



5 November 2019

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

Attention: Elisha Dunn

### **SSD-9549 – PROPOSED JINDERA SOLAR FARM, LOT & DP, URANA ROAD, JINDERA**

I refer to correspondence forwarded to Roads and Maritime Services for assessment and comment.

Roads and Maritime Services has reviewed the Environmental Impact Statement (EIS) dated September 2019 prepared by NGH Environmental and the Traffic Impact Assessment (TIA) prepared by Stantec Australia Pty Ltd for the Jindera Solar Farm project. From the information provided it is understood that the proposal is for the establishment and operation of a 150 MW solar photovoltaic (PV) plant and associated infrastructure on the subject site. From the documentation provided, the development will comprise of a series of photovoltaic (PV) modules (approximately 400,000) erected on the site. The PV Modules will be mounted single axis trackers with a maximum height not exceeding 3m above the natural ground level mounted on driven steel posts.

The subject site is located to the north of Jindera with frontage to Urana Road (MR125) and the Walla Walla Jindera Road (MR547) which are both classified roads and to several other public roads such as Klinbergs Lane, Sparkes Road and Glenellen Road and Ortlipp Road which are classed as local roads under the provisions of the Roads Act.

The documentation indicates that the construction period will be 12-18 months. It is understood that approximately 200 construction personnel would be required on site during the peak construction period. Due to the characteristics of such a development the significant proportion of traffic generation (for both light and heavy vehicles) occurs during the construction and decommissioning stages of the development with the operational phase of the development generating limited traffic.

From the information provided it is understood that there are 3 proposed access points to the development site plus 1 for emergency purposes. One access point is located along Urana Road, approximately 4.9km north-west of the intersection of Urana Road and Walla Walla - Jindera Road. 2 access points are proposed along Walla Walla - Jindera Road located opposite each other with one on each side of the road. There is also an access proposed from Ortlipp Road, on the south-eastern corner of the site which will be used for maintenance and emergency access only.

The TIA recommends that a Basic Right Turn (BAR) treatment be constructed at intersection of the proposed driveway from Urana Road to the site. Traffic volumes on the Urana Road in the vicinity of the site are high (approx. 4500 vehicles per day) and the posted speed limit is 100km/h. The bulk of traffic generated by the development is expected to be travelling to the site from the south, hence demand for left turn into the site is expected to be low but right turn volumes are likely to be high during peak times. Considering these factors Austroads guidelines indicate that a Channelised Right Turn-Short (CHR(s)) and Basic Left Turn (BAL) treatment would be an appropriate configuration for the intersection of the driveway with Urana Road. Sight distance requirements under the guidelines will also need to be met.

Walla Walla Jindera Road carries considerably less traffic than Urana Road (approx. 1000 VPD) and is also a Classified Road. It has a speed limit of 100km/h in the vicinity of the proposed driveways to the site from this road. Considering these factors the minimum acceptable treatment for the site for these driveways would be a Basic Right Turn (BAR)/Basic Left Turn (BAL) treatment in accordance with the Austroads Guide to road design. Site access via the driveways from Walla Walla – Jindera Road is expected to generate a significant increase in traffic at the intersection of Urana Road and Walla Walla – Jindera Road. A swept path assessment was completed as part of the TIA which indicates that there is adequate width for two way movement of B-Double traffic through the intersection. There is an existing AUR treatment for traffic turning right from Urana Road into Walla Walla - Jindera Road. The existing intersection layout has been deemed to meet requirements for construction traffic generated by the Jindera Solar farm development provided a B-Double is the largest vehicle requiring access to the site.

The submitted documentation indicates that worker accommodation will be provided on site. If a significant number of workers are likely to be housed within the local area including Albury and surrounding localities. It is recommended that measures such as encouraging staff to car pool and provision of shuttle buses from Albury are given consideration as part of a Traffic Management Plan for construction activity.

The development site is adjacent to the public road network in various locations. It is recommended that the establishment of plantings is used to screen the development from view from the public roads. Whilst the landscaping is establishing it may be necessary to implement short term measures such as screening fences to address glint and glare should this become an issue. This is proposed to shield the facility from the most frequent and direct views from Gundagai Road to minimise distraction of the motorist.

Roads and Maritime is mainly concerned with 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. As the subject site is to be accessed via intersections with both Urana Road and Walla Walla - Jindera Road within a 100 km/h speed zone the following conditions are proposed for road safety reasons.

Transport for NSW has assessed the Development Application based on the documentation provided and would raise no objection to the development proposal and grant concurrence in accordance with section 138 of the Roads Act 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. Prior to the commencement of construction activities on the development site 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 and decommission processes. 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) Details of haulage, including transport routes, volumes, vehicle type and length, timing, and frequency,
  - ii) Finalise details of any required road-specific mitigation measures.
  - iii) Require that all vehicular access to the site be via the approved access route.
  - iv) Details of measures to be employed to ensure safety of road users and minimise potential conflict with project generated traffic,
  - v) Proposed hours for construction activities, as night time construction presents additional traffic related issues to be considered.
  - vi) 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.
  - vii) The management of construction staff access to the works site is to include strategies and measures employed to manage the risks of driver fatigue and driver behaviour.

- viii) Measures to address adverse climatic conditions that may affect road safety for vehicles used during construction, operation and decommissioning of the facility (e.g. fog, dust, wet weather).
  - ix) procedures for informing the public where any road access will be restricted as a result of the project,
  - x) any proposed precautionary measures such as signage to warn road users such as motorists about the construction activities for the project,
  - xi) 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,
  - xii) 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 transport routes, particularly intersections, to be used during the construction (and decommissioning) activities, in consultation with the relevant road authority. 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 following intersections shall be constructed 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:
    - i) a Channelised Right Turn -Short (CHR(s))/Basic Left Turn (BAL) for the intersection of the driveway to the development site with the Urana Road (MR125), and
    - ii) a Basic Right Turn (BAR)/Basic Left Turn (BAL) for the intersections of each of the 2 driveways to the development site with the Walla Walla – Jindera Road (MR547).
  5. As a minimum all access driveways connecting the development site to a Classified Road shall be constructed and maintained to the satisfaction of Roads and Maritime Services to comply with the following:
    - i) constructed as a "Rural Property Access" type treatment in accordance with the Austroads Guide to Road Design as amended by the supplements adopted by Roads and Maritime Services.
    - ii) constructed perpendicular (or at an angle of not less than 70 degrees) to the carriageway and with a minimum width of 6 metres to accommodate 2 way movement of the largest vehicle likely to access the subject site. The driveway shall be designed, line marked and maintained so that vehicles exiting the site do not interfere with the movement of vehicles entering the site from the main road.
    - iii) sealed for at least 10 metres from the edge of seal of the carriageway.
    - iv) shall not reduce the capacity of the existing roadside drainage network and to prevent water from proceeding onto, or ponding within, the carriageway of the main road. If a culvert is to be installed and is to be located within the required clear zone of main road for the posted speed limit it is to be constructed with a traversable type headwall.

- v) shall provide the required width and storage to accommodate the turning path of the largest vehicle that will be used to deliver materials to the site without obstructing the travel lanes of the main road.
6. Any entry gate to the development site shall be located at least 30m from the edge of seal of the carriageway or at the property boundary whichever is the greater. This is to allow for storage of delivery vehicles when gates are to be opened.
  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. A landscaped buffer (at least 5 metres in width planted with a variety of species endemic to the area and growing to a mature height ranging from 2 metres to at least 5 metres) shall be established and maintained within the subject property along the frontages of the site to any road to a standard to minimise distraction of the travelling public.
  9. Glint and glare from the solar panels shall not cause a nuisance, disturbance or hazard to the travelling public on the public road network. In the event of glint or 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. Any damage or disturbance to the road reserve of any road shall be restored to match surrounding landform in accordance with Council requirements.
  11. 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.
  12. Any works within the road reserve of the Urana Road and Walla Walla Jindera Road 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.
  13. Works associated with the development shall be at no cost to 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.

**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.**

Any enquiries regarding this correspondence may be referred to the Manager, Land Use - Transport for NSW (South West Region), Maurice Morgan, phone (02) 6923 6611.

Yours faithfully



Per:  
Lindsay Tanner  
Director South West NSW