

3 March 2017

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The Manager
Department of Planning & Environment
GPO Box 39
SYDNEY NSW 2001

Attention: Rose-Anne Hawkeswood

**SSD 7680 - PROPOSED "SUNRAYSIA" SOLAR FARM DEVELOPMENT, LOTS 9, 10, 11 & 14
DP751179, TOOLEYBUC-BALRANALD ROAD, BALRANALD.**

I refer to your correspondence regarding the subject Application which was referred to the Roads and Maritime Services for assessment and comment.

Roads and Maritime Services has reviewed the Environmental Impact Statement (EIS) dated January 2017 prepared by NGH Environmental for the Sunraysia Solar Farm project. From the information provided it is understood that the proposal is for the establishment and operation of a 200 MW solar photovoltaic (PV) plant and associated infrastructure, including a transmission line on the subject site. The subject site has frontage to the Balranald-Tooleybuc Road (MR694), also referred to as Yanga Way, which is a classified road, within a 100 km/h speed zone. Yanga Way is an approved road train route.

The development will comprise of a series of mounted photovoltaic modules (approximately 750,000 solar panels) erected in arrays with single axis tracking. The panel structures will stand about 3 metres above ground level however the mounting system and panel orientation will depend on the panel technology adopted. Generally the panels will be orientated towards the predominate sun direction either in a north facing or east west facing orientation or a combination of these. The submitted documentation indicates that the Solar Farm will be undertaken in 2 stages with 100 MW in each stage. It is understood that the anticipated total construction period will be between 7 to 12 months

Due to the characteristics of such a project it is appropriate that the development be considered as 2 distinct phases, the Construction phase and Operational phase. This is considered appropriate as the significant proportion of traffic generation and the transportation of the large components will occur during the construction and decommissioning stages of the development. It is anticipated that the operational phase of the development will generate limited traffic.

Section 8.2 of the EIS outlines transport issues and details safe guards and mitigation measures for traffic generation including works to the intersection with Yanga Way and a Traffic Management Plan to be developed with input from the relevant roads authorities.

The submitted documentation considers the heavy and light vehicle traffic generation for construction of the facility. However it fails to define the preferred haulage routes for the components to the site, or source of other products, such as the aggregate, water and sand. Whilst the transportation of the components may be addressed, it's the frequency and volumes of the other material and the smaller construction and worker vehicles that can represent issues for the road network. These issues need to be finalised to allow for the proper assessment of the impacts on the road network. Therefore any consent for this development will require the preparation of an appropriate Traffic Management Plan. The submitted documentation indicates that a Traffic Management Plan will be completed. As the proposal relies on access via the classified and local road network this plan should be finalised in consultation with the relevant road authorities, in this case being both the Roads and Maritime Services and Balranald Shire Council.

The documentation indicates that access to the site is via Yanga Way and a new intersection to be constructed on Yanga Way. It is appropriate to require that all access to the development site be via the new intersection and not various other dirt tracks that access the site. Given the potential traffic generation, including light vehicles, the submitted reports propose the construction of an Auxiliary Right Turn (AUR) intersection treatment at the intersection of the access road with Yanga Way. The Austroads Guide to Road Design proposes that Auxiliary Right Turn (AUR) treatments be replaced with Channelised Right Turn -Short (CHR(s)) treatments. Roads and Maritime Services requires that as a minimum the intersection be constructed as a Channelised Right Turn - Short (CHR(s)) and Basic Left Turn (BAL) intersection treatment and that the access road be sealed for at least 50 metres from its intersection with Yanga Way.

It is noted that there is an application for the Limondale Sun Farm proposed to be located on land adjoining to the north of the site of the Sunraysia Solar Farm. It is noted that the proposed access arrangements for this other solar farm may be via an intersection with Yanga Way immediately north of the Sunraysia Solar Farm site. It would be appropriate that consideration be given to the use of the same access point to Yanga Way for both developments however this would be dependent on the relative timing of construction of each proposal so as not to be simultaneous.

The cumulative traffic impact needs to be assessed should both the Sunraysia Solar Farm and the Limondale Sun Farm projects be constructed simultaneously. However based on the information provided a number of unanswered variables exist, such as timing of construction, transportation routes, source of and transportation of materials such as sand and gravel, etc. that require clarification. It is considered appropriate that the assessment of these applications condition the need for discussions with the relevant road authorities (in the case Roads and Maritime Services and Council) to formulate appropriate traffic management processes and road upgrades.

The construction workforce is proposed to be housed in Balranald, Swanhill, Mildura and surrounding localities. Given the distances required to be travelled and the construction workforce numbers it would be appropriate to consider options to address driver fatigue for the construction period of the development. The submitted documentation refers to car pooling and buses being organised to transport personnel to and from the development site.

The development proposes a number of mitigating measures to be undertaken to address any perceived impact on visual amenity or glare. This includes the establishment of additional plantings to screen the development from view along Yanga Way. This is proposed to shield the facility from the most frequent and direct views from Yanga Way and will minimise distraction of the motorist on Yanga Way.

Roads and Maritime is mainly concerned with the provision of safe access between the subject site and the public road network and the impact of the development on the safety and efficiency of the road network. Roads and Maritime emphasises the need, particularly during the construction phase of this development, to minimise the impacts on the existing road network and maintain the safety, efficiency and standard of maintenance along the existing road network and to minimise the impact and distraction to the road user. As the subject site is to be accessed via the intersection with Yanga Way which is located within a 100 km/h speed zone the following conditions are proposed for road safety reasons.

Roads and Maritime Services has assessed the Development Application based on the documentation provided and would raise no objection to the development proposal subject to the Consent Authority ensuring that the development is undertaken in accordance with the information submitted as amended by the inclusion of the following as conditions of consent (if approved):-

1. A Traffic Management Plan shall be prepared in consultation with the relevant road authorities (Council and Roads and Maritime Services) to outline measures to manage traffic related issues associated with the development, particularly during the construction or decommission process. The appointed transport contractor shall be involved in the preparation of this plan. The plan shall address all light and heavy traffic generation to the development site and detail the potential impacts associated with the development, the mitigation measures to be implemented, and the procedures to monitor and ensure compliance. This plan shall address, but not necessarily be limited to the following;
 - i) Require that all vehicular access to the site be via the approved access route.
 - ii) Details of traffic routes to be used by heavy and light vehicles, and any associated impacts and any road-specific mitigation measures.
 - iii) Details of measures to be employed to ensure safety of road users and minimise potential conflict with project generated traffic,
 - iv) Proposed hours for construction activities, as night time construction presents additional traffic related issues to be considered.
 - v) The management and coordination of the movement of vehicles for construction and worker related access to the site and to limit disruption to other motorists, emergency vehicles, school bus timetables and school zone operating times,
 - vi) loads, weights and lengths of haulage and construction related vehicles and the number of movements of such vehicles,
 - vii) procedures for informing the public where any road access will be restricted as a result of the project,
 - viii) any proposed precautionary measures such as signage to warn road users such as motorists about the construction activities for the project,
 - ix) a Driver Code of Conduct to address such items as; appropriate driver behaviour including adherence to all traffic regulations and speed limits, safe overtaking and maintaining appropriate distances between vehicles, etc and appropriate penalties for infringements of the Code,
 - x) details of procedures for receiving and addressing complaints from the community concerning traffic issues associated with truck movements to and from the site,
2. The Proponent must engage an appropriately qualified person to prepare a Road Dilapidation Report for all road routes to be used during the construction (and decommissioning) activities, in consultation with the relevant road authority (Roads and Maritime Services and Council). This report is to address all road related infrastructure. Reports must be prepared prior commencement of, and after completion of, construction (and decommissioning). Any damage resulting from the construction (or decommissioning) traffic, except that resulting from normal wear and tear, must be repaired at the Proponent's cost. The applicant is accountable for this process, rather than the proposed haulage contractor. Such work shall be undertaken at a time as agreed upon between the Proponent and relevant road authorities.
3. Prior to the commencement of construction on-site, the Proponent must undertake all works to upgrade any road, its associated road reserve and any public infrastructure in that road reserve, to a standard suitable for use by heavy vehicles to meet any reasonable requirements that may be specified by the relevant roads authority. The design and specifications, and construction, of these works must be completed and certified by an appropriately qualified person to be to a standard to accommodate the traffic generating requirements of the project. On Classified Roads the geometric road design and pavement design must be to the satisfaction of the Roads and Maritime Services.

4. As a minimum the intersection of the access road with Yanga Way is to be constructed and the roadside maintained so as to provide the required Safe Intersection Sight Distance (SISD) with a reaction time of 2.5 seconds in either direction in accordance with the Austroads Publications as amended by the supplements adopted by Roads and Maritime Services for the posted speed limit. Compliance with this requirement is to be certified by an appropriately qualified person prior to construction of the vehicular access.
5. As a minimum the intersection of the access road with Yanga Way is to be constructed with a Channelised Right Turn -Short (CHR(s)) and Basic Left Turn (BAL) intersection treatment in accordance with the Austroads Guide to Road Design as amended by the supplements adopted by Roads and Maritime Services for the posted speed limit on Yanga Way. The intersection is to be constructed to the standards required for an approved road train route.
6. As a minimum the access road is to be constructed to provide for 2 way movement and be sealed for at least 50 metres from its intersection with Yanga Way. The intersection shall be designed and constructed so that vehicles turning between Yanga Way and the access road are not required to cross to the opposing travel lane in order to perform a turn manoeuvre. The intersection shall be line marked in accordance with Australian standards.
7. A management plan to provide measures to suppress dust generation from the development site and the transportation route shall be prepared and implemented to the satisfaction of Council and Roads and Maritime Services.
8. No external lighting of any infrastructure associated with the project is permitted at night that may cause distraction to road users other than low intensity security lighting.
9. Reflection of sunlight from the solar panels (glare) shall not cause a nuisance, disturbance or hazard to the travelling public. In the event of glare from the solar plant being evident from a public road, the proponent shall immediately implement glare mitigation measures such as construction of a barrier (e.g. fence) or other approved device to remove any nuisance, distraction and/or hazard caused as a result of glare from the solar panels.
10. The intersection of the access roadway and Yanga Way is to be designed and constructed so as not to interfere with the capacity of the current roadside drainage network and to prevent water from proceeding onto, or ponding within, the carriageway of Yanga Way. If a culvert is to be installed and is to be located within the required clear zone of Yanga Way for the posted speed zone it is to be constructed with a traversable type headwall.
11. Any damage or disturbance to the road reserve of Yanga Way is to be restored to match surrounding landform in accordance with Council requirements.
12. Yanga Way is part of the State Road network. For works on the State Road network the developer is required to enter into a Works Authorisation Deed (WAD) with Roads and Maritime Services before finalising the design or undertaking any construction work within or connecting to the road reserve. The Works Authorisation Deed documentation is to be submitted for each specific change to the state road network for assessment and approval by Roads and Maritime Services prior to commencement of any works within the road reserve. The applicant is to contact the Land Use Manager for the South West Region on Ph. 02 69236611 for further detail.
13. Any works within the road reserve of Yanga Way requires approval under Section 138 of the Roads Act, 1993 from the road authority (Council) and concurrence from Roads and Maritime Services prior to commencement of any such works. The developer is responsible for all public utility adjustment/relocation works, necessitated by the development and as required by the various public utility authorities and/or their agents.
14. All works associated with the project shall be at no cost to the Roads and Maritime Services.

Under the provisions of the Environmental Planning & Assessment Act, the Consent Authority, is responsible to consider any likely impacts on the natural or built environment. Depending on the level of environmental assessment undertaken to date and nature of the works, it may be necessary for the developer to undertake further environmental assessment for any ancillary road works required as a condition on the development.

Any enquiries regarding this correspondence may be referred to the Manager, Land Use for Roads and Maritime Services (South West Region), Maurice Morgan, phone (02) 6923 6611.

Please forward a copy of the Notice of Determination for this Development Application to the Roads and Maritime Services at the same time as advising the applicant.

Yours faithfully



Per:
Mr Lindsay Tanner
Regional Manager
South West Region