



04 February 2021

File No: NTH18/00147/03

Your Ref: SSD-9679

The Director
Department of Planning and Environment
Resource & Energy Assessments
GPO Box 39
SYDNEY NSW 2001

Attention: Anthony Ko

Dear Sir / Madam,

**RE: State Significant Development – SSD 9679 – Hills of Gold Wind Farm – Advice on EIS
Located approximately 5 km south of Hanging Rock and 8 km south-east of Nundle.**

I refer to the referral via the Major Projects Planning Portal of 26 November 2020 requesting advice from Transport for NSW (TfNSW) in relation to the abovementioned development application.

Roles and Responsibilities

From 1 December 2019, all functions and responsibilities of Roads and Maritime Services will now be vested in an integrated Transport for NSW (TfNSW). Our key interests are for the safety and efficiency of the transport network, the integrity of State infrastructure and the integration of land use and transport in accordance with *Future Transport Strategy 2056*.

The proposed transportation route/s consist of the following classified (State) roads as defined under the Roads Act 1993 (Roads Act), The New England Highway [HW9], Pacific Highway [HW10], Golden Highway [HW27], Denman Road [MR209], Industrial Drive [MR316], John Renshaw Drive [MR588] and the Hunter Expressway [M15]. The local Councils are the roads authorities for all public roads (other than freeways or Crown roads) in the respective local government areas pursuant to Section 7 of the Roads Act. TfNSW is the roads authority for freeways and can exercise roads authority functions for classified roads in accordance with the Roads Act. Any proposed works on a classified (State) road will require the consent of TfNSW. Consent is provided under the terms of a Works Authorisation Deed (WAD).

In addition to the above, it is noted that Nundle Road [MR105] and Lindsays Gap Road [MR106] are classified (Regional) roads. TfNSW's concurrence is required prior to Council's approval to works on these roads in accordance with S138 of the Roads Act.

In accordance with Clause 101 of the State Environmental Planning Policy (Infrastructure) 2007 (ISEPP) the Consent Authority must have consideration for the safety, efficiency and ongoing operation of a classified road where development has frontage to a classified road. TfNSW is given the opportunity under Clause 104 to comment on traffic generating developments listed under Schedule 3.

Transport for NSW Response

TfNSW understands that the development is for a Wind Farm, consisting of up to 70 turbines, with the turbines reaching a maximum height of 230m when constructed. It is further understood that the project proposes to transport Over Size Over Mass (OSOM) turbine components from the Port of Newcastle to the Project Site near the village of Nundle. Two options are currently being considered for the project's blade size/s (65.4m long blades, for a 158m rotor and 83.5 long blades, for a 170m rotor), with further options being investigated in regards to transporting the blades as either a single unit (up to approximately 92 in length on a trailer) or as smaller split units.

TfNSW has reviewed the development application and provides the following comments to assist the consent authority in requesting further information to inform a determination;

This TfNSW response takes into account all referred documentation, in particular addressing the Environmental Impact Statement (EIS), Traffic and Transport Assessment (TTA), and the Transport Route Assessment (the Route Assessment). The following is a summary of the points outlined in detail in Attachment A – Transport for NSW Comments:

- The proposal to transport 83.5m long blades on NSW roads.
- The need to update the TTA and Route Assessment to include the proposed Alternative Route via Tamworth, and reassess certain locations along the route/s in relation to identified TfNSW projects which will have occurred between 2019 & 2022.
- The need for clarification in regards to proposed road & bridge upgrades.
- Further information needed in regards to staff, plant / equipment and construction material vehicle movements & their traffic impacts.

Please refer to Attachment A to read the full and comprehensive TfNSW response

Advice to the Consent Authority

TfNSW highlights that in determining the application under the *Environmental Planning and Assessment Act 1979*, it is the Consent Authority's responsibility to consider the environmental impacts of any roadworks which are ancillary to the development. This includes any works which form part of the proposal and/or any works which are deemed necessary to include as requirements in the conditions of project approval.

Please keep TfNSW informed of to progress of the application. If you have any further enquiries regarding the above comments please do not hesitate to contact Katrina Wade, Development Services Case Officer or the undersigned on (02) 6640 1362 or via email at: development.northern@rms.nsw.gov.au

Yours faithfully,



for Matt Adams
Team Leader, Development Services
Community and Place | Region North
Regional & Outer Metropolitan
Transport for NSW

Enc. Attachment A – Transport for NSW Comments

Transport for NSW

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ATTACHMENT A – Transport for NSW Comments

For context, this attachment must be read with the TfNSW Response letter of 04 February 2021, in relation to the Hills of Gold Wind Farm (SSD-9679) Development Application – EIS Exhibition. TfNSW Ref: **NTH18/00147/03**.

Transport for NSW (TfNSW) – Development Services (the respondent and case manager for this application) has reviewed the development application and sought input from various TfNSW departments to assist with the TfNSW response to the Development Application Exhibition. This TfNSW response takes into account all referred documentation, in particular addressing the Environmental Impact Statement (EIS), Traffic and Transport Assessment (TTA), and the Transport Route Assessment (the Route Assessment). The following comments are provided to assist the consent authority in requesting further information to inform a determination.

PRELIMINARY CONSULTATION WITH TfNSW

Preliminary comments were provided by TfNSW to The Transport Planning Partnership (TPPP) on 25 September 2020. These comments were in regards to a review of the proposed Route Assessment. These comments can be seen in Appendix C in the TTA. It should be noted that the advice provided by TfNSW has not been actioned or implemented prior to the submission of the DA. Many of the comments in the preliminary consultation with TfNSW still stand and are further addressed below.

PROPOSED ROAD UPGRADES & WORKS ON CLASSIFIED (STATE) ROADS

- The swept path analysis indicates that depending on the size of the blade there is a need for removal of signs, repositioning of light poles, purchasing of land, erection of hard stand areas and so on to accommodate these extreme loads.

Any removable signs installed for the project will require replacement with conventional signage posts at project completion. All other relevant infrastructure removed for the project needs to be replaced as per existing.

- Any damage to the state road assets (including but not limited to concrete medians, pavement, or safety barriers) as a result of the project and the associated heavy vehicles will be required to be “made good” by the project.
- Any roadwork on classified (State) road/s is to be designed and constructed in accordance with the current Austroads Guidelines, Australian Standards and [TfNSW Supplements](#).

Any modification to the state road assets will require the proponent to enter into a Works Authorisation Deed (WAD) with TfNSW for any roadwork deemed necessary on the classified (State) road. The developer will be responsible for all costs associated with the roadwork and administration for the WAD. It is recommended that developers familiarise themselves with the requirements of the WAD process. Further information can be obtained from the TfNSW [website](#).

- *Figure 3.12 of the TTA* - There is a section of median safety barrier (Elsholz kerb) that is proposed to be removed at the intersection of Industrial Drive (MR316) and the Pacific Highway (HW10) / Maitland Road. The time-line indicates a delivery window of 9 months.

Further details are required by TfNSW for review to understand how this safety component is proposed to be maintained during the 9 month delivery period.

- *Figure 3.13 of the TTA* - John Renshaw Drive onto Hunter Expressway – The project proposes to construct a new crossover of Hunter Expressway (HEX) median instead of utilising existing crossover West of Wallis Creek (existing crossover will require Wire Rope Safety Barrier to be dropped during movements).

Further clarification is required to understand the justification for this proposal.

TfNSW recommend the Consent Authority request the above identified further information & clarification from the proponent to further assist TfNSW to provide the appropriate comments in regards to traffic impacts and the ongoing safety for road users along the proposed transport route/s.

ESTIMATED CONSTRUCTION COMMENCEMENT AND TfNSW PROJECT TIMEFRAMES

Preliminary consultation with TfNSW has advised that the estimated commencement date for construction has been amended from the SEARs stage and is now expected to begin in the year 2022. *Table 7-5* of the EIS, mentions a Project Plan which also estimates construction to commence in 2022.

The Route Assessment will need to be reassessed to cater for new road infrastructure / upgrades completed from 2019 to 2022 and also take into consideration any proposed works under construction during the project's new construction phase. Noting that projects may yet to be identified.

Below is a list of Upcoming TfNSW Infrastructure Services Projects which may be affected by the project and should be taken into consideration:

- John Renshaw Drive Rehabilitation from Buttai Creek to Hunter Expressway Buchanan Interchange - Jan 2021 to April 2022
- HW27 Golden Highway, West of Jerrys Plains (1.4km of road improvements/curve upgrades and barrier installation) – November 2020 to April 2021
- HW27 Halcombe Hill (West of Aberdeen) Safety improvement works – Feb/March 2021 (TBC)
- HW27 Golden Highway, West of Ogilvies Hill – (1.7km of road upgrades between Ogilvies Hill and Denman Road Intersection – September 2021 to June 2022
- HW9 New England Highway - Parkville Pavement Rehabilitation and Safety Improvement works – October/Jan 2021
- Golden Highway to Denman Road – This intersection has been upgraded recently.
- New England Highway (HW09) / Golden Hwy intersection arrangement will change in the coming months / years as part of the Belford to Golden Highway upgrade project. There will likely be impacts to the new street lighting that is proposed on the northern

side of the New England Highway (HW09). Impacts or possible changes to this lighting could have a significant impact on the safe operation of the intersection.

There is some information available on the web or alternatively proponent may contact TfNSW Project Manager, Daniel Evans and request drawings of the final design.

TfNSW recommend the Consent Authority request an updated Route Assessment be undertaken addressing the above mentioned projects, for further review by TfNSW.

STAFF TRANSPORTATION AND DELIVERY MOVEMENTS – TRAFFIC GENERATION, DISTRIBUTION AND INTERSECTION ANALYSIS.

- *Section 3.3.2 of the TTA* addresses Traffic Generation for the project. Staff movements during the construction phase of the project are proposed to be 50% of staff (approximately 87 workers from the Tamworth region) being transported by 24 seater bus/es, and the other 87 workers are proposed to travel individually to site in light vehicles. There does not appear to have been any consideration towards carpooling arrangements for those travelling to site in the Light Vehicles to reduce the volume of traffic generated by these staff movements.
- *Figure 3.2 of the TTA* indicates the Traffic Routes for the staff vehicles in addition to the plant equipment and construction materials vehicles. However the figure does not provide labels for the relevant roads, the legend appears mislabelled and the connections to the New England Highway do not appear to match the description of the staff and plant/materials vehicle movements.
- *Table 3.4 of the TTA* demonstrates approximately 108 vehicles are expected to arrive & depart the site during the peak hours, over a 13 month peak construction timeframe. However, there does not appear to have been any intersection analysis undertaken for the indicated routes at key locations on the classified (State) roads for the traffic generated by the project. All references to intersection analysis throughout the EIS and TTA are in relation to the transportation of the OSOM movements only.

TfNSW recommends the Consent Authority request further intersection analysis be undertaken, including Austroads Turn Warrant assessments, to address the impacts of the increase in traffic generated by the development at key intersections along the traffic route as indicated in Section 3.3.2 of the TTA. This analysis should address any existing or proposed turn treatments or mitigation measures to manage the increase in traffic, and should clearly identify the exact routes proposed to be used by the project.

ALTERNATIVE ROUTE

Section 3.6.4 of the TTA refers to an Alternative Route via Tamworth, proposed as an alternative to the project's proposal to widen bridges on Lindsays Gap Road.

- Preliminary advice provided by TfNSW to TTPP (25 September 2020) highlighted the need to further address this information in regards to providing clear route details of the Alternative Route, identify the load limits on bridges, expand on the potential options to widen bridge/s and clarify the axle widths of the Over Size Over Mass (OSOM) design vehicles.

Although the documentation appears to state that the OSOM vehicles transporting the Tower units will be the only vehicles needing to utilise the Alternative Route, it is unclear if the vehicles transporting the blades (or any other OSOM vehicle) are also impacted by the existing width of the bridge. *Section 10* of the Transport Route Assessment (page 34) appears to indicate that although the blades sitting on the trailers would clear the bridge structure/s, it is the axle width of the relevant design vehicles that determines if this route is viable for those items. It is not clearly stated that the vehicle / trailer can cross these bridges.

- *Section 3.7.2.2* states that Tamworth Regional Council have not raised any objections to the upgrade of the Goonoo Goonoo Creek Bridge and indicates further details are available in *Section 3.8.1 & Appendix C – Copy of the Meeting Minutes*. This addresses the consultations with the council. There is no clear statement from Council as to their response or position with the bridge/s proposal & without any details about the works required to widen & strengthen the bridge structures, TfNSW are unable to rely on these works going ahead & therefore require further information about the proposed Alternative Route via Tamworth.

TfNSW recommends the Consent Authority request further information addressing the proposed bridge/s widening or upgrade works on Lindsays Gap Road in addition to further information about the Alternative Route via Tamworth. This should address and clearly identify the design vehicles (and their loads) which will be using the Alternative Route, the exact route proposed, Swept Paths the traffic impacts, additional traffic generated and key intersection analysis. It is further recommended that this Alternative Route is included into the Route Assessment as another route option.

OVER SIZE OVER MASS (OSOM) VEHICLES – BLADE MOVEMENTS

- The Development Application identifies two blade sizes as options for the project, 65.4m long blades (158m rotor) and 83.5 long blades (170m rotor). The EIS, TTA and Route Assessment state the OSOM movements have been assessed on the largest blade size (as a single full sized component). The OSOM movements for the project are extreme and will bring with them a level of risk to other road users, to State owned infrastructure and also to network efficiencies.

TfNSW notes, that with many options still being considered by the project, from a road safety and infrastructure protection perspective the shorter blade combination is the most favourable. There is an indication of an option to split the blades, transporting them in two parts (root and tip sections). This would be a scenario worth progressing and would have far reaching implications for future projects of a similar nature.

Although there are no objections by TfNSW at this time in regards to the transportation of the blades, it is noted that the blades will potentially have the greatest impact on the road network. The Route Assessment indicates that with the proposed works, the longer blades can in theory be accommodated by the route. There will be substantial cost (to the project) and inconvenience with the works that need to be undertaken at several intersections to accommodate these vehicles and their loads.

Furthermore the Development Application refers to roads having been previously used for other wind farm developments, however, the largest blade movement in NSW to date has been for 67m long blades. Therefore, although the route from the Port of Newcastle to Tamworth, has been used by other wind farm projects, the proposed trailer combination

that extends to approximately 92m in length is a dimension that has not been tested in NSW previously and the true impact is unknown.

Further consultation should be undertaken with TfNSW Regional Infrastructure to ensure the proposed works to accommodate the transportation of the larger blade lengths are in accordance with TfNSW requirements.

TfNSW recommends that the Consent Authority request further consultation be undertaken with TfNSW and investigate undertaking a “trial dry run” to prove the combination blade trailer can negotiate the identified route, key intersections and identified pinch points & bridges.

OVER SIZE OVER MASS (OSOM) VEHICLES – GENERAL ADVICE

- Vehicles identified in the Route Assessment as completely blocking the classified and local road/s during turning manoeuvres, will require police escorts, a Traffic Control Plan (TCP) and a Road Occupancy Licence (ROL), for these and other manoeuvres along the designated route/s, to prevent interactions with approaching vehicles. These processes will include further TfNSW reviews of the proposed manoeuvres.
- The blades and towers must be transported at very low traffic times between Newcastle and Denman, including, if necessary, staging of the movements to avoid peak mining traffic periods in the Hunter Valley.
- TfNSW Transport Operation Managers would require confirmation of completed works and the Transport Management Plan (TMP) would need to be formally tabled with the OSOM Road Access team for further review prior to any permits being issued.
- Approvals from land holders and road managers will be required prior to the project commencing.
- The Route Assessment, indicates the use of Kelly Street in Scone via the rail level crossing for OSOM vehicles.

TfNSW recommends the project investigates the use of the Scone Bypass as an alternative.

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