Griffith BESS

Transport Impact Assessment

SSD-85372970

250170TIA001B-F

12 November 2025

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DOCUMENT INFORMATION

Prepared for	Eku Energy on behalf of Griffith BESS Co Pty Ltd		
File Name	250170TIA001B-F	**Report Date**	12 November 2025
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one*mile****grid*** *operates from Wurundjeri Woiworung Country of the Kulin nation. We acknowledge and extend our appreciation to the Wurundjeri People, the Traditional Owners of the land. We pay our respects to leaders and Elders past, present and emerging for they hold the memories, the traditions, the culture, and the hopes of all Wurundjeri Peoples.*

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EXECUTIVE SUMMARY

onemile**grid** has been requested by Eku Energy on behalf of Griffith BESS Co Pty Ltd (the Proponent) to undertake a Transport Impact Assessment (TIA) of the proposed Battery Energy Storage System (BESS) at Griffith BESS, located at 15 Bob Irvin Road, Yoogali.

The proposed BESS has a nominal capacity of 100 Megawatts (MW) / 1,000 Megawatt hours (MWh), and will include associated infrastructure such as inverters, transformers, and a cable connection to the Griffith Substation.

In addition to the key components outlined above, temporary infrastructure will be required to facilitate the construction and commissioning phases of the proposed BESS. The construction compound is expected to include:

- Temporary construction offices;
- A site office;
- Laydown areas.

This TIA has been prepared to assess the traffic and transport impacts of the proposed BESS during both the construction and operational phases. Construction of the facility is expected to take place over an 18 to 24-month period.

Vehicle access to the site is proposed via Bob Irvin Road, with primary access through a crossover previously approved for the Yoogali Solar Farm. Secondary/emergency access options are also identified and will be finalised during detailed design.

To support safe and efficient access, a strategic route review was undertaken for general heavy vehicle deliveries and private vehicles. Due to turning constraints and culvert upgrade limitations at the Irrigation Way intersection, inbound heavy vehicles are recommended to approach the site from the south via Hanwood Avenue and Bob Irvin Road. Outbound movements may use the Irrigation Way intersection, which is better suited to exit manoeuvres. The recommended routes prioritise sealed roads and minimise bridge crossings locally, whilst aligning with the NSW Higher Mass Limits (HML) B-Double network further afield. Swept path analysis confirms that 19 m semi-trailers can be accommodated by the Irrigation Way / Bob Irvin Road intersection.

A maximum of five Oversize and/or Overmass (OSOM) vehicles are expected to require access to the site during construction. The proponent has advised that the largest OSOM vehicle will be approximately 36.95 metres long, including a 4 m wide trailer with a payload width of 5.3 metres. Based on constraints of the NHVR OSOM network, it is recommended that OSOM deliveries access the site via the south along Kidman Way and Hanwood Avenue, avoiding the constrained Irrigation Way / Bob Irvin Road intersection.

The peak construction period includes civil and electrical works phases. During the peak civil works phase the development is anticipated to generate a maximum of 230 daily vehicle movements including up to 130 light vehicle movements and 100 heavy vehicle movements per day, including 65 movements during the AM and PM peak periods. During the electrical works phase the site is anticipated to generate a maximum of 170 light vehicle movements and 30 heavy vehicle movements per day, including 83 movements during the AM and PM peak periods. It is anticipated that the surrounding road network will be able to comfortably accommodate the traffic generated during this period, even when considering the cumulative impacts of the Yoogali Solar Farm and Hawkins Road projects.

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1 INTRODUCTION

onemile**grid** has been requested by Eku Energy on behalf of Griffith BESS Co Pty Ltd (the Proponent) to undertake a Transport Impact Assessment of the proposed Battery Energy Storage System (BESS) development at 15 Bob Irvin Road, Yoogali. The proposed BESS, hereafter referred to as the Griffith BESS, is a State Significant Development, SSD-85372970. This Transport Impact Assessment forms part of the Environmental Impact Assessment which has been prepared by Cogency Australia Pty Ltd (Cogency) to support assessment of the project.

This report has been prepared to respond to the Planning Secretary's Environmental Assessment Requirements (SEARs) issued on 23 June 2025, including (but not limited to) the following transport requirements:

- *an assessment of the peak and average traffic generation, including light vehicles (including shuttle buses), heavy vehicles, heavy vehicles requiring escort, high risk heavy vehicles requiring escort (noting Table 1 in TfNSW Fact Sheet - Transport Management Plans for Over Size and/or Overmass Movements in NSW) and construction worker transportation;*
- *an assessment of the likely transport impacts to the site access route(s) from the above listed vehicles including the site access point(s) and any Crown land, particularly in relation to the capacity and condition of the roads, road safety and intersection performance;*
- *a concept Level Route Analysis required for heavy vehicles requiring escort and high risk heavy vehicles requiring escort; a cumulative impact assessment of traffic from nearby developments (including mining operations); and*
- *provide details of measures to mitigate and/or manage potential impacts (developed in consultation with the relevant road authorities) including:*
  - a schedule of all required road upgrades (including resulting from heavy vehicle and over mass / over dimensional traffic haulage routes);
  - strategic concept designs of proposed road upgrades (including the site access point); and
  - road maintenance contributions, and any other traffic control measures.

In addition to addressing the Secretary's Environmental Assessment Requirements (SEARs), this analysis has also had regard to the Department of Planning, Housing and Infrastructure (DPHI) *Large-Scale Solar Energy Guideline*. While the Guideline primarily applies to solar energy developments, certain principles remain relevant to the planning and assessment of BESS projects. These include identifying key traffic impacts associated with the construction and operation of the proposed BESS, and determining any infrastructure necessary to support its use and mitigate potential impacts. The Guideline has therefore been considered where applicable, acknowledging its primary focus on solar energy projects rather than BESS projects.

As part of this assessment the subject site has been inspected with due consideration of the development proposal, traffic data has been sourced, and relevant background information has been reviewed.

2 PRE-APPLICATION DISCUSSIONS

onemile**grid** engaged in pre-application discussions with a representative from the Development Services – Renewables team at Transport for New South Wales (TfNSW) to confirm scope requirements for assessment. In particular, these discussions were undertaken to confirm the scope and methodology required for the Transport Impact Assessment and ensure alignment with regulatory expectations.

Key topics discussed included the specific requirements for the route assessment, particularly in relation to Oversize and Overmass (OSOM) vehicle movements, and the identification of potential constraints along the proposed haulage routes. The sensitivity of the irrigation channels within the immediate vicinity of the site was also highlighted as a critical consideration, given their proximity to key access points and intersections, and the complexities involved with any potential upgrades.

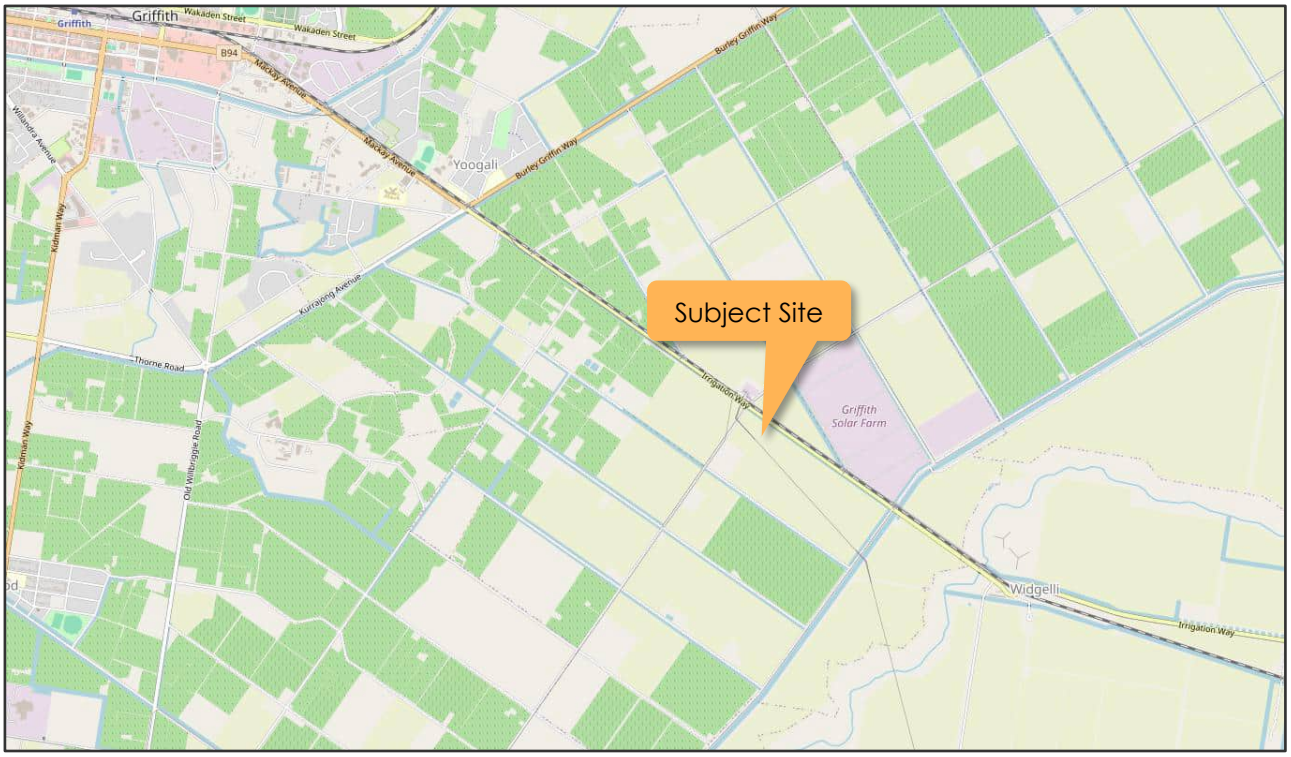
This early consultation provided clarity on TfNSW's expectations and informed the approach adopted throughout the assessment, ensuring that all relevant transport and infrastructure considerations were addressed comprehensively.

3 EXISTING CONDITIONS

3.1 Site Location

The subject site is located on the south side of Irrigation Way, the east side of Bob Irvin Road, and the north side of Morley Road, and is located on the same land as the approved but yet to be constructed Yoogali Solar Farm project (DA: 291/2018) as shown in Figure 1. The overall site is comprised of two lots currently titled as 1 & 2/ DP12527790, though the subject development is to be addressed as 15 Bob Irvin Road, Yoogali.

Figure 1 Site Location



Source: OpenStreetMap

The site largely accommodates rural farm land. A dwelling was previously located on the site of the Yoogali Solar Farm, though has now been demolished.

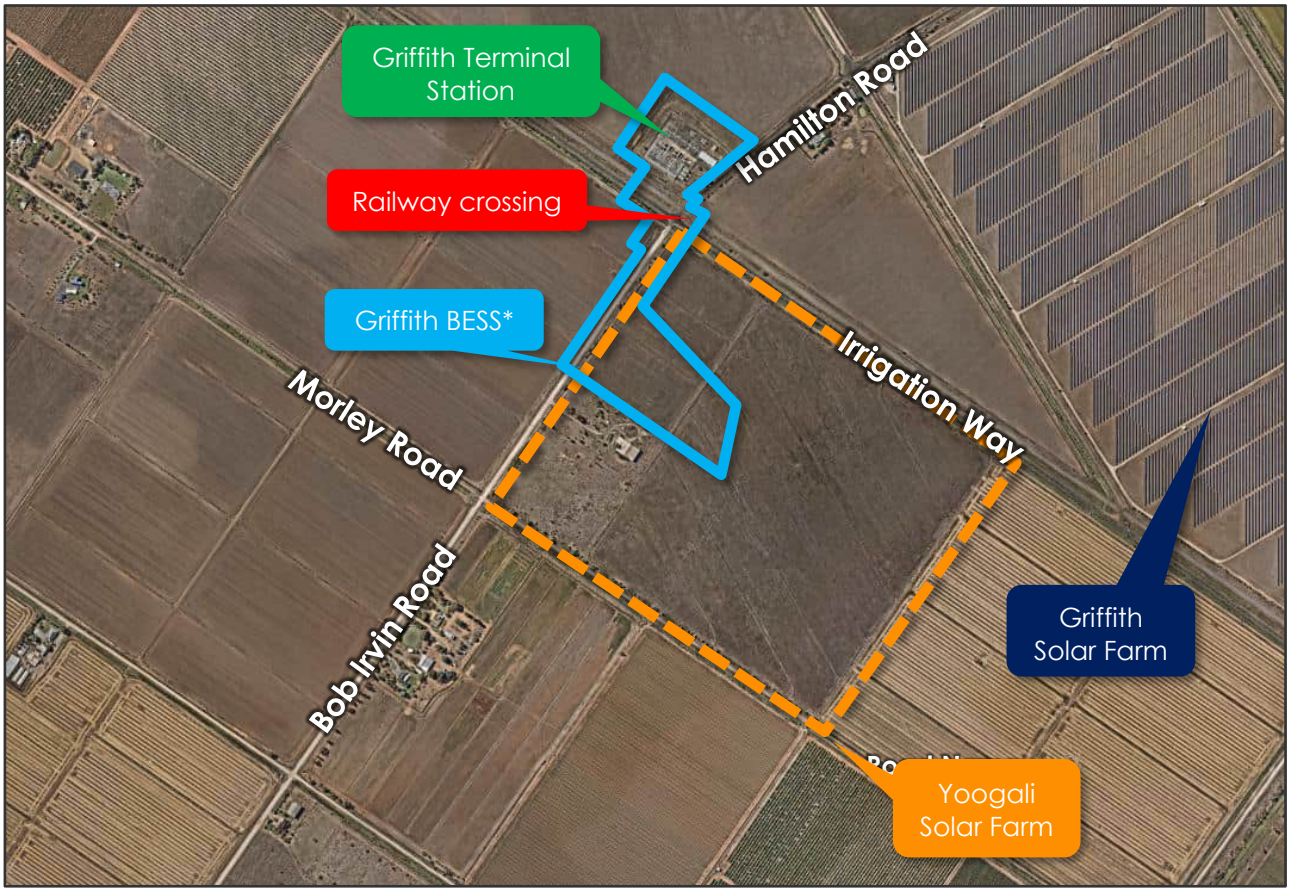
No access is provided to the site of the Griffith BESS.

Land use in the immediate vicinity of the site is generally agricultural farming, though the Griffith Solar Farm is located to the northeast of the site.

The site is located within the Murrumbidgee Irrigation Area (MIA), and therefore several supply and drainage channels traverse the vicinity of the site, with bridges and culverts provided at locations where channels intersect with roads.

An aerial view of the subject site is provided in Figure 2.

Figure 2 Site Context (22 March 2025)



**Note: The Development Area includes the indicative BESS area, transmission corridor and Griffith substation works area*

Copyright Nearmap

3.2 Planning Zones and Overlays

It is shown in Figure 3 that the site is located within a RU1 Primary Production Zone.

Figure 3 Land Zoning Map

Additionally, the site abuts Irrigation Way which is designated as a State Road under the control of TfNSW.

3.3 Road Network

3.3.1 Bob Irvin Road

Bob Irvin Road is a local road generally aligned north-south, running between Irrigation Way in the north, and Hanwood Avenue in the south.

Bob Irvin Road is unsealed for the 2.5 km section from Irrigation Way to Wincey Road, including adjacent to the site. The unsealed section provides for a wide formation of approximately 10 metres which offers two-way traffic movements.

The section of Bob Irvin Road from Wincey Road to Hanwood Avenue is sealed with an approximately 5 m wide pavement with gravel shoulders.

The cross-section of Bob Irvin Road at the frontage of the site is shown in Figure 4.

Figure 4 Bob Irvin Road, looking north adjacent to the site

3.3.2 Irrigation Way

Irrigation Way is a state controlled arterial road running between Kidman Way in Griffith and Newell Highway in Narrandera.

Irrigation Way operates as a single carriageway road that provides a single traffic lane in each direction with a combination of sealed and gravel shoulders on both sides. A drainage channel runs parallel to the alignment of Irrigation Way on the south side of the road reservation, which sits between the subject site and the Irrigation Way carriageway.

The cross-section of Irrigation Way at the frontage of the site is shown in Figure 5.

Figure 5 Irrigation Way, looking east adjacent to the site

Copyright Google (Image date: January 2025)

A 100 km/h speed limit applies to Irrigation Way in the vicinity of the site.

3.4 Irrigation Way / Bob Irvin Road / Hamilton Road intersection

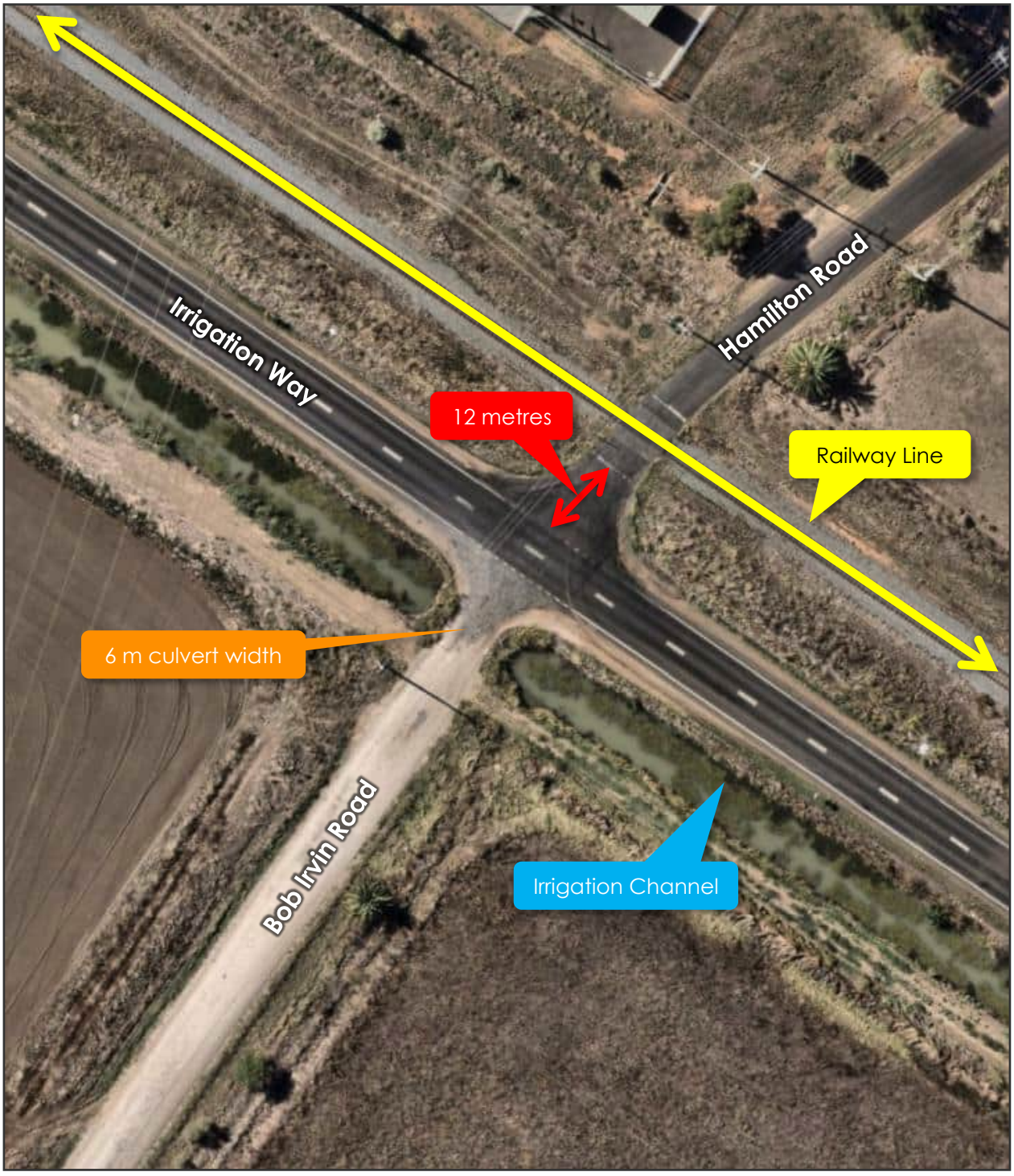
The intersection between Irrigation Way / Bob Irvin Road / Hamilton Road is provided as a standard four-way intersection, with no formal turn lanes provided on either approach.

As identified above, an irrigation channel runs parallel to Irrigation Way on its southern side, bisecting the subject site and Irrigation Way. Immediately south of the intersection, the culvert passing over the channel is approximately 6 m wide.

Hamilton Road is a local road running between Cain Road in the northeast and Irrigation Way in the southwest. Hamilton Road is provided with an approximately 6 m wide paved carriageway. An at-grade railway crossing is provided north of the intersection along Hamilton Road. The edge of the Irrigation Way carriageway is offset from the level crossing stop line by approximately 12 metres

A view of the Irrigation Way / Bob Irvin Road / Hamilton Road intersection is provided below.

Figure 6 Irrigation Way / Bob Irvin Road / Hamilton Road intersection



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3.5 Crash History

Crash history information in the vicinity of the site was obtained through the TfNSW Interactive crash statistics map for the latest available 5-year period from 2020 to 2024. The severity of each incident is classified in accordance with the below:

- **Fatal**: At least one person was killed or died within 30 days of the crash
- **Serious Injury**: At least one person was injured and admitted to hospital and did not die within 30 days of the crash
- **Moderate Injury**: Those involved were injured and required medical treatment and were not admitted to hospital nor died within 30 days of the crash, or a previously defined Minor/Other or No Injury CrashLink record matched to a SIRA CTP record with a MAIS score of 2 (Moderate) or higher
- **Minor/Other Injury**: Those involved were injured and isn't matched to a hospital admission record, or previously defined No Injury CrashLink record matched to a SIRA CTP record with a MAIS score of 1 (Minor)
- **Non-casualty (towaway)**: A crash where a vehicle was towed away however no death or injuries are recorded.

It is acknowledged that the crash stats only include the incidents recorded by police and therefore may exclude minor incidents which were not reported.

Each of the recorded crashes is shown below in Figure 7 and summarised in Table 1.

Figure 7 Crash History

Table 1 Crash Data Summary

Crash id	Year	Description	Type of Location	Lighting	Severity	Number Killed / Injured
1270511	2021	Off road to left	2-way undivided	Darkness	Serious injury	0 / 1
1271520	2021	Right rear	X-intersection	Daylight	Moderate injury	0 / 1
1305278	2022	Right rear	T-junction	Daylight	Serious injury	0 / 2

1312239	2022	Right off road into object / parked vehicle	X-intersection	Darkness	Non-casualty (towaway)	0 / 0
1315848	2023	Struck train	2-way undivided	Daylight	Non-casualty (towaway)	0 / 0

The above does not demonstrate any road safety issues or trends in the nearby area.

4 EXISTING TRAFFIC VOLUMES

4.1 Overview

To understand existing traffic conditions in the vicinity of the site a series of traffic counts were undertaken on behalf of **one**mile**grid** in the vicinity of the site. The data collection process sought to collect peak hour turning movement counts at key intersections as well as daily 'mid-block' volumes to establish fluctuations across 24 hour periods.

The survey locations are shown in Figure 8, whilst the volumes are provided in the following sections.

Figure 8 Traffic Survey Locations

Source: OpenStreetMap

4.2 Peak Hour Counts

Peak hour turning movement traffic volume surveys were undertaken by Trans Traffic Survey on behalf of **one**mile**grid** on Thursday 29th May 2025, between 6:30am and 9:30am, and between 2:30pm and 7:00pm at the following intersections in the vicinity of the site:

- Irrigation Way / Bob Irvin Road / Hamilton Road;
- Irrigation Way / Murray Road; and
- Burley Griffin Way / Irrigation Way / Kurrajong Avenue.

The peak hour results of the surveys are shown in Figure 9 and Figure 10.

Figure 9 Existing Traffic Volumes – AM Peak (8:15 am to 9:15 am)

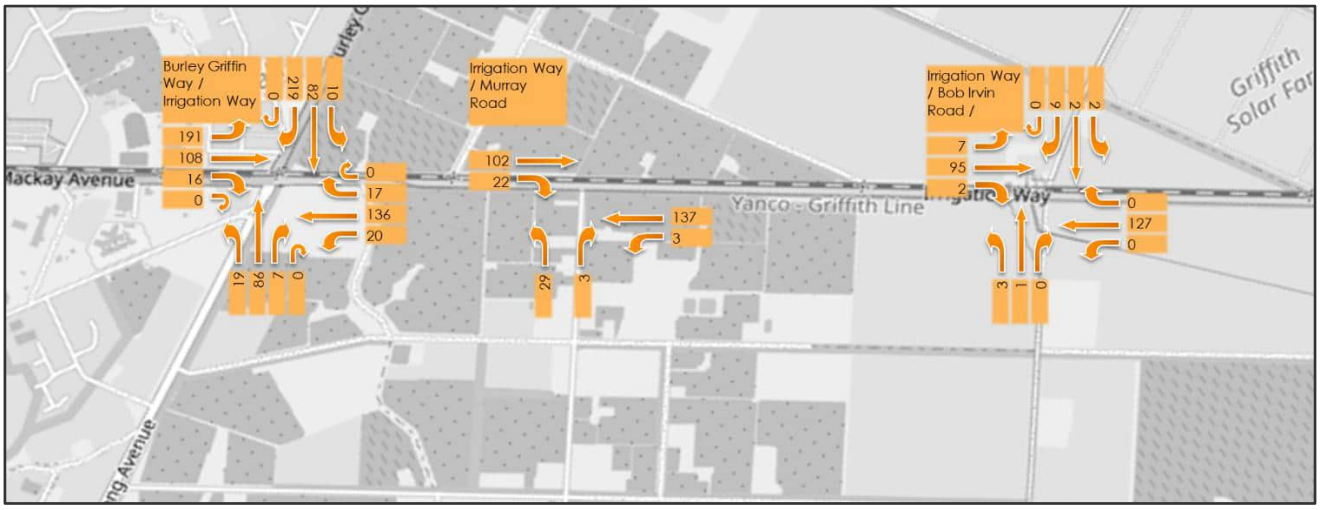
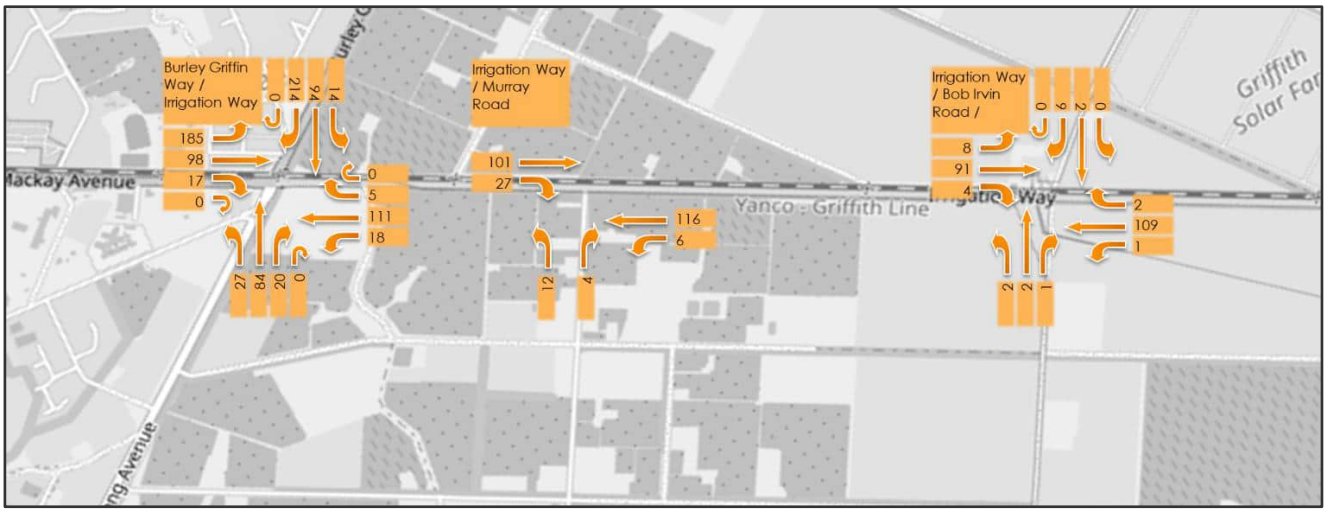


Figure 10 Existing Traffic Volumes – PM Peak (3:00 pm to 4:00 pm)



4.3 Daily Traffic Volume Counts

Traffic volume, speed and classification surveys were undertaken by Trans Traffic Survey on behalf of **one**mile**grid** on Bob Irvin Road and Irrigation Way adjacent the site, and Hanwood Avenue southwest of the site for a one-week period from Thursday 29th May 2025 to Wednesday 4th June 2025 inclusive. The results of the surveys are summarised in Table 3, Table 3 and Table 4.

Table 2 Traffic Volume and Speed Surveys – Irrigation Way

Time Period	Direction	Traffic Volume (vpd)	Average Speed (km/h)	85th Percentile Speed (km/h)
Weekday Average	Eastbound	1,225	96.7	107.1
	Westbound	1,287	88.6	97.3
	Both Directions	2,512	92.3	101.5
7 Day Average	Eastbound	1,092	97.7	107.5
	Westbound	1,146	88.8	97.7
	Both Directions	2,238	93.2	102.6

The surveys identified a heavy vehicle percentage of 13.8% along Irrigation Way, with average speeds generally in line with the posted limit, although higher speeds 85th percentile speeds were noted heading east.

Table 3 Traffic Volume and Speed Surveys – Bob Irvin Road

Time Period	Direction	Traffic Volume (vpd)	Average Speed (km/h)	85th Percentile Speed (km/h)
Weekday Average	Northbound	62	58.1	65.4
	Southbound	57	55.0	61.5
	Both Directions	119	57.4	63.8
7 Day Average	Northbound	56	58.7	65.4
	Southbound	53	54.5	60.3
	Both Directions	109	57.0	62.5

The surveys identified a heavy vehicle percentage of 13.9% along Bob Irvin Road. In relation to speeds, the average speed was around 60km/h which is lower than the default speed limit of 100 km/h. This is not unexpected noting the nature of construction of Bob Irvin Road and that default speed limits apply to a variety of road types and are not necessarily fit for all purposes.

Table 4 Traffic Volume and Speed Surveys – Hanwood Avenue

Time Period	Direction	Traffic Volume (vpd)	Average Speed (km/h)	85th Percentile Speed (km/h)
Weekday Average	Eastbound	258	58.7	65.2
	Westbound	236	63.5	71.4
	Both Directions	494	61.0	68.2
7 Day Average	Eastbound	237	59.1	65.6
	Westbound	224	64.1	71.8
	Both Directions	461	61.6	68.6

The surveys identified a heavy vehicle percentage of 9.0% along Hanwood Avenue. In relation to speeds, the average speed was around 62 km/h, which is again lower than the default speed limit of 100 km/h, which is again not unexpected.

4.4 Existing Performance

To assess the operation of the Irrigation Way / Bob Irvin Road / Hamilton Road intersection the traffic volumes have been input into SIDRA Intersection, a traffic modelling software package.

The SIDRA Intersection software package has been developed to provide information on the capacity of an intersection with regard to a number of parameters. Those parameters considered relevant are, Degree of Saturation (DoS), 95th Percentile Queue, and Average Delay, and Level of Service (LoS), as described in Table 5 below.

Table 5 SIDRA Intersection Parameters

Parameter	*Description*
Degree of Saturation (DoS)	The DoS represents the ratio of the traffic volume making a particular movement compared to the maximum capacity for that particular movement.
Average Delay (seconds)	Average delay is the time delay that can be expected for all vehicles undertaking a particular movement in seconds. This includes time taken to accelerate or decelerate, time taken to undertake the manoeuvre, and delay at a hold line or stop line.
95th Percentile (95%ile) Queue	95%ile queue represents the maximum queue length in metres that can be expected in 95% of observed queue lengths in the peak hour.
Level of Service (LoS)	A qualitative measure of sign-controlled intersection performance, based on the average delay experienced by a driver. A LoS of A, B, C or D suggests acceptable intersection performance. A LoS of E or F suggests mitigation measures or upgrades may be warranted.

The value of the average delay and Level of Service for a sign-controlled intersection has a corresponding rating, as shown in Table 6 below.

Table 6 Rating of Delay and Level of Service

Rating	*Delay in seconds (d)*	*Level of Service*
Excellent	$d \leq 10$	A
Very Good	$10 < d \leq 15$	B
Good	$15 < d \leq 25$	C
Fair	$25 < d \leq 35$	D
Poor	$35 < d \leq 50$	E
Very Poor	$50 < d$	F

The results of the analysis are provided in Table 7.

Table 7 Irrigation Way / Bob Irvin Road / Hamilton Road – Existing Conditions

Approach	*DoS*	*Avg. Delay (sec)*	*Queue (m)*	*Level of Service*
AM Peak				
Bob Irvin Road (S)	0.004	6.0	0.1	A
Irrigation Way (E)	0.075	0.0	0.0	A
Hamilton Road (N)	0.016	6.7	0.4	A
Irrigation Way (W)	0.062	0.5	0.2	A
PM Peak				
Bob Irvin Road (S)	0.005	5.8	0.1	A
Irrigation Way (E)	0.064	0.2	0.1	A
Hamilton Road (N)	0.013	6.5	0.3	A
Irrigation Way (W)	0.060	0.7	0.3	A

It is shown that the intersection of Irrigation Way / Bob Irvin Road / Hamilton Road operates within the excellent category with a Level of Service of A with no delays to through traffic on Irrigation Way.

5 RELATED AND NEARBY PROJECTS

5.1 Yoogali Solar Farm

The Yoogali Solar Farm is an approved Solar Farm project co-located on the same land as the subject site, to be developed by EDP Renewables (EDPR). The project is understood to have received approval in 2019 via DA291/2018, though construction has not yet commenced. Concurrent to the proposed development, EDPR is seeking a modification of DA 291/2018 to realign the title boundary to accommodate the proposed BESS.

The proposed BESS and Yoogali Solar Farm will be operated separately and delivered by separate entities, however these entities are working closely together to ensure a coordinated construction and functional outcome.

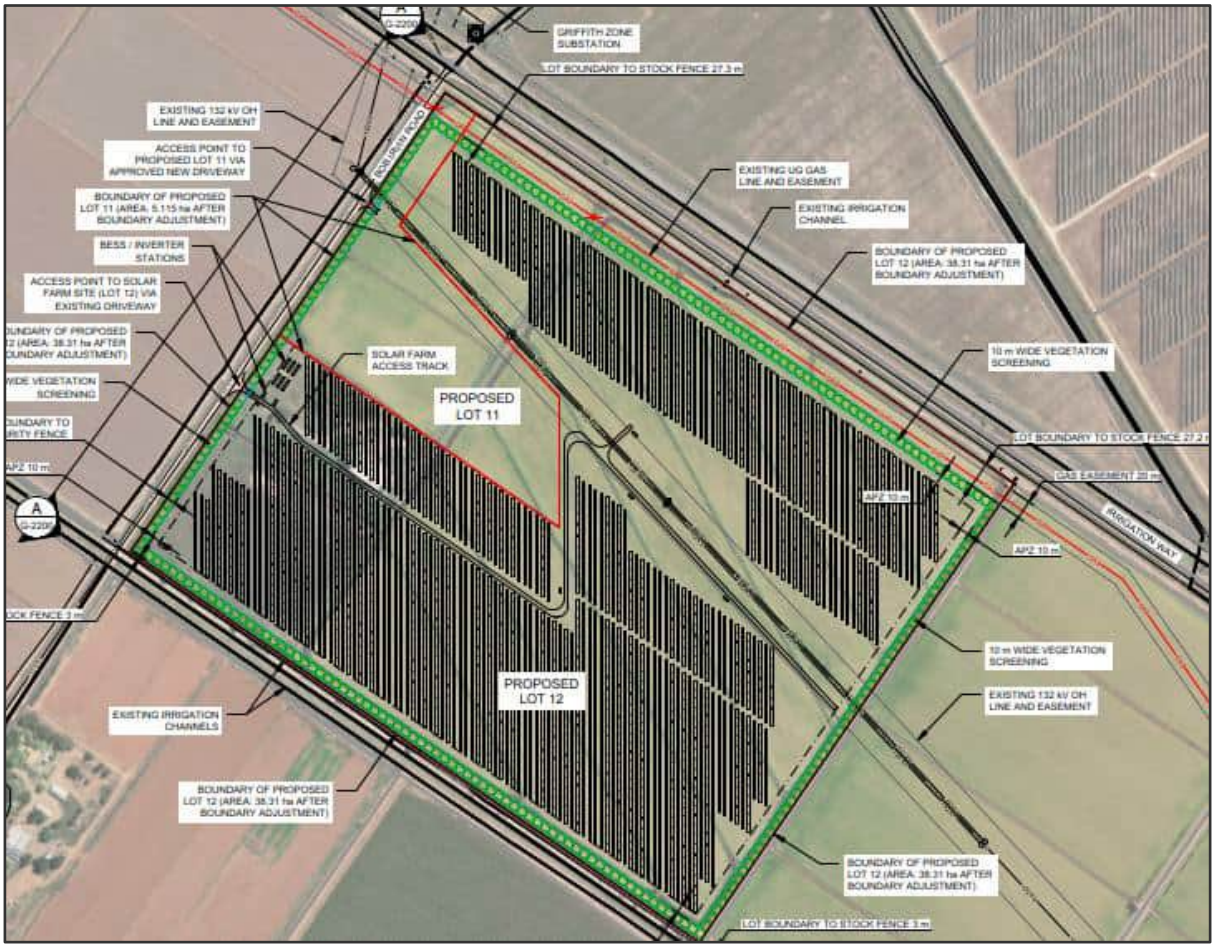
onemile**grid** has reviewed relevant material prepared for the Yoogali Solar Farm, including the Traffic Impact Assessment and Construction Traffic Management Plan prepared by ML Traffic Engineers both dated October 2018. The reports identify that primary vehicle access to the site was to be provided via the north from Irrigation Way, with secondary vehicle access being provided via Kidman Way, Mirrool Branch Canal Road, Old Willbriggie Road, Hanwood Avenue and Bob Irvin Road.

A temporary traffic control plan was proposed, which involved stopping vehicles approaching Irrigation Way on Bob Irvin Road from the south via traffic signals.

The Transport Impact Assessment identified a maximum of 40 traffic movements during the peak hours would be generated by the site, associated with construction staff arriving and departing the site. A maximum of 6 heavy vehicle deliveries were expected per day.

The approved site plan from the modification application is shown below in Figure 11.

Figure 11 Site Plan



5.2 Riverina Solar Farm

The Riverina Solar Farm (SSD 7482) is an approved solar facility project currently under construction, located approximately 500 m northwest of the subject site, although it is understood that limited activity has been undertaken on-site. It is understood that the project team has undertaken sensitivity testing, and it has been concluded this project is unlikely to be built.

5.3 Hawkins Road Solar Farm

The Hawkins Road Solar Farm (DA189/2023) is an approved 5 MW Solar Farm and BESS project, located approximately 1 km south of the site on Hawkins Road.

6 DEVELOPMENT PROPOSAL

It is proposed to develop the site for the purposes of a nominal 100MW / 1,000 MWh Battery Energy Storage System (BESS), including associated infrastructure including inverters, a transformer, and a mixed underground and overhead cable connection to the Griffith Substation. As previously noted, the proposed BESS will be co-located on the same land as the approved but yet to be constructed Yoogali Solar Farm.

In addition to the key components outlined above, there will be temporary infrastructure required to facilitate the construction and decommissioning phases of the proposed BESS. The construction compound would likely include:

- Temporary construction offices;
- A site office; and
- Laydown areas.

These will all be accommodated within the subject site.

The proposed BESS units are to be located along the southern boundary of the site, with the Yoogali Solar Farm modules on the southern, northern and eastern peripheries of the site.

6.1 Construction / Installation

Construction of the facility is expected to take place over an 18 to 24-month period. Construction personnel and heavy vehicle deliveries are expected to vary significantly during the construction period, though two key peak periods have been identified, during the peak earth works, and for BESS delivery and installation works.

Additionally, construction hours are generally to be limited to the following (unless required for specific activities):

- Monday to Friday: 7:00 AM to 5:00 PM;
- Saturday: 7:00 AM to 1:00 PM.

A breakdown of the typical construction periods and peak construction periods is discussed below.

6.1.1 Typical Construction

During a typical construction period associated with the facility, the site is expected to accommodate a maximum of 45 staff on-site at a given time. Additionally, up to 20 heavy vehicle deliveries are expected per day, with the timing of these deliveries distributed throughout the day.

6.1.2 Civil Works Peak

The operator has advised that heavy vehicle activity is expected to be at its peak during the earthworks phase of construction. It is anticipated that the site will accommodate a maximum of 50 heavy vehicles deliveries/pick-ups per day. Additionally, the site is expected to accommodate a maximum of 55 construction personnel during the peak earthworks phase.

6.1.3 Electrical Works Peak

The second peak for construction activity is anticipated to occur during the BESS deliveries and installation phase.

During this phase, a maximum of 105 construction staff and maximum of 15 heavy vehicle deliveries are anticipated.

6.1.4 Deliveries

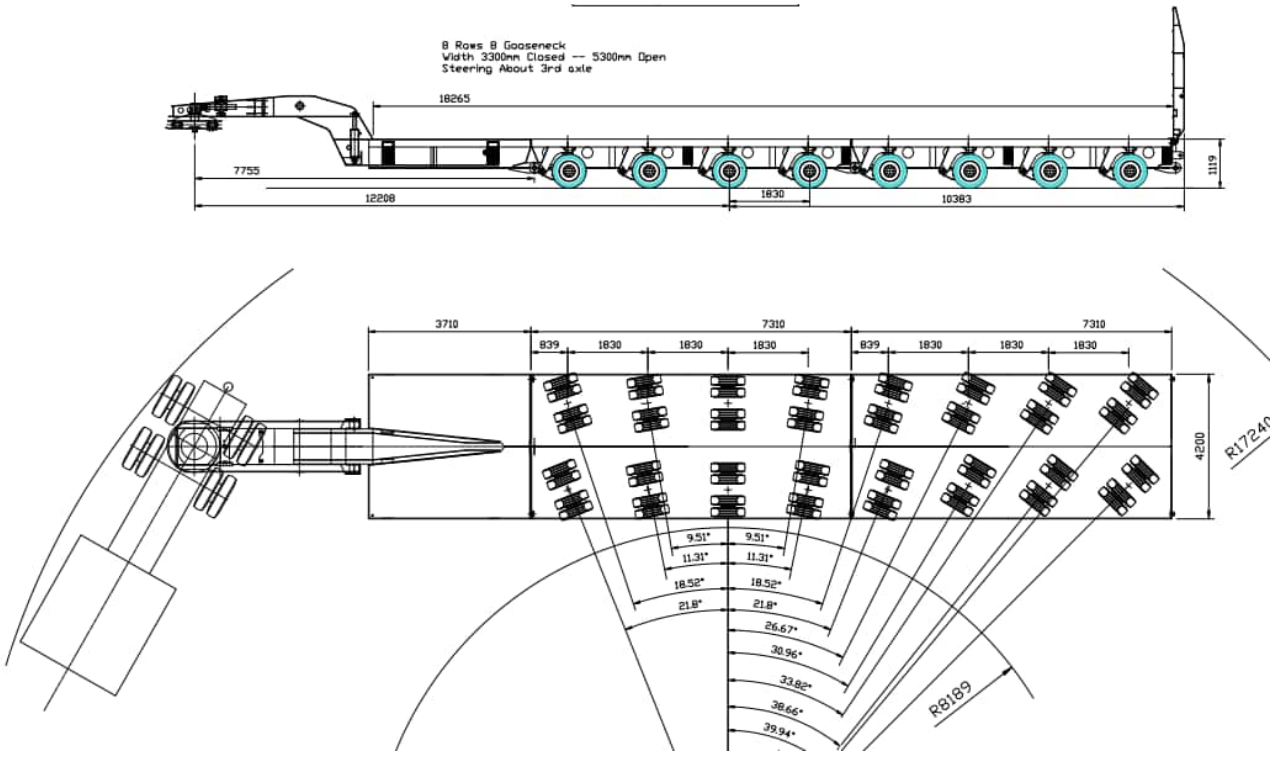
The majority of heavy vehicle deliveries are expected to be via 6.4 m to 12.5m rigid trucks, 19 m semi-trailers and 20 m tandem tipper and trailers (truck and dogs). Other heavy vehicles that will require occasional access are low loader trailers and 26 m B-Double's (BD).

The proponent has advised that the largest vehicles that will access the site will be OSOM vehicles between 30 and 40 metres in length associated with the delivery of the Main Transformer, and switch room / control room buildings. It is expected that a maximum of 5 OSOM vehicle deliveries will occur over the course of the construction of the facility. As the design of the BESS components is still in initial phases, the details of the power transformer and buildings are still subject to refinement, and therefore the OSOM vehicles are subject to change.

Notwithstanding this, **one**mile**grid** have been advised the 'worst case' vehicles for assessment purposes.

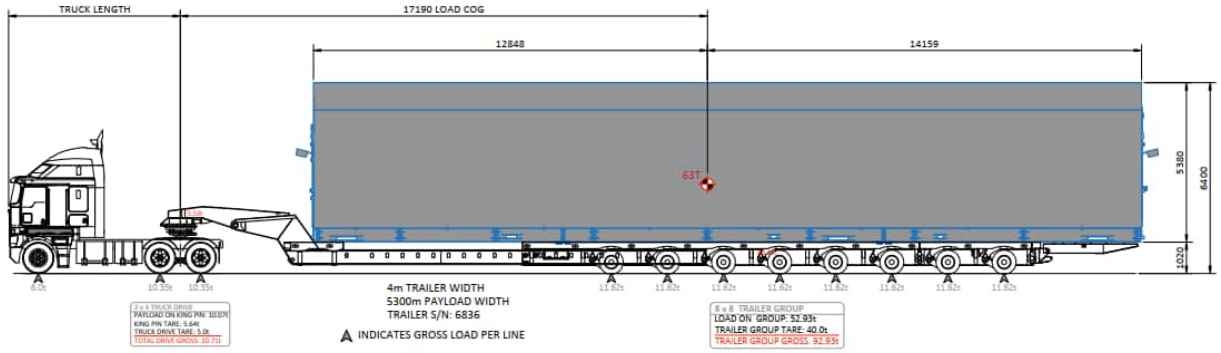
The power transformer is expected to be transported via an 8 to 12-axle platform trailer. An example of an 8-axle platform trailer is provided below.

Figure 12 8-axle platform trailer



The combined switchgear and control building is expected to be transported via a 36.95 m long extended trailer, including a 4 m wide trailer and a 5.3 m wide payload. This vehicle is provided below. As this vehicle is essentially the same as the one described above, but longer, it will be considered the 'worst-case' scenario. The vehicle is identified with a maximum height of 6.4 m.

Figure 13 TES25012 Extended Trailer (36.95 m long)



6.1.5 Potential Busing

The operator has advised they will consider the opportunity for staff to travel to the site via buses during the peak periods, in consultation with construction contractors. Staff will meet at a designated point and coordinate travel to the site during these periods if provided.

6.2 Operation

The proponent has outlined the site will accommodate up to 5 maintenance staff on-site during the typical operations of the site.

Annual access to the site will be necessary for major maintenance and inspections, with a maximum of 10 staff expected on-site, including two heavy vehicles.

6.3 Access

Vehicular access to the site is proposed to be established from Bob Irvin Road.

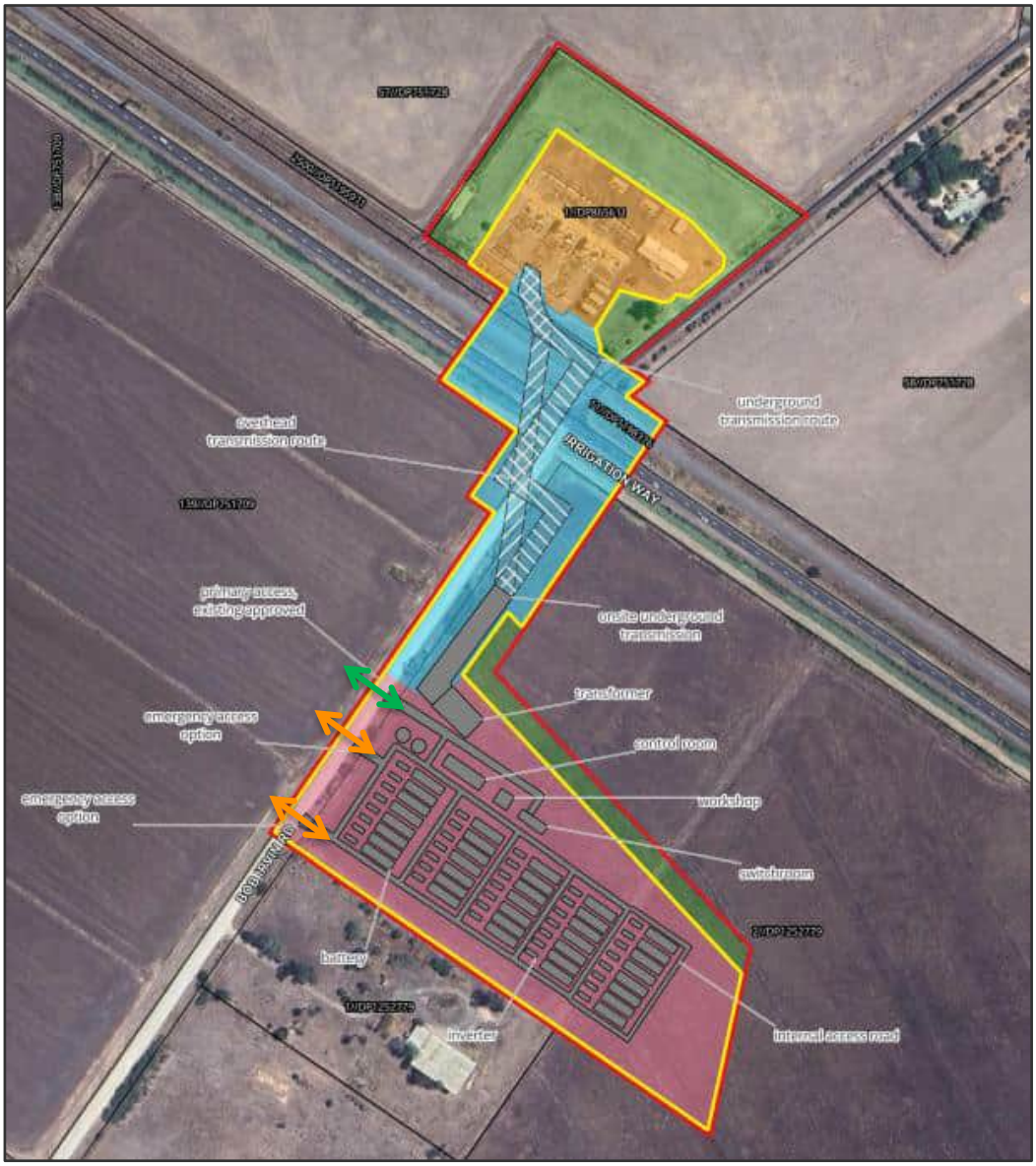
Primary access to the site is to be provided via a crossover previously approved for the Yoogali Solar farm project. The site layout plan identifies two options for secondary / emergency access, with the final location to be determined during the detailed design process.

The proposed access crossovers will facilitate fully directional vehicle movements into and out of the site to Bob Irvin Road.

It is anticipated that access to the site will be secured against unauthorised access outside of construction hours/days, and at all times once operational.

The indicative site layout plan is shown below in Figure 14.

Figure 14 Site Layout



6.4 Car Parking

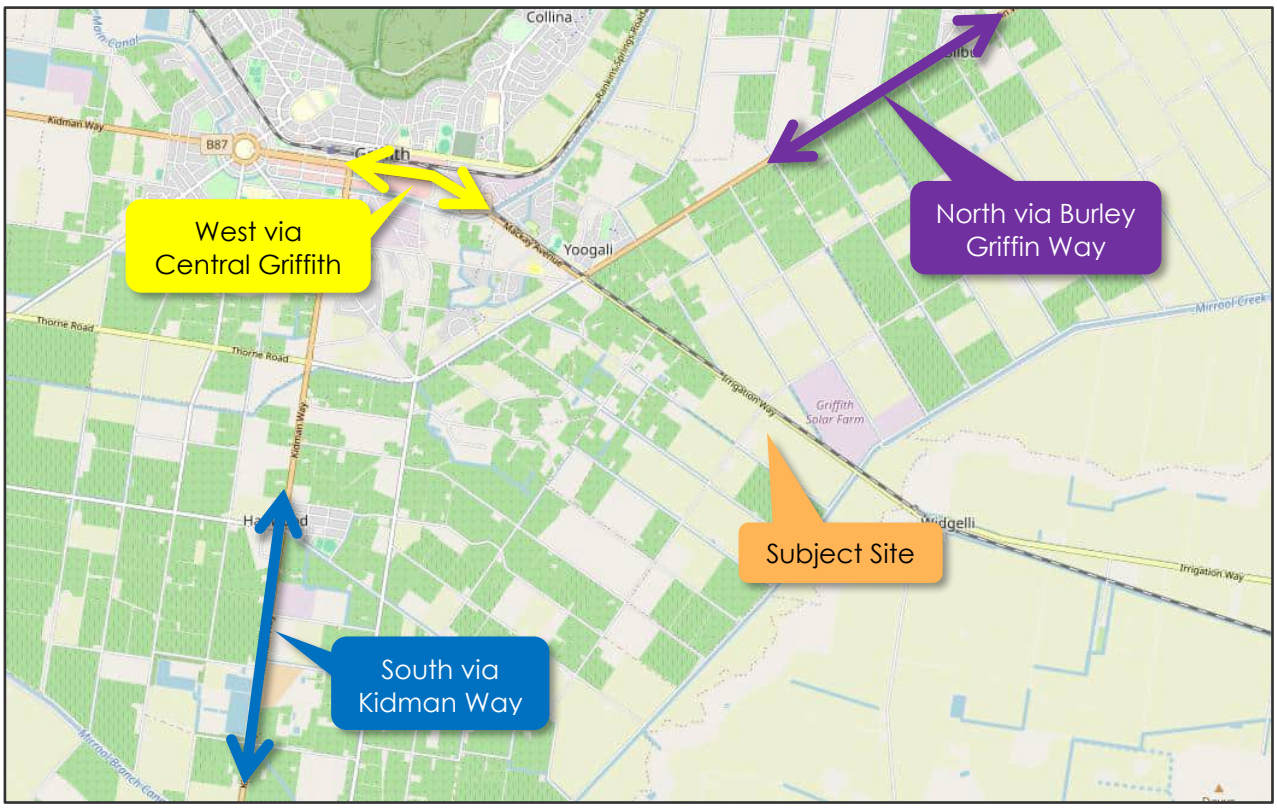
Car parking for construction staff will be provided within a parking area on-site, or within the adjacent Yoogali Solar Farm site. Given the large area that the two projects occupy all car parking demands are expected to be comfortably accommodated on-site.

7 ACCESS ROUTE REVIEW

7.1 General

The operator, Eku Energy, has advised that construction vehicles and deliveries will be likely to originate / depart from the Port of Melbourne, Port Botany, Port Kembla and other locations in New South Wales, Victoria and South Australia. Based on the limited arterial road connections to the east along Irrigation Way, it is expected that the majority of construction related traffic will originate and depart to the west via Irrigation Way, and be dispersed further to the north via Burley Griffin Way, to the south via Kidman Way and central Griffith to the west.

Figure 15 Expected Origin / Destination Locations



7.2 Irrigation Way / Bob Irvin Road intersection

Over the course of our involvement with the project, we have identified the Irrigation Way / Bob Irvin Road intersection as the key constraint to access to the site. This intersection provides the primary connection between the site and the arterial road network.

onemile**grid** has prepared swept path diagrams for the Irrigation Way / Bob Irvin Road intersection, based on a feature survey provided by the project team. The swept paths demonstrate that 19 metre semi-trailers can turn into and out of Bob Irvin Road using the existing road width. It is acknowledged that movements from Irrigation Way into Bob Irvin Road are particularly tight, with the 500 mm clearance envelope overhanging outside of the aisle and potentially impacting the landscaping and reflector poles, though the wheels do remain within the roadway.

The results of the swept path assessment are attached in Appendix A.

Critically, the swept path assessment highlights that heavy vehicle movements for vehicles larger than or equal to 19 m semi-trailers, including OSOM deliveries, cannot be comfortably accommodated without widening the existing culvert and potentially modifying the intersection geometry. Due to the proximity of the irrigation channel, such upgrades would be highly complex and limited to short seasonal windows.

Given these constraints, the project team has adopted an access strategy that aims to:

- Divert heavy vehicle inbound movements away from the Irrigation Way / Bob Irvin intersection, directing them instead to approach from the south via Hanwood Avenue and Bob Irvin Road.
- Utilises the Irrigation Way / Bob Irvin Road intersection primarily for outbound movements, which are unconstrained as demonstrated by the swept path analysis.

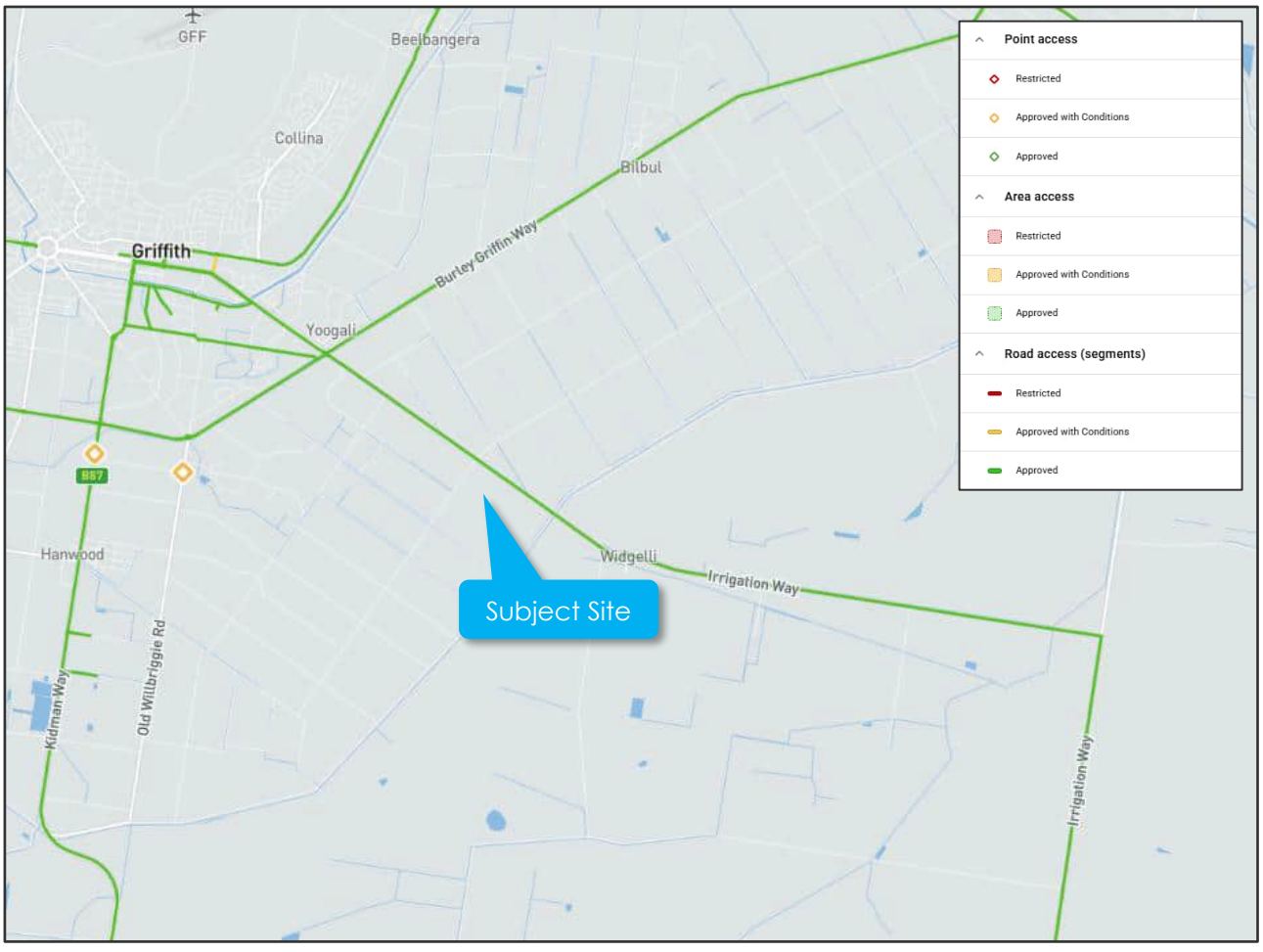
This approach minimises safety risks and avoids unnecessary infrastructure upgrades for short-term construction traffic.

7.3 General Heavy Vehicles

7.3.1 B-Double Network

New South Wales Higher Mass Limits (HML) 25/26 m B-Double Routes in the vicinity of the subject site are shown below in Figure 16.

Figure 16 NSW HML 25/26 m B-double Routes



It is shown that Irrigation Way, Burley Griffin Way and Kidman Way and Sunraysia Highway approved roads, in addition to a number of roads further afield.

7.3.2 Recommended Route

Based on the above, it is recommended that inbound heavy vehicles access the site from the south along Bob Irvin Road.

Standard sized heavy vehicle deliveries from the northeast are expected to arrive via Burley Griffin Way, and vehicles from the south are expected to arrive via Hanwood Avenue.

The recommended route from the northeast (via Burley Griffin Way), is to continue along Kurrajong Avenue, turn left at Old Willbriggie Road, continue along Old Willbriggie Road, turn left at Hanwood Avenue, continue along Hanwood Avenue, turn left at Bob Irvin Road and approach the site from the south. This route minimises the number of turning movements to access the site and the use of unsealed roads, with the only unsealed section of road being Bob Irvin Road from Wincey Road to Irrigation Way. Additionally, this route minimises the need for travelling over bridges and culverts to access the site.

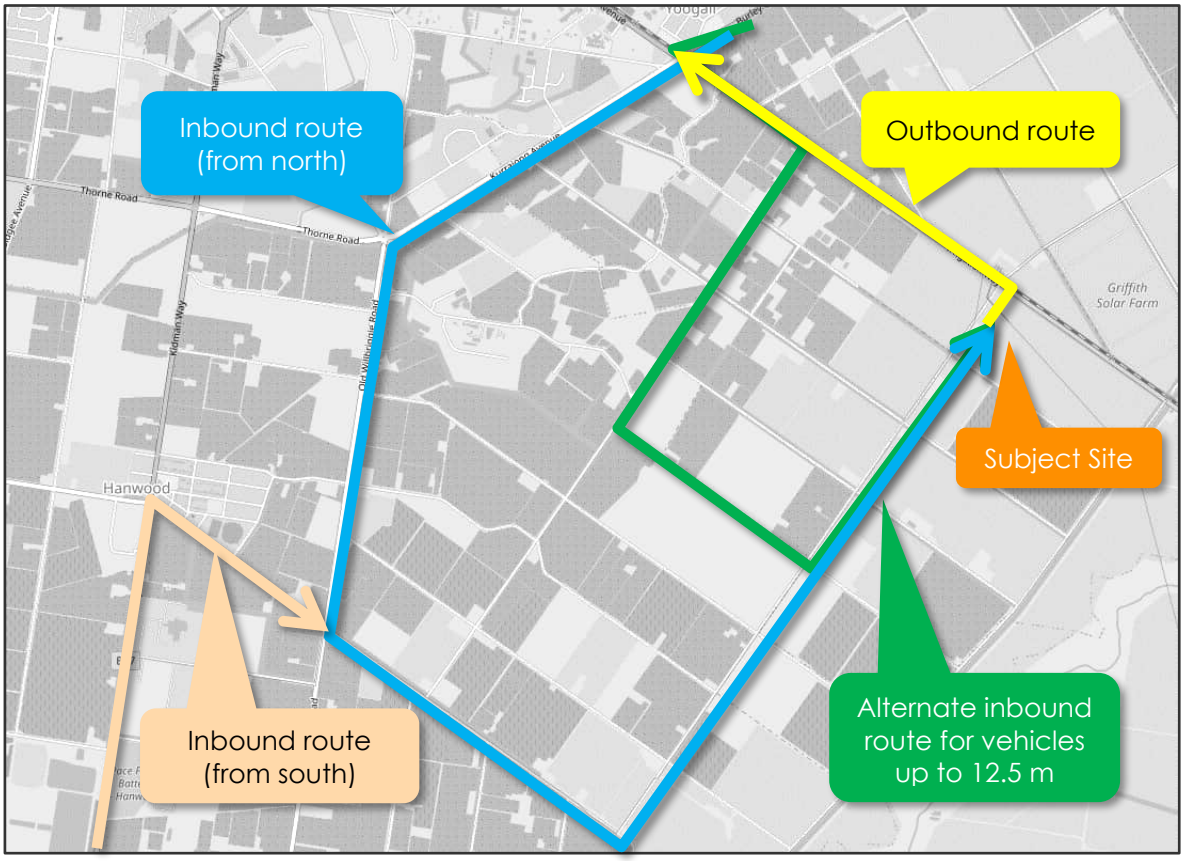
Vehicles travelling from the south, will approach from the south via Kidman Way and turn right onto Hanwood Avenue and continue on the same route as vehicles approaching from the north.

It should be noted that an alternate shorter route that may be suitable for smaller heavy vehicles (such as rigid 12.5 m trucks) is available via the Murray Road / Irrigation Way intersection and Wincey Road. Murray Road is sealed and is provided with an approximately 7.5 m wide culvert over the drainage channel. Wincey Road is chosen as the east-west road, due to it being sealed.

While the Bob Irvin Road /Irrigation Way intersection is not the preferred route for inbound truck movements, it is considered appropriate to provide outbound truck movements. This would reduce the interaction and potential conflict between heavy vehicles on the local roads surrounding the site.

As shown in the swept paths attached in Appendix A, the Bob Irvin Road / Irrigation Way intersection is capable of accommodating outbound movements for 19 m semi-trailers.

Figure 17 Heavy Vehicle Access Routes



Source: OpenStreetMap

Table 8 Recommended General Heavy Vehicle Access Routes summary

Origin/Destination	*Inbound*	*Outbound*
North	Burley Griffin Way, Kurrajong Avenue, Old Willbriggie Road, Hanwood Avenue, Bob Irvin Road.	Bob Irvin Road, Irrigation Way, Burley Griffin Way
South	Kidman Way, Hanwood Avenue, Bob Irvin Road.	Bob Irvin Road, Irrigation Way, Kurrajong Avenue, Kidman Way.

7.4 Staff / Light Vehicles

It is expected that staff will be accommodated locally in Griffith during the construction period, and therefore all staff / light vehicles will be assumed to originate from the west.

To reduce interaction between opposing traffic generated by the proposed development, it is recommended that staff and other light vehicle traffic follow the same heavy vehicle routes identified above.

7.5 OSOM Route Assessment

7.5.1 General

As identified in Section 6.1.4, OSOM deliveries will be required to transport transformers and control buildings to the site. A maximum of five OSOM deliveries are anticipated.

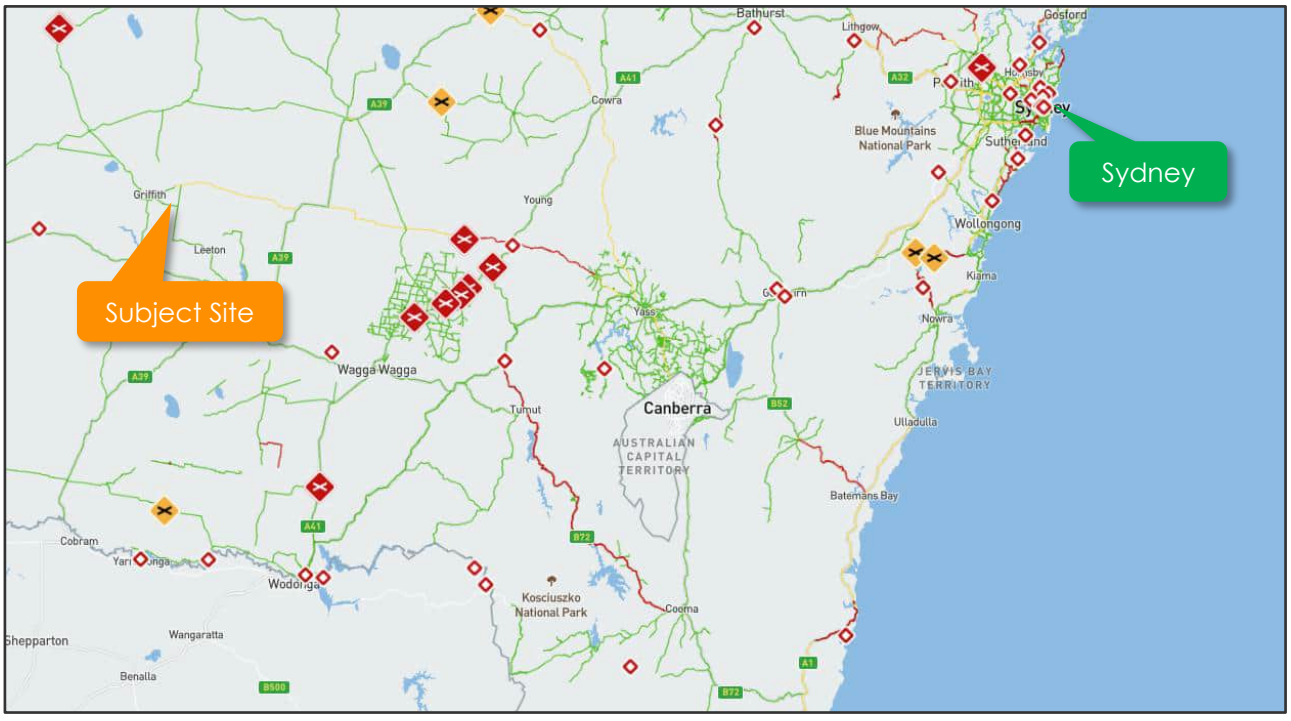
It is anticipated that all movements by OSOM vehicles will be managed via traffic management along the entirety of the journey, which is to be addressed in the construction traffic management plan following development consent.

7.5.2 OSOM Network

Vehicles operating under the Multi-State Class 1 Load Carrying Vehicle Mass Exemption Notice are eligible to travel on the NSW OSOM network. This includes vehicles up to 3.5 m wide, 4.6m high, 25.0 m long, 5.5m rear overhang and total mass of 49.5 tonnes, subject to meeting all other relevant eligibility requirements.

The NSW Oversize Overmass (OSOM) Load Carrying Vehicles Network map is shown below.

Figure 18 NSW OSOM Network Map



Furthermore, The NSW OSOM Network in the vicinity of the site is shown below.

Figure 19 NSW OSOM Network Map in the vicinity of the site

In the vicinity of the site Irrigation Way, Kurrajong Avenue, Kidman Way, Whitton Stock Route Road and Burley Griffin Way are all approved roads as part of the OSOM network.

It should be noted that Burley Griffin Way, between Binalong and Stockinbingal, is denoted as a limited access location, with additional travel conditions. It is understood that vehicles must contact Police before travel, and an eligible vehicle that exceeds a dimension limit must obtain a Class 1 permit before travel. Additionally, time travel restrictions are in place along Burley Griffin Way between Hume Highway west of Bowning and Irrigation Way at Yoogali, with vehicles wider than 2.5 m or longer than 22 m not permitted to travel in the daytime on weekends, or state-wide public holiday periods.

7.5.3 High-Risk Assessment

An assessment of the OSOM 'high-risk' criteria as defined by TfNSW is provided below.

Table 9 OSOM High Risk Criteria

Criteria	*Vehicle Dimensions*	*TMP Required if?*	*High Risk Criteria Met?*
Length	36.95 m	> 40 m on single carriageway sections.	No
Height	6.4 m	>5.2 m	Yes
Rear overhang	10.7 m	> 7.5 m	Yes
Forward projection	0 m	>5.5 m	No
Width	5.3 m	>6.0 m	No
Total combination weight	113.64 T	>184.5 T	No

Based on the above assessment, the OSOM vehicle is considered 'high risk' as it meets the height and rear overhang criteria. It should be noted that the triggers for 'high risk' are not the width or the length of the vehicle, and are therefore not related to the turning circle of the vehicle.

7.5.4 Pilot and Escort Requirements

7.5.4.1 Overview

In 2025, TfNSW published standardised pilot and escort requirements for Class 1 load carrying vehicles such as the proposed OSOM vehicle.

The worst-case OSOM vehicle includes a 5.3 m payload and total length of 36.95 m.

A pilot vehicle is defined as a motor vehicle that accompanies an oversize vehicle to warn other road users of the oversize vehicles presence.

An escort vehicle is defined as a pilot vehicle that is driven by a police officer or another person authorised to direct traffic under an Australian road law. The below assessment determines that the proposed development does not trigger a requirement to be provided an escort vehicle for both daytime and nighttime travel.

7.5.4.2 Day Time

For vehicles travelling during the day time the following requirements apply:

- Vehicles wider than 3.5 metres or longer than 26 metres require **one pilot vehicle**;
- Vehicles wider than 4.6 metres or longer than 30 metres require **two pilot vehicles;**
- Vehicles wider than 5.5 metres or longer than 35 metres require **three pilot vehicles;**
- Vehicles equal to or wider than 6 metres or equal to or longer than 45 metres require an **escort vehicle**.

The proposed OSOM vehicle therefore requires three pilot vehicles when travelling during the day time.

7.5.4.3 Night time

For vehicles travelling during the night time the following requirements apply:

- Vehicles wider than 3.2 metres or longer than 26 metres require **one pilot vehicle**;
- Vehicles wider than 3.5 metres or longer than 30 metres require **two pilot vehicles;**
- Vehicles wider than 5.5 metres or longer than 35 metres require **three pilot vehicles;**
- Vehicles equal to or wider than 6 metres or equal to or longer than 45 metres require an **escort vehicle**.

The proposed OSOM vehicle therefore requires three pilot vehicles when travelling at night time.

7.5.5 Proposed OSOM Route

As noted previously, the origin location for OSOM vehicles is subject to change at this early stage, with several locations still under consideration. Notwithstanding, it is understood that Port Kembla is the most likely origin location. Port Melbourne is the closest port geographically to the site, however, represents challenges with limited OSOM approved routes available in the immediate vicinity.

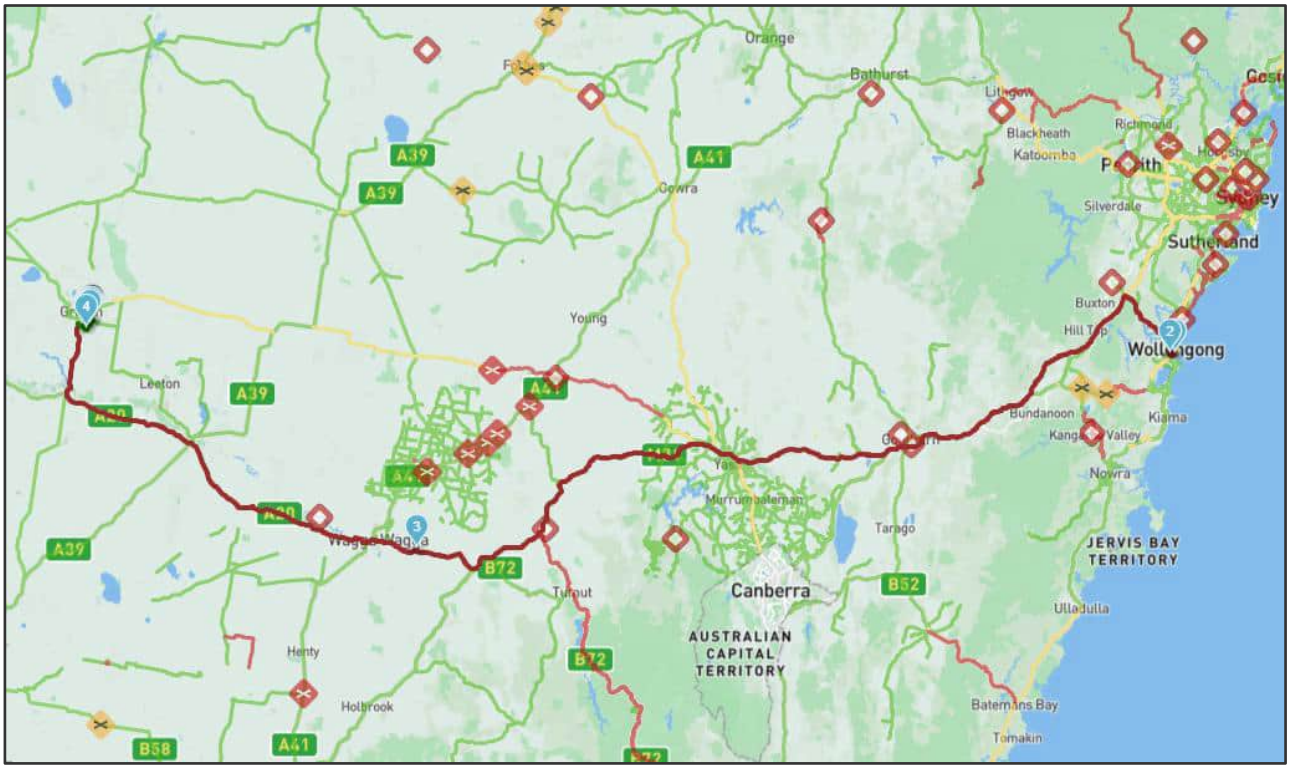
The route has therefore utilised Port Kembla in Wollongong, NSW as the expected origin location.

The Route is as follows:

- **Start**: Tom Thumb Road, Port Kembla;
- Springhill Road, Port Kembla to Spring Hill;
- Masters Road, Spring Hill;
- Princes Motorway, Figtree to Cataract;
- Picton Road, Cataract to Wilton;
- Hume Motorway, Wilton to Berrima;
- Hume Highway, Berrima to Mount Adrah;
- Sturt Highway, Tarcutta to Gumly Gumly;
- Hammond Avenue, East Wagga Wagga;
- Edward Street, Wagga Wagga;
- Sturt Highway, Ashmont to Darlington Point;
- Kidman Way, Darlington Point;
- Carrington Street, Darlington Point;
- Bridge Street, Darlington Point;
- Narrand Street, Darlington Point;
- Uri Street, Darlington Point;
- Kidman Way, Darlington Point to Hanwood;
- Hanwood Avenue, Hanwood;
- Bob Irvin Road, Hanwood;
- **End**: 15 Bob Irvin Road, Yoogali.

The proposed OSOM Route is shown below, with the total route being approximately 610 km (not including the internal roads at the port).

Figure 20 Proposed OSOM Route to Port Kembla (NHVR Route ID 2NZHH-0 v1)



The route has been limited to areas approved or approved with conditions along the NSW OSOM Load carrying Vehicles Network Map. The eastern section of Burley Griffin Way is limited to vehicles that are 3.5 m wide therefore the route continues on Hume Highway to divert through Wagga Wagga via Sturt Highway.

onemile**grid** has undertaken further investigation at pinch points along the route, with a summary provided below. The swept paths for the OSOM vehicle are attached in Appendix A.

Table 10 OSOM Route Pinch points

Location	Swept Path Reference	Notes
Tom Thumb Road / Springhill Road	SPA100	➢ Vehicle traverses mountable concrete pad; ➢ No modifications to intersection required.
Springhill Road / Masters Road	SPA101	➢ No modifications to intersection required.
Princes Motorway / Picton Road	SPA102	➢ Body overhang only above traffic island, though wheels remain within roadway; ➢ No modifications to intersection required.
Picton Road / Hume Motorway	SPA103	➢ Body overhang only outside traffic lanes, though wheels remain within roadway; ➢ No modifications to intersection required.
Hume Highway / Sturt Highway	SPA104	➢ No modifications to intersection required.

Sturt Highway / Tasman Road / Eunony Bridge Road	SPA105	➢ Body overhang only above roundabout island, though wheels remain within roadway; ➢ No modifications to intersection required.
Sturt Highway/ Kooringal Road	SPA106	➢ Body overhang only on eastern approach, wheels remain within roadway; ➢ Truck wheels access mountable section of roundabout; ➢ Existing signage not impacted.
Sturt Highway under Edward Street Rail Bridge	N/A	➢ Bridge is understood to have a minimum height clearance of 5.4 metres, based on publicly available route assessment undertaken for Yanco BESS project. ➢ If vehicle is greater than 5.4 m in height (as depicted in indicative drawings) alternate route will need to be prepared. It is expected that the route will divert locally in Wagga Wagga in this case.
Sturt Highway / Norton Street / Mason Street	SPA107	➢ Existing signage to be removed ➢ Body overhang only on eastern approach, wheels remain within roadway; ➢ Truck wheels access mountable section of roundabout.
Sturt Highway / Pearson Street / Olympic Highway	SPA108	➢ Body overhang only on eastern approach, wheels remain within roadway; ➢ Truck wheels access mountable section of roundabout.
Sturt Highway / Newell Highway	SPA109	➢ Existing signage to be removed.
Sturt Highway / Kidman Way	SPA110	➢ Vehicle to utilise full carriageway; ➢ No modifications to intersection required.
Narrand Street / Uri Street	SPA111	➢ Vehicle to utilise full carriageway; ➢ No modifications to intersection required.
Kidman Way / Hanwood Avenue	SPA112	➢ Vehicle to utilise full carriageway; ➢ No modifications to intersection required.

Hanwood Avenue / Bob Irvin Road	SPA113	➢ Vehicle to utilise full carriageway. ➢ Height clearance under power lines will need to be confirmed during detailed design. ➢ Clearance envelope for load passes over power pole and drainage culvert. It is expected that the vehicle will take multiple corrective manoeuvres to undertake this turn, and therefore this is not anticipated to be an issue.
Bob Irvin Road access to site	SPA114	➢ Vehicle to utilise full carriageway.

7.5.6 Pull Over / Rest Locations

onemile**grid** has investigated pull over/rest locations managed by TfNSW and other authorities. The following locations are considered suitable not only as rest stops but also as safe areas for vehicles to pull over, allowing queued traffic behind the load to pass.

- 32 km: Picton Road, Picton Road Rest Area Westbound;
- 106 km: Hume Highway, Sutton Forrest Rest Area Southbound;
- 156 km: Hume Highway, Goulburn Bypass Rest Area Southbound;
- 168 km: Hume Highway, Drews Truck Parking Bay;
- 179 km: Hume Highway, Mystery Boulders Truck Parking Bay Southbound;
- 192 km: Hume Highway Windmills Rest Area Southbound;
- 199 km: Hume Highway, Lerida Creek Truck Parking Bay;
- 256 km: Hume Highway, Two Mile Rest Area;
- 260 km: Hume Highway, Conroys Gap Rest Area Southbound;
- 278 km: Hume Highway, Gowlands Stopping Bay;
- 286 km: Hume Highway, Reddy Creek Truck Parking Bay Southbound;
- 314 km: Hume Highway, Mungi Mungi Hill Rest Area;
- 319 km: Hume Highway, Coolac Rest Area;
- 331 km: Hume Highway, Four Mile Hill Truck Parking Bay;
- 343 km: Hume Highway, Big Ben Creek Rest Area Westbound;
- 373 km: Sturt Highway, Lower Tarcutta Rd Truck Parking Bay;
- 399 km: Sturt Highway, Guys Hill Truck Parking Bay Westbound;
- 436 km: Sturt Highway, Yarragundry Stopping Bay Westbound;
- 481 km: Sturt Highway, Kywong Stopping Bay;
- 492 km: Sturt Highway, Sandigo Truck Parking Bay Westbound.

8 DESIGN ASSESSMENT

8.1 Sight Distance Review

As part of **one**mile**grid**'s investigations, Google Streetview imagery was reviewed to assess the sight lines along the frontage of the site. The safe intersection sight distance (SISD) requirements, as outlined within *Austroads Guide to Road Design Part 4A: Unsignalised and Signalised Intersections*, is summarised below in Figure 21.

Figure 21 Austroads SISD

Design speed (km/h)	Based on safe intersection sight distance for cars[1] h_1 = 1.1; h_2 = 1.25, d = 0.36[2]; Observation time = 3 sec					
	R_T = 1.5 sec[3]		R_T = 2.0 sec		R_T = 2.5 sec	
	SISD (m)	K	SISD (m)	K	SISD (m)	K
40	67	4.9	73	6	–	–
50	90	8.6	97	10	–	–
60	114	14	123	16	–	–
70	141	22	151	25	–	–
80	170	31	181	35	–	–
90	201	43	214	49	226	55
100	234	59	248	66	262	74
110	–	–	285	87	300	97
120	–	–	324	112	341	124
130	–	–	365	143	383	157

Source: Austroads Guide to Road Design Part 4A: Unsignalised and Signalised Intersections

Noting the observed 85th percentile speed of 62.8 km/hr on Bob Irvin Road, the design speed of 70 km/h applies to the site access. Regardless, sight distances are expected to be appropriate with clear sight lines available in both directions along Bob Irvin Road.

8.2 Access Design

Detailed designs for the site access points have not been undertaken at this stage. The site access should be designed to accommodate the largest typical vehicles that will access the site during the construction and operational phases of the facility. In relation to the OSOM vehicles it is expected that movements will be managed under traffic management and accordingly additional widening at the site access will be limited and therefore avoid impacts to existing flora and fauna.

9 TRAFFIC

9.1 Traffic Generation

9.1.1 Overview

The majority of traffic generated by the proposed development will be generated during the construction / installation phases associated with trade persons, facility staff and deliveries. During the future operational phase, the level of traffic generated will be significantly reduced due to the low employee intensity requirements of the facility. Notwithstanding, an assessment of the anticipated traffic generated by the site during each phase of the project follows.

9.1.2 Typical Construction

As noted in Section 6.1.1, approximately 45 staff will be accommodated on-site during the typical construction phase. To provide for a conservative analysis, it will be assumed that each staff member drives to the site independently, and it will be assumed that all staff travelling via private vehicles arrive and depart during a single peak hour.

During the typical construction phase, it is expected that the 20 heavy vehicle deliveries will occur at regular intervals throughout the day, and therefore 10% will be assumed to occur during the peak periods, equating to 2 trucks arriving and departing during the peak periods.

9.1.3 Civil Works Peak

The peak civil works phase of the project requires a maximum of 55 construction staff on-site. To provide for a conservative analysis, it will be assumed that each staff member drives to the site independently, and it will be assumed that all staff travelling via private vehicles arrive and depart during a single peak hour. This equates to 55 vehicle movements during the AM and PM peak hours.

It will again be assumed that the 50 heavy vehicle deliveries will occur at regular intervals throughout the day, with 10% occurring during the peak periods. This equates to 5 trucks arriving and departing during the peak periods.

9.1.4 Electrical Works Peak

The peak electrical works phase of the project requires a maximum of 105 construction staff on-site.

Due to the large volume of staff travelling to the site during the peak construction phases, the operator has outlined that they will consider the opportunity for staff to travel to the site via buses, with a communal meeting point or accommodation venue for staff.

Based on this, it will be assumed that one third of staff will arrive via buses provided by the operator. It will be assumed that 2 standard buses will be provided, each accommodating 10-20 staff, therefore approximately 30 staff will arrive via bus. This equates to 2 vehicle trips associated with buses arriving and departing the site during the peak hours (2 arrivals and 2 departures).

To provide for a conservative analysis, it will be assumed that the remaining 75 staff members drive to the site independently. This equates to 75 vehicle movements during the AM and PM peak hours.

It will again be assumed that 10% of the 15 heavy vehicle deliveries occur during the peak periods, equating to 2 trucks arriving and departing during the peak periods.

9.1.5 Anticipated Daily Traffic Generation

Based on the above, the anticipated daily traffic generation of the proposed development is shown below. For clarity the traffic generation of the operational phases, as discussed in Section 6.2 has been included.

Noting the location of the site approximately 7 km from Central Griffith, there has been an allowance made for return trips to the site for staff to purchase lunch. For the purposes of analysis, it will be assumed that 10 private vehicles that access the site during each the construction periods will depart and return back to the site over the course of the day.

Table 11 Anticipated Daily Traffic Movements

Stage	Light Vehicles	Buses	Heavy Vehicles	Total
Typical Construction	110	0	40	**150**
Civil Works Peak	130	0	100	**230**
Electrical Works Peak	170	8	30	**208**
Typical Operation	10	0	0	**10**
Annual Inspections	20	0	4	**24**

As shown above, the peak period for traffic generation of the site is during the civil works peak construction period, when the site is expected to generate 230 daily trips. For the purposes of analysis, the civil works peak will be considered the 'worst case' scenario for daily traffic movements.

9.1.6 Peak Hour Traffic Generation

Based on the above, the following traffic generation is expected during the AM and PM peak periods.

Table 12 Anticipated Peak Hour Traffic Movements

Stage	Light Vehicles	Buses	Heavy Vehicles	Total
Typical Construction	45	0	4 (2 arrivals 2 departures)	49
Civil Works Peak	**55**	**0**	**10** (5 arrivals 5 departures)	**65**
Electrical Works Peak	**75**	**4** (2 arrivals 2 departures)	**4** (2 arrivals 2 departures)	**83**
Typical Operation	5	0	0	5
Annual Inspections	10	0	2	12

As detailed above, during the electrical works peak the site is anticipated to generate a maximum of 83 vehicle movements during the AM and PM peak periods. For the purposes of analysis, the electrical works peak will be considered the 'worst case' scenario for AM and PM peak hour traffic movements.

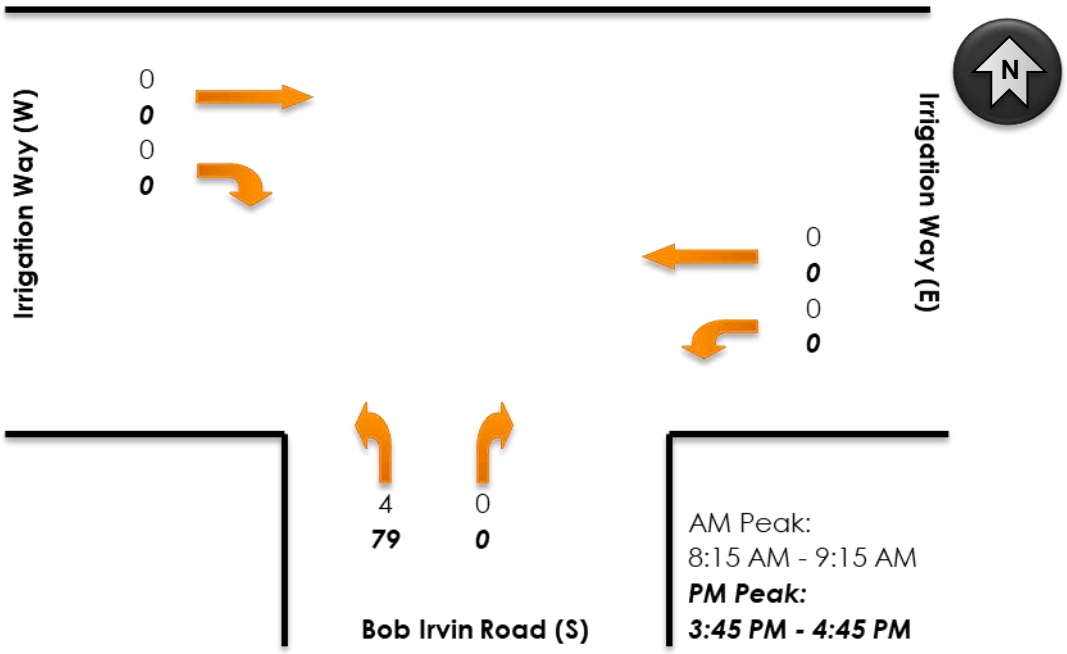
9.2 Traffic Distribution

As noted in Section 7 above, it is proposed to have vehicles approach the site from the south along Bob Irvin Road, whilst outbound traffic movements will be via the north and the intersection with Irrigation Way.

Due to the proximity of Griffith, and the connections to Burley Griffin Way and Kidman Way, it will be assumed that all construction traffic will originate and depart to the west.

Application of the above assumptions returns the anticipated turning movements at the Irrigation Way / Bob Irvin Road intersection during the AM and PM peak hours of the electrical works peak.

Figure 22 Generated Traffic Volumes – Irrigation Way / Bob Irvin Road



9.3 Expected Traffic Volume Growth

The TfNSW advice for SEARs specifically requests the addition of linear growth to the year of peak construction. The construction contractor has advised that the electrical works peak is anticipated in March 2027, less than 2 years after the traffic surveys described in Section 4. It is therefore anticipated that growth on the external road network will be negligible prior to the peak construction period.

Regardless, for the purposes of a conservative analysis, growth rates of 2% per year (compound) have been applied to the existing traffic volumes over a 3-year period, equivalent to a 6.1% increase in traffic volumes.

9.4 Cumulative Projects

onemile**grid** and the project team has undertaken research on developments in the vicinity of the site. The key project to be considered is the Yoogali Solar Farm project, which is to be delivered concurrently with the proposed development. The Riverina Solar Farm is the other project that is

relevant for cumulative purposes, however it should be noted that this project is considered unlikely to be built by the project team. A description of each project is provided below in Table 13.

Table 13 Cumulative projects summary

Project	Description	Location	Status
Yoogali Solar Farm (DA291/2018)	15 MW Solar Farm	Shared property	Approved, seeking modification
Riverina Solar Farm (SSD 7482)	40 MW Solar Farm	Approx. 500 m northwest	Approved, pre-construction (Understood to be unlikely to be built)
Hawkins Road Solar Farm (DA189/2023)	5 MW Solar Farm and 5 MW BESS	Approx. 1 km south	Approved, modification application submitted August 2025

Based on publicly available information, the estimated traffic volumes for each project are demonstrated below. It is understood that commensurate with the proposed development, all cumulative projects listed above will generate limited traffic once operational, and therefore further assessment is not required.

Table 14 Cumulative projects estimated construction traffic volumes

Project	Construction Period	Peak Light Vehicles per day	Peak Heavy Vehicles per day	Total movements per day
Yoogali Solar Farm (DA291/2018)	10 weeks	40	6	**92**
Riverina Solar Farm (SSD 7482)	12 months	100	46	**292**
Hawkins Road Solar Farm (DA189/2023)	6 months	15	4	**38**

A review of the information available for the Riverina Solar Farm project reveals that the preferred access route for construction materials and private vehicles was from the north, via Burley Griffin Way and Ross Road, rather than via Irrigation Way. This approach is understood to have been adopted due to the low level of separation provided on Hamilton Road between the railway line and Irrigation Way, and the required upgrades to provide a compliant turning treatment. Given the low likelihood of the Riverina Solar Farm being constructed, and the differences in access routes, the Riverina Solar Farm project is not anticipated to have a material cumulative impact on the proposed development, and has been excluded from further analysis.

For the Yoogali Solar Farm and Hawkins Road Solar Farm project, it will be assumed that each light vehicle will equate to an additional one inbound movement during the AM peak, and one outbound movement during the PM peak, equating to a total of 40 movements during the peak periods. It will again be assumed that 10% of heavy vehicle deliveries occur during the peak periods, equating to 1 truck arriving and departing during the peak periods.

As the Yoogali Solar Farm is proposed to utilise the same routes as the subject development, the same traffic distribution as described in Section 9.2 will be applied to traffic generated by this development.

The Traffic Impact Assessment prepared for Hawkins Road Solar Farm identifies that inbound and outbound access is to be provided via Mirrool Branch Road, east of Bob Irvin Road. The traffic

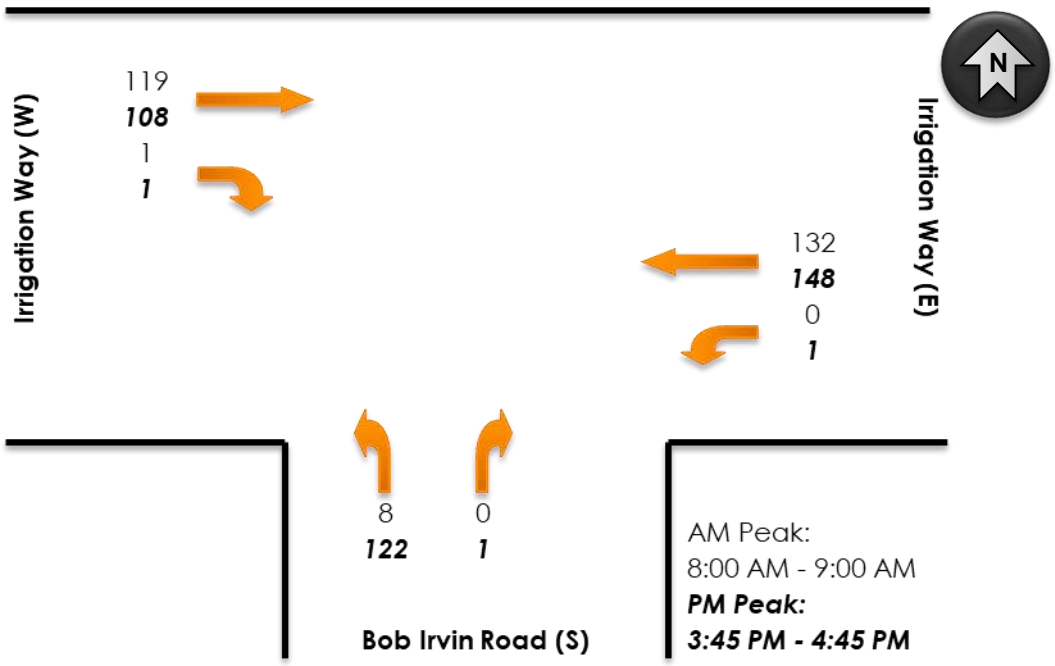
generated by the Hawkins Road Solar Farm will therefore be included within the traffic analysis as additional through volumes along Irrigation Way.

9.5 Resultant Future Traffic Volumes

Based on the above, the future intersection volumes at the Irrigation Way / Bob Irvin Road intersection can be calculated by combining the existing volumes with the expected traffic volume growth, and superimposing the traffic anticipated to be generated by the proposed development and cumulative projects.

The resultant peak hour traffic volumes are shown in Figure 23.

Figure 23 Resultant Traffic Volumes – Irrigation Way / Bob Irvin Road



9.6 Traffic Impact

9.6.1 Overview

The above traffic volumes represent the combined impact of the proposed BESS development alongside the Yoogali Solar Farm and Hawkins Road Solar Farm projects. Although each project has distinct construction schedules and peak activity periods, this assessment adopts a conservative approach by aggregating all peak traffic volumes into a single scenario. This 'worst-case' methodology ensures that any potential overlaps in construction activity are fully captured.

However, it is highly unlikely that all projects will experience peak construction activity simultaneously. In practice, this means actual cumulative traffic volumes will almost certainly be lower than those assessed. By applying this conservative approach, the analysis provides a robust evaluation of intersection performance, road capacity, and safety implications under the highest anticipated cumulative traffic generation.

The traffic impacts are as follows.

9.6.2 Peak Period Impacts

During the electrical works peak construction phase of the proposed development, the anticipated traffic generation of the development is 83 vehicle movements during the peak periods. When accounting for the cumulative volumes including the Yoogali Solar Farm project, a total of 124 movements are expected.

It should be noted the traffic generation of the proposed development and the Yoogali Solar Farm is expected to be highly tidal, with arrivals during the AM peak and departures during the PM peak. The separation of inbound and outbound routes will also reduce the impact of the construction traffic on the surrounding road network.

It should be noted the above analysis conservatively assumes that all staff arrive during the AM peak hour, and all staff depart during the PM peak hour. Based on the proposed construction hours 7:00 AM to 5:00 PM on weekdays, it is expected that the majority of staff will arrive prior to the existing AM peak period of 8:15 AM to 9:15 AM. Similarly, outbound staff movements are expected to be more evenly distributed throughout the afternoon, rather than being concentrated within the PM peak period of 3:45 PM to 4:45 PM.

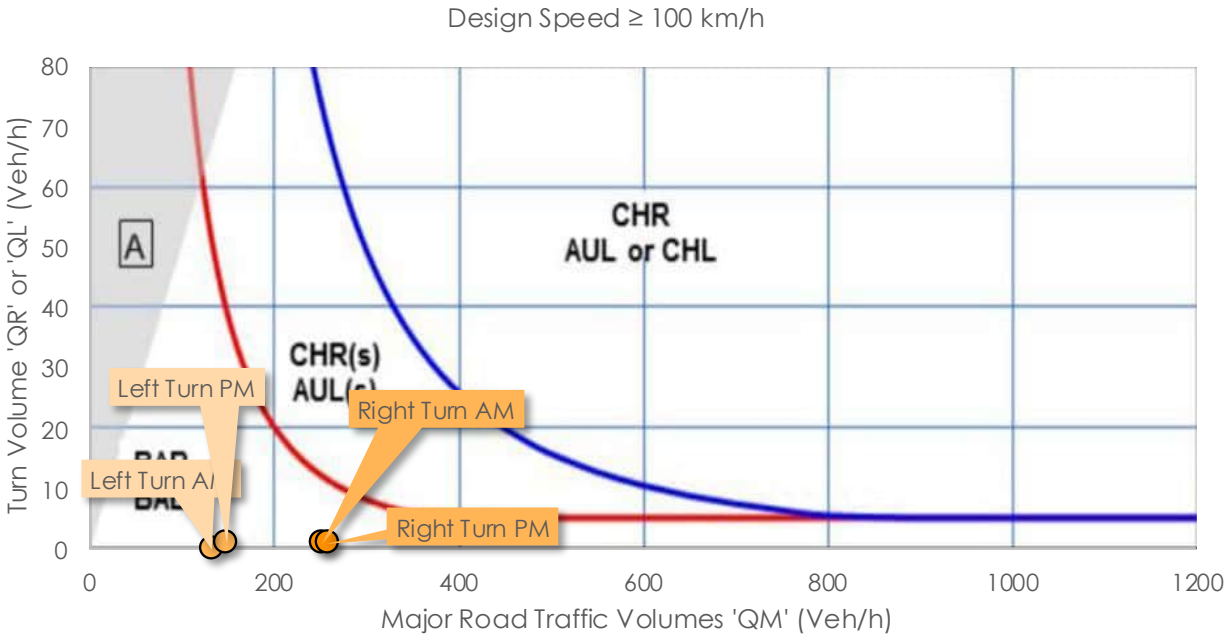
9.6.3 Turn Warrant Assessment

In evaluating the suitability of the Irrigation Way / Bob Irvin Road intersection, reference is made to the *Austroads Guide for Road Design Part 4A: Unsignalised and Signalised Intersections* which outlines what physical form of turn treatment will provide an appropriate level of safety at priority controlled intersections, balanced with additional construction costs associated with higher level treatments.

Consequently, it is considered that the design process should initially decide whether a turn lane is actually required, and then, if it is decided that a turn lane is required, the Austroads Turn Lane Warrants may be used as guidance as to what turn lane design may be the most appropriate

A review of the warrants for Basic, Auxiliary and Channelised turn treatments has been undertaken for the intersection, based on the resultant (cumulative) traffic volumes presented above.

Figure 24 Austroads Turn Treatment Warrants – Peak Electrical Works Phase



The figure above suggests that peak hour traffic volumes to and from the development would warrant provision of at most a basic right turn treatment (BAR) and basic left turn treatment (BAL) for the Irrigation Way approaches.

In this regard it should be noted that as the development is not proposing to utilise the Irrigation Way / Bob Irvin Road intersection for inbound traffic movements, the warrants are not triggered by any traffic generated by the proposed development. The only traffic that will be added to the intersection will be from the minor road approach, with all traffic expected to turn left onto Irrigation Way.

Noting the warrants are the same before and during construction of site, it is not considered that the proposed development in isolation triggers requirements to upgrade the intersection.

It is noted that these warrants effectively balance the additional construction cost of higher-order treatments against the reduction in estimated crash costs. Commentary within the associated Austroads Guide to Traffic Management Part 6 does however note that these warrants are based on the construction of intersections on **new** roads (i.e., greenfield sites), and are not strictly applicable for the construction of new intersections on existing roads, where construction costs of these treatments may be higher due to the presence of existing infrastructure or other site constraints.

Furthermore, it is noted that the warrants do not allow any consideration of the duration of traffic impacts, instead assuming that traffic volumes continue in perpetuity. In the case of the proposed BESS, the increase in traffic volumes will only be applicable during the 18 to 24-month construction period, after which the use will be operational and volumes generated through the intersection will effectively cease, leaving any upgrades disused.

The diagrams above show that the generated turning volumes do not influence the warrants, whilst the observed through traffic volumes are low, therefore the operation of the intersection is not expected to be compromised under this scenario.

Nevertheless, it is recommended to implement advanced warning signage along Irrigation Way in the vicinity of the site as part of the construction traffic management strategy during the construction period to assist with vehicle access.

9.6.4 Intersection Capacity Analysis

To assess the future operation of the Irrigation Way / Bob Irvin Road / Hamilton Road the future traffic cumulative volumes in Figure 23 have been input into SIDRA Intersection, a traffic modelling software package.

Table 15 Irrigation Way / Bob Irvin Road / Hamilton Road – Existing/Future Conditions

Approach	DoS		Avg. Delay (sec)		Queue (m)		Level of Service	
	Existing	Future	Existing	Future	Existing	Future	Existing	Future
AM Peak								
Bob Irvin Road (S)	0.004	0.008	6.0	6.1	0.1	0.2	A	A
Irrigation Way (E)	0.075	0.078	0.0	0.0	0.0	0.0	A	A
Hamilton Road (N)	0.016	0.017	6.7	6.9	0.4	0.4	A	A
Irrigation Way (W)	0.062	0.076	0.5	0.4	0.2	0.2	A	A
PM Peak								
Bob Irvin Road (S)	0.005	0.099	5.8	6.2	0.1	3.1	A	A
Irrigation Way (E)	0.064	0.087	0.2	0.1	0.1	0.1	A	A
Hamilton Road (N)	0.013	0.016	6.5	7.6	0.3	0.4	A	A
Irrigation Way (W)	0.060	0.069	0.7	0.6	0.3	0.3	A	A

The table above indicates that performance of the intersection is not anticipated to be materially impacted during the peak construction period, even when considering the cumulative impacts of the nearby projects, with nominal increases to delays and queues and importantly no change to the through operation of Irrigation Way.

9.6.5 Daily Traffic Volumes

The standard road widths for Rural/Rural Residential Roads from the Griffith Engineering Guidelines for Subdivisions and Development Standards, Part 2 Road Design are provided below.

Figure 25 Griffith Rural/Rural Residential Road widths

AADT	ROAD RESERVE	CARRIAGEWAY	SHOULDER	FORMATION
<500	20	6.0	1.2	8.4
500-1000	20	6.5	1.2	8.9
1000-2000	20	6.5	1.8	10.1
>2000 (and all B double routes)	25	7.0	1.8	10.6

onemile**grid** has undertaken an assessment of existing and future daily traffic volumes for roads impacted by the proposed routes described in Section 7. As previously noted, this is based on the civil works peak which is considered the critical case for daily traffic volumes.

Table 16 Resultant Daily Traffic Volumes

Road	*Existing Volumes*	*Additional Daily Volumes**	*Resultant Traffic Volumes*
Irrigation Way	2,512	161	2,673
Bob Irvin Road	119	161	280
Hanwood Avenue	494	161	655

*Including Yoogali Solar Farm project

A review of the resultant traffic volumes during the construction period against the Griffith design standards is provided above.

Table 17 Resultant Daily Traffic volumes Assessment

Road	*Resultant Traffic Volumes*	*Design Standard*	*Existing road condition*	*Will meet standard?*
Irrigation Way	2,673	25 m road reserve and 7 m carriageway	Sealed with a single lane in each direction and a carriageway width of 7.2 m	Yes
Bob Irvin Road	280	20 m road reserve and 6 m carriageway	Adjacent the site: Unsealed with a carriageway width of 10.3 m	Yes
			South of the site: Sealed with a carriageway width of 5.5	No, refer to further discussion below
Hanwood Avenue	655	20 m road reserve and 6.5 m carriageway	Sealed with a carriageway width of 5.9 m	No, refer to further discussion below

It is acknowledged that during the construction period of the proposed development, daily traffic volumes will exceed target road volumes along Bob Irvin Road and Hanwood Avenue.

The Griffith City Council Engineering Guidelines identify that Rural roads should be provided with a 6 m wide carriageway for daily traffic volumes less than 500 vehicles per day (vpd), and a 6.5 m carriageway for traffic volumes between 500-1000 vpd. Both roads are provided with sealed carriageways, though the width is marginally non-compliant of the above requirements.

Considering the relatively short duration of the construction period, with traffic volumes generally to return to existing volumes once construction ceases, the existing road conditions are considered to be appropriate. It is acknowledged that the increased traffic volumes on Bob Irvin Road and Hanwood Avenue during construction may result in increased frequency of vehicles relying on the shoulder to pass one another other. However, considering the low speed limit and warning signage expected during the construction period, the seal width is expected to be appropriate to

accommodate infrequent passing, with gravel shoulders provided on both sides of Bob Irvin Road and Hanwood Avenue along the length of the road. Additionally, all construction traffic along each of these roads is expected to be inbound traffic, that is east bound for Hanwood Avenue and north bound for Bob Irvin Road. The tidal nature of the construction related traffic is expected to reduce the frequency of opposing traffic.

It is recommended that the pavement is monitored by the construction contractor and operator to identify if any maintenance is required during or after completion of the construction phase of the project. This process may be supported through the preparation of a pre-construction condition report and a post-construction dilapidation report, carried out by a suitably qualified professional.

10 CONCLUSIONS

Based on the foregoing assessment, it is concluded as follows:-

- It is proposed to develop the site in Yoogali for the purposes of a battery energy storage system (BESS);
- The following access routes are recommended during the construction period:
  - It is recommended that inbound vehicles approach the site via Hanwood Avenue and Bob Irvin Road to the south;
  - It is recommended that outbound vehicles depart to the north via the Irrigation Way / Bob Irvin Road intersection;
  - OSOM vehicles from Port Kembla will access the site via a proposed route of 610 km, with key connections being Hume Highway, Stuart Highway and Kidman Way.
- Sight lines at the proposed access via Bob Irvin Road are considered appropriate;
- The proposed access via Bob Irvin Road be designed to accommodate the largest vehicle requiring access to the site during construction;
- During the construction phase, the proposed BESS will create short-term, elevated levels of vehicle movements, though the level of traffic generated is expected to have a minimal impact on the operation of the external road network;
- During operation the site is expected to have a negligible impact on the surrounding road network;
- Car parking will be comfortably provided on-site as required.

Appendix A Swept Path Diagrams

HAMILTON ROAD

IRRIGATION WAY

BOB IRVIN ROAD

N

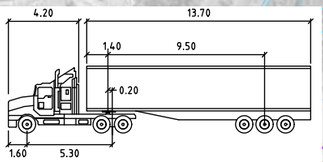
BODY IMPACT WITH ROAD FURNITURE

CLEARANCE OVERHANG ONLY
WHEELS AND BODY REMAIN
WITHIN ROADWAY

ROAD LEVEL OF SURVEY
SHOWN IN PURPLE

PM S 19M
AUSTROADS 2013 (AU)

SUBJECT SITE
41 BOB IRVIN ROAD



PM S 19M

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Trailer Width	: 2.50	Steering Angle	: 27.8
Tractor Track	: 2.50	Articulating Angle	: 70.0
Trailer Track	: 2.50		

SWEPT PATH LEGEND

— — — — DESIGN VEHICLE SWEPT PATHS SHOWN DASHED

- - - - - - - - - 500mm CLEARANCE ENVELOPE SHOWN DOTTED

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Date Plotted: 13-05-2025 12:00:12

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Scale
1:400 @ A3
0 2 4 8

Drawing Title
GRIFFITH BESS
HEAVY VEHICLE SITE ACCESS
SWEPT PATH ANALYSIS

Designed	Approved	Melway Ref
DA	VG	NA

Project Number	Drawing Number	Revision
250170	SPA100	A

HAMILTON ROAD

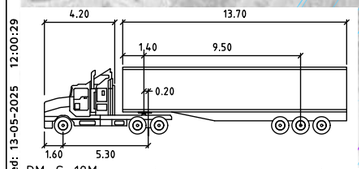
IRRIGATION WAY

BOB IRVIN ROAD

ROAD LEVEL OF SURVEY
SHOWN IN PURPLE

SUBJECT SITE
41 BOB IRVIN ROAD

N



PM S 19M	meters		meters
Tractor Width	: 2.50	Lock to Lock Time	: 6.0
Trailer Width	: 2.50	Steering Angle	: 27.8
Tractor Track	: 2.50	Articulating Angle	: 70.0
Trailer Track	: 2.50		

SWEPT PATH LEGEND

- — — — DESIGN VEHICLE SWEPT PATHS SHOWN DASHED
- - - - - - - - 500mm CLEARANCE ENVELOPE SHOWN DOTTED

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Scale
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0 2 4 8

Drawing Title
GRIFFITH BESS
HEAVY VEHICLE SITE ACCESS
SWEPT PATH ANALYSIS

Designed	Approved	Melway Ref
DA	VG	NA

Project Number	Drawing Number	Revision
250170	SPA101	A

INTERSECTION OF:
TOM THUMB ROAD AND SPRINGHILL ROAD
PORT KEMBLA

SPRINGHILL ROAD

N

MOUNTABLE CONCRETE PAD

TES25012 - Extended Trailer
Custom

TES25012 Extended Trailer
Custom

TOM THUMB ROAD

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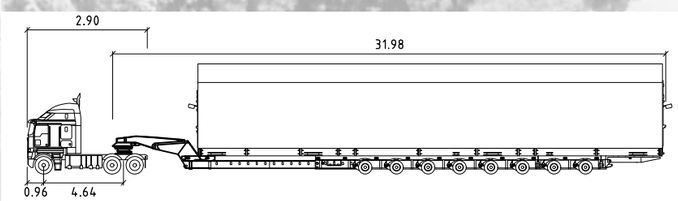

TES25012 Extended Trailer 36.95m Long

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Trailer Width	: 4.20	Steering Angle	: 19.6
First Unit Track	: 2.50	Articulating Angle	: 60.0
Trailer Track	: 4.620		

SWEPT PATH LEGEND

- — — — DESIGN VEHICLE SWEPT PATHS SHOWN DASHED
- - - - - - - - - 500mm CLEARANCE ENVELOPE SHOWN DOTTED

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Scale
1:400 @ A3
0 2 4 8

Drawing Title
GRIFFITH BESS
HEAVY VEHICLE INBOUND ROUTE
SWEPT PATH ANALYSIS

Designed	Approved	Melway Ref
DA	VG	NA

Project Number	Drawing Number	Revision
250170	SPA200	A

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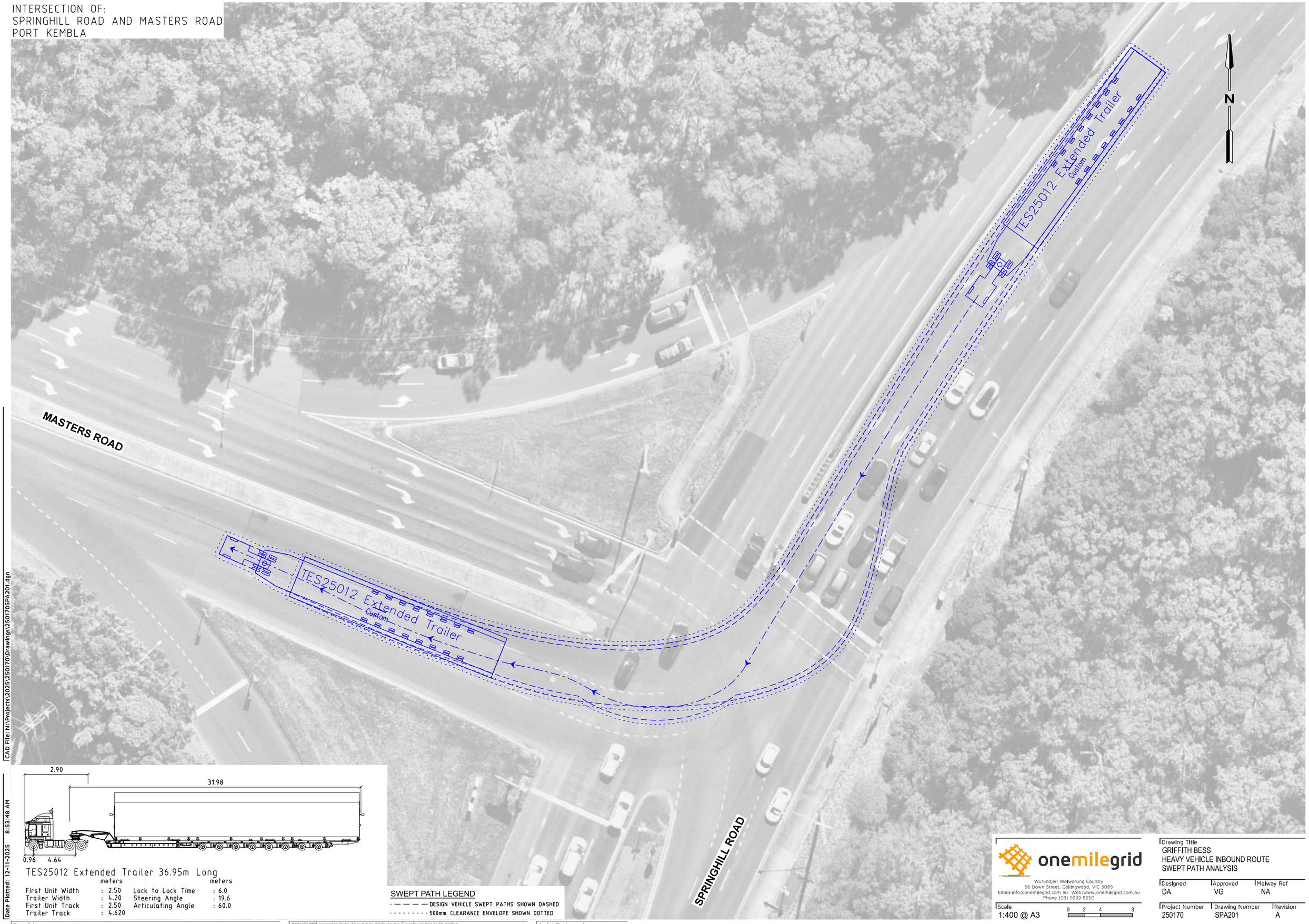
INTERSECTION OF:
SPRINGHILL ROAD AND MASTERS ROAD
PORT KEMBLA



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Trailer Width	: 4.20	Steering Angle	: 19.6
First Unit Track	: 2.50	Articulating Angle	: 60.0
Trailer Track	: 4.620		

SWEPT PATH LEGEND

- — — — DESIGN VEHICLE SWEPT PATHS SHOWN DASHED
- - - - - - - - 500mm CLEARANCE ENVELOPE SHOWN DOTTED

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Scale 1:400 @ A3 (0 2 4 8)

Drawing Title
GRIFFITH BESS
HEAVY VEHICLE INBOUND ROUTE
SWEPT PATH ANALYSIS

Designed	Approved	Melway Ref
DA	VG	NA

Project Number	Drawing Number	Revision
250170	SPA201	A

INTERSECTION OF:
PRINCES MOTORWAY AND PICTON ROAD
CATARACT

PICTON ROAD

TES25012 Extended Trailer Custom

TES25012 Extended Trailer Custom

TES25012 Extended Trailer Custom

BODY OVERHANG ONLY
WHEELS REMAIN WITH ROADWAY

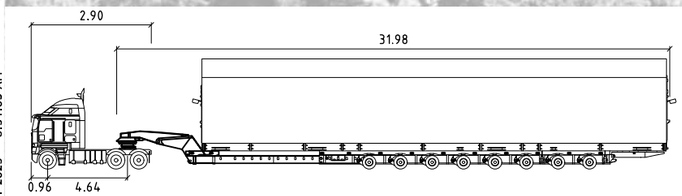
LOW HEIGHT TRAFFIC ISLAND

EXISTING BARRIER

N

PRINCES MOTORWAY

TES25012 Extended Trailer Custom



TES25012 Extended Trailer 36.95m Long

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First Unit Width	: 2.50	Lock to Lock Time	: 6.0
Trailer Width	: 4.20	Steering Angle	: 19.6
First Unit Track	: 2.50	Articulating Angle	: 60.0
Trailer Track	: 4.620		

SWEPT PATH LEGEND

— — — — DESIGN VEHICLE SWEPT PATHS SHOWN DASHED

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Scale 1:400 @ A3 (0 2 4 8)

Drawing Title
GRIFFITH BESS
HEAVY VEHICLE INBOUND ROUTE
SWEPT PATH ANALYSIS

Designed	Approved	Melway Ref
DA	VG	NA

Project Number	Drawing Number	Revision
250170	SPA202	A

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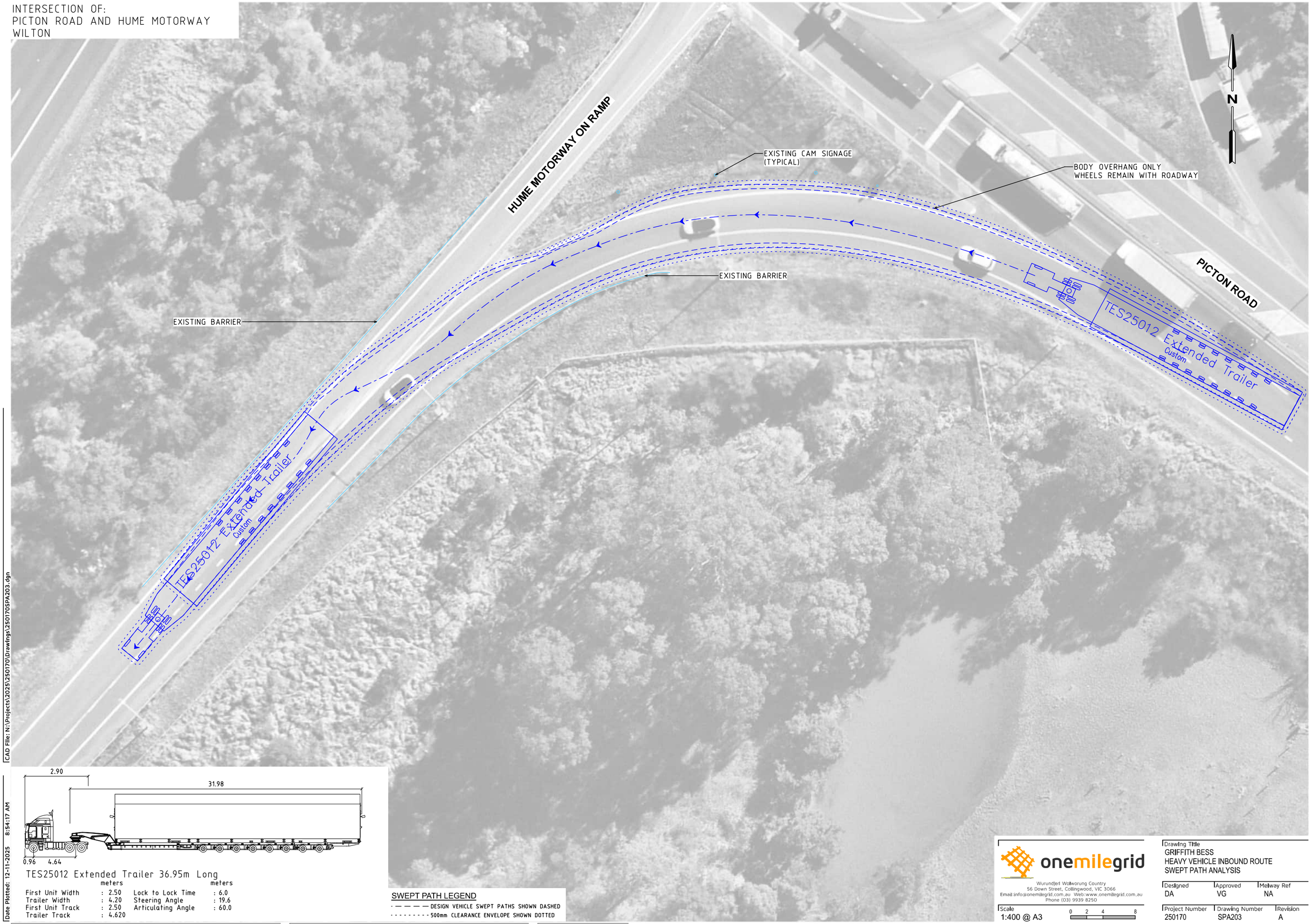
INTERSECTION OF:
PICTON ROAD AND HUME MOTORWAY
WILTON



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First Unit Track	: 2.50	Articulating Angle	: 60.0
Trailer Track	: 4.620		

SWEPT PATH LEGEND

- — — — DESIGN VEHICLE SWEPT PATHS SHOWN DASHED
- - - - - - - - 500mm CLEARANCE ENVELOPE SHOWN DOTTED

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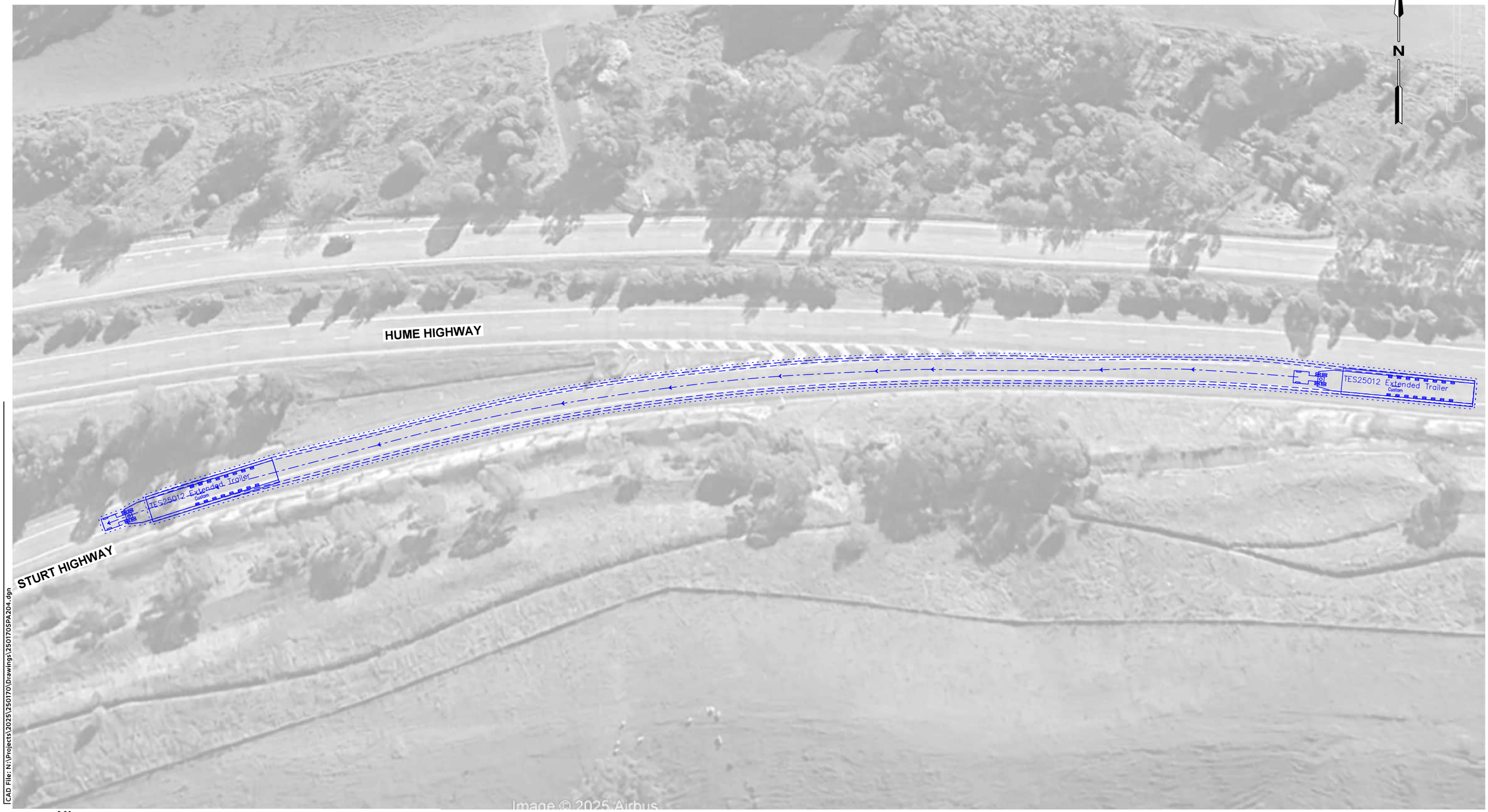
Scale
1:400 @ A3
0 2 4 8

Drawing Title
GRIFFITH BESS
HEAVY VEHICLE INBOUND ROUTE
SWEPT PATH ANALYSIS

Designed	Approved	Melway Ref
DA	VG	NA

Project Number	Drawing Number	Revision
250170	SPA203	A

INTERSECTION OF:
HUME HIGHWAY AND STURT HIGHWAY
TARCUTTA



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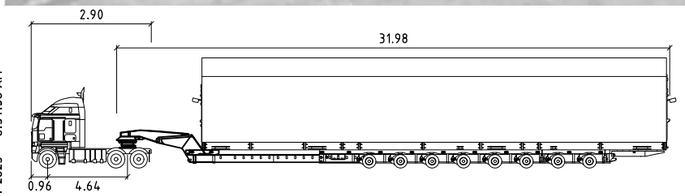

TES25012 Extended Trailer 36.95m Long

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Trailer Width	: 4.20	Steering Angle	: 19.6
First Unit Track	: 2.50	Articulating Angle	: 60.0
Trailer Track	: 4.620		

SWEPT PATH LEGEND

- — — — DESIGN VEHICLE SWEPT PATHS SHOWN DASHED
- - - - - - - - - 500mm CLEARANCE ENVELOPE SHOWN DOTTED

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Aerial provided by Google Earth Pro

Scale 1:750 @ A3 (0 3,75 7,5 15)

Drawing Title
GRIFFITH BESS
HEAVY VEHICLE INBOUND ROUTE
SWEPT PATH ANALYSIS

Designed	Approved	Melway Ref
DA	VG	NA

Project Number	Drawing Number	Revision
250170	SPA204	A

INTERSECTION OF:
STURT HIGHWAY, TASMAN ROAD AND EUNONY BRIDGE ROAD
EAST WAGGA WAGGA

EUNONY BRIDGE ROAD

N

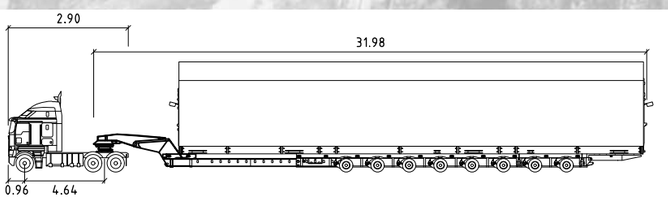
TES25012 Extended Trailer
Custom

EXISTING SIGNAGE

STURT HIGHWAY

EXISTING SIGNAGE

TASMAN ROAD



TES25012 Extended Trailer 36.95m Long

	meters		meters
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Trailer Width	: 4.20	Steering Angle	: 19.6
First Unit Track	: 2.50	Articulating Angle	: 60.0
Trailer Track	: 4.620		

SWEPT PATH LEGEND

- — — — DESIGN VEHICLE SWEPT PATHS SHOWN DASHED
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Scale 1:400 @ A3 (0 2 4 8)

Drawing Title
GRIFFITH BESS
HEAVY VEHICLE INBOUND ROUTE
SWEPT PATH ANALYSIS

Designed	Approved	Melway Ref
DA	VG	NA

Project Number	Drawing Number	Revision
250170	SPA205	A

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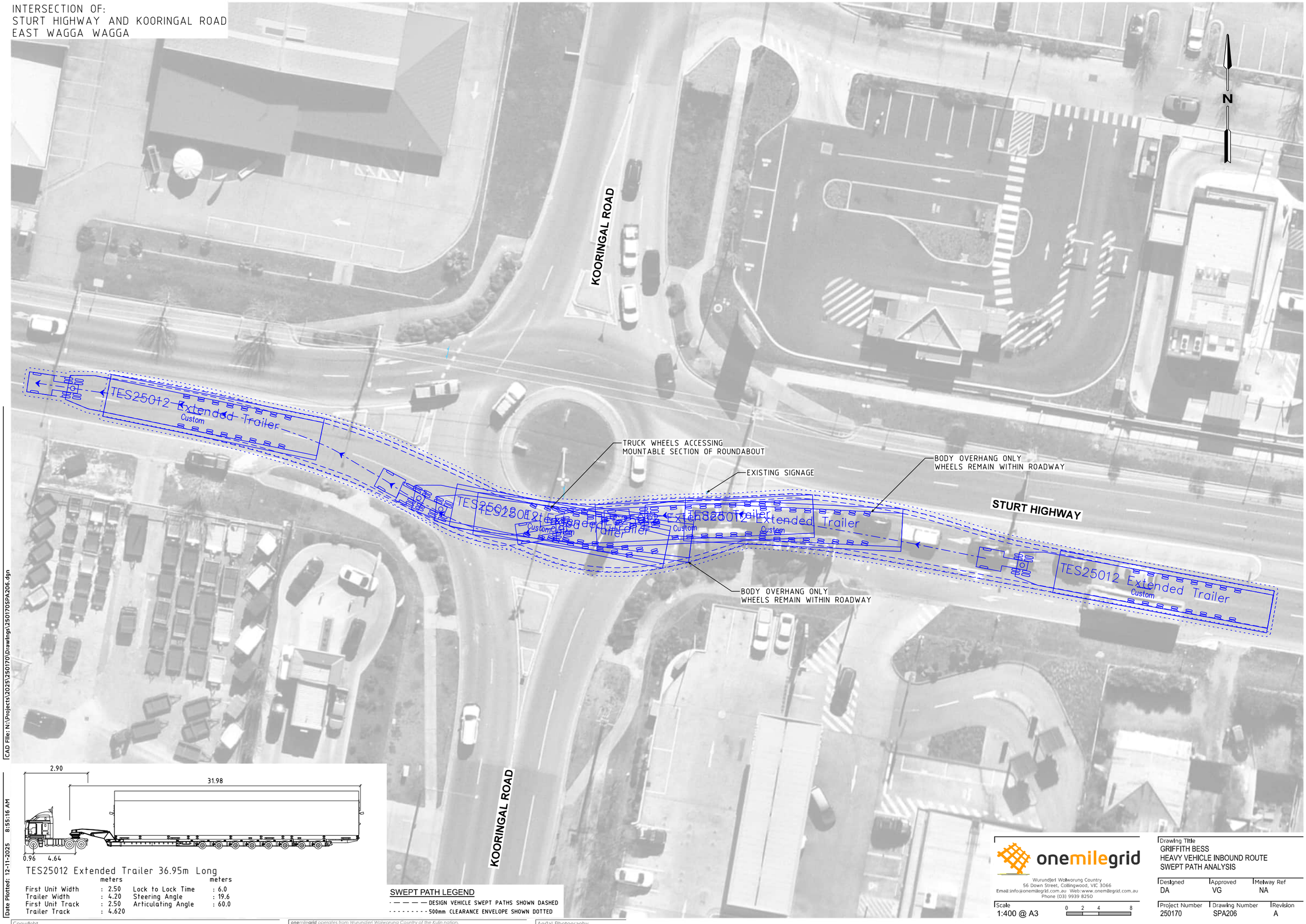
INTERSECTION OF:
STURT HIGHWAY AND KOORINGAL ROAD
EAST WAGGA WAGGA



TES25012 Extended Trailer 36.95m Long

	meters		meters
First Unit Width	: 2.50	Lock to Lock Time	: 6.0
Trailer Width	: 4.20	Steering Angle	: 19.6
First Unit Track	: 2.50	Articulating Angle	: 60.0
Trailer Track	: 4.620		

SWEPT PATH LEGEND
- — — — DESIGN VEHICLE SWEPT PATHS SHOWN DASHED
- - - - - - - - 500mm CLEARANCE ENVELOPE SHOWN DOTTED

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Wurundjeri Woiworung Country
56 Down Street, Collingwood, VIC 3066
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Phone (03) 9939 8250

Scale 1:400 @ A3 (0 2 4 8)

Drawing Title
GRIFFITH BESS
HEAVY VEHICLE INBOUND ROUTE
SWEPT PATH ANALYSIS

Designed	Approved	Melway Ref
DA	VG	NA

Project Number	Drawing Number	Revision
250170	SPA206	A

Date Plotted: 12-11-2025 8:55:16 AM
CAD File: N:\Projects\2025\250170\Drawings\250170SPA206.dgn

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Aerial Photography
Aerial photography provided by Nearmap

INTERSECTION OF:
STURT HIGHWAY AND MASON STREET
EAST WAGGA WAGGA

MASON STREET

STURT HIGHWAY

NORTON STREET

N

EXISTING SIGNAGE
TO BE REMOVED

TRUCK WHEELS ACCESSING
MOUNTABLE SECTION OF ROUNDABOUT

EXISTING SIGNAGE
TO BE REMOVED

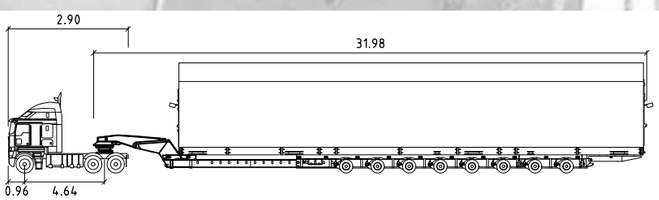
BODY OVERHANG ONLY
WHEELS REMAIN WITHIN ROADWAY

BODY OVERHANG ONLY
WHEELS REMAIN WITHIN ROADWAY

EXISTING POWER POLE

EXISITNG SIGNAGE

TES25012 Extended Trailer
Custom



TES25012 Extended Trailer 36.95m Long

	meters		meters
First Unit Width	: 2.50	Lock to Lock Time	: 6.0
Trailer Width	: 4.20	Steering Angle	: 19.6
First Unit Track	: 2.50	Articulating Angle	: 60.0
Trailer Track	: 4.620		

SWEPT PATH LEGEND

— — — — DESIGN VEHICLE SWEPT PATHS SHOWN DASHED
- - - - - - - - 500mm CLEARANCE ENVELOPE SHOWN DOTTED

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Scale 1:400 @ A3 (0 2 4 8)

Drawing Title
GRIFFITH BESS
HEAVY VEHICLE INBOUND ROUTE
SWEPT PATH ANALYSIS

Designed	Approved	Melway Ref
DA	VG	NA

Project Number	Drawing Number	Revision
250170	SPA207	A

Date Plotted: 12-11-2025 8:55:30 AM
CAD File: N:\Projects\2025\250170\Drawings\250170SPA207.dgn

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Aerial Photography
Aerial photography provided by Nearmap

INTERSECTION OF:
STURT HIGHWAY, PEARSON STREET AND OLYMPIC HIGHWAY
WAGGA WAGGA

OLYMPIC HIGHWAY

STURT HIGHWAY

PEARSON STREET

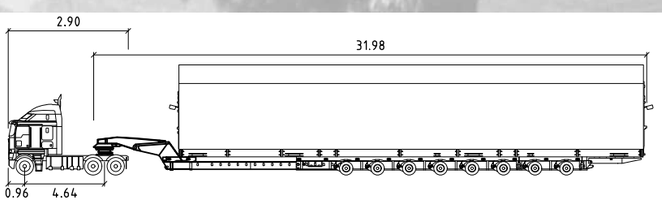
N

TES25012 Extended Trailer
Custom

TRUCK WHEELS ACCESSING
MOUNTABLE SECTION OF ROUNDABOUT

BODY OVERHANG ONLY
WHEELS REMAIN WITH ROADWAY

BODY OVERHANG ONLY
WHEELS REMAIN WITH ROADWAY



TES25012 Extended Trailer 36.95m Long

	meters		meters
First Unit Width	: 2.50	Lock to Lock Time	: 6.0
Trailer Width	: 4.20	Steering Angle	: 19.6
First Unit Track	: 2.50	Articulating Angle	: 60.0
Trailer Track	: 4.620		

SWEPT PATH LEGEND

- — — — DESIGN VEHICLE SWEPT PATHS SHOWN DASHED
- - - - - - - - - 500mm CLEARANCE ENVELOPE SHOWN DOTTED

CAD File: N:\Projects\2025\250170\Drawings\250170SPA208.dgn
Date Plotted: 12-11-2025 8:55:41 AM

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Scale 1:400 @ A3 (0 2 4 8)

Drawing Title
GRIFFITH BESS
HEAVY VEHICLE INBOUND ROUTE
SWEPT PATH ANALYSIS

Designed	Approved	Melway Ref
DA	VG	NA

Project Number	Drawing Number	Revision
250170	SPA208	A

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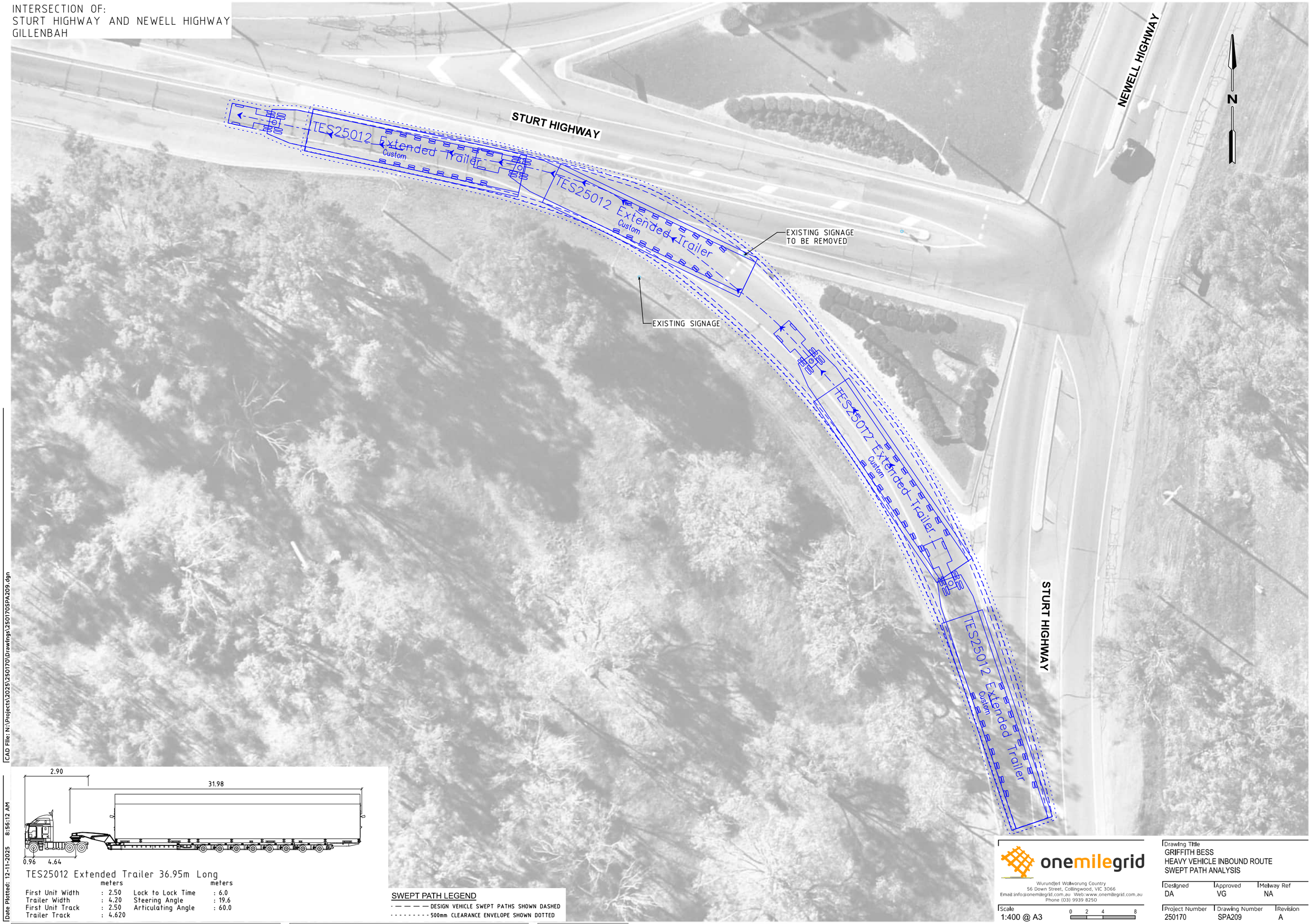
the traditions, the culture, and the hopes of all Wurundjeri Peoples.

Aerial Photography
Aerial photography provided by Nearmap

INTERSECTION OF:
STURT HIGHWAY AND NEWELL HIGHWAY
GILLENBAH



TES25012 Extended Trailer 36.95m Long

	meters		meters
First Unit Width	: 2.50	Lock to Lock Time	: 6.0
Trailer Width	: 4.20	Steering Angle	: 19.6
First Unit Track	: 2.50	Articulating Angle	: 60.0
Trailer Track	: 4.620		

SWEPT PATH LEGEND

- — — — DESIGN VEHICLE SWEPT PATHS SHOWN DASHED
- - - - - - - - - 500mm CLEARANCE ENVELOPE SHOWN DOTTED

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Scale
1:400 @ A3
0 2 4 8

Drawing Title
GRIFFITH BESS
HEAVY VEHICLE INBOUND ROUTE
SWEPT PATH ANALYSIS

Designed	Approved	Melway Ref
DA	VG	NA

Project Number	Drawing Number	Revision
250170	SPA209	A

Date Plotted: 12-11-2025 8:56:12 AM
CAD File: N:\Projects\2025\250170\Drawings\250170SPA209.dgn

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Aerial Photography
Aerial photography provided by Nearmap

INTERSECTION OF:
STURT HIGHWAY AND KIDMAN WAY
DARLING POINT

KIDMAN WAY

STURT HIGHWAY

EXISTING GIVE WAY SIGNAGE

EXISTING GIVE WAY SIGNAGE

EXISTING POWER POLE

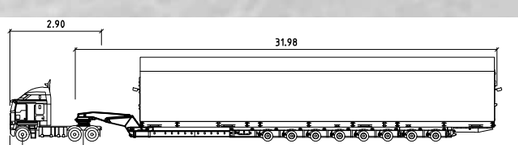
EXISTING SIGNAGE

VEHICLE TO USE OPPOSITE LANE OF ROAD
UNDER TRAFFIC CONTROL ENVIRONMENT

N

CAD File: N:\Projects\2025\250170\Drawings\250170SPA210.dgn

Date Plotted: 12-11-2025 8:56:25 AM



TES25012 Extended Trailer 36.95m Long

	meters		meters
First Unit Width	: 2.50	Lock to Lock Time	: 6.0
Trailer Width	: 4.20	Steering Angle	: 19.6
First Unit Track	: 2.50	Articulating Angle	: 60.0
Trailer Track	: 4.620		

SWEPT PATH LEGEND

- — — — — DESIGN VEHICLE SWEPT PATHS SHOWN DASHED
- - - - - - - - - - - 300mm CLEARANCE ENVELOPE SHOWN DOTTED

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Aerial photography provided by Google Earth Pro

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Scale 1:400 @ A3 (0 2 4 8)

Drawing Title
GRIFFITH BESS
HEAVY VEHICLE INBOUND ROUTE
SWEPT PATH ANALYSIS

Designed	Approved	Melway Ref
DA	VG	NA

Project Number	Drawing Number	Revision
250170	SPA210	A

INTERSECTION OF:
NARRAND STREET AND URI STREET
DARLING POINT

URI STREET

NARRAND STREET

TES25012 Extended Trailer
Custom

EXISTING GIVE WAY SIGNAGE

EXISTING GIVE WAY SIGNAGE

EXISTNG LIGHT POLE

EXISTING SIGNAGE

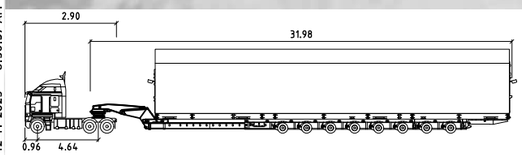
EXISTING LIGHT POLE

VEHICLE TO USE OPPOSITE LANE OF ROAD
UNDER TRAFFIC CONTROL ENVIRONMENT

N

CAD File: N:\Projects\2025\250170\Drawings\250170SPA211.dgn

Date Plotted: 12-11-2025 8:56:37 AM



TES25012 Extended Trailer 36.95m Long

	meters		meters
First Unit Width	: 2.50	Lock to Lock Time	: 6.0
Trailer Width	: 4.20	Steering Angle	: 19.6
First Unit Track	: 2.50	Articulating Angle	: 60.0
Trailer Track	: 4.620		

SWEPT PATH LEGEND

- — — — — DESIGN VEHICLE SWEPT PATHS SHOWN DASHED
- - - - - - - - - - 300mm CLEARANCE ENVELOPE SHOWN DOTTED

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Aerial photography provided by Google Earth Pro

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Phone (03) 9939 8250

Scale 1:400 @ A3 (0 2 4 8)

Drawing Title
GRIFFITH BESS
HEAVY VEHICLE INBOUND ROUTE
SWEPT PATH ANALYSIS

Designed	Approved	Melway Ref
DA	VG	NA

Project Number	Drawing Number	Revision
250170	SPA211	A

INTERSECTION OF:
KIDMAN WAY AND HANWOOD AVENUE
HANWOOD

BEAUMONT ROAD

EXISTING LIGHT POLE

EXISTING POWER POLE

EXISTING BARRIER

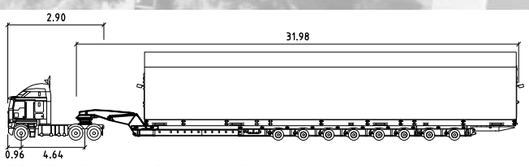
EXISTING BARRIER

HANWOOD AVENUE

KIDMAN WAY

TES25012 Extended Trailer
Custom

VEHICLE TO USE OPPOSITE LANE OF ROAD
UNDER TRAFFIC CONTROL ENVIRONMENT



TES25012 Extended Trailer 36.95m Long

	meters		meters
First Unit Width	: 2.50	Lock to Lock Time	: 6.0
Trailer Width	: 4.20	Steering Angle	: 19.6
First Unit Track	: 2.50	Articulating Angle	: 60.0
Trailer Track	: 4.620		

SWEPT PATH LEGEND

- — — — DESIGN VEHICLE SWEPT PATHS SHOWN DASHED
- - - - - - - - 300mm CLEARANCE ENVELOPE SHOWN DOTTED

CAD File: N:\Projects\2025\250170\Drawings\250170SPA212.dgn
Date Plotted: 12-11-2025 8:56:50 AM

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Aerial Photography
Aerial photography provided by Nearmap

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Scale
1:500 @ A3
0 3,75 7,5 15

Drawing Title
GRIFFITH BESS
HEAVY VEHICLE INBOUND ROUTE
SWEPT PATH ANALYSIS

Designed	Approved	Melway Ref
DA	VG	NA

Project Number	Drawing Number	Revision
250170	SPA212	A

INTERSECTION OF:
HANWOOD AVENUE AND BOB IRVIN ROAD
HANWOOD

HANWOOD AVENUE

BOB IRVIN ROAD

N

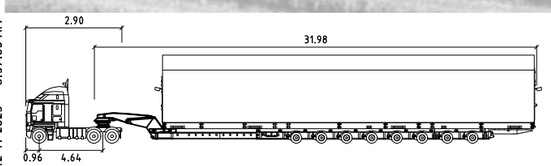
VEHICLE TO USE OPPOSITE LANE OF ROAD
UNDER TRAFFIC CONTROL ENVIRONMENT

TES25012 Extended Trailer
Custom

EXISTING DRAINAGE

EXISTING DRAINAGE

EXISTING POWER POLE



TES25012 Extended Trailer 36.95m Long

	meters		meters
First Unit Width	: 2.50	Lock to Lock Time	: 6.0
Trailer Width	: 4.20	Steering Angle	: 19.6
First Unit Track	: 2.50	Articulating Angle	: 60.0
Trailer Track	: 4.620		

SWEPT PATH LEGEND

- — — — — DESIGN VEHICLE SWEPT PATHS SHOWN DASHED
- - - - - - - - - 300mm CLEARANCE ENVELOPE SHOWN DOTTED

CAD File: N:\Projects\2025\250170\Drawings\250170SPA213.dgn
Date Plotted: 12-11-2025 8:57:03 AM

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Aerial Photography
Aerial photography provided by Nearmap

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Phone (03) 9939 8250

Scale
1:500 @ A3
0 3.75 7.5 15

Drawing Title
GRIFFITH BESS
HEAVY VEHICLE INBOUND ROUTE
SWEPT PATH ANALYSIS

Designed	Approved	Melway Ref
DA	VG	NA

Project Number	Drawing Number	Revision
250170	SPA213	A

BOB IRVIN ROAD

EXISTING POWER POLE

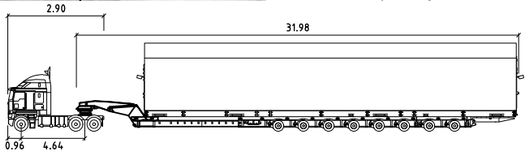
EXISTING POWER POLE

TES25012 Extended Trailer
Custom

TES25012 Extended Trailer
Custom

N

SUBJECT SITE
15 BOB IRVIN ROAD



TES25012 Extended Trailer 36.95m Long

	meters		meters
First Unit Width	: 2.50	Lock to Lock Time	: 6.0
Trailer Width	: 4.20	Steering Angle	: 19.6
First Unit Track	: 2.50	Articulating Angle	: 60.0
Trailer Track	: 4.620		

SWEPT PATH LEGEND

- — — — — DESIGN VEHICLE SWEPT PATHS SHOWN DASHED
- - - - - - - - - 300mm CLEARANCE ENVELOPE SHOWN DOTTED

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Scale
1:500 @ A3
0 3.75 7.5 15

Drawing Title
GRIFFITH BESS
HEAVY VEHICLE INBOUND ROUTE
SWEPT PATH ANALYSIS

Designed	Approved	Melway Ref
DA	VG	NA

Project Number	Drawing Number	Revision
250170	SPA214	A

CAD File: N:\Projects\2025\250170\Drawings\250170SPA214.dgn

Date Plotted: 12-11-2025 8:57:18 AM