information. Inclusion of Project Risk Management requirements. Establishment of tiered risk structure. Inclusion of inherent risk. Updated to incorporate task hazard assessment - Stop & Think. Inclusion of Worksite Protection Plan in related documents.
1.1	19 December 2017	Various	Removal of RMIS and HP Trim references and inclusion of Central Risk Register
1.2	19 February 2018	Various	Change of title for Executive roles. Change Division/ Business Unit.

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1.3	23 November	Various	Incorporation of references to ARTC's new Enterprise Risk Management System, and terminology and process changes arising from the system implementation including transitional arrangements. Inclusion of Risk Appetite and Risk Tolerance. Update to risk matrix.
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## 1 Introduction

### 1.1 Purpose

The purpose of this procedure is to inform stakeholders of the ARTC process for the management of risks and define the associated systems and tools available to assist in this process.

Risk can be defined as the effect of uncertainty on objectives, and organisations of all types face internal and external factors that have the potential to impact on objectives. All activities within an organisation involve some degree of risk, and risk management is a discipline that assists in the achievement of those objectives.

Risk management is conducted within ARTC to meet our company objectives through a clear, defined and continual process.

### 1.2 Scope

This procedure is applicable to all ARTC workers and contractors undertaking risk management activities.

This procedure is consistent with *ISO 31000:2018 Risk Management – Guidelines*, which ARTC is committed to following.

All workers are responsible for adopting a risk management methodology that is appropriate to their work area accountabilities.

### 1.3 Procedure Owner

The ARTC Corporate Risk Manager is the coordinator of this procedure and is the initial point of contact for all inquiries relating to its application across the organisation.

### 1.4 Responsibilities

Risk management is a continuous process that involves all ARTC workers. All workers have responsibility for the implementation of this procedure.

Any worker who becomes aware of a risk shall ensure that appropriate action is considered and taken, including immediate actions deemed necessary and advising their immediate supervisor.

Workers who interface with stakeholders are responsible for incorporating stakeholder input and perceptions into the process.

**Chief Executive Officer** is responsible for:

- Overseeing the development and administration of ARTC's Risk Management Policy;
- Overseeing the development and implementation of ARTC's Risk Appetite Statement; and
- Ensuring good governance of ARTC's risks to meet the Company's obligations.

**Group Executive Corporate Services & Safety** is responsible for:

- Ensuring systems are in place for the identification, assessment and management of all risks in accordance with the ARTC Risk Appetite Statement;
- Ensuring systems are in place to meet legislative requirements for the management of risk;
- The development, review and analysis of policies and practices to ensure safety related risks comply with So Far As Is Reasonably Practicable (SFAIRP) principles;
- Ensuring that the ARTC Risk Appetite Statement and ARTC Risk Matrices are reviewed at least biennially;
- Overseeing the systematic development, management and governance of ARTC's Enterprise Risk Management System and associated processes, frameworks and tools to deliver an effective and compliant system; and
- Periodically reporting the status of risk management to the Executive Committee and the Board.

**ARTC Executive** are responsible for:

- Planning and implementing processes for risk management within their area of responsibility in accordance with this procedure;
- Ensuring relevant information and training in risk management is provided to employees and other stakeholders (including contractors) within their area of responsibility;
- Ensuring appropriate assessments of risk are conducted for notifiable changes to ARTC infrastructure or the Safety Management System;
- Monitoring and reviewing the effectiveness of the management of risk process in their area of responsibility and planning and implementing identified opportunities for improvement; and
- The selection of appropriate Risk Owners and Risk Managers for each risk.

**Risk Owners** are responsible for:

- Ensuring that they have appropriate oversight for the risks that they own, and that those risks are being managed in accordance with the ARTC Risk Appetite Statement;
- Ensuring that the risks that they own, including their Controls and Proposed Treatments, are identified and appropriately documented and updated within ARTC's Enterprise Management System;
- Ensuring that periodic reviews of the risks that they own are conducted, including the effectiveness of their existing Controls, in accordance with required timeframes and appropriate records of review and updates are made;
- Ensuring that appropriate Proposed Treatments are identified and being actioned for the risks that they own;
- If appropriate, assigning a suitable Risk Manager to manage further detailed activity for the risks that they own; and
- Reporting information on risks in accordance with escalation requirements and governance arrangements.

**ARTC Corporate Risk Manager** is responsible for:

- Providing advice and reasonable assistance to Executive and Senior Managers, Risk Owners, Risk Managers, other employees and relevant external stakeholders on their risk management obligations;
- Documenting and communicating this procedure to all relevant internal and external stakeholders;
- Ensuring that training in risk management is conducted for relevant ARTC employees and stakeholders;
- Managing information within the ARTC Enterprise Control Library, ARTC Enterprise Cause Library and ARTC Enterprise Consequence Library;
- Designing and implementing effective risk reporting mechanisms;
- Monitoring and measuring the effectiveness of this procedure and its interface with related policies and procedures;
- Facilitating the review of the ARTC Risk Appetite Statement and ARTC Risk Matrices at least biennially;
- Implementing mechanisms to ensure risks are being management in accordance with the risk management framework; and
- Ensuring that training in ARTC's Enterprise Risk Management System is conducted for relevant ARTC employees and stakeholders.

**Risk Managers are responsible for:**

- Ensuring that the risks that they manage, including their Controls and Proposed Treatments, are entered into ARTC's Enterprise Risk Management System and appropriately documented and updated;
- Ensuring that periodic reviews of the risks that they manage are conducted, including the effectiveness of their existing Controls, and appropriate records of review and updates made; and
- Ensuring that appropriate Proposed Treatments are identified and being actioned for the risks that they manage.

**Workshop Facilitators** are responsible for:

- Preparing and distributing pre-workshop reading material to workshop participants; and
- Facilitating risk assessment and/or risk review workshops, documenting outcomes and ensuring that the appropriate Risk Register within ARTC's Enterprise Risk Management System is accurately updated with the outcomes of risk workshops.

**Managers and Supervisors** are responsible for:

- Identifying where risk assessment activity may be required to be undertaken, and providing relevant information and input in risk assessments, where requested; and
- Monitoring, reviewing and updating the progress of Actions and Proposed Treatments for which they are responsible in ARTC's Enterprise Risk Management System.

**Workers** are responsible for:

- Identifying and communicating local worksite hazards and their controls to all personnel at that particular worksite, and reporting risks to their supervisor; and
- Providing relevant information and input in risk assessments, where requested.

## 1.5 Associated Documents

COR-PO-006 Risk Management Policy is the parent document to this procedure.

The following documents are subordinate to this procedure:

- RSK-GP-001 ARTC Business Risk Profile
- RSK-GP-002 ARTC Project Risk Profile
- RSK-GP-003 ARTC Risk Management (SMS process – available via ARTC SMS)
- RSK-GP-004 ARTC Risk Management Framework
- RSK-GP-005 ARTC Human Factors Framework
- RSK-GP-007 Risk Appetite Statement
- RSK-WI-001 Application of Risk Management
- RSK-WI-005 Project Risk Management
- RSK-WI-006 Stop & Think
- RSK-GL-001 Risk Management Terms and Data Guideline
- RSK-GL-003 Risk Management Overview
- RSK-GL-004 Inland Rail Level Crossing Risk Tool
- RSK-GL-005 Project Risk Management Overview

The following tools and templates, whilst not mandatory, may assist with meeting the requirements of this procedure and related subsidiary documents:

- RSK-FM-003 Risk Assessment Report Template
- RSK-FM-005 Project Risk Management Plan

The following documents, whilst not subordinate to this procedure, are important documents in the context of managing risk:

- WHS-PR-311 Work Method Statements
- ENV-WI-005 Task Based Environmental Impact Assessment (TBEIA)
- ENV-PR-008 Review of Environmental Factors
- RLS-PR-005 Pre-Work Brief
- RLS-PR-006 Worksite Protection Plan

The following documents were referenced in this procedure:

- ISO 31000:2018 Risk Management – Guidelines
- SA/SNZ HB 436:2013 Risk management guidelines – Companion to ISO 31000:2009



## 1.6 Definitions

The following terms and acronyms are used within this document:

Term or acronym	Description
Causal & Contributing Factor	<p>A condition or set of conditions leading to a risk. It is often used to describe “what could go wrong”. Used in this document to describe the cause contributing to a risk.</p> <p>A causal factor is a factor which may alone cause the risk to eventuate. A contributing factor, is a factor which, when combined with other factors could cause the risk to eventuate.</p>
CGR Foundation	The name of the proprietary governance, risk and assurance software developed by Corporate Governance Risk Pty Ltd and utilised by ARTC as its Enterprise Risk Management System. Its use to document and manage risks is mandated.
Consequence	<p>Outcome of an event affecting objectives.</p> <p>An event can lead to a range of consequences. A consequence can be certain or uncertain and can have positive or negative effects on objectives. Consequences can be expressed qualitatively or quantitatively.</p> <p>A consequence may also be referred to as an impact.</p>
Contractor	An entity performing work under contract to ARTC. For the purpose of this work instruction, contractor includes entities performing work under sub-contractor arrangements.
Context	The set of circumstances or facts that surround a particular event or situation, and/or, a clearly defined set of parameters that enable focussed risk assessment.
Control	A measure that modifies risk by either preventing the risk or reducing (mitigating) the consequences of the risk. Controls may include any process, policy, device, practice or other action which modifies risk.
Control Owner	The person with the responsibility, authority and accountability to manage a control of a specific risk/s.
Current Risk Level	The risk level given the effectiveness of controls currently in place. Also known as residual risk level.
Enterprise Risk Management System (ERMS)	A system that is utilised to record and manage risks, controls, treatments and actions across the whole of the organisation, including projects. CGR Foundation is ARTC’s mandated Enterprise Risk Management System.
Event	<p>Occurrence or change of a particular set of circumstances.</p> <ul style="list-style-type: none"> <li>• An event can be one or more occurrences, and can have several causes.</li> <li>• An event can consist of something not happening.</li> <li>• An event can sometimes be referred to as an “incident” or “accident”.</li> <li>• An event without consequences can also be referred to as a “near miss”, “incident”, “near hit”, “close call” or “breach”.</li> </ul>
Hazard	A source of potential harm e.g. in terms of human injury, damage to property or other loss. A hazard can be a risk source.

Term or acronym	Description
Hierarchy of Controls	<p>A sequence of options which offer you a number of ways to approach the control of hazards. The hierarchy is arranged in order of implementation preference.</p> <ul style="list-style-type: none"> <li>• Elimination</li> <li>• Substitution</li> <li>• Isolation</li> <li>• Engineering controls</li> <li>• Administrative controls</li> <li>• Personal Protective Equipment (PPE)</li> </ul>
Human Factors	<p>A discipline concerned with the interactions between humans and other elements of a system, where theory, principles, data, and methods to design are applied to optimise human well-being and system performance.</p> <p>Also known as ergonomics.</p>
Inherent Risk Level	The risk level without any controls in place, also known as “untreated risk”.
Level of Risk	Magnitude of a risk or combination of risks, expressed in terms of the combination of consequences and their likelihood.
Likelihood	A qualitative description of the chance of something happening.
Objectives	Organisational and/or project deliverables.
Opportunity	<p>An uncertainty that could have a positive effect leading to benefits or rewards.</p> <p>Also referred to as Positive Risk</p>
Proposed Treatment	A control that is not yet implemented.
Qualitative Assessment	Method of risk analysis used to describe the level of risk considering scaled consequences and likelihood, utilising the ARTC Risk Matrix.
Quantitative Assessment	Method of risk analysis used to numerically assess the nature, sources, and impact of a risk, and assess and quantify the overall impact of uncertainties.
Review	Activity undertaken to determine the suitability, adequacy and effectiveness of the subject matter to achieve established objectives. Review can be applied to a risk management framework, risk management process, risk or control.
Risk	Effect of uncertainty on objectives. An effect is a deviation from the expected. Objectives can have different aspects (such as financial, rail safety, WHS and operation goals) and can apply at different levels (such as strategic, organisational, project and process).
Risk Appetite	<p>The amount of risk an entity is willing to accept or retain in order to achieve its objectives.</p> <p>The appetite for risk and opportunity can vary between, and within, risk impact categories depending on the type of risk and the potential for adverse events and positive rewards.</p>
Risk Appetite Statement	A formal statement that describes ARTC’s attitude towards risk taking.

Term or acronym	Description
Risk Assessment	The process of identifying, analysing and evaluating risk.
Safety Impact	An impact to workers and/or the public incorporating impacts to: <ul style="list-style-type: none"> <li>Physical safety (e.g., from hazards such as machinery and plant);</li> <li>Health and wellbeing;</li> <li>Psychological health;</li> <li>System and process safety (e.g. assets); or</li> <li>Operational safety (e.g. railway operations).</li> </ul>
Workshop Facilitator	A person with sufficient training and/or experience to conduct a risk workshop. Sufficient training and/or experience includes: <ul style="list-style-type: none"> <li>The ARTC Risk Workshop Facilitator training course; and/or</li> <li>External training course based on AS/NZS ISO 31000; and/or formal recognised qualifications that include risk management; and/or</li> <li>Experience in the facilitation of previous risk assessments using Bow Tie methodology or quantitative risk analysis – whichever is relevant.</li> </ul>
Risk Impact Categories	ARTC's six identified organisational areas of risk focus; SAFERR. In the context of project risk, ARTC recognises a seventh area of risk focus – Schedule.
Risk Identification	Process of finding, recognizing and describing risks.  Risk identification involves the identification of risk sources, events, their causes and their potential consequences.  Risk identification can involve historical data, theoretical analysis, informed and expert opinions, and stakeholder's needs.
Risk Management	Coordinated activities to direct and control an organisation with regard to risk.
Risk Management Framework	Set of components that provide the foundations and organisational arrangements for designing, implementing, monitoring, reviewing and continually improving risk management throughout the organisation. The foundations include policy, objectives, mandate and commitment to manage risk.
Risk Management Policy	Statement of the overall intentions and direction of an organisation related to risk management.
Risk Management Process	The systematic application of management policies, procedures & practices to the tasks of: <ul style="list-style-type: none"> <li>Establishing the context of the risk</li> <li>Identifying the risk</li> <li>Analysing the risk</li> <li>Evaluating the risk</li> <li>Controlling the risk</li> <li>Monitoring and reviewing the risk</li> <li>Communicating the risk</li> </ul>

Term or acronym	Description
Risk Manager	<p>The person appointed by a Risk Owner to conduct the detailed activity on a risk on their behalf.</p> <p>Nomination of a Risk Manager is not mandatory, and is only undertaken in circumstances where the Risk Owner is not undertaking detailed activity themselves.</p>
Risk Owner	Person with the responsibility, authority and accountability to manage a risk.
Risk Profile	A description of any set of risks.
Risk Register	A collation of risk information that provides a record of identified risks relating to the objectives of the organisation, business unit or project. They provide assurance on the range of control measures and plans in place to address identified risks.
Risk Source	Element which alone or in combination has the intrinsic potential to give rise to risk.
Risk Tolerance	The specific level of risk taking that is acceptable in order to achieve a specific objective or manage a category of risk.
SAFERR Effects	What will be the Safety, Asset (Network Performance and Organisational Capability), Financial, Environmental, Regulatory and/or Reputational impacts of an option.
Safety Management System (SMS)	A comprehensive, fully integrated system to reduce safety risks through systematic application of safety management principles and processes.
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.
Stakeholder	Person or organisation that can affect, be affected by, or perceive themselves to be affected by a decision or activity. A decision maker can be a stakeholder.
Strategic Risk	A risk determined by the Executive as a key risk which can adversely affect the achievement of the company's objectives.
Target Risk Level	The risk level expected to remain after implementation of Proposed Treatments.

## 2 Types of Assessments

The identification and management of risks occurs at all levels of ARTC, and can range from informal task hazard assessments undertaken onsite, through to complex formal risk studies undertaken by risk specialists (refer Figure 1).

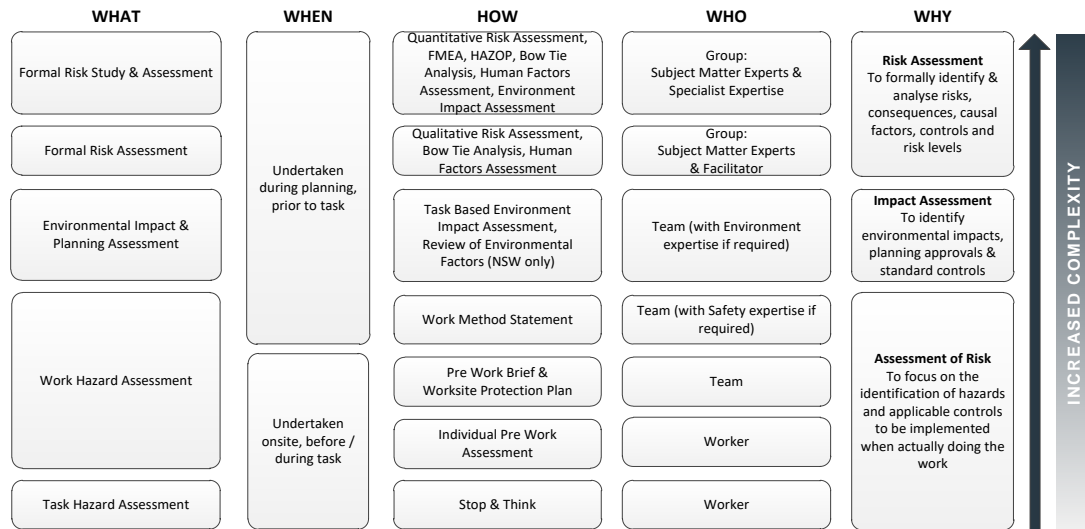


Figure 1: Types of Assessments within ARTC

### 2.1 Formal Risk Study & Assessment

Formal Risk Studies are usually undertaken for complex activities where potential impact is likely to be significant. Types of activities where a formal risk study may be appropriate can include:

- Significant civil works, such as tunnel construction, bridge construction;
- Technical operational changes, such as introduction of new signal/track infrastructure;
- Safety critical system changes, such as network control system changes.

Risk assessments of this type frequently utilise several different methodologies to identify, assess and quantify risk in addition to assessment utilising Bow Tie Analysis. Specific methodologies that may be utilised include:

- Quantitative Risk Assessment;
- Failure Mode Effects Analysis (FMEA);
- Hazard and Operability Study (HAZOP);
- Human Factors Assessment;
- Environmental Impact Assessment.

These methodologies can be complex to undertake, and specialist expertise in these techniques is required. Although specific methodologies are utilised to conduct a risk study, the broader risk management process utilised is to be consistent with this procedure and related subordinate documents.

In some circumstances, it may be identified that a specific alternate process is required to be utilised (for example, the process defined in the International Engineering Safety Management Handbook). Where this occurs, approval to apply an alternate process is to be sought from the Group Executive Corporate Services & Safety.

## 2.2 Formal Risk Assessments

Formal risk assessment is undertaken in order to identify potential risks, their causal and contributory factors, the likelihood and consequence of the risk eventuating, and controls that may be implemented to prevent the risk or otherwise minimise the impacts of the risk.

A formal, documented risk assessment must be conducted in various circumstances (including when notifiable changes are planned to the SMS and/or network configuration and as directed in project management procedures).

This can include identification and assessment of risks associated with:

- Achievement of organisational objectives
- Operational activities of the organisation
- Projects
- Impending changes to the organisation, operational environment or systems

Formal risk assessments are undertaken in accordance with this procedure and related subordinate documents.

## 2.3 Environmental Impact & Planning Assessments

Environmental Impact and Planning Assessments are undertaken utilising specific processes and formats. Environmental Impact and Planning Assessments are focused on identifying potential environmental impacts from activities that are being undertaken at a specific site, required planning permissions, and controls that are required to be implemented.

Identification and assessment of causal and contributory factors and likelihood are not included in Environmental Impact and Planning Assessments.

### 2.3.1 Task Based Environment Impact Assessment (TBEIA)

Task Based Environment Impact Assessments (TBEIA) are form style environmental assessments that have been developed for day to day rail related maintenance activities where environmental impacts are low and readily identifiable.

For further information regarding TBEIA, refer ENV-WI-005 Task Based Environmental Impact Assessment (TBEIA).

### 2.3.2 Review of Environmental Factors (REF)

Review of Environmental Factors (REF) is a specific type of environmental impact assessment that is conducted for specified classes of activities conducted in NSW in order to meet specific requirement of the Environmental Planning and Assessment Act 1979.

For further information regarding REF, refer ENV-PR-008 Review of Environmental Factors.

## 2.4 Work Hazard Assessments

Work Hazard Assessments are formal assessments of specific work activities. Work Hazard Assessments are focused on ensuring the identification and communication of hazards and their controls.

Identification and assessment of causal and contributory factors, potential consequences and likelihood are not included in a Work Hazard Assessment.

#### 2.4.1 Work Method Statement

A Work Method Statement is a document that sets out specific work activities, the hazards and risks from these activities and the measures that are required to be put in place to control the risks.

Work Method Statements go through a formal development and approval process, with Approved Work Method Statements published on the ARTC intranet.

For further information regarding Work Method Statements, refer WHS-PR-311 Work Method Statements.

#### 2.4.2 Pre-Work Brief

A Pre-Work Brief is mandatory for teams working within the rail corridor, and outlines activities, hazards and controls and the worksite protection plan that is to be implemented to ensure safety from rail traffic. Pre-Work Briefs may also be conducted at other types of worksites, for example, Provisioning Centres.

For further information regarding Pre-Work Briefs, refer RLS-PR-005 Pre-Work Brief.

#### 2.4.3 Individual Pre-Work Assessment

Pre-Work Assessments are undertaken for single or two person teams working within the rail corridor, and are a simplified version of a Pre-Work Brief.

For further information regarding Pre-Work Assessments, refer RLS-PR-005 Pre-Work Brief.

### 2.5 Task Hazard Assessments

Task hazard assessments are a simple self-assessment undertaken by an individual in an informal way, by taking a few minutes to think about a task, its potential hazards and how any risks can be controlled.

For further information regarding task hazard assessments, refer RSK-WI-006 Stop & Think.

## 3 Communication and Consultation

Effective external and internal communication and consultation is essential to ensure that those accountable for implementing the risk management process and stakeholders understand the basis on which decisions are made and the reasons why particular actions are required.

Communication and consultation with stakeholders is important as they make judgments about risk based on their perceptions of risk. These perceptions can vary due to differences in values, needs, assumptions, concepts and concerns of the stakeholders.

As these views can have a significant impact on the decisions made, the stakeholders' perceptions should be identified, recorded, and taken into account in the decision making process.

A consultative team approach may:

- help establish the context appropriately;
- ensure that the interests of stakeholders are understood and considered;
- help ensure that risks are adequately identified;
- bring different areas of expertise together for analysing risks;
- ensure that different views are appropriately considered when defining risk criteria and evaluating risks;
- secure endorsement and support for a treatment plan;
- enhance appropriate change management during the risk management process; and develop an appropriate internal and external communication and consultation plan.

For further information regarding communication and consultation with stakeholders and subject matter experts, refer RSK-WI-001 Application of Risk Management.

## 4 Resource Requirements

In order to conduct effective risk management throughout the organisation, the following resources are required:

- Capable personnel with the ability to conduct risk assessments and develop and maintain risk management documentation on an ongoing basis;
- Internal auditors as detailed in audit procedures;
- Risk Management software that is compliant with legislative requirements; and appropriate risk management procedures and reporting mechanisms.

Where dedicated risk workshops are conducted, the Workshop Facilitator must have sufficient experience and/or training in order to facilitate the risk workshop. Sufficient training and/or experience includes:

- completion of ARTC Risk Workshop Facilitator training; and/or
- completion of external training based on AS/NZS ISO 31000; and/or
- formal recognised qualifications that include risk management; and/or
- experience in the facilitation of previous risk assessments utilising Bow Tie methodology or quantitative risk analysis – whichever is relevant.

A Risk Owner may also identify and assess a risk, where they have sufficient knowledge of risk management and risk management principles.

For further information regarding appropriate personnel to conduct risk assessments, refer RSK-WI-001 Application of Risk Management.

## 5 Contractor Obligations to Undertake Risk Assessments

Where ARTC employees engage contractors, suppliers or consultants they are required to ensure these organisations and individuals are aware of ARTC requirements for risk management and as a minimum, apply these for the work and services they provide for us.

Where contractors, suppliers or consultants undertake risk assessments on behalf of ARTC, they are required to be undertaken in accordance with this procedure.



## 6 ARTC Risk Profile

The Risk Impact Categories and Strategic Risks that can have an effect on the achievement of ARTC's organisational objectives are clearly defined in RSK-GP-001 ARTC Business Risk Profile.

The Business Risk Profile is comprised of six Risk Impact Categories, collectively referred to as SAFERR:

- Safety
- Assets (Network Performance)
- Assets (Organisational Capability)
- Financial
- Environment
- Regulatory
- Reputation

The ARTC Risk Matrix defines risk criteria for each of these Risk Impact Categories (refer Section 11.3.1). The ARTC Project Risk Matrix defines risk criteria in the context of projects against Project Risk Impact Categories defined in a Project Risk Profile (refer RSK-GP-002 ARTC Project Risk Profile and RSK-WI-005 Project Risk Management).

## 7 Tiered Risk Structure

Risks may be relevant to all of the organisation, part of the organisation, or to a specific location or project. Additionally, a risk may be related to other risk(s) through dominant and subordinate relationships. This is described through a six tiered approach to risk:

- **Strategic** – a risk determined by the Executive as a key risk which could adversely affect the achievement of the company's objectives and is included in the ARTC Business Risk Profile
- **Enterprise Wide** - a risk that has been identified as affecting more than one part of ARTC, commonly a specific breakdown of a "Strategic" risk
- **Operational** – a risk owned by a particular part of ARTC, related to a particular Division or Business Unit, or a specific type of task
- **Geographic/Location** – a risk that is specific to a particular geographical vicinity, section of track or specific location
- **Programme** – a risk that is relevant to a particular programme of projects that is usually able to be closed at the end of the programme.
- **Project** – a risk that is relevant to a particular project that is usually able to be closed at the end of the project.

Risks that have been identified as belonging to the "Strategic" risk tier are documented in RSK-GP-001 ARTC Business Risk Profile. Risks related to all other tiers (with the exception of the "Programme" and "Project" risk tiers) are subsequently indicated as being related to the relevant Strategic risk. Risks that are allocated to the "Programme" or "Project" risk tier are related to the relevant high level project risk documented in RSK-GP-002 ARTC Project Risk Profile.

Further information regarding the six risk tiers and allocation of a risk to the relevant Strategic Risk is provided in RSK-GL-001 Risk Management Terms and Data Guideline.

## 8 Project Risk Management

Risk management within the context of a project is consistent with the ARTC Risk Management Process (refer Figure 2), however there are some variations to specific arrangements for identifying and managing risk in the context of a Project.

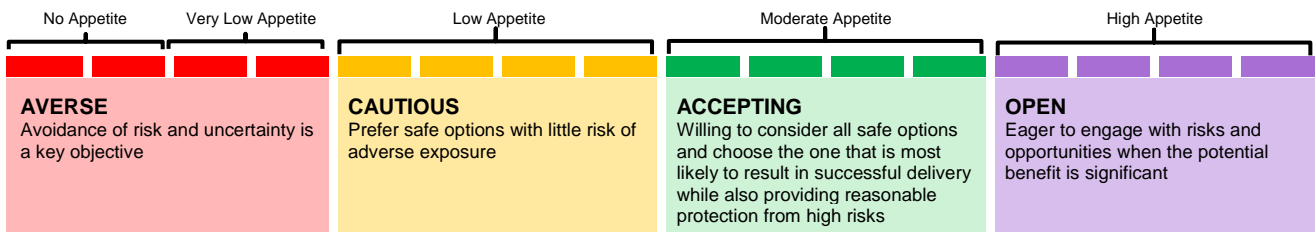
Additional requirements and guidance on Project Risk Management is documented in RSK-WI-005 Project Risk Management.

## 9 Risk Appetite

To eliminate all risk would significantly impair our ability to meet our strategic objectives, and therefore risks are managed to an acceptable level through our framework of controls and assurance.

Our risk appetite outlines where we are willing to engage with higher levels of risk for the benefit of achieving our strategic objectives. Understanding our risk appetite assists in supporting conscious and informed decision making across the organisation. It is an expectation that all risks identified within ARTC are managed in accordance with ARTC's Risk Appetite Statement.

Our appetite for risk and opportunity varies between, and within, our Risk Impact Categories depending on the type of risk and the potential for adverse events and positive rewards and is expressed on a scale across four levels of appetite:



ARTC's risk appetite is formally documented in RSK-GP-007 Risk Appetite Statement.

## 10 Risk Tolerance

Risk tolerance is the level of risk-taking acceptable to manage a category of risk. It is the practical application of risk appetite.

Generally, our tolerance to risk is established as a residual risk level of Medium. However, this tolerance should not be taken as a blanket assumption that no further actions or controls are required for Medium rated risks.

In the context of safety risk, ARTC applies the principles of providing safety So Far As Is Reasonably Practicable. This may mean that despite a residual risk level of Medium, additional controls could potentially be taken, and a determination of whether this is appropriate and reasonably practicable is to be undertaken.

Additionally, where gaps related to legal obligations and compliance have been identified, appropriate actions are to be taken irrespective of residual risk level.

## 11 Risk Management Process

Figure 2 shows a broad overview of ARTC’s risk management process based on AS/NZS ISO 31000.

Risks are identified from various sources, assessed and analysed, and ownership allocated to the appropriate manager. Controls are implemented, and the risk is then monitored to ensure the continued effectiveness of controls. Stakeholder communication and consultation occurs at each stage of the process where appropriate.

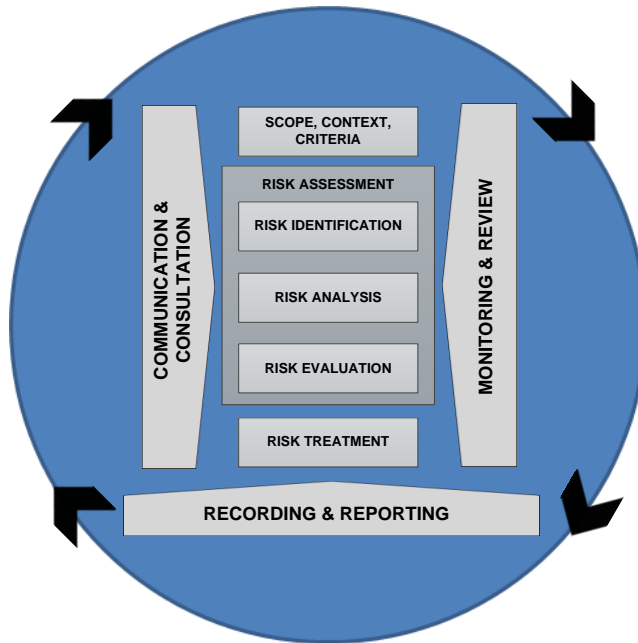


Figure 2: ARTC Risk Management Process

Specific activities undertaken at each step of the Risk Management Process are defined below and in RSK-WI-001 Application of Risk Management.

### 11.1 Establish the context

This step defines the basic parameters within which risks must be managed and sets the scope for the remainder of the process.

The context for overall risk management within ARTC must be established at the organisational (strategic) and local (operational) level.

At a strategic level, the context for ARTC risk management (including definition of the internal and external environment) is broadly defined in the organisation’s corporate plans.

Risk criteria for the Risk Impact Categories of Safety, Assets, Finance, Environment, Regulatory and Reputation are defined in the ARTC Risk Matrix (refer Figure 3: ARTC Risk Matrix).

Categories and criteria for project risks are defined in the ARTC Project Risk Matrix (refer RSK-WI-005 Project Risk Management).

Establishment of operational context is a requirement of the risk assessment process. A consultative approach with stakeholders must be used to determine the context, risk criteria and structure for the remainder of the process.

Guidance for the establishment of context when conducting a risk assessment is provided in RSK-WI-001 Application of Risk Management.

## 11.2 Identify Risks

A risk is made up of a number of components. These usually include a source (e.g. a hazard), strategic risk and causal factor.

There may be a number of causal factors leading to the risk event.

The aim of risk identification is to generate a comprehensive list of sources of risks and events that might have an impact on the achievement of each of the objectives.

### 11.2.1 Methods for Risk Identification

Risk identification methods used as part of the risk assessment process may include checklists, brainstorming, experience and historical records, stakeholder consultation, flow charts, systems and scenario analysis and systems engineering techniques.

The approach taken will depend on the type of activities and risks under review and is at the discretion of the qualified facilitator.

Identified risks must be recorded within an appropriate risk register in ARTC's Enterprise Risk Management System. Where impacts or variations to existing risks have been identified, these are to be communicated to the relevant Risk Owner and/or Risk Manager for review and update of the relevant risk entry.

For further information regarding methods of identifying risks, refer RSK-WI-001 Application of Risk Management.

## 11.3 Analyse risks

Analysis involves consideration of the sources and causal factors of the risk along with the likelihood that those consequences will eventuate. This step is conducted to develop a greater understanding of risks, facilitate prioritisation and provide ARTC with data to assist in the evaluation and control of risks.

Where qualitative assessment is adequate, identified risks are analysed and reported in terms of likelihood and consequence criteria. Existing controls applicable to the risk scenario in question are considered during this process.

There are three calculations of risk level that can be determined during the risk assessment process:

**Inherent Risk Level** – the risk level without any controls in place

**Current Risk Level** – the risk level given the effectiveness of controls that are currently in place

**Target Risk Level** – the risk level that is expected to remain after implementation of Proposed Treatments

The assessed levels of likelihood and consequence are analysed and ranked using the applicable ARTC risk matrix, with the risk level described as Very High, High, Medium or Low (refer Figure 3).

Detailed instruction on the analysis of risks during a risk assessment is contained within RSK-WI-001 Application of Risk Management.

### 11.3.1 ARTC Risk Matrix

The ARTC Risk Matrix defines risk criteria across the six SAFERR impact categories and provides a method of scaling for financial risks appropriate for the part of the business that the risk belongs to. For Project risks, financial and schedule criteria are determined as relevant to the scale and scope of the programme or project, as outlined in RSK-WI-005 Project Risk Management.

The risk matrix provides alpha-numeric numbering within each calculated risk level that provides a structured method to enable ranking within a risk level - for example, a risk level of Very High 5B is lower than Very High 5A.

Approved risk matrices are programmed into ARTC's Enterprise Risk Management System, with the appropriate risk matrix available for use within the system dependant on the type of risk, the applicable Business Unit, and/or the applicable programme or project.

When analysing a risk, the potential consequence across one or more of the applicable impact categories is to be determined, with the risk level calculated based on the highest potential consequence.

In undertaking analysis using the Risk Matrix, the following must be considered:

*Partitioning the risk across many hazards and evaluating each against a matrix alone may lead to a hazard being assessed as low, whereas the total system risk may be in a higher category. The individual risks may be considered low, but collectively the risks may contribute to a higher overall likelihood of occurring (or more severe consequence).*

*Analysing individual risks without looking at the overall system may lead to flawed decisions.*

Use of the Risk Matrix alone is not enough to demonstrate that a safety risk has been reduced SFAIRP. It must be demonstrated that there are no other reasonably practicable measures that can reduce risk further. Section 11.4.1 and RSK-WI-001 Application of Risk Management provide guidance in demonstrating compliance with SFAIRP principles.

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*Note: The ARTC Risk Matrix as documented in this section is being progressively implemented in conjunction with the implementation of the Enterprise Risk Management System (ERMS).*

*Risks not yet transferred into the ERMS are to continue to be assessed utilising the risk matrix as per Appendix 1.*

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**ARTC Non-Project Risks Criterion**

		Consequence					
<b>Safety</b>		Injury or illness with no impairment (may or may not require treatment)	Injury or illness with short-term impairment	Injury or illness with moderate but recoverable impairment	Injury or illness with long term to permanent impairment	One or more fatalities	
<b>Assets: Network Performance</b>		Immaterial disruption to non-critical track section	Material disruption to non-critical track section or Immaterial disruption to critical track section	Material disruption to a critical track section recoverable in the short-term	Material disruption to critical track section not recoverable in the short term	Material disruption to critical track section not recoverable in the short term with significant long term impacts on customers	
<b>Assets: Organisational Capability</b>		Manageable impact to internal operations, which may or may not require internal reallocation of existing resources	Missing short-term targets which may or may not require use of additional resources	Reduced ability to achieve business goals with some business impact	Material failure to achieve business goal(s) with significant business impact	Failure to achieve business goals with lasting impacts	
<b>Financial</b>		<b>Enterprise</b>	Less than \$2M operating profit loss of enduring impact; or One off impact of less than \$10M; or Less than \$50M impact to balance sheet	\$2M to \$10M operating profit loss of enduring impact; or One off impact of \$10M to \$50M; or \$50 to \$250M impact to balance sheet	\$10M to \$50M operating profit loss of enduring impact; or One off impact of \$50M to \$250M; or \$250M to \$500M impact to balance sheet	\$50M to \$150M operating profit loss of enduring impact; or One off impact of \$250M to \$750M; or \$500M to \$1B impact to balance sheet	More than \$150M operating profit loss of enduring impact; or One off impact of more than \$750M; or More than \$1B impact to balance sheet
		<b>Interstate</b>	Less than \$700K operating profit loss of enduring impact; or One off impact of less than \$3M; or Less than \$25M impact to balance sheet	\$700K to \$3M operating profit loss of enduring impact; or One off impact of \$3M to \$15M; or \$25 to \$125M impact to balance sheet	\$3M to \$15M operating profit loss of enduring impact; or One off impact of \$15M to \$80M; or \$125M to \$250M impact to balance sheet	\$15M to \$50M operating profit loss of enduring impact; or One off impact of \$80M to \$250M; or \$250M to \$500M impact to balance sheet	More than \$50M operating profit loss of enduring impact; or One off impact of more than \$250M; or More than \$500M impact to balance sheet
		<b>Hunter Valley</b>	Less than \$1.5M operating profit loss of enduring impact; or One off impact of less than \$7M; or Less than \$25M impact to balance sheet	\$1.5M to \$7M operating profit loss of enduring impact; or One off impact of \$7M to \$35M; or \$25 to \$125M impact to balance sheet	\$7M to \$35M operating profit loss of enduring impact; or One off impact of \$35M to \$180M; or \$125M to \$250M impact to balance sheet	\$35M to \$100M operating profit loss of enduring impact; or One off impact of \$180M to \$500M; or \$250M to \$500M impact to balance sheet	More than \$100M operating profit loss of enduring impact; or One off impact of more than \$500M; or More than \$500M impact to balance sheet
		<b>Support Services</b>	Less than \$400K operating profit loss of enduring impact; or One off impact of less than \$2M; or Less than \$10M impact to balance sheet	\$400K to \$2M operating profit loss of enduring impact; or One off impact of \$2M to \$10M; or \$10 to \$50M impact to balance sheet	\$2M to \$10M operating profit loss of enduring impact; or One off impact of \$10M to \$50M; or \$50M to \$100M impact to balance sheet	\$10M to \$30M operating profit loss of enduring impact; or One off impact of \$50M to \$150M; or \$100M to \$200M impact to balance sheet	More than \$30M operating profit loss of enduring impact; or One off impact of more than \$150M; or More than \$200M impact to balance sheet
<b>Environment</b>		Minimal environmental impact	Limited and recoverable environmental impact	Significant and recoverable environmental impact	Permanent impact to area of less than high environmental significance	Permanent impact to area of high environmental significance	
<b>Regulatory</b>		Expected to prompt regulatory interest	Increased oversight by regulator	Limited fine, official caution and / or direction to act	Formal regulatory action impacting on operating activities and / or material fine	Prosecution of the company and / or its office holders	
<b>Reputation</b>		Short term loss of confidence from other than key stakeholders	Sustained loss of confidence from other than key stakeholders	Short-term loss of confidence from a key stakeholder	Sustained loss of confidence from a key stakeholder	Loss of Shareholder support	
		<b>Not Significant</b>	<b>Minor</b>	<b>Moderate</b>	<b>Major</b>	<b>Extreme</b>	
		<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	
<b>Likelihood</b>	<b>Almost Certain</b> (Is expected to occur in most circumstances)	<b>A</b>	<b>MEDIUM 1A</b>	<b>MEDIUM 2A</b>	<b>HIGH 3A</b>	<b>VERY HIGH 4A</b>	<b>VERY HIGH 5A</b>
	<b>Likely</b> (Between once a month and once a year (Will probably occur in most circumstances))	<b>B</b>	<b>LOW 1B</b>	<b>MEDIUM 2B</b>	<b>HIGH 3B</b>	<b>VERY HIGH 4B</b>	<b>VERY HIGH 5B</b>
	<b>Possible</b> (Between once a year and once in five years (Might occur at some time))	<b>C</b>	<b>LOW 1C</b>	<b>MEDIUM 2C</b>	<b>MEDIUM 3C</b>	<b>HIGH 4C</b>	<b>VERY HIGH 5C</b>
	<b>Unlikely</b> (Between once in 5 years and once in 20 years (Could occur at some time))	<b>D</b>	<b>LOW 1D</b>	<b>LOW 2D</b>	<b>MEDIUM 3D</b>	<b>MEDIUM 4D</b>	<b>HIGH 5D</b>
	<b>Rare</b> (Once in more than 20 years (May occur in exceptional circumstances))	<b>E</b>	<b>LOW 1E</b>	<b>LOW 2E</b>	<b>LOW 3E</b>	<b>MEDIUM 4E</b>	<b>MEDIUM 5E</b>

Figure 3: ARTC Risk Matrix

## 11.4 Evaluate risks

The purpose of risk evaluation is to document and implement decisions, based on the outcomes of the risk analysis, about the degree of control required for each risk and risk priorities with a view to eliminating the risk or minimising risk to the lowest possible level.

Risk evaluation involves comparing the level of risk found during the analysis process with risk criteria established when the context was considered. This activity is intended to determine:

- a. degree of control required for each risk; and
- b. if the activity associated with the risk should be undertaken.

All risks identified during a formal risk assessment will require evaluation. Each risk entry documented must contain information on responsibility for existing controls and treatments.

### 11.4.1 Ensuring Safety So Far As Is Reasonably Practicable (SFAIRP)

For risks with safety impacts, ARTC adopts the So Far As Is Reasonably Practicable (SFAIRP) principle when addressing the evaluation and control phase of the assessment. The basic principle of SFAIRP is to consider all possible additional controls and provide justification for adopting or rejecting those identified additional controls.

Stakeholders and participants with the appropriate level of experience and knowledge must be involved in the decision making, and all decisions must be documented against the risk entry.

Further detail on the principles and practical application of SFAIRP is provided in RSK-WI-001 Application of Risk Management.

## 11.5 Treat Risks

Evaluation of the risk may identify that further controls are required or that further actions are needed to strengthen or improve effectiveness of current controls.

Further treatment of the risk allows for one (or more) of the following to be achieved:

- Avoid the risk
- Remove the risk source
- Change the likelihood
- Change the consequence
- Share the risk
- Accept the risk

Once determined, Proposed Treatments and any associated actions are to be recorded against the relevant risk. Further detail on determining treatments and actions is provided in RSK-WI-001 Application of Risk Management.

## 11.6 Monitor and review

There are three types of reviews that may be conducted for a risk:

- Periodic scheduled review of the risk;
- Unscheduled review of the risk;
- Review of a specific risk control.



**11.6.1 Periodic Scheduled Risk Review**

Risk Owners are required to regularly review risks within their control, and to raise issues of concern with their Executive.

ARTC has in place standing committees with risk management responsibility:

- Board Risk Committee – review and oversight of very high and high strategic, enterprise wide and operational risks;
- Various Board Committees – oversight of strategic risks, as defined in RSK-GP-006 Board Committee Risk Governance Map;
- Executive Committee – management of all strategic risks;
- Operational Safety and Environment Review Committee – monitors and reviews WHS, Rail Safety, and Environmental risks.

Through these committees, the CEO and Board are made aware of risk issues and ongoing risks may be monitored and reviewed.

Review periods shall be developed in accordance with Table 1. Where appropriate, more frequent review periods may be utilised.

*Note: An ERMS is being progressively implemented across ARTC with risks being progressively transferred into the system. Review and reassessment of risks in accordance with the new matrix will be required and for many risk entries, additional information may be required to be populated and/or relationship mapping undertaken. Following transfer, review to complete this activity should be undertaken within six months of the risk owner receiving system training. Review dates may be extended beyond the specified timeframes to enable this to be undertaken.*

Review requirements for *project related risks* tend to be much shorter and are to be determined and documented, as outlined in RSK-WI-005 Project Risk Management.

Further information on scheduled review of risks is provided in RSK-WI-001 Application of Risk Management.

RISK LEVEL	REVIEW PERIOD
Very High	Very High Risks should be reviewed at a period no longer than every six months unless review is triggered earlier (i.e. as a result of incident investigation, audit findings etc.).
High	High risks should be reviewed at a period no longer than every six months unless review is triggered earlier (i.e. as a result of incident investigation, audit findings etc.).
Medium	Medium risks should be reviewed at a period of no longer than every 24 months unless review is triggered earlier (i.e. as a result of incident investigation, audit findings etc.).
Low	Low risks should be reviewed at a period of no longer than every 36 months unless review is triggered earlier (i.e. as a result of incident investigation, audit findings etc.).

*Table 1: ARTC Risk Review Requirements*

*Note: The requirement to report high and very high current risk levels risks to the Board Risk Committee applies to risks assessed using the Corporate Risk Matrix. Where a project risk is determined to be high or very high, it shall only be included in this reporting if the potential risk to ARTC (arising from the project risk) is also high or very high*



### 11.6.2 **Unscheduled Review of a Risk**

It may be appropriate to review a risk prior to the due date of the scheduled review. Examples of where this may be appropriate include where operational changes have occurred that may impact the risk, following a relevant incident, or where relevant audit findings have been identified.

Further information on unscheduled review of risks is provided in RSK-WI-001 Application of Risk Management.

### 11.6.3 **Review of Specific Risk Controls**

Review of a control should take place soon after implementation and then at intervals appropriate for the level of risk and anticipated adequacy and effectiveness of the control. Depending on the type of control, monitoring and review mechanisms could include:

- Formal audit or inspection
- Data monitoring / statistical analysis
- Investigation, following a relevant incident
- Other methods, for example obtaining feedback from stakeholders and end users.

Records of control reviews are to be documented. Further information on reviewing controls and determining effectiveness is also provided in RSK-WI-001 Application of Risk Management.

## 12 Risk Assessment Outcomes, Records and Reports

### 12.1 Communication of Risk Assessment Outcomes

Following risk assessment, action and escalation of identified risks is to occur in accordance with Table 2.

RISK LEVEL	ACTION REQUIRED	ESCALATION
<b>Very High</b>	<p>Immediate action is required and implementation of additional controls is obligatory.</p> <p>Immediate notification to the (existing or proposed) Risk Owner, relevant member of Executive, relevant General Manager(s) (or equivalent), and any affected or impacted party.</p> <p>Immediately discuss control actions and options, and determine required actions. Agreed actions are to be promptly implemented by the nominated responsible person.</p> <p><b>Where a new risk is identified that has safety and/or environmental impacts that have been assessed as Very High, or where an existing risk has been reassessed as having Very High safety and/or environmental impacts, the related activity is to cease until approval to resume has been provided by the relevant Executive.</b></p>	<p>The Chief Executive Officer is to be informed immediately and the Executive made aware of the risk as soon as practicable.</p> <p>Reported to the Board Risk Committee.</p>
<b>High</b>	<p>Senior Management attention is needed and expected.</p> <p>Discuss control actions and options, and determine required actions. Agreed actions are to be promptly implemented by the nominated responsible person.</p> <p>The relevant Executive will expect regular feedback on status/progress of risk controls.</p>	<p>The Executive is to be made aware of the risk as soon as practicable.</p> <p>Reported to the Board Risk Committee.</p>
<b>Medium</b>	<p>Not specifically brought to the attention of the Executive.</p> <p>Control actions to be implemented as agreed.</p>	<p>Included in normal reporting processes.</p>
<b>Low</b>	<p>Neither ARTC Management nor the Executive require any special reporting requirements.</p> <p>Control actions to be implemented as agreed.</p>	<p>Normal ARTC business practices in place are sufficient to manage this risk.</p>

*Table 2: ARTC Action and Escalation Requirements*

Action and escalation requirements for project related risks are to be determined and documented, as outlined in RSK-WI-005 Project Risk Management.

*Note: The requirement to report high and very high current risks to the Board Risk Committee applies to risks assessed using the Corporate Risk Matrix. Where a project risk is determined to be high or very high, it shall only be included in this reporting if the potential risk to ARTC (arising from the project risk) is also high or very high*

### 12.2 Risk Registers

The purpose of a risk register is to provide a record of all identified risks relating to the objectives of the organisation, business unit or project. Risk registers document the range of control measures and plans in place to address identified risks. Risk registers act as a tool in support of managers when managing risks and help drive risk management activities.

All risk registers within ARTC are to be maintained in ARTC's Enterprise Risk Management System (ERMS). The ERMS:

- enables management of the register of risks related to its business activities;
- is intuitive, fast, stable, accessible and user friendly;
- promotes and enables sharing of risk information;
- provides clear visibility and oversight of risks for risk owners;
- provides efficiencies by reducing unnecessary duplication in risk identification and assessment activities; and,
- enables active management of risks and actions through alerts and notifications.

Risk Owners are responsible for all content recorded for risks they own, including details regarding causes, consequences, controls and the assessed risk levels. By approving a risk the Risk Owner is acknowledging that they agree and approve all the information held on that risk entry.

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*Note: The Enterprise Risk Management System (ERMS) is being progressively implemented across ARTC. Project risks not yet transferred into the ERMS will continue to be managed via stand-alone project risk registers until the project has been transitioned into the ERMS, where transition is deemed appropriate, or until the project end. Decisions will be made on a case by case basis as to whether project registers will be transitioned into the ERMS*

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### 12.2.1 Specialised Risk Registers

Specialised Risk Registers are in place where it is appropriate to capture specific information that is outside of the scope of general risk registers, or where additional functionality and requirements may exist. Examples of these types of registers include the Geo-tech register.

### 12.3 Risk Assessment Reports & Supplementary Information

On occasion, it may be appropriate to record additional supplementary information related to a risk or risk workshop. RSK-FM-002 Risk Assessment Report Template is a non-mandatory template that may be utilised for this purpose.

Where supplementary information has been identified or developed, an appropriate reference is to be made within the relevant risk and/or workshop entry through attachment of the document, inclusion of a hyperlink or appropriate notes referencing the location of the information.

### 12.4 Risk Assessment Library

A risk assessment library exists for the storage of historical risk assessments undertaken prior to the implementation of the ERMS.

Access to the risk assessment library is limited for confidentiality reasons however requests for access to historical stored information may be made to the Corporate Risk Manager.

### **13 Audit and Review**

The Group Executive Corporate Services & Safety or delegate will audit the risk management process and report the findings to the Executive Committee.

The Group Executive Corporate Services & Safety will review this procedure as per review processes outlined in the Safety Management System.

In addition to reviewing this procedure, review will be undertaken of the ARTC Risk Matrix, at least biennially.

During review of the ARTC Risk Matrix, consideration will be given as to whether the risk criteria:

- is able to be understood;
- continues to provide an accurate reflection of the potential consequence that may be experienced by the organisation;
- remains appropriate for ARTC operations;
- is consistent with contemporary risk management practice; and
- is consistent with ARTC's risk appetite.

The Executive Committee has responsibility for approving any changes arising from such review.

**APPENDIX 1**

The ARTC Risk Matrix as documented in Section 11.3.1 is being progressively implemented in conjunction with the implementation of the Enterprise Risk Management System (ERMS).

Risks not yet transferred into the ERMS are to continue to be assessed utilising either the risk matrix depicted below, or the relevant project matrix, whichever is deemed applicable.

ARTC Risk Criterion (Aligned to ARTC Business Risk Profile - SAFERR)								
Risk Category			Consequence					
Safety category is focussed on Impact to People	<b>S: Safety</b>		No Medical Treatment Required	Lost Time Injury Results (LTI) OR Medical Treatment Required	Serious Injury Occurs	Single Fatality Occurs	Multiple but Localised Fatalities Occur	
Asset category is focussed on Operations Impact, Track, Systems (Hardware & Software) and Human Assets	<b>A: Assets</b>		<6hrs Track Closure	>6hrs but <24hrs Track Closure	>24hrs but <48hrs Track Closure	>48hrs but <5 Days Track Closure	>5 Days Track Closure	
Focussed on Financial Impact Cash flow, liquidity, Capital, Asset Value, Procurement & Contracts related exposure	<b>F: Financial</b>		<\$250K	>\$250K but <\$2M	> \$2M but <\$10M	>\$10M but <\$50M	>\$50M	
Focussed on Environment Impact Heritage, Flora & Fauna, Archaeology & Indigenous, Pollution and Amenity (Public)	<b>E: Environment</b>		Contained Environmental Damage - fully recoverable (no cost or ARTC action required)	Isolated Environmental Damage - minimal ARTC remediation required	Localised/Clustered Environmental Damage - requiring remediation	Considerable Environmental damage - requiring remediation	Widespread long term or permanent damage to the environment - remediation required	
Focussed on Regulatory/Legislation Exposure Non-compliance & Our Licence to Operate	<b>R: Regulatory</b>		Minimal or no Regulatory involvement	Notice to Produce Information	Improvement Notice or Threatened Action	Prohibition Notice or Fine/s	Prosecution of the company and/or its office holders	
Focussed on Reputational Exposure Customer Dissatisfaction, Shareholder Support, Service Quality & Reliability, Public Image and Stakeholder Attitudes	<b>R: Reputation</b>		Isolated event able to be resolved [ <7Days ]	Management intervention required [ >7days but <3mths ]	Tactical (Business Unit / Divisional) intervention required [ >3 months but <18mths ]	Strategic intervention required [ >18mths but <3years ]	Corporate Loss of Shareholder and/or Customer support (tangible business impact) >3years	
			<b>Descriptor</b> →	<b>Not Significant</b>	<b>Minor</b>	<b>Moderate</b>	<b>Major</b>	<b>Extreme</b>
Likelihood		Descriptor ↓	Level	1	2	3	4	5
Description	Frequency of Occurrence							
Is expected to occur in most circumstances	Once per month	<b>Almost Certain</b>	<b>A</b>	<b>MED - 1A</b>	<b>MED - 2A</b>	<b>HIGH - 3A</b>	<b>V HIGH - 4A</b>	<b>V HIGH - 5A</b>
Will probably occur in most circumstances	Between once a month and once a year	<b>Likely</b>	<b>B</b>	<b>LOW - 1B</b>	<b>MED - 2B</b>	<b>HIGH - 3B</b>	<b>V HIGH - 4B</b>	<b>V HIGH - 5B</b>
Might occur at some time	Between once a year and once in five years	<b>Possible</b>	<b>C</b>	<b>LOW - 1C</b>	<b>LOW - 2C</b>	<b>MED - 3C</b>	<b>HIGH - 4C</b>	<b>HIGH - 5C</b>
Could occur at some time	Between once in 5 years and once in 20 years	<b>Unlikely</b>	<b>D</b>	<b>LOW - 1D</b>	<b>LOW - 2D</b>	<b>LOW - 3D</b>	<b>MED - 4D</b>	<b>MED - 5D</b>
May occur in exceptional circumstances	Once in more than 20 years	<b>Rare</b>	<b>E</b>	<b>LOW - 1E</b>	<b>LOW - 2E</b>	<b>LOW - 3E</b>	<b>LOW - 4E</b>	<b>MED - 5E</b>

Figure 4: Transitional ARTC Risk Matrix for non-project risks