

Energy Assessments
Department of Planning & Environment
Locked Bag 5022
PARRAMATTA NSW 2124

Attention: Iwan Davies

**SSD-10471 for Winterborne Wind Farm, Walcha
(various lots)**

5 January 2023

Dear Iwan,

Thank you for referring the abovementioned state significant development application via the NSW Major Projects Planning Portal dated 14 November 2022 inviting further comment from Transport for NSW (TfNSW).

TfNSW's primary interests are in the road network, traffic and broader transport issues. In particular, the efficiency and safety of the classified road network, the security of property assets and the integration of land use and transport.

The Oxley Highway (HW11) and the New England Highway (HW09) are classified (State) roads. Thunderbolts Way (MR73) is a classified (Regional) road. Council is the roads authority for these roads and other public roads in the area, in accordance with Section 7 of the *Roads Act 1993* (Roads Act). Any proposed works on a classified (State) road will require the consent of TfNSW, and consent is generally provided under the terms of a Works Authorisation Deed (WAD) or other agreement with TfNSW. Works on a Regional road will require a section 138 approval, for which TfNSW concurrence may be required.

TfNSW understands that the proposal seeks approval for the construction, operation and decommissioning of a 700MW Wind Farm comprising of 119 Wind Turbine Generators (WTG), with (maximum) single piece 81m Blades, a 100MW / 200MWh Battery Energy Storage System (BESS) and supporting ancillary infrastructure which includes an (approximately) 50km long transmission line. The development is to be constructed over approximately 24-30 months with a peak workforce of 400 workers during construction phase and 39 during operations.

TfNSW has reviewed the development application and supporting documentation submitted and **is not satisfied** that the proposed development has adequately addressed the anticipated construction traffic impacts on the NSW state road and rail networks.

To enable TfNSW to undertake an assessment of the proposed development's impacts on the state road and rail networks the following additional information is required:

1. Transport Routes

- The assessment focuses primarily on access to the site via the identified *Preferred Access Route/s*, for Over Size Over Mass (OSOM) and Heavy Vehicles, including access to site from the key intersection of Thunderbolts Way & Jamieson Street.
- Not all rail related infrastructure has been identified along the proposed transportation route/s from the Port of Newcastle. In particular it is noted that a road over rail bridge along the Oxley Highway, west of Surveyors Creek Bridge is not mentioned in either Section 5.4.3 of the TIA, the Route Survey or the Transport Route Map in Figure F6 in the TIA. It is unclear whether any other rail related infrastructure is missing from the assessment, which may be impacted by construction traffic of the development.
- TfNSW notes, consultation was undertaken with TfNSW by the traffic consultants, Amber Organisation Pty Ltd in preparation for the EIS. In an email dated 24 June 2021, TfNSW highlighted the need for the development to undertake a formal review of the proposed transport route/s, in particular referring to the need to include bridge

assessment/s. The email further advised that Rex J Andrews (RJA), OSOM transport consultants, were familiar with the process outlined for undertaking a formal review and assessment of the proposed transport route/s with TfNSW. However, this does not yet appear to have been undertaken as the (RJA) Route Survey notes that the capacity of each identified structure will need to be checked, and Section 5.4.1 of the TIA proposes use of an alternative route should the capacity of Surveyors Creek Bridge on the Oxley Highway be insufficient. (*Refer below for further comments regarding alternative routes.*)

The EIS, TIA and Route Survey all appear to rely solely on the OSOM route/s utilising the Oxley Highway to access the project site for OSOM loads, yet present uncertainty regarding the viability of the proposed route/s to accommodate the loads transported to the project site, furthermore not all relevant bridge / culvert structures along the proposed route/s have been identified.

TfNSW reiterates this assessment must be undertaken prior to determination to ensure the route/s are suitable to accommodate the proposed OSOM / HV loads being transported to site. Where the *Preferred Access Route/s* is found to be unsuitable, further assessment will be required for any alternative route/s.

- Figure F6 identifies Thunderbolts Way as a route between Walcha and the approximate location of the proposed switching yard, however does not show Thunderbolts Way as an access route to site for construction traffic coming from further north. This traffic is noted to include, approximately 50% of Light Vehicles transporting workers, 40% of the MRV/HRV and 30% of the Truck and Dog/AV/B-Doubles traveling to site from the Armidale and Uralla regions. Furthermore, no intersection assessment appears to have been undertaken at the key intersection of New England Highway & Thunderbolts Way. The TIA must be updated to clearly demonstrate ALL access routes to site, in particular from the key intersections of the classified (State & Regional) roads, further addressing traffic impacts at the key intersections along those route/s.
- Although not directly proposed, TfNSW advise that any use of the Oxley Highway, East of Walcha will not be supported by TfNSW. This particular road corridor is prone to flooding, and hazards including land slips. It is currently undergoing significant rehabilitation works which may continue for several years, which may at times include single lane alternate flow, stop/slow, reduced lane / shoulder widths and the potential for road closures.

2. Alternative Transport Routes

- Alternative transport routes for OSOM and Heavy Vehicles via Kentucky and Uralla are mentioned in Sections 5.4.1 and 5.5 of the TIA, (bypassing the Oxley Highway). Each route is stated not to be the preferred route due to a variety of constraints, however none of these route/s are entirely discounted either. Furthermore, on occasion are used to suggest alternatives are available to the *Preferred Access Route/s*, if needed. These routes have not been sufficiently detailed in the TIA or Route Survey to be considered suitable viable alternatives, at this time. Further assessment is required if they are to be considered for this development.
- A Tamworth Bypass route for Blade transportation, is detailed in both the TIA and Route Survey. This route is acknowledged to have a number of constraints, including being limited to a maximum of 25T. The proposed single piece 81m Blades are noted (in TIA Table 4) to have a mass of 28.1T, exceeding that maximum. It is unclear if this mass is for the blade component only or is inclusive of the specialist transportation vehicle's weight, also.

The proposal includes extensive traffic control & reversing manoeuvres to accommodate this route, in particular at the intersection of Whitehouse Lane & the New England Highway, south of Tamworth, and along Nundle Road between O'Brien's Lane & the intersection at the New England Highway, East of Tamworth at Nemingha. The Route Survey (*11.0 Route Survey 3: Alternative Route through Tamworth*), appears incomplete in addressing the relevant impacts, timeframes and distances of particular reversing movements.

Further to this, Section 6.6 of the TIA states that there is potential for the construction period to overlap with the Hills of Gold Wind Farm. Further information is required to directly address the cumulative impacts of both wind farm development's construction traffic occurring concurrently, in particular at the two identified intersections of the New England Highway and along Nundle Road. Further information is also required to further address any relevant pull over bays and / or procedures to enable the OSOM vehicles to wait, without blocking traffic, prior to traffic control processes being implemented to enable the proposed manoeuvres to occur.

TfNSW do not support the closing statement of Section 5.5, that the Tamworth Bypass will be further investigated prior to construction. Any route proposed to be included in any future consent, must address and identify any impacts on the classified road network, including the extent of works within the classified road reserve, which may require further consent and / or concurrence from TfNSW. Any associated environmental approvals are required to be identified & addressed prior to determination.

Transport for NSW

- Uncertainty remains regarding the viability of the *Preferred Access Route/s* via the Oxley Highway (from the New England Highway), in particular regarding, impacts to relevant road and rail corridors, the need to undertake bridge and culvert assessments and further details required for the proposed works at Surveyors Creek Bridge. Until such details are provided to confirm the viability of the *Preferred Access Route/s*, TfNSW require further investigations be undertaken and details be provided regarding the alternative access route/s to site.

3. Swept Paths:

- Swept Paths demonstrated in *Appendix I* demonstrate the concurrent swept paths for a 19m Articulated Vehicle (AV) only, however, the project proposes to utilise a variety of Heavy Vehicles (HVs) including 19m Truck and Dog trailers and 26m B-Doubles. Swept paths must be updated to further demonstrate the concurrent inbound and outbound movements of both the largest design vehicle (B-Double) and the Truck and Dog (proposed to transport majority of materials to site) to identify any potential points of conflict at this intersection.

4. SIDRA

- Throughout the TIA, in particular the *Executive Summary*, *Appendix G* and *Appendix K*, reference is made to SIDRA Analysis being undertaken, however, no SIDRA Outputs have been provided. Furthermore, *Appendix K* states that SIDRA has been undertaken for the intersection of Thunderbolts Way / Jamieson Street, but does not state that any other key intersections have been analysed. SIDRA Outputs are required to enable an appropriate assessment of the traffic impacts of the development at key intersections along the various

5. Light Vehicle Trips & Carpooling

- Table 9 in the TIA proposes 105 (one-way) peak hour Light Vehicle trips, with a further proposal to encourage carpooling among staff, at a rate of 4 people per car for a peak workforce of 400 workers. This rate although stated to be conservative, is rather high, and is without any evidence or strategies demonstrating how carpooling will be encouraged, implemented, mandated, or managed. Without this information, it is unclear how such rates would be maintained throughout the construction period of the project, to ensure the volume of light vehicle trips, complied with the proposal. The traffic impacts of the development have been demonstrated based on this high light vehicle passenger rate scenario, rather than “worst case” scenario. If they cannot be maintained, the traffic impacts on the state road and key intersections may be greater than demonstrated.

TfNSW recommends the development provide a *Carpooling and Shuttle Buses Strategy* further detailing how staff will be required to take up the option/s proposed. Where such a strategy cannot be provided to demonstrate processes and policies to comply with the proposal, further amendments to the TIA will be required to demonstrate the worst case scenario traffic impacts for light vehicle trips between their points of origin to/from site.

6. Rail Corridor Impacts

- The proposed excavation works at the Surveyors Creek Bridge location along the *Preferred Transport Route/s*, has the potential to impact the adjacent rail corridor. The proposed switchyard and associated Transmission Line corridor appear to be within close proximity to the rail corridor.

Further information is required, which clearly identifies the relevant land parcels associated with the project and specifies the distance of any proposed works to the rail network corridor. Works may require further assessment under *Section 2.99* of the *Transport and Infrastructure SEPP* (Excavation in, above, below or adjacent to rail corridors).

- Consultation is stated to have commenced and be ongoing with ARTC, in particular with regard to the Selwyn Street level crossing, however no details regarding this consultation was provided. Further evidence is required of this consultation, to understand the impacts identified, any mitigation measures proposed or works required.

7. Additional Roads Act 1993 Concurrence

- The Transmission Line Corridor is proposed to cross over Thunderbolts Way. Works crossing a classified (regional) road reserve will require Council to seek concurrence from TfNSW under *Section 138* of the *Roads Act 1993*.

8. Works Proposed at Surveyors Creek Bridge

The development proposes undertaking significant works adjacent to Surveyors Creek Bridge, to accommodate the transportation of the proposed 81m Blades along the Oxley Highway. These include relocating fencing, removing armco (safety barriers), excavation into the roadside bank to allow for blade swing, and several signs to be relocated and /or made removable.

Transport for NSW

The works proposed will require TfNSW consent and the developer will be required to enter into a 'Works Authorisation Deed' (WAD) with Transport for NSW, or other suitable arrangement as agreed to by TfNSW. However, TfNSW require additional information, regarding the proposed works, to ensure that any impacts of works on the classified road and rail networks are clearly identified & addressed prior to determination.

It is recommended that the Consent Authority request the applicant to provide a scaled strategic design of the proposed works at Surveyors Creek Bridge addressing the below points for consideration, showing:

- Plans, cross sections & long sections, demonstrating the full scope of works proposed. Including but not limited to:
 - All works are to be designed and constructed in accordance with the relevant *Austrroads Guidelines*, *Australian Standards* and related *TfNSW Supplements*.
 - The existing and proposed road geometry, lane and shoulder widths, line-marking & signage.
 - The proposed excavation (and / or fill) works. Including batter specifications for all excavation and / or fill locations.
 - Removal of trees and safety barriers, relocation of utilities, stormwater management (new and existing), etc.
 - Dimensions of the proposed works to the adjacent rail corridor.
 - Accurate cadastral boundaries.
 - Any relevant pull over bays required to enable the OSOM vehicles to wait, without blocking traffic, prior to traffic control processes being implemented.
- Specifications of Armco (safety barrier) removal, including details of any proposed replacement infrastructure to ensure the safety of other road users is not compromised outside of the OSOM transportation schedules at the subject location.
- Swept path diagrams, for OSOM vehicles and associated loads.
- Details of the bridge capacity, in regard to all OSOM loads proposed to access the site via the structure.
- Note: The design needs to comply with *TfNSW Strategic design requirements for DAs*. To assist you in preparing the designs, please refer to link below:

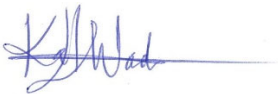
<https://roads-waterways.transport.nsw.gov.au/business-industry/partners-suppliers/documents/planningprinciples/strategic-design-fact-sheet-02-2022.pdf>

Further to this, the proximity of the proposed works in this location to the adjacent rail corridor is unclear and may require further assessment under *Section 2.99* of the *Transport and Infrastructure SEPP* (Excavation in, above, below or adjacent to rail corridors). Further details are required to:

- Accurately identify the land parcels within the immediate vicinity of the works & any land acquisitions required to enable the proposed works to be constructed.
- Identify and address any potential impacts to the rail corridor.
- Demonstrate evidence of consultation with the relevant landholders impacted by the proposed works.

If you wish to discuss this matter further, please contact the undersigned via development.west@transport.nsw.gov.au

Yours faithfully,



Katrina Wade

A/ Team Leader Development Services (Renewable Resources)
West Region | Community and Place
Regional and Outer Metropolitan