Appendix 2
Cross-Reference of Draft EIS content with EIS Guidelines (Northern Territory)

1 INTRODUCTION

The draft environmental impact statement (Draft EIS) for the Ichthys Gas Field Development Project (the Project) has been prepared with consideration for the guidelines developed by the Department of Natural Resources, Environment, the Arts and Sport (NRETAS) in September 2008.

These guidelines, which are provided in Appendix 1, contain a detailed list of information requirements on the existing environment in the development areas, the potential impacts of the Project, and the management controls proposed by the proponent to minimise negative impacts. These requirements are cross-referenced to the relevant sections of the Draft EIS in Table 1, to guide interested members of government and the public through the impact assessment completed for each particular issue.

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Table 1: Cross-reference of Draft EIS Guidelines against relevant sections of this Draft EIS

Factor	Requirements to be addressed	Relevant Draft EIS section(s)
Landform	Baseline (existing environment) Provide detailed maps and an interpretation of regional and local topography, geology, and geomorphology.	Chapter 3, Section 3.4.2 Topography and geomorphology Chapter 3, Section 3.4.3 Regional geology Chapter 3, Section 3.4.4 Soils
	Provide results and interpretation of any geotechnical investigations undertaken to assess the suitability of relevant proposal components.	Chapter 3, Section 3.4.3 Regional geology
	Discuss the soil/sediment types and land units within the Project footprint including actual and potential acid sulfate soils, and existing levels of erosion and other disturbances.	Chapter 3, Section 3.4.4 Soils Chapter 3, Section 3.6.3 Land tenure and sea use Chapter 8, Section 8.2.2 Soil chemistry
	Discuss the available and potential sources of fill/borrow material for the project.	Chapter 4, Section 4.5.7 Construction of onshore infrastructure
	Describe regional geology/geomorphology including seismic stability.	Chapter 3, Section 3.4.3 Regional geology Chapter 3, Section 3.4.5 Seismicity
	Discuss landform features of economic/social/heritage/other significance.	Chapter 3, Existing natural, social and economic environment
	Potential impacts Detail the extent and implications of possible impacts to landform features/sites from construction of relevant project components. Discuss the potential impacts of extraction and fill activities associated with the Project. Provide details of limiting properties of soil and substrate types and land units in the Project footprint including consideration of erosion, acid generation, land stability, rehabilitation and any specific management requirements.	Chapter 4, Section 4.5.7 Construction of onshore infrastructure Chapter 8, Section 8.2 Physical disturbance
	Safeguards, management and monitoring Detail measures to avoid/minimise identified impacts. Provide management plans to address the potential environmental impacts arising from identified landform limitations. Explain how the safeguards will work and the monitoring required to maintain those safeguards.	Chapter 8, Section 8.2 Physical disturbance Chapter 11, Section 11.4 Monitoring programs for the receiving environment Chapter 11, Annexe 1 Provisional Acid Sulfate Soils Management Plan Chapter 11, Annexe 7 Provisional Dust Management Plan Chapter 11, Annexe 10 Provisional Liquid Discharges, Surface Water Runoff and Drainage Management Plan Chapter 11, Annexe 15 Provisional Vegetation Clearing, Earthworks and Revegetation Management Plan

Table 1: Cross-reference of Draft EIS Guidelines against relevant sections of this Draft EIS (continued)

Factor	Requirements to be addressed	Relevant Draft EIS section(s)
Oceanic processes and natural features	Baseline (existing environment) Provide maps and interpretation of regional bathymetry and local-scale seabed features.	Chapter 3, Section 3.2.3 Seabed and bathymetry Chapter 3, Section 3.3.1 Darwin Harbour bathymetry
natural leatures	Provide results and interpretation of any geotechnical investigations undertaken to assess the suitability of components of the proposal.	Chapter 3, Section 3.3.5 (Nearshore) Marine sediments
	Describe the oceanic processes within Darwin Harbour and the offshore proposal area such as local and regional tides, current patterns and wave magnitudes.	Chapter 3, Section 3.2.1 (Offshore) Oceanography and hydrodynamics Chapter 3, Section 3.3.2 (Nearshore) Oceanography and hydrodynamics
	Provide details of any tidal inundation areas and storm surge zones.	Chapter 3, Section 3.3.2 (Nearshore) Oceanography and hydrodynamics
	Provide details on water quality of marine waters including temporal and spatial variations that are appropriate for the locations of the Project components and the nature of their potential impacts.	Chapter 3, Section 3.2.5 (Offshore) Water quality Chapter 3, Section 3.3.4 (Nearshore) Water quality
	Provide details on any natural and historic heritage values within the Commonwealth marine environment affected by the proposal.	Chapter 3, Section 3.2.7 (Offshore) Marine benthic habitats and communities
	Potential impacts Discuss the potential impacts of Project components/activities such as site preparation, component construction, dredging and spoil dumping, spills, waste/produced water discharge and port operation on all aspects of marine waters, oceanic processes and natural features.	Chapter 4, Section 4.2 Offshore infrastructure Chapter 4, Section 4.3 Gas export pipeline Chapter 4, Section 4.4 Nearshore infrastructure Chapter 7, Section 7.2.1 (Offshore) Alteration of habitat Chapter 7, Section 7.2.2 Drilling discharges Chapter 7, Section 7.2.3 (Offshore) Liquid discharges Chapter 7, Section 7.2.4 (Offshore) Accidental hydrocarbon spills Chapter 7, Section 7.2.5 (Offshore) Waste Chapter 7, Section 7.3.1 (Nearshore) Alteration of habitat Chapter 7, Section 7.3.2 Dredging Chapter 7, Section 7.3.3 Dredge spoil disposal Chapter 7, Section 7.3.4 (Nearshore) Liquid discharges Chapter 7, Section 7.3.5 (Nearshore) Accidental hydrocarbon spills Chapter 7, Section 7.3.6 (Nearshore) Waste

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Factor	Requirements to be addressed	Relevant Draft EIS section(s)
Oceanic processes and natural features	Detail the extent and implications of, and other possible impacts on and from, coastal processes, such as erosion, currents and storm events.	Chapter 4, Section 4.5.7 Construction of onshore infrastructure Chapter 7, Section 7.3.1 (Nearshore) Alteration of habitat Chapter 7, Section 7.3.2 Dredging
	 Appropriate modelling of sediment plumes from dredging activities and offshore spoil disposal must be undertaken, as well as modelling of hydrocarbon spill risks, produced water discharge, scouring effects, sediment deposition and erosion, and dispersion of any other contaminant plumes. 	Chapter 7, Section 7.2.3 (Offshore) Liquid discharges Chapter 7, Section 7.2.4 (Offshore) Accidental hydrocarbon spills Chapter 7, Section 7.3.2 Dredging Chapter 7, Section 7.3.3 Dredge spoil disposal Chapter 7, Section 7.3.4 (Nearshore) Liquid discharges Chapter 7, Section 7.3.5 (Nearshore) Accidental hydrocarbon spills
	Identify and discuss the expected changes in hydrodynamics from infrastructure installations and biophysical consequences of these changes.	Chapter 7, Section 7.3.2
	Detail the extent and implications of possible impacts to seabed features/sites from dredging and spoil disposal activities, construction and/or operation of all Project components.	Chapter 4, Section 4.4.3 Dredging and dredge spoil disposal Chapter 7, Section 7.2.1 (Offshore) Alteration of habitat Chapter 7, Section 7.3.1 (Nearshore) Alteration of habitat Chapter 7, Section 7.3.2 Dredging Chapter 7, Section 7.3.3 Dredge spoil disposal
	Describe the impacts of any reclamation on the marine and coastal environment.	Chapter 8, Section 8.3.1 Vegetation-clearing Chapter 8, Section 8.2.3 Alteration of surface-water and groundwater flow Chapter 8, Section 8.2.1 Soil erosion Chapter 8, Section 8.3.3 Biting insects
	Safeguards, management and monitoring Detail measures to avoid/minimise identified impacts. Provide management plans to address the potential environmental impacts. Explain how the safeguards will work and the monitoring required to maintain those safeguards. In particular, discuss: the treatment and disposal of wastewater into the marine environment (e.g. ballast water, produced water, wastewater discharge, hydrostatic test water); the management of dredge spoil; and the protection of seabed features and subtidal/intertidal areas during dredging and spoil disposal activities, and construction.	Chapter 7, Section 7.2.1 (Offshore) Alteration of habitat Chapter 7, Section 7.2.2 Drilling discharges Chapter 7, Section 7.2.3 (Offshore) Liquid discharges Chapter 7, Section 7.2.4 (Offshore) Accidental hydrocarbon spills Chapter 7, Section 7.2.5 (Offshore) Waste Chapter 7, Section 7.3.1 (Nearshore) Alteration of habitat Chapter 7, Section 7.3.2 Dredging Chapter 7, Section 7.3.3 Dredge spoil disposal Chapter 7, Section 7.3.4 (Nearshore) Liquid discharges Chapter 7, Section 7.3.5 (Nearshore) Accidental hydrocarbon spills Chapter 7, Section 7.3.6 (Nearshore) Waste Chapter 8, Section 8.3.1 Vegetation-clearing Chapter 8, Section 8.2.3 Alteration of surface-water and groundwater flow Chapter 8, Section 8.2.1 Soil erosion Chapter 8, Section 8.3.3 Biting insects Chapter 11, Section 11.4 Monitoring programs for the receiving environment Chapter 11, Annexe 6 Provisional Dredging and Dredge Spoil Disposal Management Plan Chapter 11, Annexe 10 Provisional Liquid Discharges, Surface Water Runoff and Drainage Management Plan Chapter 11, Annexe 13 Provisional Quarantine Management Plan Chapter 11, Annexe 16 Provisional Waste Management Plan

Table 1: Cross-reference of Draft EIS Guidelines against relevant sections of this Draft EIS (continued)

Factor	Requirements to be addressed	Relevant Draft EIS section(s)
Water	Baseline (existing environment) Describe and discuss: Local meteorology in the context of Project environmental management including the frequency and severity of extreme weather conditions such as storms and cyclones for the 2, 10 and 100 year average return interval events (accounting for climate change scenarios); Natural/artificial, permanent/ephemeral catchment system(s), drainage lines, waterways, wetlands and ground water systems; Hydrology/hydrogeology including drainage patterns, flow/discharge rates, likelihood of flooding, etc; Water quality of fresh waters including temporal and spatial variations; and Beneficial uses and environmental values of water resources in the project locality.	Chapter 3, Section 3.3.2 Oceanography and hydrodynamics Chapter 3, Section 3.4.6 Surface water Chapter 3, Section 3.4.7 Groundwater Chapter 3, Section 3.5.1 Meteorology Chapter 3, Section 3.6.12 Recreation Chapter 3, Section 3.7.4 Commercial fishing and aquaculture Chapter 10, Section 10.3.7 Recreation
	Potential impacts Identify and discuss in detail: Potential impacts of project components/activities such as site preparation, component construction, spills, and wastewater disposal on all aspects of fresh/ground waters;	Chapter 8, Section 8.2.3 Alteration of surface-water and groundwater flow Chapter 8, Section 8.6 Spills and leaks
	Project water supply requirements, available sources and impacts on sources;	Chapter 4, Section 4.5.6 Supporting facilities Chapter 10, Section 10.3.3 Key social infrastructure and services
	Implications of local weather impacts on establishment and operation of all Project components;	Chapter 4, Section 4.5.1 Onshore gas-processing facilities Chapter 8, Section 8.2.1 Soil erosion Chapter 8, Section 8.2.3 Alteration of surface-water and groundwater flow
	Expected changes in stormwater runoff and impacts on existing natural systems;	Chapter 8, Section 8.2.3 Alteration of surface-water and groundwater flow
	Expected impacts on the "beneficial uses" and environmental values identified; and	Chapter 7, Section 7.3.4 (Nearshore) Liquid discharges
	Impacts of water quality on the food chain, particularly species gathered by Indigenous community and fishers.	Chapter 7, Section 7.3.2 Dredging Chapter 7, Section 7.3.3 Dredge spoil disposal Chapter 7, Section 7.3.4 (Nearshore) Liquid discharges Chapter 7, Section 7.3.10 (Nearshore) Marine megafauna
	 Safeguards, management and monitoring Detail measures to avoid/minimise identified impacts. Provide management plans to address the potential environmental impacts. Explain how the safeguards will work and the monitoring required to maintain those safeguards. In particular, discuss: Treatment and disposal of wastewater (e.g. hydrostatic test water, process water, sewage, etc) including preferred options and selection criteria; Protection of beds & banks of watercourses. Include any preferred methodologies of Land and Water Division, NRETAS; Water Quality protection including acid sulphate soil & wetland/waterway crossing management; Details of how the "beneficial uses" will be protected and maintained; and Design of stormwater management systems relevant to the local meteorology, including capacity and resilience of any existing natural drainage systems that will be implicated in stormwater management. 	Chapter 4, Section 4.5.5 Drainage and wastewater treatment system Chapter 5, Section 5.6.1 Offshore discharges Chapter 5, Section 5.6.3 Darwin harbour discharges Chapter 7, Section 7.3.2 Dredging Chapter 7, Section 7.3.3 Dredge spoil disposal Chapter 7, Section 7.3.4 (Nearshore) Liquid discharges Chapter 7, Section 7.3.10 (Nearshore) Marine megafauna Chapter 8, Section 8.2.2 Soil chemistry Chapter 8, Section 8.2.3 Alteration of surface-water and groundwater flow Chapter 10, Section 10.3.7 Recreation Chapter 11, Section 11.4 Monitoring programs for the receiving environment Chapter 11, Annexe 1 Provisional Acid Sulfate Soils Management Plan Chapter 11, Annexe 6 Provisional Dredging and Dredge Spoil Disposal Management Plan Chapter 11, Annexe 10 Provisional Liquid Discharges, Surface Water Runoff and Drainage Management Plan Chapter 11, Annexe 11 Provisional Onshore Spill Prevention and Response Management Plan Chapter 11, Annexe 15 Provisional Vegetation Clearing, Earthworks and Revegetation Management Plan

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Table 1: Cross-reference of Draft EIS Guidelines against relevant sections of this Draft EIS (continued)

Factor	Requirements to be addressed	Relevant Draft EIS section(s)
Air quality	Baseline (existing environment) Identify sensitive receptors adjacent to the Project area and/or likely to be impacted by the Project and discuss their potential level of sensitivity to air quality aspects	Chapter 3, Section 3.5.2 Air quality Chapter 8, Section 8.4 Air emissions
	 Record applicable onshore ambient air quality parameters for representative periods within both wet and dry seasons prior to plant operation. Parameters include dust (in particular the PM₁₀ fraction) and odour. 	Chapter 3, Section 3.5.2 Air quality
	Include meteorological information applicable to air quality parameters.	Chapter 3, Section 3.5.1 Meteorology
	Potential impacts • Describe the expected noise levels and vibration associated with the Project construction and operation, including timing and duration, in comparison to background levels, sensitivity of receptors and nominated performance indicators and standards.	Chapter 5, Section 5.5.2 Airborne noise Chapter 10, Section 10.3.10 Airborne noise
	 Determine and quantify all air emissions that will be produced by the Project including: An estimate of total annual quantities that will be emitted; Emission rates and total emissions from each point source; and An estimate of fugitive emissions. 	Chapter 5, Section 5.3 Air emissions
	 Atmospheric dispersion modelling must be undertaken of the major emissions identified for the Project. Modelling should take into account the cumulative and synergistic impacts of this proposal with emissions from the current and future Wickham Point LNG Plant and other point sources in the region, as well as relevant diffuse sources, in particular, bushfires. 	Chapter 8, Section 8.4.3 (Air emissions) Operations phase
	Assess the need for an ambient air quality monitoring program to monitor ground level impacts of significant air pollutant emissions.	Chapter 8, Section 8.4.3 (Air emissions) Operations phase
	 Assess and discuss the impacts on the community, nearby businesses and the environment from dispersion of emissions from the Project. Include the risks of a failure of critical pollution control equipment and possible outcomes. 	Chapter 8, Section 8.4 Air emissions
	Identify expected odour-generating activities and the potential impacts of odour on the community.	Chapter 5, Section 5.3.5 Odour Chapter 8, Section 8.4.3 (Air emissions) Operations phase
	Safeguards, management and monitoring Detail measures to avoid/minimise identified impacts, including: An outline of the measures that will be employed for monitoring and dealing with gas leakages during operations; Methods for minimising odour emissions; and	Chapter 4, Section 4.5.1 Onshore gas-processing facilities Chapter 4, Section 4.5.3 Ground flare Chapter 8, Section 8.4 Air emissions Chapter 11, Section 11.4 Monitoring programs for the receiving environment
	 Dust suppression initiatives. Discuss and recommend dust suppression strategies and monitoring of dust impacts. Explain how the safeguards will work and the monitoring required to maintain those safeguards. Provide management plans to address the potential environmental impacts. 	Chapter 11, Annexe 2 Provisional Air Emissions Management Plan Chapter 11, Annexe 7 Provisional Dust Management Plan Chapter 11, Annexe 12 Provisional Piledriving and Blasting Management Plan

Table 1: Cross-reference of Draft EIS Guidelines against relevant sections of this Draft EIS (continued)

Factor	Requirements to be addressed	Relevant Draft EIS section(s)
Noise and vibration	Baseline (existing environment) Identify sensitive receptors (resident and transitory) within or adjacent to the Project area and provide detail on their potential level of sensitivity to noise and vibration. All EPBC Act protected species that may occur in the area must be considered including: Natator depressus (Flatback Turtle); Lepidochelys olivacea (Pacific Ridley); Eretmochelys imbricata (Hawksbill Turtle); Dermochelys coriacea (Leatherback Turtle); Chelonia mydas (Green Turtle); Caretta caretta (Loggerhead Turtle); Tursiops aduncus (Spotted Bottle-nose Dolphin) – Arafura/Timor Sea populations; Sousa chinensis (Indo-Pacific Humpback Dolphin); Balaenoptera musculus (Blue Whale); Megaptera novaeangliae (Humpback Whale); Balaenoptera bonaerensis (Antarctic Minke Whale); Balaenoptera edeni (Bryde's Whale); Dugong dugon (Dugong); Orcaella brevirostris (Irrawaddy Dolphin); Orcinus orca (Orca, Killer Whale); Physeter macrocephalus (Sperm Whale).	Chapter 2, Section 2.2.5 Implementation of stakeholder communication plan Chapter 3, Section 3.2.8 (Offshore) Protected species Chapter 3, Section 3.3.8 (Nearshore) Protected species Chapter 3, Section 3.4.12 (Terrestrial) Protected species Chapter 7, Section 7.2.6 (Offshore) Underwater noise emissions Chapter 7, Section 7.3.7 (Nearshore) Underwater noise and blast emissions Chapter 10, Section 10.3.10 Airborne noise
	Identify any existing sources of noise pollution in the area.	Chapter 3, Section 3.2.4 (Offshore) Underwater noise Chapter 3, Section 3.3.3 (Nearshore) Underwater noise Chapter 3, Section 3.6.15 Noise
	Include meteorological information applicable to noise parameters.	Chapter 3, Section 3.5.1 Meteorology
	Potential impacts Identify any major sources of noise and/or vibration from the proposal (including transient and temporary noise producers during construction and operation).	Chapter 5, Section 5.5 Noise and vibration
	 Provide details of modelling studies undertaken to determine the level and extent of noise and vibration produced in comparison to background levels, sensitivity of receptors and nominated performance indicators and standards. Undertake a risk assessment of the potential for underwater noise associated with the construction and operation of the Project to significantly impact upon those sensitive receptors identified, or upon habitats and processes that are necessary for their survival. If the risk assessment identifies potential sources of significant impacts, modelling of outputs from these sources must be undertaken. 	Chapter 7, Section 7.2.6 (Offshore) Underwater noise emissions Chapter 7, Section 7.3.7 (Nearshore) Underwater noise and blast emissions Chapter 10, Section 10.3.10 Airborne noise
context must be discussed. Identify any species that may be impacted by noise or vibration produced from the proposal and provide details of possible impacts. Safeguards, management and monitoring Discuss measures that would be used to manage noise and vibration, including attenuation of noise in the marine water column. Provide management plans to address the potential environmental impacts. Explain how the safeguards will work and the monitoring required to maintain the safeguards.	Chapter 7, Section 7.2.6 (Offshore) Underwater noise emissions Chapter 7, Section 7.3.7 (Nearshore) Underwater noise and blast emissions	
	Discuss measures that would be used to manage noise and vibration, including attenuation of noise in the marine water column. Provide management plans to address the potential environmental impacts.	Chapter 7, Section 7.2.6 (Offshore) Underwater noise emissions Chapter 7, Section 7.3.7 (Nearshore) Underwater noise and blast emissions Chapter 10, Section 10.3.10 Airborne noise Chapter 11, Annexe 4 Provisional Cetaceans Management Plan Chapter 11, Annexe 12 Provisional Piledriving and Blasting Management Plan

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Table 1: Cross-reference of Draft EIS Guidelines against relevant sections of this Draft EIS (continued)

Factor	Requirements to be addressed	Relevant Draft EIS section(s)
cological values	Baseline (existing environment) Describe floral & faunal species (including exotic/pest species) and biological communities (including marine, estuarine, freshwater, terrestrial) including those of local, regional and national significance that are found within and around the project area. These must include those EPBC Act listed marine species listed above and: Xeromys myoides (False Water Rat) Dasyurus hallucatus (Northern Quoll) Sterna albifrons (Little Tern) Putfinus leucomelas (Streaked Shearwater) Calonectris leucomelas (Streaked Shearwater) Apus pacificus (Fork-tailed Swift) Tringa brevipes (Grey-tailed Tattler) Arenaria interpres (Ruddy Turnstone). Maps must be provided showing the distribution of species and communities described. Survey methodologies must: Follow best practice & advice from relevant agencies; Account for seasonality, potential for occurrence of significant species & sensitivity of species to disturbance; Identify rare, threatened, endangered species against relevant NT & Commonwealth legislation. Particular reference must be made to species and ecological communities listed as threatened under the EPBC Act that (through analysis) may potentially be disturbed by the Project; Consider migratory species, and species with conservation and biodiversity values in the Project area; Consider species with londigenous conservation values. Survey work must be conducted by suitably qualified personnel. Include survey methodologies and results in appendices. Include any survey limitations with reference to best practice methodology. Provide mapping (at a level appropriate to the types and magnitudes of potential impacts from Project activities) and descriptions of marine and intertidal benthic habitats potentially at risk of impact from the construction and operation of onshore and offshore components of the proposal. The appropriate level of mapping must be determined in consultation with DEWHA.	Chapter 3, Section 3.2.7 Marine benthic habitats and communities Chapter 3, Section 3.2.8 (Offshore) Protected species Chapter 3, Section 3.2.9 Other marine megafauna Chapter 3, Section 3.3.6 Marine communities Chapter 3, Section 3.3.7 Marine habitats of the nearshore developmer area Chapter 3, Section 3.3.8 (Nearshore) Protected species Chapter 3, Section 3.4.9 Flora in the onshore development area Chapter 3, Section 3.4.10 Weeds Chapter 3, Section 3.4.11 Terrestrial animals Chapter 3, Section 3.4.12 (Terrestrial) Protected species Chapter 3, Section 3.4.13 Introduced animal species Chapter 3, Section 3.4.14 Blaydin Point invertebrate fauna
	Potential impacts • Specify the extent of clearing required in the Project footprint.	Chapter 4, Section 4.5 Onshore infrastructure Chapter 4, Section 4.5.7 Construction of onshore infrastructure Chapter 8, Section 8.3.1 Vegetation-clearing

Table 1: Cross-reference of Draft EIS Guidelines against relevant sections of this Draft EIS (continued)

Factor	Requirements to be addressed	Relevant Draft EIS section(s)
Ecological values	Describe direct, indirect, consequential and cumulative impacts on species/communities/habitats and food webs, including those of local/regional/national significance. Impacts to be considered include: I land clearing and disturbance; habitat removal, destruction and compromise; contaminant discharges and pollutants; smothering of benthic substrates and corals; changes to hydrology; exotic species introduction, including the identification of the potential for introduction and/or spread of pest species/noxious weeds (including marine species); fauna entrapment in pipeline trench or underwater infrastructure; boat strike; and illumination and lighting, including disorientation of fauna such as marine turtles and seabirds/shorebirds from illumination of offshore infrastructure, support vessels and ongoing operations. Include an analysis of the significance of the relevant impacts on EPBC Act protected matters. The analysis must conform to relevant EPBC Act policy statements.	Chapter 7, Section 7.2.1 (Offshore) Alteration of habitat Chapter 7, Section 7.2.2 Drilling discharges Chapter 7, Section 7.2.3 (Offshore) Liquid discharges Chapter 7, Section 7.2.4 (Offshore) Accidental hydrocarbon spills Chapter 7, Section 7.2.7 (Offshore) Light emissions Chapter 7, Section 7.2.8 (Offshore) Marine pests Chapter 7, Section 7.2.9 (Offshore) Marine megafauna Chapter 7, Section 7.3.1 (Nearshore) Alteration of habitat Chapter 7, Section 7.3.2 Dredging Chapter 7, Section 7.3.3 Dredge spoil disposal Chapter 7, Section 7.3.4 (Nearshore) Liquid discharges Chapter 7, Section 7.3.5 (Nearshore) Accidental hydrocarbon spills Chapter 7, Section 7.3.8 (Nearshore) Light emissions Chapter 7, Section 7.3.9 (Nearshore) Marine pests Chapter 7, Section 7.3.10 (Nearshore) Marine megafauna Chapter 8, Section 8.2.3 Alteration of surface-water and groundwater flow Chapter 8, Section 8.3.1 (Terrestrial) Alteration of habitat Chapter 8, Section 8.3.4 Introduced species Chapter 8, Section 8.3.5 (Policy and Peaks)
	Include a statement of whether there will be any relevant impacts that are likely to be unknown, unpredictable or irreversible.	Limitations of impact assessment studies are discussed throughout the document, where relevant.
	Discuss the implications of the identified impacts on the Indigenous and non-Indigenous access to and use of flora and fauna.	Chapter 10, Section 10.3.7 Recreation
	With respect to lighting impacts, discuss the potential for disorientation of fauna such as marine turtles and seabirds/shorebirds from illumination of infrastructure, support vessels and ongoing operations.	Chapter 7, Section 7.2.7 (Offshore) Light emissions Chapter 7, Section 7.3.8 (Nearshore) Light emissions
	Identify the potential for introduction and/or spread of pest species/noxious weeds (including marine species).	Chapter 7, Section 7.2.8 (Offshore) Marine pests Chapter 7, Section 7.3.9 (Nearshore) Marine pests Chapter 8, Section 8.3.4 Introduced species

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Table 1: Cross-reference of Draft EIS Guidelines against relevant sections of this Draft EIS (continued)

Factor	Requirements to be addressed	Relevant Draft EIS section(s)
Ecological values	Safeguards, management and monitoring Discuss measures to minimise identified impacts on species, communities and habitats. Discuss methods to manage/minimise exotic fauna species introduction and spread. Detail rehabilitation and monitoring strategies. Explain how proposed safeguards will work and the monitoring required to maintain those safeguards. Provide management plans to address the potential environmental impacts.	Chapter 7, Section 7.2.1 (Offshore) Alteration of habitat Chapter 7, Section 7.2.2 Drilling discharges Chapter 7, Section 7.2.3 (Offshore) Liquid discharges Chapter 7, Section 7.2.4 (Offshore) Accidental hydrocarbon spills Chapter 7, Section 7.2.7 (Offshore) Light emissions Chapter 7, Section 7.2.8 (Offshore) Marine pests Chapter 7, Section 7.2.9 (Offshore) Marine megafauna Chapter 7, Section 7.3.1 (Nearshore) Alteration of habitat Chapter 7, Section 7.3.2 Dredging Chapter 7, Section 7.3.3 Dredge spoil disposal Chapter 7, Section 7.3.4 (Nearshore) Liquid discharges Chapter 7, Section 7.3.5 (Nearshore) Accidental hydrocarbon spills Chapter 7, Section 7.3.8 (Nearshore) Marine pests Chapter 7, Section 7.3.9 (Nearshore) Marine megafauna Chapter 7, Section 7.3.9 (Nearshore) Marine megafauna Chapter 8, Section 8.2.3 Alteration of surface-water and groundwater flow Chapter 8, Section 8.3.1 Vegetation-clearing Chapter 8, Section 8.3.2 (Terrestrial) Alteration of habitat Chapter 8, Section 8.3.4 Introduced species Chapter 8, Section 8.3.5 (Perrestrial) Alteration of habitat Chapter 11, Section 11.4 Monitoring programs for the receiving environment Chapter 11, Annexe 4 Provisional Decommissioning Management Plan Chapter 11, Annexe 6 Provisional Dredging and Dredge Spoil Disposal Management Plan Chapter 11, Annexe 10 Provisional Liquid Discharges, Surface Water Runoff and Drainage Management Plan Chapter 11, Annexe 13 Provisional Quarantine Management Plan Chapter 11, Annexe 15 Provisional Vegetation Clearing, Earthworks and Revegetation Management Plan

Table 1: Cross-reference of Draft EIS Guidelines against relevant sections of this Draft EIS (continued)

Factor	Requirements to be addressed	Relevant Draft EIS section(s)
Land use	Baseline (existing environment) Identify zoning, uses and features within the Project locality including: Urban and rural residential; Agricultural, pastoral, fisheries and shipping; Conservation, wilderness, and scenic areas; Indigenous land use; Recreational land use, and areas of research, educational and scientific value; Road reserves and pipeline easements; Military reserves or exercise areas; Extractive, mining and other commercial industries; and Land/sea titles and rights e.g. those granted under Native Title Act 1993. Include map/s showing jurisdictions and responsible authorities for the areas described above and a description of the regulatory regime applying to each area.	Chapter 3, Section 3.1.1 Development areas Chapter 3, Section 3.6.2 Government policies and plans Chapter 3, Section 3.6.3 Land tenure and sea use
	Potential impacts Describe, including timeframes, the anticipated and potential site specific and cumulative impacts on existing and potential uses and developments during the construction and operation phases. The proponent is required to consult with responsible authorities for policies on such disturbances.	Chapter 4, Section 4.1.5 Development schedule Chapter 10, Section 10.3 Social impacts and management Chapter 10, Section 10.4 Economic effects and benefits
	 Include a discussion of the potential issues associated with a flare on Darwin Airport flight paths. Discuss the likely impacts on the land use status and ownership of the land crossed by various components of the Project in terms of land acquisition and compensation. This discussion should include any Indigenous ownership, native title claimants and holders, and land use. 	Chapter 10, Section 10.3.6 Air traffic Chapter 3, Section 3.6.3 Land tenure and sea use Chapter 10, Section 10.3.12 Commercial fishing and aquaculture Chapter 10, Section 10.3.13 Defence
	Safeguards, management and monitoring Outline measures to minimise the impacts to current and future uses of land and water in the Project area. Detail measures to rehabilitate areas impacted by the Project. Outline consultation processes to be undertaken with key stakeholders.	Chapter 4, Section 4.6 Decommissioning Chapter 11, Annexe 5 Provisional Decommissioning Management Plan
Visual amenity	Baseline (existing environment) • Discuss the current general amenity of Darwin Harbour.	Chapter 3, Section 3.6.3 Land tenure and sea use
	Discuss the visual amenity of the proposed Project site from the perspective of agreed viewing points around Darwin Harbour and taking into account the values of the general Darwin regional community.	Chapter 3, Section 3.6.16 Aesthetics and light
	Potential impacts • Describe the potential impacts to the visual amenity of Darwin Harbour generally, and from agreed viewing points specifically, of the construction activities in the harbour and an operating facility on Blaydin Point.	Chapter 10, Section 10.3.11 Visual amenity
	Describe the impact to visual amenity of the Project site post-operations.	Chapter 4, Section 4.6 Decommissioning Chapter 11, Annexe 5 Provisional Decommissioning Management Plan
	Safeguards, management and monitoring • Describe methods to minimise impacts to visual amenity.	Chapter 10, Section 10.3.11 Visual amenity

Table 1: Cross-reference of Draft EIS Guidelines against relevant sections of this Draft EIS (continued)

Factor	Requirements to be addressed	Relevant Draft EIS section(s)
Historic and cultural heritage values	Baseline (existing environment) Identify all Indigenous/non-Indigenous places of historic or contemporary cultural heritage significance including: areas nominated for listing or listed on the Register of the National Estate or the Northern Territory Heritage Register, or Interim listing on either of these Registers; areas nominated for listing or listed on Commonwealth and Territory Heritage registers and Commonwealth and Territory registers of Indigenous cultural heritage;	Chapter 3, Section 3.3.6 Marine communities Chapter 3, Section 3.6.13 Aboriginal cultural heritage (Existing) Chapter 3, Section 3.6.14 Non-Aboriginal cultural heritage (Existing)
	 sacred sites – provide evidence of an Authority Certificate under the Northern Territory Aboriginal Sacred Sites Act 1989 and compliance with protection of sites under both the Aboriginal Land Rights (Northern Territory) Act 1976 and the Northern Territory Aboriginal Sacred Sites Act 1989; 	Chapter 3, Section 3.6.13 Aboriginal cultural heritage (Existing) Chapter 10, Section 10.3.8 Aboriginal cultural heritage (impacts and management)
	traditional and historic Aboriginal and Torres Strait Islander (ATSI) archaeological and heritage places and objects protected under relevant Territory (e.g. NT Heritage Conservation Act) and/or Commonwealth legislation;	Chapter 3, Section 3.6.13 Aboriginal cultural heritage (Existing) Chapter 3, Section 3.6.14 Non-Aboriginal cultural heritage (Existing)
	 any historic shipwrecks that may be encountered and are protected under the Historic Shipwrecks Act 1976; other wrecks encountered, including the Catalina flying-boat wrecks; European and Macassan historic sites 	Chapter 3, Section 3.6.14 Non-Aboriginal cultural heritage (Existing)
	areas with special values to Indigenous and non-Indigenous people (e.g. traditional land use, landscape, visual environment, recreational, commercial, tourism, fisheries, scientific, educational, marine archaeological sites).	Chapter 3, Section 3.6.3 Land tenure and sea use Chapter 3, Section 3.6.13 Aboriginal cultural heritage (Existing) Chapter 3, Section 3.6.14 Non-Aboriginal cultural heritage (Existing)
	qualify the methods used to identify surface and sub-surface cultural anomalies, and the resolution allowed by those methods.	Chapter 3, Section 3.6.13 Aboriginal cultural heritage (Existing) Chapter 3, Section 3.6.14 Non-Aboriginal cultural heritage (Existing)
	Potential impacts Describe potential impacts to the features identified in baseline studies including lifestyles, traditional hunting/fishing practices, heritage places, Indigenous/non-Indigenous culture generally and the impact of increased visitation.	Chapter 10, Section 10.3.8 Aboriginal cultural heritage (Impacts and management) Chapter 10, Section 10.3.9 Non-Aboriginal cultural heritage (Impacts and management)
	Safeguards, management and monitoring Detail measures to mitigate impacts to any features at risk from the Project. A management plan should be developed to include: Procedures to avoid significant areas; Ongoing protection measures; and Procedures for the discovery of surface or sub-surface materials during the course of the Project. Every attempt should be made to avoid any significant heritage areas when locating project components.	Chapter 10, Section 10.3.8 Aboriginal cultural heritage (Impacts and management) Chapter 10, Section 10.3.9 Non-Aboriginal cultural heritage (Impacts and management) Chapter 11, Annexe 9 Provisional Heritage Management Plan Chapter 11, Annexe 15 Provisional Vegetation Clearing, Earthworks and Revegetation Management Plan
Social environment	Baseline (existing environment) Identify key stakeholders, regional community structures and community vitality (including demography, health, education and social well-being, access to services and housing, etc).	Chapter 2, Section 2.2.4 Stakeholder identification and communication methods Chapter 3, Section 3.6.4 Demographics and population trends Chapter 3, Section 3.6.5 Income support payments Chapter 3, Section 3.6.6 Education and training profile
	Estimate local employment including a breakdown of skills/trades required and specific opportunities for skills development.	Chapter 10, Section 10.4.3 Employment and training
	Potential impacts Identify opportunities for training and employment during construction of the Project and how this would be structured, managed and implemented. Identify opportunities for local industry and indigenous/non-indigenous workforce participation in the construction and operation of the Project.	Chapter 10, Section 10.4.2 Business opportunity Chapter 10, Section 10.4.3 Employment and training
	Outline possible future benefits for the community following construction.	Chapter 10, Section 10.4 Economic effects and benefits

Table 1: Cross-reference of Draft EIS Guidelines against relevant sections of this Draft EIS (continued)

Factor	Requirements to be addressed	Relevant Draft EIS section(s)
Social environment	Outline the accommodation requirements and arrangements for construction and maintenance activities and any associated infrastructure and services required.	Chapter 4, Section 4.5.7 Construction of onshore infrastructure Chapter 10, Section 10.3.2 Housing
	Discuss the potential negative social impacts that could arise from the Project including the impacts of the construction/operation and its workforce/maintenance teams on affected landowners and communities, recreational users, local health services, etc.	Chapter 10, Section 10.3.1 Social integration Chapter 10, Section 10.3.2 Housing Chapter 10, Section 10.3.3 Key social infrastructure and services
	Safeguards, management and monitoring Identify measures to reduce negative impacts and maximise benefits.	Chapter 10, Section 10.3.1 Social integration Chapter 10, Section 10.3.2 Housing Chapter 10, Section 10.3.3 Key social infrastructure and services
Economics	Baseline (existing environment) Discuss the current local, regional, state and national economic viability (including economic base and economic activity, future economic opportunities and contribution to the Northern Territory economy).	Chapter 3, Section 3.7 Economic environment
	Potential impacts Present a summary of the Project's impact on the regional/territory/national economies in terms of direct/indirect effects on employment, income and production including the broader development benefits of the project.	Chapter 10, Section 10.4 Economic effects and benefits
	Consider the effects of disturbance to existing land use or threat to the surrounding environment such as the harbour, coastline and mangroves that may impact on current and future commercial activities.	Chapter 10, Section 10.3.12 Commercial fishing and aquaculture Chapter 10, Section 10.3.13 Defence Chapter 10, Section 10.4 Economic effects and benefits
	 Describe opportunities available to regional centres/communities based on the activity generated by the Project and the availability of gas and other services to existing and potential customers. 	Chapter 10, Section 10.4 Economic effects and benefits
	Safeguards, management and monitoring • Detail measures to minimise potential adverse impacts identified and maximise the beneficial impacts.	Chapter 10, Section 10.4 Economic effects and benefits
Infrastructure and transport	Baseline (existing environment) Provide a plan detailing existing transport networks (including road, air and ports), telecommunications (optic fibre routes), gas and electricity infrastructure, and water supply and wastewater utilities.	Chapter 3, Section 3.6.9 Road traffic (Existing) Chapter 3, Section 3.6.10 Marine traffic (Existing) Chapter 3, Section 3.7.5 Industrial infrastructure and services
	Identify constraints with existing infrastructure and transport networks within the Project context.	Chapter 10, Section 10.3.4 Road traffic (Impacts and management) Chapter 10, Section 10.3.5 Marine traffic and navigation (Impacts and management)
	Provide details of new infrastructure that will be required for the Project including any upgrades.	Chapter 1, Section 1 Introduction
	Describe transport systems, methods and routes for delivering construction and maintenance materials and other necessary goods and consumables including a general description of requirements for upgrading existing transport routes.	Chapter 4, Section 4.5.7 Construction of onshore infrastructure Chapter 10, Section 10.3.4 Road traffic (Impacts and management) Chapter 10, Section 10.3.5 Marine traffic and navigation (Impacts and management)
	 Provide details of approvals and agreements obtained by the relevant government bodies regarding infrastructure requirements such as trade waste disposal, water and sewerage, and road access. 	Chapter 1, Section 1.2. Environmental assessment process Chapter 7, Section 7.3.4 (Nearshore) Liquid discharges
	Potential impacts • Provide information on the use of and impact on infrastructure required by the Project.	Chapter 4, Section 4.5.2 Utilities Chapter 4, Section 4.5.6 Supporting facilities Chapter 10, Section 10.3.4 Road traffic (Impacts and management) Chapter 10, Section 10.3.5 Marine traffic and navigation (Impacts and management)
	Discuss project water supply requirements, available sources and impacts on sources.	Chapter 4, Section 4.5.2 Utilities

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Table 1: Cross-reference of Draft EIS Guidelines against relevant sections of this Draft EIS (continued)

Factor	ference of Draft EIS Guidelines against relevant sections of this Draft EIS (continued) Requirements to be addressed	Relevant Draft EIS section(s)
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Infrastructure and transport	Discuss potential impacts of transport operations on public amenity (e.g. impact of infrastructure corridor/road directly passing proposed housing estate, noise, light, dust).	Chapter 10, Section 10.3.4 Road traffic (Impacts and management) Chapter 10, Section 10.3.5 Marine traffic and navigation (Impacts and management) Chapter 8, Section 8.4.2 Dust
	Provide information on the use of and impact on port, road, air and rail networks for the construction and operational phases.	Chapter 10, Section 10.3.4 Road traffic (Impacts and management) Chapter 10, Section 10.3.5 Marine traffic and navigation (Impacts and management) Chapter 10, Section 10.3.6 Air traffic
	Safeguards, management and monitoring	Chapter 10, Section 10.3.4 Road traffic (Impacts and management)
	 Detail the management of impacts on the road system and other existing infrastructure, including proposed corrective measures (in consultation with relevant regulatory agencies) and relevant guidelines used for construction and operational and maintenance phases. Include measures to upgrade, maintain and restore gazetted or nominated roads and access tracks, and to undertake pipeline crossings of tracks. 	Chapter 11, Annexe 14 Provisional Traffic Management Plan
	Discuss lighting plans and measures that will be employed to avoid interference with safe navigation of Darwin Harbour.	Chapter 5, Section 5.4.2 Onshore and nearshore lighting Chapter 10, Section 10.3.5 Marine traffic and navigation (Impacts and management)
	Outline requirements and responsibilities for rehabilitation or maintenance of roads and other Project infrastructure upon Project completion.	Chapter 4, Section 4.6 Decommissioning Chapter 11, Annexe 5 Provisional Decommissioning Management Plan Chapter 11, Annexe 15 Provisional Vegetation Clearing, Earthworks and Revegetation Management Plan
Biting insects	Baseline (existing environment) The existing biting insect species and populations, and their seasonal variability in the Project area should be understood. A biting insect assessment report is available for Blaydin Point. The recommendations and conclusions from this report should be included in the EIS.	Chapter 3, Section 3.4.15 Biting insects (Existing)
	Potential impacts Discuss the impact of biting insects on workforce and residents. Discuss the impacts of the project on biting insect populations/habitats.	Chapter 8, Section 8.3.3 Biting insects (Impacts and management)
	Safeguards, management and monitoring Outline measures to prevent increase in biting insect habitats/populations, particularly in tidal areas. Refer to the guideline: Construction Practice Near Tidal Areas of the Northern Territory – Guidelines to Prevent Mosquito Breeding.	Chapter 8, Section 8.3.3 Biting insects (Impacts and management) Chapter 11, Annexe 10 Provisional Liquid Discharges, Surface Water Runoff and Drainage Management Plan

Table 1: Cross-reference of Draft EIS Guidelines against relevant sections of this Draft EIS (continued)

Factor	Requirements to be addressed	Relevant Draft EIS section(s)
Waste and hazardous materials management	Baseline (existing environment) Identify and describe (amount and characteristics) all wastes and their sources, including hazardous wastes, associated with construction, operation and decommissioning of all Project components.	Chapter 5, Section 5.7 Liquid and solid wastes
	Detail all chemicals, including fuels, to be stored and/or used on the Project site. Outline the proposed methods for transportation, storage and use of these substances.	Chapter 4, Section 4.5.1 Onshore gas-processing facilities Chapter 4, Section 4.5.4 Product storage and loading facilities Chapter 4, Section 4.5.6 Supporting facilities
	Detail other possible hazardous materials that may be derived from construction and operation of the Project.	Chapter 5, Section 5.7 Liquid and solid wastes
	Potential impacts • Discuss the potential impacts associated with identified wastes and loss/spills of hazardous materials.	Chapter 7, Section 7.2.4 (Offshore) Accidental hydrocarbon spills Chapter 7, Section 7.2.5 (Offshore) Waste Chapter 7, Section 7.3.5 (Nearshore) Accidental hydrocarbon spills Chapter 7, Section 7.3.6 (Nearshore) Waste Chapter 8, Section 8.5 (Terrestrial) Waste Chapter 8, Section 8.6 Spills and leaks
	Include a discussion of NORMs.	Chapter 5, Section 5.7.1 Wastes generated offshore Chapter 7, Section 7.2.5 (Offshore) Waste
	Identify and discuss activities likely to give rise to an environmental nuisance as defined under the Waste Management and Pollution Control Act.	Chapter 5, Section 5.3.4 Particulates Chapter 5, Section 5.3.5 Odour Chapter 5, Section 5.5 Noise and vibration Chapter 5, Section 5.6 Liquid discharges (Emissions) Chapter 5, Section 5.7 Liquid and solid wastes Chapter 7, Section 7.3.4 (Nearshore) Liquid discharges Chapter 7, Section 7.3.5 (Nearshore) Accidental hydrocarbon spills Chapter 7, Section 7.3.6 (Nearshore) Waste Chapter 7, Section 7.3.7 (Nearshore) Underwater noise and blast emissions Chapter 8, Section 8.3.3 Biting insects (Impacts and management) Chapter 8, Section 8.4 Air emissions Chapter 8, Section 8.5 (Terrestrial) Waste Chapter 8, Section 8.6 Spills and leaks Chapter 10, Section 10.3.10 Airborne noise
	 Discuss the potential impacts on the Shoal Bay landfill and other primary landfills in the Litchfield Municipality, and on other users of these facilities. 	Chapter 5, Section 5.7 Liquid and solid wastes Chapter 10, Section 10.3.3 Key social infrastructure an services
	Safeguards, management and monitoring • Discuss waste management strategies including avoidance, reduction, reuse, recycling, storage, transport and disposal of waste.	Chapter 5, Section 5.7 Liquid and solid wastes Chapter 7, Section 7.2.5 (Offshore) Waste Chapter 7, Section 7.3.6 (Nearshore) Waste Chapter 8, Section 8.5 (Terrestrial) Waste Chapter 11, Annexe 16 Provisional Waste Management Plan
	Outline all government approvals and agreements required and obtained for all waste disposal and management matters.	Chapter 11, Annexe 16 Provisional Waste Management Plan

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Table 1: Cross-reference of Draft EIS Guidelines against relevant sections of this Draft EIS (continued)

Factor	Requirements to be addressed	Relevant Draft EIS section(s)
Waste and hazardous materials management	Outline how any contaminated soils will be managed and the controls that will be put in place to prevent contaminants from leaving the site. Discuss hazardous materials management. Environmental & Safety management programs should include: Contingency/response plans; Spills & containment; and Hazardous materials data & storage.	Chapter 8, Section 8.2.2 Soil chemistry Chapter 11, Section 11.4 Monitoring programs for the receiving environment Chapter 11, Annexe 1 Provisional Acid Sulfate Soils Management Plan Chapter 11, Annexe 11 Provisional Onshore Spill Prevention and Response Management Plan Chapter 11, Annexe 16 Provisional Waste Management Plan Chapter 5, Section 5.7 Liquid and solid wastes Chapter 7, Section 7.2.4 (Offshore) Accidental hydrocarbon spills Chapter 7, Section 7.3.5 (Nearshore) Accidental hydrocarbon spills Chapter 8, Section 8.6 Spills and leaks Chapter 11, Annexe 1 Provisional Acid Sulfate Soils Management Plan Chapter 11, Annexe 10 Provisional Liquid Discharges, Surface Water Runoff and Drainage Management Plan Chapter 11, Annexe 11 Provisional Onshore Spill Prevention and Response Management Plan Chapter 11, Annexe 16 Provisional Waste Management Plan
	Wastewater	Chapter 7, Section 7.2.3 (Offshore) Liquid discharges Chapter 7, Section 7.3.4 (Nearshore) Liquid discharges Chapter 11, Annexe 10 Provisional Liquid Discharges, Surface Water Runoff and Drainage Management Plan
Fire	Baseline (existing environment) • Current fire regimes and risk of wildfire	Chapter 3, Section 3.4.8 Vegetation communities
	Potential impacts Identify activities that pose a risk of wildfire.	Chapter 8, Section 8.3.5 Changes to fire regime
	Safeguards, management and monitoring • Develop a fire management plan in consultation with relevant stakeholders outlining fire response plans, wildfire prevention methods, etc.	Chapter 8, Section 8.3.5 Changes to fire regime Chapter 11, Annexe 3 Provisional Bushfire Prevention Management Plan