

HumeLink (SSI-36656827)

Request for additional information – road closures

June 2024

Transgrid response regarding further detail on proposed road closures

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The HumeLink Amendment Report and Submissions Report were lodged with the Department of Planning, Housing, and Infrastructure (DPHI) on 16 May 2024. On 21 June 2024, DPHI sought additional information to support its assessment of the project including:

- *Further detail on the proposed road closures, including timing, road crossing methodologies considered, and the consultation undertaken with the relevant roads authority on these matters.*

1. Scope of this document

This document provides Transgrid's response to the request for further detail on proposed road closures associated with the stringing of transmission lines over roads during construction. This document has been prepared in consultation with the HumeLink construction contractors with consideration of feedback received from Transport for NSW (TfNSW) and other relevant road authorities to date.

This document should be read in conjunction with information regarding the stringing of transmission lines over roads as detailed in the:

- HumeLink Environmental Impact Statement (EIS)
- HumeLink Submissions Report
- HumeLink Amendment Report
 - Technical Report 6 – Revised Traffic and Transport Impact Assessment (Revised TTIA).

Noting the current status of the project in the detailed design and construction planning phase, this document focuses primarily on the stringing of transmission lines over the National and State roads intersected by the project. The Hume Highway is the only National road to be crossed by the project and will be crossed twice, by two different construction contractors. The State roads to be crossed by the project include the Snowy Mountains Highway, Gocup Road, Crookwell Road, Tumbaramba Road, and Batlow Road (refer [Figure 6-5, Revised TTIA](#)). It should be noted there are three separate crossings of Batlow Road by one of the two construction contractors.

Similar road crossing methodology options for the stringing of transmission lines over Regional and Local roads will apply to the crossing methodology options being considered for National and State roads. Transgrid and the construction contractors will be engaging further with the relevant road authorities during detailed design and construction planning and will present the most appropriate crossing methodology in a

Road Occupancy Licence application and/or application for consent under Section 138 of the *Roads Act 1993*, where relevant, prior to carrying out the proposed activity.

2. Project staging and scoping

The project is being delivered by two construction contractors under two separate contract packages - HumeLink East and HumeLink West. The two construction contractors for the project are as follows:

- HumeLink East (HLE): Acciona Construction Australia Pty Ltd and Genus Infrastructure (NSW) Pty Ltd Joint Venture; and
- HumeLink West (HLW): UGL Engineering Pty Ltd and CPB Contractors Pty Ltd Joint Venture.

The contract packages will interface at Wondalga (refer to [Figure 1-1](#)) and each construction contractor will be responsible for obtaining the necessary Road Occupancy Licences and/or consents under Section 138 of the *Roads Act 1993* from the relevant road authority to facilitate the stringing of transmission lines over roads within their respective contract package.

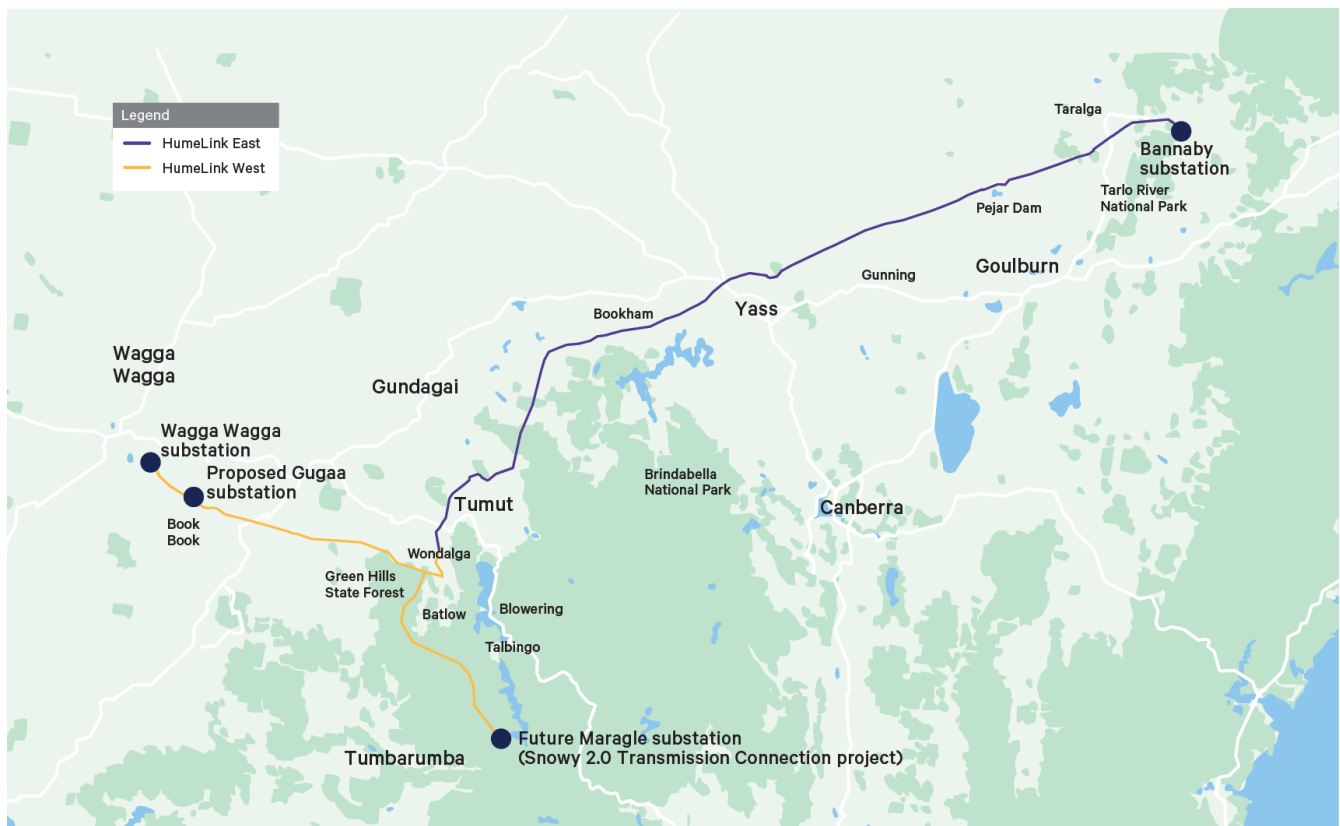


Figure 1-1: Indicative location of the HumeLink East and HumeLink West contract packages

HLE will be responsible for the stringing of transmission lines over the Hume Highway (one of two crossings), Snowy Mountains Highway, Gocup Road, and Crookwell Road. The crossing of the Hume Highway within this contract package is approximately 500 metres north-west of the Derringullen Creek rest area on the Hume Highway. The crossing of the Snowy Mountains Highway is approximately 3 kilometres (km) west of Gilmore. The crossing of Gocup Road is approximately 8 km northwest of Tumut. The crossing of Crookwell Road is approximately 700 metres west of Pejar Dam. The relevant road authorities for the stringing of transmission lines over Regional and Local roads within this contract package include Snowy Valleys Council, Cootamundra Gundagai Council, Yass Valley Council and Upper Lachlan Shire

Council. Concurrence from TfNSW will be sought for the crossing of Regional roads within each local government area (LGA).

HLW will be responsible for the stringing of transmission lines over the Hume Highway (second crossing), three crossings of Batlow Road, and a crossing of Tumbarumba Road. The crossing of the Hume Highway within this contract package is approximately 9 km south-west of Tarcutta. The crossings of Batlow Road within this contract package are approximately 1 km south of Windowie, 1.5 km south of Wondalga and approximately 9 km south-west of Batlow. The crossing of Tumbarumba Road is approximately 8 km south of Ladysmith. The relevant road authorities for the stringing of transmission lines over the Regional and Local roads within this contract package include Snowy Valleys Council and Wagga Wagga City Council. Concurrence from TfNSW will be sought for the crossings of Regional roads within each LGA.

3. Consultation

Consultation has been undertaken with TfNSW and local councils since February 2022 in relation to traffic and transport matters as part of the panning approval process. Noting the current status of the project in the detailed design and construction planning phase, technical discussions with road authorities on the potential methodologies for the stringing of transmission lines over roads have only occurred in relation to the two crossings of the Hume Highway. Since Transgrid's construction contractors were engaged in December 2023, the following meetings have been held regarding the Hume Highway crossings:

- 31 January 2024: Transgrid, HLE and TfNSW
- 3 April 2024: Transgrid, HLE and TfNSW
- 9 May 2024: Transgrid, HLW and TfNSW
- 21 May 2024: Transgrid and TfNSW
- 19 June 2024: Transgrid, HLW and TfNSW.

Transgrid, HLE and HLW have been and are still focussing the engagement with TfNSW and local councils on road access point requirements and approvals as part of the construction planning, noting access tracks to the transmission line structures will need to be constructed/upgraded and transmission line structures will need to be assembled in-situ before transmission line stringing over roads can occur. Access point requirements and approvals have therefore been prioritised in the consultation strategy with the relevant road authorities.

As outlined in Section 20.6.1 of the EIS, a Traffic and Transport Management Plan (TTMP) will be prepared by each construction contractor for the construction phase of the project to identify the key management and response strategies to minimise potential traffic delays and disruptions that may arise due to the project. TfNSW and local councils are currently being consulted as part of the development of the draft TTMPs. The draft TTMPs will be issued to TfNSW and local councils for review and comment prior to lodgement with the DPHI for approval.

It is noted that TfNSW consent via a Road Occupancy Licence would be required for any works undertaken within the National and State road carriageway. In the meeting held with TfNSW on 19 June 2024, it was agreed that a draft Road Occupancy Licence application would be developed with TfNSW for the HLW stringing of transmission lines over the Hume Highway. The draft Road Occupancy Licence application would be issued to TfNSW for internal stakeholder consultation and once review comments had been satisfactorily addressed, the formal Road Occupancy Licence application would be issued for approval (i.e. following an in-principal TfNSW approval). This approach will also be adopted for the HLE stringing of

transmission lines over the Hume Highway and the stringing of transmission lines over other State roads, pending further discussion with TfNSW.

4. Potential road crossing methodologies

This section provides an overview of the crossing methodology options for the stringing of transmission lines over National, State, Regional and Local roads, with a focus on the Hume Highway crossing. Each crossing will be considered on a case-by-case basis and [Section 5](#) provides an overview of the factors to be considered in determining the most appropriate road crossing methodology for any given road.

Once the appropriate road crossing methodology has been determined, the transmission line would be strung by either ground pulled draw wire (with brake and winch sites), helicopter (subject to meeting all Transgrid and relevant road authority health and safety requirements) or line stringing drone (with brake and winch sites).

4.1. Road Closure and Detours

All construction activity for the project is assessed via the hierarchy of controls:

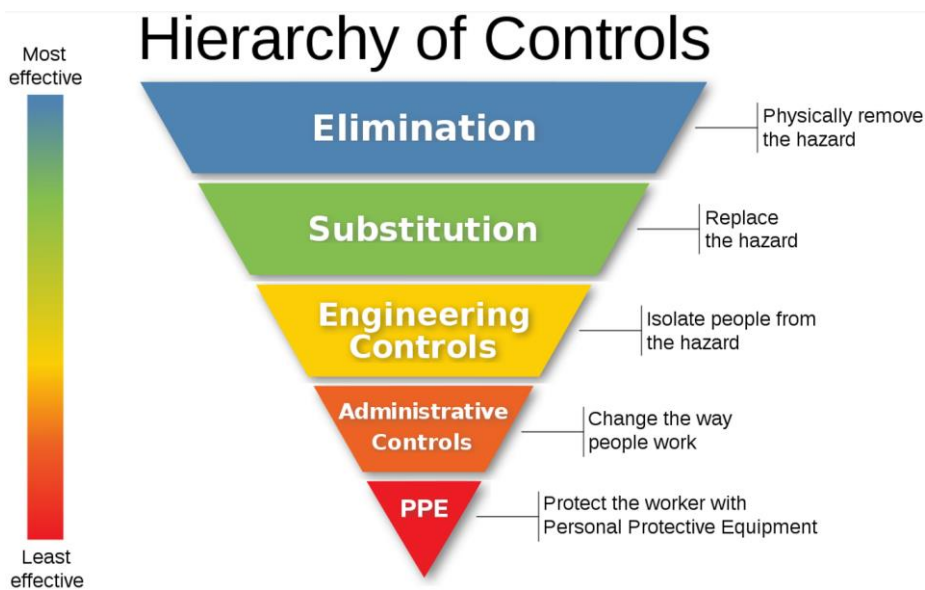


Figure 4-1: Hierarchy of controls for construction activities

With regards to works within or above any road carriageway, the safest option is to close a section of the road as this eliminates all potential hazards and risks to construction personnel, commuters, other road users, and the road network. This could include a short-term partial or full road or lane closure with an appropriate detour. Generally, the detour will require to have a similar road classification and would need to be planned to minimise travel times, which is not always feasible in regional areas.

Detour options have been considered for both Hume Highway crossings. Both eastbound and westbound detours for the HLE Hume Highway crossing have been assessed as approximately a 120 km detour taking 2 hours and 30 minutes with potential restrictions for oversized vehicles. The option of a detour for the HLE Hume Highway crossing was therefore considered not feasible by TfNSW and not a viable option from a commuter impact perspective.

Detours on the HLW Hume Highway crossing using Tumbarumba Road and Sturt Highway have been investigated and discussed with TfNSW. This detour would add approximately 32.5 km and approximately 25 minutes to typical journeys through this section of the Hume Highway. TfNSW has advised a Tumbarumba Road and Sturt Highway detour is used for emergency events where the Hume Highway would need to be closed within this section. Further investigation into this potential detour option is required for B-Triples and Road Trains as intersections may not accommodate the turning radii of these vehicles. An option may be to detour light vehicles and suitable heavy vehicles only via Tumbarumba Road and Sturt Highway, with B-Triples, Road Trains, and other oversize and overmass vehicles continuing on the Hume Highway to the intersection point with the transmission line where traffic management measures will be in place. This option will only be considered if all other options are determined to be too time constrained to complete the works or pose an unacceptable risk to the safety of construction personnel.

Closure of the Hume Highway is generally not supported by TfNSW as it may pose issues for long haul freight and heavy vehicle driver allowable time logs, also increasing traffic build-up and excessive travel delays. The construction contractors will continue to consult with TfNSW regarding the potential acceptability of this road closure and detour option for the Hume Highway. Should this option not be acceptable to TfNSW, HLW will need to refine and propose an alternate construction methodology which would be acceptable to TfNSW within the Road Occupancy Licence application.

Detour options may be considered for the stringing of transmission lines over other State, Regional and Local roads. Detour options may also be considered to facilitate the installation of hurdles (refer [section 4.3](#)). Where either option is proposed, it would be discussed with the relevant road authority prior to lodgement of the applicable Road Occupancy Licence application and/or application for consent under Section 138 of the *Roads Act 1993*.

4.2. Traffic Management

The construction contractors are assessing the potential for the stringing of transmission lines over roads to be carried out under traffic management which could include a stop-go arrangement at the crossing location.

TfNSW are supportive of intermittent closures of maximum ten-minute duration, for no more than six times per day, occurring outside of network peak hours for the Hume Highway. This timeframe would not allow the construction contractors to safely complete the stringing of transmission lines over the Hume Highway. Instead, these ten-minute periods would therefore be used to facilitate the installation of hurdles (scaffolding) on either side of the highway including connecting safety netting between the hurdles (refer [section 4.3](#)). Once established, this option would facilitate the stringing of transmission lines over live traffic on the Hume Highway albeit at reduced speeds.

The construction contractors are reviewing methodologies to determine if a proposal using two truck mounted attenuators to form a rolling block ahead of the actual stop point on the Hume Highway would be feasible. This would reduce the overall stop time and potentially not stop the through traffic at all during the hurdle and netting installation. TfNSW has indicated the practice of using a rolling block has been approved in the past to facilitate works on major roads.

Further traffic volume evaluation will be undertaken by the construction contractors to determine when the quietest day and night periods are on the Hume Highway at the crossing locations. From this information the construction contractors can then calculate the expected traffic and delays that may be encountered. Once this information is known, the construction contractors will present this to TfNSW for their

consideration prior to the development of a draft Road Occupancy Licence for review, comment, and in-principal approval prior to formal lodgement.

Traffic management options under a stop-go arrangement may be considered for the stringing of transmission lines over other State, Regional and Local roads. Traffic management options under a stop-go arrangement may also be considered to facilitate the installation of hurdles (refer [section 4.3](#)). Where either option is proposed, it would be discussed with the relevant road authority prior to lodgement of the applicable Road Occupancy Licence application and/or application for consent under Section 138 of the *Roads Act 1993*.

4.3. Hurdles

The construction contractors are assessing the use of hurdles with the potential for safety netting spanning the road crossing as a safety measure to protect the road and traffic beneath during the stringing of transmission lines overhead. This is a proven and industry standard mitigation measure to de-risk and safely undertake the stringing of transmission lines over roads. Once established, this will enable free flowing traffic such that impacts to National, State, Regional and Local roads are minimised.

The project may utilise both semi-permanent and modular hurdle arrangements dependant on site constraints and protection requirements. A representative example of a semi-permanent hurdle arrangement is provided at [Figure 4-2](#).



Figure 4-2: Example of a semi-permanent hurdle arrangement with safety netting. Indicative only.

Semi-permanent hurdle arrangements (such as scaffolding) will require significant design, construction and certification requirements and be erected for a significant amount of time (i.e. in excess of 3 months) and distance (i.e. greater than 50 metres).

For the Hume Highway crossings, a semi-permanent hurdle arrangement is likely to be required. Preliminary discussions with TfNSW have indicated traffic could travel at reduced speeds of up to 80 km/hr (from up to 110 km/hr) for the section of road in the approach to and beneath the semi-permanent hurdle arrangement.

The final detail of the hurdle arrangements for the Hume Highway crossings are subject to detailed design and further consultation with TfNSW.

Modular hurdles are designed to be portable undercrossing protective barriers which will only be utilised during a short stringing period at distances less than 50 metres. A representative example of a modular hurdle arrangement is provided at [Figure 4-3](#).



Figure 4-3: Example of a modular hurdle arrangement with safety netting. Indicative only.

There have been numerous occasions in the past where construction work on a transmission line over the Hume Highway has occurred. As recently as 2020, this was carried out when Transgrid and its construction contractor UGL built the Collector Wind Farm connection point. The use of hurdles and implementation of an activity specific traffic management plan were approved by TfNSW via a Road Occupancy Licence application process for these works.

Semi-permanent hurdle arrangements may be considered for the stringing of transmission lines over other State and Regional roads. Noting the shorter spanning distances, the modular hurdle arrangements may be considered for Local roads and may be considered for Regional roads in some instances. It should be noted that a road closure and detour or traffic management option may still be required to facilitate the installation and removal of either semi-permanent or modular hurdle arrangements. Installation works will be undertaken from the adjoining properties rather than the road reserve to minimise impacts to the network, where possible.

Where any of these options are proposed, they would be discussed with the relevant road authority prior to lodgement of the applicable Road Occupancy Licence application and/or application for consent under Section 138 of the *Roads Act 1993*.

5. Factors in determining the preferred crossing methodology

In determining the optimal methodology for the stringing of transmission lines over any given road, the following factors will be considered in consultation with the relevant road authority:

- the road classification and anticipated traffic volumes
- the distance of the crossing span and surrounding topography
- the acceptability of the most effective methodology to the relevant road authority in line with the Hierarchy of Controls
- the measures which can be applied to limit the level of driver distraction, impact, delay, and interference where possible.

As each road crossing will have its own unique features and geometry, each option will be assessed against these criteria to produce the optimal methodology. This optimal methodology will then be presented to the relevant road authority for consideration, following which a Road Occupancy Licence application and/or application for consent under Section 138 of the *Roads Act 1993* will be lodged for approval prior to carrying out the works.

The determination of the optimal methodology will inform the timing and duration of the road closure and detour or traffic management approach to be listed in the Road Occupancy Licence and/or consent under Section 138 of the *Roads Act 1993*.

6. Community, commuter and freight industry notification

Transgrid and the construction contractors will undertake a cooperative and coordinated approach to ensure the community, commuters and the freight industry receive timely, accurate and credible traffic information about upcoming changes associated with the stringing of transmission lines over any given road. The communication channels for disseminating information about upcoming changes to the road network will be tailored to the likely level of impact with consideration of the road classification, traffic volumes, and road users (i.e. local traffic / commuter traffic / freight and haulage traffic etc).

For the stringing of transmission lines over the Hume Highway, a widespread communications strategy will be implemented in the weeks preceding any closures or traffic management with advertisement of potential impacts and delays. This communication strategy will be determined in consultation with TfNSW and other relevant stakeholders and may include:

- major milestone media releases
- briefings to local councils and elected representatives
- freight industry briefings and engagement
- newspaper advertising
- radio and social media campaigns
- Variable Message Signage and static signage installations
- community notifications / emails distribution to subscribed stakeholders / HumeLink website updates
- live Traffic NSW updates.