

CHAPTER 20

Statement of Commitments

20. STATEMENT OF COMMITMENTS

The Statement of Commitments (SoC) is a review of all management and mitigation measures mentioned in previous chapters of this Environmental Assessment (EA) that will be managed by the Proponent. The framework for the SoC is displayed in **Figure 20.1**, and comprises an Environmental Management Plan (EMP) that combines the Construction Environmental Management Plan (CEMP) and the Operational Environmental Management Plan (OEMP). Within both of these plans there are a number of sub-plans to assist in the amelioration, management and mitigation of environmental impacts from the construction and operational phases of the Project.

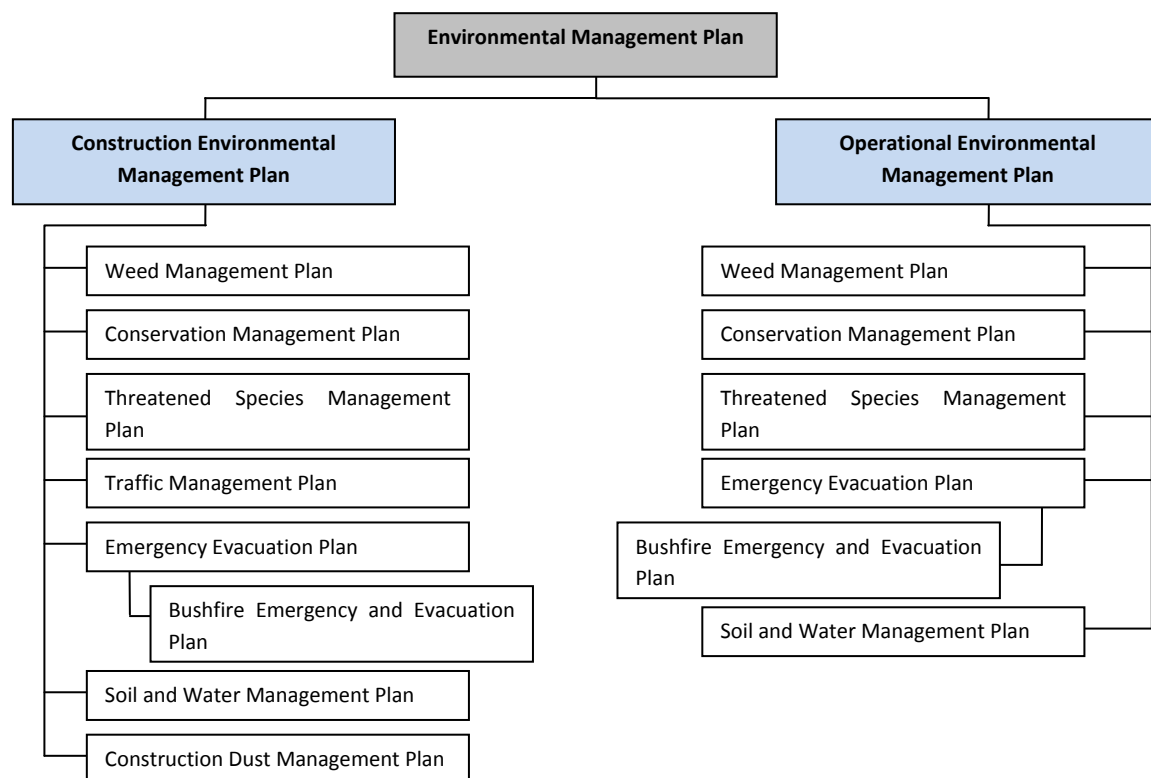


Figure 20.1 Environmental Management Plan framework

20.1 Management Plans

The following section provides an overview of each of the plans and how each relates to the overall scheme of ameliorating, mitigating and managing identified environmental impacts in this EA during the construction and operational phases of the Project.

CEMP: The main aim of the CEMP will be to ameliorate, mitigate and manage any identified environmental impacts during the construction phase of the Project. This will be done through controlling, training and monitoring measures. The CEMP will cover a number of other plans, creating a working environmental plan during construction.

OEMP: The main aim of the OEMP will be to ameliorate, mitigate and manage any identified environmental impacts during the operation phase of the Project. This will be done by combining, where feasible, with the CEMP and adding additional mitigation and management strategies for operational environmental impacts. The OEMP will cover a number of other plans, creating a working environmental plan during operation.

Weed Management Plan: The main aim of this plan will be to stop the spread of weeds during both the construction and operation phase of the Project. This will involve areas of the Project that will have soil disturbance and vegetation clearance, vehicle and machinery movement between sites, importation of soil, rocks and revegetation. By implementing a Weed Management Plan into both the CEMP and OEMP, the spread of weeds can be mitigated and managed.

Conservation Management Plan: The main aim of this plan is to limit vegetation clearance/disturbance during the construction phase of the Project and monitor fauna during the operational phase of the Project. This plan will involve the movement of vehicles and machinery between sites, damage to surrounding tree roots, vegetation clearance, smothering of vegetation by dust particles, accidental capture/injury/death to fauna and temporary removal of fauna habitat. By implementing the Conservation Management Plan into both the CEMP and OEMP, vegetation clearance/disturbance and the impact on fauna can be ameliorated, mitigated and managed.

Threatened Species Management Plan: The main aim of this plan is to limit the amount of accidental injury and/or death to threatened species located within the Project mainly during the construction phase, but also during any maintenance of the operational phase. By implementing the Threatened Species Management Plan into the CEMP and OEMP, accidental injury and/or death to threatened species can be ameliorated, mitigated and managed.

Cultural Heritage Management Protocol: The main aim of this protocol is to limit the impact on Cultural Heritage items found during the construction and operational phase of the Project. By implementing the Cultural Heritage Management Protocol into the CEMP and OEMP the impact on Cultural Heritage items can be ameliorated, mitigated and managed.

Traffic Management Plan: The main aim of this plan is to minimise risk from increased traffic on the roads in the Project site during the construction phase of the Project. This plan will involve the movement of vehicles and machinery between sites and the haulage process. By implementing the Traffic Management Plan into the CEMP the impact of increased traffic on the roads can be ameliorated, mitigated and managed.

Emergency Evacuation Plan: The main aim of this plan is to provide an effective and suitable emergency evacuation plan for use on-site during the construction and operational phase of the Project. This plan will consist of plans for activities occurring during construction and maintenance activities and if a fire or bushfire were to occur in/around the Project Site. By implementing the Emergency Evacuation Plan into the CEMP and OEMP all emergency evacuations will be carried out in an effective and suitable manner decreasing the risk of injury and damage.

Bushfire Emergency and Evacuation Plan: The main aim of this plan is to provide planned and orderly evacuation plans to construction and maintenance employees, visitors and landowners in the event of a bushfire impacting the Project site during the construction and operational phases of

the Project. This plan will be a sub-plan under the Emergency Evacuation Plan. By implementing the Bushfire Emergency and Evacuation Plan into the CEMP and OEMP the plan will be able to provide planned and orderly instructions to all impacted persons decreasing the risk of injury.

Soil and Water Management Plan: The main aims of this plan are to minimise loss of water quality and changes in the hydraulic regime during the construction and operational phases of the Project. This plan will involve soil disturbance, erosion events from surface run-off and disturbance of water resources in the Project site. By implementing the Soil and Water Management Plan into the CEMP and OEMP, water quality and hydraulic regimes will be ameliorated, mitigated and managed.

Construction Dust Management Plan: The main aim of this plan is to minimise the generation and spread of dust during the construction phase of the Project. This plan will involve vehicle and machinery movement and activities on dry and windy days. By implementing the Construction Dust Management Plan into the CEMP, dust generation will be able to be mitigated and managed.

20.2 Draft Statement of Commitments

In accordance with the Director-General's Requirements (DGR's) and Part 3A reforms of the *Environmental Planning and Assessment (EP&A) Act, 1979* the SoC details measure for environmental mitigation, management and monitoring for the Project. Mitigation, management and monitoring measures have been developed by the Proponent and consultants reports for a range of environmental issues as discussed through **Chapters 8 to 19** for the Pre-Construction (PC), Construction (C), Operation/Maintenance (OM) and Refurbishment/Decommissioning (RD) as displayed in **Table 20.1**. Each mitigation task is defined by an impact, objective, the party responsible for the task and when the task is required during the Project. To enable ease of referencing to chapters the SoC mitigation tasks have been split into the associated chapters.

	Impact	Objective	Mitigation Task	By	Stages			
					PC	C	OM	RD
Landscape and Visual								
001	Impact to receptors	Minimise view of infrastructure	Use of a matt and/or off-white finish on the structures to reduce visual contrast between wind turbine generator (WTG) structures and the viewing background (this is subject to final turbine selection).	Proponent	✓	✓		✓
002	Impact to receptors	Minimise view of infrastructure	Tracks have been designed to follow contour lines and existing roads will be used as much as possible, which will minimise cut-and-fill and the potential landscape scarring.	Proponent in consultation with road engineers	✓	✓		✓
003	Impact to receptors	Minimise view of infrastructure	Location of the collector substation and other ancillary infrastructure sited sympathetically with the nature of the locality and away from major roads and residences where possible to mitigate visual impact.	Proponent	✓	✓		✓
004	Impact to receptors	Minimise view of infrastructure	The majority of electrical connections within the Project site (i.e. cables between the WTG's) have been designed to be located underground (where possible), in order to further reduce potential visual impacts.	Proponent	✓	✓		✓
005	Impact to receptors	Minimise view of infrastructure	Undertake landscape planting where screening is deemed appropriate and in accordance with the outcomes of the assessment process.	Proponent in consultation with affected receptor		✓	✓	✓
006	Impact to receptors	Minimise view of construction	Re-instate disturbed soil areas immediately after completion of construction and decommissioning which would include re-contouring and re-seeding with appropriate plant species and local materials where feasible.	Proponent		✓		✓
007	Impact to receptors	Minimise view of construction	Enforce safeguards to control and minimise dust emissions during construction and decommissioning.	Proponent		✓		✓

	Impact	Objective	Mitigation Task	By	Stages			
					PC	C	OM	RD
008	Impact to receptors	Minimise view of construction	Minimise activities that may require night time lighting and, if necessary, use low lux (intensity) lighting designed to be mounted with the light projecting inwards to the Project site to minimise glare.	Proponent		✓		✓
Noise								
009	Operational noise exceedance	Compliance	<p>If WTG noise impacts are non-compliant with stated criteria used for the assessment due to temperature inversion, atmospheric stability or other reasons, then an 'adaptive management' approach can be implemented to mitigate or remove the impact. This process could include:</p> <ul style="list-style-type: none"> • Investigating the nature of the reported impact; • Identifying exactly what conditions or times lead to undue impacts; • Consideration of operating WTG's in a reduced 'noise optimised' mode during offending wind directions and at night-time (sector management); • Turning off WTG's that are identified as causing the undue impact; and • Providing acoustic upgrades (glazing, façade, masking noise etc) to affected dwellings. 	Proponent			✓	
010	Construction noise exceedance	Minimisation	Ensure work activities occur within recommended working hours, according to the EPA, where practicable (i.e. 7.00 am to 6.00 pm, Monday to Saturday and 9.00 am to 6.00 pm Sundays). Any proposed work outside of these hours will entail close consultation with the affected community.	Proponent in consultation with EPA		✓		✓
011	Construction noise exceedance	Minimisation	Prior notification to the affected public and restricted use of exhaust/engine brakes in built up areas for night-time deliveries.	Proponent		✓		✓

	Impact	Objective	Mitigation Task	By	Stages			
					PC	C	OM	RD
012	Construction noise exceedance	Minimisation	Continued adequate maintenance of construction vehicles.	Proponent		✓		✓
013	Construction noise exceedance	Minimisation	Noise emissions from construction activity will be localised and temporary.	Proponent		✓		✓

Flora and Fauna

014	Spread of weeds	Minimise spread	<p>Development of a Weed Management Plan, which provides:</p> <ul style="list-style-type: none"> • From soil disturbance and vegetation clearance, placing soil which may contain exotic species at least 50 m from any water source; • Where a specific weed risk has been identified, all machinery, equipment and vehicles are to be washed down before entering and leaving the Project site; • Topsoil that is limited in weeds, harvested to salvage the native soil seed bank and then used to reintroduce the seed bank back into disturbed areas; • All onsite staff and contractors educated on noxious weeds present at the Project site and ways to prevent spread; • Revegetation with locally native endemic species characteristic of the cleared vegetation type; • Control of perennial weed grasses within the disturbance zone for 3 to 5 years after construction; and • Management of stock access during periods of vegetation and soil disturbance in coordination with landowners. 	Proponent in consultation with ecologist and associated landowners			✓	✓	✓
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	Impact	Objective	Mitigation Task	By	Stages			
					PC	C	OM	RD
015	Loss of biodiversity value	Minimise impact	<p>Development of a Conservation Management Plan, which provides:</p> <ul style="list-style-type: none"> All vehicles are to remain within the extent of the earth works designed specifically for the Project to minimise vegetation disturbance; Care to be taken when working in close proximity to trees to prevent damage to roots; All on-site staff and contractors to undergo a brief site induction regarding the known threatened species on-site and the management protocol should any be encountered; All logs and large rocks removed from within the proposed development area are to be redistributed following the completion of works in temporary clearance areas or adjacent areas to supplement habitat; Revegetation of disturbed areas will be timed to maximise success. Average rainfall is steady throughout the year with a slightly higher average number of rain days in spring. With spring being the typical growth period of many flora, revegetation is likely to be undertaken at this time. The CEMP will include Key Performance Indicators to measure the success of the revegetation process and adaptive responses will be applied relative to the observed success; Daily checking of trenches by the Environmental Compliance Manager to ensure any captured fauna will be released according to the Construction Environmental Management Plan (CEMP) or Threatened Species Management Plan (TSMP) (<i>Note: this will not be carried out during the operation phase</i>); Pre-clearance surveys undertaken to determine if roosts, nests or dens present in any trees proposed for clearing; Bird and bat strike monitoring will be undertaken in accordance with the monitoring guidelines provided by the Australian Wind Energy Association (Brett Lane & Associates 2005). If results show that longer term monitoring is required then a monitoring programme will be developed in 	Proponent in consultation with ecologist and DECC				
					✓	✓	✓	✓

	Impact	Objective	Mitigation Task	By	Stages			
					PC	C	OM	RD
			<p>consultation with DECCW and other departments/agencies as required. Such a programme could include adaptive management whereby significant impacts are dealt with by using an adaptive approach;</p> <ul style="list-style-type: none"> • Should WTG's require lighting, select lighting that minimises the likelihood of attracting insects and hence foraging bats, subject to CASA requirements; • During water extraction from the dam, a suitable water level for use by the Blue-billed Duck should be maintained and extraction from the dam undertaken in a manner that avoids key habitat areas such as reeds and rushes; 					
016	Loss of biodiversity value	Minimise impact	<p>Three alternative offset packages have been proposed, all exclusive of one another, with the potential to be modified or combined, subject to further discussions with DECC. These are:</p> <ul style="list-style-type: none"> • Biobank (or alternate) agreements with adjacent landowners to the Project in accordance with those vegetation communities impacted; • Biobank (or alternate) agreement with an adjacent landowner(s) to protect up to 500 ha of NTG; and • Three year monitoring program. 	Proponent in consultation with ecologist, DECC, associated land owners and University of Canberra	✓			
Flora and Fauna - Grassland Earless Dragon								
017	Impacts on GED sensitive lifecycle stages - mating and laying periods	Minimise impact	Development will not occur on the Sherwin and Springfield Clusters during this time (November to January).	Proponent in consultation with ecologist and DECC		✓		✓
018	Injury or death of GED present within construction	Minimise impact	Pre-clearance surveys within the construction area boundaries where located within known or potential GED habitat within three weeks of the proposed construction activities commencing. Including:	Proponent in consultation with ecologist and DECC	✓			

	Impact	Objective	Mitigation Task	By	Stages			
					PC	C	OM	RD
	area		<ul style="list-style-type: none"> Spider-tubed sized pitfalls - between late January and April (or until the onset of cold weather); and Systematic searches of tussocks, rolling of all rocks with a diameter greater than 20 cm and the use of an endoscope to search spider burrows - May to end of October. 					
019	Relocation to avoid Injury or death of GED present within construction area	Minimise impact	<p>Survey of distribution and habitat to select relocation sites:</p> <ul style="list-style-type: none"> Use aerial photography etc to map areas of potential habitat and likely condition; Identify areas for relocations and hence field verification; Field verification will be undertaken well in advance of pre-clearance surveys to ensure relocation sites have been selected prior to pre-clearance surveys; Gather data from known sites, including rock cover, tussock spacing and spider burrow densities; Undertake field assessment to confirm desktop habitat mapping and use data collected from known sites to assess habitat condition. Map habitat condition for proposed relocation sites; and Simultaneously undertake rock rolling and endoscope surveys for the GED with particular focus on relocation sites to determine the distribution and density of GED and ensure relocations do not occur in areas where there are already high densities (i.e. assess carry capacity of the land). <i>Note: Spider tubing will not be used if any surveys are undertaken between November and January or during winter months.</i> 	Proponent in consultation with ecologist and DECC			✓	
020	Injury or death of GED present within construction	Minimise Impact	<p>Relocation of GED from construction area (detailed relocation strategy is included in Appendix 10):</p> <ul style="list-style-type: none"> GED will be moved to adjacent areas (i.e. outside construction boundaries) within 150 m to 200 m of the construction area; 	Proponent in consultation with ecologist and DECC	✓	✓		✓

	Impact	Objective	Mitigation Task	By	Stages			
					PC	C	OM	RD
	area		<ul style="list-style-type: none"> Relocation sites will support habitat similar to that of where the individual was caught or if this is not possible, within an area currently mapped as potential habitat. An assessment of relocation sites in accordance with Option 3 of the proposed offset packages is proposed; Individuals caught in pitfall traps will be left in the pitfall traps and moved immediately to the relocation site and placed within one of the three proposed artificial burrows to be installed for each relocated individual. The pitfall will then be re-installed at the pre-clearance survey site; If individuals are caught during winter, they will be placed in a cloth bag and transported immediately to the release site. They will then be placed in one of the artificial burrows. Individuals in torpor will be warmed slightly to assist in getting them to enter the burrow and a flat stone placed over the burrow for protection; Individuals found active during the warmer months of the year will be placed in cloth bags and immediately transported to the release site where they will be released into a grass sward; and In areas where a group of individuals are found the same approach as that used for individuals would be implemented. However, a greater density of artificial burrows will be established (1,000 burrows within a 150 m zone). 					
021	Relocation success/failure - monitoring	Monitor impact	<p>Monitoring using radio-tracking (pending advice from DECC, DEWHA and experts) will accompany relocations to provide information to inform future GED relocations. Also:</p> <ul style="list-style-type: none"> Whilst it is recognised that the period between relocations of GED on one Cluster may not provide comprehensive feedback for implementation on other Clusters, it may provide some information that will enable relocations to be undertaken more effectively elsewhere throughout the site; and 	Proponent in consultation with ecologist, DECC and DEWHA	✓	✓		✓

	Impact	Objective	Mitigation Task	By	Stages			
					PC	C	OM	RD
			<ul style="list-style-type: none"> In addition the information collected for this Project can be used to inform management options and the likely success of relocations for other projects in areas where the GED is present. 					
022	Injury or death of GED that re-enter the construction area	Minimise impact	During the summer months (January to April) in areas where GED habitat (both known and potential) occurs within turbine construction areas, the development zone should be partially fenced off using plastic gutter guard to deter individuals from nearby grassland moving back into the area. It obviously will only be possible to fence out some sides of the area where machinery and vehicle access is not required.	Proponent in consultation with ecologist and DECC	✓	✓		✓
023	Capture within trenches	Minimise impact	An Environmental Compliance Manager will be onsite during the civil works phase (including cable trenching and laying) to conduct regular inspections in trenches and excavated areas and manage any incidental GED encounters.	Proponent in consultation with ecologist and DECC	✓	✓		✓
024	Capture within trenches	Minimise impact	A trained field officer or post graduate research student will be onsite a minimum of two days per week and on call to assist in the management of any findings by construction personnel.	Proponent in consultation with ecologist and DECC	✓	✓		✓
025	Capture within trenches	Minimise impact	Trenches will be dug and filled in sections and therefore it is not anticipated that any section of trench would remain uncovered for more than a few days.	Proponent in consultation with ecologist and DECC	✓	✓		✓
026	Habitat loss	Minimise impact	Rocks removed from the construction area will be scattered throughout designated areas of NTG where past rock removal has been undertaken, during the rehabilitation phase of the track verges.	Proponent in consultation with ecologist and DECC		✓		✓
027	Habitat loss	Minimise impact	Rocks between 20 cm diameter and 50 cm diameter will be salvaged from earth works and scattered across identified re-rocking areas.	Proponent in consultation with ecologist and DECC		✓		✓

	Impact	Objective	Mitigation Task	By	Stages			
					PC	C	OM	RD
028	Protection of GED habitat	Minimise impact	To assist in the conservation of the GED and to further mitigate impacts of the proposal, the inclusion of funding for research forms part of the proposed offset package options. It is envisaged that this funding would be used to implement some of the key objectives outlined in the GED Recovery Plan or to monitor the relocated dragons to provide important information for future management of the species.	Proponent in consultation with ecologist and DECC	✓	✓	✓	✓
Flora and Fauna - Striped Legless Lizard								
029	Impacts on Striped Legless Lizard lifecycle stages	Minimise Impact	Development will not occur on the Sherwin and Springfield Clusters during this time (November to January).	Proponent in consultation with ecologist and DECC		✓		✓
030	Injury or death of Striped Legless Lizard present within construction area	Minimise impact	Pre-clearance surveys within the construction area boundaries where located within known or potential Striped Legless Lizard habitat within three weeks of the proposed construction activities commencing. Including: <ul style="list-style-type: none"> • Spider-tubed sized pitfalls; and • Systematic searches of tussocks, rolling of all rocks with a diameter greater than 20 cm. 	Proponent in consultation with ecologist and DECC	✓	✓		✓
031	Injury or death of Striped Legless Lizard present within construction area	Minimise impact	Striped Legless Lizard will be moved to adjacent areas (i.e. outside construction boundaries) within 150 m to 200 m of the construction area.	Proponent in consultation with ecologist and DECC	✓	✓		✓

	Impact	Objective	Mitigation Task	By	Stages			
					PC	C	OM	RD
032	Injury or death of Striped Legless Lizard present within construction area	Minimise impact	During the summer months (January to April), the development zone should be partially fenced off with plastic gutter guard to deter individuals from nearby grassland moving back into the area. It obviously will only be possible to fence out some sides of the area where machinery and vehicle access is not required.	Proponent in consultation with ecologist and DECC	✓	✓		✓
033	Injury or death of Striped Legless Lizard present within construction area	Minimise impact	Reticulation trenches (each section will only be open for short periods) which will then be checked daily for any trapped Striped Legless Lizard will be released on-site into adjacent areas with suitable habitat and cover.	Proponent in consultation with ecologist and DECC	✓	✓		✓

Flora and Fauna - Natural Temperate Grassland

034	Loss of habitat	Minimise impact	Road layouts have been placed outside areas of NTG so as to minimise fragmentation of NTG wherever feasible.	Proponent in consultation with ecologist and DECC	✓			
035	Loss of habitat	Minimise impact	Potential locations for concrete batching plants have been located in disturbed and sown areas to avoid further impacts on NTG.	Proponent in consultation with ecologist and DECC	✓			
036	Loss of habitat	Minimise impact	Temporary construction facilities will be located in disturbed areas and within the current study area wherever possible to avoid further impacts on NTG.	Proponent in consultation with ecologist and DECC	✓			

	Impact	Objective	Mitigation Task	By	Stages			
					PC	C	OM	RD
Cultural Heritage								
037	Loss of cultural heritage items	Minimise impact	Development of a Cultural Heritage Management Protocol, which provides procedures to be followed for impact avoidance and accidental discovery.	Proponent in consultation with an archaeologist, relevant Aboriginal communities and NSW DECC	✓	✓		✓
038	Loss of cultural heritage items	Minimise impact	Personnel involved in the construction and management phases of the Project should be trained in procedures to implement recommendations relating to cultural heritage, where necessary, to decrease impact.	Proponent in consultation with archaeologist	✓	✓	✓	✓
039	Loss of Aboriginal heritage items	Minimise impact	A program to salvage archaeological excavations and analysis be undertaken in a sample of Survey Units prior to construction.	Proponent in consultation with archaeologist	✓	✓		✓
040	Loss of Aboriginal heritage items	Minimise impact	In the case of a few low/moderate and moderate archaeological significance locales, it is recommended that impacts are avoided or limited through the detailed design and construction phases of the Project.	Proponent in consultation with archaeologist	✓	✓		✓
041	Loss of Aboriginal heritage items	Minimise impact	Ground disturbance impacts associated with the Project be kept to a minimum and to defined areas, as to ensure minimum impact to Aboriginal objects (stone artefacts), which can be expected to extend in a relatively continuous, albeit very low to low density distribution, across the broader landscape encompassed by the Project.	Proponent in consultation with archaeologist		✓		✓
042	Loss of Non-Indigenous heritage items	Minimise impact	Impact on already-disturbed sections or avoid recorded items altogether where feasible.	Proponent in consultation with archaeologist		✓		✓

	Impact	Objective	Mitigation Task	By	Stages			
					PC	C	OM	RD
Traffic and Transport								
043	Safety and asset protection	Minimise risk	Contract a licensed haulage contractor with experience in transporting heavy and over-size loads, to be responsible for obtaining all required approvals and permits from the RTA and Councils and for complying with conditions specified in the aforementioned approvals.	Proponent in consultation with RTA and councils	✓			
044	Safety and asset protection	Minimise risk	<p>Development of a Traffic Management Plan, which provides:</p> <ul style="list-style-type: none"> • Scheduling of deliveries, timing of transport, limiting the number of trips per day; • Undertaking community consultation before and during all haulage activities and providing a dedicated telephone contacts list to enable any issues or concerns to be rapidly identified and addressed; • Managing the haulage process, including the erection of warning signs and/or advisory speed signs posting in advance of isolated curves, crests, narrow bridges and changes of road conditions; • Placing of speed limits on all roads that would be used primarily by construction traffic to reduce the likelihood of any accidents and reduce maintenance costs; • Designing and implementing temporary modifications to intersections and roadside furniture as appropriate; • Producing a Transport Code of Conduct which would be made available to all contractors and staff detailing traffic routes, behavioural requirements and speed limits; • Establishing procedures to monitor traffic impacts on public and internal access tracks during construction, including noise, dust nuisance and travel times, and to implement modified work methods to reduce such impacts where possible; and • Reinstating pre-existing conditions after temporary modifications to the roads and pavements along the route, where applicable, in consultation with relevant authorities. 	Proponent in consultation with licensed haulage contractor and road authorities	✓	✓		✓

	Impact	Objective	Mitigation Task	By	Stages			
					PC	C	OM	RD
045	Safety and asset protection	Minimise risk	Implement all aspects of the Traffic Management Plan in co-ordination with the Councils and Road Traffic Authority (RTA).	Proponent in consultation with licensed haulage contractor and road authorities		✓		✓
046	Safety and asset protection	Minimise risk	Prepare road dilapidation reports covering pavement and drainage structures for all of the routes before and after construction. Any damage resulting from construction traffic, except that resulting from normal wear and tear, would be repaired at the Proponent's cost. Alternatively, the Proponent may negotiate other forms of compensation for road damage with the relevant roads authorities as appropriate.	Proponent in consultation with council and road authorities	✓	✓		✓
047	Loss of biodiversity value	Minimise impact	The reconstruction of the causeway, as discussed in Chapter 3 Project Description, will be in accordance with the Department of Water and Energy under the <i>Water Management Act 2000</i> and the NSW Department of Primary Industries Fish Friendly Waterways Crossing guidelines.	Proponent	✓	✓		✓
048	Safety and asset protection	Minimise risk	Consideration for establishing a transport pool for employees from nearby towns to minimise traffic volumes.	Proponent	✓			
049	Safety and asset protection	Minimise risk	Establish a procedure to ensure the ongoing maintenance of the Project site access roads during the operation phase. This maintenance would include sedimentation and erosion control structures, where necessary.	Proponent			✓	
050	Safety and asset protection	Minimise risk	Prepare and implement a revised Traffic Management Plan reflecting change in traffic volumes, during time of decommissioning.	Proponent in consultation with council and road authorities				✓

	Impact	Objective	Mitigation Task	By	Stages			
					PC	C	OM	RD
Aviation Assessment								
051	Creation of hazard	Minimise risk	The Proponent will provide the RAAF AIS, CASA, AA and AAAAA with the location and height details once final design positions are known and before construction commences. After construction is complete, the Proponent will provide RAAF AIS, CASA, AA and AAAAA with "as constructed" details.	Proponent	✓	✓	✓	✓
052	Creation of hazard	Minimise risk	The Proponent will provide CASA with notification of any cranes (temporary obstacles) that exceed 110 m above ground level.	Proponent	✓	✓		✓
053	Creation of hazard	Minimise risk	Appropriate information regarding the WTG layout and dimensions will be supplied to the Rural Fire Service, if required, to assist in their planning and execution of fire response.	Proponent	✓	✓		✓
054	Creation of hazard	Minimise risk	On receipt of Development Approval for the Project, and with particular regard to the Aeronautical Impact Assessment and Obstacle Lighting Review, the Proponent will consult with CASA on the issue of obstacle lighting.	Proponent in consultation with CASA	✓			
055	Impact to nearby properties	Minimise impact	If lighting is required, the Proponent will commit to shielding provisions allowed under existing CASA guidelines. At the time of writing the shielding restricts the downward component of light to 5 % of nominal intensity emitted below 5 ° below horizontal and zero light emission below 10 ° below horizontal.	Proponent in consultation with CASA	✓			
Communication								
056	Deterioration of signal strength	Minimise deterioration	Amend planned WTG positions if necessary and feasible within the Approval Conditions, to create corridors to ensure minimal interference on links.	Proponent	✓			
057	Deterioration of signal strength	Minimise deterioration	Use of primarily non-metallic WTG blades, to minimise disruption.	Proponent	✓	✓		✓

	Impact	Objective	Mitigation Task	By	Stages			
					PC	C	OM	RD
058	Deterioration of signal strength	Minimise deterioration	Where practical, use equipment complying with the Electromagnetic Emission Standard AS/NZS 4251.2:1999.	Proponent	✓	✓		✓
059	Deterioration of signal strength	Minimise deterioration	A system for recording any complaints on interference, to allow for further investigations with the affected party, to reach an amicable solution.	Proponent			✓	✓
060	Deterioration of signal strength	Minimise deterioration	General mitigation methods for radio-communication include: <ul style="list-style-type: none"> • Modifications to or relocation of existing antennae; • Installation of a directional antennae; and • Installation of an amplifier to boost the signal. 	Proponent			✓	✓
061	Deterioration of signal strength	Minimise deterioration	If television interference is experienced and reported by an existing receiver in the vicinity of the Project, the source and nature of the interference would be investigated by the Proponent. Should the cause of interference be attributed to the Project, then the Proponent will put suitable mitigation measures in place after consultation and agreement with the effected landowner. These could include: <ul style="list-style-type: none"> • Re-orientation of existing aerials to an alternative transmitter; • Provision of a land line between the effected receiver and an antenna located in a suitable reception area; • Provision of satellite or digital TV where available; and • Installation of a new repeater station in a location where interference can be avoided (this is more complex for digital but also less likely to be required for digital television). 	Proponent			✓	✓
Electromagnetic Fields								
062	Exposure from EMF's	Minimise exposure	Bury electrical cables where possible to shield electrical fields.	Proponent		✓		✓
063	Exposure from EMF's	Minimise exposure	Place wires together to cause a cancellation between the fields of electrical phases for magnetic fields.	Proponent		✓		✓

	Impact	Objective	Mitigation Task	By	Stages			
					PC	C	OM	RD
064	Exposure from EMF's	Minimise exposure	Place appropriate security around emitting structures (e.g. collector substation).	Proponent	✓			
065	Exposure from EMF's	Minimise exposure	Ensure the public, including tourists, that need to go near emitting structures are accompanied by a trained and qualified staff member.	Proponent			✓	✓
Fire and Bushfire								
066	Increase risk of fire ignition or spread	Minimise risk	Adherence to all regulations under the NSW Rural Fires Act 1997 and the Snowy Monaro and Bombala Bushfire Risk Management Plans.	Proponent in consultation with relevant authorities	✓	✓	✓	✓
067	Increase risk of fire ignition or spread	Minimise risk	The Rural Fire Service (RFS) and NSW Fire Brigade will be consulted in regard to the adequacy of bushfire prevention measures to be implemented on-site during construction, operation and decommissioning. These measures would potentially cover hot-work procedures, asset protection zones (APZ's), safety, communication, site access and response protocols in the event of a fire originating in the Project infrastructure, or in the event of an external wildfire threatening the Project or nearby properties.	Proponent in consultation with RFS and NSW Fire Brigade	✓	✓	✓	✓
068	Increase risk of fire ignition or spread	Minimise risk	Provide RFS with the locations of individual WTG locations, ancillary infrastructure, construction work schedule, location of additional water supplies for construction, potential landing pads for fire fighting aircrafts and helicopters and access gates for fire fighting services.	Proponent	✓	✓	✓	✓
069	Increase risk of fire ignition or spread	Minimise risk	Installation of access tracks at appropriate width and vertical clearances with access suitable for all weather conditions.	Proponent	✓	✓		✓

	Impact	Objective	Mitigation Task	By	Stages			
					PC	C	OM	RD
070	Increase risk of fire ignition or spread	Minimise risk	Education to construction crews and maintenance staff on the topic of bushfire risk management and risks that could be present at the Project.	Proponent		✓	✓	✓
071	Increase risk of fire ignition or spread	Minimise risk	Provision of basic fire fighting equipment at each active site, including fire extinguishers, knapsacks and other equipment suitable for initial response actions with a minimum of one trained person on-site.	Proponent		✓	✓	✓
072	Increase risk of fire ignition or spread	Minimise risk	Maintain provision for mobile telephone and UHF radio communications.	Proponent in consultation with RFS and NSW Fire Brigade		✓	✓	✓
073	Increase risk of fire ignition or spread	Minimise risk	The collector substation will be surrounded by a gravel and concrete area, free of vegetation, to provide an APZ.	Proponent	✓	✓		✓
074	Increase risk of fire ignition or spread	Minimise risk	The collector substation facility will be bunded with a capacity exceeding the volume of the transformer oil. The facility will be regularly inspected and maintained to ensure leaks do not present a fire hazard, and to ensure the bunded area is clear (including removing any rainwater).	Proponent	✓	✓	✓	✓
075	Increase risk of fire ignition or spread	Minimise risk	Placement and maintenance of APZ will occur around WTG's, transmission line easements and ancillary structures to minimise the spread of fire. Workplace health and safety protocols will be developed to minimise the risk of fire for workers in the control room and amenities.	Proponent	✓	✓	✓	✓
076	Increase risk of fire ignition or spread	Minimise risk	WTG's will be shut down if monitored components reach critical temperatures or if directed to by the RFS in the case of a nearby wildfire being declared (an all-hours contact number would be available to the RFS during the bushfire period).	Proponent in consultation with the RFS			✓	

	Impact	Objective	Mitigation Task	By	Stages				
					PC	C	OM	RD	
077	Increase risk of fire ignition or spread	Minimise risk	Flammable materials and ignition sources brought onto the Project site will be handled and stored as per manufacturer's instructions.	Proponent		✓	✓	✓	
078	Increase risk of fire ignition or spread	Minimise risk	Lightening protection will be installed correctly to minimise risk of malfunction.	Proponent		✓		✓	
Water									
079	Loss of integrity to riparian corridor	Minimise loss	Any access tracks (with the exception of crossings) and all other works and disturbances should not be located in any riparian corridors.	Proponent in consultation with DWE	✓	✓		✓	
080	Loss of integrity to riparian corridor	Minimise loss	DWE guidelines for river crossing designs, based on the Strahler Stream Order Categorisation to minimise environmental impact, will be followed in the design and upgrade of existing roads and river crossings.	Proponent in consultation with DWE	✓	✓		✓	
081	Loss of water quality and change to hydraulic regime	Minimise loss and impact on adjacent watercourses	<p>Development of a Soil and Water Management Plan (SWMP), to minimise soil disturbance, prevent erosion from surface runoff and to prevent disturbance of water resources in the area. Including:</p> <ul style="list-style-type: none"> • All drainage from the Project is in accordance with the POEO Act; • All outlet structures designed in accordance with DWE guidelines; • Avoid removal or disruption to naturally occurring drainage stabilisers; • Installation of water retardation and diversion devices around construction areas, including devices to manage surface runoff from hardstand areas and surfaced access tracks; • Design appropriate sedimentation basins to catch and treat all water from the Project site and consider utilising existing drainage paths for discharge points; 	Proponent in reference to Landcom 2004		✓	✓	✓	✓

	Impact	Objective	Mitigation Task	By	Stages				
					PC	C	OM	RD	
			<ul style="list-style-type: none"> Monitor changes to quantity and quality of receiving waters at Nimmitabel Wastewater Treatment Facility (Station No 222017); Regular inspection, maintenance and cleaning of water quality and sedimentation control devices; and If erosion is detected as a result of inadequate maintenance of drainage control devices, the relevant Environmental Manager shall be alerted and remedial action is to occur immediately, to ensure no re-occurrence of the event. 						
082	Loss of water quality and change to hydraulic regime	Minimise loss and impact on adjacent watercourses	<p>In particular the SWMP provides specific measures for access tracks:</p> <ul style="list-style-type: none"> All roads have sufficient cross-fall gradient to allow all runoff to be collected and treated; All watercourse crossings to be designed in accordance with the DWE guidelines; The design and construction footprint and the extent of disturbances proposed within the riparian zone should be minimised; Maintain existing or natural hydraulic, hydrologic, geomorphic and ecological functions of the watercourse; and Stabilise and rehabilitate all disturbed areas. 	Proponent in reference to Landcom 2004	✓	✓	✓	✓	
083	Loss of water quality and change to hydraulic regime	Minimise loss and impact on adjacent watercourses	<p>In particular the SWMP provides specific measures for hydrology:</p> <ul style="list-style-type: none"> The establishment and operation of the concrete batching plant(s) facilities must be in accordance with the Environment Protection Authority's guidelines for the Concrete Batching Industry and the Environment Protection Licence issued by Department of Environment and Climate Change (DECC); Concrete and cement carrying vehicles should be washed out in appropriate wash-down facilities off-site; Management of hazardous material, waste and sewage; Wastewater produced from temporary on-site toilets during construction will be stored and trucked off-site; 	Proponent in reference to Landcom 2004	✓	✓	✓	✓	

	Impact	Objective	Mitigation Task	By	Stages			
					PC	C	OM	RD
			<ul style="list-style-type: none"> All hazardous materials are to be properly classified and stored away from flood prone areas and drainage lines. Appropriate spill kits and fire protection are to be provided on-site during construction; Any on-site refuelling must occur in an area greater than 100 m from the nearest drainage line; and All hazardous materials are to be stored and transported appropriately in accordance with relevant DECC and Workcover guidelines and regulations, to avoid release into the environment. 					
Air Quality								
084	Deterioration of air quality	Minimise impact	During excavation topsoil will be stockpiled. After excavation topsoil will be replaced for seeding/fertilising and excess subsoil will be disposed of in an appropriate manner. If any excavation occurs on steep slopes the topsoil will need to be stabilised.	Proponent		✓		✓
085	Deterioration of air quality	Minimise impact	Any stockpiled material will be covered with plastic, seeded or otherwise bound to reduce dust. Dust levels at stockpile sites would be visually monitored. Dust suppression (e.g. water sprays) would be implemented if required.	Proponent		✓		✓
086	Deterioration of air quality	Minimise impact	During dry and windy conditions a water cart or alternative chemical dust suppression would be available and applied to work areas.	Proponent		✓		✓
087	Deterioration of air quality	Minimise impact	If blasting is required, Australian New Zealand Environment and Conservation Council guidelines for control of blasting impacts will be followed.	Proponent in consultation with ANZECC		✓		✓
Soil and Landforms								
088	Disturbance to	Minimise	The SWMP provides specific measures for soil:	Proponent		✓		✓

	Impact	Objective	Mitigation Task	By	Stages			
					PC	C	OM	RD
	existing land formations	disturbance	<ul style="list-style-type: none"> • Procedure for personnel to manage suspected contaminated soils disturbed during earthworks; • All disturbed soil surfaces should be stabilised as soon as practicable after works have ceased in the area; and • All stockpiles should be covered to prevent the loss of material during high wind and rain events. Where practicable stockpiles should be placed in areas sheltered from the wind. 					
089	Soil compaction	Minimise impact	<p>The SWMP will have specific measures for stock management:</p> <ul style="list-style-type: none"> • Management of stock access during periods of vegetation and soil disturbances; and • Removal of stock access from construction areas for entire construction periods to allow for regeneration – subject to landowner participation. 	Proponent in consultation with associated landowners		✓		✓
Waste								
090	Waste generation	Minimise waste and maximise recycling	Provision of skip bins and recycling bins on-site to handle packaging materials and domestic waste.	Proponent		✓	✓	✓
091	Waste generation	Minimise waste and maximise recycling	Mulch vegetation and use on-site where feasible, otherwise burn on-site with permission from council, provide firewood to landowners or take to Cooma landfill.	Proponent		✓		✓
092	Waste generation	Appropriate disposal of waste	On-site toilets will either be drained by a septic tank or be an enclosed unit.	Proponent		✓	✓	✓
093	Waste generation	Appropriate disposal of waste	All chemicals and oils will be treated as contaminated waste at the Cooma landfill.	Proponent		✓	✓	✓

	Impact	Objective	Mitigation Task	By	Stages			
					PC	C	OM	RD
094	Waste generation	Appropriate disposal of waste	Any disposal of unsuitable excavated material will require development consent from Bombala Council, unless it is virgin excavated natural material, then it can be disposed of at the Cooma landfill.	Proponent		✓		✓
Response to Consultation								
095	Damage to Trigonometrical Stations	Avoid damage	Commitment to avoid disturbing and damaging the Trigonometrical Station's and adjacent witness marks.	Proponent		✓		✓
096	Crown roads and Crown land	Avoid impact	Relocation of overhead line to ensure no part of the Project intersects the known area of land under an Aboriginal Land Claim.	Proponent	✓	✓		✓
097	Council roads	Liaison with council	It may be necessary to transfer a Crown Road to Council for discrete sections of land that are to be affected by the proposed development.	Proponent in consultation with council	✓	✓		✓
098	Council roads	Liaison with council	In the instance of an existing council road located outside of the legal road reserve, road boundaries will be adjusted as necessary so that any part of the road on which upgrading work was carried out for the Project was brought into the legal reserve.	Proponent in consultation with council	✓	✓		✓
Construction								
099	Environmental	Minimise impact	Micro-site on-site infrastructure within a 100 m radius of the proposed Project infrastructure with respect to: <ul style="list-style-type: none"> • Maintaining a minimum 500 m buffer between constructed WTG's and the neighbouring landowner to the south of the Boco Cluster; and • Minimising impacts to ecologically sensitive habitats and species, as listed in Chapter 10 Flora and Fauna. 	Proponent in consultation with relevant consultant	✓	✓		✓
100	Environmental	Minimise impact	Access roads have been designed along current tracks and roads present within the study area where possible to avoid additional vegetation clearance for access.	Proponent	✓			

	Impact	Objective	Mitigation Task	By	Stages			
					PC	C	OM	RD
101	Environmental	Minimise impact	The reticulation has been placed underground and within the road footprint where possible to allow for temporary rather than permanent disturbance.	Proponent	✓			
102	Environmental	Minimise impact	Electrical cables occurring across significant gullies and waterways will be strung overhead.	Proponent	✓			
103	Environmental	Minimise impact	<p>Development of a Construction Environmental Management Plan (CEMP), which provides:</p> <ul style="list-style-type: none"> • A SWMP in accordance with Landcom (2004). Managing Urban Stormwater: Soils and Construction, 4th Edition; • A Construction Dust Management Plan (CDMP) as listed in Appendix 23; • Manage site security and uncontrolled access via a lockable chain link fence around the temporary site facilities to minimise acts of vandalism and arson; • Obtain necessary licenses and permits from NOW, DPI and NSW DECC; • Manage disturbance to 'no go' areas by flagging, fencing and including details on hard copy and electronic construction plans; • Designate environmental management responsibility to key personnel; • Transport of oil (80,000 L for collector substation transformer and 1,000 L per WTG transformers) will be via purpose built vehicles/ tankers in accordance with the Australian Dangerous Goods Code and will be fitted with emergency spill equipment. Oil will be transferred to transformers by qualified personnel, who have training in emergency spill response. Spill control equipment will be available at the point of use; • Incorporate licensing requirements for the concrete batching plants into the CEMP, including speed limits, portable spill kits, and management of concrete slurry; 	Proponent		✓	✓	✓

	Impact	Objective	Mitigation Task	By	Stages			
					PC	C	OM	RD
			<ul style="list-style-type: none"> • Use of fire mitigation and management strategies discussed in Chapter 16 Fire and Bushfire; • Use local water supplies, where possible, in written agreement with local landowner; • Community consultation strategy for the duration of the construction period, to keep community informed of progress/delays and to maintain a method for receiving and addressing community feedback; and • Other mitigation measures as outlined in Appendix 23. 					
104	Environmental	Minimise impact	Development of an Operational Environmental Management Plan (OEMP) , which can be combined with the CEMP and additions added for operation of the Project as listed in Appendix 23 .	Proponent			✓	
Mineral Exploration								
105	Future land use for mineral exploration	Minimise impact	Liaise with Volcan Australia Pty Ltd and Geogen Victoria Pty Ltd and provide updates of any modifications to the Project design that arise during the construction of the Project.	Proponent			✓	
106	Future land use for mineral exploration	Minimise impact	At the time of decommissioning, communicate with associated landowners and mineral title holders that may wish to retain roads.	Proponent				✓
Tourism								
107	Future tourism	Manage increase	Consideration of a parking or stopping bay if required.	Proponent in consultation with councils and landowners			✓	

	Impact	Objective	Mitigation Task	By	Stages			
					PC	C	OM	RD
Community Wellbeing								
108	Affect on local area	Maximise positive effect of proposal	Contributions of \$2,500 per wind turbine into a Community Fund as each stage of the Project commences commercial operation will be established in close cooperation with the Bombala and Cooma-Monaro Shire Councils to provide funding for local community interest groups and activities.	Proponent in consultations with councils and community	✓		✓	✓
Economic								
109	Affect on local economy	Maximise positive effect of proposal	Local contractors will be used where it is feasible, which will allow the Proponent to utilise the full potential of local resources.	Proponent in consultation with local industry representatives	✓	✓		✓

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