

## 7.1 Introduction

The likelihood of an environmental impact occurring can be described in terms of its probability. Overlaying this probability is the need to recognise that a degree of uncertainty may be associated with possible environmental impacts, particularly during the initial risk assessment process. Where there is scientific uncertainty, a cautious approach will identify a higher level of risk providing a conservative assessment.

Each identifiable impact can be assigned an occurrence rating, between being 'rare' through to 'almost certain'. In simplifying the possible impacts for the purpose of an environmental risk assessment, an element of subjectivity must also be introduced.

An environmental risk assessment of the Project was undertaken to inform the Environmental Assessment process. This chapter outlines the key findings from this assessment as they relate to environmental risk, and details the wider methodology utilised to carry out the environmental risk assessment for the proposed Project as presented in this Environmental Assessment.

## 7.2 Methodology

The issues raised by stakeholders and local residents informed AGL's consideration of risk and the technical investigations carried out as part of the assessment process. A number of additional sources were used by the AGL Project team to ascertain the level of environmental risk associated with the Project, including the planning and legislative requirements affecting the site, the environmental context of the Project area and the region, and the findings of the specialist environmental studies undertaken for the preparation of this Environmental Assessment. Additionally, the assessment was based on existing hazard management plans and other operational documents that are used by AGL in the day to day management of similar facilities.

A Preliminary Hazard Analysis (refer to **Chapter 17**) was also undertaken as part of the Environmental Assessment for the proposal.

### 7.2.1 Issues raised by Stakeholders

Issues that were raised by key agency stakeholders were considered to be crucial in assisting to define the level of environmental risk associated with the Project. The issues raised by key agency stakeholders are reflected in the Director-General's Requirements (**Chapter 1 Introduction**). The issues include:

- air quality related issues;
- greenhouse gas impacts;
- traffic and transport related impacts;
- surface and groundwater impacts;
- visual impacts;
- noise related impacts;

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- ecological impacts;
- impacts associated with hazards arising from the operation and expansion of the facility, such as fire, hazardous materials, etc; and
- impacts on neighbouring agricultural land uses.

Issues of concern to the wider community as communicated to AGL through the website, face to face meetings and the first of a number of planned Community Open Day events included the following (refer **Chapter 6 Consultation**):

- Noise and vibration concerns;
- Air Quality and emissions and odour impacts;
- Flora and Fauna impacts;
- Visual Impacts;
- Traffic impacts;
- Water sourcing and availability;
- Weed management;
- Generation of dust and other construction phase impacts;
- More general requests for information from AGL;
- Project justification queries (particularly about renewable energy alternatives);
- Enquiries regarding design safety;
- Land use change and future use of the AGL site;
- Fire hazard and hazard reduction burning;
- Property rental and other local business opportunities.
- Local employment generation and opportunities;
- Accommodation provision for the workforce; and
- AGL contribution to the community.

### 7.3 Summary of Potential Environmental Risks

The identification and prioritisation of environmental issues associated with the Project has been based on the consideration of:

- the planning and legislative requirements affecting the site;
- the environmental context of the Project area and the region;
- the outcomes of the community and stakeholder consultation undertaken thus far;

- a review of previous investigations of the Project site; and
- the findings of the specialist environmental studies undertaken for the preparation of this Environmental Assessment.

Based on these considerations, a summary of the environmental risk analysis for the Project has been prepared and is presented in **Table 7-1** below. Further to this, **Table 6-2** within **Chapter 6 Consultation** outlines the issues identified to date during community consultation, and where and how these concerns have been considered within the Environmental Assessment.

**Table 7-1 Summary of Environmental Risk**

Issue	Environmental Risk	Likelihood of Occurrence	Where issue is addressed in EA
Agriculture related impacts	Risk of impacts on existing and neighbouring agricultural land uses resulting from the Project.	Low. AGL has purchased the Project site, with less than 5 % (approximately) of the total Site required for the Project. Agricultural land uses (such as grazing) can continue on most areas of the Site, and the Project would not hinder the ongoing agricultural land uses of neighbouring properties.	Refer <b>Chapter 16</b>
Surface Water	Contamination of surface water.	Possible without control measures, but unlikely due to proposed mitigation measures.	Refer <b>Chapter 14</b>
Groundwater	Contamination of ground water.	Unlikely without control measures, less so due to proposed mitigation measures.	Refer <b>Chapter 8</b>
Noise and Vibration	Increased noise impacts above the OEH guidelines. Impacts on local residents.	Unlikely due to the large buffer distance between both the Project site and sensitive receivers.	Refer <b>Chapter 12</b> and <b>Appendix G</b>
Air quality	Emission of air pollutants and odour above the OEH guidelines.	Unlikely based on air assessments undertaken.	Refer <b>Chapter 9</b> and <b>Appendix C</b>
Greenhouse gas emissions and energy use	Excessive energy consumption and related GHG emissions compared to similar facilities.	Unlikely, due to standardised plant design. Further total emissions are low when compared to coal fired power stations of similar generating capacity. Furthermore, as a peaking power station, the site will only be used for a relatively low proportion of the year.	Refer <b>Chapter 9</b> and <b>Appendix E</b>
Traffic and transport	Significant impacts on local Dalton community, impacting levels of service and traffic flow.	Low, due to the relatively low level of truck movements, and the fact that most traffic impacts will be short term in nature, and overall levels of service will not be adversely impacted. Most traffic movements will avoid the Dalton township.	Refer <b>Chapter 11</b> and <b>Appendix F</b>
Visual	Significant visual impacts resulting from the Project on sensitive receptors.	Low. Site section study that was carried out selected location of least visual impact. Few sensitive receivers given relatively isolated location. Significant buffer between Project site and visual receptors.	Refer <b>Chapter 10</b> and <b>Appendix K</b>

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Issue	Environmental Risk	Likelihood of Occurrence	Where issue is addressed in EA
Flora and Fauna	Negative impact on biodiversity.	Possible, although Project site and infrastructure routes have been selected to reduce impacts on biodiversity. Ecological assessment has been undertaken identifying impacts on flora and fauna. Project includes avoidance, mitigation measures, and a proposed offset area within the Site. Consequently, it is considered that the overall biodiversity of the local area will be 'maintained or improved'.	Refer <b>Chapter 13</b> and <b>Appendix H</b>
Water management	Definition of water source. Impacts on receiving waters.	Possible as a range of water sources have been identified. Further studies to be undertaken relating to groundwater use and potential for supply by water pipeline. Management measures to be implemented to minimise potential impact on receiving waters.	Refer <b>Chapter 14</b>
Socio economic	Negative impact on existing social conditions and on economic vitality of the Dalton area.	Rare as the Project will generate additional employment demand, while amenity impacts are low.	Refer <b>Chapter 17</b>
Hazard and risk	Increased risk to surrounding land uses from leak of natural gas.	Rare. Preliminary Hazard Analysis indicates that risk to surrounding land use is low as there are no significant land uses or population within close proximity to areas that may be impacted by explosion or fire and the underlying risk of an event is low.	<b>Chapter 18</b> and <b>Appendix J</b>
Bushfire risk	Increased bushfire risk to surrounding land uses from the Project.	Possible, although Preliminary Hazard Analysis has considered that further assessment is not required to address fire as there are adequate design controls. Notwithstanding this, AGL have committed to further assessment of the impact of bushfires on the power station and bushfire ignition threats from the power station.	Refer to <b>Chapter 18</b> .
Cumulative impacts	Possible cumulative impacts include noise, air quality and odour, surface water, groundwater, and traffic.	Possible without adequate control measures and management techniques.	Each respective Environmental Assessment chapter considers various impacts arising from the Project.

## 7.4 Conclusion

This chapter has outlined the most significant potential environmental risks associated with the Project. The potential risks were assessed for likelihood of occurrence and reference included for where further assessment is presented for each issue within this Environmental Assessment.

The hazard and risk assessment carried out and summarised in **Chapter 18** concluded that the Project would not introduce any significant risks on surrounding land uses.