

Enquiries**Please ask for****Direct****Our reference**

Theresa Folpp

02 6549 3700

State

Government

Approvals

13 October 2022

Natasha Homsey
Environmental Assessment Officer
Department of Planning and Environment

Dear Natasha

Liverpool Range Modification 1 (SSD-6696 MOD1)
Muswellbrook Shire Council – MOD1 Objection

Reference is made to the following:

- 'Liverpool Range Wind Farm Modification Assessment Report MOD-1 and associated documentation' (Tilt Renewables, September 2022) (Modification Report); and
- Exhibition notification via the Major Projects website.

The Liverpool Range Wind Farm (Project) is located in the Upper Hunter and Mid-western local government areas, approximately six kilometres (km) east of Coolah and 121 km northwest of Muswellbrook.

The Project is located within, and forms a key component of, the Central-West Orana Renewable Energy Zone (CWO REZ) declared under Clause 23 of the NSW *Electricity Infrastructure Investment Act 2020*.

The CWO REZ has been identified as a suitable area for renewable energy infrastructure by the NSW Government as well as being recognised in the Australian Energy Market Operator's (AEMO) Draft 2022 Integrated Systems Plan.

Up to 5.5GW of capacity (and possibly more) has been proposed for the CWO REZ.

The Liverpool Range MOD1 proposes to undertake the following activities within the Muswellbrook Shire Council (Council) Local Government Area (LGA):

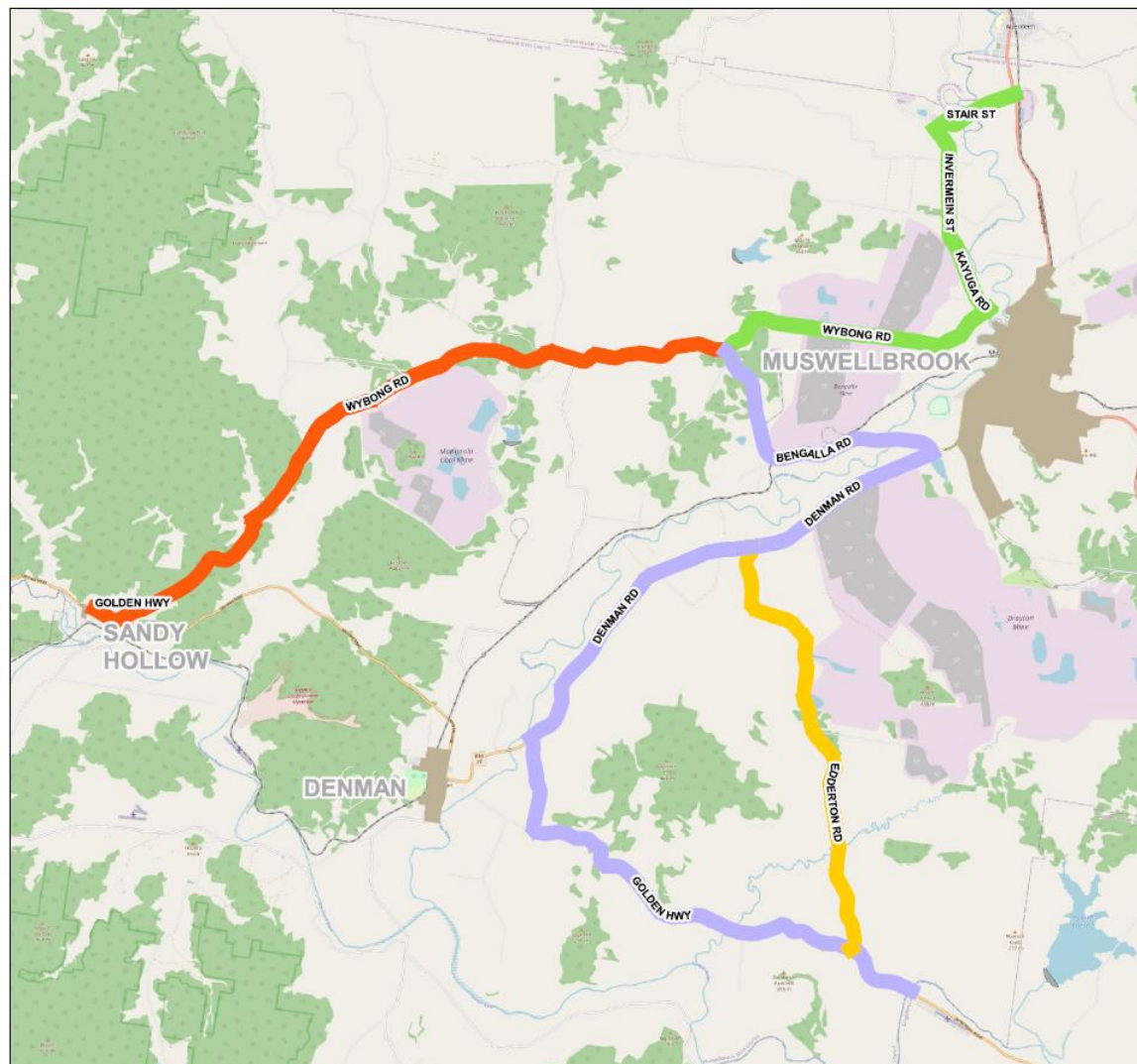
- Transportation of 90m wind turbine blades (and loads >5.2m height), originating at the Port of Newcastle, via the following Council local roads (**Figure 1**):
 - Bengalla Link Road;
 - Wybong Road; and
 - Edderton Road
- Proposed upgrades to the abovementioned roads to facilitate the movement of 660 Over Size Over Mass (OSOM) vehicles required to transport the blades; and
- Removal of up to 0.1ha of native vegetation from Wybong Road.

It should be noted that the transport route shown in **Figure 1** is currently being proposed as a transport route by up to five other similar projects in the CWO REZ.

Figure 2 shows the impacted local roads at the LGA scale, it also shows the proposed transport route for projects accessing the Hunter New England (HNE) REZ via local roads.



Figure 1 – Proposed OSOM Transport Route for Liverpool Range MOD1 using Council owned Local roads



Muswellbrook LGA - OSOM for Wind Farms Transport Routes

- the route all over dimensioned vehicles for both the New England REZ and Central West-Orana REZ would take if upgrades to the intersection of Golden Hwy and Denman Rd can be achieved
- an alternative option for all over dimensioned vehicles for both the New England REZ and Central West-Orana REZ to take as if upgrades to the intersection of Golden Hwy and Denman Rd cannot be achieved (this is Edderton Road)
- the route all over dimensioned vehicles for the New England REZ would take after Bengalla Mine (this route utilises Wybong Rd, Kayuga Rd and Dartbrook mine road)
- the route all over dimensioned vehicles for the Central West-Orana REZ would take after Bengalla Mine (this route utilises Wybong Rd to Sandy Hollow)

Figure 2 - Impacted local roads within Muswellbrook Shire LGA for Central West Orana REZ and Hunter New-England Rez

Objection

Council's Objection to MOD1, which also applies to any development in the CWO and HNE REZ proposing to use Council owned local roads to transport project components, was resolved at the State Significant Development Committee on 3 November 2021:

Authorises staff to object to all State Significant Development (SSD) that nominates the use of local roads in the Shire for transport of components to another LGA, until EnergyCo, Transport for NSW and Department of Planning Industry and Environment find a more strategic solution to managing transport issues that is acceptable to Council.

Background to Objection - Cumulative Impacts

1. Council has been approached by several renewable energy proponents seeking to use local roads to access the REZ's via the routes shown in **Figure 1** and **Figure 2**.
2. Currently, there are approximately 2,265 Over Size Over Mass (OSOM) (blade) movements proposed through the MSC LGA using Council owned local roads to access the CWO REZ. A review of the HNE REZ has not been undertaken.

Ref	Project	Planning Status	Construction Period	Capacity / Details	Turbine Port Delivery / Route	OSOM Movements (blades)*
1	Barneys Reef	Prepare EIS	28 months	441 MW 63 turbines ~100m blade	Newcastle via Golden Hwy - "Initial desktop analysis indicates the transport route may be constrained".	189
2	Burrendong	Prepare EIS	24 months	650 MW 105 turbines ~85m blade	Newcastle via Golden Hwy – Denman bridge not identified as a constraint.	315
3	Spicers Creek	Prepare EIS	24 - 30 months	730 MW 122 turbines 110m blade	Newcastle via Golden Hwy, Denman Road, Bengalla Road, Wybong Road.	366
4	Valley of the Winds	Submissions Report	-	800 MW 148 turbines 90m blade	Newcastle via Golden Hwy - "Alternate routes may need to be investigated to use the NEH via Scone".	444
5	Liverpool Range	Approved (not yet constructed)	29 months (WTG component delivery)	1,320 MW 220 turbines 90m blade	Newcastle via Golden Hwy, Denman Road, Bengalla Road, Wybong Road.	660
6	Uungula	Approved (not yet constructed)	24 - 30 months	400 MW 97 turbines ~85m blade	"Not resolved, assumed Port of Newcastle". No vehicles >5.6m in height proposed.	291
7	Bodangora	Operational	-	-		Did not use local roads
Total OSOM Movements in MSC LGA (indicative)						2,265

*Values based on the number of proposed turbines. Assumes one truck movement per blade. Total includes Uungula.

3. There are also several projects currently in the planning system for the CWO REZ that are proposing to use Council local roads and have not consulted with Council or included detail in planning documentation assessing the proposed transport route.
4. There has been no cumulative assessment on the planned and foreseeable future projects in the CWO REZ that employs an explicit methodology to model plausible future scenarios, understand the pathways of interaction of cumulative impacts and determines and describes thresholds and limits for traffic impacts.
5. Use of Council owned local roads (as opposed to State roads) is a constraint caused by the Denman Road bridge crossing of the Hunter River (height limit restricted). Note that the proposed 100-110m blade for Barney's Reef and Spicer's Creek may also be constrained by the newly constructed Mangoola overpass on Wybong Road.
6. Many proposed development timeframes within the CWO REZ appear to occur at the same time.
7. Council's concern is on the unsustainable use of local roads and bridges that are not fit for purpose, by numerous large-scale projects.
8. Road conditions are broadly described as a country road standard with narrow lane widths, unformed shoulders, poor pavement depths, aged sealed surfaces, drainage structures that will not support repeated heavy loads/turning movements; and road gradients unsuitable for transport of long loads. Some roads have known accident history including fatalities (discussed below) and form part of local bus routes.
9. The public are at risk of traffic related impacts from multiple projects i.e cumulative road closures and cumulative OSOM movements (flashing lights and safety considerations). These roads and intersections form part of the designated access to coal mines and horse studs, carry high volumes of traffic at peak times and disruption can cause significant issues for these businesses. Businesses include:
 - Maxwell Underground Mine;
 - Mt Arthur Mine;
 - Bengalla Mine;
 - Mt Pleasant Mine;
 - Mangoola Mine;
 - Dartbrook Underground Mine;
 - Coolmore Stud
 - Darley Woodlands Stud
 - Edenglassie Stud
 - Balmoral Stud
10. Coal mining occurs 24/7, with a change of shift every 10 to 12 hours, so any night time / early morning transport may impact on shift changes.
11. Some of these roads are maintained by mining companies, and the mining operations are prohibited from using some of these roads (as terms of approvals) due to safety issues arising from poor alignment and weight limited structures.
12. There are no direct benefits to the ratepayers of Muswellbrook Shire (e.g. Employment opportunities) and yet ratepayers are at risk of:

- a. Funding costs associated with the accelerated deterioration of the local road network and staff time required to create legal agreements and monitor impacts;
 - b. The inconvenience of temporary road closures;
 - c. Safety issues of encountering large numbers of OSOM vehicles on local roads (see below for Coroner's recommendations relating to Wybong Road);
 - d. Amenity impacts for residents of traffic noise, flashing lights and other unfavourable impacts, particularly if night movements are proposed
13. A Coroner has made several recommendations following a fatal car accident on Wybong Road between a light vehicle and escorted prime mover. Key recommendations were in relation to OSOM travelling on narrow country roads, as described below:
 - *The current legislation requires wide load escorts for any load wider than 3.5 metres. Wide loads under 3.5 metres require an over mass/oversize permit, flashing warning lights, flags and signs, but does not require a pilot/escort vehicle. The current legislation does not appear to take into account wide loads which are required to travel on narrow country roads.*
 - *A review of the wide load escort requirements should be undertaken to address amendments in the legislation. The relevant legislation should be amended to reflect travel performed on narrow roads. The maximum width without pilot vehicles, on country roads, particularly on narrow roads should be altered to 3 metres.*
 - *Additional escort vehicles should be required where the total road width at any point is less than 6 metres width.*
 - *If these recommended amendments to the pilot/escort vehicle requirements had been in place than this collision may not have occurred as the pilot/escort vehicle would have provided sufficient warning of the oversize vehicle to oncoming vehicles.*
 - *An amendment to the legislation may avert any similar collisions occurring in future.*
 - *It is recommended that a formal review of the legislation, particularly in relation to pilot/escort vehicle requirement for oversize vehicles on narrow roads, be undertaken with a view of implementing the recommendations as detailed above.*
14. If approved, every project Proponent would need to enter into a Deed of Agreement and Maintenance Agreement with Council. Significant bank guarantees would be required to enable Council to undertake maintenance work to roads in the likely scenario that none of the Proponents accepts that their transportation effort caused the damage to the roads. Muswellbrook Shire ratepayers should not pay for the staff time and resources required for this.
15. Dilapidation reports will need to be timed so that damage is identified within an appropriate timeframe and able to be apportioned to a particular Proponent.
16. As significant upgrades will be required to these roads, their asset value will change and Council maintenance costs will increase to reflect the new standard e.g. 8m wide road compared to a 5.5m wide road.
17. The Mining Industry have indicated they do not support a project-by-project approach where each Proponent seeks individual landholder agreements (mining companies own a significant amount of land on the transport route).

18. Some areas of land are under long term lease agreements between mining companies and landowners. The proposed transport route will mean a permanent resumption of land as access would be required not only for the project construction period, but also if blades needed to be replaced or more turbines added in a staged development.

Background to Objection - Planning Issues

19. A strategic solution to the transport of over-dimensioned equipment on local roads has not yet been proposed and it remains unclear which State Government agency is taking the lead to develop a solution that ensures all issues are being captured and a practical and workable solution for Council, wind farm proponents and mining companies and other landowners.
20. A strategic approach would benefit the community by improving safety, reducing the number of consultations/negotiations for access over private land and by undertaking upgrade works once, not several times depending on the component size of each wind farm.
21. Council Officers have consulted with EnergyCo, Transport for NSW and Department of Planning and Environment (DPE) regarding Council's concerns for more than 12 months, the most recent correspondence received from DPE on 15 February 2022, on behalf of the (then) Minister of Energy and Environment, stated:

"EnergyCo is committed to working with Council to ensure impacts on the road network throughout the Muswellbrook LGA are appropriately managed and a coordinated approach to this issue is developed."

EnergyCo and Transport for NSW have already commissioned a road access study to identify the constraints on the road network between Newcastle and the Central West-Orana and New England REZs.

The study will be completed in the near future and... the consultant has been asked to consider impacts on local road networks and include recommendations for addressing these issues.

EnergyCo will seek to engage further with Council on these important matters once the study has progressed.

22. It is Council's preference that the CWO REZ and HNE REZ have continuous State Road access from the Port of Newcastle to the 'last mile' before the project destination. Requests to re-classify Council local roads has been forwarded to TfNSW - a formal response has not been provided.
23. Council Officers are aware of potential engineering solutions that would allow the use of the State classified roads for the entire length of the transport route.
24. Council is eager to be involved in a strategic plan/approach so that issues raised would be adequately addressed and the objection removed.
25. Council Officers would prefer frequent engagement with EnergyCo to keep abreast of the process regarding the planning of the CWO and HNE REZ.

26. It should be noted that Council is not opposed to renewable energy development.

Incremental Impacts

Given Edderton Road, Wybong Road and Bengalla Link Road were not constructed to contemplate these types of loads and vehicle numbers, Council will require the applicant to complete the following.

Route Assessment

- A Detailed Route Analysis considering road furniture, geometry, load limits, safe sight distance, private property and Council road impacts, turning circles by a suitably experienced and practicing consultant is to be provided to Council.
- Written consent of the impacted private property owners along the route, including any written correspondence between parties and contact information.
- A joint dilapidation survey with Council.
- Structural assessment of all drainage structures along the proposed route that has not had a recent condition assessment with proposed design loads exceeding existing load compliant traffic along the proposed road route.

Traffic Impacts

The Traffic Impact Assessment should include a separate section to describe traffic impacts for the Muswellbrook Shire LGA i.e traffic generation, transport impacts and mitigation measures.

Transport Management Plan

A Transport Management Plan submitted to Council for the route by a suitably experienced and practicing consultant showing:

- i. Distribution and number of loads, including frequency per week, expected time of travel, standard axle design loads, total vehicle widths and lengths, proposed route;
- ii. Traffic Management Plan for the route, including use of wide swept paths across private property, movement and replacement of identified road furniture to prevent short-cuts by the community, pull-over bays for road furniture interchanging;
- iii. Proposals for any details of any intersection upgrades through private property;
- iv. Consider and determine any impacts to existing school bus routes;
- v. Vertical geometry for clearances of long loads to be considered, including any side-track;
- vi. Details of the pilots to be provided as part of the S138 permit stage; and
- vii. Applicant to fund the cost of hiring a Council Traffic Observer for the duration of the project to follow OSOM transport through Council's municipality during operations.

Road Improvements

A description of requirements for impacted roads within the MSC LGA, similar to Table 14 of the Modification Report (reproduced below) developed in consultation with Council.

Table 14: Proposed Revisions to the Public Road Upgrade Standards

Council	Description of Requirements
Warrumbungle Shire Council (WSC)	<ul style="list-style-type: none">- Road upgrade standards as per the agreed standards as follows:<ul style="list-style-type: none">o <i>Unsealed local road to a sealed road</i>: pavement depth in accordance with Austroads Standards or 300mm road base, 6.0 m seal and 8.0 m formation width, topped with 14/10 double/double bitumen seal.o <i>Unsealed local road to remain unsealed</i>: construction width 8.0 m, pavement thickness 150mm.o <i>Regional road upgrade</i>: pavement depth in accordance with Austroads Standards, 7.5 m seal and 9.5 m formation width, topped with 14/10 double/double bitumen seal.o <i>Atypical, unsealed road upgrade standard for lowest order Local roads (i.e., Warung Road)</i>: trim and repair existing pavement, 5.5 m formation widtho <i>Gundare Road</i>: the Applicant will enter into an agreement with Council that will set out the applicable upgrade standard (anticipated to be approximately 4 m wide unsealed trafficable area) and require the Applicant to be responsible for ongoing maintenance throughout the operational life of the Project.- Council will accept a cut and fill batter slope of 1(V):3(H) on Local and Regional roads subject to geotechnical assessment.- Council will consider requests to vary the upgrade treatment standards on Local rural roads for specific sections of the road, subject to documentation of physical and environmental constraints where application of road width standards, described in the Consent Conditions, will cause unreasonable ground disturbance.

Any works or maintenance on Council Public Roads is subject to application for an S138 of the Roads Act permit and will be required to be prepared and delivered in accordance with the conditions of the S138 permit.

Note that Council Officers have recently been restricting OSOM movements on Wybong due to lack of passing opportunities caused by saturated table drains.

Lighting

The intersection upgrade to Golden Highway / Denman Road will require the removal of safety lighting. The Proponent proposed installation of solar lighting as a solution (subject to approval by TfNSW and Council). The following information remains outstanding:

- a) Whether the proposed solar lighting meets the required safety standard;
- b) Reliability of solar lighting;
- c) Maintenance / repairs and replacement detail for solar lighting e.g costs, duration to undertake any works and types of training required for works

Road Maintenance

The applicant will need to enter a formal maintenance management plan as part of the S138 permit for Council roads along the route for the entire duration of the project, to Council's written satisfaction including:

- a) The maintenance management plan will be based on TfNSW M3 Maintenance Plan (a proforma will be provided on request);
- b) Maintenance work to be coordinated to Council's satisfaction including timing and day/night work;
- c) Dilapidation survey of the route to be undertaken every twelve weeks of the project and provided to Council;
- d) A Bank Guarantee will be required for the period of the project plus six months to cover any damage determined by Council; and
- e) An Indemnity Deed Poll to be provided for emergency works to any assets that may suffer damage during the project.

Communication

The applicant will need a formal community consultation management plan for the entire duration of the project, to Council's written satisfaction.

The community consultation management plan is to be developed in consultation with Council including but not limited to:

- Monthly meetings with Council staff to discuss progress, issues and community feedback;
- f) Complaints and incident handling procedure including contact details of the applicant;
- g) Identifying residents, businesses, emergency services, school bus and mines (shift change times) and key contacts in these operations and necessary liaising with these road users;
- h) Details of the Transport Management Plan and progress to be included and updated on both the applicant's website as well as Council's website;
- i) Applicant to provide updates to Council with regards to any planned maintenance works and/or upgrades and replacements.

Amenity

The Proponent is proposing to remove 0.1ha of native vegetation from Wybong Road. There are extensive remnant patches of vegetation adjacent to Wybong Road that serve as a link between the Manobalai Nature Reserve and Wollemi National Park. These patches provide scenic amenity values for road users and Council officers would prefer vegetation remain in-situ.

Council Officers appreciate the opportunity to comment and would be pleased to provide additional information if requested. Should you need to discuss the above, please contact Theresa Folpp, Development Compliance Officer on 02 6549 3700 or email council@muswellbrook.nsw.gov.au.

Yours faithfully



Sharon Pope
Director Environment and Planning

Annexure A

Road Dilapidation Survey Requirements

Liaison is to occur with MSC Staff as to what is to be included in the dilapidation survey. This will require a s.138 *Roads Act 1993* approval through MSC. The following matters (at a minimum) need to be addressed in the pre dilapidation survey:

Minimum requirement

1. Visual Condition Assessment (Automated Road Analyser – ARAN) - The visual pavement assessment is to be undertaken by an experienced pavement engineer who will:
 - a) Record video of the relevant road section using a GPS camera to document the condition of the existing pavement;
 - b) Use the footage to record the location, type and extent of pavement defects and other environmental factors (e.g. drainage) that may be impacting the existing pavement.

The results of the visual assessment will be provided in a section of the pavement assessment report and summarised in table format and to include the following factors:

- Roughness
- Rutting
- Structural Cracking
- Environmental Cracking
- Pot holes
- Pot Patch
- Heavy Patching
- Ravelling
- California Bearing Ratio (CBR)
- Deflection
- Curvature
- AC overlay (mm)
- Granular Overlay (mm)
- Structural Deficiency (mm)
- Pavement Condition Index (PCI)
- Surface Curvature Index (SCI)

The assessment of the existing pavement is to be conducted in accordance with the following design standards and guidelines:

- Austroad Guide to Pavement Technology (AGPT)- Part 2: Pavement Structural Design (2017)
- Austroad Guide to Pavement Technology (AGPT) -Part 5 Pavement Evaluation and Treatment Design (2011)
- Applicable AUSPEC and TfNSW specifications
- Other applicable design standards.

2. Falling Weight Deflectometer (FWD) – Specifically loading 40kN and 70kN need to be applied to the existing pavement at 20m intervals in alternating wheel paths. Subsurface investigations -sufficient number of 300mm (at a minimum) diameter pavement holes would be required to sufficiently assess the pavement and underlying subgrade. Dynamic cone penetrometer (DCP) testing to be performed at each test pit location to assess in-situ density or consistency of subsurface material. The test locations are to be recorded by a GPS unit with typical accuracy of +/- 10m) in MGA format, together with description of locations relative to the pavement.

Samples of pavement and subgrade are to be tested at a NATA registered laboratory for the following geotechnical testing:

- Subgrade
 - i) 3 No. Standard compaction and CBR
- 3 No. moisture content pavement
 - i) 6 No. Modified compaction and CBR
 - ii) 6 No. PSD
 - iii) 6 No. moisture content
 - iv) 6 No. Atterberg Limits

The above 2 methods are standard investigations to determine the current surface and pavement condition prior to use of the road by construction traffic.