

# Top 5 Consolidated MCA Criteria - Design Definitions

## Environmental Criteria



Top 5 community based environmental criteria	Attributes	Attributes that contribute to differentiate between design options	Attributes that do not contribute to differentiate between design options	Combine and interpret into Design Definitions
<b>1. Impact on Wider Regional Area (Env 24).</b>	<ul style="list-style-type: none"> <li>Impact zone wider than project area (how its measured)</li> <li>Reduce traffic elsewhere eg noise air - pollution leach, South, Farrington (balanced picture)</li> <li>Maintain ecosystem</li> <li>Impacts of climate change</li> <li>Zero impact on educational facilities</li> </ul>	<ul style="list-style-type: none"> <li>Impact zone wider than project area (how its measured)</li> <li>Reduce traffic elsewhere eg noise air - pollution leach, South, Farrington (balanced picture)</li> <li>Maintain ecosystem</li> <li>Zero impact on educational facilities</li> </ul>	<ul style="list-style-type: none"> <li>Impacts of climate change</li> </ul>	<ul style="list-style-type: none"> <li>Impact on connectivity between areas of environmental importance</li> <li>Impact on area outside of footprint</li> <li>Impact on fauna crossing</li> <li>Impact on road kill</li> <li>Impact on bird strike</li> <li>Interdependencies within the ecology</li> <li>Access to areas of environmental importance (for recreation/research/school children/scouts)</li> </ul>
<b>2. Fauna (Env1). (protecting and enhancing fauna)</b>	<ul style="list-style-type: none"> <li>Protecting endangered species</li> <li>Retaining habitat</li> <li>Maintaining ecological linkages</li> <li>Increasing biodiversity (average abundance of species)</li> <li>Maintaining minimum viable habitat area (for species survival)</li> <li>Avoiding light and noise spill</li> <li>Underpasses and causeways to preserve connectivity</li> <li>Human access and its impact on Fauna</li> <li>Habitat in different areas</li> <li>Impacts on Carnaby's Cockatoos feeding habitat</li> <li>Zero impacts on migratory birds</li> <li>Fauna Habitat (formerly criteria name of Env9)</li> <li>Bird Nesting Sites</li> <li>Maintain Natural Habitat</li> </ul>	<ul style="list-style-type: none"> <li>Protecting endangered species</li> <li>Retaining habitat</li> <li>Maintaining ecological linkages</li> <li>Increasing biodiversity (average abundance of species)</li> <li>Maintaining minimum viable habitat area (for species survival)</li> <li>Avoiding light and noise spill</li> <li>Underpasses and causeways to preserve connectivity</li> <li>Human access and its impact on Fauna</li> <li>Habitat in different areas</li> </ul>	<p>None</p>	<ul style="list-style-type: none"> <li>Protection of endangered species</li> <li>Retention of habitat</li> <li>Maintenance of ecological linkages</li> <li>Maintaining minimum viable habitat area</li> <li>Reducing light spill</li> <li>Preserve connectivity for fauna</li> <li>Reduce human access to areas of importance to endangered/protected species</li> <li>Reduce impact on Carnaby's Cockatoo</li> <li>Reduce impact on migratory birds</li> </ul>

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	<ul style="list-style-type: none"> <li>• Bird strike (larger birds)</li> <li>• Swans</li> <li>• Protected Species</li> <li>• Food types</li> <li>• Migratory birds (minimise impact on habitat)</li> <li>• Lighting (formerly name of Env33)</li> <li>• Minimise light pollution</li> <li>• Light design ensure only local impact</li> </ul>	<ul style="list-style-type: none"> <li>• Impacts on Carnaby's Cockatoos feeding habitat</li> <li>• Zero impacts on migratory birds</li> <li>• Fauna Habitat (formerly criteria name of Env9)</li> <li>• Bird Nesting Sites</li> <li>• Maintain Natural Habitat</li> <li>• Bird strike (larger birds)</li> <li>• Swans</li> <li>• Protected Species</li> <li>• Food types</li> <li>• Migratory birds (minimise impact on habitat)</li> <li>• Lighting (formerly name of Env33)</li> <li>• Minimise light pollution</li> <li>• Light design ensure only local impact</li> </ul>		<ul style="list-style-type: none"> <li>• Rehabilitation of degraded areas</li> </ul>
<p><b>3. Sources of Contamination (Env 16). (reducing and managing sources of contamination)</b></p>	<ul style="list-style-type: none"> <li>• Long term pollutants</li> <li>• Short Term Pollutants</li> <li>• Run off</li> <li>• Groundwater pollution</li> <li>• Soil contamination (former name of criteria Env13)</li> <li>• Fuel source for construction</li> <li>• Acid Sulphate Soils (do not build if it exists)</li> <li>• Incident management (formerly name of Env18)</li> <li>• Accidents</li> <li>• Spillage</li> <li>• Dangerous goods</li> <li>• Design controls</li> <li>• Fire risk</li> </ul>	<ul style="list-style-type: none"> <li>• Long term pollutants</li> <li>• Short Term Pollutants</li> <li>• Run off</li> <li>• Groundwater pollution</li> <li>• Soil contamination (former name of criteria Env13)</li> <li>• Acid Sulphate Soils (do not build if it exists)</li> <li>• Accidents</li> <li>• Spillage</li> <li>• Dangerous goods</li> <li>• Design controls</li> <li>• Runoff design</li> </ul>	<ul style="list-style-type: none"> <li>• Incident management (formerly name of Env18)</li> <li>• Fire risk</li> <li>• Incident prevention (formerly name of Env19)</li> <li>• Trucks leak fuel and coolant</li> <li>• Safety (formerly name of Env31)</li> <li>• Investigate PCBs buried in project area (old SECWA tip site)</li> </ul>	<ul style="list-style-type: none"> <li>• Impact on contaminated areas and acid sulphate soils</li> <li>• Drainage design and treatment of runoff (impact on water quality)</li> <li>• Impact on water levels in wetlands</li> <li>• Impact on water connectivity</li> <li>• Impact on ground water</li> </ul>

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	<ul style="list-style-type: none"> <li>• Incident prevention (formerly name of Env19)</li> <li>• Runoff design</li> <li>• Design Control</li> <li>• Water quality (formerly name of Env25)</li> <li>• Trucks leak fuel and coolant</li> <li>• Drainage to avoid pollution of existing water</li> <li>• Contaminants</li> <li>• Lake water quality</li> <li>• Improve, filter, recycle and treatment</li> <li>• Safety (formerly name of Env31)</li> <li>• Investigate PCBs buried in project area (old SECWA tip site)</li> </ul>	<ul style="list-style-type: none"> <li>• Design Control</li> <li>• Water quality (formerly name of Env25)</li> <li>• Drainage to avoid pollution of existing water</li> <li>• Contaminants</li> <li>• Lake water quality</li> <li>• Improve, filter, recycle and treatment</li> </ul>		
<p><b>4. Size of Footprint (Env 8). (reducing the size of the footprint)</b></p>	<ul style="list-style-type: none"> <li>• Impact on area of vegetation</li> <li>• No. of priority species</li> <li>• The lakes Area</li> <li>• Natural Bush</li> <li>• Standards of road design - look for innovation to reduce</li> <li>• Minimise impacts</li> <li>• Place environment before cost</li> <li>• Actual Risk of damage to the environment caused by construction methods (former criteria name of Env15)</li> <li>• Number of lanes consideration</li> <li>• Tunnel Options</li> <li>• Independent review of studies</li> <li>• Length of studies need to be reviewed</li> </ul>	<ul style="list-style-type: none"> <li>• Impact on area of vegetation</li> <li>• No. of priority species</li> <li>• The lakes Area</li> <li>• Natural Bush</li> <li>• Standards of road design - look for innovation to reduce</li> <li>• Minimise impacts</li> <li>• Number of lanes consideration</li> <li>• Tunnel Options</li> </ul>	<ul style="list-style-type: none"> <li>• Independent review of studies</li> <li>• Length of studies need to be reviewed</li> <li>• Place environment before cost</li> <li>• Actual Risk of damage to the environment caused by construction methods (former criteria name of Env15)</li> </ul>	<ul style="list-style-type: none"> <li>• Reduction of footprint</li> <li>• Retention of natural bush</li> <li>• Tunnel options</li> </ul>

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<p><b>5. Wetlands (Env 4).</b></p>	<ul style="list-style-type: none"> <li>• Connectivity, functionality and quality</li> <li>• Improving/maintaining water quality</li> <li>• Light and noise spill</li> <li>• Wetland flora and fauna</li> <li>• Treating drainage and runoff</li> <li>• protecting and preserving functionality Quality of Beeliear wetlands (Regional)</li> <li>• Enhance water quality</li> <li>• avoid wetlands</li> <li>• Bridge over wetlands</li> <li>• Dredge Bibra Lake</li> <li>• RAMSAR Wetlands</li> <li>• Water levels (former criteria name of Env10)</li> <li>• Maintain Natural Levels</li> <li>• Maintain Linkages</li> <li>• During Construction</li> <li>• During operations</li> </ul>	<ul style="list-style-type: none"> <li>• Connectivity, functionality and quality</li> <li>• Improving/maintaining water quality</li> <li>• Light and noise spill</li> <li>• Wetland flora and fauna</li> <li>• Treating drainage and runoff</li> <li>• protecting and preserving functionality Quality of Beeliear wetlands (Regional)</li> <li>• Enhance water quality</li> <li>• avoid wetlands</li> <li>• Bridge over wetlands</li> </ul>	<ul style="list-style-type: none"> <li>• Dredge Bibra Lake</li> <li>• RAMSAR Wetlands</li> <li>• During Construction</li> <li>• During operations</li> </ul>	<ul style="list-style-type: none"> <li>• Maintain existing connectivity, functionality and quality of wetlands</li> <li>• Maintain/improve water quality of wetlands</li> <li>• Reduce light and noise spill in wetlands</li> <li>• Treatment of runoff into wetlands</li> <li>• Build bridge over wetlands</li> <li>• Water levels (former criteria name of Env10)</li> <li>• Maintain Natural Levels</li> <li>• Maintain Linkages</li> </ul>
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