

Annex L

## Project Risk Analysis Matrix

**Table L1 Project Environmental Risk Analysis**

Aspect	Potential Impacts	Probability	Consequence	Risk	Mitigation
Local Road upgrades:	<ul style="list-style-type: none"> <li>Loss/damage to cultural heritage values</li> <li>Loss/damage of biodiversity value, EEC</li> <li>Erosion and sedimentation</li> <li>Loss of water quality</li> <li>Hydrocarbon, chemical leaks and spills</li> <li>Introduction/spreading weeds</li> <li>Generation of waste</li> <li>Deterioration of air quality (e.g. dust)</li> <li>Impacts to visual amenity.</li> <li>Fire / bushfire</li> <li>Road safety</li> <li>Traffic disruption</li> <li>Noise at neighbouring receivers</li> </ul>	Possible to Likely	Low to High	Acceptable to High	<ul style="list-style-type: none"> <li>Construction Environmental Management Plan</li> <li>Construction Traffic and Access Management Plan</li> <li>Construction Flora and Fauna Management Plan</li> <li>Noise and Vibration Management Plan</li> <li>Stakeholder and Community Engagement Plan</li> <li>Requirements of road authority.</li> <li>Communication Plan</li> </ul>
Site establishment: <ul style="list-style-type: none"> <li>site offices installation</li> <li>laydown and parking areas</li> <li>power supply</li> <li>vehicle movements</li> <li>transport people to and from site</li> <li>transport equipment and materials to site office</li> </ul>	<ul style="list-style-type: none"> <li>Traffic disruption/accidents</li> <li>Clearing of native vegetation (EEC)</li> <li>Introduction of weeds</li> <li>Damage to stakeholder relationships</li> <li>Hydrocarbon, chemical leaks and spills</li> <li>Contaminated soil</li> <li>Noise at neighbouring receivers</li> <li>Deterioration of air quality (e.g. dust)</li> <li>Impacts to visual amenity</li> <li>Generation of waste</li> <li>Fire / bushfire</li> </ul>	Possible to Likely	Low to High	Acceptable to High	<ul style="list-style-type: none"> <li>Construction Environmental Management Plan</li> <li>Construction Traffic and Access Management Plan</li> <li>Construction Flora and Fauna Management Plan</li> <li>Noise and Vibration Management Plan</li> <li>Stakeholder and Community Engagement Plan</li> <li>Construction Compound and Ancillary Facilities Management Plan</li> <li>Communication Plan</li> </ul>

Aspect	Potential Impacts	Probability	Consequence	Risk	Mitigation
Earthworks for access tracks <ul style="list-style-type: none"> <li>• clearing,</li> <li>• transport gravel,</li> <li>• form roads,</li> <li>• create drainage</li> <li>• apply road surfacing</li> </ul>	<ul style="list-style-type: none"> <li>• Loss or damage to of cultural heritage values</li> <li>• Loss/damage of biodiversity value</li> <li>• Erosion and sedimentation</li> <li>• Loss of water quality</li> <li>• Hydrocarbon, chemical leaks and spills</li> <li>• Introduction/spreading weeds</li> <li>• Generation of waste</li> <li>• Deterioration of air quality (e.g. dust)</li> <li>• Impacts to visual amenity.</li> <li>• Fire / bushfire</li> <li>• Noise at neighbouring receivers</li> </ul>	Possible to Likely	Low to High	Acceptable to High	<ul style="list-style-type: none"> <li>• Construction Environmental Management Plan</li> <li>• Construction Noise and Vibration Management Plan</li> <li>• Construction Soil and Water Quality Management Plan</li> <li>• Construction Heritage Management Plan</li> <li>• Construction Flora and Fauna Management Plan</li> <li>• Communication Plan</li> </ul>
Earthworks for wind turbine footings and hardstands: <ul style="list-style-type: none"> <li>• clearing,</li> <li>• excavation (cut/fill)</li> <li>• transport gravel,</li> <li>• form hardstand,</li> <li>• stabilise batters</li> <li>• create drainage</li> <li>• apply surfacing</li> <li>• form stockpiles</li> </ul>	<ul style="list-style-type: none"> <li>• Loss/damage to cultural heritage values</li> <li>• Loss/damage of biodiversity value, EEC</li> <li>• Erosion and sedimentation</li> <li>• Loss of water quality</li> <li>• Hydrocarbon, chemical leaks and spills</li> <li>• Spreading weeds</li> <li>• Generation of waste</li> <li>• Deterioration of air quality</li> <li>• Impacts to visual amenity</li> <li>• Fire / bushfire</li> <li>• Noise at neighbouring receivers</li> </ul>	Possible to Likely	Low to High	Acceptable to High	<ul style="list-style-type: none"> <li>• Construction Environmental Management Plan</li> <li>• Construction Noise and Vibration Management Plan</li> <li>• Construction Soil and Water Quality Management Plan</li> <li>• Construction Heritage Management Plan</li> <li>• Construction Flora and Fauna Management Plan</li> <li>• Communication Plan</li> </ul>

Aspect	Potential Impacts	Probability	Consequence	Risk	Mitigation
Earthworks for substation: <ul style="list-style-type: none"> <li>clearing,</li> <li>excavation (cut/fill)</li> <li>transport gravel,</li> <li>form hardstand,</li> <li>stabilise batters</li> <li>create drainage</li> <li>apply surfacing</li> </ul> form stockpiles	<ul style="list-style-type: none"> <li>Loss/damage to cultural heritage values</li> <li>Loss/damage of biodiversity value</li> <li>Erosion and sedimentation</li> <li>Loss of water quality</li> <li>Hydrocarbon, chemical leaks and spills</li> <li>Spreading weeds</li> <li>Generation of waste</li> <li>Deterioration of air quality</li> <li>Impacts to visual amenity</li> <li>Fire / bushfire</li> <li>Noise at neighbouring receivers</li> </ul>	Possible to Likely	Low to High	Acceptable to High	<ul style="list-style-type: none"> <li>Construction Environmental Management Plan</li> <li>Construction Noise and Vibration Management Plan</li> <li>Construction Soil and Water Quality Management Plan</li> <li>Construction Heritage Management Plan</li> <li>Construction Flora and Fauna Management Plan</li> <li>Communication Plan</li> </ul>
Concrete Batch Plant: <ul style="list-style-type: none"> <li>clearing,</li> <li>earth works for bench</li> <li>transport gravel, sand, water to site</li> <li>install site drainage</li> <li>operate batch plant,</li> <li>load and dispatch agitator trucks</li> </ul>	<ul style="list-style-type: none"> <li>Traffic generation and accidents</li> <li>Damage to local roads</li> <li>Air quality (dust)</li> <li>Pollution of waters</li> <li>Hydrocarbon, chemical leaks and spills</li> <li>Noise at neighbouring receivers</li> <li>Introduction/spread of weeds</li> <li>Generation of waste</li> <li>Fire / bushfire</li> </ul>	Possible to Likely	Low to High	Acceptable to High	<ul style="list-style-type: none"> <li>Decision on siting of Plant</li> <li>Construction Environmental Management Plan</li> <li>Noise and Vibration Management Plan</li> <li>Compound and Ancillary Facilities Management Plan</li> <li>Traffic and Access Management Plan</li> <li>Soil and Water Quality Management Plan</li> <li>Heritage Management Plan</li> <li>Flora and Fauna Management Plan</li> <li>Communication Plan</li> </ul>

Aspect	Potential Impacts	Probability	Consequence	Risk	Mitigation
Trenching: <ul style="list-style-type: none"> <li>• Clearing cable route</li> <li>• Excavate trench</li> <li>• Install sand and cables</li> <li>• Backfill</li> <li>• Restore surface and revegetate</li> </ul>	<ul style="list-style-type: none"> <li>• Loss of biodiversity value</li> <li>• Soil disturbance</li> <li>• Erosion and sedimentation</li> <li>• Loss of water quality and changes to hydraulic regime</li> <li>• Hydrocarbon, chemical leaks and spills</li> <li>• Loss of cultural heritage</li> <li>• Generation of waste</li> <li>• Impacts to visual amenity</li> <li>• Construction noise exceedance</li> <li>• Introduce / spread weeds</li> <li>• Deterioration of air quality (dust)</li> <li>• Fire / bushfire</li> <li>• Noise at neighbouring receivers</li> </ul>	Possible to Likely	Low to High	Acceptable to High	<ul style="list-style-type: none"> <li>• Construction Environmental Management Plan</li> <li>• Compound and Ancillary Facilities Management Plan</li> <li>• Noise and Vibration Management Plan</li> <li>• Traffic and Access Management Plan</li> <li>• Soil and Water Quality Communication Plan Management Plan</li> <li>• Heritage Management Plan</li> <li>• Flora and Fauna Management Plan</li> </ul>
Install overhead line: <ul style="list-style-type: none"> <li>• provide temporary access</li> <li>• clearing pole sites and hardstands</li> <li>• form hardstands</li> <li>• install poles</li> <li>• string conductors</li> <li>• tension</li> <li>• restore disturbance</li> </ul>	<ul style="list-style-type: none"> <li>• Loss of biodiversity value</li> <li>• Soil disturbance</li> <li>• Erosion and sedimentation</li> <li>• Loss of water quality and changes to hydraulic regime</li> <li>• Hydrocarbon, chemical leaks and spills</li> <li>• Loss of cultural heritage</li> <li>• Generation of waste</li> <li>• Construction noise exceedance</li> <li>• Introduce / spread weeds</li> <li>• Deterioration of air quality (dust)</li> <li>• Impacts to visual amenity</li> <li>• Fire / bushfire</li> <li>• Noise at neighbouring receivers</li> </ul>	Possible to Likely	Low to High	Acceptable to High	<ul style="list-style-type: none"> <li>• Construction Environmental Management Plan</li> <li>• Noise and Vibration Management Plan</li> <li>• Traffic and Access Management Plan</li> <li>• Soil and Water Quality Management Plan</li> <li>• Heritage Management Plan</li> <li>• Flora and Fauna Management Plan</li> <li>• Communication Plan</li> </ul>

Aspect	Potential Impacts	Probability	Consequence	Risk	Mitigation
Temporary stockpiles <ul style="list-style-type: none"> <li>Establishment of erosions and sediment controls;</li> <li>Use of earth moving equipment;</li> <li>Clearing and stockpiling of vegetation and topsoil;</li> <li>Importation of stockpile material;</li> <li>Re-use of stockpile material; and</li> <li>Rehabilitation of disturbed areas.</li> </ul>	<ul style="list-style-type: none"> <li>Loss of biodiversity</li> <li>Erosion and sedimentation</li> <li>Loss of water quality and changes to hydraulic regime</li> <li>Introduce / spread weeds</li> <li>Deterioration of air quality (dust)</li> <li>Impacts to visual amenity</li> <li>Fire / bushfire</li> <li>Hydrocarbon, chemical leaks and spills.</li> <li>Noise at neighbouring receivers</li> </ul>	Possible to Likely	Low to High	Acceptable to High	<ul style="list-style-type: none"> <li>Construction Environmental Management Plan</li> <li>Construction Compound and Ancillary Facilities Management Plan</li> <li>Air Quality Management Plan</li> <li>Noise and Vibration Management Plan</li> <li>Traffic and Access Management Plan</li> <li>Soil and Water Quality Management Plan</li> <li>Heritage Management Plan</li> <li>Flora and Fauna Management Plan</li> <li>Communication Plan</li> </ul>
Transport large components to site: <ul style="list-style-type: none"> <li>transport large items to site</li> <li>use crane to unload at temporary site or hardstand adjacent footing</li> <li>transport truck leaves site</li> </ul>	<ul style="list-style-type: none"> <li>Damage to roads / bridges and street furniture</li> <li>Traffic disruption and road safety</li> <li>Construction noise exceedance</li> <li>Hydrocarbon, chemical leaks and spills</li> <li>Generation of waste</li> <li>Impact on water quality</li> <li>Fire / bushfire</li> </ul>	Possible to Likely	Low to High	Acceptable to High	<ul style="list-style-type: none"> <li>Construction Environmental Management Plan</li> <li>Traffic and Access Management Plan;</li> <li>Noise and Vibration Management Plan;</li> <li>Stakeholder and Community Engagement Plan</li> <li>Communication Plan</li> </ul>

Aspect	Potential Impacts	Probability	Consequence	Risk	Mitigation
Wind turbine assembly and erection: <ul style="list-style-type: none"> <li>• layout components</li> <li>• bring crane to site and assemble</li> <li>• operate crane with crew to erect components</li> <li>• secure each section</li> <li>• remove crane from site</li> </ul>	<ul style="list-style-type: none"> <li>• Disturbance outside standard hours</li> <li>• Construction noise exceedance</li> <li>• Deterioration of air quality</li> <li>• Impact on water quality and changes to hydraulic regime</li> <li>• Hydrocarbon, chemical leaks and spills</li> <li>• Generation of waste</li> <li>• Fire / bushfire</li> </ul>	Possible to Likely	Low to High	Acceptable to High	<ul style="list-style-type: none"> <li>• Stakeholder and Community Engagement Plan</li> <li>• Construction Environmental Management Plan</li> <li>• Noise and Vibration Management Plan + OOHW</li> <li>• Traffic and Access Management Plan</li> <li>• Soil and Water Quality Management Plan</li> <li>• Communication Plan</li> </ul>