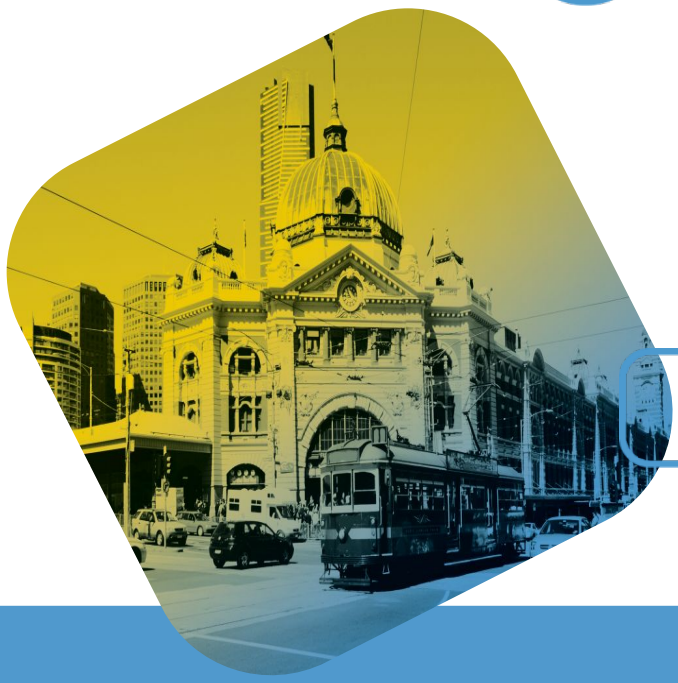
36°43'41.9"S
144°32'12.2"E

Fosterville Solar Farm: Russells Bridge Road, Axedale



Traffic Impact Assessment

10 December 2021
Prepared for Energy Forms Pty Ltd

IMP2106049TIA01F01

Impact

Company Information

Impact Traffic Engineering Pty Ltd

Level 17, 31 Queen Street, Melbourne, Victoria, 3000

ABN: 78 611 424 107

Email create@impactaustralia.com.au

Website www.impactaustralia.com.au

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Contents

Figures

1 IMPACT® Snap Shot

Development Proposition		
Location	36° 43' 31" S 144° 33' 11" E	Fosterville Solar Farm, Axedale
Use	Solar Farm - Up to 100MW	
Access	Primary Access to the site will be via Brownes Lane and Russells Bridge Road	

Statutory Controls	
Traffic Generation	
Construction	Up to 147 daily inbound vehicle movements are expected during the peak construction period, comprising 42 heavy vehicles & 105 light vehicles.
Operation	Up to ten (10) daily vehicle movements are associated with routine maintenance during operations. There will also be, on occasion some additional movements associated with more thorough maintenance.
Traffic Impact	This level of construction traffic will not have any material impact on the operation of the external road network. To ensure the physical impact on the external local road network is appropriately managed, we recommend that the applicant enter into an agreement with Bendigo Council to ensure appropriate repair and maintenance during the construction period.
Design Considerations	
Access Design	Three (3) access points are proposed at the south-western (Brownes Lane), north-western (Brownes Lane) and north-eastern (Russells Bridge Road) corners of the subject site. The site's primary access point will be afforded at the north-western corner via Brownes Lane while the other two will be utilised for emergencies and operational activities. We are advised that the site access will be designed to cater for up to 26 metre B-double vehicles to come into and out of the site.
Sight Distances	A desktop assessment of sight distances along Brownes Lane and Russells Bridge Road has been undertaken. Sight distances of at least 330 metres are available from the northern access points while a sight distance of approximately 150 metres is observed from the southern access point to the south. It is recommended that a physical sight distance assessment be undertaken prior to construction, and if necessary, trees be trimmed and/or install signage to mitigate potential conflicts.
Turn Treatments	Given the low traffic volumes, combined with the relatively short construction period it is considered appropriate to utilise the road shoulders for vehicles to pass (if required) in place of more formal BAR and BAL treatments at local intersections. Temporary advanced warning signs can be put in place to mitigate risks during the construction period.
Recommendations	
Maintenance Plan	We recommend that a repair and maintenance agreement be put in place to ensure any damage to the external road network caused by construction traffic is mitigated and managed appropriately.

Traffic Management Plan	It is recommended that a detailed Traffic Management Plan (TMP) be prepared once the project design is complete and prior to commencement of the project construction, to confirm requirements for mitigation and management works.

Conclusion

— There are no traffic and transport grounds that should prohibit the issue of a permit.

2 Introduction

2.1 Engagement

IMPACT® have been engaged by Energy Forms Pty Ltd on behalf of the applicant to undertake an assessment of the traffic implications of the proposed Fosterville Solar Farm located near Axedale, Victoria.

This Traffic Impact Assessment has been prepared to accompany a planning permit application for the project.

3 Existing Conditions & Site Context

3.1 Location

The Fosterville Solar Farm development site is located at the corner of Russells Bridge Rd and Brownes Ln as illustrated in Figure 1.

Figure 1 Location of Development Site

3.2 Site Context

The subject land is zoned as farming zone and is mainly comprised of flat-lying open paddocks, which have historically been used for cropping and grazing activities.

The site is bound by the Brownes Lane to the west and Russells Bridge Road to the north. The existing Shepparton to Fosterville 220 kV transmission line bisects the site (from south-west to north-east) as shown in the green line above.

Land use in the area is comprised mainly of farming parcels of land. Notably however, the Fosterville Gold Mine/Quarry is located approximately 3 kilometres west along Russells Bridge Road and a quarry is located approximately 5.5 kilometres south along Brownes Lane.

3.3 Planning and Policy Context

The site is situated within City of Greater Bendigo Local Government Areas (LGA), as shown in Figure 2.

All land within the site is designated as Farming Zone, with no specific planning overlays applicable to this area of land.

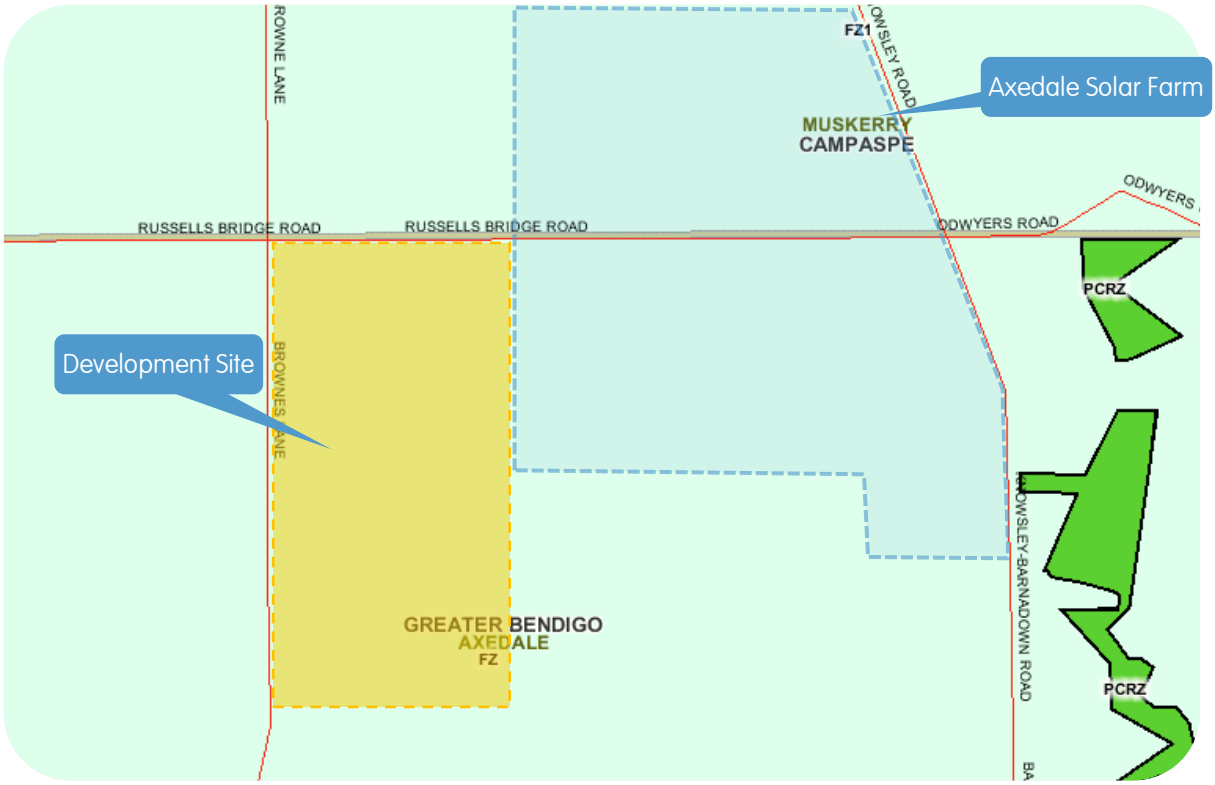


Figure 2 Planning Zone and Overlays

3.3.1 Planning Framework

3.3.1.1 Clause 53.13 - Renewable Energy Facility

Clause 53.13 of the Victorian Planning Provisions outlines the relevant application requirements associated with the development of renewable energy facilities such as the proposed. Relevant to traffic and access matters, considerations under Clause 52.34 include:

- A design response, including a written report and assessment which addresses:
  - The effect of traffic to be generated on roads.
- The responsible authority must also consider, as appropriate:
  - Whether the proposal will require traffic management measures.

3.3.1.2 Clause 35.07 - Farming Zone

A renewable energy facility (such as the proposed) is a Section 2 use within the Farming Zone, subject to meeting the requirements of Clause 53.13.

Relevant to traffic and access, in considering an application for use and building and works, the decision guidelines listed under Clause 35.07-6 include:

- How the use, and development makes use of existing infrastructure and services.

3.4 Existing Road Network

3.4.1 Russells Bridge Road

Classified as a local road (controlled by Campaspe Shire), Russells Bridge Road extends in an east-west direction between Barnadown-Knowsley Road and the Campaspe River; east of Barnadown-Knowsley it continues as Dwyer Lane, whilst to the west of the river it continues as River Road until its intersection with Axedale Goornong Road.

Russells Bridge Road is constructed with an approximate 6 metre gravel road pavement plus verge, which provides for table drains on each side of the road. With no posted speed limit, the default rural limit of 100 km/hr applies to this road.

Data provided by the Campaspe Shire Council indicates that Russells Bridge Road carries in the order of 40 vehicles per day on average, including 15% commercial sized vehicles.

A view of Russells Bridge Road and Brownes Lane looking over the subject site from the northwest is shown below in Figure 3.

Figure 3 Russells Bridge Road and Brownes Lane adjacent the subject site

3.4.2 Brownes Lane

Brownes Lane is a local road which extends north-south between McIvor Highway (to the south) and Backhaus Lane (to the north). We note that Brownes Lane is controlled by City of Greater Bendigo south of Russells Bridge Road, and Campaspe Shire Council controls the section of road located north of Russells Bridge Road.

In proximity to the site, Brownes Lane is constructed with an approximate 6 metre gravel road pavement plus verge, which provides for table drains on each side of the road. With no posted speed limit, the default rural limit of 100 km/hr applies to this road.

3.4.3 VicRoads Road Network Limits

The VicRoads pre-approved B-Double and Higher Mass Limit (HML) network in the locality of the development are reproduced in Figure 4.

These network diagrams are typically read as follows:

- Green Roads - are pre-approved for haulage and typically a permit is not required
- Orange Roads - are conditionally approved, haulage along these is subject to conditions
- Red Roads - are restricted access, an assessment and permit are required for haulage along these sections
- Unhighlighted roads - require an assessment and approval from the responsible authority

Note: A permit is not required for haulage vehicles in accordance with PBS Level 1 as per Figure 6.

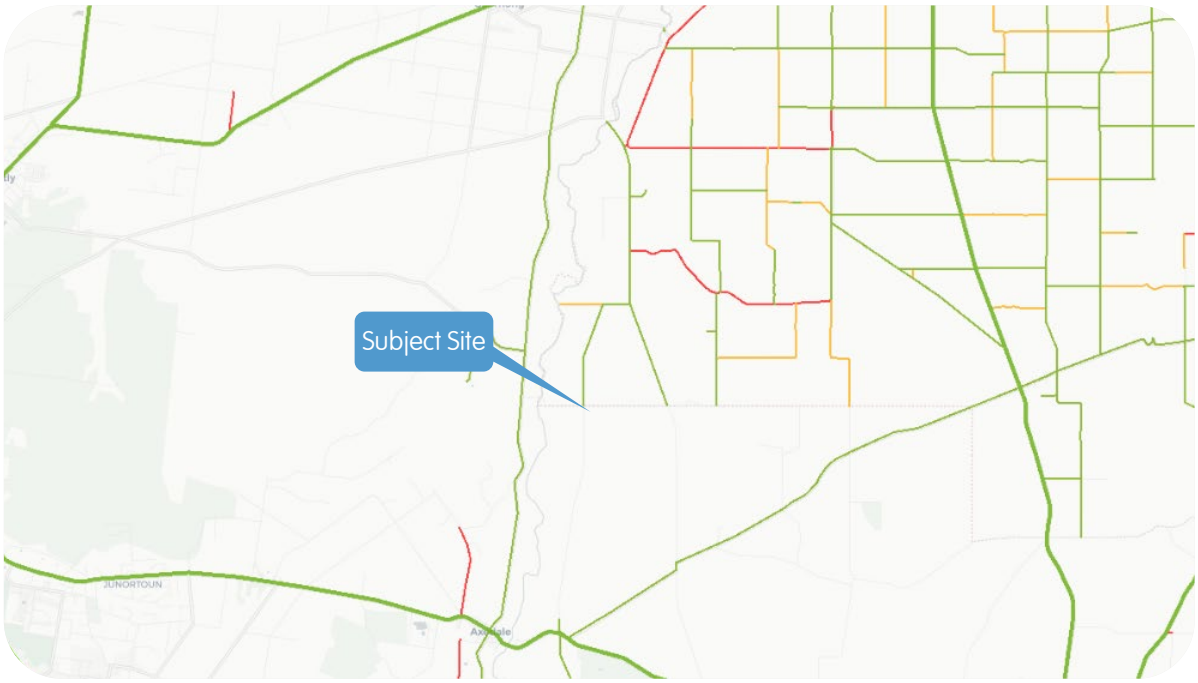


Figure 4 VicRoads B-Double & Higher Mass Limit (HML) Network

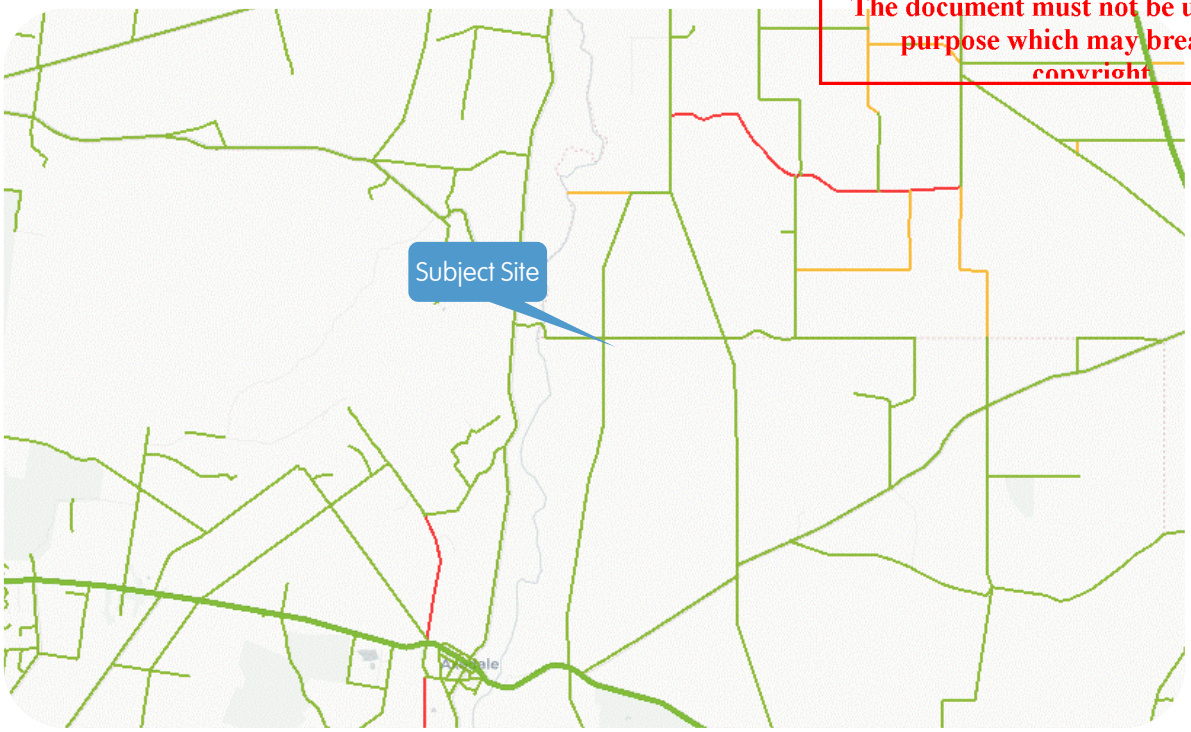


Figure 5 VicRoads PBS Level 1 Haulage (HML) Network

As per the above, the green lines represent roads which are pre-approved for haulage, and typically a permit is not required for haulage on these roads.

These figures show that both Russells Bridge Road and Brownes Lane are pre-approved for PBS Level 1 haulage.

We note however that a permit will be required for haulage of B-doubles (or other HML vehicles) along both Brownes Lane and Russells Bridge Road; Brownes Lane (north of Russells Bridge Road) is pre-approved for B-double haulage.

3.5 Other Nearby Developments

3.5.1 Axedale Solar Farm

We understand that an application was recently approved to develop the land east and north of the subject site (refer Figure 2) as the Axedale Solar Farm.

This solar farm will be constructed to ultimately provide a generating capacity in order of 180 MW, and will seek to leverage / connect into the existing 220 kV transmission line which bisects the site.

We are advised that all vehicle movements to / from the Axedale Solar Farm (during construction) will occur via McIvor Highway, Axedale-Tooleen Road and Barnadown-Knowsley Road. as opposed to Brownes Lane adjacent the proposed Fosterville Solar Farm. This will minimize any cumulative impacts as a result of any potential overlapping of construction.

Nonetheless, it is our understanding that construction for the Axedale Solar Farm is slated to begin imminently, and that there will be little likelihood of construction activities overlapping (between Axedale Solar Farm and Fosterville Solar Farm).

4 Fosterville Solar Farm

IMPACT® have been advised that the Fosterville Solar Farm project will consist of a solar energy facility with a capacity of up to 100MW, plus supplementary battery storage facilities.

The facility will expand over 183 hectares of land, providing for approximately 170,000 solar panels.

Access to the site will be afforded via three (3) access points. Specifically:

- Primary Access
  - The north-western corner of the site from Brownes Lane.
- Secondary Access
  - The south-western corner of the site from Brownes Lane,
  - The north-eastern corner of the site from Russells Bridge Road.

The proposed internal road network contemplates a loop road along the inside of the boundary fence, with internal solar farm roads through the arrays, as shown in the indicative site plans below in Figure 6.

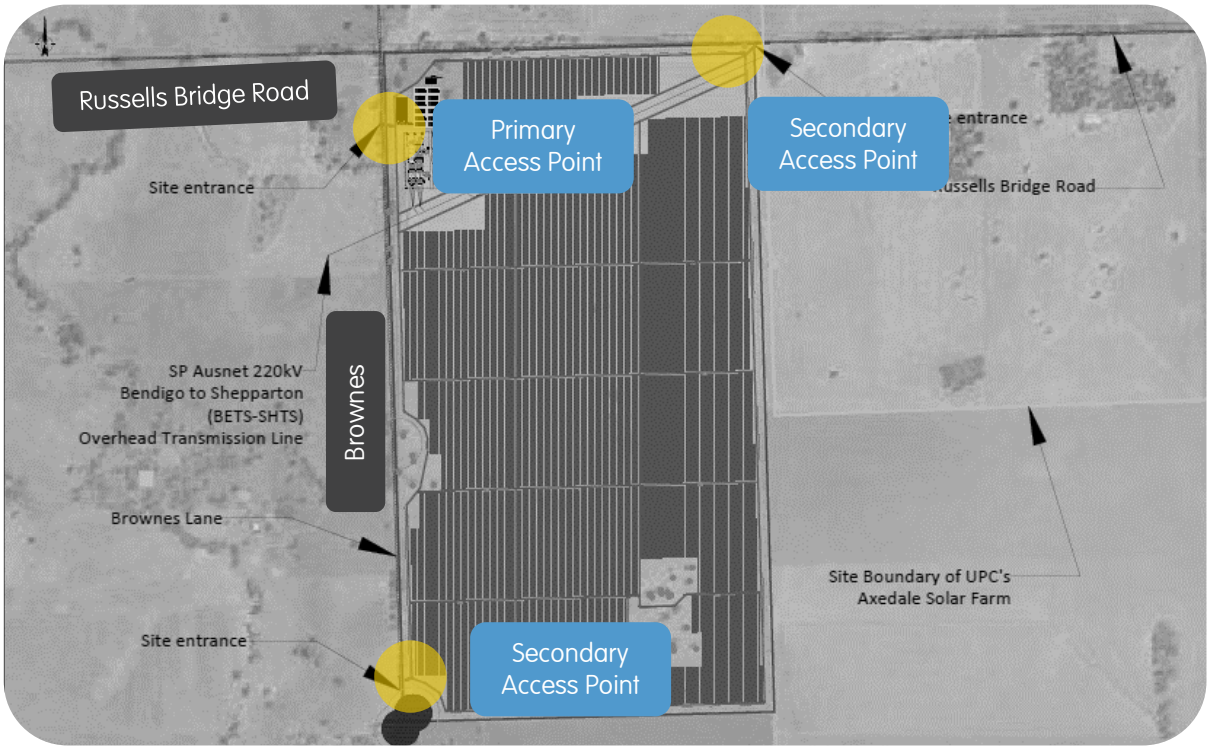


Figure 6 Proposed Fosterville Solar Farm Development Footprint

5 Traffic Considerations

5.1 General

The Solar Farm access road network will typically limit internal construction traffic to internal access roads, with only deliveries and staff movements to and from the site required to travel across the external road network.

External traffic generated by the subject site will generally be split into three broad categories:

- General traffic generated by staff & couriers travelling to/from the subject site;
- Other heavy vehicles (HV) which are used for the delivery of solar panel components and construction materials such as aggregate and water; and
- Over Dimensional (OD) vehicles used for the delivery of the larger / heavier substation components.

5.2 Traffic Generation

5.2.1 Construction Traffic Volumes

Construction is expected to take approximately 12 months to complete.

IMPACT® have been advised by the applicant based on history and experience in constructing solar farms of similar size/capacity, that the following inbound movements are likely to occur:

- Light Vehicle Movements:
  - Daily peak of up to 105 vehicle movements
- Heavy Vehicle Movements:
  - Daily peak of up to 42 vehicle movements

Accordingly, a total of up to 147 daily vehicle movements are expected.

It is expected that a maximum of 210 workers will be on-site during all stages of construction activity.

During the delivery of the project, it is expected that majority of staff will reside locally in Bendigo.

We understand that there is an opportunity for staff to be bussed in from Bendigo (where possible/practicable) via McIvor Highway and Brownes Lane. This strategy (if adopted) shall drastically reduce the number of light vehicle movements generated to/from the subject site

5.2.2 Operation

5.2.3 and Maintenance Traffic Volumes

For majority of the time, solar farms operate with limited staff and generate minimal traffic movements.

Accordingly, apart from the initial construction phase, the proposal is anticipated to have a negligible impact upon traffic on the local road network. Details of likely traffic generation during the operation are estimated as follows:

- Daily routine operations and maintenance to be carried out by up to five (5) people. It is assumed that the daily traffic generation will not exceed ten (10) vehicle movements per day to the local road network, with all other movements being internal to the site.
- Occasional maintenance will occur when components of the development need to be replaced, such as replacing solar panels, tracker systems or transformer components. This is expected to occur only very occasionally and will have no discernible impact on the external road network.
- Visitors to the site such as office based staff and courier deliveries etc.

In the context of the solar farm construction traffic and background traffic along Russells Bridge Road and Barnadown-Knowsley Road, operating traffic will be minimal.

We understand that an occasional OD delivery may be required during operations (i.e. if a transformer needs to be replaced). An OD permit will be required and obtained for the haulage of these vehicles when required.

5.3 Vehicle Access Routes

As above, vehicle deliveries will be split between various categories. The following section outlines the anticipated vehicle routes for various types of delivery/construction vehicles.

5.3.1 Coarse Aggregate and Fine Crushed Gravel

IMPACT® has been advised that both coarse and fine gravel for the construction of hardstand areas and access tracks will be sourced locally where possible.

Of significance, we note that Axedale Sands quarry is located approximately 5.5 kilometres south of the site.

Accordingly, we expect that majority of deliveries for aggregate will occur from this quarry directly **via Brownes Lane**.

Note: Use of Axedale Sands quarry is subject to confirmation depending on the availability of suitable construction materials.

5.3.2 Water Deliveries

We are advised that external water deliveries required for construction and dust suppression will be sourced locally and access to the site will likely be via McIvor Highway (west) and Brownes Lane.

5.3.3 Solar Module / Substation Components

IMPACT® are advised that due to the specialised nature of the solar farm components, these materials are likely to be sourced overseas.

Materials will likely be imported to Melbourne (or Portland) and then transported to the site by road.

The anticipated route from Melbourne is as follows:

Melbourne - Citylink - Tullamarine Freeway - Hume Freeway - Northern Highway - McIvor Highway (east) – Brownes Lane

5.3.4 Construction Staff

During the delivery of the project, it is expected that a majority of staff vehicle movements will arrive at the site via McIvor Highway and Brownes Lane.

As above, with staff residing mostly within Bendigo, an opportunity will exist for staff to be bused to/from the subject site if required.

5.3.5 Emergency Vehicle Access

Emergency vehicle access to/from the site will be via all three (3) access points. These site access points will provide an appropriate ingress and egress point for emergency service vehicles.

Furthermore, vehicles accessing the site will not impact on emergency vehicles travelling along Brownes Lane

5.4 Traffic Impact

5.4.1 Vehicle Access Routes

As highlighted in Section 3.4.3, all roads local to the site (McIvor Highway, Brownes Lane & Russells Bridge Road) are pre-approved haulage route for PBS Level 1 vehicles, and thus no approvals or permits will be required to use these roads as part of the haulage route for PBS Level 1[1] compliant vehicles.

As shown in Figure 4, McIvor Highway and the start of Brownes Lane is pre-approved routes for B-double vehicles, and hence no permit is required to use these sections of road for the haulage of B-double vehicles.

The remainder of Brownes Lane and Russells Bridge Road however are not a pre-approved road for the haulage of B-double vehicles and therefore a permit will be required (from City of Greater Bendigo via NHVR) for any B-double sized vehicle to utilise this road as part of the haulage route.

5.4.1.1 Over-Dimensional Vehicle Deliveries

Based on the foregoing, there are also no pre-approved higher mass (HML) or over-dimensional routes leading to the subject site. Accordingly, a permit will be required for use of these roads as part of the haulage route to the subject site for larger Over-Sized and Over-Mass vehicles.

5.4.2 Road Capacity

The proposed development is projected to generate up to 147 additional inbound movements per day during peak construction activities, with reduced vehicle movements expected outside of the peak construction period. This traffic will be accommodated entirely along Brownes Lane and Russells Bridge Road.

This volume of traffic is not expected to have any material impact on the operation of these roads.

As highlighted above, neither Brownes Lane nor Russells Bridge Road are entirely pre-approved B-double/HML haulage routes. Notwithstanding, we expect that these roads can physically cater to the heavy vehicle traffic, however, may require some repair and maintenance during and post construction activities.

Accordingly, prior to construction, **we recommend** that the applicant and Council (Bendigo) form an agreement with respect to maintenance and repair work along the relevant sections of these roads during the construction period. This agreement can be used to help ensure that the impact of construction related traffic movements on the external road network is minimal and managed appropriately.

Note: A swept path analysis has been prepared for local intersections (McIvor Highway / Brownes Lane, Brownes Lane / Russells Bridge Road) to confirm that each has the physical capacity to cater to anticipated construction vehicles, see Appendix A.

[1] A PBS Level 1 compliant vehicle is typically a vehicle measuring up to 20 metres in length, less than 4.3m in height and 50.5 tonnes in weight

6 Design Considerations

6.1 Site Access Design

No detailed design for each of the site access points is available at this stage.

We are advised however that each site access point will be designed to accommodate vehicles up to 26 metres in length (i.e. B-double vehicles).

When available, the capacity for each site access point to cater to these vehicles should be confirmed.

6.2 Sight Distance Assessment

6.2.1 Sight Distance Requirements

A desktop assessment of the sight distance available from the site access points has been undertaken using aerial imagery and Google Street View (where available). We note that an on-site assessment should be undertaken to validate the following assessment prior to construction.

AustRoads Guide to Road Design - Part 4A: Unsignalised Intersections sets out the sight distance requirements for unsignalised intersections, including:

- Approach Sight Distance;
- Safe Intersection Sight Distances (SISD); and
- Minimum Gap Sight Distance.

The guide recommends that Safe Intersection Sight Distance (SISD) is the minimum distances that should be provided on the Major Road at any intersection.

SISD is measured as shown in Figure 7.

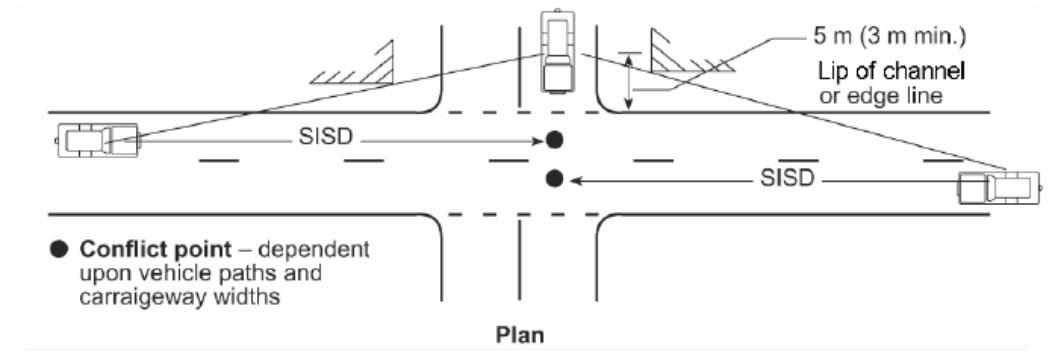


Figure 7 Guide to Measuring SISD for Unsignalised Intersections

The Austroads Guide provides SISD values for commuter vehicles at varying design speeds. For heavy vehicles the SISD values are calculated using the following formulae.

$$SISD = \frac{D_T \times V}{3.6} + \frac{V^2}{254 \times (d + 0.01 \times a)}$$

where:

SISD	=	safe intersection sight distance (m)
DT	=	decision time (s) = observation time (3 s) + reaction time (s): refer to the Guide to Road Design – Part 3: Geometric Design (Austroads 2009a) for a guide to values
V	=	operating (85th percentile) speed (km/h)
d	=	coefficient of deceleration – refer to Table 3.2 and the Guide to Road Design – Part 3: Geometric Design (Austroads 2009a) for a guide to values
a	=	longitudinal grade in % (in direction of travel: positive for uphill grade, negative for downhill grade).

Based on the above formula, the minimum SISD requirements can be determined for the following operating speeds:

- 100km/hr design speed
  - Minimum SISD of 317 metres for heavy vehicles

6.2.2 Assessed Site Access Sight Distance

Both Brownes Lane and Russells Bridge Road along the frontage of the site are generally very straight and flat. There are some trees along both roads (as illustrated in Figure 3 above), however these are typically set back at least 6-7 metres from the carriageway along Russells Bridge Rd and 3-4 metres along Brownes Lane so as not to impede on sight distances. To the south of the subject site, Brownes Lane curves to align south-west to north-east.

The SISD measurement is taken from a location 5.0 metres from the edge of the through lane to the middle of the through lanes for approaching vehicles.

A desktop assessment revealed that, with trees set back at least 3 metres from the carriageway from the through lanes and relatively flat/straight sections of road, sight distances at the two northern site access points (one each along Brownes Lane and Russells Bridge Road) are expected to comfortably exceed the minimum requirement. However, a maximum sight distance of approximately 150 metres was observed to the south of the southern access point along Brownes Lane.

Figure 8 overleaf depicts the available sight distances at each of the proposed site access points.

Figure 8 Sight Distance Assessment - Proposed Site Access Points

6.2.3 Sight Distance - Conclusion

The above assessment shows that sight lines are sufficient in all direction at the two northern access points.

Due to the curve in the road south of the site, sight lines are limited to approximately 150 metres to/from the south-western access point.

Noting the above, we suggest that a supplementary 'trucks crossing' or 'construction traffic ahead' warning signs be used to supplement the lack of sight line to this particular intersection.

This is considered an appropriate outcome in the context of this site access, noting that it is a secondary access point which will not be used frequently.

Notwithstanding, we recommend that prior to construction, an on-site assessment be undertaken to confirm that the available sight distance and subsequently installing appropriate traffic management devices based on the findings, particularly for the southern access point. 'Trucks Crossing' and speed reduction signage could be used to supplement the lack of sight lines if deemed necessary.

6.3 Turning Lane Assessment

Reference has been made to AustRoads Guide to Traffic Management Part 6: Intersections, Interchanges and Crossings[2] (AGTM Part 6). This document provides guidance on the warrants for various turn treatments at unsignalised intersections, these warrants are reproduced as Figure 9.

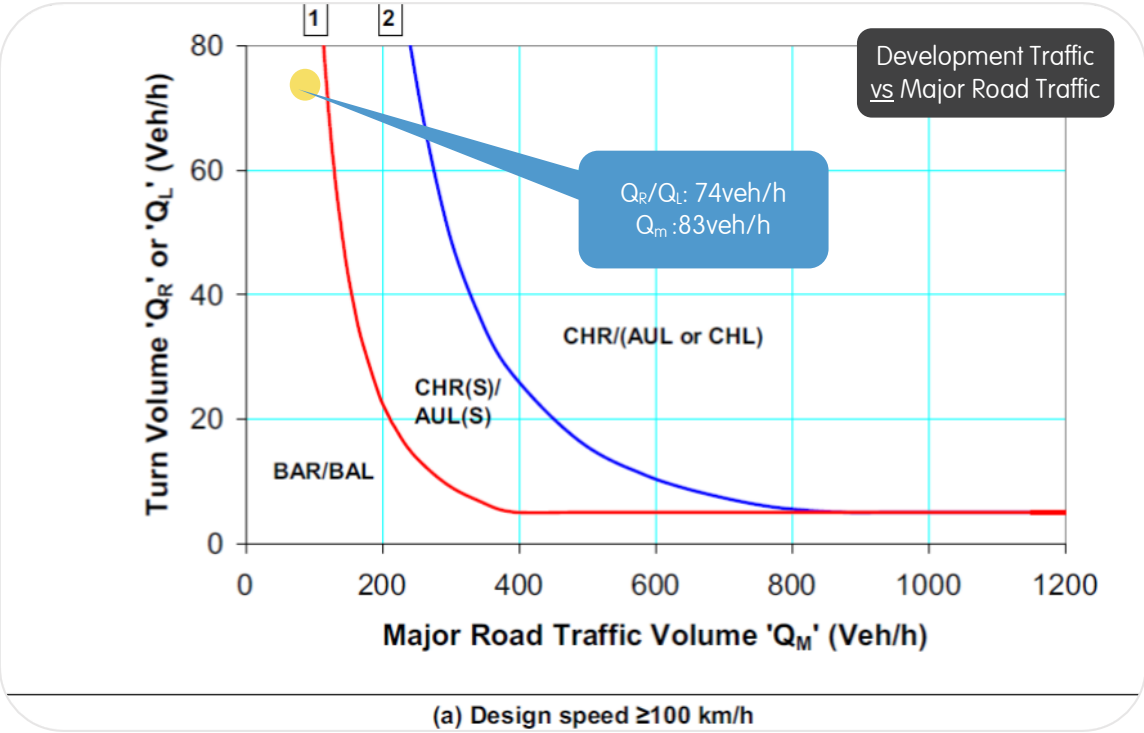
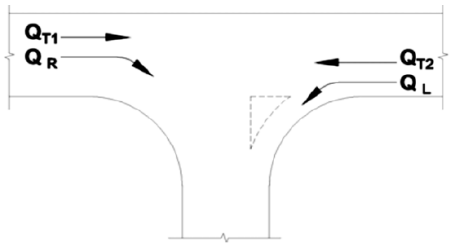


Figure 9 Warrants for Turn Treatments at Unsignalised Intersections

Note: Q_m (or major road traffic volume) is calculated using the method outlined in Figure 2.27 of the AGTM Part 6, which has been replicated below as Figure 10.



Road type	Turn type	Splitter island	Q_M (veh/h)
Two-lane two-way	Right	No	= $Q_{T1} + Q_{T2} + Q_L$
		Yes	= $Q_{T1} + Q_{T2}$
	Left	Yes or no	= Q_{T2}
Four-lane two-way	Right	No	= 50% x $Q_{T1} + Q_{T2} + Q_L$
		Yes	= 50% x $Q_{T1} + Q_{T2}$
	Left	Yes or no	= 50% x Q_{T2}
Six-lane two-way	Right	No	= 33% x $Q_{T1} + Q_{T2} + Q_L$
		Yes	= 33% x $Q_{T1} + Q_{T2}$
	Left	Yes or no	= 33% x Q_{T2}

Figure 10 Calculation of the Major Road Traffic Volume Q_m

[2] AustRoads Guide to Traffic Management Part 6: Intersections, Interchanges and Crossings, AustRoads 2017 Edition)

These warrants provide guidance on where a full-length deceleration lane must be used and where a shorter lane, designated Auxiliary Left Turn Lane (AUL) and Channelised Right Turn (CHR), may be acceptable based on traffic volumes.

Note:

> These warrants apply to new unsignalised intersections and are therefore not strictly applicable to the proposed site access points or existing intersections.
>
> Notwithstanding, reference has been made to these standards to understand the appropriateness of construction traffic in the context of turning movements.

6.3.1 Brownes Lane / Site Access

As discussed in Section 3.4, traffic counts undertaken by Campaspe Shire and City of Greater Bendigo indicate that Russells Bridge Road and Brownes Lane have historically carried in the order of 41 and 94 daily vehicle movements respectively. It is a 'rule of thumb' that peak hour traffic flows are approximately 10% of daily traffic volumes. Accordingly, each of these roads carry in the order of 4 and 9 vehicles during the peak periods respectively.

The proposal is projected to generate in the order of 147 daily vehicle inbound movements during the peak construction period. (see Section 5.2.1). It is conservatively assumed that 50% of these inbound movements will occur during the external road peak period, equating to approximately 74 vehicles going into the site.

Accordingly, as shown above, if this was a new intersection (and not a site access or existing intersection) the minimum required treatment would be for a Basic Right Turn (BAR) to be provided (we do not expect many if any vehicles to be turning left).

Notwithstanding, given the anticipated construction period is relatively short (one year only), the very low traffic volumes along the Brownes Lane and the external road geometry providing suitable sight lines, it is considered appropriate to utilise the full road width and shoulders for passing if required (in place of more formal turning treatments/road widening).

Note: Supplementary 'trucks crossing' or similar signs could be temporarily installed along each road (during construction) warning drivers of the possibility of construction traffic, increasing driver awareness.

6.3.2 Mvlcor Highway / Brownes Lane

It is noted that the intersection of McIvor Highway and Browne Lane has been provided with auxiliary left and right turn lanes.

These auxiliary lanes are considered appropriate and sufficient to accommodate the additional vehicle movements generated during the proposed construction activities.

7 Traffic Management Plan

Subject to the appointment of a supplier / construction contractor and other considerations, aspects of the Fosterville Solar Farm (the project) may be subject to review.

In addition, construction / work programs for the project will not be fully resolved until closer to the project commencement. As such, subject to commencement timeframes, there is potential for changes to the existing road conditions and Solar Farm haulage assumptions as considered within this report.

Based on the foregoing, and our experience with similar projects, we expect that a detailed Traffic Management Plan (TMP) will need to be prepared prior to the commencement of the construction of the project to confirm any mitigation measures and management works required at that time.

The TMP would be implemented as a condition of any Development Consent issued for the Solar Farm and would be developed in consultation with the City of Greater Bendigo, Department of Transport, Energy Forms, and any other relevant stakeholders to provide a more accurate indication of traffic impacts and generally identify responsibilities for road maintenance and upgrades throughout the construction period.

In general, the TMP should include:

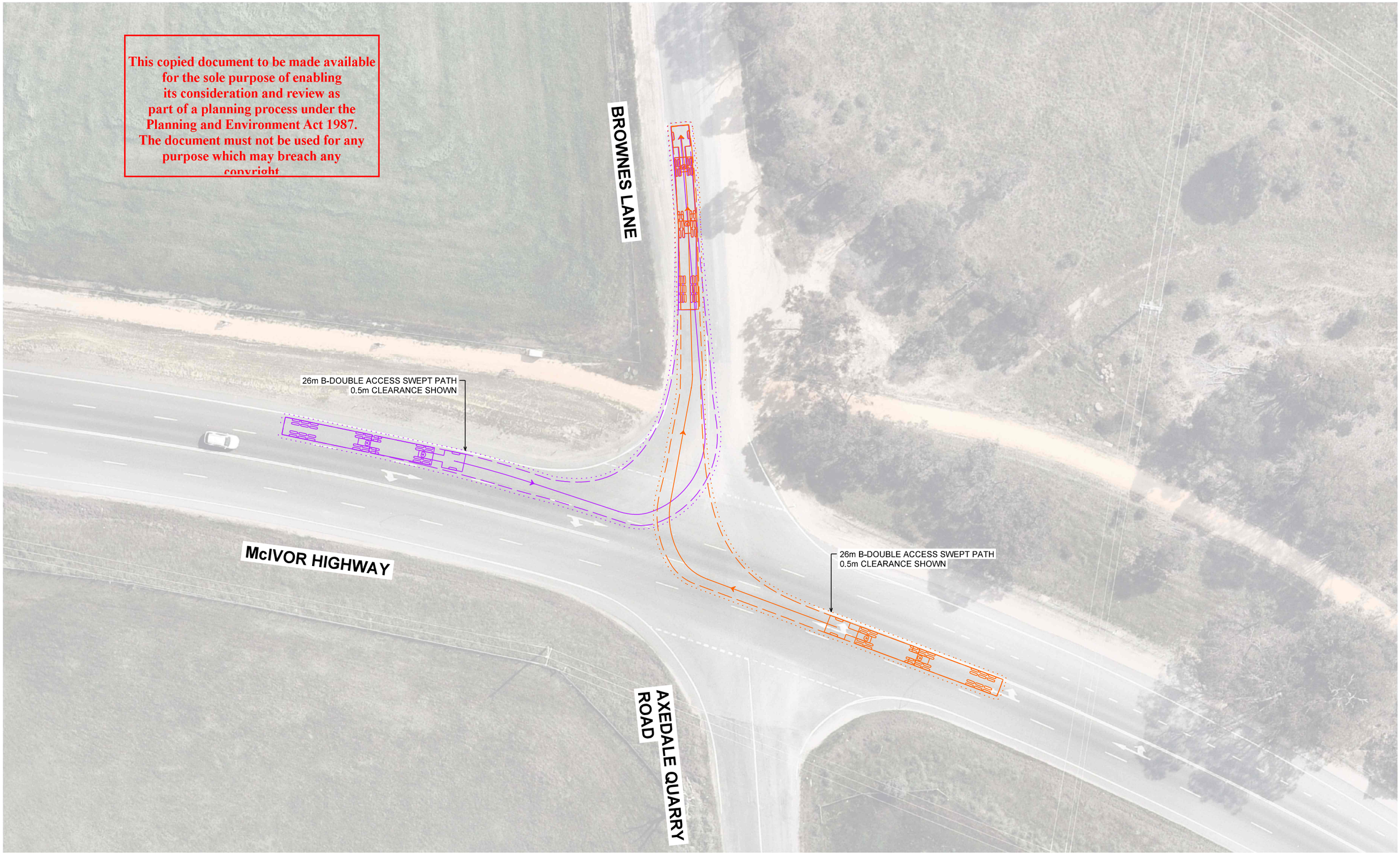
- Confirmation of the Solar Farm construction timeframe and work stages.
- Confirmation of expected traffic volumes generated by the solar farm for all work stages.
- Identification of all HV and OD vehicle haulage routes for all work stages.
- A mechanism to review identified haulage route road conditions prior to the commencement of works.
- Mechanisms/agreements (if deemed necessary) to maintain haulage route roads and road infrastructure, including local public roads used by site traffic, during construction works and to reinstate roads to at least pre-construction conditions.
- Qualify any requirement for specific work stage construction traffic management plans.
- Qualify and identify any relevant mechanisms for OD vehicle permits and traffic management requirements.
- Confirm on-site the adequacy of available sight distances along Russells Bridge Road / Brownes Lane from the site access.

Please note that this is not an exhaustive list, and that the final TMP requirements will be as per those outlined in the Development Consent.

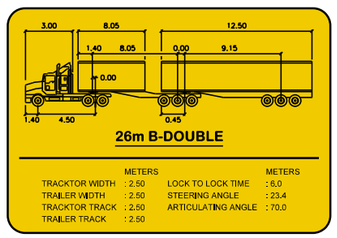
APPENDIX A
Swept Path Analysis

Design Vehicle

— 26m B-Double



ADVERTISED PLAN



	METERS		METERS
TRACKTOR WIDTH	: 2.50	LOCK TO LOCK TIME	: 6.0
TRAILER WIDTH	: 2.50	STEERING ANGLE	: 23.4
TRACKTOR TRACK	: 2.50	ARTICULATING ANGLE	: 70.0
TRAILER TRACK	: 2.50		

ENERGY FORMS

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Client
ENERGY FORMS

Status
PRELIMINARY

Project
FOSTERVILLE SOLAR FARM
BROWN E LANE, FOSTERVILLE
CITY OF

Date
2022-01-25

Drawn / Approved
JT / WD

Revision Description
ISSUED FOR INFORMATION

Title
TRAFFIC & TRANSPORT ASSESSMENT
26m B-DOUBLE SWEPT PATH ANALYSIS
McIVOR HIGHWAY / BROWNES LANE INTERSECTION

Drawing Number
IMP2106049 - DG-01-01

Revision
B

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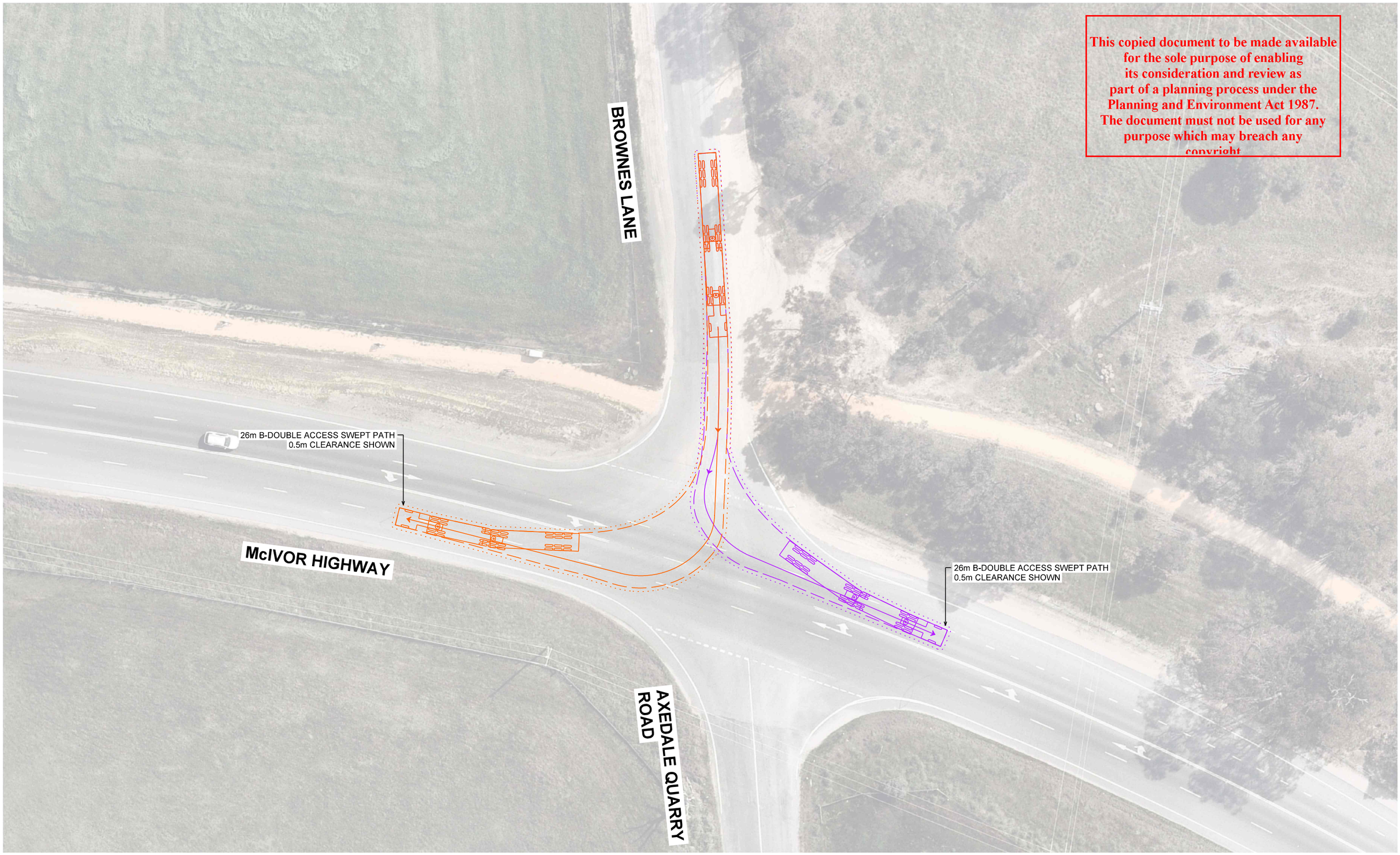
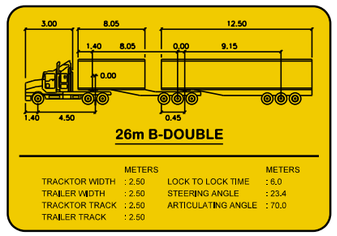


ADVERTISED PLAN



ENERGY FORMS

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Project
FOSTERVILLE SOLAR FARM
BROWN E LANE, FOSTERVILLE
CITY OF

Date
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Revision Description
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Title
TRAFFIC & TRANSPORT ASSESSMENT
26m B-DOUBLE SWEPT PATH ANALYSIS
McIVOR HIGHWAY / BROWNES LANE INTERSECTION

Drawing Number
IMP2106049 - DG-01-02

Revision
B

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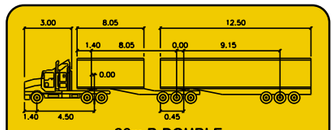

26m B-DOUBLE

	METERS		METERS
TRACKTOR WIDTH	: 2.50	LOCK TO LOCK TIME	: 6.0
TRAILER WIDTH	: 2.50	STEERING ANGLE	: 23.4
TRACKTOR TRACK	: 2.50	ARTICULATING ANGLE	: 70.0
TRAILER TRACK	: 2.50		

ENERGY FORMS

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ENERGY FORMS

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Project
FOSTERVILLE SOLAR FARM
BROWN E LANE, FOSTERVILLE
CITY OF

Date
2022-01-25

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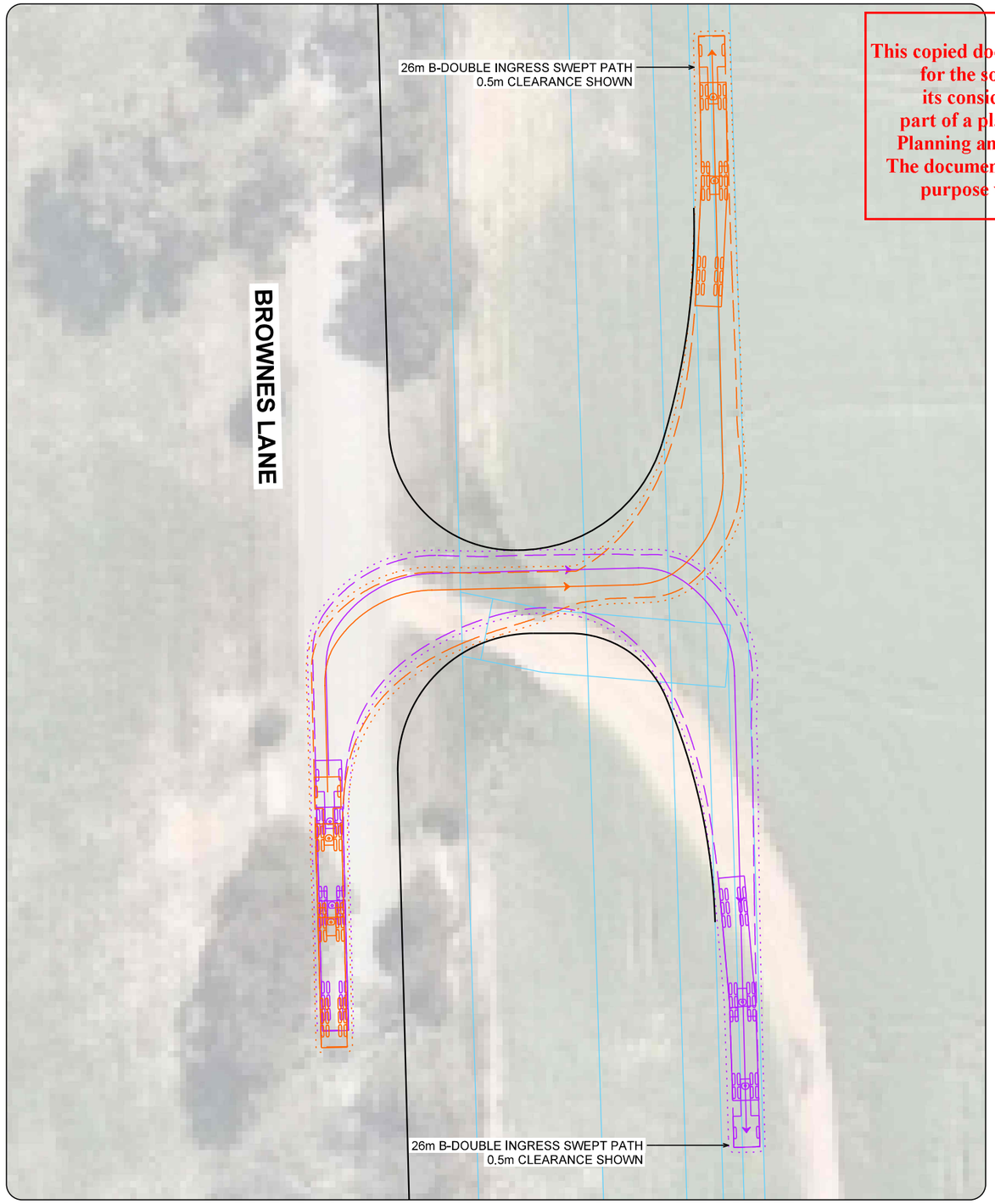
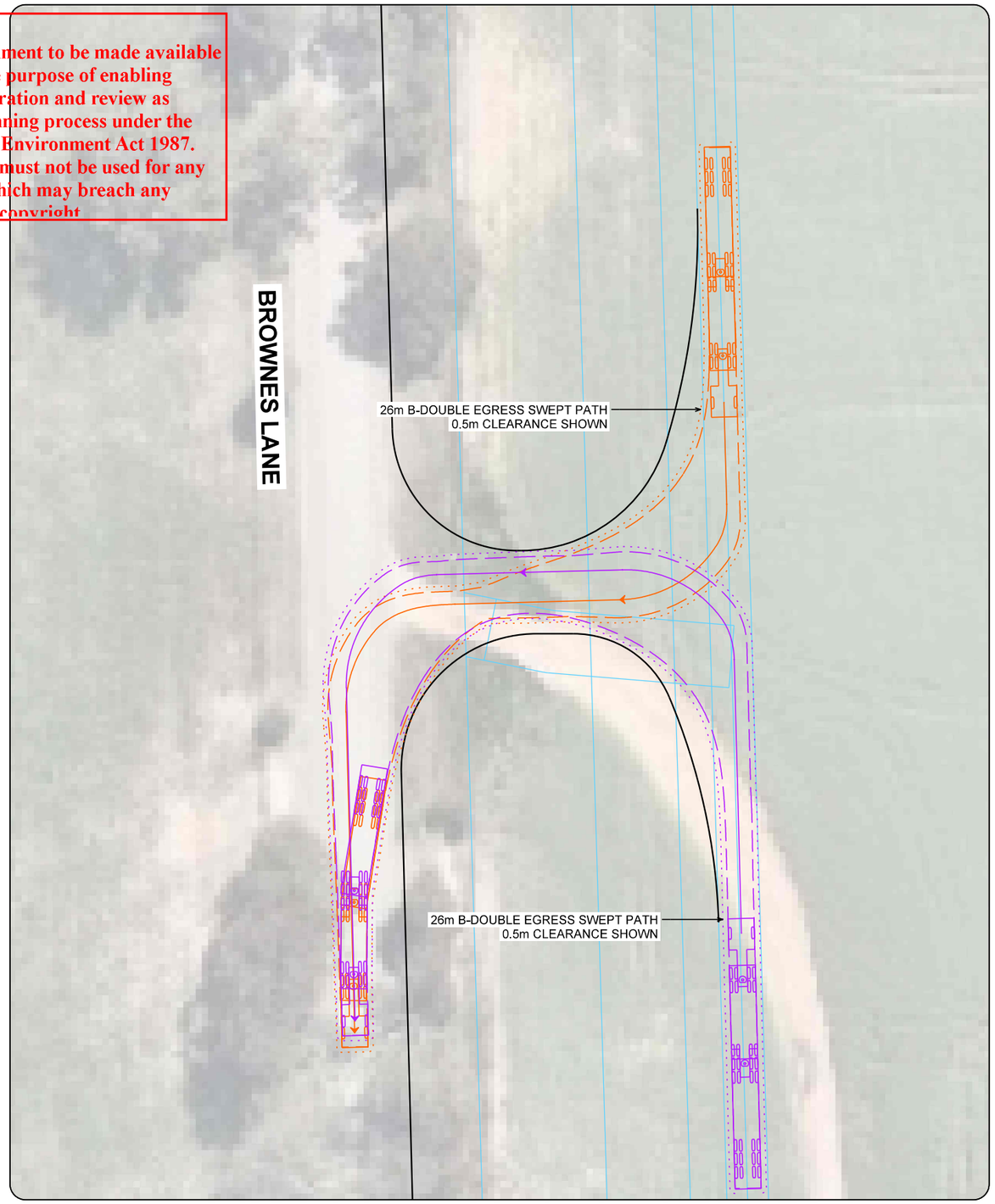
Revision Description
ISSUED FOR INFORMATION

Title
TRAFFIC & TRANSPORT ASSESSMENT
CROSSOVER DESIGN PLAN
BROWNES LANE SITE ACCESS POINT

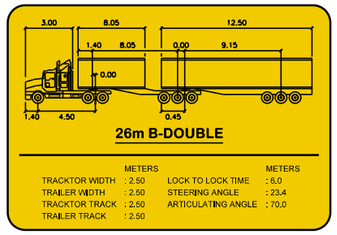
Drawing Number
IMP2106049 - DG-01-03

Revision
B





ADVERTISED PLAN



	METERS		METERS
TRACKTOR WIDTH	: 2.50	LOCK TO LOCK TIME	: 6.0
TRAILER WIDTH	: 2.50	STEERING ANGLE	: 23.4
TRACKTOR TRACK	: 2.50	ARTICULATING ANGLE	: 70.0
TRAILER TRACK	: 2.50		

ENERGY FORMS

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Project
FOSTERVILLE SOLAR FARM
BROWN E LANE, FOSTERVILLE
CITY OF

Date
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Revision Description
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Title
TRAFFIC & TRANSPORT ASSESSMENT
26m B-DOUBLE SWEPT PATH ANALYSIS
BROWNES LANE SITE ACCESS POINT

Drawing Number
IMP2106049 - DG-01-04

Revision
B

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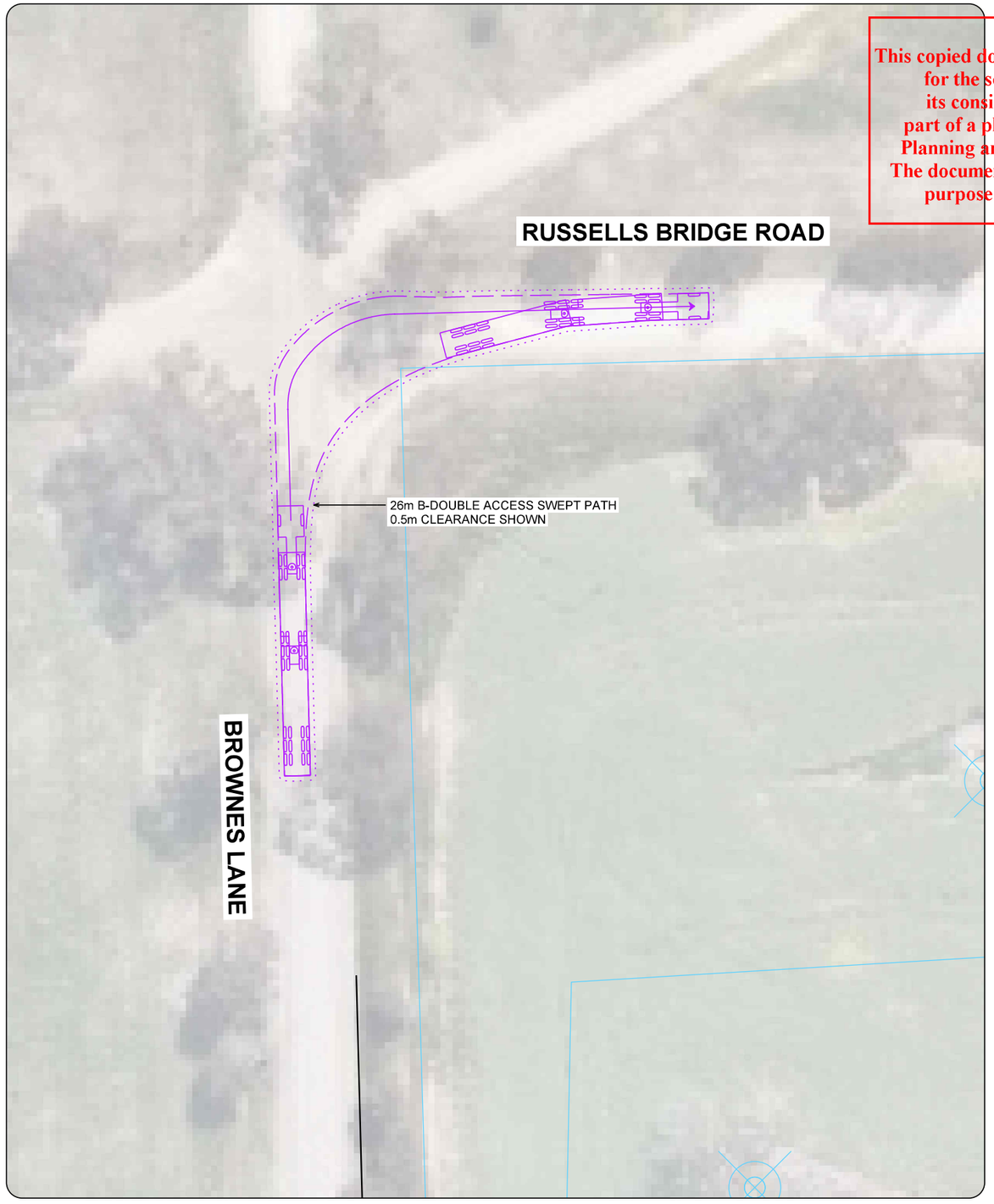
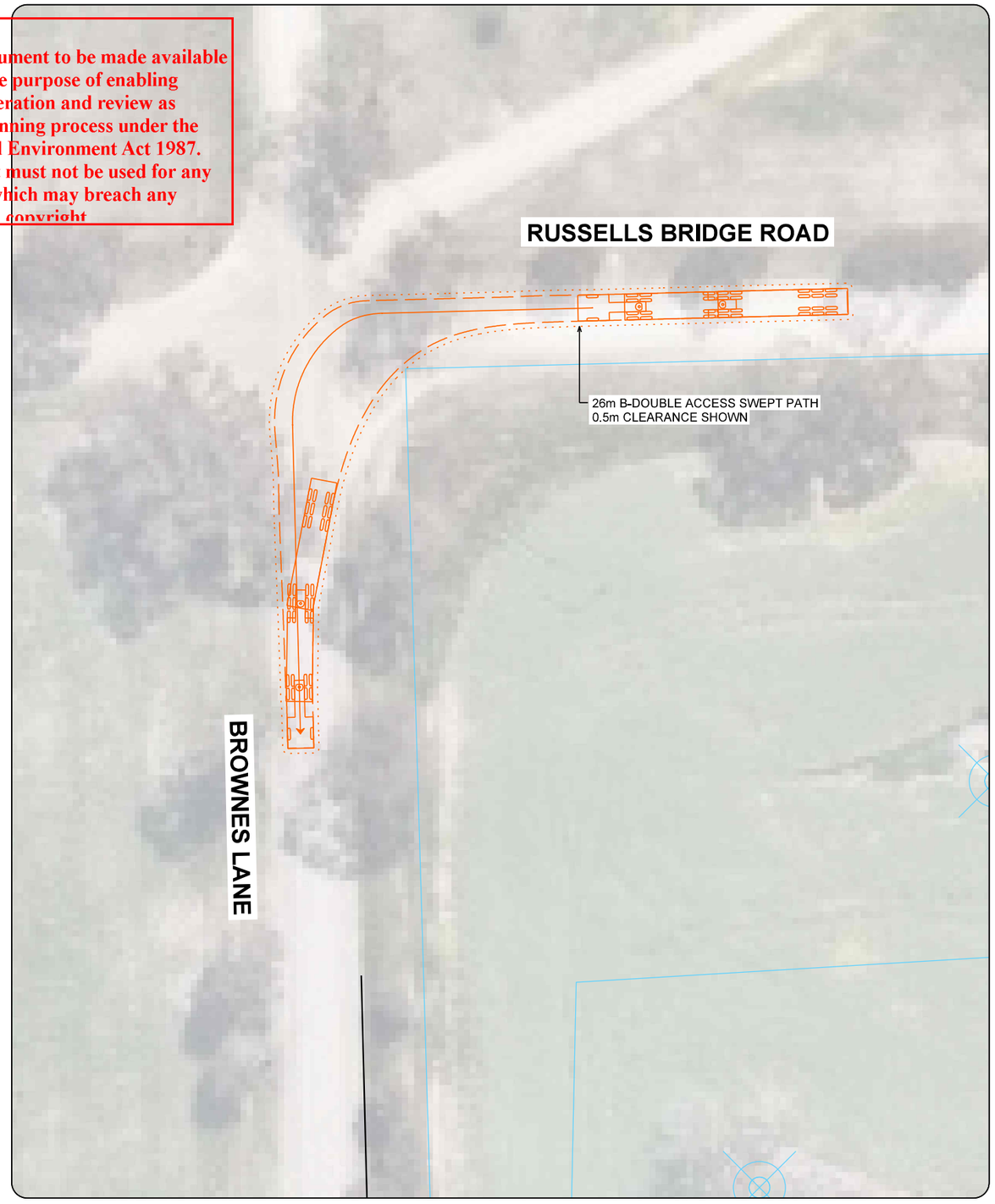
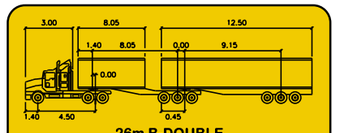




ADVERTISED PLAN



26m B-DOUBLE

	METERS		METERS
TRACKTOR WIDTH	: 2.50	LOCK TO LOCK TIME	: 6.0
TRAILER WIDTH	: 2.50	STEERING ANGLE	: 23.4
TRACKTOR TRACK	: 2.50	ARTICULATING ANGLE	: 70.0
TRAILER TRACK	: 2.50		

ENERGY FORMS

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ENERGY FORMS

Status
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Project
FOSTERVILLE SOLAR FARM
BROWN E LANE, FOSTERVILLE
CITY OF

Date
2022-01-25

Drawn / Approved
JT / WD

Revision Description
ISSUED FOR INFORMATION

Title
TRAFFIC & TRANSPORT ASSESSMENT
26m B-DOUBLE SWEPT PATH ANALYSIS
BROWNES LANE / RUSSELLS BRIDGE ROAD

Drawing Number
IMP2106049 - DG-01-05

Revision
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25/01/2022 11:51:09 AM

ADVERTISED PLAN