

Peer Reviewer Scope Of Works

SCOPE OF SERVICES

The following people have been engaged on individual contracts as expert reviewers in their particular field of expertise. The use of peer reviewers to independently examine the adequacy of consultants' technical reports and of the resulting Water Corporation environmental impact assessment documentation (Environmental Scoping Document and Public Environmental Review) is encouraged by the Environmental Protection Authority as it can increase confidence in the veracity of the studies and recommendations.

Reviewer	Company
Ian Wallis	CEE Pty Ltd
Jorg Imberger	Centre for Water Research
Michael Warne	CSIRO Adelaide
Jo Ann Beckwith	Jo Ann Beckwith & Assoc.
Marine - Mark Bailey	Oceanica
Terrestrial - Karen Lane	ENV
Harry Ventriss	Strategen
Des Lord	Des Lord & Assoc.

The following table documents the components of the Environmental Impact Assessment that each are engaged to review.

	Factor	EPA's Environmental Objective	Peer Reviewer Engaged
Over-Archiving Principles	Biodiversity	<p>Maintain abundance, diversity, geographic distribution and productivity of life forms through the avoidance or management of adverse impacts and improvement in knowledge.</p> <p>To avoid adverse impacts on biological diversity, comprising the different plants and animals and the ecosystems they form, at the levels of genetic, species and ecosystem diversity.</p> <p>To comply with the Environmental Protection Act (1986) and the Environment Protection and Biodiversity Conservation Act (1999).</p>	<p>Karen Lane (ENV)</p> <p>Mark Bailey (Oceanica)</p>

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	Sustainability	<p>To use, conserve and enhance the community's resources so that ecological processes, on which life depends, are maintained, and the total quality of life, now and in the future, can be increased.</p> <p>To ensure, as far as practicable, that the proposal meets or is consistent with the sustainability principles in the National Strategy for Ecologically Sustainable Development.</p>	Harry Ventriss (Strategen)
Terrestrial - Biological	Terrestrial flora and vegetation (including Threatened Ecological Communities [TEC])	<p>To maintain abundance, diversity, geographic distribution and productivity of flora at species and ecosystem levels through avoidance or management of adverse impacts and improvement in knowledge.</p> <p>Avoid, minimise or mitigate any likely adverse impacts, direct or indirect on regionally significant bushland, and System 6 areas.</p>	Karen Lane (ENV)
	Terrestrial Flora and Vegetation – Declared Rare Flora, Priority Flora and flora of conservation significance	<p>To protect declared rare and priority flora consistent with the <i>Wildlife Conservation Act 1950</i>.</p> <p>Protect other flora species of conservation significance.</p>	Karen Lane (ENV)
	Terrestrial Fauna	<p>To maintain abundance, diversity, geographic distribution and productivity of fauna at species levels through avoidance or management of adverse impacts and improvement in knowledge.</p>	Karen Lane (ENV)
	Specially Protected Fauna – Migratory birds, Specially Protected Fauna, Priority Fauna, endemic fauna, threatened fauna	<p>To protect specially protected (threatened) fauna consistent with the <i>Wildlife Conservation Act 1950</i>.</p>	Karen Lane (ENV)
	Subterranean Fauna	<p>Maintain integrity, ecological functions and environmental values of karst ecosystems.</p> <p>To maintain abundance, diversity, geographic distribution and productivity of subterranean fauna</p>	Karen Lane (ENV)
Marine - Biological	Marine Flora (Benthic Habitat)	<p>Maintain the ecological function, abundance, species diversity and geographic distribution of benthic habitat in order to protect ecosystem health.</p> <p>To protect marine flora consistent with the <i>Wildlife Conservation Act 1950</i>.</p>	<p>Mark Bailey (Oceanica)</p> <p>Des Lord (Des Lord and Associates)</p>

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	Marine Fauna	Maintain the ecological function, abundance, species diversity and geographic distribution of marine fauna in order to protect ecosystem health, in accordance with the values and objectives identified in Perth Coastal Waters Environmental Values and Objectives. To protect marine fauna consistent with the <i>Wildlife Conservation Act</i> 1950.	Mark Bailey (Oceanica) Des Lord (Des Lord and Associates)
Terrestrial - Physical	Landscape and Landform	To maintain landscape and landform integrity, ecological functions and environmental values	Karen Lane (ENV)
	Acid Sulphate Soils (ASS)	Minimise the risk to the environment resulting from ASS.	Karen Lane (ENV)
	Groundwater and Surface Waterways	To maintain waterway integrity, ecological function and environmental values. To maintain the quantity and quality of water so that existing and potential environmental values, including ecosystem function, are protected.	Karen Lane (ENV)
	Wetlands	To protect the environmental values and functions of wetlands in the project area. To protect, sustain and, where possible, restore the biological diversity of wetland habitats in the project area. To protect the environmental quality of the wetland ecosystems of the project area through sound management.	Karen Lane (ENV)
	Stormwater	To protect the built environment from flooding and waterlogging. To maintain the total water cycle balance within the project areas relative to the pre-development conditions. To retain natural drainage systems where practicable and protect ecosystem health.	Karen Lane (ENV)
Marine - Physical	Marine Bathymetry (including coastal processes)	To maintain seascape and landform integrity, ecological functions and environmental values. Ensure the development does not significantly impact on coastal processes.	Mark Bailey (Oceanica) Ian Wallis (CEE Pty Ltd) Des Lord (Des Lord and Associates) Jorg Imberger (Centre for Water Research)
	Marine dilution and dispersion (hydrodynamics)	To ensure that the brine discharge is sufficiently dispersed so that there are no impacts on hydrodynamic processes outside of the Low Ecological Protecting Area (LEPA) resulting from the operation of the brine outlet facilities.	Mark Bailey (Oceanica) Ian Wallis (CEE Pty Ltd) Des Lord (Des Lord and Associates) Jorg Imberger (Centre for Water Research) Michael Warne (CSIRO)

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Pollution Management	Air Quality - Greenhouse Gas Emissions	<p>Ensure that potential greenhouse gas emissions generated by the proposal are adequately addressed in the planning/design and operation of projects and that:</p> <p>best practice is applied to maximise energy efficiency; and</p> <p>a renewable energy source is used and/or appropriate offsets are implemented.</p> <p>Ensure that emissions to air do not adversely affect environmental values or the health, welfare and amenity of people and land uses by meeting statutory requirements and acceptable standards.</p> <p>Achieve the corporate goal of organisational carbon neutrality by 2030.</p>	<p>Karen Lane (ENV)</p> <p>Harry Ventriss (Strategen)</p>
	Air Quality - Particulate Matter (Dust)	<p>Protect the surrounding land users such that dust and emissions of particulate matter will not adversely impact upon welfare and amenity or cause health problems.</p>	<p>Jo Ann Beckwith (Beckwith Environmental Planning PTY LTD)</p> <p>Karen Lane (ENV)</p>
	Marine Water Quality and Sediment Quality	<p>Maintain the overall marine water and sediment quality.</p> <p>Protect objectives defined in ANZECC water and sediment quality guidelines.</p>	<p>Mark Bailey (Oceanica)</p> <p>Michael Warne (CSIRO)</p>
	Audible Amenity (Noise) - Plant and Pipe Construction	<p>To protect the amenity of the community from noise impacts associated with the development of land by ensuring compliance with Environmental Protection (Noise) Regulations and other acceptable standards.</p> <p>To avoid unnecessary adverse impacts on the natural environment, including endemic fauna.</p>	<p>Jo Ann Beckwith (Beckwith Environmental Planning PTY LTD)</p> <p>Karen Lane (ENV)</p>
	Audible Amenity (Noise) - Plant Operation	<p>To protect the amenity of nearby residents from noise impacts resulting from operation.</p> <p>Comply with Environmental Protection (Noise) Regulations.</p>	<p>Jo Ann Beckwith (Beckwith Environmental Planning PTY LTD)</p> <p>Karen Lane (ENV)</p>
	Waste Management	<p>To maintain the integrity, ecological function and values of the environment and to ensure that emissions do not adversely affect health, welfare and amenity of people and land uses.</p> <p>Manage wastes in accordance with the Waste Hierarchy.</p> <p>All reasonable and practical measures to be taken to minimise generation of wastes and discharge into the environment.</p>	<p>Jo Ann Beckwith (Beckwith Environmental Planning PTY LTD)</p> <p>Karen Lane (ENV)</p>
Social	Indigenous Heritage and Native Title	<p>Ensure changes to the biophysical environment do not adversely affect indigenous historical or cultural heritage sites.</p> <p>Ensure project is compliant with the <i>Aboriginal Heritage Act</i> 1972 and the <i>Native Title Act</i> 1993.</p>	<p>Jo Ann Beckwith (Beckwith Environmental Planning PTY LTD)</p> <p>Karen Lane (ENV)</p>

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Non-indigenous Heritage	Ensure changes to the biophysical environment do not adversely affect historical or cultural associations and comply with relevant heritage legislation. Comply with Heritage of Western Australia Act (1990) . Comply with <i>Maritime Archaeology Act (1973)</i> .	Jo Ann Beckwith (Beckwith Environmental Planning PTY LTD) Karen Lane (ENV)
Visual Amenity	Ensure that visual amenity is considered and measures are adopted to reduce adverse visual impacts on the surrounding environment are as low as reasonably practical.	Jo Ann Beckwith (Beckwith Environmental Planning PTY LTD) Karen Lane (ENV)
Recreation	To ensure that existing and planned recreational uses of the environment are not compromised.	Jo Ann Beckwith (Beckwith Environmental Planning PTY LTD)
Public Safety and Risk	To ensure public risk associated with construction and operation of the proposal is as low as is reasonably achievable.	Jo Ann Beckwith (Beckwith Environmental Planning PTY LTD)

KEY DELIVERABLES

The scope of work for each reviewer's contract is to provide a peer review service of environmental documentation for the Water Corporation with a short letter report on their findings as a deliverable. There is also provision for the reviewers to meet with community members (via invitation from the Water Corporation).

Peer reviewers may contact the authors of the reports they are reviewing (and each other, as some reports may overlap) to assist in forming their conclusions.

The Water Corporation will make available all peer reviewers' reports via the project website.

Peer Reviewer	Preliminary Advice	Scoping Documents	Impact Studies	PER Review	Community Meetings
Ian Wallis	•	•	•	•	•
Jorg Imberger			•	•	•
Michael Warne			•	•	
Jo Ann Beckwith		•	•	•	•

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Mark Bailey	•	•	•	•	•
Karen Lane		•	•	•	•
Harry Ventriss			•	•	•
Des Lord	•	•	•	•	•