

Wollar Solar Farm 330/33kV Substation Construction Haulage Plan

Version No.	Date	Document Stats	Description of Change
Rev 1 - Rev 5		Superseded	Superseded Haulage plans (old format)
Rev 6	11/08/2022	Approved	Revised haulage plan format. Inclusion of OSOM movements.
Rev 6.2	07/09/2022	Approved	Added section 2.2.2 Council Route preference

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1. Purpose

On behalf of Wollar Solar Development (Client), Transgrid has engaged Downer as the principal contractor for the construction activities associated with the Wollar Solar Farm 330/33kV substation, the purpose of this Haulage Plan is to outline the manner in which vehicular, and plant movements will be managed for the construction of the Substation only.

The key haulage activities undertaken for this works are as follows:

- Civil haulage activities such as import of quarry material
- Substation permanent building deliveries (OSOM)
- Transformer delivery (OSOM)

The plan details the control measures in place to manage risks associated with Project-related traffic in accordance with the appropriate legislation, industry standards, project specific requirements and approvals.

The target audience for this Plan is the Client Project Management Team, Project Delivery Partners, and any other relevant stakeholders who may have implications on or be impacted by the details of this Plan.

2. Summary of Project Specific Haulage Restrictions

This section summarises the Project specific restrictions stipulated in the Conditions of Consent and Traffic Management Plan.

2.1. Project Vehicle Restrictions

As per the Project Conditions of Consent Schedule 3, Transport, Over-Dimensions and Heavy Vehicle Restrictions:

1. The Applicant must ensure that the:
 - a. development does not generate more than:
 - 36 AV/B-double vehicle movements a day during construction, upgrading and decommissioning.
 - 72 combined medium and/or heavy rigid vehicle movements and AV/B double movements a day during construction, upgrading and decommissioning.
 - 2 over-dimensional vehicle movements a day and 60 over-dimensional vehicle movements in total during construction, upgrading and decommissioning; and
 - 7 AV/B-Double, medium and/or heavy rigid vehicle movements a day during operations; on the public road network.
 - b. length of any vehicles (excluding over-dimensional vehicles) used for the development does not exceed 26 metres unless the Secretary agrees otherwise in writing.
2. The applicant must keep accurate records of the number of over-dimensional vehicles, AV/B-Double vehicles, medium and/or heavy entering or leaving the site each day for the duration of the project.

2.2. Project Access Routes

2.2.1. Project Conditions of Consent

As per the Project Conditions of Consent Schedule 3, Transport, Access Routes:

3. Subject to 3A, all over-dimensional and AV/B-Double vehicles associated with the development must travel to and from site via:
 - a. Golden Highway, Ulan Road, Ulan-Wollar Road, Barigan Street, Maitland Street, Wollar Road and Barigan Road; and/or
 - b. Castlereagh Highway, Ulan Road, Ulan-Wollar Road, Barigan Street, Maitland Street, Wollar Road and Barigan Road;

Note: The Applicant is required to obtain relevant permits under the Heavy Vehicle National Law (NSW) for the use of over-dimensional vehicles on the road network.

3A. If over-dimensional vehicles are restricted from using the above routes owing to the load rating of any bridge, then two over-dimensional vehicles may travel to site via the routes in condition 3 or via Golden Highway, Castlereagh Highway, Old Mill Road, Rouse Street, Station Street, Cope Road, Robinson Street, MacKay Street, Main Street, Ulan Road, Ulan-Wollar Road, Barigan Street, Maitland Street, Wollar Road and Barigan Road or any other route approved via a permit granted by the National Heavy Vehicle Regulator under the Heavy Vehicle National Law (NSW).

4. All medium and/or heavy rigid vehicles and shuttle buses associated with the development must travel to and from the site via the routes detailed in condition 3 of Schedule 3 to this consent, and/or via:
 - c. Cope Road, Ulan Road, Ulan-Wollar Road, Barigan Street, Maitland Street, Wollar Road and Barigan Road; and/or
 - d. Castlereagh Highway, Ulan Road, Wollar Road, Phillip Street, Maitland Street, Wollar Road and Barigan Road;

2.2.2. Council Route Preference

Council has no objection to the route proposed in the Project Conditions of Consent subject to the combined 72 medium and/or heavy rigid vehicle movements (except buses) using the below routes as the first preference:

1. Cope Road, Ulan Road, Ulan-Wollar Road, Barigan Street, Maitland Street, Wollar Road and Barigan Road; and/or
2. Castlereagh Highway, Ulan Road, Ulan-Wollar Road, Phillip Street, Maitland Street, Wollar Road and Barigan Road.

Wollar Rd Via Cooyal would only be used as the alternative route for medium and/or heavy rigid vehicles if the preferred route via Ulan-Wollar Road is not available or if required during an emergency e.g. road closures, flooding, bushfire etc.

2.3. Project Access Route Map

The routes in the site access map have been assessed as suitable during the EIS and the amended route in Modification 3 has also been assessed as suitable by the National Heavy Vehicle Regulator (NHVR). All works to the public road network required for the substation works have been completed by Wollar Solar Development to the satisfaction of the roads authority (MWRC).

The AV/B double access routes provided in the Development Consent are NHVR approved B double routes with conditions. These conditions are identified in Section 4.1.

NHVR permits will be provided for all over-dimensional vehicle movements prior to the haulage commencing. These NHVR permits will assess if the route is suitable for the type of vehicle.



4. Summary of Local Interfaces

This section summarises the interfaces with the local areas considered as part of this plan.

4.1. Local Road Restrictions

Road restrictions imposed by the road owner in granting conditional approval for use may be viewed at:

<https://roads-waterways.transport.nsw.gov.au/business-industry/heavy-vehicles/maps/restricted-access-vehicles-map/map/index.html>

The restrictions at the time of writing are:

Road Name: ULAN WOLLAR ROAD

Start Point: MR214 ULAN ROAD

End Point: GOULBURN ROAD, WOLLAR

Conditions: 80km/hr B-Double speed limit on sealed section. Outside school bus operation times.

Road Name: BARIGAN ROAD

Start Point: MR208 WOLLAR ROAD

End Point: TICHULAR ROAD

Conditions: A maximum speed limit of 60km/h applies.

4.2. Cumulative Impact

The EIS, the Modification 3 report and Traffic Impact Assessment have assessed that the roads are able to accommodate the traffic volumes generated by the Wollar Solar Farm. The substation works is expected to utilise a maximum of 17 heavy vehicle movements per day. This is negligible compared to the 72 heavy vehicle movements provided in the Development Consent.

A further Haulage Plan will be submitted for Stage 3B of the Wollar Solar Farm which will consider the cumulative impact of up to 72 heavy vehicle movements per day.

4.3. Mine Interactions

The local mines will be made aware of the Haulage Plan including estimated truck movements including notices regarding oversize vehicle movements.

Minimal disruption is expected to the local mines as a result of the substation works.

This Haulage Plan notes that Ulan Road and Ulan-Wollar Road may have increased traffic at the change of shift times for Local Mines. These are subject to change but an example of typical shift times and the number of personnel changing for Wilpingjong mine is provided below:

- 6.00am – 7.30am (approx. 240 people enter and 170 leave)
- 4.00pm - 5.00pm (approx. 70 staff leave)
- 6.00pm -7.30pm (approx. 170 leave and 170 enter)

4.4. School Zone Interactions

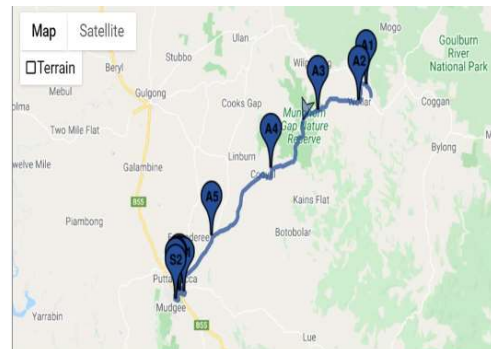
It is recognised that school bus services run on Wollar Road between Wollar and Mudgee, with a 2.8km portion of the bus route on the proposed haulage route as noted above. The bus is scheduled to use this section of road between 7:30am and 7:48am weekday mornings and between 4:30pm and 4:45pm weekdays. The staging of trucks as above will ensure there is no breach of conditions.

School buses are expected on Wollar Road between the hours of 7.30am and 8.48am to account for the below bus stop services:

Am Timetable

MA02

A1	Araluen Road	7:30am
A2	Wollar Service Centre	7:38am
A3	Cnr Wollar/Cumbo Roads	7:45am
A4	Cnr Cooyal Lane/Wollar Road	8:00am
A5	Cnr Ulan/Wollar Road	8:17am
B1	Cnr Mulgoa Way/Julia Court	8:27am
S1	St Matthews Catholic School	8:35am
B2	33 Lawson Street	8:37am
S2	Cudgong Valley Public School	8:43am
S3	Mudgee High School	8:45am
S4	Mudgee Public School	8:48am

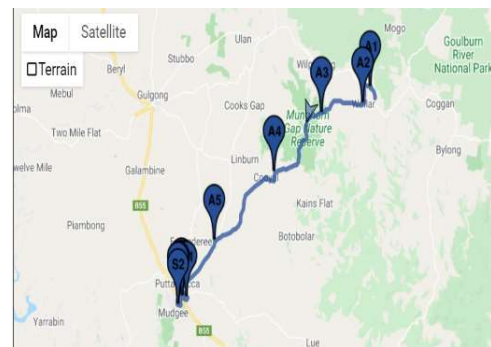


The afternoon bus services will proceed along Wollar Road between 3.30pm and 4.45pm with the below bus stop noted:

PM Timetable

MP02

S1	Cudgong Valley Public School	3:25pm
S2	Mudgee High School	3:27pm
S3	Mudgee Public School	3:28pm
S4	St Matthews Catholic School	3:32pm
A1	Cnr Mulgoa Way/Julia Court	3:34pm
A2	Cnr Mortimer/Lawson Streets	3:39pm
A3	Cnr Wollar/Ulan Roads	3:45pm
A4	Cnr Wollar Road/Kurtz Lane	4:02pm
A5	Cnr Cooyal Lane/Wollar Road	4:12pm
B1	Cnr Wollar/Cumbo Roads	4:25pm
B2	Wollar Service Centre	4:30pm
B3	Araluen Road	4:45pm



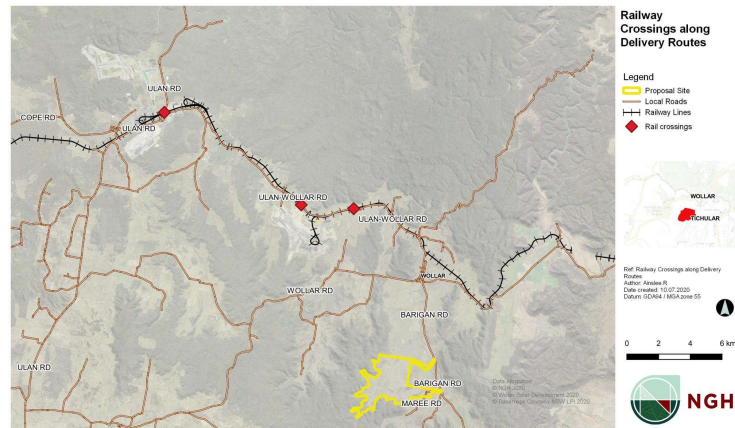
These services travel in the opposite direction of incoming site-based light vehicles. Drivers are to take care when travelling through these areas, always observing posted speed limits.

Link to the school bus timetables: <https://www.ogdenscoaches.com.au/timetables/>

All drivers will be briefed on the school bus timetables with location routes and times of these services so avoidance of these areas can be maintained.

4.5. Rail Crossings

There are three rail crossings along Ulan-Wollar Road:



During construction, vehicles will be required to cross the rail line, abiding by the traffic rules for all vehicles e.g. giving way to rail traffic and slowing down on approach to the rail crossing before coming to a complete stop to check for rail traffic.

It is not anticipated that traffic from the Wollar Solar Farm substation construction will impact rail movements, as rail traffic has right of way at all crossings. All drivers will be briefed on the location of the crossing.

5.2. Vehicle Movement Register

A register will be maintained detailing the number and type of non-light vehicles leaving the site each day for the duration of the project.

Date of Entry	Time of Entry	Vehicle Rego	Vehicle size/type	Goods Delivered	Drivers Name	Time of Exit

6. Substation Construction Haulage Activities

This section detail the substation specific haulage activities for the project.

Note that the relevant NHVR permits have or will be obtained for these movements where required.

6.1. Civil Haulage Activities

Haulage activities will be required for the import of material from the local quarries to site. Previous haulage plans have been prepared for the bulk earthworks, this work is now complete. The remaining civil haulage works for the substation relate to the import of capping material and crushed rock for the substation. The haulage activity is summarised below:

Load	10, 000 tonne of quarry material
Qty	Approximately 467 over a 9-week period from September to October
Truck type	Truck and Dog classified as AV/B double under the Development Consent
Origin	MDL 9 Buckaroo Ln, Mount Knowles NSW 2850
Destination	Wollar Solar Farm Substation, 516 Barigan Road, Wollar, NSW
Map	<p>The map displays a blue route starting from the origin (MDL 9 Buckaroo Ln, Mount Knowles NSW 2850) and ending at the destination (516 Barigan Road, Wollar, NSW). The route passes through or near several towns and locations, including Ulan, Wilpielong, Wollar, Moolarben, Cooles Gap, Cumbandry, Yarrowonga, Lead, Home Rule, Linburn, Frog Rock, Stony Creek, Cross Roads, Eurunderee, Budgee Budgee, Mudgee Dolomite & Lime, Cooyal, Kains Flat, Botobolar, and Cumbo. A callout box on the map indicates a travel time of 51 minutes and a distance of 87.1 km. The Munghorn Gap Nature Reserve is also visible on the map.</p>

6.2. Substation Permanent Building Delivery (OSOM)

Three Substation buildings are to be transported to site from Ferryden Park, SA. HISpec Industrial Coatings have been engaged to undertake these three movements. The haulage activity is summarised below:

Load	Substation Buildings 21.5m [L] x 4.2m [W] x 4.2m [H], 41 tonne x1 , 25 tonne x 2
Qty	3 vehicle movements in late August / September
Truck type	Over-dimensional
Origin	12 Days Road, Ferryden Park, SA
Destination	Wollar Solar Farm Substation, 516 Barigan Road, Wollar, NSW
Map	

The National Heavy Vehicle Regulator has assessed this route as suitable and provided the class 1 permit. This permit is available upon request as Appendix B. Please contact us via the Wollar Solar Farm website: <https://wollarsolar.com.au/>

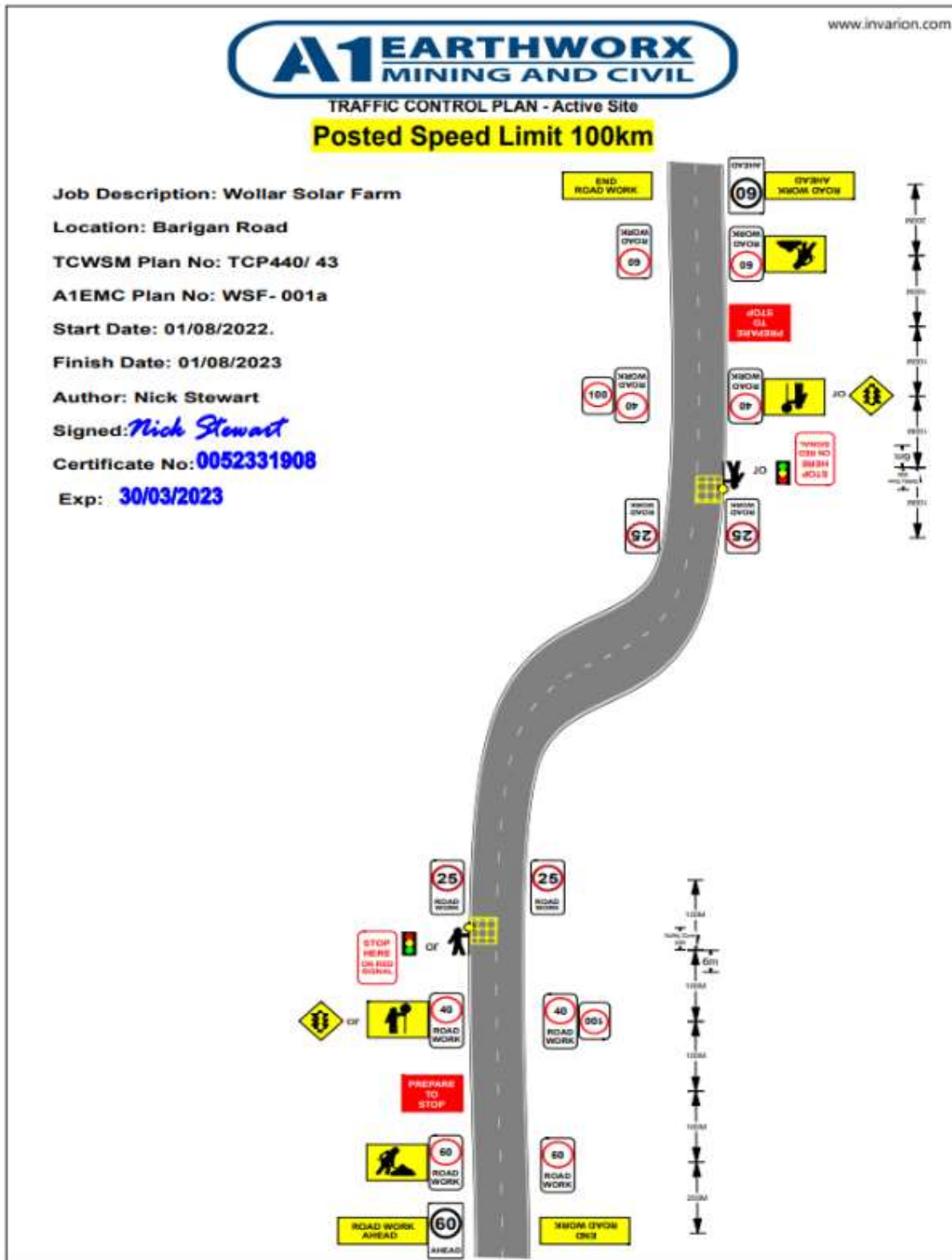
6.3. Transformer Delivery (OSOM)

Two main power transformers are to be transported to site from the Port of Newcastle, NSW. ODLS has been engaged to undertake these two movements. The haulage activity is summarised below:

Load	230MVA 330/33kV Main Transformers 9.25m [L] x 4.65m [W] x 4.2m [H], 126 tonne
Qty	2 vehicle movements in late August / September
Truck type	Over-dimensional
Origin	Port of Newcastle, Stolthaven Terminals via Selwyn St, Mayfield North NSW
Destination	Wollar Solar Farm Substation, 516 Barigan Road, Wollar, NSW
Map	

Appendix C contains specific transport details and a turn assessment of the roads. The National Heavy Vehicle Regulator has assessed this route as suitable and provided the class 1 permit. This permit and the transport details are available upon request as Appendix C. Please contact us via the Wollar Solar Farm website: <https://wollarsolar.com.au/>

Appendix A Traffic Control Plan for Oversized Vehicles



Appendix B Substation Permanent Building Haulage (OSOM)

National Heavy Vehicle Regulator permits for delivery of the substation buildings are available upon request. Please contact us via the Wollar Solar Farm website: <https://wollarsolar.com.au/>

Appendix C Substation Transformer Haulage (OSOM)

Specific transport details and the National Heavy Vehicle Regulator permits are available upon requires. Please contact us via the Wollar Solar Farm website: <https://wollarsolar.com.au/>

Appendix D Drivers Code of Conduct

The contractors' 'Drivers Code of Conduct' for the Project will include but is not limited to the following:

Penalties and Disciplinary Action

- Failure to comply with this Driver Code of Conduct will lead to either the issue of a warning notice or disciplinary action.

Code of Conduct Induction

- All contractors will be required to complete an induction of this 'Drivers Code of Conduct', and sign a declaration stating, they have read and understood the requirements in the document, and will comply and assist their implementation, requirements, and ongoing administration. This may be an online induction.

Safe Driving Practices

- All drivers must hold a current and valid driving licence for the class of vehicle that you operate.
- Drivers must notify their employer if they are not fit for duty prior to commencing their shift.
- Always adjust your driving to the existing road and climatic conditions.
- You should always drive in a manner that will help you to avoid an accident.
- Take regular breaks on long drives. Drivers of medium/heavy vehicles, over-dimensional vehicles and AV/B-Double vehicles must adhere to the maximum work requirements and minimum rest requirements outlined in the Heavy Vehicle (Fatigue Management) National Regulation (NSW).
- All vehicles must be maintained and operated in accordance with the vehicle manufacturers recommended standards.
- Always brake with care, remembering that the truck will react differently according to the weight of the load, weight distribution of the load and road surface condition.

Speed Restriction

Always follow the posted speed limits and advisory speed signs as they provide vital clues to road conditions and characteristics. You must apply the following rules at:

- o Always reduce your speed in wet or dry and dusty conditions.
- o Drive cautiously in fog or heavy rain.
- o Descend hills at sign-posted truck speeds, or in the lowest gear to suit the conditions.
- o Always observe the special limits that apply for road works etc.
- o Always observe the special speed limits that apply to internal access roads within the construction site.
- o DO NOT exceed the posted maximum speed.
- o DO NOT drive at speed past schools, school buses, parks, shopping areas etc.

Designated Routes

- All vehicular traffic associated with the development must travel to and from the Project site via Wollar Road and Barigan Road and the approved site entry point.
- Trucks and heavy vehicles must not use local residential streets.

Drivers must stay on the defined routes laid down unless there are exceptional circumstances.

Exceptional circumstances include:

- Normal route blocked e.g., flooded.
- A revised route agreed in writing.

Vehicle Recording

- All drivers will be responsible for recording when they enter the site on the Vehicle Movement Register.