Appendix 11 of Submissions Report for Modification Application (Mod_1)

1.1 Appendix: Revised Statement of Commitments in full – 3 June 2014

1.1.1 Visual

	Impact	Objective	Mitigation tasks	By	Timing	Auditing	Criteria
1.	Visual impact to nearby properties	Minimise the view of infrastructure	• The Proponent would determine the extent of planting with residents of properties within 3km of a wind turbine. This would include a site visit. Any such offer would remain in place for a period of 1 year after project construction. Screening options are detailed in Attachment 3.	The Proponent	During Construction and Operation	CEMP OEMP	Minimise complaints by residents within 3km
1a			Landscaping will be provided as per the GRWFPL Landscaping Management Plan and in consultation with landowners.	Proponent		Cond 7.5(b) and LMP	

1.1.2 Noise

	Impact	Objective	Mitigation tasks	By	Timing	Auditing	Criteria
2.	Construction noise exceedance	Minimisation	• Limit hours of high noise generating activities	The Proponent	Construction	CEMP	Minimise noise complaints
3.	Construction noise exceedance	Minimisation	• Establish communication with relevant authorities and local residents	The Proponent	Construction	CEMP	Minimise noise complaints
4.	Construction noise exceedance	Minimisation	• Adoption of a site representative responsible for noise and vibration issues	The Proponent	Construction	CEMP	Fast response to all complaints

	Impact	Objective	Mitigation tasks	By	Timing	Auditing	Criteria
5.	Construction noise exceedance	Minimisation	• The contractor would select appropriate machinery for the proposed works. This machinery would have low inherent potential for noise generation where practicable	The Proponent	Construction	CEMP	Compliance with DECC *Environmental Noise Control Manual*
5a	Construction noise exceedance	Minimisation	• An onsite representative to meet with residents at their property to discuss the noise issues experienced	The Proponent	Operation	DPE	
6.	Construction noise exceedance	Minimisation	• Where necessary, barriers would be erected around potentially high noise generating areas including generator and high duty compressors	The Proponent	Construction	CEMP	Minimise noise complaints
7.	Construction noise exceedance	Minimisation	• Appropriate siting of noisy machinery. This siting would be as far away from the nearest receiver as possible	The Proponent	Construction	CEMP	Minimise noise complaints
8.	Operational noise exceedance	Compliance	• Further noise assessment would be required to be carried out on the turbine ultimately selected for construction and on the final layout proposed taking into account any minor changes in turbine location to ensure compliance with SA EPA noise guidelines	Noise consultant	Post final site layout and turbine selection	DPE EPA	Compliance with SA EPA noise guidelines
9.	Noise exceedance	Compliance	• Develop and implement an operational noise compliance testing program. This is included in OEMP that has been approved.	Noise consultant	Once all turbines are operational	DPE EPA	Compliance with SA EPA noise guidelines
10.	Noise exceedance	Compliance	• If operational monitoring identifies exceedances, the Proponent would give consideration to providing mechanical ventilation (to remove requirement for open windows), building acoustic treatments (improved glazing) or using turbine control features to manage excessive noise under particular conditions. (Noise Management Plan)	The Proponent	Once all turbines are operational	NMP DPE EPA	Compliance with SA EPA noise guidelines

1.1.3 Biodiversity

Impact	Objective	Mitigation tasks	By	Timing	Auditing	Criteria

	Impact	Objective	Mitigation tasks	By	Timing	Auditing	Criteria
11. Mod	Loss of biodiversity value	Avoid direct and indirect impact	• Infrastructure (including turbines, powerlines, access roads, construction works areas and crane pads) would be located to avoid dense woodland/forest, impacts to woodland/forest in all other cases would be minimised through rigid site controls established in the CEMP to minimise clearing. Any loss of native vegetation would be offset in accordance with SoC16.	The Proponent	Development of site layout	DPE OEH	Minimise clearing
12. Mod	Loss of biodiversity value	Minimise impact	• The Proponent would locate the electricity corridor required at the Gurrundah property using Option 2 (as shown in figure 7-10 of the EA). The width of the corridor would be minimised and impacts to native vegetation offset in accordance with SoC16.	The Proponent	During construction	DPE OEH	Minimise clearing of mature vegetation
13. Mod	Loss of biodiversity value	Avoid direct and indirect impact	• Impacts to isolated mature trees (>60cm diameter at breast height) in cleared areas would be minimised through rigid site controls established in the CEMP to minimise clearing. Where trees cannot be avoided these would be offset in accordance with SoC16.	The Proponent	Development of site layout	DPE OEH	Minimise clearing of mature vegetation
14.	Loss of biodiversity value	Avoid direct and indirect impact	• The final infrastructure layout would avoid areas identified as constraints (refer to constraints maps, Figures 7-6 – 7-9 this EA, and Attachment 3.3)	The Proponent	Development of site layout	DPE OEH	Adherence to biodiversity constraints maps
15.	Loss of biodiversity value	Avoid direct and indirect impact	• A flora assessment would be conducted as part of the construction environmental management plan, to microsite infrastructure such as tracks away from better quality patches of understorey.	Proponent	During construction	ER	Adherence to flora assessment recommendations
16. Mod	Loss of biodiversity value	Compensate for biodiversity impact	• The Proponent would commit to offsets determined by suitably qualified experts on the basis of the quantum of vegetation to be removed, pending development of the final infrastructure layout. The offset plan would be established in perpetuity. • A Conservation Property Vegetation Plan (CPVP) area has been defined and actions for this area will be finalized in consultation with OEH and CMA.	Proponent Proponent	During construction Commission-ing	DPE OEH OEH/CMA	Biodiversity Assessment used as guidance to determine appropriate offsets
16a	Loss of biodiversity value	Compensate for biodiversity impact	• A review of impacts during construction will be undertaken and assessed against the offset to ensure that the offset is adequate	The Proponent	Post construction	GRWFPL	Ecologist review

	Impact	Objective	Mitigation tasks	By	Timing	Auditing	Criteria
17.	Loss of biodiversity value	Minimise impact	• Weed and sediment erosion controls would be implemented to prevent onsite habitat degradation during and following the proposed works. A Construction Environmental Plan would be the appropriate vehicle for these controls. Weeds such as serrated tussock would be treated before the commencement of works to avoid spreading the infestation	The Proponent	During construction	DPE OEH	Minimise indirect biodiversity impacts
18.	Loss of biodiversity value	Minimise impact	• All areas of disturbed soil would be rehabilitated progressively as soon as practicable after disturbance, in order to resist erosion and colonisation by weeds. This may require restricting stock access and implementing revegetation activities	The Proponent	During construction	DPE OEH	Rapid rehabilitation of disturbed areas
19. Mod	Loss of biodiversity value	Minimise impact	• Where the initial monitoring program demonstrates a need, the Proponent will liaise with landowners to negotiate to fill in dams within 100m of a turbine on involved properties to reduce the potential to attract birds and bats which might collide with turbines. Dams removed due to site development would be reinstated in more appropriate locations to retain this habitat resource onsite.	The Proponent	During construction	DPE OEH	Minimise bird and bat collisions
20. Mod	Loss of biodiversity value	Avoid or minimise impact	• Final site inspections would be undertaken for the electricity corridor between Pomeroy and Gurrundah to allow micro-siting of the corridor in areas of least vegetation. If the alternative access off Prices Lane to Pomeroy becomes the preferred option and also if the western access option (a paper road) to Gurrundah becomes the preferred option final inspections would also be undertaken in these areas.	Ecological consultant	Prior to construction	DPE OEH	Minimise direct biodiversity impact

	Impact	Objective	Mitigation tasks	By	Timing	Auditing	Criteria
21. Mod	Loss of biodiversity value	Minimise impact	Implementation of design measures: • Aviation lighting would be minimised in number and fitted to reduce their ability to attract migrating birds and insects. Red lights are preferred, with the least number of flashes per minute. Cowls may also shield the light when viewed from the ground and reduce potential to attract wetland birds taking off at dusk • Guy lines would not be fitted to wind turbine towers. Guy lines will be avoided on other associated structures, where practical. • The turbine towers would not provide perching opportunities • Electrical connection lines would be installed underground where practical • Power poles and overhead powerlines would be designed to be bird-safe using measures such as flags or marker balls, large wire size, wire insulation, wire and conductor spacing	The Proponent	During infrastructure and materials selection	DPE OEH	Minimise bird and bat collisions
22.	Loss of biodiversity value	Minimise impact	Pest Animal Control Program • To reduce the attractiveness of the site to foraging raptors, rabbits would be controlled on the turbine ridges, carrion would be removed from the site as quickly as possible	The Proponent	During operation	DPE OEH	• Minimise bird and bat collisions
23. Mod	Loss of biodiversity value	Minimise impact	Bird and Bat Monitoring Program • Pre-construction surveying would be undertaken to assist in managing bird and bat impacts (Powerful Owl would be a key species in this Pre-construction surveying). Results would be incorporated into the ongoing monitoring program • A monitoring program would be designed to document mortalities, remove carcasses and assess the effectiveness of controls in accordance with Section 9.3.1 • If mortalities exceed a pre-determined threshold (set out in the monitoring program), additional mitigation measures would be considered, such as diversion structures, turning off turbines at critical times, further habitat modification and enhancement of off-site habitats	Ecological consultant	Designed prior to operation Implemented during operation	DPE OEH	Minimise bird and bat collisions
24.	Loss of biodiversity value	Avoid or minimise impact	• A flora and fauna assessment would be undertaken prior to decommissioning to identify biodiversity constraints	Ecological consultant	Prior to decommissioning	DPE OEH	Minimise biodiversity impact

	Impact	Objective	Mitigation tasks	By	Timing	Auditing	Criteria
25.	Loss of biodiversity value	Avoid or minimise impact	• Weed and sediment erosion control principles would be developed and implemented	Ecological consultant and the Proponent	Prior to decommissioning	DPE OEH	Minimise indirect biodiversity impacts
26. Mod	Loss of biodiversity value	Avoid or minimise impact	• Disturbed ground would be stabilised and rehabilitated following works	The Proponent	After decommissioning	ER DPE OEH	Rapid rehabilitation of disturbed areas

1.1.4 Aboriginal archaeology

	Impact	Objective	Mitigation tasks	By	Timing	Auditing	Criteria
27.	Loss of Aboriginal heritage items	Minimise impact	• The Pejar LALC propose to collect artefacts located within proposed impact areas as a form of mitigation prior to the commencement of construction • The Onerwal LALC is the relevant LALC for the Gurrundah area.	Pejar and Onerwal LALCs in consultation with Proponent	Prior to construction	DPE OEH	Liaison with Pejar and Onerwal LALC
28.	Loss of Aboriginal heritage items	Minimise impact	• An Aboriginal Heritage Management Plan would be prepared, pending Project Approval and prior to any impact, which outlines the strategy of artefact collection, s85A NPW Act (transfer of Aboriginal objects) procedures, and contingencies for unexpected finds such as skeletal remains.	The Proponent / Archaeologist	Prior to construction	DPE OEH	Liaison with Archaeologist, OEH and LALCs
28a	AHMP update	Minimise impact	• The AHMP has been updated in association with the Modification Application and has been sent to LALCs and OEH for review. • GRWFPL has completed and submitted all Aboriginal Site Impact Recording (ASIR) Forms	Proponent / Archaeologist		DPE/OEH	Liaison with OEH and LALCs

1.1.5 Aircraft hazards

	Impact	Objective	Mitigation tasks	By	Timing	Auditing	Criteria
29.	Creation of hazard	Minimise risk	• The Proponent would install obstacle marking as required by CASA. • Obstacle lighting has not been required.	The Proponent	During construction	DPE in consultation with CASA	CASA signoff
30.	Creation of hazard	Minimise risk	• The Proponent would provide to the RAAF Aeronautical Information Service (AIS), CASA and Air Services Australia the location and height details once the final position of the wind turbines have been determined and before construction commences. After construction is complete, "as constructed" details would also be provided to AIS	The Proponent	Prior to construction	DPE in consultation with RAAF	Signoff by AIS and Air Services Australia
31. Mod	Creation of hazard	Minimise risk	• The Proponent would notify known users of the Crookwell and Ashwell Airstrips of the location of the wind turbines and any changes to operational procedures. The Proponent, with assistance from its specialist aviation consultant would assist the aerodrome operator and/or local aircraft operators to develop or amend procedures for safe operations on or within the vicinity of the aerodrome, taking into account the location of the turbine.	The Proponent	Prior to construction	DPE	Direct notification of users
32.	Creation of hazard	Minimise risk	• The Proponent would notify other operational information providers such as the Aircraft Owners and Operators Association and Flight Ace of the location of wind turbines in close proximity to Crookwell and Ashwell Airstrips	The Proponent	Prior to construction	DPE	Direct notification of operational information providers
33.	Creation of hazard	Minimise risk	• A briefing sheet including a description and an aerial view of the proposed development, expected construction times, extent of the development, lighting, likely operational impacts and contact details of the developer would be distributed widely.	The Proponent	Prior to construction	DPE	Advertised through local channels

	Impact	Objective	Mitigation tasks	By	Timing	Auditing	Criteria
34.	Creation of hazard	Minimise risk	The Proponent would provide the following advice to the relevant stakeholders, prompting them to undertake the specified actions: • That Crookwell Airstrip consider formalising guidance to airstrip users regarding takeoff and landing procedures giving due consideration to the location of wind turbines and other obstacles, surrounding terrain, aircraft performance, prevailing conditions, runway physical characteristics, regulatory requirements and any other operational limitations • That Upper Lachlan Shire Council's Information Sheet for Crookwell Airstrip be updated to include reference to the location of wind turbines in close proximity to the airstrip	The Proponent	Prior to construction	DPE	Direct communication

1.1.6 Communications

	Impact	Objective	Mitigation tasks	By	Timing	Auditing	Criteria
35.	Deterioration of signal strength	No deterioration of signal strength	<u>Television and radio broadcast services</u> • Use of primarily non-metallic turbine blades • Use, wherever practical, of equipment complying with the Electromagnetic Emission Standard, AS/NZS 4251.2:1999	The Proponent	Prior to construction	DPE	Adherence to standard

	Impact	Objective	Mitigation tasks	By	Timing	Auditing	Criteria
35a	Deterioration of Signal Strength	No deterioration of signal strength	The Proponent would install a Radio/Television antennae in the vicinity of Crookwell which would improve the Radio/Television signal strength for the area surrounding the wind farm and for Crookwell. The commitment above has been modified after consultation with ULSC as follows: • GRWFPL will provide funding for a suitable technical and commercial upgrade at an existing ULSC communications mast. • The funding may up to $100,000. The funding will independent of contributions to the Community Enhancement Fund. • ULSC will be responsible for the construction, operation and maintenance of the new antennae facility.	The Proponent and ULSC	Operation	ULSC	No detected deterioration in signal strength, post mitigation

	Impact	Objective	Mitigation tasks	By	Timing	Auditing	Criteria
36. Mod	Deterioration of signal strength	No deterioration of signal strength	Television and radio broadcast services • Prior to the erection of any wind turbine generators on the site, the Proponent has undertaken an assessment of the existing quality of the television/radio transmission available at a representative sample of residential dwellings located within five kilometres of a wind turbine. • The Proponent will undertake further assessment of television/radio reception following commencement of operation to determine any loss in television signal. • In the event that television interference (TVI) is experienced by existing receivers in the vicinity of the wind farm, the source and nature of the interference would be investigated by the Proponent. • Should investigations determine that the cause of the interference can be reasonably attributable to the wind farm, the Proponent would put in place mitigation measures at each of the affected receivers in consultation and agreement with the landowners. Specific mitigation measures may include: • Modification to, or replacement of receiving antenna • Provision of a land line between the effected receiver and an antenna located in an area of favourable reception • Improvement of the existing antenna system • Installation of a digital set top box or • In the event that interference cannot be overcome by other means, negotiating an arrangement for the installation and maintenance of a satellite receiving antenna at the Proponents cost	The Proponent	Prior to construction and commencement of operation	DPE	No detected deterioration in signal strength, post mitigation
37.	Deterioration of signal strength	No deterioration of signal strength	Mobile phone (and wireless broadband) services • The Proponent will consult with Wirefree to avoid impacts to wireless broadband service	The Proponent	At the commencement of construction	DPE	Direct consultation

	Impact	Objective	Mitigation tasks	By	Timing	Auditing	Criteria
38.	Deterioration of signal strength	No deterioration of signal strength	Radio communications services • The Proponent has made provisions for a 100m corridor for the RFS links from Mt Martin to Mt Gray. In the event that any issues with license links are identified as a result of the wind farm, whether prior to or post construction, the proponent would consult with the operator and undertake appropriate remedial measures, which may include: • Modifications to or relocation of the existing antennae • Installation of a directional antennae and/or • Installation of an amplifier to boost the signal	The Proponent And RFS	At the commencement of operation	DPE	No detected deterioration in signal strength, post mitigation
38a.			GRWFPL provided additional assessment of potential for impacts to point to point services to relevant stakeholders and will consult further with RFS in respect of its service between Mt Mary and Mt Gray.	Proponent and RFS	Commencement of operation	DPE	No impact on service, Mt Mary to Mt Gray.

1.1.7 Electromagnetic fields (EMFs)

	Impact	Objective	Mitigation tasks	By	Timing	Auditing	Criteria
39.	Exposure from EMFs	Minimise exposure	• The substation would be designed in accordance with all applicable codes and industry best practice standards in Australia	The Proponent	Pre construction design phase	DPE	Adherence to standard
40.	Exposure from EMFs	Minimise exposure	• The turbines, control building, substation and transmission lines would be located at appropriate distances from residences, farm shed and yards in order to reduce the potential for both chronic and acute exposure	The Proponent	Pre construction design phase	DPE	Adherence to ARPANSA guidelines

1.1.8 Traffic and transport

	Impact	Objective	Mitigation tasks	By	Timing	Auditing	Criteria
			General measures:				
41.	Safety and asset protection	Minimise risks	• Use of a licensed haulage contractor with experience in transporting similar loads, to be responsible for obtaining all required approvals and permits from the RMS and Councils and for complying with conditions specified in the approvals	The Proponent	Prior to construction	CEMP	Written confirmation of license and experience, including referees
42.	Safety and asset protection	Minimise risks	• Development of a **Traffic Management Plan** to include scheduling of deliveries, managing timing of transport through Goulburn and Crookwell to avoid peak hours (beginning/end of the school day), limiting the number of trips per day, undertaking community consultation before and during all haulage activities (including with neighbouring landowners and landowners adjoining access roads), designing and implementing temporary modifications to intersections and street furniture , restoring all changes to their original condition and managing the haulage process	The Proponent	Prior to construction	CEMP	Develop TMP in accordance with Traffic Impact Study, Attachment 3.7
43.	Safety and asset protection	Minimise risks	• Implementation of all aspects of the **Traffic Management Plan** in coordination with the Councils and RMS	The Proponent	During construction	CEMP	Adherence to TMP
44.	Safety and asset protection	Minimise risks	• Providing a dedicated telephone contacts list to enable any issues or concerns to be rapidly identified and addressed	The Proponent	Prior to construction	CEMP	Rapid response to queries
45.	Safety and asset protection	Minimise risks	• Installing required signage to direct traffic flows appropriately during haulage through Goulburn and Crookwell	The Proponent	During construction	CEMP	Timely provision of signage

	Impact	Objective	Mitigation tasks	By	Timing	Auditing	Criteria
46.	Safety and asset protection	Minimise risks	• Reinstating pre-existing conditions after temporary modifications to the roads and pavement along the route.	The Proponent	During construction	CEMP	Dilapidation report adhered to
47.	Safety and asset protection	Minimise risks	• Undertaking forward planning to ensure equipment transportation complies with requirements of the management plan, RMS and Council	The Proponent	Prior to construction	CEMP	Minimise complaints from road users and risks associated with transport
48.	Safety and asset protection	Minimise risks	• The extent of road upgrades, including realignments and paving upgrades, would be determined by a qualified traffic consultant, in consultation with the RMS and Council	The Proponent	During construction	CEMP	Minimise complaints from road users and risks associated with transport
49.	Safety and asset protection	Minimise risks	• The Proponent would prepare road dilapidation reports covering pavement and drainage structures in consultation with Council, for the construction (and decommissioning) route prior to the commencement of construction (and decommissioning) and after construction (and decommissioning) is complete. Any damage resulting from the construction (or decommissioning) traffic, except that resulting from normal wear and tear, would be repaired at the Proponent's cost. Alternatively, the Proponent may negotiate an alternative for road damage with the relevant roads authority. The decision to provide a seal needs to be balanced against the cost of maintenance on the gravel surface. • Road condition would be inspected throughout construction to ensure that impacts are addressed as they occur. This would be undertaken at regular intervals by the site manager and council roads engineer	The Proponent in consultation with Councils	Prior to construction	CEMP	Dilapidation report adhered to Ongoing contact with roads authorities

	Impact	Objective	Mitigation tasks	By	Timing	Auditing	Criteria
50.	Safety and asset protection	Minimise risks	• A speed limit would be placed on some of the roads near dwellings or sub standard junctions. The speed restriction would be included in the **Traffic Management Plan** to be submitted to Council	The Proponent in consultation with Council and RTA	Prior to construction	CEMP	Adherence to TMP
51.	Safety and asset protection	Minimise risks	• A procedure would be established to monitor the traffic impacts during construction, such as noise, dust nuisance and travel times and work methods modified to reduce the impacts	The Proponent	Prior to construction	CEMP	Minimise complaints from road users and risks associated with transport
52.	Safety and asset protection	Minimise risks	• A procedure would be established to inform vehicle operators on the precise timing of school buses	The Proponent	Prior to construction	CEMP	Protocols set out in CEMP
53.	Safety and asset protection	Minimise risks	• Regular monitoring and scheduled maintenance of gravel pavements such as grading, dust suppression and drainage control would take place during the construction period	The Proponent	Construction	CEMP	Protocols set out in CEMP
54.	Safety and asset protection	Minimise risks	• Signposting to warn horse riders of construction traffic and slashing of vegetation from verges on the Bi-Centennial Route to allow horses to move off the road when vehicles approach	The Proponent in consultation with Council	Prior to construction	CEMP	Timely provision of signage
			Additional location specific measures				
55.	Safety and asset protection	Minimise risks	*Hume Highway Junction at Breadalbane* • Speed controls. The Roads and Maritime Services are generally not in favour of speed restrictions on the Hume Highway because of the loss in efficiency of the route. However, the use of speed controls for specific short-term activities may be included in a traffic control plan or other temporary traffic control measures	The Proponent in consultation with RMS	Prior to construction	CEMP	Adherence to TMP

	Impact	Objective	Mitigation tasks	By	Timing	Auditing	Criteria
56.	Safety and asset protection	Minimise risks	*Crookwell Road* • The business owners, retailers etc in the main street of Crookwell would be made aware of the timing for heavy, over-mass and over-dimensional vehicles	The Proponent	Prior to construction	CEMP	Timely notification
57.	Safety and asset protection	Minimise risks	*Grabben Gullen Road* • The junction is to be designed and constructed in consultation with Upper Lachlan Shire Council and the Roads and Traffic Authority	The Proponent	Prior to construction	CEMP	Adherence to TMP
58.	Safety and asset protection	Minimise risks	*Range Road* • The new junction required to be constructed on Range Road would be designed and constructed in consultation with Upper Lachlan Shire Council	The Proponent in consultation with RTA	Prior to construction	CEMP	Adherence to TMP
59.	Safety and asset protection	Minimise risks	*Gurrundah Road* The new junction required to be constructed on Range Road would be designed and constructed in consultation with Upper Lachlan Shire Council	The Proponent in consultation with RTA	Prior to construction	CEMP	Adherence to TMP
60.	Safety and asset protection	Minimise risks	*Range Road* • Consideration would be given to the reconstruction and sealing of the 1.8km length of unsealed pavement which would include the proposed junctions	The Proponent in consultation with RTA	Prior to construction	CEMP	Adherence to TMP
61.	Safety and asset protection	Minimise risks	*Range Road* • The shadow flicker effects would be monitored following commissioning and any remedial measures to address concerns would be developed in consultation with the RMS and the Department of Planning	The Proponent	Operation	CEMP	Shadow flicker controlled (via roadside planting if required)
62.	Safety and asset protection	Minimise risks	*Bannister Lane, Storriers Lane, Prices Lane* • A program would be established to consult with all of the road users and residents in the area particularly those living in the residences close to the roads	The Proponent in consultation with RMS and Council	Prior to construction	CEMP	Timely notification and consultation

	Impact	Objective	Mitigation tasks	By	Timing	Auditing	Criteria
63.	Safety and asset protection	Minimise risks	*Gurrundah Road* • The junction is to be designed and constructed in consultation with Upper Lachlan Shire Council	The Proponent in consultation with Council	Prior to construction	CEMP	Adherence to TMP
64.	Safety and asset protection	Minimise risks	*Breadalbane to Gurrundah Road* • A procedure would be established for all over-dimensioned vehicles associated with the Gullen Range wind farm project to make contact with a railway service to establish approximate timing of trains so that crossings could be made during the safer periods. The need to always visually check for the approach of trains would be stressed to vehicle operators	The Proponent	Prior to construction	CEMP	Adherence to TMP

1.1.9 Fire and bushfire impacts

	Impact	Objective	Mitigation tasks	By	Timing	Auditing	Criteria
65.	Increase risk of fire ignition or spread	Minimise risks	• The Rural Fire Service and NSW Fire Brigade would be consulted in regard to the adequacy of bushfire prevention measures to be implemented on site during construction, operation and decommissioning. These measures would in particular cover hot-work procedures, asset protection zones, safety, communication, site access and response protocols in the event of a fire originating in the wind farm infrastructure, or in the event of an external wildfire threatening the wind farm or nearby properties	The Proponent	Prior to construction	DoP	Timely notification and consultation

	Impact	Objective	Mitigation tasks	By	Timing	Auditing	Criteria
65a	Increase risk of fire ignition or spread	Minimise risk	• The Proponent will investigate the potential to house an RFS hall within the Wind Farm or at a suitable location identified in consultation with RFS near to the wind farm. This facility could also be used as a community hall. o The Proponent would offer the land to the RFS in perpetuity. o The construction, operation and maintenance of the RFS station would be the responsibility of the RFS	The Proponent	Operation	Proponent	Adherence to RFS guidelines for fire safety
66.	Increase risk of fire ignition or spread	Minimise risks	• Flammable materials and ignition sources brought onto the site, such as hydrocarbons, would be handled and stored as per manufacturer's instructions	The Proponent	During construction	CEMP	Adherence to safety protocols set out in CEMP
67.	Increase risk of fire ignition or spread	Minimise risks	• During the construction phase, appropriate fire fighting equipment would be held onsite when the fire danger is very high to extreme, and a minimum of one person on site would be trained in its use. The equipment and level of training would be determined in consultation with the local RFS	The Proponent	During construction	CEMP	Adherence to safety protocols set out in CEMP
68.	Increase risk of fire ignition or spread	Minimise risks	• The substation facility would be bunded with a capacity exceeding the volume of the transformer oil to contain the oil in the event of a major leak or fire. The facility would 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)	The Proponent	During construction	CEMP	Adherence to safety protocols set out in CEMP
69.	Increase risk of fire ignition or spread	Minimise risks	• The substation would be surrounded by a gravel and concrete area free of vegetation to prevent the spread of fire from the substation and reduce the impact of bushfire on the structure. The substation area would also be surrounded by a security fence as a safety precaution to prevent trespassers and stock ingress	The Proponent	During construction	CEMP	Adherence to safety protocols set out in CEMP
70.	Increase risk of fire ignition or spread	Minimise risks	• Asset protection zones, based on the RFS *Planning for Bushfire Protection*, would be maintained around the control room, sub-station and in electricity transmission easements. Workplace health and safety protocols would be developed to minimise the risk of fire for workers during construction and during maintenance in the control room and amenities	The Proponent	During construction	CEMP	Adherence to RFS *Planning For Bushfire Protection*

	Impact	Objective	Mitigation tasks	By	Timing	Auditing	Criteria
71.	Increase risk of fire ignition or spread	Minimise risks	• Fire extinguishers would be stored onsite in the control building and within the substation building	The Proponent	During construction	CEMP	Adherence to safety protocols set out in CEMP
72.	Increase risk of fire ignition or spread	Minimise risks	• Shut down of turbines would commence if components reach critical temperatures or if directed by the RFS in the case of a nearby wildfire being declared (an all hours contact point would be available to the RFS during the bushfire period). Remote alarming and maintenance procedures would also be used to minimise risks	The Proponent	Operation	OEMP	All hours contact point provided to RFS. Remote alarming installed
73.	Increase risk of fire ignition or spread	Minimise risks	• Overhead transmission easements would be periodically inspected to monitor regrowth of encroaching vegetation	The Proponent	Operation	OEMP	Compliance with Transgrid easement maintenance protocols.

1.1.10 Hydrology

	Impact	Objective	Mitigation tasks	By	Timing	Auditing	Criteria
74.	Water extraction	Not deplete local supplies	• Water would be sourced from an onsite bore (Pomeroy) as well as other local sources including onsite dams. It would be reused where possible to reduce the total amount required. No water would be sourced from creeks or rivers without relevant permits being sought. No water would be or discharged into creeks, rivers or drainage lines without relevant permits	The Proponent	Construction	CEMP	Minimise water use, maximise reuse onsite,
75.	Deterioration of water quality	Minimise risk	• All vehicles onsite would follow established trails and minimise onsite movements	The Proponent	Construction and operation	CEMP and OEMP	Protocols set out in CEMP and OEMP

	Impact	Objective	Mitigation tasks	By	Timing	Auditing	Criteria
76.	Deterioration of water quality	Minimise risk	• Machinery would be operated and maintained in a manner that minimises risk of hydrocarbon spills	The Proponent	Construction and operation	CEMP and OEMP	Protocols set out in CEMP and OEMP
77.	Deterioration of water quality	Minimise risk	• Maintenance or re-fuelling of machinery would be carried out on hard-stand areas (i.e. existing or proposed road surface or hard-stand areas beneath turbines). Where possible, maintenance and re-fuelling would not occur on areas that either contain native vegetation, or would be revegetated	The Proponent	Construction and operation	CEMP and OEMP	Protocols set out in CEMP and OEMP
78.	Deterioration of water quality	Minimise risk	• The concrete batching plants would contain settling ponds sufficient to capture all concrete wash. Wash water would be recycled onsite (in cement mix, road base and dust control) and would not be released. The Batching Plants have been removed from site.	The Proponent	Construction	CEMP	Protocols set out in CEMP
79.	Deterioration of water quality	Minimise risk	• Waste sludge would be recovered from the settling pond and used in the production of road base manufactured onsite. The waste material would be taken from the batching plant to be blended in the road base elsewhere onsite	The Proponent	Construction	CEMP	Minimise waste, maximise reuse
80.	Deterioration of water quality	Minimise risk	• The concrete batching plant areas would be fully remediated at the completion of the construction phase	The Proponent	Completion of construction	CEMP	Stable and revegetated
81.	Deterioration of water quality	Minimise risk	• Dust suppression would be carried out where required. Central to controlling dust are means to determine when dust suppression is required and having adequate access to water or chemical dust suppression alternatives to control dust. These specifications would be included in the **Construction Environmental Management Plan** prepared for the project prior to construction	The Proponent	Construction	CEMP	Minimise dust complaints

	Impact	Objective	Mitigation tasks	By	Timing	Auditing	Criteria
82.	Deterioration of water quality	Minimise risk	Sediment and erosion would be controlled as part of a formal **Sediment / Erosion Control Plan (SECP)**, as a sub plan of the **Construction Environmental Management Plan**. This plan would include the following provisions: • Sediment traps would be installed wherever there is potential for sediment to collect and enter waterways • Stockpiles generated as a result of construction activities would be bunded with silt fencing, (hay bales or similar) to reduce the potential for runoff from these areas • Soil and water management practices would be guided by the Best Practice guidelines contained within *Soils and Construction Vol. 1* (Landcom 2004)	The Proponent	Construction	CEMP	Adherence to SECP
83.	Deterioration of water quality	Minimise risk	• A **Water Management Strategy** would be developed for the site as part of the Construction and Operational Environmental Management Plans. This would aim to integrate the total water cycle of the site in terms of water supply, stormwater and wastewater, and maximise the use of best management practice techniques for stormwater and wastewater management. Devices such as swales to disperse rather than concentrate runoff would be implemented. Water use would be minimised by maximising reuse. Detailed measures would be devised in conjunction with the development of the construction drawings.	The Proponent	Construction and Operation	CEMP and OEMP	Best practice water management devices
84.	Deterioration of water quality	Minimise risk	A **Site Restoration Plan (SRP)** would be prepared as part of the **Construction Environmental Management Plan**. This would set out protocols for restoration works including: • Site preparation • Stabilisation • Revegetation • Monitoring	The Proponent	Construction	CEMP	Adherence to SRP

	Impact	Objective	Mitigation tasks	By	Timing	Auditing	Criteria
85.	Deterioration of water quality	Minimise risk	The contractor would prepare and implement a **Spill Control Plan,** as a sub-plan of the **Construction Environmental Management Plan.** It would: • Identify persons responsible for implementing the plan if a spill of a dangerous or hazardous chemical/waste would occur • Material Safety Data Sheets (MSDS) for all chemical inventories would be located on site and readily available • Where chemicals are used, their application and disposal would comply with manufacturers recommendations • Any spill that occurs, regardless of size or type of spill, would be reported to the Construction Manager • The event and clean up processes would be recorded. Information that would be recorded in the event of spill would include time and date of spill, type of chemical or waste spilt, approximate volume spilt, general area in which the spill occurred, corrective actions applied, and disposal of spilt material • Spill protocols in this plan would dictate when the EPA would be notified • Chemical / fuel storage areas would be identified, and be bunded to prevent loss of any pollutants • Hydrocarbon spill kits would be stored at the site. A number of site staff are to be trained in the use of the spill kits	The Proponent	Construction	CEMP	Adherence to Spill Control Plan. Minimise spills. Rapid response to spill, involving the EPA as required.
86.	Deterioration of water quality	Minimise risk	• Infrastructure would be bunded to ensure that the amounts of oil could be fully contained in the event of a leak. Bunding provisions would be regularly inspected	The Proponent	Operation	OEMP	Bunding adequate to contain fluids
87.	Deterioration of water quality	Minimise risk	• Septic systems, if installed, would meet Upper Lachlan Council standards	The Proponent	Operation	OEMP	Adherence to Council standards

1.1.11 Mineral exploration

	Impact	Objective	Mitigation tasks	By	Timing	Auditing	Criteria
88.	Conflict with mineral exploration	Minimise conflict	• The Proponent would liaise with the current mineral lease holders, providing a final turbine and infrastructure layout, prior to the construction phase	The Proponent	Prior to construction	DoP	Timely notification and liaison
89.	Conflict with mineral exploration	Minimise conflict	• The Proponent would liaise with the current mineral lease holders during the construction phase, to ensure that where possible, the works program does not unnecessarily interfere with planned exploration activities.	The Proponent	Construction	DoP	Timely notification and liaison
90.	Conflict with mineral exploration	Facilitate access	• The Proponent would liaise with the involved land owners and current mineral lease holders prior to rehabilitation, to ensure that any project access roads that they may wish to retain are retained. Several of these access roads are likely to be of benefit both to routine agricultural activities as well as to exploration activities onsite	The Proponent	Construction	DoP	Timely notification and liaison

1.1.12 Economic

	Impact	Objective	Mitigation tasks	By	Timing	Auditing	Criteria
91.	Affect on local economy	Maximise positive effect of proposal	• The Proponent would liaise with local industry representatives to maximise the use of local contractors and manufacturing facilities in the construction and decommissioning phases of the project	The Proponent	Prior to construction	DoP	Timely notification and liaison
92.	Affect on local activities	Minimise disruption	• Co-ordinate construction activities with local events. Gullen Range Wind Farm Pty Ltd would liaise with the local visitor information centres to ensure that construction and decommissioning timing and haulage routes are known well in advance of works	The Proponent	Prior to construction	DoP	Timely notification and liaison

	Impact	Objective	Mitigation tasks	By	Timing	Auditing	Criteria
92a	Affect on local economy	Minimise impacts	• Where feasible/reasonable the Proponent would implement a Sustainable Procurement Strategy with the goal of increasing local (regional and national) products required for the construction and operation of the wind farm	The Proponent	Ongoing	Project Manager	% of local regional products
92b	Local opportunities	Maximise local opportunities	• The Proponent would source services from the local area including but not limited to: o Staff o Suppliers o Materials o Services o Food and consumables	The Proponent	Ongoing	Project Manager	% of local employment

1.1.13 Community wellbeing

	Impact	Objective	Mitigation tasks	By	Timing	Auditing	Criteria
93.	Community division	Provide accurate information	• Dissemination of accessible and independent information on wind farm impacts	The Proponent	Prior to construction	DPE	Timely dissemination of information
94.	Community division	Provide accurate information	• Monitoring information collected during the operation of the wind farm would be made publicly available	The Proponent	Operation	DPE	Timely dissemination of information
95.	Community division	Equitable distribution of benefits	• Gullen Range wind farm would address the potential for wider adverse community impacts by way of a Community Enhancement Program as presented in Section 4.4.2.	The Proponent	Prior to construction	DPE in consultation with the ULSC	Agreement on amount and conditions of fund

	Impact	Objective	Mitigation tasks	By	Timing	Auditing	Criteria
							achieved, in accordance with Council policy
95a	Community division	Maximise Benefits	• The Proponent would investigate and where feasible purchase a property for the use of the Public as a community hall. This may combine with Commitment 65a as a shared facility. • The community hall would be run by a panel of community members for the benefit of local people and events	The Proponent		ULSC	
95b	Community division	Provide accurate information and education	• The Proponent would provide a community education program for local schools which would include: o Visits to the wind farm o Information on renewable energy o Information on climate change issues	The Proponent	Operation	DPE	
95c	Community division	Provide accurate information and education	• The Proponent would hold an annual 'open day' at the wind farm to allow the public to visit the facility	The Proponent	Operation	DPE	
95d	Community division	Better community relationship	• The proponent will strengthen its relationship with the community by improving its consultation efforts and undertaking regular interface with neighbours within 2km of the wind farm.	The Proponent	Operation	DPE	Evidence of consultation by GRWFPL
95e	Community division	Provide accurate information and education	• The proponent would provide an annual public report on the environmental and social performance of the wind farm and the consultation activities undertaken for the year	The Proponent	Operation	DPE	Annual Report issued to public

1.1.14 Tourism

Impact	Objective	Mitigation tasks	By	Timing	Auditing	Criteria

	Impact	Objective	Mitigation tasks	By	Timing	Auditing	Criteria
96.	Affect on local activities	Minimise disruption	• Co-ordinate construction activities with local events. Gullen Range Wind Farm Pty Ltd would liaise with the local visitor information centres to ensure that construction and decommissioning timing and haulage routes are known well in advance of works	The Proponent	Prior to construction	DPE	Timely notification and liaison
97.	Affect on local activities	Maximise benefits	• The Proponent would work with the involved landowners, the community and Upper Lachlan Shire Council to allow for the development of the wind farm as a tourist attraction, if this option becomes desirable to these three parties.	The Proponent	Operation	DPE	Liaison as required

1.1.15 Agricultural impacts

	Impact	Objective	Mitigation tasks	By	Timing	Auditing	Criteria
98.	Affect on current local land use	Minimise disruption	• A **Traffic Management Plan** would be developed and would include provisions for construction traffic on access roads where stock may be grazing. These may include specifications for safe speed limits and provision of a construction timetable to affected landowners	The Proponent	Construction	CEMP	Adherence to TMP
99.	Affect on current local land use	Minimise disruption	• Stock would be restricted from works areas where there is a risk stock injury. For example, near excavated trenches and within high traffic areas	The Proponent	Construction	CEMP	Adherence to TMP
100.	Affect on current local land use	Maximise benefits	• Liaison would be undertaken with involved landowners to explore the possibility of enhancing the native component of the understorey in pasture production. This could be incorporated into the site restoration plan which would dictate protocols for the rehabilitation of areas disturbed during construction	The Proponent	Construction	CEMP	Liaison as required
101.	Affect on current local land use	Maximise benefits	• Stock would be restricted from areas being rehabilitated, until surfaces are able to withstand resumed grazing	The Proponent	Construction	CEMP	Protocols set out in SRP

	Impact	Objective	Mitigation tasks	By	Timing	Auditing	Criteria
102.	Affect on current local land use	Minimise risks	• Liaison would be undertaken with involved landowners to restrict stock access within construction zones during the construction and decommissioning phases. This is aimed at reducing potential for collision and ensuring stock are not able to escape during construction	The Proponent	Construction	CEMP	Timely notification and liaison
103.	Affect on current local land use	Minimise disruption	• Liaison would be undertaken with neighbouring landowners and landowners adjoining access roads, to provide information about the timing and routes to be used during construction and decommissioning. This could be in the form of advertising and provision of a contact point for further inquiries. The aim would be to reduce the risk of interference with agricultural activities on affected roads and road verges.	The Proponent	Construction	CEMP	Timely notification
104.	Affect on current local land use	Minimise risks	• The **Traffic Management Plan (TMP)** would contain procedures to manage horse riders using the Bicentennial National Trail during the construction period including keeping the verge of the road clear for riders to allow riders to move off the road. This would include ongoing consultation and liaison with the BNT co-ordinator	The Proponent	Operation	OEMP	Adherence to TMP

1.1.16 Health and safety: construction activities

	Impact	Objective	Mitigation tasks	By	Timing	Auditing	Criteria
105.	Safety of persons or stock	Minimise risks	A detailed **Health and Safety Plan (H&SP)** would be prepared, as a sub plan of the **Construction Environmental Management Plan**, identifying hazards associated with construction works, the risks of the identified hazards occurring and appropriate safeguards would be prepared prior to the commencement of construction works. Additionally: • The plan would incorporate standard work place practices, such as restraints, fall arrest systems, protective clothing and procedures that enable infrastructure to remain stationary during specific activities • Emergency response protocols and equipment and reminders of the requirement for workers to take responsibility for their safety would be implemented • All site workers are to be inducted to the site on their first day of	The Proponent	Construction	CEMP	Adherence to H&SP

	Impact	Objective	Mitigation tasks	By	Timing	Auditing	Criteria
			employment. The induction would include a detailed briefing of the health and safety plan • Workplace health and safety protocols would be developed to minimise the risk as a result of the ignition of fire from and to workers during construction and during maintenance in the control room and amenities				
106.	Safety of persons or stock	Minimise risks	• Liaison would occur between property owners and construction staff in relation to land and stock management during construction (during construction and decommissioning, stock would be excluded from the works area - this would exclude road works)	The Proponent	Construction	CEMP	Timely notification and liaison
107.	Safety of persons or stock	Minimise risks	• Site fencing would be installed where there is a risk to the safety of the general public (i.e. when the trench is left open for extended periods)	The Proponent	Construction	CEMP	Adherence to H&SP
108.	Safety of persons or stock	Minimise risks	• Employee safety would be managed through the application a **Health and Safety Plan**	The Proponent	Operation	OEMP	Adherence to H&SP

1.1.17 Health and safety: shadow flicker

	Impact	Objective	Mitigation tasks	By	Timing	Auditing	Criteria
109.	Safety / nuisance to persons or stock	Minimise risks	• If shadow flicker is found to be a nuisance to residents, conditions would be pre-programmed into the control system and individual wind turbines automatically shut down whenever these conditions are present	The Proponent	Operation	OEMP	Minimise complaints
110.	Safety of persons or stock	Minimise risks	• Shadow flicker effects on motorists using Range Road would be monitored following commissioning and any remedial measures to address concerns would be developed in consultation with the RTA and the Department of Planning	The Proponent	Operation	OEMP in consultation with the RTA and the Department of Planning	Minimise shadow flicker on this section of road

1.1.18 Health and safety: stability of turbines

	Impact	Objective	Mitigation tasks	By	Timing	Auditing	Criteria
111.	Safety of persons or stock	Minimise risks	• Obtain and implement sound geotechnical advice during construction, choice of a reliable turbine and proper installation and maintenance of the turbines	The Proponent	Construction	DPE	Adherence to geotechnical report conclusions

1.1.19 Historic heritage

	Impact	Objective	Mitigation tasks	By	Timing	Auditing	Criteria
112.	Deterioration of heritage items	Minimise risks	• Inform the Upper Lachlan Shire Council, Goulburn-Mulwaree Council and the NSW Heritage Office of the proximity of final access routes	The Proponent	Construction	DPE	Timely notification and liaison
113.	Deterioration of heritage items	Minimise risks	• Building design, materials and colour would be appropriate to the heritage values of the area	The Proponent	Prior to construction	DPE	Signoff from Landscape Architect
114.	Deterioration of heritage items	Minimise risks	• Underground rather than overhead transmission would be used where possible and where it would not result in inappropriate risks to soils and land forms. Although extensive existing electricity transmission infrastructure is present on the site and to the south, the cumulative impact of the development would be reduced where possible	The Proponent	Prior to construction	DPE	Minimal overhead transmission

1.1.20 Physical impacts: air quality

	Impact	Objective	Mitigation tasks	By	Timing	Auditing	Criteria
115.	Air quality	Minimise risks	• Subsoil would be separated from topsoil for rehabilitation purposes. All topsoil from the excavation sites would be stockpiled and replaced to its original depth for seeding and fertilising. On steep slopes, topsoil would need to be stabilised using, for example, jute matting. Any excess subsoil would be removed from the site and disposed of at an appropriate fill storage site	The Proponent	Construction	CEMP	Protocols set out in CEMP
116.	Air quality	Minimise risks	• Any material stockpiled as would be covered with plastic, seeded or otherwise bound to reduce dust. Dust levels at stockpile sites would be visually monitored. Dust suppression (eg. water sprays) would be implemented if required	The Proponent	Construction	CEMP	Protocols set out in CEMP
117.	Air quality	Minimise risks	• Product stockpiles would be protected from prevailing weather conditions	The Proponent	Construction	CEMP	Protocols set out in CEMP
118.	Air quality	Minimise risks	• During dry, windy periods a water cart or alternative chemical dust suppression would be available and applied to works areas generating dust. Means to determine when action is required would be detailed in the **Construction Management Plan**	The Proponent	Construction	CEMP	Protocols set out in CEMP
119.	Air quality	Minimise risks	• Should blasting be required, it would be carried out in accordance with all relevant statutory requirements	The Proponent	Construction	CEMP	Adherence to ANZECC guidelines
120.	Air quality	Minimise risks	• Residences within 1km of blasting activities would be informed prior to blasting	The Proponent	Construction	CEMP	Timely notification
121.	Air quality	Minimise risks	• Dust filters would be installed on silos, where required	The Proponent	Construction	CEMP	Minimal dust complaints

	Impact	Objective	Mitigation tasks	By	Timing	Auditing	Criteria
122.	Air quality	Minimise risks	Sediment and erosion would be controlled as part of a formal **Sediment / Erosion Control Plan (SECP)**. This plan would include the following provisions: • Sediment traps would be installed wherever there is potential for sediment to collect and enter waterways • On the steeper slopes check banks would be installed across the trenchline, as appropriate, following closure of the trench. These would discharge runoff to areas of stable vegetation • Stabilisation would be undertaken as soon as practicable during construction. Furthermore, rehabilitation of disturbed ground would be carried out at the completion of construction works • Stockpiles generated as a result of construction activities would be bunded with silt fencing, (hay bales or similar) to reduce the potential for runoff from these areas • Soil and water management practices would be guided by the Best Practice guidelines contained within *Soils and Construction Vol. 1* (Landcom 2004)	The Proponent	Construction	CEMP	Adherence to SECP
123.	Air quality	Minimise risks	A **Traffic Management Plan (TMP)** would be developed and would include strategies to reduce the number of vehicle movements to, from and across the sites. These would include: • Only machinery compliant with emission standards would be used • Vehicles and motorised equipment would be maintained so that emissions are minimised • Machinery and vehicles would not be left running or idling when not in use	The Proponent	Construction	CEMP	Adherence to TMP

1.1.21 Physical impacts: soils and landforms

	Impact	Objective	Mitigation tasks	By	Timing	Auditing	Criteria
124.	Soil loss or	Minimise risks	• Concrete wash would be deposited in an excavated area,	The	Construction	CEMP	No effect on

	Impact	Objective	Mitigation tasks	By	Timing	Auditing	Criteria
	stability of landform loss		below the level of the topsoil, or in an approved landfill site. Where possible, waste water and solids would be reused onsite	Proponent			waterways or top soil
125.	Soil loss or stability of landform loss	Minimise risks	• Tracks would be graded to enhance their stability	The Proponent	Construction	CEMP	Adherence to SECP
126.	Soil loss or stability of landform loss	Minimise risks	• Access routes and tracks would be confined to already disturbed areas, where possible	The Proponent	Construction	CEMP	Minimise disturbance area
127.	Soil loss or stability of landform loss	Minimise risks	• ANZECC guidelines for control of blasting impact at residences would be adhered to if blasting is required	The Proponent	Construction	CEMP	Adherence to ANZECC guidelines

1.1.22 Resource impacts

	Impact	Objective	Mitigation tasks	By	Timing	Auditing	Criteria
128.	Waste generation	Minimise waste and maximise recycling of materials	• Waste would be reused or recycled whenever possible. Separate recyclable materials receptacles would be provided (eg. For glass, plastics and aluminium)	The Proponent	Construction and operation	CEMP and OEMP	Waste streams identified, Waste Hierarchy implemented
129.	Waste generation	Appropriate disposal of waste	• Packaging materials and general construction wastes would be disposed of, with Council's approval, at Council operated waste disposal centres	The Proponent	Construction and operation	CEMP and OEMP	Waste streams identified, Waste Hierarchy implemented

	Impact	Objective	Mitigation tasks	By	Timing	Auditing	Criteria
130.	Waste generation	Appropriate disposal of waste	• Toilet facilities would be provided for onsite workers and sullage from contractor's pump out toilet facilities would be disposed at the local sewage treatment plants or other suitable facility agreed to by Council	The Proponent	Construction and operation	CEMP and OEMP	Council approved disposal
131.	Waste generation	Minimise waste and maximise recycling of materials	• Surplus topsoil would be stockpiled on site during construction, and following construction would be spread on the site (particularly over former hardstand areas and access roads) to assist with revegetation	The Proponent	Construction	CEMP	SRP adhered to
132.	Waste generation	Minimise waste and maximise recycling of materials	• Excavated material would be used in road base construction and as aggregate for footings where possible. Surplus material would be disposed of in appropriate locations on site (on agreement with the landowner), finished with topsoil, and revegetated	The Proponent	Construction	CEMP	Maximum reuse of excavated material
133.	Waste generation	Appropriate disposal of waste	• Risk of chemical spills would be minimised and protocols would be in place to ensure prompt and effective clean up of any accidental spills	The Proponent	Construction and operation	CEMP and OEMP	Adherence to Spill Control Plan. Minimise spills. Rapid response to spill, involving the EPA as required.
134.	Waste generation	Appropriate disposal of waste	• No permanent waste disposal would be utilised onsite	The Proponent	Construction and operation	CEMP and OEMP	Waste disposal protocols set out in CEMP and OEMP adhered to

	Impact	Objective	Mitigation tasks	By	Timing	Auditing	Criteria
135.	Waste generation	Appropriate disposal of waste	• The contractor would implement a Spill Control Plan as part of its Erosion and Sediment Control Plan. Spill Control Plans would identify persons responsible for implementing the plan if a spill of a dangerous or hazardous waste should occur. Any spill that occurs, regardless of size or type of spill, would be reported to the Construction Manager. The event and clean up processes would be recorded. Spill protocols in the plan would dictate when the EPA should be notified	The Proponent	Construction and operation	CEMP and OEMP	Adherence to Spill Control Plan. Minimise spills. Rapid response to spill, involving the EPA as required.

1.1.23 Cumulative impact

	Impact	Objective	Mitigation tasks	By	Timing	Auditing	Criteria
136.	Cumulative noise	Minimise risk of construction noise criteria exceedence	Construction noise • If an additional project proposes concurrent construction timing as the proposed Gullen Range wind farm, the Proponent would enter into liaison to ensure that additional construction noise issues were addressed	The Proponent	Construction and operation	CEMP and OEMP	Rapid response to complaints, adherence to SA EPA guidelines
137.	Cumulative traffic and infrastructure	Minimise disruption	Traffic and infrastructure • If an additional project proposed concurrent construction timing on access routes nominated by the Gullen Range wind farm, the Proponent would enter into liaison to ensure that additional traffic and transport issues were addressed	The Proponent	Construction and operation	CEMP and OEMP	Timely notification and liaison with road authorities and second proponent
138.	Cumulative economic	Maximise local skill use	Economic • Liaison would continue with local economic development bodies to	The Proponent	Construction and operation	DPE	Timely notification

	Impact	Objective	Mitigation tasks	By	Timing	Auditing	Criteria
			ensure the potential for local skill use and manufacturing is maximised				and liaison
139.	Impact on future rural subdivisions	Minimise risks	Future Rural Subdivisions The Proponent will provide reasonable and feasible noise mitigation measures to achieve a noise criterion ($LA_{eq\ (10\text{-}minute)}$) of 30dB(A) inside bedrooms (as outlined in the Guidelines for Community Noise (WHO, 1999) for no more than one dwelling on each parcel of land that: • Is not associated with the project; • Was lawfully in existence at the date of the approval; • Was lawfully permitted to be developed for the purpose of a residential dwelling at the date of the approval; • Is or was the subject of a valid construction certificate for a residential dwelling, lodged with the consent or a certifying authority within three years of the date of approval; and • Would, but for the requirements of this condition, experience noise contributions from the project at the approved location of the residential dwelling in excess of the noise limits recommended in the SA EPA guidelines. •	The Proponent	Operation	DoP	Minimise impacts
140.	Impact on local water supplies	Comply with water authority	• No ground water would be sourced without relevant permits being sought.	The Proponent	Prior to construction	CEMP	Relevant approvals obtained
141.	Impact on groundwater	Minimise risks	• Undertake geotechnical investigations to ensure that the project would have no material adverse effect on groundwater/aquifers as a result of blasting activities.	The Proponent	Detailed design phase	CEMP	No detectable impact on groundwater
142.	Loss of biodiversity value	Avoid or minimise impact	• *During the detailed design phase, a copy of the plans of the final infrastructure layout (including all turbines, hard stand areas, buildings, tracks, power lines and associated infrastructure) would be provided to DoP to demonstrate the achievement of biodiversity SoCs in the EA.*	Ecological consultant	Prior to construction	DPE	Minimise direct biodiversity impact

	Impact	Objective	Mitigation tasks	By	Timing	Auditing	Criteria
143.	Loss of biodiversity value	Avoid or minimise impact	• Additional targeted surveying (utilising 'Spider hole' pitfall traps) would be carried in works area likely to be impacted by GUR-08 infrastructure to establish if the Grassland Earless Dragon utilises this habitat at Gurrundah. If it is identified as occurring, turbine infrastructure would be relocated to avoid this habitat, and a buffer of at least 25 metres maintained	Ecological consultant	Prior to construction	DPE OEH	Minimise direct biodiversity impact
144.	Safety and asset protection	Minimise risks	• If haulage is proposed on routes that have not been assessed as part of the EA, assessment would be undertaken, in consultation with the Department of Planning, the roads authority and Council, prior to its inclusion in the haulage route. This would be completed as part of the Construction Environmental Management Plan.	The Proponent	During construction	CEMP	Minimise impacts on road users