8. Environmental risk analysis

8.1 Key issues identified

The key environmental issues associated with the project have been identified through a review of the Director-General of the Department of Planning's environmental assessment requirements (DGRs) for the project as well as input from various government agencies and community consultation. The DGRs (Appendix A) focus on the following key issues:

- strategic justification
- greenhouse gas generation
- air quality impacts
- noise impacts
- visual amenity impacts
- flora and fauna
- heritage impacts
- hazards and risk.

These issues are assessed in full in Chapter 9, along with monitoring and mitigation measures. An assessment of the feasibility, effectiveness and reliability of proposed measures, and any residual impacts after these measures have been implemented, is also provided.

The environmental risks associated with the project are summarised in Table 8-1. Each issue is listed with a cross-reference to the relevant section of the Environmental Assessment in which it is discussed. The environmental risk analysis addresses the environmental impacts during construction and operation of the proposed power station, gas supply pipeline and compressor station.

8.2 Risk rating methodology

The environmental risk analysis identifies the risks associated with each of the key issues. The 'initial' risks associated with the project are considered prior to implementation of appropriate mitigation measures. The 'overall' risk considers the risks associated with the project following implementation of the identified mitigation measures.

The risks have been categorised as either negligible, low, medium or high. Issues identified as being negligible or low risk are those that are common risks for independent projects. As such, the mitigation measures associated with them are standard measures. Issues classified as having high initial risk (and some medium risk) tend to be more project-specific, and as a result, comprehensive studies have been undertaken and technical papers prepared to assess the potential impacts and identify appropriate mitigation measures.

Table 8-1 Summary of environmental risks for the project

Issue	Identified risks	Initial project risk (before mitigation)	Risk mitigation measures	Overall project risk (after mitigation)	Section of EA
Key issues					
Greenhouse gas generation	**Power station** *Construction* Greenhouse gases would be produced by: ▪ energy use, as fuel to operate plant and equipment, and as electricity consumed for site compounds and any batching plants ▪ vegetation clearing, although this would not be material to greenhouse gas calculations due to the limited extent of vegetation removal required ▪ emissions embodied in the materials used for construction, such as carbon dioxide (CO_2) generated during cement manufacture, or energy consumed in steel production.	Low	Emission of greenhouse gases during construction would be managed through conventional management measures. Planning and implementing an efficient construction program would minimise greenhouse gas emissions.	Low	Section 9.1.1
	Operation The project would produce greenhouse gases, with associated potential climate change impacts.	Low	Efficient operation of the power station, including ensuring appropriate maintenance, would reduce gas consumption for the equivalent power output, thus reducing greenhouse gas emissions and greenhouse gas intensity. In the context of comparable fossil-fuel powered generation (e.g. coal-fired), the proposed power station provides a much lower greenhouse intensity alternative, less than half that of equivalent coal-fired generation.	Low	

Issue	Identified risks	Initial project risk (before mitigation)	Risk mitigation measures	Overall project risk (after mitigation)	Section of EA
	Gas pipeline *Construction* Greenhouse gases would be produced by: ▪ energy use, as fuel to operate plant and equipment, and as electricity consumed for site compounds and any batching plants ▪ vegetation clearing — cleared vegetation would decay or burn to release CO_2, with limited methane emissions if allowed to decay under anoxic conditions ▪ emissions embodied in the materials used for construction, such as CO_2 generated during cement manufacture, or energy consumed in steel production.	Low	Emission of greenhouse gases during construction would be managed through standard management measures, including: ▪ adequate maintenance and efficient operation of all equipment ▪ no unnecessary revving or idling of engines ▪ staging works to minimise double-handling (i.e. duplication of soil movements) ▪ preservation of existing on-site vegetation, and revegetation where feasible on completion of construction ▪ preference to locally sourced materials during procurement.	Low	Section 9.1.2
	Operation Gas leaks along the pipeline could contribute to emission of greenhouse gases.	Negligible	The pipeline has been designed for a loss rate of <0.03%. Loss rates in Australia are usually <0.05%. Implementation of industry practices would minimise greenhouse gas emissions.	Negligible	

Issue	Identified risks	Initial project risk (before mitigation)	Risk mitigation measures	Overall project risk (after mitigation)	Section of EA
Air quality	**Power station** *Construction* Dust would be generated during construction from: ▪ erosion of stockpiles and exposed areas on-site ▪ handling, transfer and storage of materials ▪ heavy earthwork operations such as excavation ▪ removal of vegetation, re-contouring of land and soil exposure for reseeding ▪ vehicle movements along internal access and haul roads. The project has the potential to increase emissions to air through the operation of construction equipment and vehicles.	Low	Construction impacts would be addressed through the application of project-specific management measures (see Section 9.2.6). Some sensitive receptors would experience dust impacts, however, these would be negligible. Emissions from construction equipment and vehicles would be unlikely to result in air quality impacts.	Negligible	Section 9.2.4
	Operation The project would generate pollutants, including oxides of nitrogen (NO_x), sulfur dioxide (SO_2), particulate matter (PM_{10}) and carbon monoxide (CO).	Medium	Operational impacts would be addressed through the application of project-specific management measures (see Section 9.2.6). The gas turbines would use dry low NO_x technology and, during normal operational mode, would be expected to achieve best practice NO_x emissions.	Low	

Issue	Identified risks	Initial project risk (before mitigation)	Risk mitigation measures	Overall project risk (after mitigation)	Section of EA
	Gas pipeline *Construction* Dust would be generated during construction from: ▪ erosion of stockpiles and exposed areas on-site ▪ handling, transfer and storage of materials ▪ heavy earthwork operations such as excavation ▪ removal of vegetation, re-contouring of land and soil exposure for reseeding ▪ vehicle movements along internal access and haul roads. The project has the potential to increase emissions to air through the operation of construction equipment and vehicles.	Low	Construction impacts would be addressed through the application of project-specific management measures (see Section 9.2.6). Negligible dust impacts would be experienced at some sensitive receptors. Emissions from construction equipment and vehicles would be unlikely to result in air quality impacts.	Negligible	Section 9.2.4
	Operation Operation of the compressor station would generate pollutants including NOx, SO_2, PM_{10} and CO.	Low	Operational impacts would be addressed through the application of project-specific and industry standard management measures (see Section 9.2.6).	Negligible	
Noise	**Power station** *Construction* It is expected that noise levels during some construction activities (particularly clearing and excavation) would exceed the adopted noise goals at some sensitive receptors.	Medium	Standard environmental management measures would be implemented to mitigate potential construction noise impacts (see Section 9.3.7).	Low	Section 9.3.4

Issue	Identified risks	Initial project risk (before mitigation)	Risk mitigation measures	Overall project risk (after mitigation)	Section of EA
	Operation The power station has the potential to increase noise levels at several nearby residences. Assessment results indicate that during operation of the power station, noise levels would exceed adopted noise design goals at some sensitive receptors during neutral and/or adverse meteorological conditions.	High	Operational impacts would be addressed through the application of project-specific and industry standard management measures (see Section 9.3.7). Careful siting of plant to minimise noise impacts was undertaken during project development. Where noise above Department of Environment and Climate Change (DECC) noise goals is experienced, negotiation and consultation with affected property owners would ensure best management outcomes.	Medium	
	Gas pipeline *Construction* It is expected that noise levels during some construction activities (particularly ground clearance and excavation) would exceed the adopted noise goals at some sensitive receptors. However, impacts at any one location would be short term, as construction activities would move progressively along the pipeline route.	Medium	Standard environmental management measures would be implemented to mitigate potential construction noise impacts where possible (see Section 9.3.7).	Medium	Section 9.3.5
	Operation No risks.	Negligible		Negligible	
Visual impact	**Power station** *Construction* Construction activities, equipment and traffic would be visible to vehicle traffic passing along Gulgong Road.	Medium	Standard mitigation measures, such as the erection of temporary fencing, would be implemented.	Low	Section 9.4.2

Issue	Identified risks	Initial project risk (before mitigation)	Risk mitigation measures	Overall project risk (after mitigation)	Section of EA
	Operation The four exhaust stacks would be a maximum height of 35 metres. These stacks may be visible from nearby residences and long range views may also be possible from the township. The plant would be visible to traffic travelling along Gulgong (Mudgee) Road. Overall, the site is well suited as it provides the opportunity for the power station to be located within a depression and thus 'absorbed' in the landscape.	Medium-High	The design of the power station would take visual amenity into account and standard mitigation measures (i.e. colouring the structures to blend with environment and vegetation screening) would be implemented.	Medium	
	Gas pipeline *Construction* The majority of the pipeline would be built within rural private properties; the construction activities, equipment and traffic would not generally be highly visible to vehicle traffic passing along nearby roads. The pipeline would have a visual impact on the land owners through whose properties the pipeline would pass. Goobang National Park is a highly sensitive location in terms of visual impacts. Some visual impacts would be experienced during construction of the pipeline within the existing road reserve.	Low	Construction activities would move progressively along the pipeline route. As such, any visual impact created would be short term.	Low	Section 9.4
	Operation The pipeline would be buried beneath the ground surface and the disturbed construction corridor would be returned to its pre-construction condition.	Negligible		Negligible	

Issue	Identified risks	Initial project risk (before mitigation)	Risk mitigation measures	Overall project risk (after mitigation)	Section of EA
Biodiversity	**Power station** *Construction* Construction would require some vegetation clearing (paddock trees), which may lead to direct mortality of plants and less mobile animals.	Medium	Construction of the power station would be unlikely to result in a significant impact to any endangered ecological community (EEC) or threatened species. Impacts would be managed following the 'avoid, minimise, mitigate, compensate' hierarchy. Management measures would include limiting the extent of clearing, standard erosion and sedimentation controls, and revegetation and rehabilitation (see Section 9.5.3).	Low	Section 9.5.1
	Operation No risks.	Negligible	Operation of the power station would be unlikely to result in a significant impact to any EEC or threatened species.	Negligible	
	Gas pipeline *Construction* The pipeline construction footprint would be approximately 25 – 30 metres wide and would require the clearing of vegetation. This may result in removal of fauna habitat elements, habitat fragmentation and edge effects, direct mortality of plants and less mobile animals, dispersion of weeds, increase in pest species, and disturbance to aquatic habitats.	High	Construction of the gas pipeline would be unlikely to result in a significant impact to any EEC or threatened species. Impacts would be managed following the 'avoid, minimise, mitigate, compensate' hierarchy. Management measures would include limiting the extent of clearing, standard erosion and sediment controls, and revegetation and rehabilitation. Through sensitive areas, the construction corridor would be narrowed to minimise impact on biodiversity (see Section 9.5.3).	Medium	Section 9.5.2
	Operation No risks.	Negligible	Operation of the gas pipeline would be unlikely to result in a significant impact to any EEC or threatened species.	Negligible	

Issue	Identified risks	Initial project risk (before mitigation)	Risk mitigation measures	Overall project risk (after mitigation)	Section of EA
Aboriginal heritage	**Power station** *Construction* No risks — Aboriginal heritage survey did not identify any sites or objects of significance.	Negligible	Should any items of Aboriginal heritage significance be found during construction, work would cease immediately and Aboriginal heritage specialists would be consulted.	Negligible	Section 9.6.3
	Operation No risks.	Negligible		Negligible	
	Gas pipeline *Construction* Four objects/sites of Aboriginal heritage significance have been identified in the vicinity of the pipeline route.	Medium	Standard management measures would be implemented to avoid, restore and/or archive these objects/sites (see Section 9.6.4). Should any further items of Aboriginal heritage significance be found during construction, work would cease immediately and Aboriginal heritage specialists would be consulted.	Low	Section 9.6.3
	Operation No risks.	Negligible		Negligible	
Hazard and risk	**Power station** *Construction* Risks include those associated with general construction activities. Potential for air, noise and water pollution.	Medium	Construction impacts would be addressed through the implementation of industry standard management measures (see Section 9.7.5). Those mitigation measures implemented for air, noise and hydrology risks would further minimise potential impacts.	Low	Section 9.7.2
	Operation The main potential hazard is loss of containment. The detailed design of the power station would take this into account and mitigate for possible causes of a loss of containment.	Medium	Operational impacts would be addressed through the application of project-specific and industry standard management measures (see Section 9.7.5).	Low	

Issue	Identified risks	Initial project risk (before mitigation)	Risk mitigation measures	Overall project risk (after mitigation)	Section of EA
	Gas pipeline *Construction* Risks include those associated with general construction activities. Potential risk of accidents associated with changed road conditions, increased driver confusion and construction equipment. Potential hazards associated with construction near live electrical equipment.	Medium	Construction impacts would be addressed through the implementation of industry standard management measures (see Section 9.7.5). Mitigation measures implemented for air, noise and hydrology risks would further minimise potential impacts.	Low	Section 9.7.3
	Operation Potential hazards associated with the gas pipeline include pipeline leak and pipeline rupture. These hazards are standard to gas pipelines and would be managed appropriately by referring to the relevant standards and regulations.	Medium	Operation impacts would be addressed through the application of project-specific and industry standard management measures (see Section 9.7.5).	Low	
Traffic and transport	**Power station** *Construction* The project would result in increased traffic volumes along Gulgong Road during construction. A new access point would be required to provide for site access. The turbines would have specific transportation requirements due to their size and would require significant planning and coordination.	Medium	Construction impacts would be addressed through the implementation of project-specific management measures (see Section 10.1.4). Traffic control plans and a traffic management plan would be developed and implemented. A specialist heavy equipment transport contractor with specific experience in lifting and transporting this type of equipment would be engaged for the transport of the gas turbines.	Low	Section 10.1.1

Issue	Identified risks	Initial project risk (before mitigation)	Risk mitigation measures	Overall project risk (after mitigation)	Section of EA
	Operation Traffic volumes during operation are not expected to have a significant impact on traffic patterns or sensitive users. Vehicles would occasionally deliver and remove hazardous materials to and from the site.	Low	Operation impacts would be addressed through the implementation of project-specific and industry standard management measures (see Section 10.1.4).	Low	
	Gas pipeline *Construction* Construction would result in increased traffic volumes along the pipeline route. However, because construction activities would move progressively along the pipeline route, the traffic impact would be minimal. Pipeline construction would require access to private properties.	Low	Construction impacts would be addressed through the implementation of project-specific management measures (see Section 10.1.4). Traffic control plans and a traffic management plan would be developed and implemented. Consultation with land owners regarding vehicle access would ensure the best management outcomes.	Low	Section 10.1.2
	Operation The gas pipeline would need to be inspected on a weekly basis to monitor the status of the inlet facility and pipeline, and to ensure that no activities were taking place within the easement that could jeopardise the safety of the pipeline. These inspections would require vehicular access along the easement.	Low	Vehicular access along the easement would be established in consultation with land owners and relevant authorities.	Low	
Historic heritage	**Power station** *Construction* No features of historic heritage significance would be directly impacted by construction of the power station.	Low	Should any items of historic heritage significance be found during construction, work would cease immediately and historic heritage specialists would be consulted.	Negligible	Section 10.2.3
	Operation No risks.	Negligible		Negligible	

Issue	Identified risks	Initial project risk (before mitigation)	Risk mitigation measures	Overall project risk (after mitigation)	Section of EA
	Gas pipeline *Construction* No features of historic heritage significance would be directly impacted by construction of the gas pipeline.	Negligible	Should any items of historic heritage significance be found during construction, work would cease immediately and historic heritage specialists would be consulted.	Negligible	Section 10.2.3
	Operation No risks.	Negligible		Negligible	
Land use and property	**Power station** *Construction* Amenity impacts on surrounding properties as a result of construction (e.g. noise, air quality, visual) are discussed in the preceding sections.	Medium	Mitigation measures for greenhouse gas emissions, air quality, noise and visual impacts will be implemented, which would also address land use and property impacts.	Low	Section 10.3.1
	Operation Establishment of the power station would result in the permanent loss of approximately 45 hectares of land from its current agricultural use. However as a proportion of existing land supply, this loss is considered to be negligible.	Negligible	No specific mitigation measures.	Negligible	
	Gas pipeline *Construction* The project would require acquisition of easements from approximately 55 private land owners for the pipeline easement.	High	Consultation specialists undertook negotiations with land owners to optimise the pipeline route so as to minimise potential impacts. Ongoing consultation would assist in achieving the best management outcomes.	Medium	Section 10.3.2

Issue	Identified risks	Initial project risk (before mitigation)	Risk mitigation measures	Overall project risk (after mitigation)	Section of EA
	Operation Almost all of the land on which the pipeline would be located is under agricultural use. Once installed, the pipeline would not restrict normal agricultural operations and, as such, impact on land use would be negligible. Access to the pipeline easement would need to be maintained at all times; however, this is not expected to affect existing land uses.	Negligible	Ongoing access would be facilitated through the establishment of easements with individual land owners. Maintenance schedules would be agreed upon with land owners and relevant authorities.	Negligible	
Socio-economic impacts	**Power station** *Construction* Negative impacts include those associated with noise, dust and disruption to the local road network. However, there would be significant economic benefits associated with local and regional expenditure on services as well as increased local expenditure from the construction workforce.	Medium (negative impacts) Medium (positive impacts)	Mitigation measures for air quality, noise, visual and traffic and transport impacts would address socio-economic impacts.	Low (negative impacts) Medium (positive impacts)	Section 10.4.1
	Operation The power station would be unlikely to impact agricultural production on surrounding land. However, some negative impacts would be experienced (e.g. noise). Local expenditure from the full-time workforce, plus local maintenance expenditure, would provide a positive impact.	Medium	Mitigation measures implemented for noise and visual impact would address socio-economic impacts.	Low	

Issue	Identified risks	Initial project risk (before mitigation)	Risk mitigation measures	Overall project risk (after mitigation)	Section of EA
	Gas pipeline *Construction* Construction may temporarily interrupt existing farming practices, resulting in loss of income. However this would be minimal provided it is carefully managed. Significant economic benefits would be associated with local and regional expenditure on services as well as increased local expenditure from the construction workforce.	Medium (negative impacts) Medium (positive impacts)	Community consultation would be undertaken to ensure construction of the gas pipeline route minimises loss of income. Project-specific management measures would be implemented to further minimise impacts.	Low (negative impacts) Medium (positive impacts)	Section 10.4.2
	Operation No risks — Once operational the pipeline would have a negligible impact on economic activity.	Negligible		Negligible	
Geology and soils	**Power station** *Construction* Detailed geotechnical testing has not been undertaken; however, desk-based assessment of geotechnical conditions indicates that the site's geology and soils would be suitable for construction of the power station. Contamination risk is low due to the history of agricultural use of the site.	Low	The detailed design phase would comprehensively assess potential impacts on geology and soils through geotechnical studies. Construction impacts would be addressed through the implementation of project-specific and industry standard management measures.	Negligible	Section 10.5.1
	Operation Potential for corrosion of foundation structures due to acid sulfate soils would be subject to testing during the detailed design.	Low	The detailed design phase would comprehensively assess potential impacts on geology and soils through geotechnical studies. Operational impacts would be addressed through the implementation of project-specific and industry standard management measures.	Negligible	

Issue	Identified risks	Initial project risk (before mitigation)	Risk mitigation measures	Overall project risk (after mitigation)	Section of EA
	Gas pipeline *Construction* Potential issues associated with construction include encountering hard rock, soft soils, mineral deposits/mining leases and mine subsidence. These issues, as well as the potential for acid sulfate soils would be subject to testing during the detailed design.	Low	Where surface rock deposits are encountered, minor realignment of the pipeline would occur to avoid these deposits, provided that environmentally sensitive areas are avoided. Construction impacts would be addressed through the implementation of project-specific and industry standard management measures.	Negligible	Section 10.5.2
	Operation Subsidence of the pipeline could occur if the pipeline was constructed through geology and soil types that are susceptible to subsidence, or if the pipeline was constructed using techniques that did not allow for subsidence. Subsidence would increase risk to the integrity of the pipeline, thus increasing hazard.	Low	The detailed design phase would include comprehensive geotechnical assessments to identify areas of the proposed pipeline route that are susceptible to subsidence. The detailed design would take the findings of these assessments into account to ensure such areas are avoided or the design/construction of the pipeline through those areas is compatible with the potential for subsidence. Operational impacts would be addressed through the implementation of project-specific and industry standard management measures.	Low	
Hydrology and water quality	**Power station** *Construction* Construction activities have the potential to generate pollutants that could affect surface water quality. The primary impact would result from increased sediment loads into the unnamed tributary that flows through the site during storm events, would then affect water quality of the Macquarie River. Other pollutants may include hydrocarbons and chemicals from spoil and leakage, and general litter and gross pollutants.	Medium	Construction impacts would be addressed through the implementation of project-specific and industry standard management measures (see Section 10.6.4). An erosion and sediment control plan would be prepared and implemented to achieve best management outcomes and minimise impact on water quality.	Low	Section 10.6.2

Issue	Identified risks	Initial project risk (before mitigation)	Risk mitigation measures	Overall project risk (after mitigation)	Section of EA
	Operation Development of the power station would alter the drainage characteristics of the site (due to increased area of impermeable surface), with increased potential for impacts on water quality within the unnamed tributary and the Macquarie River. Site activities would generate wastewater and stormwater run-off, which could impact the unnamed tributary and the Macquarie River. The power station site is not prone to flooding. However, an increase in the proportion of impervious surfaces on the site would lead to an increase in the volume of stormwater run-off, which could impact the hydrology of the unnamed tributary and potentially increase peak flood levels.	Medium	A site stormwater management system would be developed during the detailed design phase. This would be developed in accordance with best practice standards and would ensure no discharges of wastewater from the site (see Section 10.6.4). Particular attention would be given to the provision of safe overland flow paths across the site, especially through areas that currently drain to the upper reaches of the unnamed tributary — an area that is proposed to be filled. Careful design of the drainage system would ensure this water is safely diverted around the site. Measures to prevent erosion and scour of any diversion channel or stormwater discharge point would also be incorporated. The stormwater management system would ensure no increase in peak stormwater flows from the site. Reuse of stormwater on-site would be maximised for purposes such as irrigation and cleaning.	Low	

Issue	Identified risks	Initial project risk (before mitigation)	Risk mitigation measures	Overall project risk (after mitigation)	Section of EA
	Gas pipeline *Construction* Increased sediment run-off could occur due to land disturbance, particularly open cut trenching across small watercourses and vegetation clearance. Open cut trenching across small watercourses to install the pipeline may require over-pumping of water. Such an activity may result in loss of water from the watercourses. Directional drilling under major watercourses would use bentonite slurry to lubricate equipment. This slurry could affect water quality of the watercourses. Construction of the pipeline would require hydrostatic testing for pipeline integrity and to ensure there are no leaks. One-third of the pipeline would be filled with water (approximately 3.3 megalitres) and tested. The water would then be transferred to the other sections of the pipe. Chemical treatment of the water to inhibit corrosion and kill biological organisms is such that reuse of the water following testing would be limited.	Medium	An erosion and sediment control plan would be prepared and implemented to achieve best management outcomes and minimise impact water quality (see Section 10.6.4). Open cut trenching of watercourses would be undertaken when watercourses are dry, wherever possible, to minimise the requirement to over-pump water. The water required to hydrotest the pipeline would, as much as possible, be re-used within the project site or on surrounding land (the latter in consultation with land owners). Any water unsuitable for reuse would be disposed of in accordance with environmental standards and project-specific wastewater management principles.	Low	Section 10.6.3

Issue	Identified risks	Initial project risk (before mitigation)	Risk mitigation measures	Overall project risk (after mitigation)	Section of EA
	Operation If the pipeline is not constructed at an adequate depth from the bottom of watercourses, there is potential for scour and resulting changes to channel morphology. Scour could become an ongoing issue if the pipeline is located within a watercourse.	Medium	The detailed design phase would comprehensively assess each watercourse crossing to ensure the pipeline profile is suitable to prevent scour or changes to channel morphology (see Section 10.6.4). The Department of Water and Energy would be consulted during the detailed design phase to ensure suitable watercourse crossing designs and to obtain the necessary approvals under Part 3A of the *Rivers and Foreshores Improvement Act 1948*.	Low	
Waste	**Power station** *Construction* Construction of the power station would generate various types of construction wastes.	Low	Waste produced during construction would be managed through the implementation of project-specific and industry standard management measures (see Section 10.7.3). Surplus spoil would be minimised through cut and fill. Any material unsuitable for engineering purposes would be used in on-site landscaping to ensure no off-site disposal.	Negligible	Section 10.7.1
	Operation A range of liquid and solid wastes would be generated during operation of the power station.	Low	Waste produced during operation would be managed through the implementation of project-specific and industry standard management measures (see Section 10.7.3). Wastewater produced would be managed in accordance with the stormwater management plan.	Negligible	

Issue	Identified risks	Initial project risk (before mitigation)	Risk mitigation measures	Overall project risk (after mitigation)	Section of EA
	Gas pipeline *Construction* Only minor quantities of waste would be generated during the construction of the gas pipeline.	Low	Waste produced during construction would be managed through the implementation of project-specific and industry standard management measures (see Section 10.7.3). Spoil from pipeline installation would be reinstated in close proximity to the pipeline.	Negligible	Section 10.7.2
	Operation Waste generation associated with operation of the gas pipeline would be negligible.	Negligible	Waste produced during operation would be managed through the implementation of project-specific and industry standard management measures (see Section 10.7.3).	Negligible	
Cumulative impacts	**Power station** *Construction* Construction of the power station would have minimal cumulative impacts as the site is remote from other construction sites and major developments.	Low	All standard mitigation measures (i.e. noise, air quality, waste) would be implemented to ensure that construction of the power station has no significant cumulative impacts.	Negligible	Section 10.8.1
	Operation Operation of the power station would have minimal cumulative impacts as the site is remote from other major developments.	Low	All standard mitigation measures (i.e. noise, air quality, waste) would be implemented to ensure that operation of the power station has no significant cumulative impacts.	Negligible	
	Gas pipeline *Construction* Construction of the gas pipeline is unlikely to have an adverse cumulative impact due to the location of the proposed pipeline route, as there are no other major projects along the route.	Negligible	All standard mitigation measures (i.e. noise, air quality, waste) would be implemented to ensure that construction of the gas pipeline has no significant cumulative impacts.	Negligible	Section 10.8.2

Issue	Identified risks	Initial project risk (before mitigation)	Risk mitigation measures	Overall project risk (after mitigation)	Section of EA
	Operation Operation of the gas pipeline is unlikely to have adverse cumulative impacts due to the location of the proposed pipeline route, with no other major projects along the route.	Negligible	All standard mitigation measures (i.e. noise, air quality, waste) would be implemented to ensure that operation of the gas pipeline has no significant cumulative impacts.	Negligible	