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**DRAFT ENVIRONMENTAL MANAGEMENT PLAN (SUMMARY)** 

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# 32 Draft Environmental Management Plan (Summary)

#### 32.1 Introduction

Arrow has prepared a draft Environmental Management Plan (EM Plan) as part of the Project EIS which is provided in full as Appendix Z.

This draft EM Plan forms part of the EIS and as such, has been developed in accordance with the Project ToR, but can also be read as a standalone document. The EHP (previously DERM) *Guideline for Preparing an Environmental Management Plan for Coal Seam Gas Activities* (DERM, 2010) was also used to inform the content and structure of this plan. A cross reference to the locations where each of the requirements of the ToR has been addressed is given in Appendix B which references both the study chapters (Sections 1 through 34) and/or Appendices (A through EE).

The purpose of this draft EM Plan is to detail environmental values, potential impacts to these values from Project activities and environmental protection commitments for the Project to implement during planning and design, construction, operation and decommissioning, to enable protection of the identified environmental values.

This draft EM Plan will be utilised to inform a subsequent Operational EM Plan that will be prepared to support the applications for EA or amendments to existing EA's for the Project.

The key objectives of this draft EM Plan are to:

- Document acceptable environmental protection commitments to manage potential impacts on the environmental values as a result of proposed activities and, in doing so, assist the administrating authority decide on the approval conditions for the Project EIS; and
- Provide the community with evidence that the environmental management of the Project is appropriate.

#### 32.2 Environmental Management Plan Scope

The draft EM Plan describes Arrow's approach to the management of environmental impacts associated with Project activities, from planning and design through to decommissioning and rehabilitation. In accordance with the EP Act, the EM Plan will contain the sections outlined in Table 31-2 below.



## Section 32 Draft Environmental Management Plan (Summary)

**Table 32-1** Environmental Management Plan Sections

Section Number	Section Name	Purpose
Z.1	Introduction	Provides a background on the Project and the proponent;
		Describes the purpose and scope of the EM Plan;
		Outlines the relevant environmental framework;
		Identifies environmentally relevant activities;
		Describes relevant Petroleum tenures and authorities; and
		Identifies relevant stakeholders.
Z.2	Environmental Management System	Outlines Arrow's Health, Safety and Environmental Management System (HSEMS). This includes the following aspects:
		Arrow's environmental policy;
		Roles and responsibilities;
		Inductions and training;
		Monitoring and reporting;
		Incidents and emergencies;
		Inspections, reviews and audits;
		Continuous improvement and corrective action;
		Community concerns and complaints; and
		Document control and records management.
Z.3	Description of Petroleum Activities	Describes the relevant petroleum activities associated with the Project and the target resource. This section also describes the Project in terms of:
		The major infrastructure components (including water treatment and
		storage);
		Power generation facilities; and
		The supporting infrastructure and logistics.
Z.4	Environmental Values, Impacts and Management Actions	Identifies the existing environment and environmental values in the Project area, and Arrow's approach to managing potential environmental impacts that are associated with Project activities. Environmental protection commitments are also identified.
		This section is broken down into the following environmental elements:
		Section Z.4.1 – Air Quality;
		Section Z.4.2 – Geology, Landform and Soils;
		Section Z.4.3 – Landscape and Visual Amenity;
		Section Z.4.4 – Terrestrial Ecology;
		Section Z.4.5 – Aquatic Ecology;
		Section Z.4.6 – Groundwater;
		Section Z.4.7 – Surface Water;
		Section Z.4.8 – Coal Seam Gas Water;
		Section Z.4.9 – Dams;
		<ul> <li>Section Z.4.10 – Noise and Vibration;</li> </ul>
		<ul> <li>Section Z.4.11 – Waste Management;</li> </ul>



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Section Number	Section Name	Purpose
		<ul> <li>Section Z.4.12 – Preliminary Hazard and Risk;</li> <li>Section Z.4.13 – Indigenous Cultural Heritage;</li> <li>Section Z.4.14 – Non-Indigenous Cultural Heritage;</li> <li>Section Z.4.15 – Roads and Transport.</li> </ul>
Z.5	Decommissioning and Rehabilitation	This section outlines the final land use options, summarises the decommissioning and rehabilitation goals and objectives, and identified monitoring, auditing and reporting requirements.

As a separate document, Arrow has also developed a draft social impact management plan (SIMP). The SIMP was prepared based on the Guideline to Preparing a Social Impact Management Plan (DIP, 2010) and provides avoidance, mitigation and management measures to address the potential impacts identified in the social impact assessment conducted as part of the Project EIS. The SIMP is provided as Appendix V of the EIS.

