## State code 23: Wind farm development

**Table 23.2.1: Material change of use**

| Performance outcomes | Acceptable outcomes | Response |
| --- | --- | --- |
| Aviation safety, integrity and efficiency | | |
| **PO1** The safety, operational integrity and efficiency of air services and aircraft operations are not adversely affected by the location, siting, design and operation of the development. | **AO1.1** Wind turbines or wind monitoring towers are 150 metres or less in height and do not infringe on the obstacle limitation surfaces (OLS), procedures for air navigation services – aircraft operations (PANS-OPS) surface, restricted airspace and low flying areas of a certified aerodrome, registered aerodrome or military aerodrome.  OR | Complies with PO# / AO#  Use this column to indicate whether compliance is achieved with the relevant PO or AO (or if they do not apply), and explain why |
| **AO1.2** For development involving wind turbines or wind monitoring towers more than 150 metres in height:   1. written endorsement by the Civil Aviation Safety Authority (CASA), Airservices Australia and the district aerodrome supervisor is provided stating they have no objection to the proposed development; or 2. where within 30 kilometres of a military aerodrome, or a certified aerodrome or registered aerodrome jointly used as a military aerodrome, written endorsement by the federal Department of Defence, Civil Aviation Safety Authority (CASA), Airservices Australia and the district aerodrome supervisor is provided stating they have no objection to the proposed development. |  |
| PO2 Development includes lighting and marking measures to ensure the safety, operational integrity and efficiency of air services and aircraft operations. | **AO2.1** Marking of wind turbines is provided so that rotor blades, the nacelle and the upper two thirds of the supporting mast of the wind turbines are painted white.  AND |  |
| **AO2.2** The top one third of wind monitoring towers is painted in alternating bands of contrasting colour.  AND |  |
| **AO2.3** For development involving the lighting of wind turbines or wind monitoring towers more than 150 metres in height or within 30 kilometres of a certified aerodrome or registered aerodrome, written endorsement by the Civil Aviation Safety Authority (CASA) and Airservices Australia is provided stating they have no objection to the proposed development and lighting measures.  AND |  |
| **AO2.4** In areas where low flying aircraft occur:   1. marker balls or high visibility sleeves are placed on the outside guy wires of wind monitoring towers 2. the guy wire ground attachment points have contrasting colours to the surrounding ground/vegetation 3. a flashing strobe light is installed to operate on wind monitoring towers during daylight hours.   AND |  |
| **AO2.5** Where LED obstruction lighting is proposed, the frequency range of the LED light emitted falls within the range of wavelengths 655 to 930 nanometres. |  |
| Electromagnetic interference | | |
| **PO3** Development is designed, located and sited to avoid, or minimise and mitigate, electromagnetic interference to pre-existing television, radar and radio transmission and reception. | No acceptable outcome is prescribed. |  |
| Shadow flicker | | |
| **PO4** Development avoids or minimises shadow flicker impacts on existing or approved sensitive land uses. | **AO4.1** The modelled blade shadow flicker impact on any existing or approved sensitive land use(s) does not exceed 30 hours per annum and 30 minutes per day.  AND |  |
| **AO4.2** Wind turbine blades have a low reflectivity finish/treatment. |  |
| Flora and fauna | | |
| **PO5** Development ensures that impacts on flora, fauna and associated ecological processes are avoided, or minimised and mitigated, through effective siting, design and operation of the development. | No acceptable outcome is prescribed. |  |
| Traffic and access | | |
| **PO6** Development provides suitable vehicular access, manoeuvring areas and parking for the ongoing operation and maintenance activities associated with the wind farm. | No acceptable outcome is prescribed. |  |
| Stormwater management | | |
| **PO7** Development avoids, or minimises and mitigates, adverse impacts on water quality objectives to achieve no worsening to receiving waters during the operation of the wind farm. | No acceptable outcome is prescribed. |  |
| Watercourses and drainage features | | |
| **PO8** Development avoids or minimises the clearing of vegetation within any watercourse or drainage feature to protect:   1. bank stability by protecting against bank erosion 2. water quality objectives by filtering sediments, nutrients and other pollutants 3. aquatic habitat 4. terrestrial habitat. | No acceptable outcome is prescribed. |  |
| Character, scenic amenity and landscape values | | |
| **PO9** Development avoids, or minimises and mitigates, adverse impacts on the character, scenic amenity and landscape values of the locality and region through effective siting and design. | No acceptable outcome is prescribed. |  |
| Separation distances | | |
| **PO10** Wind turbines are adequately separated from existing or approved sensitive land uses on non-host lots. | **AO10.1** Wind turbines are setback at least 1 500 metres from existing or approved sensitive land uses on non-host lots.  OR |  |
| **AO10.2** Where wind turbines are proposed within 1500 metres of existing or approved sensitive land uses on non-host lots, written agreements (deeds of release) from all affected non-host lot owners are provided accepting the reduced setback. |  |
| Acoustic amenity – host lots | | |
| **PO11** The predicted acoustic level at all noise affected existing or approved sensitive land uses does not exceed the criteria stated in table 23.3.1. | No acceptable outcome is prescribed. |  |
| Acoustic amenity – non-host lots | | |
| **PO12** The predicted acoustic level at all noise affected existing or approved sensitive land uses:   1. does not exceed the criteria stated in table 23.3.2; or 2. where the acoustic levels stated in table 23.3.2 cannot be achieved at noise affected existing or approved sensitive land uses:    1. individual written agreements (deeds of release) from non-host lot owners are provided    2. the predicted acoustic level at all noise affected existing or approved sensitive land uses does not exceed the criteria stated in table 23.3.1. | No acceptable outcome is prescribed. |  |
| Construction management | | |
| **PO13** Construction activities associated with the development avoid, or minimise and mitigate, adverse impacts on environmental values, water quality objectives, amenity, local transport networks and road infrastructure. | No acceptable outcome is prescribed. |  |