TRAFFIC MANAGEMENT PLAN

Glenellen Solar Farm

PREPARED FOR:
Global Power Generation Australia Pty Ltd

REFERENCE:
0888r01v08

DATE:
13/08/2024

TRAFFIC MANAGEMENT PLAN

Glenellen Solar Farm

Prepared for: Global Power Generation Australia Pty Ltd

ABN: 74 130 542 031

Reference: 0888r01v08

Date: 13/08/2024

Revision History

VERSION	DATE	PREPARED	REVIEWED	APPROVED	SIGNED
04	1/05/2024	Hayden Calvey	Hayden Calvey	Paul Corbett	Original Signed
05	3/07/2024	Hayden Calvey	Hayden Calvey	Paul Corbett	Original Signed
06	8/07/2024	Hayden Calvey	Hayden Calvey	Paul Corbett	Original Signed
07	08/08/2024	Hayden Calvey	Hayden Calvey	Paul Corbett	Original Signed
08	13/08/2024	Hayden Calvey	Hayden Calvey	Paul Corbett	

PDC Consultants

info@pdcconsultants.com.au | www.pdcconsultants.com.au

+61 2 7900 6514 | Level 14, 100 William Street, Woolloomooloo NSW 2011

Table of Contents

List of Figures

List of Tables

Appendices

1. Introduction

1.1. Overview

PDC Consultants has been commissioned by Global Power Generation Australia Pty Ltd through its wholly owned subsidiary Glenellen Asset Pty Ltd (Project Owner) to prepare a Traffic Management Plan (TMP) for the proposed solar farm and associated infrastructure, namely Glenellen Solar Farm (GSF) located approximately 20 kilometres north of Albury, NSW.

GSF is expected to produce approximately 200 megawatts of electricity, generating 400 GWh of renewable energy that is sufficient to power the equivalent of 94,899 average NSW households each. The project is approved under State Significant Development (SSD) 9550 with the construction period is expected to be about 18 months to complete and the project is forecasted to operate for about 30 years.

In discussions with Department of Planning, Housing and Infrastructure (DPHI), the recommend staging of the Traffic Management Plan is per the below, with this TMP reflective of Stage 1a, 1b, 3 and 4. Stage 1c, relating to the heavy vehicles requiring escort, will be subject to its own TMP and further consultation with Transport for NSW (TfNSW) once the transport vehicles, and origin of material is known:

- Stage 1a: Road upgrades or maintenance works to public road network as outlined in the conditions of consent, building/road dilapidation surveys, installation of fencing, artefact survey and/or salvage, overhead line safety marking and geotechnical drilling and/or surveying.
- Stage 1b: commence construction of Solar Farm.
- Stage 1c: Solar farm construction continuation, including movement of heavy vehicles requiring escort during construction as described in Condition B1 of Schedule 2 of Consent .
- Stage 2: Solar Farm Operation.
- Stage 3: Solar Farm Decommissioning at end of life.

Refer to **Appendix A** for full scale site layout plans produced by the project owner.

1.2. Applicable Legislation

The entirety of this project requires the Project Owner to consult with Commonwealth, State and local legislations which are potentially relevant to the GSF and discusses the applicability of each statute, including any additional approvals, licenses or permits which are required. However, considering this report deals with the traffic management policies associated with the construction, operation and decommissioning for the GSF, this section only provides an overview of the legal documents that pertain to the transport and traffic generation aspects of planning. Further legislative conditions regarding other aspects of the project may be applicable and dealt with in separate documentation.

- State Legislation.

- Environmental Planning and Assessment Act 1979 (EP&A Act).
- State Environmental Planning Policy (State and Regional Development) 2011 (SEPP(SRD)).
- State Environmental Planning Policy (Transport & Infrastructure) 2021 (SEPP T&I 2021).
- Environmental Planning Policy (Primary Production and Rural Development) 2019.
- State Environmental Planning Policy (Koala Habitat Protection) (Koala SEPP).
- State Environmental Planning Policy No. 33 – Hazardous and Offensive Development (SEPP 33).
- State Environmental Planning Policy No. 55 – Remediation of Land (SEPP 55).
- Biodiversity Conservation Act 2016 (BC Act).
- Fisheries Management Act 1994 (FM Act).
- Water Management Act 2000 (WM Act).
- Local Land Services Act 2013 (LLS Act).
- Heritage Act 1977.
- Crown Land Management Act 2016.
- Conveyancing Act 1919.
- Roads Act 1993.
- Protection of the Environment Operations Act 1997 (POEO Act).

The development will be carried out in accordance with the Development Consent, all written directions of the Planning Secretary, the EIS and the approved development layout.

1.3. References

In preparing this report, reference has been made to the following guidelines / standards:

- Greater Hume Council Local Environmental Plan 2012 (GHLEP 2012).
- Greater Hume Council Development Control Plan 2013 (GHDCP 2013).
- State Environmental Planning Policy (Transport & Infrastructure) 2021 (SEPP T&I 2021).
- Integrated Public Transport Service Planning Guideline, Sydney Metropolitan Area 2013 (Integrated Public Transport Planning Guidelines 2013).

- Australian Standard AS 2890.1-2004, Part 1: Off-Street Car Parking (AS 2890.1).
- Australian Standard AS 2890.3-2015, Part 3: Bicycle Parking Facilities (AS 2890.3).
- Australian Standard AS 2890.6-2022, Part 6: Off-Street Parking for People with Disabilities (AS 2890.6).
- TfNSW Traffic Control at Works Sites Technical Manual Issue 6.1 (TCAWS).
- RMS Guide to Traffic Generating Development 2002 (GTTGD).
- RMS Technical Direction TDT 2013/04a - Guide to Traffic Generating Developments, Updated Traffic Surveys (TDT 2013/04a).
- Glenellen Solar Farm Environmental Impact Statement, ELA Pty Ltd, October 2021 (EIS).
- Traffic Impact Assessment, Cardno, May 2021 (Cardno TIA).
- Glenellen Solar Farm (SSD 9550) Proposed Road Upgrades, ELA Pty Ltd, June 2023 (Road Upgrade RFI).
- Development Consent for SSD 9550, December 2023 (Development Consent).

1.4. Development Consent

Table 1 below summarises the relevant requirements of the Development Consent on traffic management grounds and the section of this report that addresses the item.

Table 1: Development Consent Conditions & Where Addressed

DEVELOPMENT CONSENT CLAUSE	REQUIREMENT	RELEVANT TMP SECTION/S
Evidence of Consultation A13	Where conditions of this consent require consultation with an identified party, the Applicant must: (a) consult with the relevant party prior to submitting the subject document to the Planning Secretary for approval; and (b) provide details of the consultation undertaken including: (i) the outcome of that consultation, matters resolved and unresolved; and (ii) details of any disagreement remaining between the party consulted and the Applicant and how the Applicant has addressed the matters not resolved.	Section 1.5 and Appendix B
Heavy Vehicles Requiring Escort and Heavy Vehicle Restrictions B1.	The Applicant must ensure that the: (a) development does not generate more than: (i) 45 heavy vehicle movements a day during construction, upgrading and decommissioning; and (ii) 11 movements of heavy vehicles requiring escort during construction, upgrading and decommissioning; and (b) length of any vehicles (excluding heavy vehicle requiring escort) used for the development does not exceed 26 metres, unless the Planning Secretary agrees otherwise.	Section 4.1, 4.2, 4.4, 4.5

DEVELOPMENT CONSENT CLAUSE	REQUIREMENT	RELEVANT TMP SECTION/S
B2	The Applicant must keep accurate records of the number of heavy vehicles and vehicles requiring escort entering or leaving the site each day for the duration of the project.	Section 5.9
Access Route B3.	B3. Unless otherwise agreed by the Planning Secretary, all heavy vehicles associated with the development (including heavy vehicles requiring escort) must travel to and from the site: (a) via Hume Highway, Thurgoona Drive, Union Road, Urana Road, Walla Walla Jindera Road, Lindner Road, and Ortlipp Road and the approved Main Access Point off Ortlipp Road, as identified in Figure 4; and / or (b) from the Ettamogah Rail Hub via Hub Road, Gerogery Road, Wagga Road, Catherine Crescent, Union Road, Urana Road, Walla Walla Jindera Road, Lindner Road, and Ortlipp Road, as identified in Figure 5.	Section 3.2
Access Route B4.	All heavy vehicles and heavy vehicles requiring escort associated with the development: (a) Are prohibited from using Glenellen Road and Drumwood Road; and (b) are prohibited from moving through, and parking in, the township of Jindera (along Urana Road between Pioneer Drive and Walla Walla Jindera Road) during school zone times of 8am to 9.30am and 2.30pm to 4pm. Note: The Applicant is required to obtain relevant permits under the Heavy Vehicle National Law (NSW) for the use of heavy vehicle requiring escort on the road network.	Section 3.2
Site Access B5.	All vehicles associated with the development must enter and exit the site via the Main Access Point off Ortlipp Road, as identified in Appendix 1.	Section 3.2
Road Maintenance B7.	The Applicant must, in consultation with the relevant roads authority: (a) undertake an independent dilapidation survey to assess the: (i) existing condition of Ortlipp Road and Linder Road on the transport route, prior to construction, upgrading or decommissioning works; and (ii) condition of Ortlipp Road and Linder Road on the transport route, following construction, upgrading or decommissioning works; and (b) repair of roads identified in condition B7(a) if dilapidation surveys identify that the road has been damaged due to development-related traffic during construction, upgrading or decommissioning works. If there is a dispute between the Applicant and the relevant roads authority about road repairs required under this condition, then either party may refer the matter to the Planning Secretary for resolution.	Section 4.3, 4.5, Appendix D, Appendix F
Operating Conditions B8.	The Applicant must ensure: (a) the internal roads are constructed as all-weather roads; (b) there is sufficient parking on site for all vehicles, and no parking occurs on the public road network in the vicinity of the site; (c) the capacity of the existing roadside drainage network is not reduced; (d) all vehicles are loaded and unloaded on site, and enter and leave the site in a forward direction; and (e) development-related vehicles leaving the site are in a clean condition to minimise dirt being tracked onto the sealed public road network.	Section 5

DEVELOPMENT CONSENT CLAUSE	REQUIREMENT	RELEVANT TMP SECTION/S
Traffic Management Plan B9.	At least 6 months prior to commencing road upgrades identified in condition B6, the Applicant must prepare a Traffic Management Plan for the development in consultation with TfNSW and Council, and to the satisfaction of the Planning Secretary. This plan must include: (a) details of the transport route to be used for all development-related traffic; (b) details of the road upgrade works required by condition B6; (c) details of the measures that would be implemented to minimise traffic impacts during construction, upgrading or decommissioning works, including: (i) details of the dilapidation surveys required by condition B7; (ii) temporary traffic controls, including detours and signage; (iii) scheduling the arrival and departure of heavy vehicles from the site to avoid the PM peak hour where practicable; (iv) notifying the local community about development-related traffic impacts; (v) procedures for receiving and addressing complaints from the community about development- related traffic; (vi) ensuring construction traffic complies with a 40 km/h speed limit along Ortlipp and Lindner Roads; (vii) minimising potential cumulative traffic impacts with other projects in the area; (viii) minimising potential for conflict with school buses and other road users as far as practicable, including preventing queuing on the public road network, and avoiding the transport of material along the local bus routes when school buses are in operation, in consultation with local schools; (ix) details of how heavy vehicles and heavy vehicles requiring escort associated with the development will avoid moving through, and parking in, the township of Jindera during school zone times, as required by condition B4(b); (x) measures to minimise dirt tracked onto the public road network from development-related traffic; (xi) details of any employee shuttle bus service, including pick-up and drop-off points and associated parking arrangements for construction workers, and measures to encourage employee use of this service; (xii) encouraging car-pooling or ride sharing by employees; (xiii) scheduling of haulage vehicle movements to minimise convoy length or platoons; (xiv) responding to local climate conditions that may affect road safety such as fog, dust, wet weather and flooding; (xv) responding to any emergency repair or maintenance requirements; and (xvi) a traffic management system for managing heavy vehicles requiring escort; (d) a code of conduct that addresses: (i) driver fatigue; (ii) procedures to ensure that drivers adhere to the designated transport routes and speed limits; and (iii) procedures to ensure that drivers implement safe driving practices; and	This report

DEVELOPMENT CONSENT CLAUSE	REQUIREMENT	RELEVANT TMP SECTION/S
	(e) a program to ensure drivers working on the development receive suitable training on the code of conduct and any other relevant obligations under the Traffic Management Plan. Following the Planning approval, the Applicant must implement the Traffic Management Plan.	
Construction, Upgrading and Decommissioning Hours B20.	Unless the Planning Secretary agrees otherwise, the Applicant may only undertake road upgrades, construction, upgrading or decommissioning activities between: (a) 7 am to 6 pm Monday to Friday; (b) 8 am to 1 pm Saturdays; and (c) at no time on Sundays and NSW public holidays. The following construction, upgrading or decommissioning activities may be undertaken outside these hours without the approval of the Planning Secretary: • the delivery of materials as requested by the NSW Police Force or other authorities for safety reasons; and • emergency work to avoid the loss of life, property and/or material harm to the environment.	Section 3

1.5. Consultation

The Development Consent stipulates that the TMP be prepared in consultation with TfNSW and Council as below:

> *"Prior to commencing road upgrades identified in condition B6, the Applicant must prepare a Traffic Management Plan for the development in consultation with TfNSW and Council, and to the satisfaction of the Planning Secretary"*

The Engineering, Procurement and Construction (EPC) contractor and project team, accompanied by traffic specialists, will meet with council representatives on a scheduled date and time to discuss and consult on the TMP. Following the meeting, any comments received for the first draft will be discussed and implemented to satisfy the aims set out in the Development Consent to the benefit of both parties.

Records of consultation activity are provided in **Appendix B** for reference.

1.6. Structure of this Report

This report documents the findings of our investigations in relation to the anticipated traffic and parking impacts of the proposed development and should be read in the context of the Statement of Environmental Effects (SEE), prepared separately. The remainder of this report is structured as follows:

- Section 1: Introduction to the project and statutory requirements.
- Section 2: Describes the existing conditions surrounding the project.

- Section 3: Describes the approved project and construction.
- Section 4: Assesses the transport impacts of the development.
- Section 5: Discusses the proposed management measures.

2. Existing Conditions

2.1. Location and Site

The subject site is located approximately 20 kilometres north of Albury, NSW and 2 kilometres northeast of Jindera. More specifically, Glenellen Solar Farm lies near the intersection between Ortlipp Road, which forms the site access, and Lindner Road. The site comprises of the following lots:

- Lot 3 DP 411022
- Lot 3 DP 1190444
- Lot 27 DP 753342
- Lot 101 DP 791421
- Lot 1004 DP 1033823
- Lot 1 DP 588720.

The site is irregular in configuration and is approximately 398 hectares with a 309 hectare developmental footprint. Part of the site's north-western boundary borders Ortlipp road, the south-eastern side is bounded by Drumwood Road, and parts of the north eastern boundary is borders Blight Road West. The surrounding land use is primarily agricultural, with 22 rural dwellings within 1 km of the site. **Figure 1** and **Figure 2** provide an appreciation of the site's location in a local and broad context, respectively.

2.2. Road Network

The road hierarchy in the vicinity of the site is shown by **Figure 2** with the following roads considered noteworthy:

- **Hume Highway:** a state road (HW2) running in a northeast / southwest direction between the Victorian state border and Parramatta Road near Ashfield. Near the site, it is subject to 110 km/h speed zoning with two lanes of traffic in each direction. Parking is not permitted on either side.
- **Ortlipp Road**: a local road which facilitates access to the site and runs in a northeast / southwest alignment between Glenellen Road to the north and Lindner Road to the south. Near the site it is subject to 100 km/h speed zoning restrictions and carries one lane of traffic in each direction. There is no parking on either side.
- **Lindner Road:** a local road which runs in a northwest / southeast alignment between its intersection with Ortlipp Road to the north in the south and Drumwood Road to the south. Near the site it is subject to 100 km/h speed zoning restrictions and carries a single lane in each direction. No parking is permitted along its length.
- **Walla Walla Jindera Road**: a classified regional road (no. 00547) which runs in a north / south alignment between Walla Walla in the north and Jindera in the south. Near the site it is subject to 100 km/h speed zoning restrictions and carries a one lane of traffic in each direction. No parking is permitted along its length.
- **Urana Road:** a classified regional road (no. 00125) running from Walbundrie in the northwest to Lavington in the southeast. Near the site, it is subject to 100 km/h speed zoning with 2 lanes of traffic in each direction. There is no parking permitted on either side.

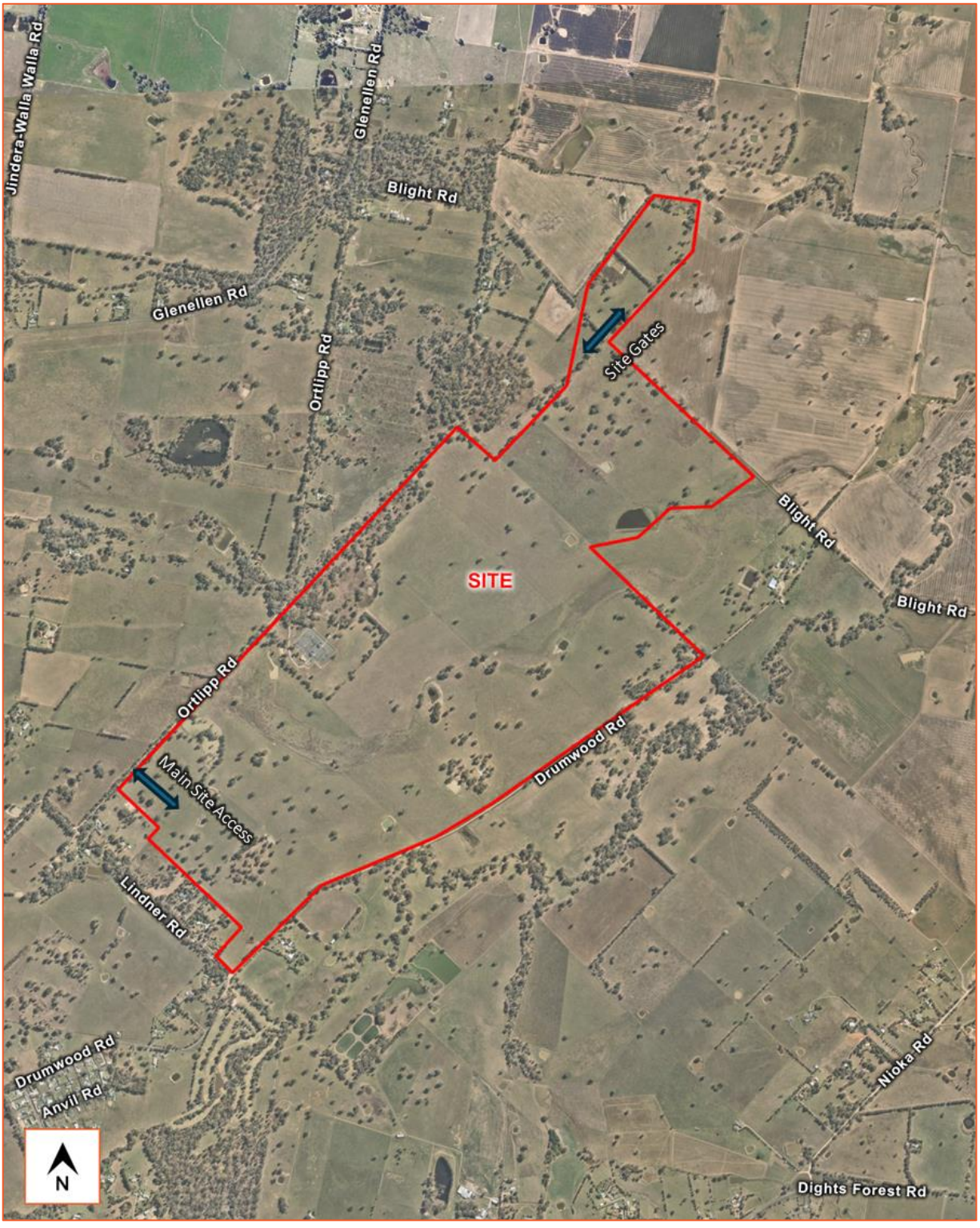


Figure 1: Site Context

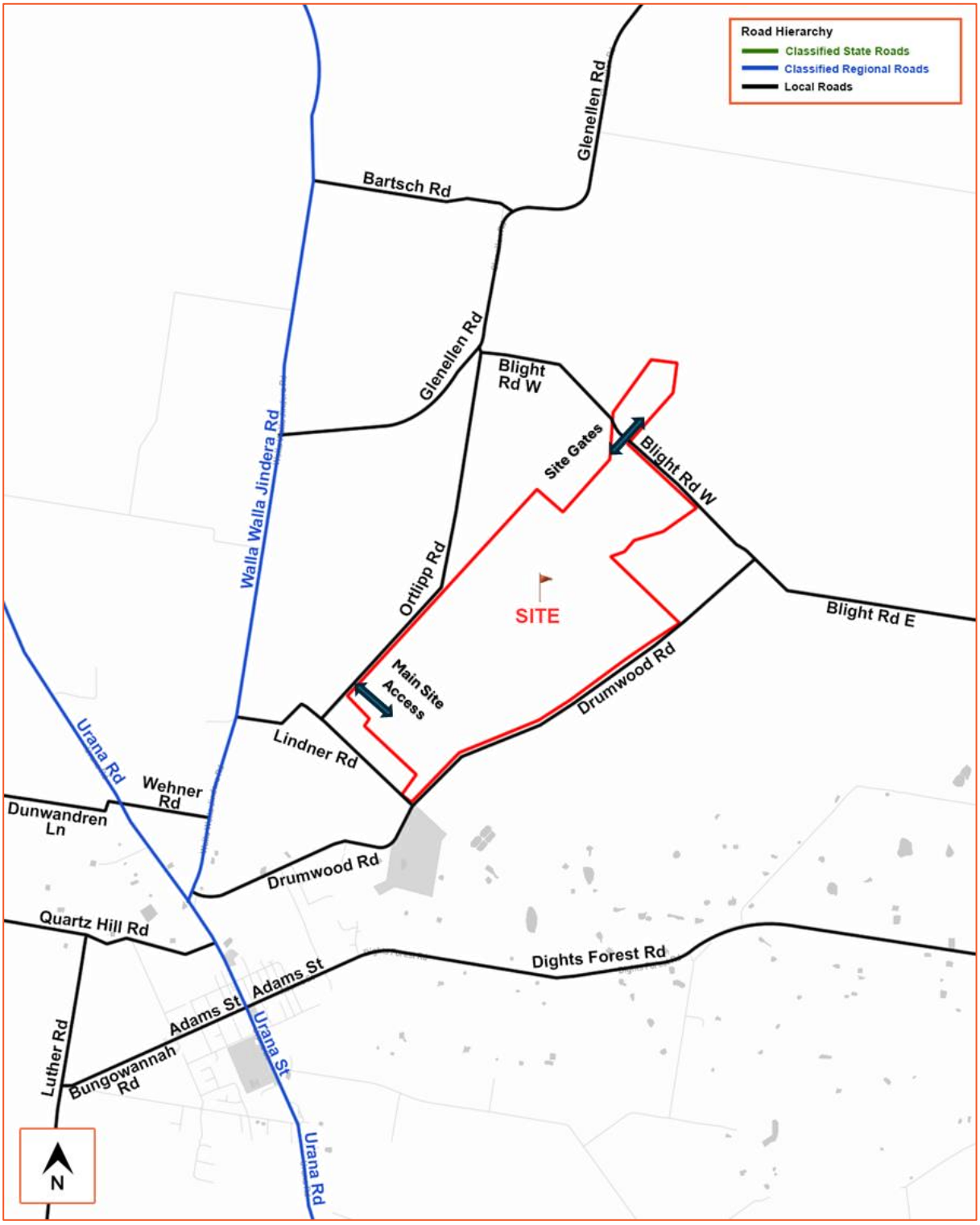


Figure 2: Location and Road Hierarchy

2.3. Public and Active Transport

2.3.1. Bus Services

Given the regional location and lack of demand, there is limited regular public transport running near the subject site. However, there are on-demand private coach services operated by M&M Kane Pty Ltd and A. P. Ofak Pty Ltd that picks up at predefined points within Burrumbuttock, Walla Walla, Jindera and Albury. Additionally, Martin's Albury Bus Service runs between Albury and Jindera via Urana Rd and operates during peak times from 7:30 AM to 5:00 PM. Details can be found in the route timetables and stops appended in **Appendix C.**

2.4. Existing Traffic Conditions

2.4.1. Crash Data

The most recent data available for the study area is between 2018 to 2022, sourced from the TfNSW Centre for Road Safety. **Figure 3** shows the recorded crashes along the haulage route.

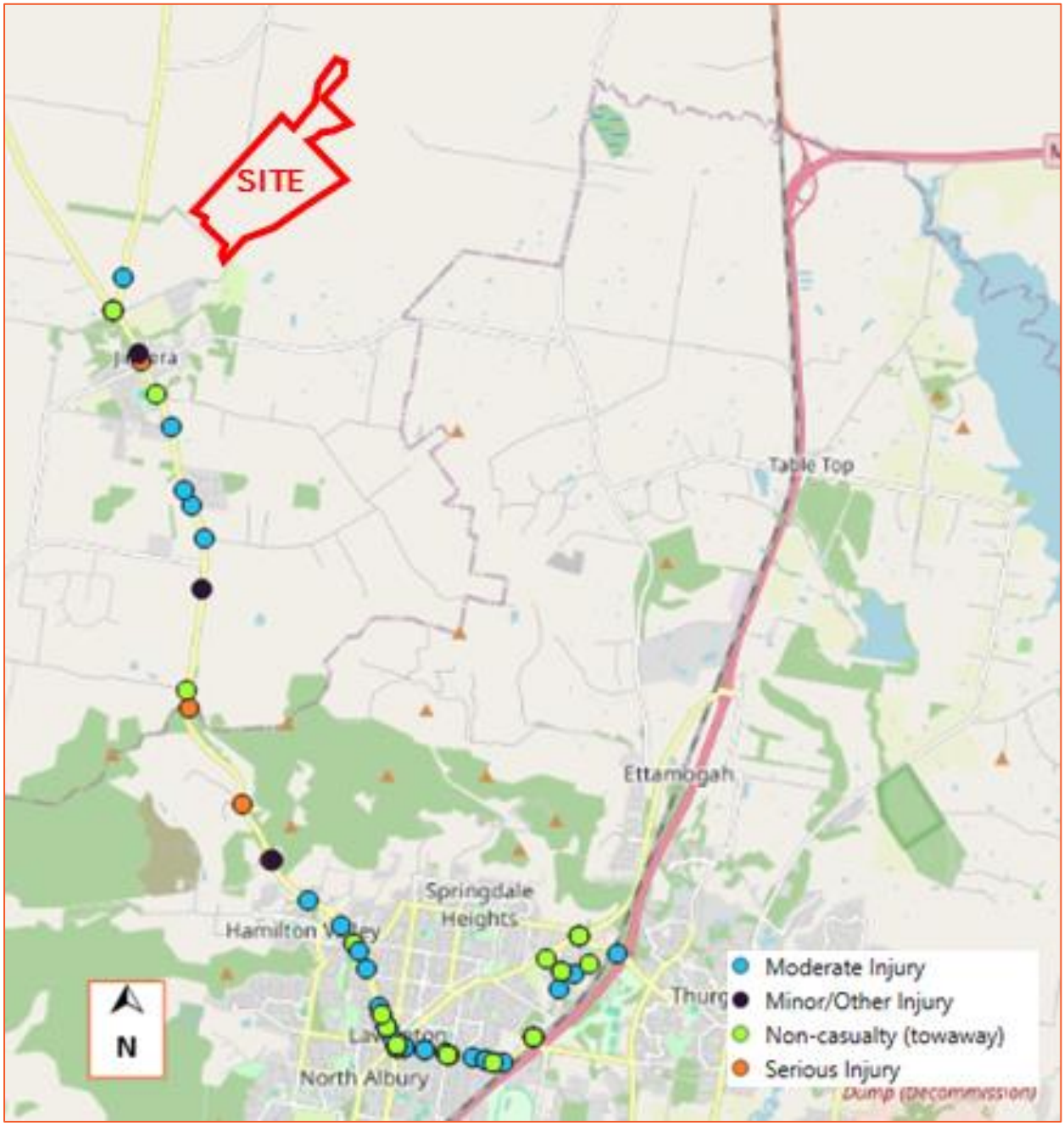


Figure 3: Crash Locations

2.4.1.1 Crash Severity

The crash severity has been categorised into four classes ranging from minor to serious. It was found that 20 % of crashes were serious injury cases, with no recorded fatalities. The following **Table 2** shows the summary of crashes and their severity rating.

Table 2: Haulage Route Crash Severity

CRASH SEVERITY	NUMBER OF CRASHES	PERCENTAGE
Serious Injury	14	20 %
Moderate Injury	26	37 %
Minor / Other Injury	7	10 %
Non-casualty	23	33 %
Total	**70**	**100%**

2.4.2. Existing Traffic Volumes

As discussed in Section 2.1 of this report, the site is currently used as rural farmland and as such, generates little to no traffic on its own. The existing trip volumes will be informed by the surrounding road network as well as the other traffic generating developments nearby. **Table 3** below shows a summary of the traffic volumes from the surrounding road network that is expected to be affected by the construction process of the GSF.

Table 3: Traffic Volume Summary

LOCATION	CONDITION	AVERAGE WEEKDAY DAILY TRAFFIC VOLUME	AM PEAK TRAFFIC VOLUMES	PM PEAK TRAFFIC VOLUMES
Ortlip Road	Baseline	100 (7%)	10	10
	With Construction	200 (26%)	20	20
Lindner Road	Baseline	100 (7%)	10	10
	With Construction	200 (26%)	20	20
Walla Walla Jindera Road	Baseline	832 (7%)	74	82
	With Construction	932 (11%)	82	92
Urana Street	Baseline	4,325 (7%)	328	435
	With Construction	4,425 (8%)	338	445
Union Road	Baseline	9,564 (7%)	956	956
	With Construction	9,664 (8%)	965	965

Source: Cardno TIA

3. Approved Development

3.1. Project Description

The approved development includes the construction, operation and subsequent decommissioning (after end of life) of a 200 MW capacity solar farm with ancillary structures near Glenellen. The project scope includes the following:

- Installation of photovoltaic (PV) panels, steel racking, and piled supports.
- Installation of electrical transformers and inverters, electrical cabling, telecommunications equipment and security fencing.
- Construction of 4-metre-wide formed gravel roads for permanent access infrequently distributed throughout the project.
- An Operations and Maintenance (O&M) facility consisting of a temporary building fitted out with necessary office, communication and messing facilities.
- A combined entry and exit driveway onto Ortlipp Road.
- Construction of all-weather roads within the site as required.
- Ad-hoc parking locations within the site during construction, for contracted employees and delivery vehicles
- Construction of suitable utilities and drainage systems, if any, to support the development.

A copy of the relevant project layout is included in Appendix A.

3.2. Construction Overview

3.2.1. Staging

The construction of GSF is estimated to take approximately 18 months to complete. The staging of construction is anticipated to be as follows:

- Site clearing works.
- Access road construction.
- Civil construction of benches.
- Construction / Installation.
- Commissioning.

A breakdown of the deliverables and estimated timeframe of the construction phases is summarised in **Table 4** below.

Table 4: Construction Staging

STAGE	DURATION
Site Clearing Works	27 weeks
Access Road Construction	20 weeks
Civil Construction of Benches	10 weeks
Construction / Installation	40 weeks
Commissioning	4 weeks

The phases above are just an outline of all the construction activities and are not presented in chronological order. The duration and scheduled days of operation are subject to a 5% leakage due to unforeseeable circumstances such as bad weather or public holidays, where no truck movements or construction activities can take place.

3.2.2. Construction Workforce

The number of workers on-site will vary during the construction period, with an expected peak workforce of 165 employees on-site. This number of employees does not translate directly to car parking or traffic generation, with car pooling and other transport demand measures to be adopted. Similarly, some employees will be involved in heavy vehicle deliveries with their own vehicles.

3.2.3. Hours of Construction

The construction hours of work will be in accordance with Condition B15 of the Development Consent which has been reproduced below:

> *Unless the Planning Secretary agrees otherwise, the Applicant may only undertake road upgrades, construction, upgrading or decommissioning activities between:*
> *(a) 7 am to 6 pm Monday to Friday;*
> *(b) 8 am to 1 pm Saturdays; and*
> *(c) at no time on Sundays and NSW public holidays*

Accordingly, the construction hours for this development are limited to Monday to Friday 7am to 6pm, and Saturday 8 am to 1 pm.

Furthermore, the following travel restrictions are enforced under Condition B4(b) of the Development Consent:

> *All heavy vehicles and heavy vehicles requiring escort associated with the development:*
> *(b) are prohibited from moving through, and parking in, the township of Jindera (along Urana Road between Pioneer Drive and Walla Walla Jindera Road) during school zone times of 8am to 9.30am and 2.30pm to 4pm.*

3.2.4. Site Access

Access to the site is located on Ortlipp Road near its intersection with Lindner Road. Throughout the construction process, all vehicles associated with the development must enter and exit via the main access point off Ortlipp Road as identified in Condition B5 and Appendix 1 of the Development Consent.

Other access points may be used for emergency purposes.

All internal roads provided by the development are all-weather roads.

3.2.5. On-site Parking

A site compound will be provided on-site which will accommodate all car parking demands generated during construction. Car parking for light and heavy vehicles is as shown in **Table 5** and provided on-site.

Table 5: Construction Parking Allocation

STAGE	PARKING SPACES
Light Vehicles	40
Shuttle Bus	13
Heavy Vehicles	20

Any further parking requirements for utility vehicles and other contractors will be addressed by the EPC contractor in accordance with the relevant standards for parking provisions. No parking is to occur along Ortlipp Road, Lindner Road or any other local or state road near the site.

The EPC contractor will promote active transport modes to reduce dependency on private vehicles with consideration for the approved housing accommodation. This will consist of:

- Priority car parking on-site.
- Locating employees near each other in accommodation areas and rostering work hours to encourage car pooling amongst employees.
- Priority parking provided to shuttle bus service.

3.2.6. Shuttle Bus Service

A shuttle bus service is provided for the workforce and will operate during the approved Hours of Construction. The Site Manager is responsible for the scheduling of the shuttle bus service and route planning subject to the accommodation location and requirement of the workforce.

Utilisation of the shuttle bus service is to be encouraged through the following measures:

- Shuttle bus service will be given priority parking and pick-up / drop-off within the on-site car park.

- Notice to all employees that there is no guarantee of on-site parking for anyone not utilising the shuttle bus.
- Signage to be placed at the main entrance and internal communal areas that state “only workers on the shuttle bus are guaranteed site access and parking.”
- Workers are encouraged to report fellow employees not utilising the shuttle bus or parking in prohibited locations.

Following shuttle bus pick-up and drop-off points have been nominated:

- SS&A Carpark: 571 David St, Albury NSW 2640 https://maps.app.goo.gl/p8C9UYbdNVCCuNGL9
- Kiewa Street Carpark: 441 Kiewa St, Albury NSW 2640 https://maps.app.goo.gl/XdK9YyRDHhrZYB5M9
- BP Truckstop: 3 Travelstop Way, Lavington NSW 2641 https://maps.app.goo.gl/BtgKWZojGkKuoqgRA

The pick-up and drop-off points are to be reviewed in consultation with contracted employees to determine suitable locations for employees to access the shuttle bus service. All contracted employees are to be provided information on the shuttle bus service as part of their employment and / or site induction.

The induction material is to contain a map of the shuttle bus pick-up / drop-off points and the frequency of service, when known. The service map/s are to also be displayed in communal staff areas and be made freely available to all contracted employees.

3.2.7. Transport and Haulage Routes

Due to the constrained carriageway of Ortlipp Road and Lindner Road, the Site Manager is required to schedule the arrival and departure of delivery vehicles such that there is minimal conflict between inbound and outbound trucks.

The haulage routes from the site for the majority of the construction stages would require a connection to a container port. At the time of the preparation of this report, the site will receive materials from Port of Melbourne, Port of Newcastle or via the Ettamogah Rail Hub. The following sections will outline the truck routes for all three and the final plan will be confirmed during the detailed design stage and procurement. At all stages, vehicles associated with the development must travel on the approved roads under the Development Consent as detailed in the below sections.

Despite the origin chosen, all deliveries are to be in accordance with **Figure 4** to **Figure 6** via Hume Highway, Thurgoona Drive, Catherine Crescent, Dallinger Road, Union Road, Urana Road, Walla Walla Jinderra Road, Lindner Road and Ortlipp Road. Imports from the Ettamogah Rail Hub are to be via Hub Road, Gerogery Road, Wagga Road to Union Road before continuing to the site.

Heavy vehicle movements are prohibited to occur along Glenellen Road and Drumwood Road, and are only to be in accordance with Development Consent B4. Movements through (and parking within) Jindera, along Urana Road between Pioneer Drive and Walla Walla Jindera Road during school zone hours of 8 – 9.30am and 2.30 – 4pm are prohibited.

Loading / unloading areas are provided on-site, separated from car parking and is to be used for the purpose of loading / unloading of materials. At no stage shall stored items or waste impede vehicle access or the ability for vehicles to load / unload on-site.

The above restrictions on vehicle movements are incorporated into the Driver Code of Conduct and are to be enforced by the EPC contractor.

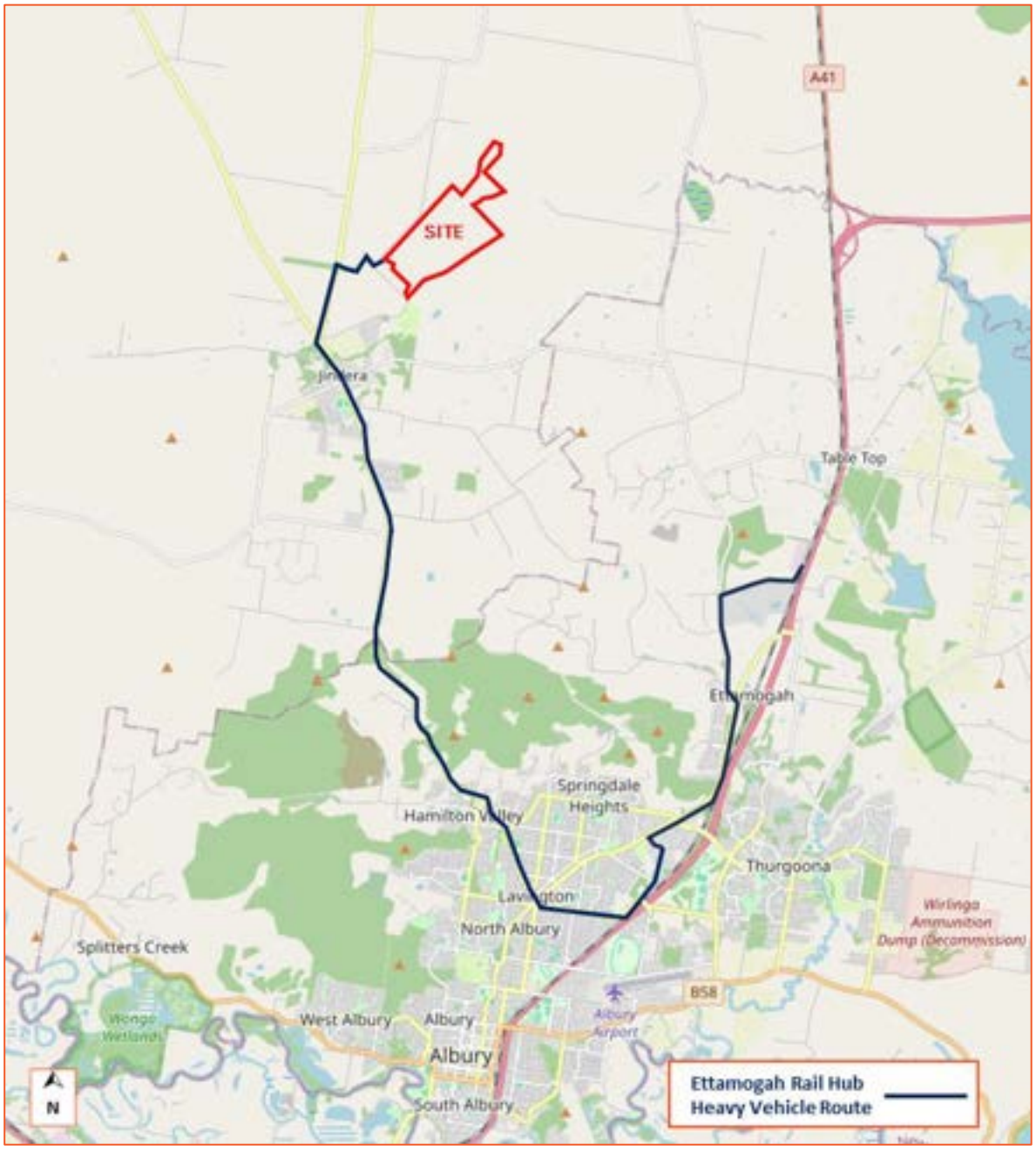


Figure 4: Truck Route from Ettamogah Rail Hub

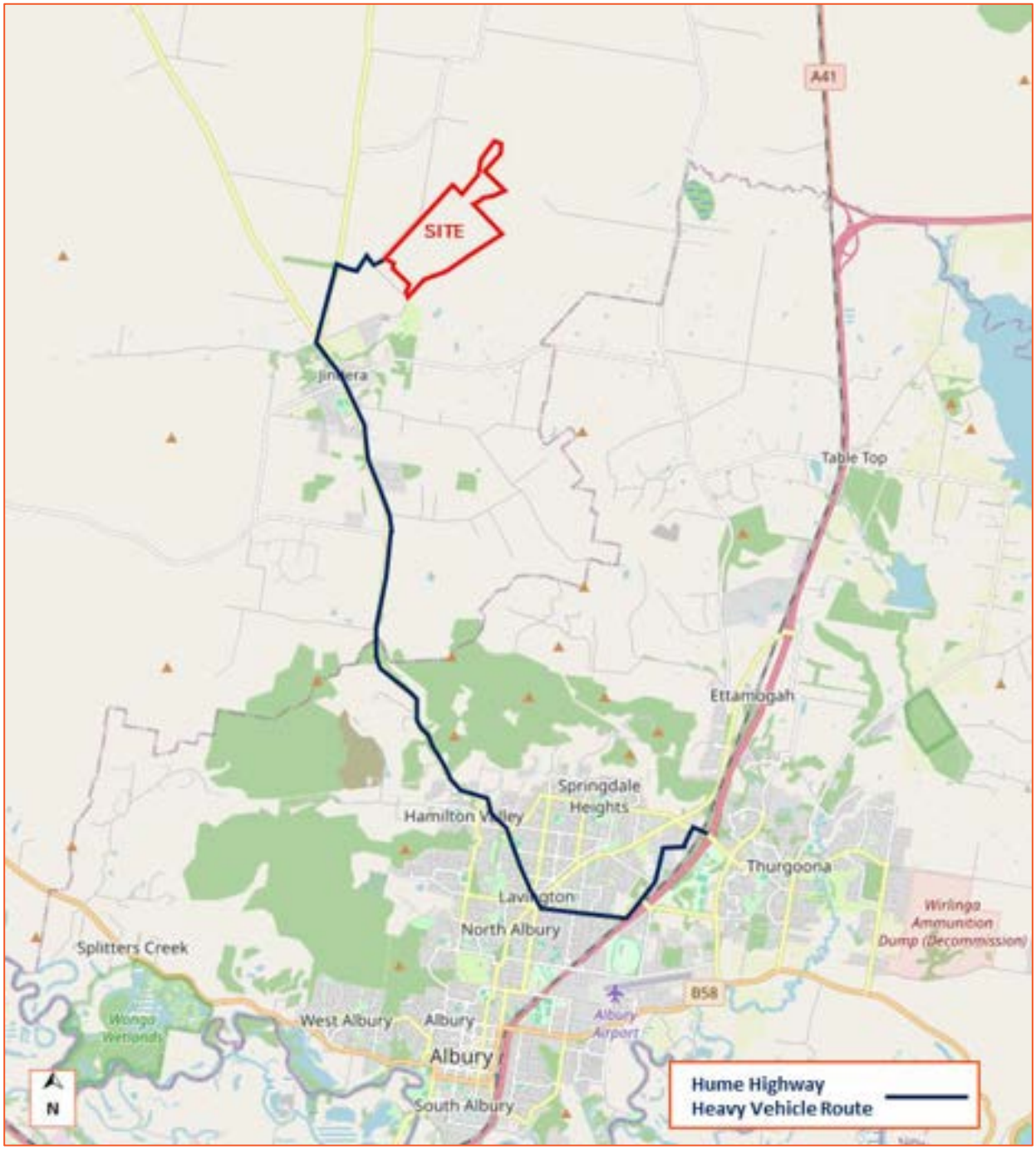


Figure 5: Truck Route from Hume Highway

Figure 6: Localised Truck Route from Urana Road

Port of Melbourne

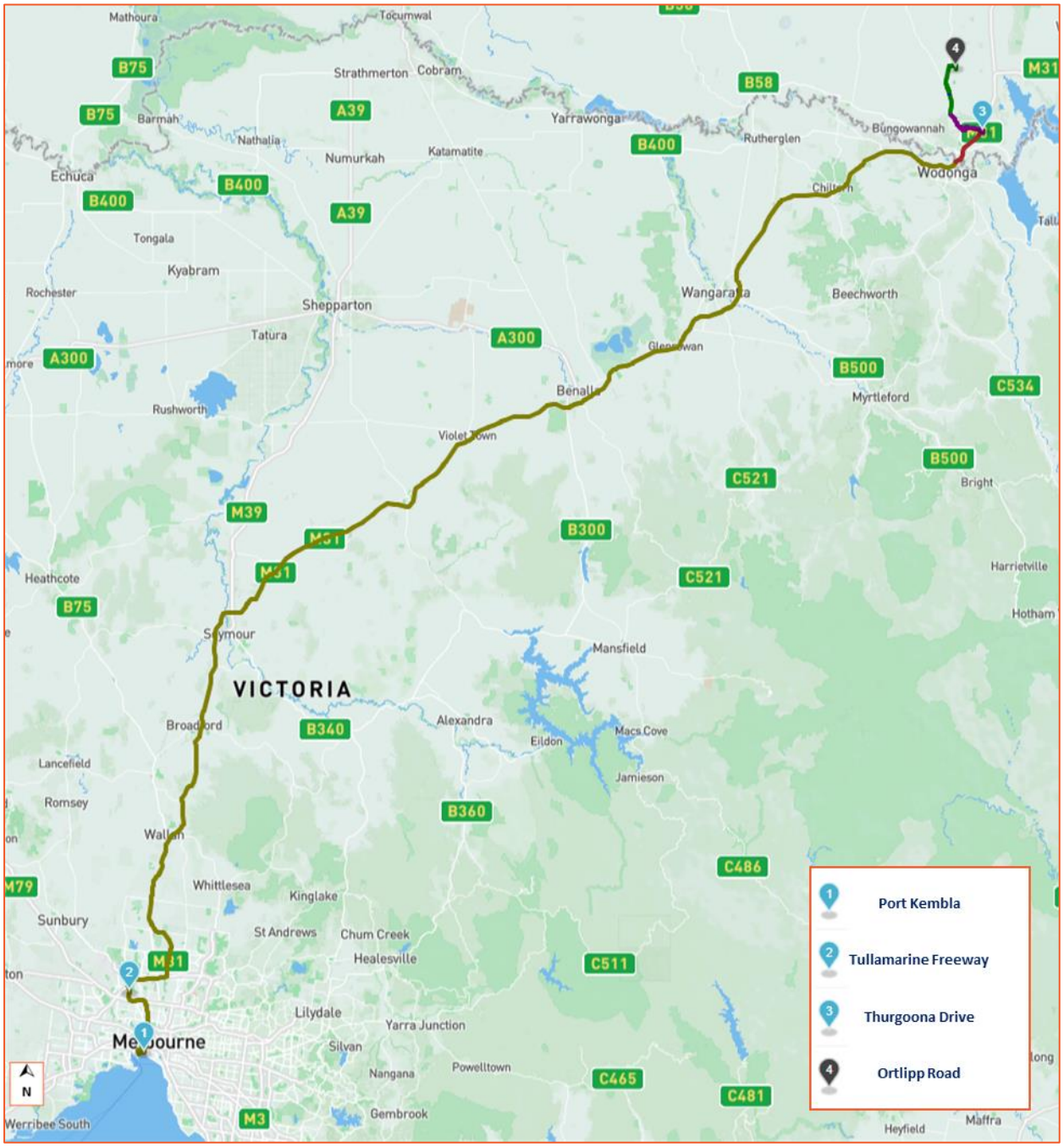


Figure 7: Port of Melbourne Truck Route

Port of Newcastle

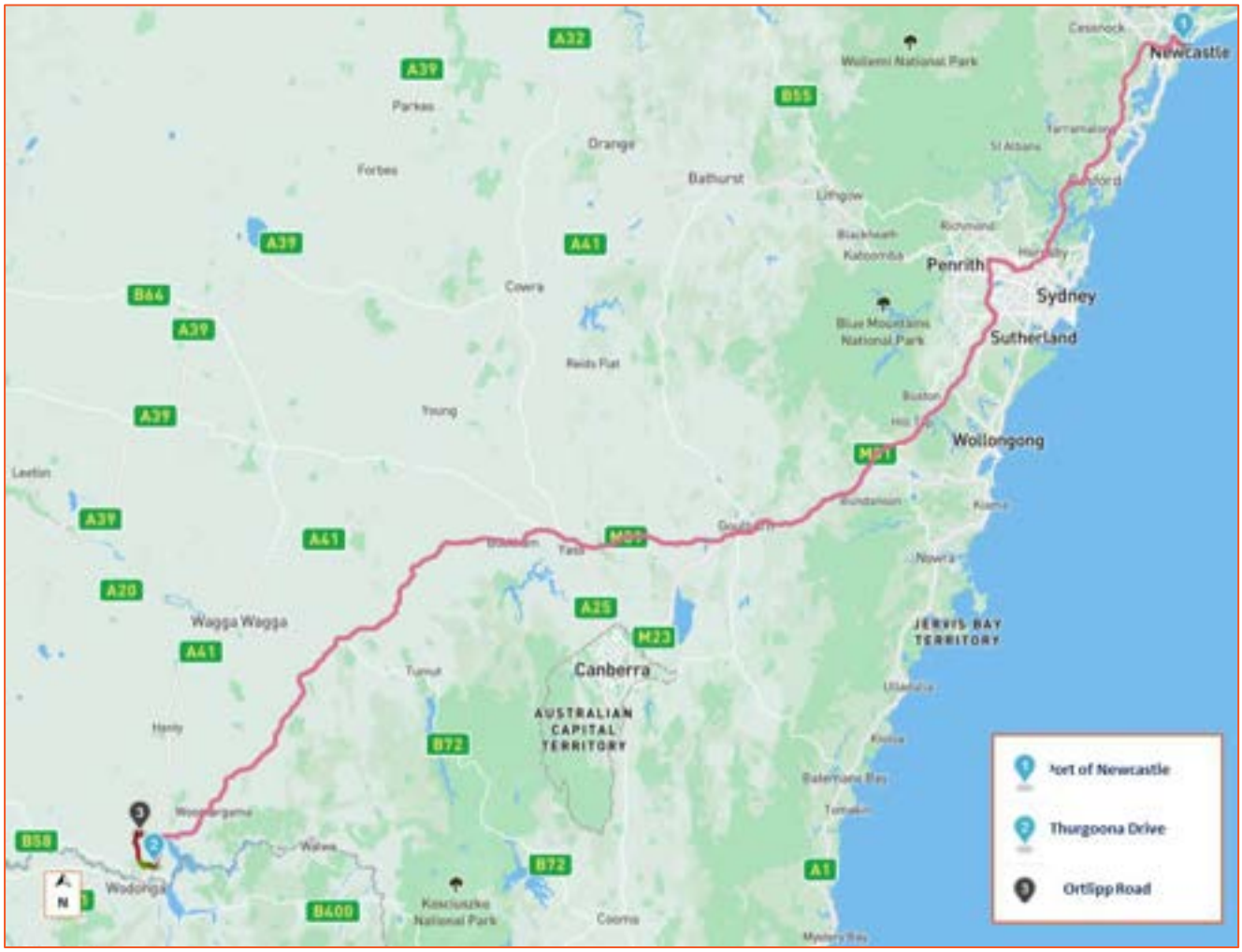


Figure 8: Port of Newcastle Truck Route

3.2.8. Oversize Overmass Vehicles

The routes for oversize and /or overmass (OSOM) vehicles shown in **Figure 6** and **Figure 7** above. These routes are designated OSOM routes by TfNSW and Vic Roads for their respective road network. The use and movement of OSOM vehicles are subject to specific road permits from the relevant road authority. When scheduling of vehicle types is known by the EPC contractor, the relevant application for permits will be made and modification to the TMP will be undertaken in consultation with TfNSW (and Council where necessary) prior to approval of the relevant permits. In this regard, traffic management planning for OSOM movements is proposed to be staged and a separate application (and TMP) will be made to TfNSW when route details and transport providers are commissioned. This staged TMP is identified as Stage 2 in **Section 1.1**.

Based on current planning, vehicles to be used for delivery of the solar farm units which may constitute as OSOM vehicles, include:

- 145 Tonne (t) mobile crane.
- 75t mobile crane.
- Transformer transport vehicles.
- Building transport vehicles

The use of OSOM vehicles will be spread across the construction period and typically occurs outside of peak times to minimise disruption to the road network. The volume of OSOM vehicles will not exceed the permitted number of vehicles under the Development Consent, being 11 movements of heavy vehicles requiring escort during construction, upgrading and decommissioning per Condition B1.

When planning for the transport of OSOM vehicles, the EPC contractor will liaise with the relevant road authorities and review the transport route, OSOM vehicle and undertake an assessment against TfNSW high risk criteria, as shown in **Table 6**.

Table 6: OSOM High Risk Criteria

CRITERIA	TMP REQUIRED IF	ADDITIONAL INFORMATION
Length	> 40 metres on single carriageway sections; and >50 metres on dual carriageway sections	Nil
Height	> 5.2 metres and within 200 millimetres of an overhead structure(s) including trees, overpasses and bridges)	Nil
Rear overhang	> 7.5 metres	Note: The rear overhang criteria for 'High Risk' agricultural combinations travelling in the NSW Western Zone is > 10 metres.
Forward projection	> 5.5 metres	Note: High risk mobile cranes are exempt from the forward projection 'High Risk' criteria as they must be enrolled in the Intelligent Access Program (IAP).
Width	> 6.0 metres	Note: The width criteria for 'High Risk' agricultural combinations travelling in the NSW Western Zone is > 6.5 metres.
Total combination weight	> 150 tonnes	Nil

OSOM vehicles are subject to available transport providers at the time of scheduling deliveries. It is understood that with exception to the likely mobile crane vehicles, the delivery of buildings and transformers will be utilised by vehicles up to an equivalent to the 26 metre long B-Double as per the Development Consent, where the load being carried is considered to be wider than 2.5 metres. However, based on early planning it is not expected that transformers and building components would be considered as high risk OSOM movements.

3.2.9. Raw Material Sources

Raw materials such (rock and cement) will be sourced from local quarries and cement plants. Subject to procurement arrangements, it is expected that the project will source the required materials from locations listed in **Table 7** and shown in **Figure 9**.

Table 7: Source of Raw Materials

NAME	LOCATION	DISTANCE FROM PROJECT	TYPE
Woomargama Quarry	Hume Highway, Woomargama nsw 2644	43 kilometres	Quarry
Albury Quarries	15778 Hume Hwy, Table Top NSW 2640	10.5 kilometres	Quarry
Monument Hill Quarry	768 Riverview Terrace, Albury NSW 2640	16.5 kilometres	Quarry
Barro Wodonga Quarries	79 Lincoln Causeway, Gateway Island VIC 3691	17.7 kilometres	Quarry
Boral Quarries	LOT 2 Weeamera Rd, Culcairn NSW 2660	24.4 kilometres	Quarry
Mawsons Glenrowan Quarry	46 Glenrowan-Moyhu Rd, Glenrowan VIC 3675	84 kilometres	Quarry
Wodonga Quarries	136 Edwards Rd, West Wodonga VIC 3690	19.6 kilometres	Quarry
Mini Cretes	556 Abercorn St, Albury NSW 2640	18 kilometres	Concrete Plant
Baxters Concrete	1 Moloney Dr, Wodonga VIC 3690	19.2 kilometres	Concrete Plant
Boral Concrete	176 Victoria Cross Parade, Wodonga VIC 3690	22.5 kilometres	Concrete Plant
Mawsons Corowa Concrete Plant	66-68 Whitehead St, Corowa NSW 2646	46 kilometres	Concrete Plant
Hanson Australia	46-50 Poseidon Rd, Corowa NSW 2646	48 kilometres	Concrete Plant

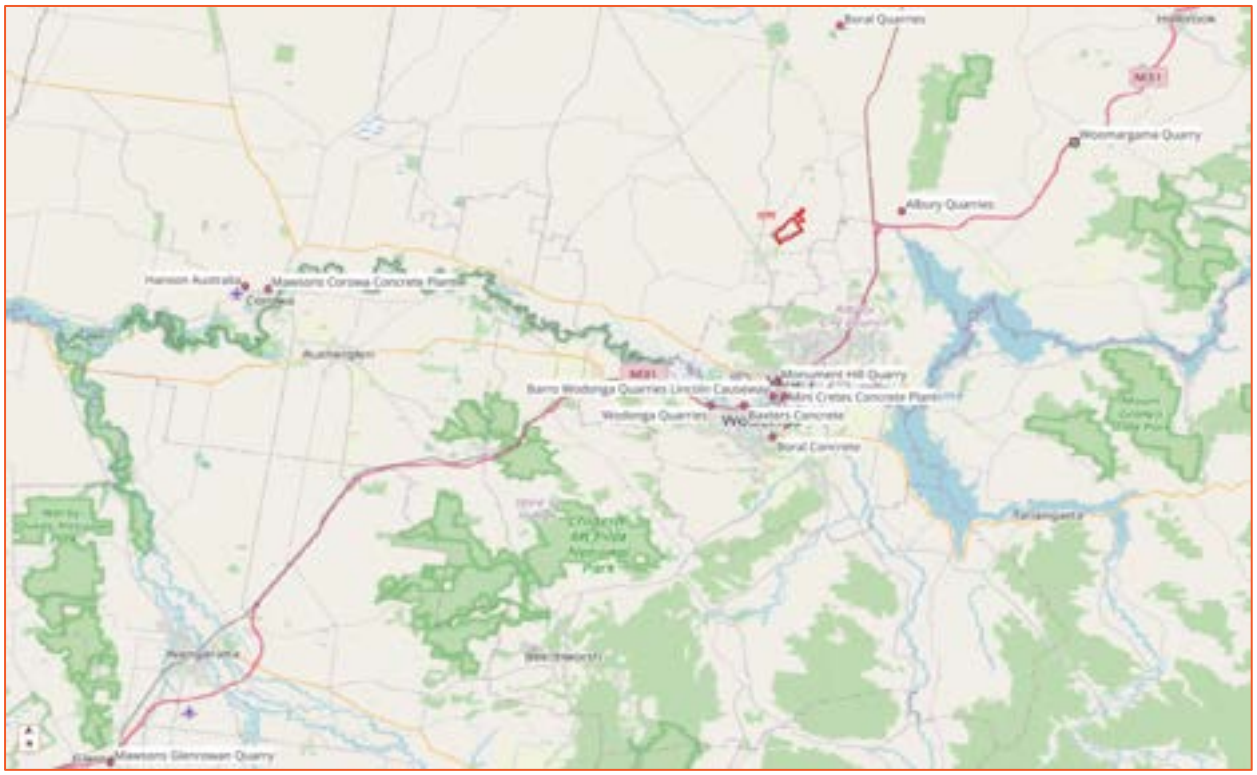


Figure 9: Location of Raw Material Quarries & Cement Plants

4. Transport Impacts

4.1. Construction

The main traffic generation during construction is attributed to construction equipment, material delivery, waste management and workforce requirements. **Table 8** below shows an appreciation of the expected vehicle trips during the different construction stages of this project.

Table 8: Construction Vehicle Traffic

STAGE	AREA OF WORK	VEHICLE TYPE	QUANTITY	APPROXIMATE DURATION
Site Clearing Works	Earthworks construction machinery	Low loader	25	27 weeks
	Tree Removal	Low loader	6	27 weeks
Access Road Construction	Earthworks construction machinery	Low loader	21	20 weeks
	Access Track Road Base	32T Truck Dog Moxy	20	20 weeks
Civil Construction of Benches	Construction equipment	Low loader	25	10 weeks
	Foundation Compound	32T Truck Dog Moxy	15	10 weeks
Construction / Installation Activities	Site Fencing	Low loader Utes Trailer Concrete truck	20	20 weeks
	Site Offices	Low Loader Flatbed truck Hiab truck	20	4 weeks
	Concrete Foundations	Concrete truck Water cart Sand cart	30	Ad hoc
	Piling Works	Low loader	15	30 weeks
	Pre-drilling works	Low loader Utes Trailers	20	15 weeks
	Tracking System Installation	Low loader Tractors Trailers	20	40 weeks

STAGE	AREA OF WORK	VEHICLE TYPE	QUANTITY	APPROXIMATE DURATION
	PV Module Installation	Low loader Tractors Trailers	20	40 weeks
	Onsite Logistics	Low loader Tractors Trailers	20	40 weeks
	Cable and Trenching	Low loader Utes Trailer Medium rigid vehicle Front end loader	20	35 weeks
	OHL Construction	Low loader Concrete truck Heavy rigid vehicle	20	25 weeks
	Dust Suppression	5,000L Water Truck	1	Daily during Summer Weekly at all other times
Deliveries	Piling Machines	Low loader or Side loader semi	7	2 weeks
	Main Equipment (Tracking, Piers, Modules, Inverters)	B-double	2000	6 months
	Gravel / Access Track Road Base	B-double	430	25 weeks
	Sand	B-double	350	35 weeks
	Mobile Crane	180T Mobile Crane	3	Ad hoc as needed
Waste Collection	Waste Collection	Waste collection truck	20	30 months (approximately 20 trucks weekly)
Workforce Requirements	Management	Light vehicles	30	Daily
	Labour Workers	Shuttle Bus	13	Daily
	Misc.	Light vehicles	10	Daily

Source: Cardno TIA

The construction of the GSF is expected to utilise around 5,000 heavy and light vehicles throughout the construction period of 12-18 months. The construction activity is to be restricted, in accordance with the Development Consent, such that at no time will the heavy vehicle, light vehicle and heavy vehicles requiring escort exceed the limits imposed by the Development Consent.

4.1.1. Heavy Vehicles

Based on the current proposed schedule at the time of this report, the development will generate up to 45 truck movements, where one movement is one vehicle entering and leaving the site (therefore 45 inbound and 45 outbound heavy vehicles). The likely heavy vehicle types identified in **Table 8** are shown in **Figure 10**.

OSOM vehicles, not shown below, are subject to available transport providers at the time of scheduling deliveries. It is understood that in most cases, the delivery of building and transformers will be utilised by vehicles up to an equivalent to the 26 metre long B-Double, where the load being carried is considered to be wider than 2.5 metres. It is not expected that transformers and building components would be considered as high risk OSOM movements.

4.1.2. Heavy Vehicle Types

Figure 10: Heavy Vehicle Types

4.1.3. Light Vehicles

It is estimated that up to 40 light vehicles may be generated per day during peak construction activities, however on average it is anticipated to be much lower than this value. Light vehicles will consist of cars and utility vehicles.

4.2. Construction Traffic Generation

Current projections for traffic generation during construction are approximately 40 light vehicle movements (40 inbound and 40 outbound) and 45 heavy vehicle movements (45 inbound and 45 outbound).

The Development Consent requires that the development does not generate more than 45 heavy vehicle movements a day and 11 vehicles requiring escort throughout the duration of construction The forecast traffic generation complies with the Development Consent and therefore is consistent with the EIS impacts already assessed.

The nearby Jindera Solar Farm (JSF) is approved, however construction scheduling for the project is unknown at the time of this TMP. The Project Owner will be required to ensure the community, which include the JSF, is updated regarding the construction program. In the event that construction of the JSF overlaps with GSF, the EPC contractor, Project Owner and Site Manager are to liaise and coordinate with JSF to minimise the cumulative impacts. The Cardno TIA has already assessed the cumulative impacts of the two projects as being acceptable and therefore, the SSD 9550 Development Consent accounts for this fact.

4.3. Road Infrastructure Upgrades

The roads along the haulage routes to GSF will undergo infrastructure upgrades to retain the integrity of the surrounding roads and traffic networks. Consultation with Council on the delivery of road upgrades required under Condition B6 of the Development Consent has occurred, with the required upgrades are illustrated in **Appendix D.**

The required road upgrades detailed in Appendix 5 of the Development Consent will be completed prior to the commencement of the solar farm construction and will be comply with all relevant standards and guidelines as required by Council and / or TfNSW where required.

Furthermore, feedback from Council has also resulted in the following requirements and maintenance works added to the road infrastructure requirements:

- Re-sheet gravel roads (Lindner and Ortlipp) right up to site access.
- Re-sheeting will use a sacrifice layer.
- Maintain same re-sheeting throughout construction of the solar farm.
- Upgrade re-sheeted roads to council requirements post construction of the solar farm.
- Signage restricting GSF related traffic on various parts of the road network, stating “No Solar Farm Traffic Permitted on this Road” as summarised below:

- Blight Road - https://maps.app.goo.gl/dxBrdD23PSiJYYP87
- Lindner Road - https://maps.app.goo.gl/1YjuZEX99Sk6aTW59
- Drumwood Road in two locations - https://maps.app.goo.gl/qhNhAt5eJGxmkBCp9 and https://maps.app.goo.gl/Gwk4SYupQnwBxLy19

Works at the intersection of Walla Walla Jindera Road / Lindner Road has been prepared based on reduced speed zoning. This has been discussed with Council and is proposed in order to protect sensitive vegetation around the intersection.

4.4. Operational Traffic

The GSF will generate extremely low traffic during operations as it requires minimal personnel to run. Additionally, the site access as well as the surrounding intersections have good visibility and are expected to be capable of supporting the low operational traffic generation following construction.

4.5. Decommissioning Traffic

The Development Consent stipulates that within 18 months of the cessation of operations, the applicant must rehabilitate the site to the satisfaction of the Planning Secretary, unless the parties agree otherwise.

Decommissioning is estimated to be around six months. During Decommissioning, the Development Consent (B1) limits the traffic generation to be no more than 45 heavy vehicle movements a day and a maximum of 11 vehicles requiring escort, which will generate a similar or lesser number of trips than the construction phase due to a reduced workforce requirement.

This phase would have a significantly reduced workforce and less traffic generation of heavy vehicles. For example, heavy vehicles required for concrete pours during the construction phase will not be required in the decommissioning phase however a lesser workforce may be required for removal of concrete structures, foundations or other building materials. As such, the traffic generation and transport impacts during the decommissioning period will comply with the conditions set out in the Development Consent and the requirement of this TMP.

4.6. Active Transport Impacts

The site and its surrounds are expected to have little to no pedestrian and cycling activity. As such, the construction activities will have no impact on the active transport network in the vicinity of the site.

4.7. Public Transport Impacts

Considering the lack of public transport from the outset, there is no considerable impact on the network as a result of this development. In any case, two-way communication will be established via agreed radio frequency for the construction vehicles and bus operators to reduce and avoid any conflict points which may arise.

The required radio frequency for construction vehicles to interact with local public buses will be agreed prior to construction activities.

4.8. Emergency Vehicle Access

Emergency vehicles will be able to access the site via the site access from Ortlipp road during and after the construction period. The construction activities will have no impact on emergency vehicle access to the site and accordingly, emergency vehicle access will be available at all times. Should there be a need for emergency vehicle access, on-site workers are to assist as necessary. As such, the construction activities and the operation of the development will not impede emergency services and is considered acceptable on traffic planning grounds.

5. Mitigation & Management Measures

All reasonable and feasible measures will be implemented to prevent and minimise any harm to the environment that may result from the construction, commissioning, upgrading, rehabilitation or decommissioning of the project. The following measures outlined in the below sub sections are primarily transport related measures however these are contributing to the overall project's requirement to minimise harm to the environment.

Section 1.1 is reiterated, whereby in discussions with DPHI, the recommended staging of the Traffic Management Plan is per the below, with this TMP reflective of Stage 1a, 1b, 3 and 4. Stage 2, relating to the heavy vehicles requiring escort, will be subject to its own TMP and further consultation with TfNSW once the transport vehicles, and origin of material is known:

- Stage 1a: Road upgrades or maintenance works to public road network as outlined in the conditions of consent, building/road dilapidation surveys, installation of fencing, artefact survey and/or salvage, overhead line safety marking and geotechnical drilling and/or surveying.
- Stage 1b: commence construction of Solar Farm.
- Stage 1c: Solar farm construction continuation, including movement of heavy vehicles requiring escort during construction as described in Condition B1 of Schedule 2 of Consent .
- Stage 2: Solar Farm Operation.
- Stage 3: Solar Farm Decommissioning at end of life.

5.1. Traffic Guidance Schemes

A Traffic Guidance Scheme (TGS) has been prepared for the proposed access to / from the site and are appended in the back as **Appendix E**, showing the proposed work zone speed restriction to better enforce Development Consent condition B9 that vehicles travel at 40 km/h on Lindner and Ortlipp Roads. Further TGS will be prepared for traffic control along Lindner Road during the detailed design and construction management plan for road upgrades.

The TGSs demonstrate the proposed signage and traffic management measures that are required to be implemented throughout the duration of the construction activities. For Restricted Access Vehicle types and OSOM vehicles, the use of TGS along its journey may be required, likely in the form of a pilot vehicle and temporary police controlled closures at intersections and road segments.

The TGSs will ensure that vehicular, pedestrian and cyclist movements are managed safely and efficiently. The TGSs have been designed in accordance with the requirements of the TCAWS and AS 1742.3, and are recommended for adoption.

TGS requirements for the road upgrade works will be developed once construction staging of the upgrades is determined. The common traffic control techniques for road upgrades may include:

- Night only works.
- Temporary lane closures or detours.
- Contraflow and single lane traffic flows.
- Directional, information and regulatory sign posting.

The traffic infrastructure will need regular inspection and review implemented by the Site Manager.

5.2. Site Induction

A mandatory Site Induction is to be completed by any personnel entering the construction works zone, including managers, workers, and delivery drivers.

Inductions for subcontractors will take place prior to arrival. For independent operators and one-off personnel, induction will take place on arrival at the site. Alternatively, independent personnel may be escorted by an inducted employee.

5.3. Driver Code of Conduct

Delivery drivers are to complete a Driver Code of Conduct, details of which are outlined in the following sections, in addition to the general Site Induction. Regular review and update to the Driver Code of Conduct may be necessary and if so, is to be undertaken at six-month intervals to ensure the Code is being adhered to. The Driver Code of Conduct is to form part of the Site Induction package for contracted drivers.

5.3.1. Heavy Vehicle Driver Code of Conduct

The Site Manager and EPC contractor will be responsible for the scheduling and receiving of freight whilst the freight companies will be encouraged to manage the drivers within the legislative and administrative requirements.

A Heavy Vehicle Driver Code of Conduct will be implemented that addresses fatigue management through the following:

- Safe travelling speeds and speed limits
- Procedures to ensure that drivers to and from the site adhere to the designated over-dimensional and heavy vehicle routes
- Procedures to ensure that drivers to and from the site implement safe driving practices
- Driving during fog, dust, and wet weather conditions
- Creating awareness around potential dangers whilst driving including the usage of mobile phones, driving under the influence etc.
- Monitor and report on the effectiveness of these measures and continually adapt mitigation measures

Additional driver behavioural expectations during a site delivery process will include:

- Engagement of local drivers to ensure familiarity with the roads.
- Planned layover areas defined in advance by Project Management.
- Directions of approach to site that are documented and specified in advance to the freight companies.
- Arrival at pre-determined and approved time with logistics.
- A driver site induction, including security gate process.
- Logistics to escort all delivery vehicles to laydown areas.
- Consideration and courtesy when driving on public roads.
- Speed limits to be strictly adhered to.
- Drivers to adhere to any directions given by site personnel.
- Drivers to adhere to maximum continuous driving times and rest breaks.
- Entering and exiting the site in a forward direction only.

An example of the Driver Code of Conduct is provided in **Appendix F** for reference.

5.4. Dust and Dirt Control

The Development Consent requires that the applicant minimise the dust generated by the construction activities through dust suppression methods. The EPC contractor is responsible for organising and facilitating the process by:

- Ensuring construction-related traffic does not track dirt onto the public road network.
- Ensuring loaded vehicles entering or leaving the site have their loads covered or contained.
- Provision of cattle grid or shaker at site access to remove / reduce dirt from vehicles.
- Implementation of sediment control at all on-road stormwater inlets and other drainage points affected by the development.

A dust suppression vehicle (i.e. water cart) is to be used as required. Ongoing review of erosion and sediment control plans will be undertaken prior and during the commencement of construction. The EPC contractor will be responsible for the establishment of a suitable site access point which will minimise and reduce the amount of dirt tracked off-site.

5.5. Environmental

In the event of adverse weather conditions or emergencies, the EPC contractor is to instruct all personnel of the prevailing road conditions. This is to include:

- Review local weather forecast and Bureau of Meteorology information daily and advise employees of conditions.
- Review local Emergency Service notifications daily regarding any bushfire, flooding or natural disasters and advise employees of conditions and directions from emergency services.
- Review site access daily along Walla Walla Jinderra Road, Lindner Road and Ortlipp Road for impacts by fog, fallen trees, road pavement conditions and advise employees of the conditions including any changed traffic conditions.

5.6. Dilapidation Surveys

A copy of the project specific Dilapidation Report is submitted separately.

Subject to the findings of a dilapidation survey, it may be necessary for the GSF to provide monetary contributions to the maintenance of affected roads. The relevant fees will be jointly estimates in conjunction with representatives of council.

Additionally, there will be on-site resources to respond to emergency road repairs during construction and decommissioning. On receipt of notification of road damage, the EPC contractor is to liaise with Council and agree on the required resources to repair the road as required.

5.7. Approvals

Throughout the course of the construction program, the EPC contractor will ensure compliance with approvals and other legislation, policy and guidelines as follows:

- Roads Act 1993
- SEPP 2022
- NSW Road Noise Policy
- EPA Act 1979
- SSD Approval 9550

5.8. Site Manager

A Site Manager is required and responsible for liaising directly with the EPC and for coordination of all heavy vehicle movements to and from the site. The Site Manager is required to coordinate the scheduling of arrival and departure times for heavy vehicles and heavy vehicles requiring escort, and ensuring the daily vehicle limits are not exceeded.

The Site Manager will schedule heavy vehicles to avoid the PM peak hour where practicable and for the record keeping of inbound and outbound vehicles from the site. Where cumulative projects in the area arise, the Site Manager is to coordinate with project representatives of other sites to plan and minimise cumulative traffic impacts.

This coordination also includes liaison with the relevant bus companies / operators and bus drivers to minimise potential for conflict with school buses and other road users as far as practicable. Priority is given to bus routes and their bus drivers.

Where heavy vehicles or heavy vehicles requiring escort are required and may impact the road network in terms of road closures, traffic control requirements or repair / maintenance, the Site Manager is to coordinate communication with relevant stakeholders and the community through the established communication channels.

The shuttle bus service is to be overseen by the Site Manager so that the number of shuttle bus movements does not exceed the daily limits. Any required changes to the shuttle bus service is to be coordinated by the Site Manager with contracted employees. The scheduling of shuttle buses at pick-up and drop-off locations will be developed in consultation with contracted employees to ensure the services can be utilised.

5.9. Record Keeping

The Site Manager is responsible for the record keeping of heavy vehicles and vehicles requiring escort entering or leaving the site each day for the duration of the project.

The Site Manager will keep daily logs of vehicle movements that can be audited to the hour and is to be produced to the relevant authority when required, to demonstrate compliance with the Development Consent.

Record keeping of other transport related matters is the responsibility of the Project Owner or its delegated representative.

5.10. Complaints Register

The Project Owner is committed to dealing with complaints in a reasonable timeframe and commits.
to ensuring that people who make complaints will be:

- Provided with information about the complaint handling process.
- Provided with acceptable ways to make complaints.
- Listened to, treated with respect and actively involved in the complaint process.
- Provided with reasons for and decisions and any options for redress or review.

Additionally, the Project Owner is also required to undertake all steps informed by a Complaints Management Plan to ensure that the individuals involved are treated with respect and the situation is handled in an unbiased and professional manner. A project specific email, phone number and online website will be available and capable of receiving complaints which are to be logged and addressed by the Project Owner.

Proactive measures to liaise, consult and communicate with the community, Transport for NSW, Greater Hume Shire Council, Albury Council and any other relevant stakeholders will be implemented during the construction phase. This is to ensure timely, accurate and comprehensive traffic information is provided to all existing and potential roads users, and to accommodate any community and key stakeholder feedback regarding road safety and traffic management issues. Community and stakeholders will also be consulted prior to the improvement works along Urana Road, Walla Wall Jinderra Road, Lindner Road and Ortlipp Road.

5.11. Community Engagement

Throughout the time leading up to and during the construction of the GSF, proactive measure to allow liaison, consultation, and communication between the community, Council and TfNSW, will be implemented by the project team. The strategies for community consultation include:

- Pre-construction: community engagement day where relevant contact details will be shared, and the community will be informed of impacts of construction activities, including:
  - Planned start and end date of investigation or construction activities.
  - Timing of construction activities.
  - Planned routes for construction vehicles.
  - Planned duration and timing of any road or lane closure, if required.
- During construction: a 24-hour phone number will be displayed on the site entrance sign. The phone number will facilitate a line of communication between the community and any project-related matters.
- Online project site providing community notifications and updates on the project.
- Project specific email for stakeholders and community to send emails and make contact.

Where project related activities impact the road network and / or the community, community and stakeholder notifications are to be issued by the EPC contractor or as delegated by the Project Owner a minimum of two-weeks prior to the planned event. This does not include activities that would otherwise require advertisement or consultation as a requirement by any planning or legislative plan.

In the occurrence of an unplanned event, the EPC contractor or as delegated by the Project Owner is to notify stakeholders and the community as soon as possible.

5.12. Review & Monitoring Process

This TMP will be reviewed and audited in accordance with the EPC contractor's management systems and the deliverables outlined in condition B9 of the Development Consent.

The TMP will be a 'living' document that will be progressively reviewed and adapted throughout the construction and operation process to reflect any changes in construction methodology. The EPC contractor is responsible for updating any incidents and traffic disruptions resulting from the works. Suitable record keeping is to be undertaken to track any changes made to this document.

Shuttle bus services are to be regularly reviewed to ensure the pick-up and drop-off points are easily accessible for majority of contracted employees. Any updates to the shuttle bus service is to be communicated to employees with revised maps and induction material provided to all employees.

As part of this process, the following Notifications are required by the Development Consent and will be fulfilled by the Project Owner:

Table 9: Notification Requirements

DEVELOPMENT CONSENT CLAUSE	REQUIREMENT
Notification of Department C7	Prior to commencing the construction, operations, upgrading or decommissioning of the development or the cessation of operations, the Applicant must notify the Department in writing via the Major Projects website portal of the date of commencement, or cessation, of the relevant phase If any of these phases of the development are to be staged, then the Applicant must notify the Department in writing prior to commencing the relevant stage, and clearly identify the development that would be carried out during the relevant stage
Incident Notification C10	The Planning Secretary must be notified in writing via the Major Projects website immediately after the Applicant becomes aware of an incident. The notification must identify the development (including the development application number and the name of the development if it has one) and set out the location and nature of the incident. Subsequent notification requirements must be given, and reports submitted in accordance with the requirements set out in Appendix 8.
Non-Compliance Notification C11 – C12	The Department must be notified via the Major Projects website portal within 7 days after the Applicant becomes aware of any non-compliance. A non-compliance notification must identify the development and the application number for it, set out the condition of consent that the development is non-compliant with, the way in which it does not comply and the reasons for the non-compliance (if known) and what actions have been, or will be, undertaken to address the non-compliance. A non-compliance which has been notified as an incident does not need to also be notified as a non-compliance

Refer to **Appendix G** for the Incident Notification.

5.13. Roles and Responsibilities

Table 10: Roles and Responsibilities

ROLE	ORGANISATION	RESPONSIBILITY
Project Owner	GSF	Adherence to approvals and legislative requirements. Community and stakeholder consultation. Complaints handling. Incident and non-compliant notifications
EPC Contractor	GSF	Adherence to approvals and legislative requirements. Implementation and enforcement of the TMP during construction. Community and stakeholder consultation. Coordination and logistics of heavy vehicles. Enforcement of Driver Code of Conduct Dust and dirt control and environmental conditions impacting transport routes. Incident and non-compliance recording and notifications.
Site Manager	GSF	Heavy vehicle scheduling, tracking and record keeping. Community and stakeholder notification. Environmental conditions impacting transport routes. Shuttle bus service logistics.
Council	Greater Hume	Approvals within their LGA.
	Albury	Approvals within their LGA.
Transport for NSW	Transport for NSW	Approvals within the state classified road network.
Public Transport	Transport for NSW / M&M Kane Pty Ltd and A. P. Ofak Pty Ltd	Liaison with the EPC contractor regarding coordination of school bus routes with construction generated heavy vehicles.
Emergency Access	NSW Police NSW Ambulance NSW Fire & Rescue	Respond to emergencies as required.

Appendix A

PROJECT

AUS-GLENELLEN-PROJECT

CLIENT

LEGENDS

- JINDERA SUBSTATION BOUNDARY
- FENCE
- 4m-WIDE INTERNAL TRACKS
- 10m-WIDE BUSHFIRE CLEARANCE ZONE
- 5m-WIDE SUBSTATION ACCESS ROAD
- TRANSMISSION LINE EASEMENT
- PONDS TO BE BACKFILLED
- PONDS TO REMAIN
- TREE AREA
- MINOR EXISTING STREAMS
- WATER TANK
- PV PANELS
- NATIVE SCREENING AS NOTED

ISSUE NOTES

REV.	DATE	DESIGNED BY
REV. 01	NOV. 24, 2021	JEANHER M.
REV. 02	MAR. 15, 2022	JEANHER M.
REV. 03	MAY 01, 2022	JEANHER M.
REV. 04	JUNE 06, 2022	JEANHER M.
REV. 05	SEPT 20, 2022	JEANHER M.

SCALE	N/A	A1

www.trinasolar.com

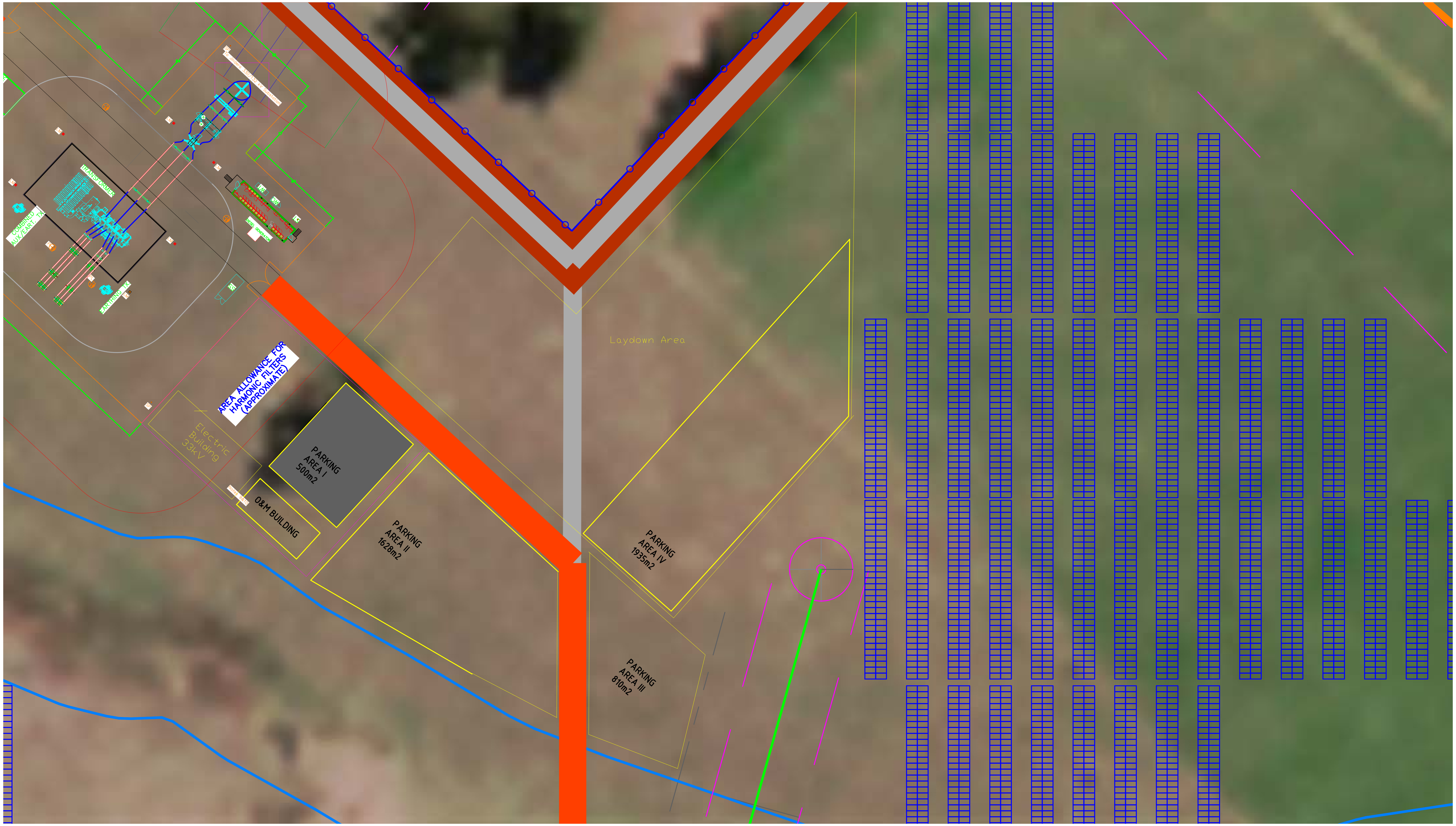
CO-OPERATED WITH

PROJECT DETAILS

DC CAPACITY	260.013MWp
INSTALLED AC CAPACITY	264MVA
GRID INJECTION CAPACITY	200MW
PV MODULE	Vertex N 670Wp BF Dual Glass
NUMBER OF PANELS	388,080 pcs
INVERTER	SMA 4400
MODULES PER STRING	30
NUMBER OF STRINGS	12,936
MMS	2P Single Axis Trackers
PITCH	9.25m

NOTE: DRAWING IS DRAFT AND FOR REVIEW PURPOSES ONLY.

DESIGNED BY	
DRAWN BY	JEANHER M.
CHECKED BY	
APPROVED BY	
PROJECT NO.	
DISCIPLINE	CIVIL
DRAWING TITLE	GLENELLEN SITE LAYOUT
DATE	
DRAWING NO.	TS19-AUS-GLENELLEN-G001-01
BARCODE	



Laydown Area
AREA ALLOWANCE FOR HARMONIC FILTERS (APPROXIMATE)
Electric Building 33kV
PARKING AREA I 500m2
O&M BUILDING
PARKING AREA II 1628m2
PARKING AREA IV 1935m2
PARKING AREA III 810m2

Appendix B

Transport for NSW

9 March 2024

TfNSW reference: WST24/00040/001 | SF2024/032456
Your reference: SSD-9550

Hayden Calvey
PDC Consulatants
By Email: hayden@pdcconsultants.com.au

Review of Traffic Management Plan for Glenellen Solar Farm

Dear Hayden,

Reference is made to the Traffic Management Plan (TMP) submitted for Transport for NSW (TfNSW) consideration in accordance with consent Condition B9, Schedule 2 of Notice of Determination for SSD-9550 issued 15 December 2023.

TfNSW has reviewed the TMP prepared by PDC Consultants, dated 2 February 2024, and recommends the following amendments:

1. Details of OSOM vehicles required to access the site have not been provided. The TMP is required to be updated to include an assessment of the identified high risk OSOM routes to ensure that no further road upgrades are required to accommodate these movements. The assessment is required to provide and assess the following:

   a) Identify and provide the following measurements parameters of the high risk OSOM components / materials to be moved:
      - Identify types and numbers of OSOM vehicles proposed to be used for the project.
      - Maximum combination load for the nominated vehicle, length, width, height and mass (including tare, payload, gcm and axle to weight ratio).
      - Maximum trailer articulation angle(s),
      - Minimum overhang heights above the road surface,

   b) Details of the road geometry and alignment along the identified transport route/s, including existing formations, crossings, bridges, intersection treatments and any identified hazards, including:
      - Bridge Assessments for any at risk bridges on the classified road network due to dimensions and weight of OSOM vehicles.
      - Swept path analysis demonstrating the largest design vehicle can enter and leave the development, and simultaneously pass through intersections along the proposed transport route/s.

        The design vehicle templates used in the swept path analysis software are also requested in order for TfNSW to review the performance within the software (e.g. Autodesk Vehicle Tracking or Transoft AutoTURN).

A 51-55 Currajong Street, PARKES NSW 2870 | PO Box 334 PARKES NSW 2870 | DX20256
E development.west@transport.nsw.gov.au | ABN 18 804 239 602

- Pinch points (corners, hairpin bends, underpasses, bridges)
- Road works (confirm with Program Delivery managers and Network Operations managers in Region for info)

If you have any questions, please contact Tim Mitchell on 1300 019 680 or email development.west@transport.nsw.gov.au.

Yours faithfully,

Alexandra Power
Team Leader Development Services - Renewables
Community and Place | Region West
Regional and Outer Metropolitan

CONSULTATION RESPONSE TABLE

AGENCY	COMMENT	RESPONSE / ADDRESSED
TfNSW	Details of OSOM vehicles required to access the site have not been provided. The TMP is required to be updated to include an assessment of the identified high risk OSOM routes to ensure that no further road upgrades are required to accommodate these movements. The assessment is required to provide and assess the following: a) Identify and provide the following measurements parameters of the high risk OSOM components / materials to be moved: • Identify types and numbers of OSOM vehicles proposed to be used for the project. • Maximum combination load for the nominated vehicle, length, width, height and mass (including tare, payload, gcm and axle to weight ratio). • Maximum trailer articulation angle(s), • Minimum overhang heights above the road surface,	OSOM Routes are provided in Figure 6 and Figure 7 of the TMP. OSOM vehicle types are not yet known and are subject to transport providers and procurement. With exception to mobile cranes, the movement of buildings and transformers are not considered to be high risk per the TfNSW criteria.
	Details of the road geometry and alignment along the identified transport route/s, including existing formations, crossings, bridges, intersection treatments and any identified hazards, including: • Bridge Assessments for any at risk bridges on the classified road network due to dimensions and weight of OSOM vehicles. • Swept path analysis demonstrating the largest design vehicle can enter and leave the development, and simultaneously pass through intersections along the proposed transport route/s. The design vehicle templates used in the swept path analysis software are also requested in order for TfNSW to review the performance within the software (e.g. Autodesk Vehicle Tracking or Transoft AutoTURN). • Pinch points (corners, hairpin bends, underpasses, bridges) • Road works (confirm with Program Delivery managers and Network Operations managers in Region for info)	OSOM routes are provided in Figure 6 and Figure 7 of the TMP. These routes are pre-approved OSOM routes and it is understood that the likely vehicle specifications and loads will not exceed the width, height or load capacity of the road network. The movement of solar farm units along the OSOM routes to the area of Albury and surrounding suburbs is not new and has been undertaken by other operators previously. The EPC will liaise with the relevant roads authority once the transport providers are engaged and vehicle types are secured. Swept path analysis has been provided as part of the EIS approval and undertaken as part of the road infrastructure upgrades detailed in Appendix D.

Department of Planning, Housing & Infrastructure

Our ref: SSD-9550-PA-12

Guillermo Alonso
Director Projects Development
Global Power Generation Australia Pty Ltd
Level 3/73 Northbourne Avenue
Canberra, ACT, 2601

16/6/2024

Subject: Glenellen Solar - Request to Stage Management Plans

Dear Mr. Guillermo

I refer to your correspondence requesting approval to stage the Traffic Management Plan as detailed in your correspondence of 14 June 2024.

The Department has considered your request and the information provided during the preparation of the draft Traffic Management Plan (TMP) and Environmental Management Strategy (EMS). After careful review, I am satisfied that it is necessary to stage both plans.

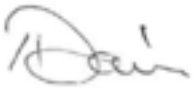
Accordingly, I approve the staged preparation and submission of the TMP and EMS as follows:

- **Stage 1a**: Road upgrades or maintenance works to public road network as outlined in the conditions of consent, building/road dilapidation surveys, installation of fencing, artefact survey and/or salvage, overhead line safety marking and geotechnical drilling and/or surveying;
- **Stage 1b**: commence construction of Solar farm;
- **Stage 1c**: Solar farm construction continuation, including movement of heavy vehicles requiring escort during construction as described in Condition B1 of Schedule 2 of Consent.
- **Stage 2**: Solar Farm Operation; and
- **Stage 3**: Solar Farm Decommissioning at end of life.

It is noted that Stage 1c of the TMP will need to include details of consultation with Councils and TfNSW.

If you wish to discuss the matter further, please contact Keren Halliday on 02 8289 6444.

Yours sincerely



Iwan Davies
Director
Energy Assessments
As nominee of the Planning Secretary

Appendix C

WALLA – GLENELLEN - JINDERA (RETURN JOURNEY)	22 May 2019

Bus No 5

3.16pm	St Patricks Primary School		Kiewa Street
		Left	Hume Street
		Left	Olive Street
3.19pm	Albury Public School	Right	Smollett Street
		Left	David Street
		Left	Guinea Street
3.35pm	Albury High School	Right	Kiewa Street
		Right at roundabout	Nathan Avenue
		Continue	Alma Street
		Right	North Street
		Right	Young Street
3.40pm	The Scots School	Left	Perry Street
		Left	Wood Street
		Right	Tribune Street
		Left	Mate Street
		Right	Fallon Street
		Left	Corella Street
		Right	Swan Street
3.44pm	St Annes & Xavier High School	Right	Curlew Crescent
		Left	Currawong Street
3.46pm	Nth Albury Public School is (J.F.H Pick Up)	Right	Fallon Street
		Right	Mate Street
		Left	Urana Road
		Continue	Urana Street, Jindera
		Right	Walla – Jindera Road
		Right	Glenellen Road
		Left	Gerogery West Road
		Right	Commercial Street, Walla
		Right	Cummings Road
4.52pm		Left	Olympic Highway
			Terminate

Current Bus Stop Locations

Stop	Location	Approx. Time
1	467 Urana Rd, Jindera Gap	3.51pm
2	Cnr Urana Rd & Hueske Rd	3.57pm
3	Bus Shelter, Urana Street, Jindera	3.59pm
4	Opposite Jindera Hotel	4.01pm
5	Opposite Jindera Post Office	4.02pm
6	Cnr Drumwood Rd & Walla – Jindera Rd	4.04pm
7	“Miya” 255 Glenellen Road	4.08pm
8	576 Glenellen Road	4.10pm
9	317 Gerogery West Road	4.27pm
10	286 Gerogery West Road	4.28pm
11	235 Gerogery West Road	4.28pm
12	Bowling Club, Commercial Street, Walla Walla	4.38pm
13	Cnr Wanke Street & Commercial Street	4.47pm
14	1696 Cummins Road - Rosedale	4.50pm
15	Wattlevale Road, Cummings Road	4.52pm
16	Kings Bridge Reserve Road, Cummings Road	4:54pm

For enquires regarding this service please call Martin’s on 02 6029 8657

Martin's BUS & COACH ALBURY

MARTIN’S ALBURY PTY LTD
73 Railway Parade, Culcairn NSW 2660
Telephone 02 6029 8657
Email: culcairn@martinsalbury.com.au
Website: www.martinsalbury.com.au

WALLA – GLENELLEN – JINDERA – ALBURY (FORWARD JOURNEY)	18 June 2019

Bus No 5

7.05am	Culcairn Bus Terminal	Depart	Railway Parade
		Right	Olympic Way
		Right	Cummings Road
		Left	Commercial Street, Walla
		Left	Walla Walla Road
		Continue	Gerogery West Road
		Right	Glenellen Road
		Left	Walla – Jindera Road
		Left	Urana Road
		Continue	Urana St, Jindera
		Continue	Urana Road
		Right	Mate Street
		Left	Swan Street
		Right	Curlew Crescent
8.30am	St Annes & Xavier High School	Left	Currawong Street
8.33am	ANPS & JFHS	Right	Fallon Street
		Left	Mate Street
		Right	North Street
		Left	Wood Street
8.36am	Scots School	Right	Perry Street
		Left	Young Street
		Right	Guinea Street
	Albury High School	Right	Kiewa Street
		U-Turn	Kiewa Street & Poole Street
8.49am	St Patricks Primary School	Continue	Kiewa Street
		Left	Hume Street
		Left	Olive Street
8.53am	Albury Public School	Right	Smollett St
			Terminate

Current Bus Stop Locations

Stop	Location	Approx. Time
1	Cnr Cummings Road & Wattlevale Road	7.31am
2	1696 Cummins Road - Rosedale	7.33am
3	Cnr Wenke Street & Commercial Street – opposite school	7.37am
4	Walla Bowling Club, Commercial Street Walla Walla	7.40am
5	235 Gerogery West Road	7.52am
6	286 Gerogery West Road	**N/A**
7	317 Gerogery West Road	7.53am
8	598 Glenellen Road	7.57am
9	576 Glenellen Road	7.57am
10	Cnr Walla-Jindera Road & Drumwood Road	8.05am
11	Jindera Post Office	8.08am
12	Bus Shelter Jindera Hotel	8.09am
13	Bus Shelter, Urana Street Jindera (Mary McKillop)	8.11am
14	Cnr Urana Road & Hueske Road	8.15am
15	467 Urana Road	8.19am

For enquires regarding this service please call Martin's on 02 6029 8657

Martin's BUS & COACH ALBURY

MARTIN'S ALBURY PTY LTD
73 Railway Parade, Culcairn NSW 2660
Telephone 02 6029 8657
Email: culcairn@martinsalbury.com.au
Website: www.martinsalbury.com.au

Burrumbuttock, Walla Walla and Jindera to Albury On Demand service

The Regional Buses On Demand service, operated by M & M Kane Pty Ltd, was launched on 11 February 2019. The service is designed to connect you to Albury from Burrumbuttock, Walla Walla and Jindera for work, shopping, medical appointments and a range of other needs. The service picks you up at predefined points within Burrumbuttock, Walla Walla and Jindera and drops you off at points of interest within Albury and vice versa.

Bookings

To book the On Demand service:

Phone or text: 0448 353 281 (tel:0448353281)

Email: bookings@regionalbuses.com.au (mailto:bookings@regionalbuses.com.au)

Via the Regional Buses website: https://www.regionalbuses.com.au/bookings (https://www.regionalbuses.com.au/bookings)

Bookings can be made between 4 weeks and 2 hours in advance. Bookings are subject to availability.

Fares

Walla Walla-Albury **Burrumbuttock-Albury**
Standard: $7.20 Concession: $3.60
Jindera–Albury **Walla Walla–Jindera** **Walla Walla–Burrumbuttock** **Jindera–Burrumbuttock**
Standard: $4.90 Concession: $2.50

Concession fare eligibility: concession card holders, including pensioners, seniors, students and apprentices.

Regional Excursion Daily (RED) ticket

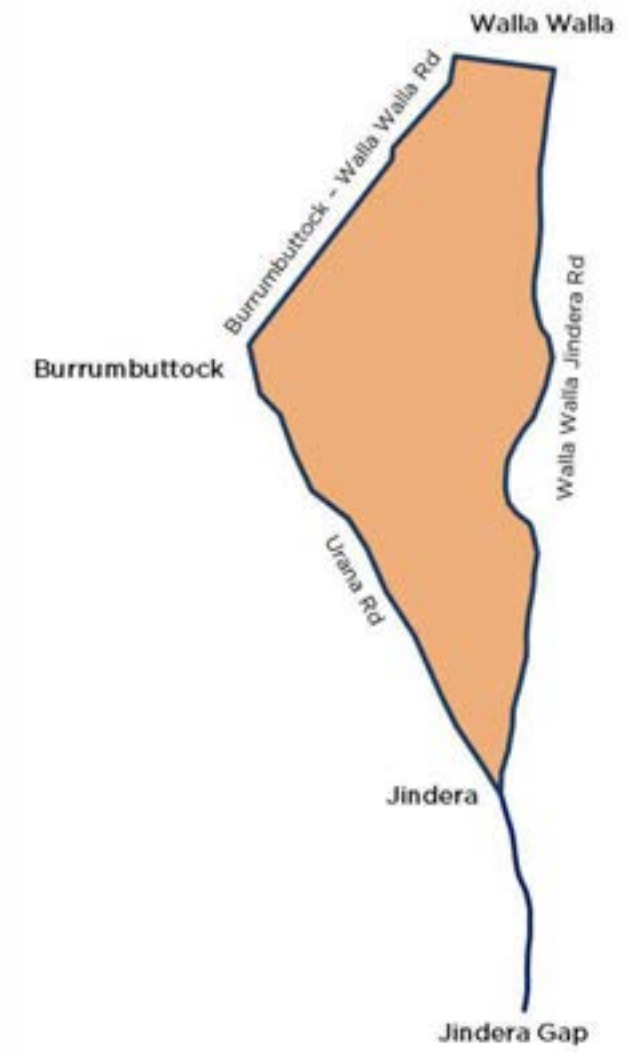
Free travel entitlements

Hours of operation

Monday to Friday	7am–7pm
Saturday and Sunday	No service
Public holidays	No service

Maps

The Burrumbuttock, Walla Walla and Jindera to Albury On Demand service area covers Walla Walla, Burrumbuttock, Jindera and Jindera Gap.



Download a printable PDF of this map (pdf 204KB) (/document/4201/albury-on-demand-service-area-map.pdf)

Planning
Tickets and Opal
Help and contact
Travel info
Other transport sites
About the site

Appendix D

MakerENG Victoria Pty Limited
2 - 6 Rutland Street
Newtown VIC 3220
Phone: 02 4288 4401
Web: www.makereng.com.au
Email: infovic@makereng.com.au
ABN: 61 658 914 455 ACN: 658 914 455

19 April 2024

Greg Blackie – Engineering Manager
Greater Hume Council
39 Young Street, PO Box 99
Holbrook NSW 2644

RE: Glenellen Solar Farm Road Upgrades

Urana Road/Walla Walla Jindera Road Intersection and Jindera Road/Lidner Road Detailed Design Technical Memo.

Dear Greg,

Please see below for our design parameters for the proposed intersection at Urana Road / Walla Walla Jindera Road and Jindera Road/Lidner Road, to support the Glenellen Solar Farm project.

Intersection 201 - Urana Road and Walla Walla Jindera Road

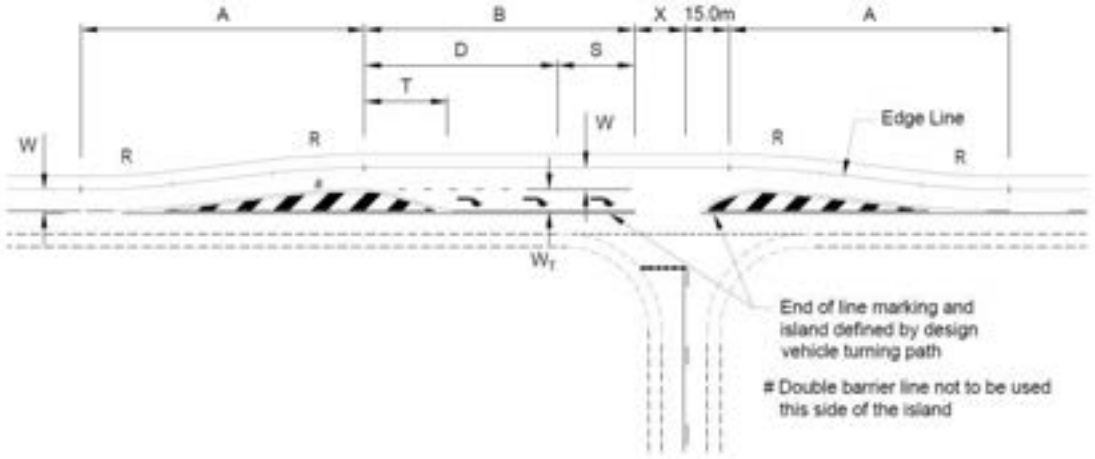


Figure 1 – Rural CHR layout (Austroads)

Table 1 – Rural CHR Values

Parameter	Value	Source
W	3.5m	Table 4.4 Austroads Part 3
Wt	3.5m	
B	100m	D + S
D	74m**	Table 5.2
T	35m	Table 5.1
S	26m	Design vehicle length
V	110km/hr (100km/hr posted)	Design Speed

X	15m	Figure 7.3 Austroads Part 4
A	110m	Table 7.2

**Diverge length for the proposed CHR has been selected from table 5.2 (Ld) due to the existing ecological impacts on using a traditional stop condition parameter. It should be noted that the minimum EDD A.5.4 nominates a smaller diverge length than that used as part of the proposed intersection. Therefore, the value chosen for the diverge length is considered appropriate.

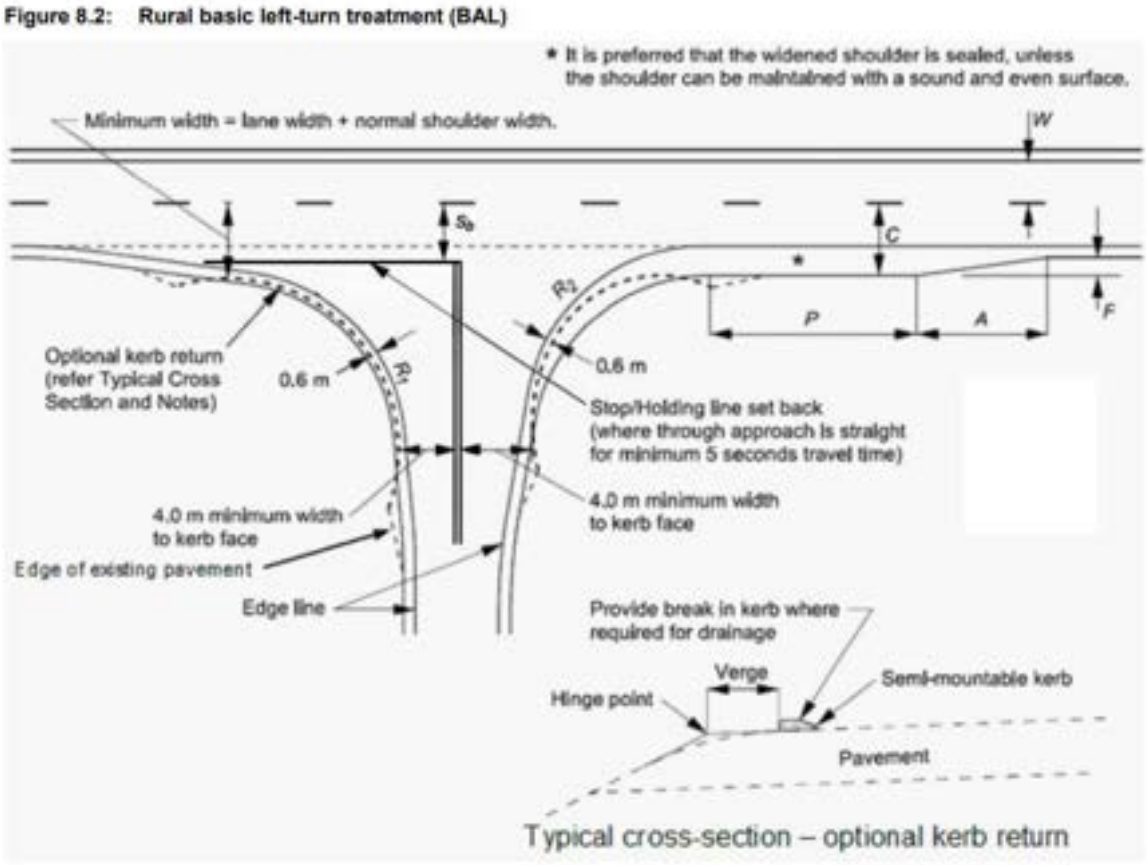


Figure 2 – Rural BAL layout (Austroads)

Table 2 – Rural AUR Values

Parameter	Value	Source
W	3.5m	Table 4.4 Austroads Part 3
C	6.5m	
A	31m	
P	35m	Table 8.1
V	110km/hr (100km/hr posted)	Design Speed

Intersection 202 - Jindera Road and Lidner Road

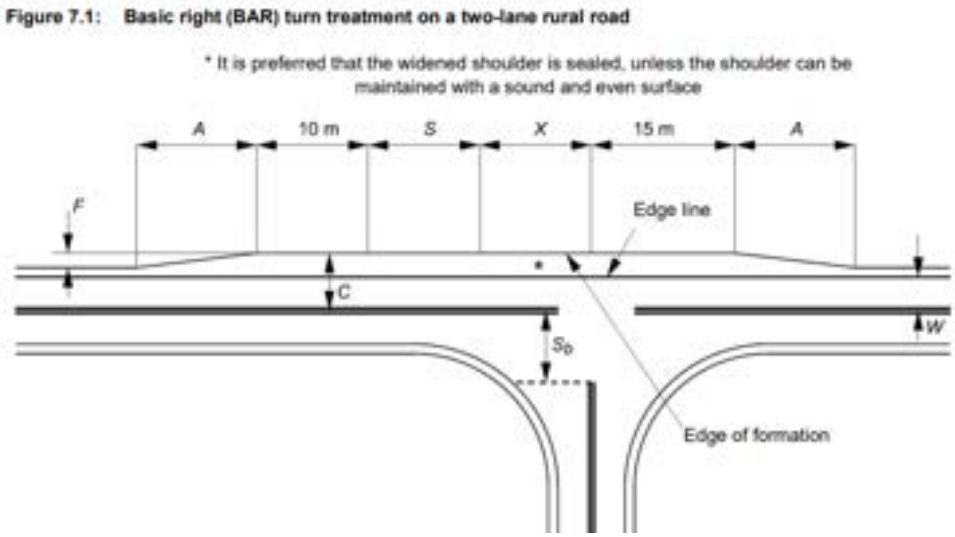


Figure 3 – Rural BAR layout (Austroads)

Table 3 – Rural BAR Values

Parameter	Value	Source
W	3.5m	Table 4.4 Austroads Part 3
C	6.5m	Figure 7.1 (Notes) Austroads Part 4
A	31m	Figure 7.1 (Notes) Austroads Part 4
V	110km/hr (100km/hr posted)	Design Speed
F	2m	Figure 7.1 (Notes) Austroads Part 4
S	26m	Design vehicle length
X	15m	Figure 7.1 (Notes) Austroads Part 4
Sb	10.0m	

Please advise at your earliest opportunity if there is any additional information that Greater Hume Council requires to procced with the Construction phase of works and we will endeavour to provide it to you.

We look forward to your response in due course.

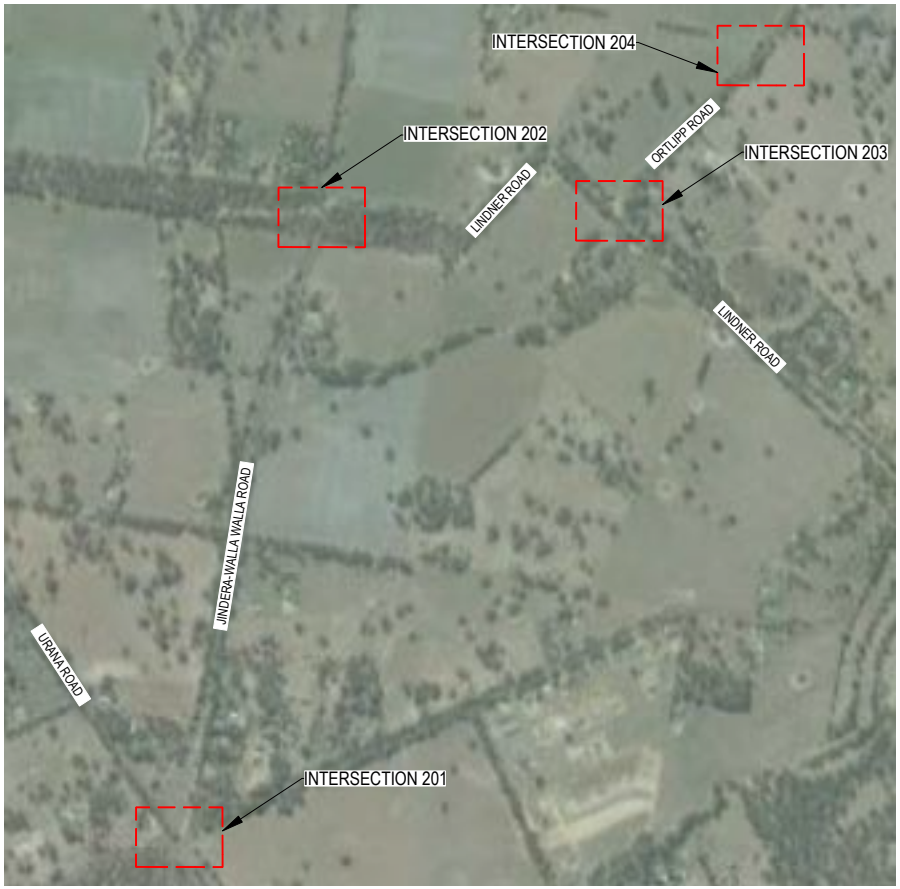
Yours faithfully,

Maker ENG.

GLENELLEN SOLAR FARM ROAD UPGRADES
JINDERA NSW

DETAILED DESIGN

LOCALITY DIAGRAM



PLAN NUMBER	DRAWING TITLE
MKRV0065-201-C0000	COVER SHEET AND INDEX
MKRV0065-201-C0010	NOTES
MKRV0065-201-C0040	KEY PLAN
MKRV0065-201-C0100	CIVIL WORKS LAYOUT PLAN - 1 OF 2
MKRV0065-201-C0101	CIVIL WORKS LAYOUT PLAN - 2 OF 2
MKRV0065-201-C0200	BULK EARTHWORKS LAYOUT PLAN
MKRV0065-201-C0310	TYPICAL SECTIONS
MKRV0065-201-C0350	CIVIL DETAILS
MKRV0065-201-C0400	PAVEMENT LAYOUT PLAN
MKRV0065-201-C0500	ROAD LONGITUDINAL SECTIONS
MKRV0065-201-C0600	ROAD CROSS SECTIONS - 1 OF 2
MKRV0065-201-C0601	ROAD CROSS SECTIONS - 2 OF 2
MKRV0065-201-C0700	KERB RETURN LAYOUT AND SECTIONS
MKRV0065-201-C1500	SOIL AND WATER MANAGEMENT NOTES
MKRV0065-201-C1501	SOIL AND WATER MANAGEMENT LAYOUT PLAN
MKRV0065-201-C1502	SOIL AND WATER MANAGEMENT DETAILS
MKRV0065-201-C1900	LOCAL AREA TRAFFIC MANAGEMENT LAYOUT PLAN - 1 OF 2
MKRV0065-201-C1901	LOCAL AREA TRAFFIC MANAGEMENT LAYOUT PLAN - 2 OF 2
MKRV0065-201-C2050	SWEPT PATH ANALYSIS - 1 OF 2
MKRV0065-201-C2051	SWEPT PATH ANALYSIS - 2 OF 2
MKRV0065-202-C0100	CIVIL WORKS LAYOUT PLAN
MKRV0065-202-C0200	BULK EARTHWORKS LAYOUT PLAN
MKRV0065-202-C0310	TYPICAL SECTIONS - 1 OF 2
MKRV0065-202-C0311	TYPICAL SECTIONS - 2 OF 2
MKRV0065-202-C0350	CIVIL DETAILS
MKRV0065-202-C0400	PAVEMENT LAYOUT PLAN
MKRV0065-202-C0500	ROAD LONGITUDINAL SECTIONS
MKRV0065-202-C0600	ROAD CROSS SECTIONS
MKRV0065-202-C0700	KERB RETURN LAYOUT PLAN
MKRV0065-202-C0701	KERB RETURN LONGITUDINAL SECTIONS

PLAN NUMBER	DRAWING TITLE
MKRV0065-202-C1500	SOIL AND WATER MANAGEMENT NOTES
MKRV0065-202-C1501	SOIL AND WATER MANAGEMENT LAYOUT PLAN
MKRV0065-202-C1502	SOIL AND WATER MANAGEMENT DETAILS
MKRV0065-202-C2050	SWEPT PATH ANALYSIS
MKRV0065-203-C0100	CIVIL WORKS LAYOUT PLAN
MKRV0065-203-C0200	BULK EARTHWORKS LAYOUT PLAN
MKRV0065-203-C0310	TYPICAL SECTIONS
MKRV0065-203-C0350	CIVIL DETAILS
MKRV0065-203-C0400	PAVEMENT LAYOUT PLAN
MKRV0065-203-C0500	ROAD LONGITUDINAL SECTIONS
MKRV0065-203-C0600	ROAD CROSS SECTIONS
MKRV0065-203-C0700	KERB RETURN LAYOUT AND SECTIONS
MKRV0065-203-C1500	SOIL AND WATER MANAGEMENT NOTES
MKRV0065-203-C1501	SOIL AND WATER MANAGEMENT LAYOUT PLAN
MKRV0065-203-C1502	SOIL AND WATER MANAGEMENT DETAILS
MKRV0065-203-C2050	SWEPT PATH ANALYSIS
MKRV0065-204-C0100	CIVIL WORKS LAYOUT PLAN
MKRV0065-204-C0200	BULK EARTHWORKS LAYOUT PLAN
MKRV0065-204-C0310	TYPICAL SECTIONS
MKRV0065-204-C0350	CIVIL DETAILS
MKRV0065-204-C0400	PAVEMENT LAYOUT PLAN
MKRV0065-204-C0500	ROAD LONGITUDINAL SECTIONS
MKRV0065-204-C0600	ROAD CROSS SECTIONS
MKRV0065-204-C0700	KERB RETURN LAYOUT AND SECTIONS
MKRV0065-204-C1500	SOIL AND WATER MANAGEMENT NOTES
MKRV0065-204-C1501	SOIL AND WATER MANAGEMENT LAYOUT PLAN
MKRV0065-204-C1502	SOIL AND WATER MANAGEMENT DETAILS
MKRV0065-204-C2050	SWEPT PATH ANALYSIS

REV	DATE	DESCRIPTION	AMD BY	APP BY
4	23.04.2024	ISSUED FOR APPROVAL	JLR	JMA
3	20.02.2024	ISSUED FOR DRAFT REVIEW	FMS	JMA
2	30.01.2024	ISSUED FOR CONCEPT DESIGN APPROVAL	FMS	JMA
1	29.01.2024	ISSUED FOR CONCEPT DESIGN APPROVAL	FMS	JMA

0 15 30 45 60 75m
SCALE 1:1500 AT ORIGINAL SIZE

GPG Australia Pty Ltd

MAKER ENG

DRAWN: F.SOMERS	DESIGNED: J.RUSHTON
DRAFT CHECK: J.AGUSTIN	DESIGN CHECK: H.SMITH
APPROVED: J.AGUSTIN	

ISSUED FOR APPROVAL

GLENELLEN SOLAR FARM ROAD UPGRADES
DETAILED DESIGN
COVER SHEET AND INDEX

DRAWING NUMBER	SHEET No.	ORIG. SIZE	REVISION
MKRV0065-201-C0000		A1	4

Job Number 11/10/2024 4:38 PM

C:\12dSdata\12DSYNERGY\MKRV0065 Glenellen Solar Farm_198\02 Design\Drawings\02 Stage 01\Xrefs\X-MKRV0065-201-GE-MKR A1.dwg

GENERAL

1. THESE DRAWINGS SHALL BE READ IN CONJUNCTION WITH ALL OTHER SPECIFICATIONS AND WITH SUCH OTHER WRITTEN INSTRUCTIONS THAT MAY BE ISSUED DURING THE COURSE OF THE CONTRACT. ANY DISCREPANCIES IN THESE DOCUMENTS SHALL BE REFERRED TO THE SUPERINTENDENT FOR A DECISION BEFORE PROCEEDING WITH THE WORK.
2. THE CONTRACTOR SHALL CHECK AND BE RESPONSIBLE FOR THE CORRECTNESS OF ALL DIMENSIONS. ANY DISCREPANCY SHALL BE REPORTED IMMEDIATELY TO THE SUPERINTENDENT. DIMENSIONS SHALL NOT BE OBTAINED BY SCALING OFF THE PLANS.
3. ALL WORKMANSHIP AND MATERIALS SHALL BE IN ACCORDANCE WITH THE REQUIREMENTS OF THE CURRENT AUSTRALIAN STANDARDS, THE BY-LAWS AND ORDINANCES OF THE RELEVANT AUTHORITIES AND THE SPECIFICATIONS.
4. NO CHANGES SHALL BE MADE BY THE CONTRACTOR WITHOUT THE WRITTEN CONSENT OF THE SUPERINTENDENT THE SUPERINTENDENT IS TO CONFIRM THE EXACT EXTENTS ON SITE PRIOR TO COMMENCEMENT OF STAGE 1.
5. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO ENSURE THAT SAFE WORK PRACTICES ARE FOLLOWED AT ALL TIMES DURING THE COURSE OF THE CONTRACT. OH&S REGULATIONS AND WORK COVER REQUIREMENTS ARE TO BE COMPLIED WITH. REFER TO THE SPECIFICATION AND CONTRACT DOCUMENTS.
6. IT IS THE CONTRACTOR'S RESPONSIBILITY TO ENSURE THAT ALL SURVEY MARKS ARE MAINTAINED. IF THE CONTROL MARKS ARE DESTROYED OR MOVED DURING CONSTRUCTION THE CONTRACTOR MUST SUPPLY ADEQUATE MARKS FOR RE-ESTABLISHMENT AND INFORM THE SUPERINTENDENT.
7. CHANGES, REDUCED LEVELS, CHAINAGES, OFFSETS AND ROAD WIDTHS ARE IN METRES UNLESS OTHERWISE SHOWN.
8. LIAISE WITH THE APPOINTED SITE SUPERINTENDENT PRIOR TO COMMENCEMENT OF CONSTRUCTION.
9. ALL SITE FILLING SHALL BE COMPACTED TO 98% STANDARD COMPACTION, CONTROLLED BY THE GEOTECHNICAL ENGINEER OR AS INSTRUCTED BY THE SUPERINTENDENT
10. SURPLUS EXCAVATED MATERIAL SHALL BE PLACED WHERE DIRECTED BY THE SUPERINTENDENT.
11. ALL NEW WORKS SHALL MAKE A SMOOTH JUNCTION WITH EXISTING CONDITIONS.
12. THE CONTRACTOR SHALL NOT ENTER UPON NOR DO ANY WORK WITHIN ADJACENT LANDS WITHOUT THE WRITTEN PERMISSION OF THE OWNERS.
13. SITE FILL AREAS - THE CONTRACTORS REGISTERED SURVEYOR SHALL TAKE LEVELS OF EXISTING SURFACE AFTER STRIPPING TOPSOIL AND PRIOR TO COMMENCING FILL OPERATIONS.
14. DRAINAGE LINES UNDER ROADS SHALL BE BACKFILLED WITH NON-COHESIVE SAND. AND THE SUBSOIL DRAIN WRAPPED IN APPROVED FILTER SOCK, DISCHARGING INTO DOWN STREAM PITS.
15. ALL CONDUITS AND MAINS SHALL BE LAID PRIOR TO LAYING FINAL ASPHALTIC CONCRETE SEAL.
16. STREET NAME SIGNS SHALL BE ERECTED, WHERE SHOWN, IN ACCORDANCE WITH COUNCIL'S STANDARD OR AS DIRECTED BY THE SUPERINTENDENT.
17. THE CONTRACTOR SHALL MAINTAIN DUST CONTROL THROUGHOUT THE DURATION OF THE PROJECT.
18. REFER TO GREATER HUME COUNCIL SPECIFICATION AND STANDARD DRAWINGS OF KERB INLET PIT AND KERB AND GUTTER.
19. DEWATER AND DESILT EXISTING DAMS TO PREPARE FOR SITE FILLING/OTHER WORKS REFER TO THE GEOTECHNICAL REPORT.
20. PROVIDE FLOODWAY WARNING SIGNS AT APPROPRIATE LOCATIONS AND/OR AS DIRECTED BY COUNCIL'S ENGINEER.

BULK EARTHWORKS NOTES

1. STRIP ALL TOPSOIL/ORGANIC MATERIAL FROM CONSTRUCTION AREA AND REMOVE FROM SITE OR STOCKPILE AS DIRECTED BY SUPERINTENDENT
2. COMPACTION, TESTING, FILING, STANDARD DRY DENSITIES & MOISTURE CONTENTS TO BE IN ACCORDANCE WITH SITE GEOTECHNICAL REPORT
3. ALL FILLING WORKS TO BE CARRIED OUT UNDER LEVEL 1 GEOTECH SUPERVISION AS PER AS 3798.

SITE PREPARATION NOTES

1. ORIGIN OF LEVELS: AHD. COORDINATES TO <MGA 56 (GDA2020)> - MAP GRID AUSTRALIA
2. ASPHALTIC CONCRETE SHALL CONFORM TO R.T.A. FORM R116.
3. ALL BASECOUSE MATERIAL TO BE A MINIMUM NGB20-2C PRODUCT IN ACCORDANCE WITH GREATER HUME CITY COUNCIL FLEXIBLE PAVEMENTS SPECIFICATION C242
4. ALL SUBBASE MATERIAL TO BE A MINIMUM NGS40 PRODUCT IN ACCORDANCE WITH GREATER HUME CITY COUNCIL FLEXIBLE PAVEMENTS SPECIFICATION C242
5. EROSION AND SEDIMENT CONTROL MEASURES SHALL BE INSTALLED IN ACCORDANCE WITH THE SPECIFICATION AND CONTRACT DOCUMENTS.
6. ALL EROSION AND SEDIMENT CONTROL MEASURES SHALL BE MAINTAINED THROUGHOUT THE PERIOD OF WORKS, INCLUDING REPAIR AND/OR REPLACEMENT OF DAMAGED SECTIONS. INSPECTIONS ARE TO BE MADE PERIODICALLY DURING PROLONGED RAINFALL EVENTS AND AFTER STORM EVENTS FOR DAMAGE.
7. WHERE NOTED ON THE DRAWINGS THAT WORKS ARE TO BE CARRIED OUT BY OTHERS (EG. ADJUSTMENT OF SERVICES). COORDINATION OF THESE WORKS SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.

SURVEY NOTES

1. ALL SITE SET OUT POINTS ARE TO BE CERTIFIED BY A REGISTERED SURVEYOR.
2. THE EXISTING SITE CONDITIONS SHOWN ON THE FOLLOWING DRAWINGS HAVE BEEN INVESTIGATED BY THE REGISTERED SURVEYOR. THE INFORMATION IS SHOWN TO PROVIDE A BASIS FOR DESIGN. MAKER ENG DOES NOT GUARANTEE THE ACCURACY OR COMPLETENESS OF THE SURVEY BASE OR ITS SUITABILITY AS A BASIS FOR CONSTRUCTION DRAWINGS.
3. CONTACT SUPERINTENDENT IF DISCREPANCIES ARE ENCOUNTERED DURING CONSTRUCTION BETWEEN THE SURVEY DATA AND FIELD DATA.
4. PROJECT COORDINATE SYSTEM USED: <MGA-56 (GDA2020)>. ALL SETOUT INFORMATION AND DATUM SHALL BE CONFIRMED BY A REGISTERED SURVEYOR PRIOR TO CONSTRUCTION.
5. DIGITAL DATA PROVIDED FOR INFORMATION ONLY AND IS NOT TO BE FOR SETOUT UNLESS NOTED OTHERWISE
6. PLANS TAKE PRECEDENCE OVER DIGITAL DATA UNLESS NOTED OTHERWISE

ASPHALT PAVEMENT

1. PREPARATION FOR PAVMENT:
   - CLEAR SITE
   - STRIP TOPSOIL
   - CUT AND FILL AND PREPARATIONS OF SUBGRADE SHALL BE AS DESCRIBED IN 'EARTHWORKS'
2. SUBGRADE SHALL BE COMPACTED TO 98% STANDARD DRY DENSITY RATIO AT OPTIMUM MOISTURE CONTENT ± 2% IN ACCORDANCE WITH AS1289.5.1.1
3. LOWER BASE COURSE SHALL BE CONSTRUCTED FROM CRUSHED SANDSTONE COMPACTED TO 98% STANDARD DRY DENSITY RATIO AT OPTIMUM MOISTURE CONTENT ± 2% IN ACCORDANCE WITH AS 1289.5.1.1. OF THICKNESS NOTED ON DRAWINGS.
4. BASE COURSE SHALL BE CONSTRUCTED FROM FINE CRUSHED ROCK DGB20 COMPACTED TO 100% STANDARD DRY DENSITY RATIO AT OPTIMUM MOISTURE CONTENT ± 2% IN ACCORDANCE WITH AS1289.5.1.1. OF THICKNESS NOTED ON DRAWINGS.
5. APPLY TACK COAT 30-120 MINUTES BEFORE ASPHALT SURFACING IS PLACED.
6. COVER THE SURFACE UNIFORMLY AT AN APPLICATION RATE OF 0.10 - 0.30 L/m2 OF RESIDUAL BITUMEN.
7. WEARING SURFACE SHALL BE ASPHALTIC CONCRETE TO STANDARD SPECIFICATION, <MINIMUM THICKNESS = 40mm>, IN ACCORDANCE WITH THE REQUIREMENTS OF GREATER HUME COUNCILS SUBDIVISION POLICY

PROPOSED SERVICES

1. ALL SERVICES SHOWN ON THIS PLAN ARE APPROXIMATE ONLY AND HAVE BEEN LOCATED FROM SITE INVESTIGATION AND RELEVANT AUTHORITIES' PLANS. THESE SERVICES ARE NOT GUARANTEED CORRECT OR COMPLETE.
2. THE CONTRACTOR MUST OBTAIN UP-TO-DATE PLANS FROM 'DIAL BEFORE YOU DIG' BEFORE COMMENCEMENT OF WORKS. THE EXACT LOCATION OF ALL SERVICES ARE TO BE VERIFIED BY THE CONTRACTOR PRIOR TO THE COMMENCEMENT OF WORKS.
3. EXISTING SERVICES ARE TO BE MAINTAINED OR ADJUSTED AS DETAILED IN THE PLANS. ANY ADJUSTMENT OR PROTECTION MEASURES ARE TO BE CARRIED OUT BY ACCREDITED SERVICE PROVIDERS. REFER ANY CONFLICTS OR UNIDENTIFIED EXISTING SERVICES TO THE SUPERINTENDENT IMMEDIATELY.
4. ELECTRICAL CONDUITS SHOULD BE PROVIDED AND LOCATED TO THE SATISFACTION OF ENDEAVOUR ENERGY.
5. WATER CONDUITS SHOULD BE PROVIDED TO SUIT WATER MAIN LOCATIONS.
6. TELSTRA CONDUITS PROVIDED AND LOCATED TO THE SATISFACTION OF THE RELEVANT TELECOMMUNICATIONS AUTHORITY
7. ALL SERVICES PIT COVERS AND MARKERS ARE TO BE LAID ENTIRELY WITHIN OR OUTSIDE OF THE CONCRETE FOOTPATH. REFER TO MAKER ENG SERVICE COORDINATION DRAWINGS FOR SERVICE COVER LOCATIONS. CONTACT SUPERINTENDENT SHOULD DIFFICULTIES ARISE.
8. WHERE SERVICES COVERS ARE LOCATED WITHIN THE FOOTPATH & ROADWAYS, INFILL COVERS WITH A PAVEMENT SIMILAR TO THAT OF THE FOOTPATH OR ADJACENT ROADWAY SHALL BE USED. PROVIDE CONCRETE INFILL WHERE COVERS ARE WITHIN LANDSCAPE.
9. ALL SERVICES COVERS TO BE PLACED AT FINISHED SURFACE LEVELS, ENSURE LONGITUDINAL AND CROSS FALL GRADES MATCH PROPOSED GRADES
10. ALL WATER AND SEWER TO BE INSTALLED IN ACCORDANCE WITH THE CURRENT GREATER HUME COUNCIL STANDARDS. CARE TO BE TAKEN WHEN INSTALLING HYDRANTS AND STOP VALVES IN THE FOOTPATH.

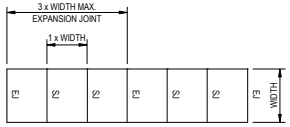
KERBING NOTES

1. ALL CONCRETE TO HAVE A MINIMUM COMPRESSIVE STRENGTH OF 25 MPa. OTHERWISE AS PER COUNCIL SPECIFICATIONS.
2. ALL KERBS, GUTTERS, DISH DRAINS AND CROSSINGS TO BE CONSTRUCTED ON 100mm GRANULAR BASECOURSE COMPACTED TO MINIMUM 95% MODIFIED DRY DENSITY (AS 1289 5.2.11.
3. EXPANSION JOINTS (E.J) TO BE FORMED FROM 10mm COMPRESSIBLE CORK FILLER BOARD FOR THE FULL DEPTH OF THE SECTION AND CUT TO PROFILE. EXPANSION JOINTS TO BE LOCATED AT DRAINAGE PITS, ON TANGENT POINTS OF CURVES AND ELSEWHERE AT MAX 12m CENTRES EXCEPT FOR INTEGRAL KERBS WHERE THE EXPANSION JOINTS ARE TO MATCH THE JOINT LOCATIONS IN THE SLABS.
4. IN THE REPLACEMENT OF ROLL/KERB AND GUTTER, EXISTING ROAD PAVEMENT IS TO BE SAWCUT 500mm U.N.O FROM THE LIP OF GUTTER. UPON COMPLETION OF THE NEW ROLL/KERB AND GUTTER, NEW BASECOURSE AND SURFACE TO BE LAID 900mm WIDE U.N.O.
5. PRAM RAMP GRADES SHALL BE MAX 1 IN 14, IN SPECIAL CIRCUMSTANCES GRADES SHALL BE ABSOLUTE MAX 1 IN 10.
6. WEAKENED PLANE JOINTS TO BE A MINIMUM 3mm WIDE AND LOCATED AT 3m CENTRES EXCEPT ON INTEGRAL KERBS WHERE THE WEAKENED PLANE JOINTS SHALL MATCH THE JOINT LOCATIONS IN THE SLABS.
7. RAMPED AND VEHICULAR CROSSINGS SHALL HAVE AS BROOMED FINISH WITH ALL OTHER KERBING OR DISH GUTTERS TO HAVE STEEL FLOAT FINISHED.

PAVEMENTS AND ROAD WORKS NOTES

PEDESTRIAN PAVEMENT JOINTS

1. ALL PEDESTRIAN PAVEMENTS ARE TO BE JOINTED AS FOLLOWS (U.N.O.)
2. EXPANSION JOINTS ARE TO BE LOCATED. WHERE POSSIBLE.. AT INTERVALS NOT EXCEEDING 3 x THE WIDTH, AT TANGENT POINTS OF CURVES AND ELSEWHERE AT MAX. 12m CENTRES.
3. SAW JOINTS ARE TO BE PLACED LATERALLY AT INTERVALS NOT EXCEEDING 1 x WIDTH AND MAX. SPACING OF 4m.
4. JOINTS SHALL BE LOCATED TO MATCH KERBING AND OR ADJACENT PAVEMENT JOINTS WHERE POSSIBLE.
5. PEDESTRIAN PAVEMENT JOINTING DETAILS SHALL BE AS PER RELEVANT COUNCIL STANDARDS.



6. ALL VEHICULAR PAVEMENTS TO BE JOINTED AS PER THE DRAWINGS.
7. VEHICULAR ACCESS IS TO BE MAINTAINED FOR ALL PROPERTIES DURING THE COURSE OF CONSTRUCTION.
8. THE CONTRACTOR SHALL CONTACT RESIDENTS/OWNERS WITHIN 48 HOURS PRIOR TO COMMENCEMENT OF WORKS UNLESS OTHERWISE DIRECTED.
9. ALL DRIVEWAY ADJUSTMENTS ARE TO BE CARRIED OUT IN ACCORDANCE WITH THE DRAWINGS
10. SUBSOIL FLUSHING POINTS ARE TO BE CONSTRUCTED IN ACCORDANCE WITH D.O.H. STANDARD DRAWING NO RM 14. THEY SHALL BE LOCATED AS DIRECTED
11. PROPOSED SERVICES WHICH CROSS THE EXISTING ROADS SHALL BE THRUST BORED UNDER THE ROAD TO AVOID DAMAGING THE EXISTING SURFACE
12. ALL ROADS ARE TO BE TEMPORARILY SEALED WITH A 1 COAT SEAL. THE FINAL ASPHALT CONCRETE TO BE BONDED AND PLACED FOLLOWING APPROVAL FROM COUNCIL.

ALL NOTES ARE TO BE READ IN CONJUNCTION WITH GREATER HUME SHIRE COUNCIL AND TRANSPORT FOR NSW (TFNSW) ENGINEERING SPECIFICATIONS. SHOULD A CONFLICT ARISE TRANSPORT FOR NSW (TFNSW) SPECIFCATIONS ARE TO TAKE PRECEDENCE

STORMWATER NOTES

1. STORMWATER DESIGN CRITERIA:
   - 1.1. COUNCIL PIPE DRAINAGE SYSTEM IS DESIGNED FOR <5> YEAR ARI
   - 1.2. INTERALLOTMENT DRAINAGE SYSTEM IS DESIGNED FOR <10> YEAR ARI
   - 1.3. DRAINAGE SYSTEM IS DESIGNED FOR MAJOR EVENT OF <100> YEAR ARI
2. PIPE BACKFILL & BEDDING SHALL BE IN ACCORDANCE WITH COUNCIL SUBDIVISION POLICY
3. ALL BEDDING TO BE TYPE HS3 IN ROAD RESERVES AND TYPE HS2 ELSEWHERE UNLESS A HIGHER STANDARD IS NOTED ON THE DRAWINGS.
4. PIPES GREATER THAN 300 DIA. TO BE REINFORCED CONCRETE 10/20 COVER APPROVED SPIGOT AND SOCKET WITH RUBBER RING JOINT, WITH MINIMUM PIPE CLASS AS STATED BELOW U.N.O.:
   - 4.1. ROAD CROSSINGS: CLASS 4
   - 4.2. ELSEWHERE: CLASS 3
5. PIPES UP TO AND INCLUDING 300 DIA. SHALL BE SEWER GRADE UPVC CLASS SN4 WITH SOLVENT WELDED JOINTS.
6. WHERE SUBSOIL DRAINS PASS UNDER FLOOR SLABS, UNSLOTTED UPVC SEWER GRADE PIPES SHALL BE USED.
7. ALL PITS DEEPER THAN 1.8m TO BE REINFORCED IN ACCORDANCE WITH COUNCIL STANDARD DRAWINGS.
8. ALL PITS, INCLUDING COUNCIL PITS SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH OF 32MPA. ALL REINFORCEMENT SHALL HAVE A MINIMUM COVER OF 50MM
9. MINIMUM 3m SUBSOIL DRAINAGE TO BE INSTALLED UPSLOPE OF ALL PITS.
10. COVERS AND GRATES SHALL CONFORM TO A.S. 3996 AND COUNCIL SPECIFICATIONS.
11. FILTER MATERIAL FOR SUBSOIL SHALL BE IN ACCORDANCE WITH COUNCIL POLICY AND STANDARD DRAWINGS.
12. LINTEL LENGTH SHOWN ON DRAWING INDICATES THE CLEAR OPENING LENGTH.
13. PRIOR TO ISSUE OF PRACTICAL COMPLETION CONTRACTOR SHALL CARRY OUT CCTV ON ALL PIPES AND SUBMIT VIDEO AND WRITTEN REPORT CONFIRMING THAT ALL PIPES ARE FREE OF DEFECTS AND ARE LAID TO SPECIFICATION.
14. A MINIMUM GAP OF 0.2m BELOW FENCING TO BE CONSTRUCTED ACROSS THE FULL WIDTH OF ALL DRAINAGE EASEMENTS TO CONVEY DRAINAGE SURCHARGE FLOWS.
15. CARE IS TO BE TAKEN WITH LEVELS OF STORMWATER LINES. GRADES SHOWN ARE NOT TO BE REDUCED WITHOUT APPROVAL.
16. GRATES AND COVERS SHALL CONFORM WITH THE CITY COUNCIL'S SPECIFICATION.
17. AT ALL TIMES DURING CONSTRUCTION OF STORMWATER PITS, ADEQUATE SAFETY PROCEDURES SHALL BE TAKEN TO SAFEGUARD AGAINST THE POSSIBILITY OF PERSONNEL FALLING DOWN PITS.
18. BACKFILLING OF TRENCHES SHALL BE IN ACCORDANCE WITH THE CITY COUNCIL'S SPECIFICATIONS.
19. STEP IRONS ARE TO BE PLACED IN PITS GREATER THAN 1.2m DEEP IN ACCORDANCE WITH THE CITY COUNCIL'S AND MANUFACTURER REQUIREMENTS.
20. SUBSOIL DRAINS ARE TO BE PROVIDED BEHIND ALL KERBS AS DIRECTED.
21. ALL PITS SHALL BE BENCHED AND FLOW STREAMLINED.
22. ALL MILD STEEL FIXTURES INCLUDING (GRATES, FRAMES, STEP IRONS, LADDERS ETC) SHALL BE HOT DIP GALVANISED WHICH SHALL COMPLY WITH THE REQUIREMENTS OF AS 1214 OR AS 1650, AS APPROPRIATE.
23. GEOFABRIC FILTER SHALL BE PERMEABLE, NON-WOVEN FABRIC MANUFACTURED FROM A POLYPROPYLENE OR POLYESTER OF MASS GREATER THAN 135G/M2.
24. ALL INTERNAL WORKS WITHIN PROPERTY BOUNDARIES ARE TO COMPLY WITH AS/NZS 3500.3 (2021).
25. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING MINIMUM HEIGHTS OF FILL OVER PIPES AND SELECTING APPROPRIATE MACHINERY DURING CONSTRUCTION IN ACCORDANCE WITH AS/NZS 3725:2007 TABLE B1.
26. PRECAST PITS DESIGN TO BE UNDERTAKEN IN ACCORDANCE AS3600 AND SUPPLIER TO BE APPROVED BY LOCAL COUNCIL SUBDIVISION ENGINEER IN WRITING PRIOR TO ORDERING OR INSTALLATION OF ANY PRECAST PITS.
27. REFER TO GREATER HUME COUNCIL DRAWING 2637-02 FOR STANDARD KERB INLET PIT DETAILS.

TREES

ALL TREES SHALL BE PROTECTED BY THE FOLLOWING MEASURES:

1. PROTECTIVE FENCING CONSTRUCTED OF 1.8m HIGH CHAIN WIRE MESH SUPPORTED BY ROBUST POSTS SHALL BE INSTALLED AT A MINIMUM RADIUS OF 3m FROM THE TRUNK OF EACH TREE.THIS FENCING SHALL BE INSTALLED PRIOR TO THE COMMENCEMENT OF ANY WORKS AND REMAIN IN PLACE UNTIL ALL WORKS ARE COMPLETED.SIGNAGE SHALL BE ERECTED ON THE FENCE IN ACCORDANCE WITH THE ARBORICULTURE REPORT.
2. THE TREE PROTECTION ZONE WITHIN THE PROTECTIVE FENCING SHALL BE MULCHED WITH SUITABLE ORGANIC MULCH (WOOD CHIPS OR COMPOST LEAF CHIP MULCH) AT THE DISCRETION OF THE PROJECT ARBORIST.
3. NO DEVELOPMENT OR ASSOCIATED ACTIVITY IS PERMITTED WITHIN THE FENCED TREE PROTECTION ZONE FOR THE DURATION OF THE WORKS.
4. ANY APPROVED WORKS WITHIN THIS TREE PROTECTION ZONE SHALL BE UNDER THE DIRECTION OF AND TO THE SATISFACTION OF A SUITABLY QUALIFIED AND EXPERIENCED ARBORIST.

REV	DATE	DESCRIPTION	AMD BY	APP BY
4	23.04.2024	ISSUED FOR APPROVAL	JLR	JMA
3	20.02.2024	ISSUED FOR DRAFT REVIEW	FMS	JMA
2	30.01.2024	ISSUED FOR CONCEPT DESIGN APPROVAL	FMS	JMA
1	29.01.2024	ISSUED FOR CONCEPT DESIGN APPROVAL	FMS	JMA

GPG Australia Pty Ltd

MAKER ENG

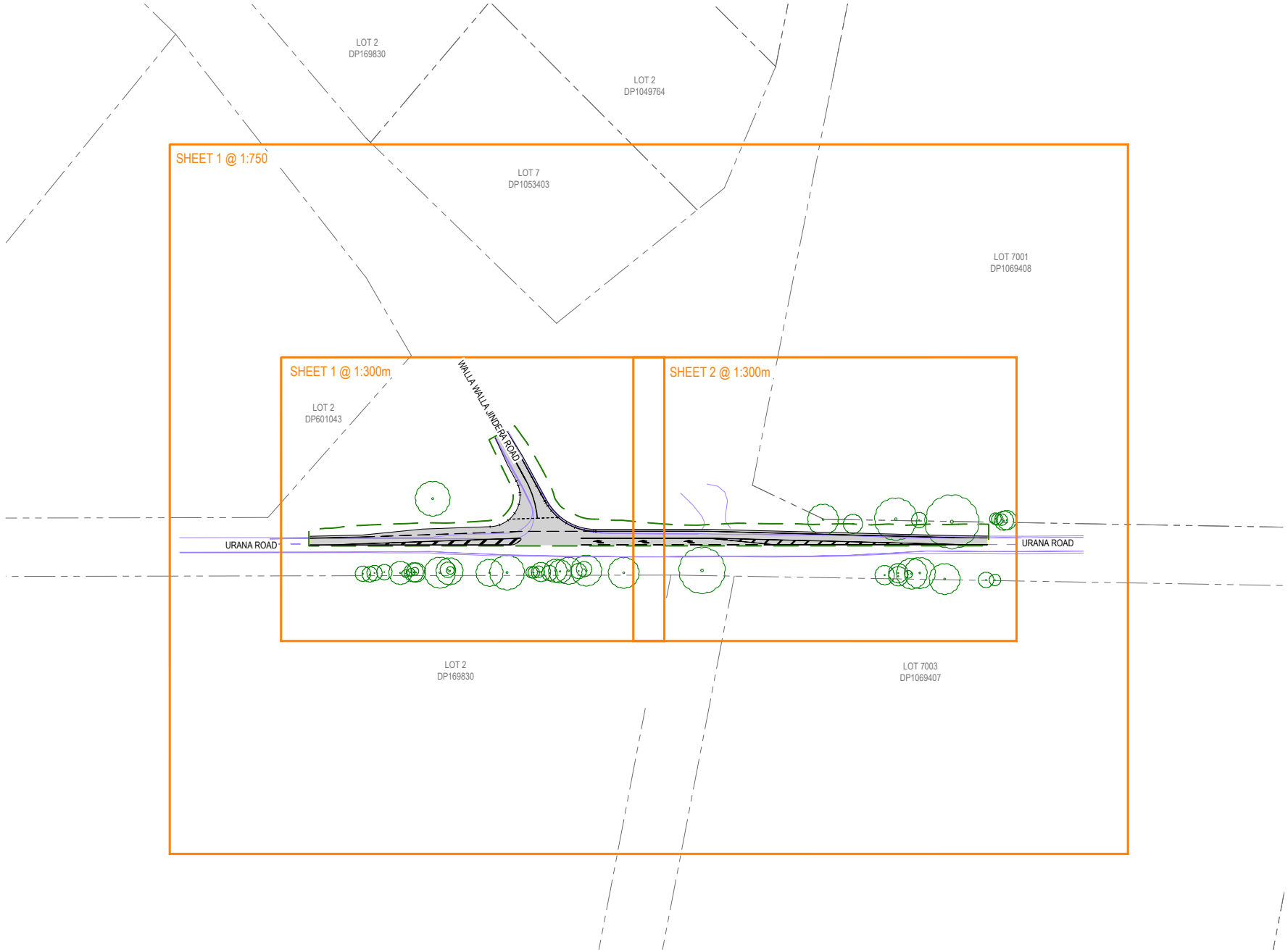
DRAWN: F.SOMERS	DESIGNED: J.RUSHTON
DRAFT CHECK: J.AGUSTIN	DESIGN CHECK: H.SMITH
APPROVED: J.AGUSTIN	
ISSUED FOR APPROVAL	

GLENELLEN SOLAR FARM ROAD UPGRADES
DETAILED DESIGN
NOTES

DRAWING NUMBER	SHEET No.	ORIG. SIZE	REVISION
MKRV0065-201-C0010		A1	4

Josh Rushton, 11/11/2024, 4:38 PM

C:\12dSdata\12DSYNERGY\MKRV0065 Glenellen Solar Farm_198\02 Design\Drawings\02 Stage 01\Xrefs\X-MKRV0065-201-GE-MKR A1.dwg



PROPOSED

LEGEND

- CIVIL WORKS BOUNDARY
- SHEET LAYOUT (REFER SHEET FOR SCALE)
- PAVEMENT
- PAVEMENT MARKING
- LINE MARKING

EXISTING

- LOT BOUNDARY
- LINEMARKING
- EDGE OF BITUMEN
- TREE (TO BE RETAINED)

BEFORE YOU DIG www.byda.com.au

UTILITY INFORMATION SHOWN ON THE PLANS DOES NOT DEPICT ANY MORE THAN THE PRESENCE OF A SERVICE, BASED ON AVAILABLE DOCUMENTARY EVIDENCE. THE PRESENCE OF A UTILITY SERVICE, ITS SIZE AND LOCATION SHOULD BE CONFIRMED BY FIELD INSPECTION, PRIOR TO THE COMMENCEMENT OF WORKS AND THE RELEVANT UTILITY PLANS OBTAINED BY DIALLING PH 1100 (BEFORE YOU DIG). CAUTION SHOULD BE EXERCISED WHEN WORKING IN THE VICINITY OF ALL UTILITY SERVICES.

REV	DATE	DESCRIPTION	AMD BY	APP BY
4	23.04.2024	ISSUED FOR APPROVAL	JLR	JMA
3	20.02.2024	ISSUED FOR DRAFT REVIEW	FMS	JMA
2	30.01.2024	ISSUED FOR CONCEPT DESIGN APPROVAL	FMS	JMA
1	29.01.2024	ISSUED FOR CONCEPT DESIGN APPROVAL	FMS	JMA

0 10 20 30 40 50m
SCALE 1:1000 AT ORIGINAL SIZE

GPG Australia Pty Ltd

MAKER ENG

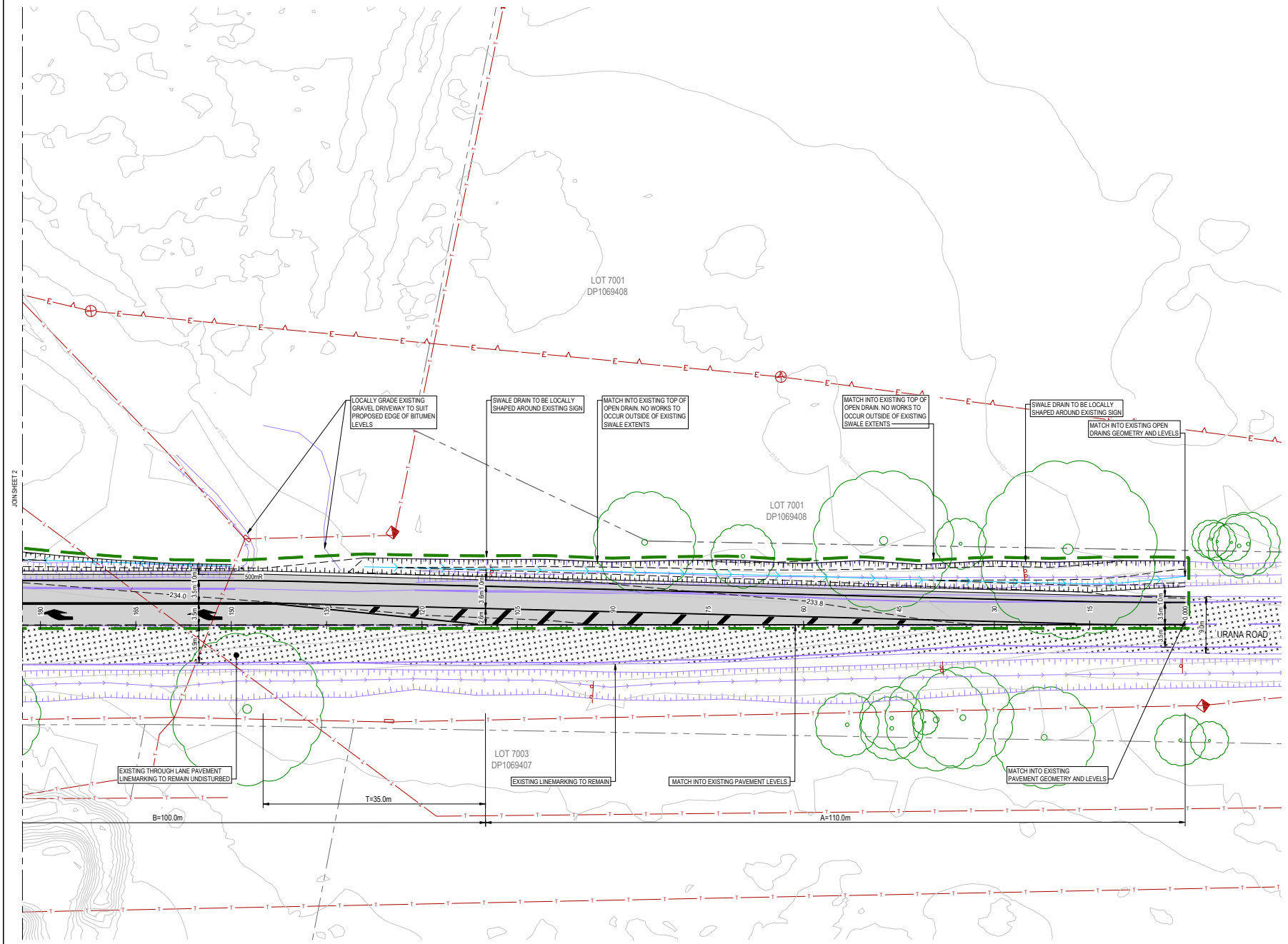
DRAWN: F.SOMERS	DESIGNED: J.RUSHTON
DRAFT CHECK: J.AGUSTIN	DESIGN CHECK: H.SMITH
APPROVED: J.AGUSTIN	
ISSUED FOR APPROVAL	

GLENELLEN SOLAR FARM ROAD UPGRADES
DETAILED DESIGN
KEY PLAN

DRAWING NUMBER	SHEET No.	ORIG. SIZE	REVISION
MKRV0065-201-C0040		A1	4

Josh Rushton, 11/10/2024, 4:38 PM

C:\12dSdata\12DSYNERGY\MKRV0065 Glenellen Solar Farm_198\02 Design\Drawings\02 Stage 01\Xrefs\X-MKRV0065-201-GE-MKR A1.dwg



PROPOSED

LEGEND

- CIVIL WORKS BOUNDARY
- ROAD CENTERLINE AND CHAINAGE
- OPEN DRAIN
- CONTOURS (0.2m)
- PAVEMENT
- PAVEMENT MARKING
- LINE MARKING
- EDGE OF BITUMEN

EXISTING

- LOT BOUNDARY
- PAVEMENT
- CONTOURS (0.2m)
- ELECTRICAL ABOVE GROUND
- TELECOMMUNICATIONS
- LINEMARKING
- EDGE OF BITUMEN
- TREE (TO BE RETAINED)
- OPEN DRAIN
- SIGN

BEFORE YOU DIG www.byda.com.au

UTILITY INFORMATION SHOWN ON THE PLANS DOES NOT DEPICT ANY MORE THAN THE PRESENCE OF A SERVICE, BASED ON AVAILABLE DOCUMENTARY EVIDENCE. THE PRESENCE OF A UTILITY SERVICE, ITS SIZE AND LOCATION SHOULD BE CONFIRMED BY FIELD INSPECTION, PRIOR TO THE COMMENCEMENT OF WORKS AND THE RELEVANT UTILITY PLANS OBTAINED BY DIALLING PH 1100 (BEFORE YOU DIG). CAUTION SHOULD BE EXERCISED WHEN WORKING IN THE VICINITY OF ALL UTILITY SERVICES.

REV	DATE	DESCRIPTION	AMD BY	APP BY
4	23.04.2024	ISSUED FOR APPROVAL	JLR	JMA
3	20.02.2024	ISSUED FOR DRAFT REVIEW	FMS	JMA
2	30.01.2024	ISSUED FOR CONCEPT DESIGN APPROVAL	FMS	JMA
1	29.01.2024	ISSUED FOR CONCEPT DESIGN APPROVAL	FMS	JMA

SCALE 1:300 AT ORIGINAL SIZE

GPG Australia Pty Ltd

MAKER ENG

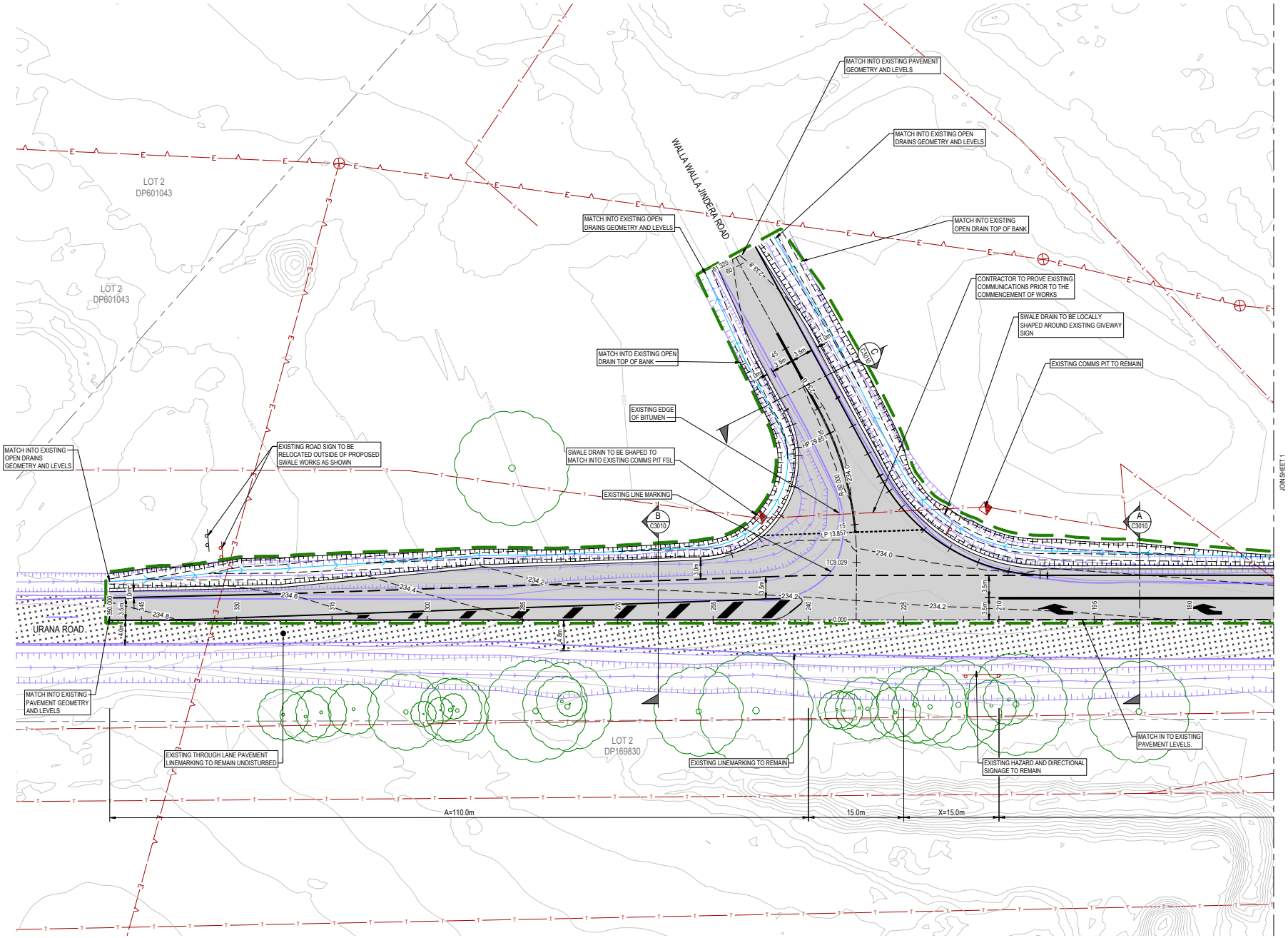
DRAWN: F.SOMERS	DESIGNED: J.RUSHTON
DRAFT CHECK: J.AGUSTIN	DESIGN CHECK: H.SMITH
APPROVED: J.AGUSTIN	
ISSUED FOR APPROVAL	

GLENELLEN SOLAR FARM ROAD UPGRADES
DETAILED DESIGN
CIVIL WORKS LAYOUT PLAN

DRAWING NUMBER	SHEET No.	ORIG. SIZE	REVISION
MKRV0065-201-C0100	1 OF 2	A1	4

Job Number, 11/10/2024, 4:38 PM

C:\12dSdata\12DSYNERGY\MKRV0065 Glenellen Solar Farm_198\02 Design\Drawings\02 Stage 01\Xrefs\X-MKRV0065-201-GE-MKR A1.dwg



BEFORE YOU DIG www.byda.com.au

UTILITY INFORMATION SHOWN ON THE PLANS DOES NOT DEPICT ANY MORE THAN THE PRESENCE OF A SERVICE, BASED ON AVAILABLE DOCUMENTARY EVIDENCE. THE PRESENCE OF A UTILITY SERVICE, ITS SIZE AND LOCATION SHOULD BE CONFIRMED BY FIELD INSPECTION, PRIOR TO THE COMMENCEMENT OF WORKS AND THE RELEVANT UTILITY PLANS OBTAINED BY DIALLING PH 1100 (BEFORE YOU DIG). CAUTION SHOULD BE EXERCISED WHEN WORKING IN THE VICINITY OF ALL UTILITY SERVICES.

REV	DATE	DESCRIPTION	AMD BY	APP BY
4	23.04.2024	ISSUED FOR APPROVAL	JLR	JMA
3	20.02.2024	ISSUED FOR DRAFT REVIEW	FMS	JMA
2	30.01.2024	ISSUED FOR CONCEPT DESIGN APPROVAL	FMS	JMA
1	29.01.2024	ISSUED FOR CONCEPT DESIGN APPROVAL	FMS	JMA

SCALE 1:300 AT ORIGINAL SIZE

GPG Australia Pty Ltd

MAKER ENG

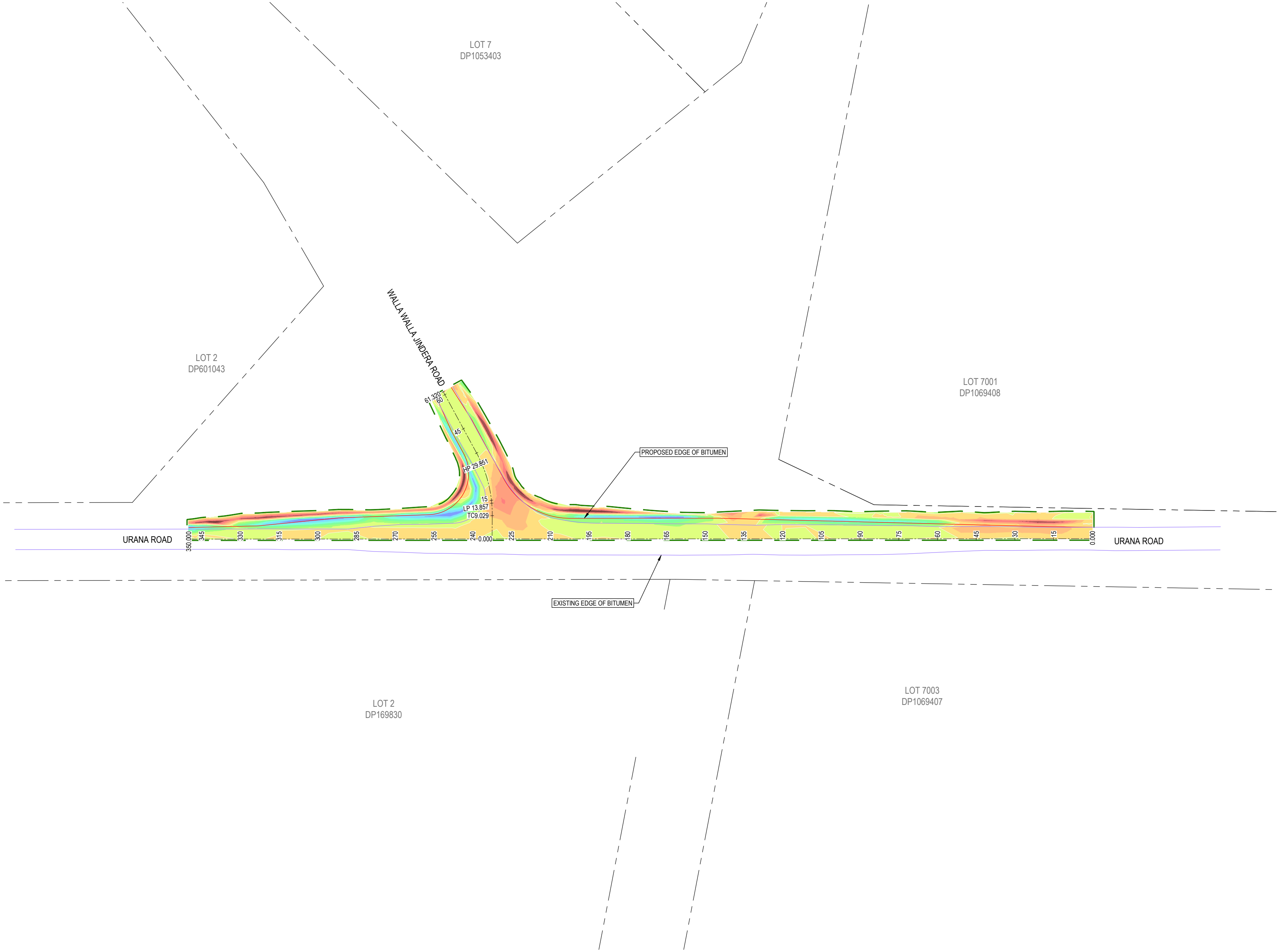
DRAWN: F.SOMERS	DESIGNED: J.RUSHTON
DRAFT CHECK: J.AGUSTIN	DESIGN CHECK: H.SMITH
APPROVED: J.AGUSTIN	
ISSUED FOR APPROVAL	

GLENELLEN SOLAR FARM ROAD UPGRADES
DETAILED DESIGN
CIVIL WORKS LAYOUT PLAN

DRAWING NUMBER	SHEET No.	ORIG. SIZE	REVISION
MKRV0065-201-C0101	2 OF 2	A1	4

Josh Rushton, 11/10/2024, 4:38 PM

C:\12dSdata\12DSYNERGY\MKRV0065 Glenellen Solar Farm_198\02 Design\Drawings\02 Stage 01\Xrefs\X-MKRV0065-201-GE-MKR A1.dwg



LEGEND

PROPOSED

- CIVIL WORKS BOUNDARY
- EDGE OF BITUMEN
- GREATER THAN -0.3m
- -0.3m TO -0.25m
- -0.25m TO -0.2m
- -0.2m TO -0.15m
- -0.15m TO -0.1m
- -0.1m TO -0.05m
- -0.05m TO 0.0m
- 0.0m TO 0.05m
- 0.05m TO 0.1m
- 0.1m TO 0.15m
- 0.15m TO 0.2m
- 0.2m TO 0.25m
- 0.25m TO 0.3m
- 0.3m TO 0.35m
- 0.35m TO 0.4m
- 0.4m TO 0.45m
- GREATER THAN 0.45m

EXISTING

- LOT BOUNDARY
- EDGE OF BITUMEN

TOTAL EARTHWORKS

CUT	84.0 Cu.m
FILL	496.3 Cu.m
NET <FILL>	412.2 Cu.m

NOTES:

1. VOLUMES EXCLUDE SERVICE TRENCHES AND PAVEMENT

UTILITY INFORMATION SHOWN ON THE PLANS DOES NOT DEPICT ANY MORE THAN THE PRESENCE OF A SERVICE, BASED ON AVAILABLE DOCUMENTARY EVIDENCE. THE PRESENCE OF A UTILITY SERVICE, ITS SIZE AND LOCATION SHOULD BE CONFIRMED BY FIELD INSPECTION, PRIOR TO THE COMMENCEMENT OF WORKS AND THE RELEVANT UTILITY PLANS OBTAINED BY DIALLING PH 1100 (BEFORE YOU DIG). CAUTION SHOULD BE EXERCISED WHEN WORKING IN THE VICINITY OF ALL UTILITY SERVICES.

REV	DATE	DESCRIPTION	AMD BY	APP BY
4	23.04.2024	ISSUED FOR APPROVAL	JLR	JMA
3	20.02.2024	ISSUED FOR DRAFT REVIEW	FMS	JMA
2	30.01.2024	ISSUED FOR CONCEPT DESIGN APPROVAL	FMS	JMA
1	29.01.2024	ISSUED FOR CONCEPT DESIGN APPROVAL	FMS	JMA

0 7.5 15 22.5 30 37.5m

SCALE 1:750 AT ORIGINAL SIZE

GPG Australia Pty Ltd

MAKER ENG

DRAWN: F.SOMERS	DESIGNED: J.RUSHTON
DRAFT CHECK: J.AGUSTIN	DESIGN CHECK: H.SMITH
APPROVED: J.AGUSTIN	

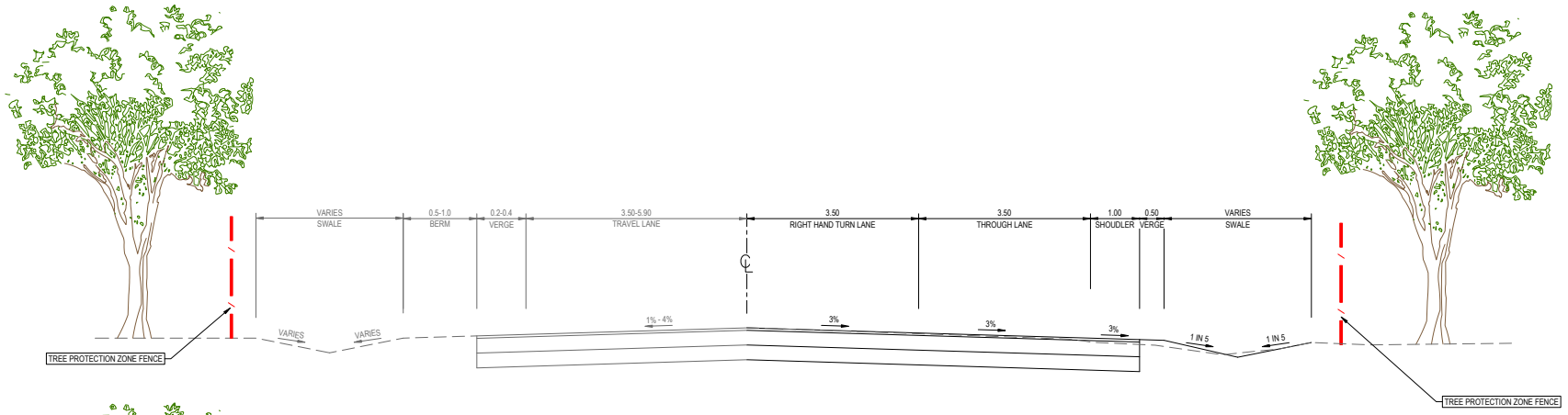
ISSUED FOR APPROVAL

GLENELLEN SOLAR FARM ROAD UPGRADES
DETAILED DESIGN
BULK EARTHWORKS LAYOUT PLAN

DRAWING NUMBER	SHEET No.	ORIG. SIZE	REVISION
MKRV0065-201-C0200		A1	4

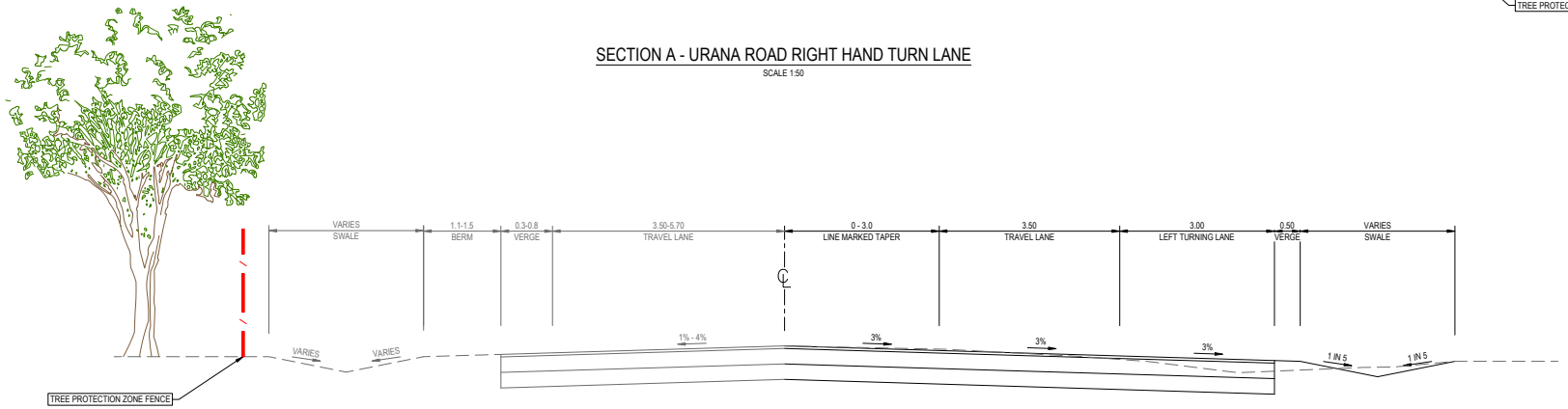
Josh Rushton, 11/11/2020 4:38 PM

C:\12dS\data\12DSYNERGY\MRKV0065 Glenellen Solar Farm_198\02 Design\Drawings\02 Stage 01\Xrefs\X-MKRV0065-201-GE-MKR A1.dwg



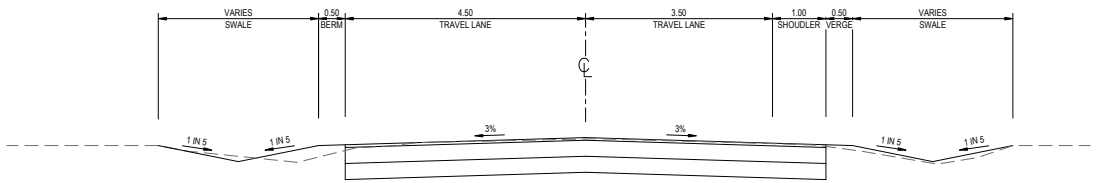
SECTION A - URANA ROAD RIGHT HAND TURN LANE

SCALE 1:50



SECTION B - URANA ROAD LEFT HAND TURN LANE

SCALE 1:50



SECTION C - JINDERA-WALLA WALLA ROAD

SCALE 1:50

REV	DATE	DESCRIPTION	AMD BY	APP BY
4	23.04.2024	ISSUED FOR APPROVAL	JLR	JMA
3	20.02.2024	ISSUED FOR DRAFT REVIEW	FMS	JMA
2	30.01.2024	ISSUED FOR CONCEPT DESIGN APPROVAL	FMS	JMA
1	29.01.2024	ISSUED FOR CONCEPT DESIGN APPROVAL	FMS	JMA

0 0.5 1.0 1.5 2.0 2.5m

SCALE 1:50 AT ORIGINAL SIZE

GPG Australia Pty Ltd

MAKER ENG

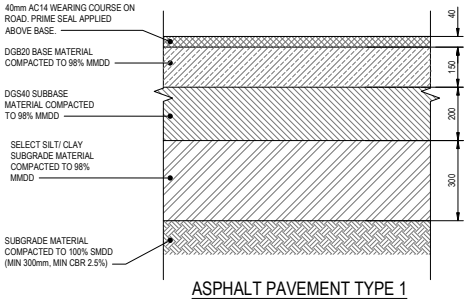
DRAWN: F.SOMERS	DESIGNED: J.RUSHTON
DRAFT CHECK: J.AGUSTIN	DESIGN CHECK: H.SMITH
APPROVED: J.AGUSTIN	
ISSUED FOR APPROVAL	

GLENELLEN SOLAR FARM ROAD UPGRADES
DETAILED DESIGN
TYPICAL SECTIONS

DRAWING NUMBER	SHEET No.	ORIG. SIZE	REVISION
MKRV0065-201-C0310		A1	4

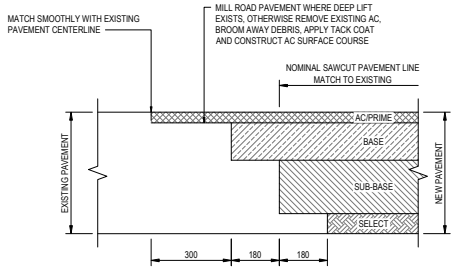
Josh Rushton, 11/10/2024, 4:38 PM

C:\12dSdata\12DSYNERGY\MKRV0065 Glenellen Solar Farm_198\02 Design\Drawings\02 Stage 01\Xrefs\X-MKRV0065-201-GE-MKR A1.dwg



ASPHALT PAVEMENT TYPE 1

SCALE: 1:10



TYPICAL JUNCTION WITH EXISTING PAVEMENT

SCALE: 1:10

NOTES

1. SELECT FILL MATERIAL SHOULD HAVE A CBR>33% AND A PLASTICITY INDEX (PI)<15% IN ITS ORIGINAL STATE BEFORE ADDITION OF ADDITIVE.
2. SELECT FILL MATERIAL SHOULD BE MODIFIED WITH APPROPRIATE ADDITIVE IF CBR<33% AND/OR PI>15%.
3. SELECT FILL SPECIFICATION TAKEN FROM TfNSW QA SPECIFICATION 3071.

REV	DATE	DESCRIPTION	AMD BY	APP BY
4	23.04.2024	ISSUED FOR APPROVAL	JLR	JMA
3	20.02.2024	ISSUED FOR DRAFT REVIEW	FMS	JMA
2	30.01.2024	ISSUED FOR CONCEPT DESIGN APPROVAL	FMS	JMA
1	29.01.2024	ISSUED FOR CONCEPT DESIGN APPROVAL	FMS	JMA

0 0.1 0.2 0.3 0.4 0.5m

SCALE 1:10 AT ORIGINAL SIZE

GPG Australia Pty Ltd

MAKER ENG

DRAWN: F.SOMERS	DESIGNED: J.RUSHTON
DRAFT CHECK: J.AGUSTIN	DESIGN CHECK: H.SMITH
APPROVED: J.AGUSTIN	

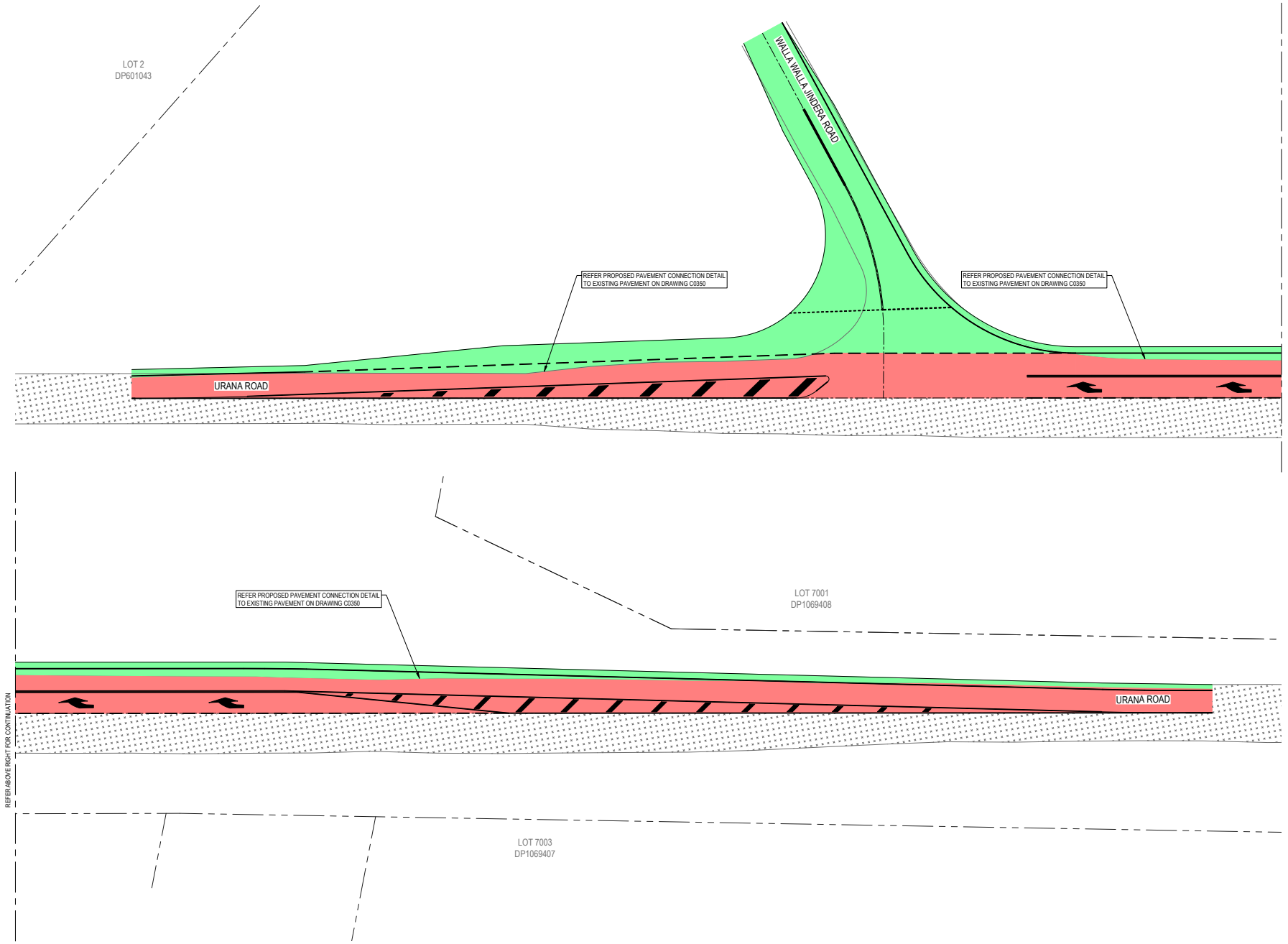
ISSUED FOR APPROVAL

GLENELLEN SOLAR FARM ROAD UPGRADES
DETAILED DESIGN
CIVIL DETAILS

DRAWING NUMBER	SHEET No.	ORIG. SIZE	REVISION
MKRV0065-201-C0350		A1	4

Job Number, 11/10/2024, 4:38 PM

C:\12dSdata\12DSYNERGY\MKRV0065 Glenellen Solar Farm_198\02 Design\Drawings\02 Stage 01\Xrefs\X-MKRV0065-201-GE-MKR A1.dwg



LEGEND

PROPOSED
- FULL DEPTH PAVEMENT
- 40mm RE-SHEET

EXISTING
- LOT BOUNDARY
- PAVEMENT

BEFORE YOU DIG www.byda.com.au

UTILITY INFORMATION SHOWN ON THE PLANS DOES NOT DEPICT ANY MORE THAN THE PRESENCE OF A SERVICE, BASED ON AVAILABLE DOCUMENTARY EVIDENCE. THE PRESENCE OF A UTILITY SERVICE, ITS SIZE AND LOCATION SHOULD BE CONFIRMED BY FIELD INSPECTION, PRIOR TO THE COMMENCEMENT OF WORKS AND THE RELEVANT UTILITY PLANS OBTAINED BY DIALLING PH 1100 (BEFORE YOU DIG). CAUTION SHOULD BE EXERCISED WHEN WORKING IN THE VICINITY OF ALL UTILITY SERVICES.

REV	DATE	DESCRIPTION	AMD BY	APP BY
4	23.04.2024	ISSUED FOR APPROVAL	JLR	JMA
3	20.02.2024	ISSUED FOR DRAFT REVIEW	FMS	JMA
2	30.01.2024	ISSUED FOR CONCEPT DESIGN APPROVAL	FMS	JMA
1	29.01.2024	ISSUED FOR CONCEPT DESIGN APPROVAL	FMS	JMA

0 3 6 9 12 15m
SCALE 1:300 AT ORIGINAL SIZE

GPG Australia Pty Ltd

MAKER ENG

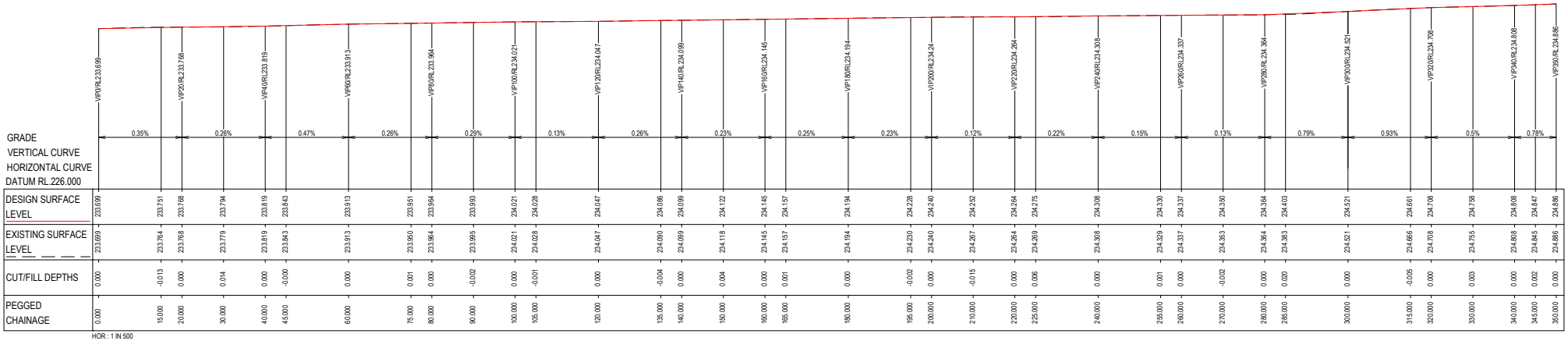
DRAWN: F.SOMERS	DESIGNED: J.RUSHTON
DRAFT CHECK: J.AGUSTIN	DESIGN CHECK: H.SMITH
APPROVED: J.AGUSTIN	
ISSUED FOR APPROVAL	

GLENELLEN SOLAR FARM ROAD UPGRADES
DETAILED DESIGN
PAVEMENT LAYOUT PLAN

DRAWING NUMBER	SHEET No.	ORIG. SIZE	REVISION
MKRV0065-201-C0400		A1	4

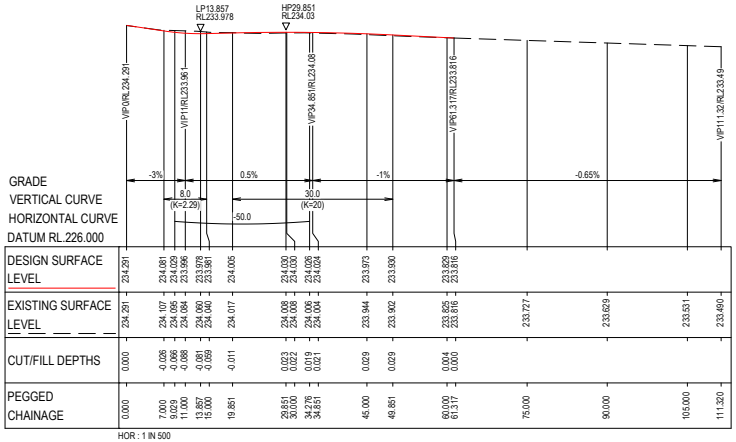
Josh Rushton, 11/10/2024, 4:38 PM

C:\12dSdata\12DSYNERGY\MKRV0065 Glenellen Solar Farm_198\02 Design\Drawings\02 Stage 01\Xrefs\X-MKRV0065-201-GE-MKR A1.dwg



HOR : 1 IN 500
VERT: 1 IN 100

LONGITUDINAL SECTION - URANA ROAD



HOR : 1 IN 500
VERT: 1 IN 100

LONGITUDINAL SECTION - JINDERA-WALLA WALLA ROAD

REV	DATE	DESCRIPTION	AMD BY	APP BY
4	23.04.2024	ISSUED FOR APPROVAL	JLR	JMA
3	20.02.2024	ISSUED FOR DRAFT REVIEW	FMS	JMA
2	30.01.2024	ISSUED FOR CONCEPT DESIGN APPROVAL	FMS	JMA
1	29.01.2024	ISSUED FOR CONCEPT DESIGN APPROVAL	FMS	JMA

HORIZONTAL 1:500 AT ORIGINAL SIZE 0 5 10 15 20 25m
VERTICAL 1:100 AT ORIGINAL SIZE 0 1 2 3 4 5m

GPG Australia Pty Ltd

MAKER ENG

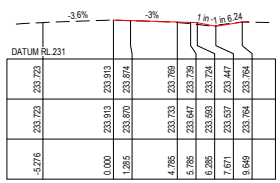
DRAWN: F.SOMERS	DESIGNED: J.RUSHTON
DRAFT CHECK: J.AGUSTIN	DESIGN CHECK: H.SMITH
APPROVED: J.AGUSTIN	
ISSUED FOR APPROVAL	

GLENELLEN SOLAR FARM ROAD UPGRADES
DETAILED DESIGN
ROAD LONGITUDINAL SECTIONS

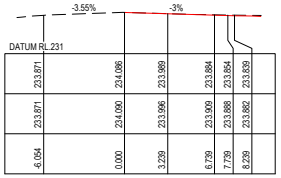
DRAWING NUMBER	SHEET No.	ORIG. SIZE	REVISION
MKRV0065-201-C0500		A1	4

Josh Rushton, 11/1/2024, 4:38 PM

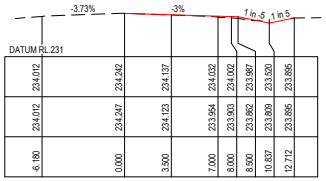
C:\12dSdata\12DSYNERGY\MKRV0065 Glenellen Solar Farm_198\02 Design\Drawings\02 Stage 01\Xrefs\X-MKRV0065-201-GE-MKR A1.dwg



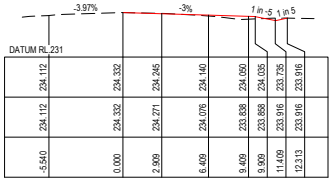
CH 60.000



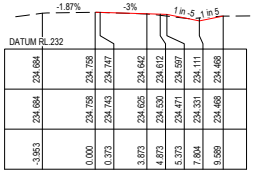
CH 135.000



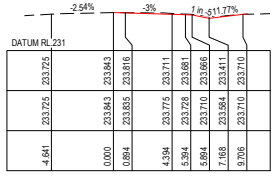
CH 202.372



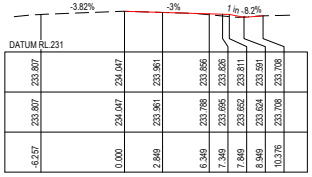
CH 256.962



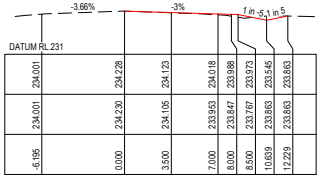
CH 330.000



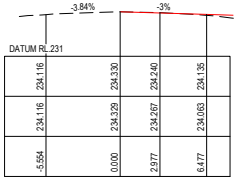
CH 45.000



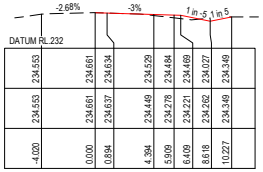
CH 120.000



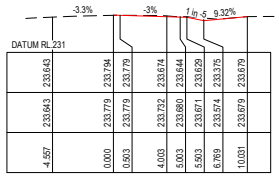
CH 195.000



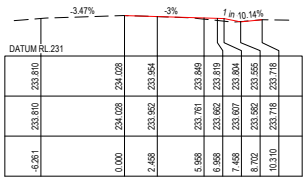
CH 255.000



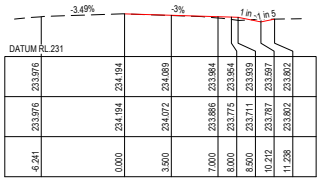
CH 315.000



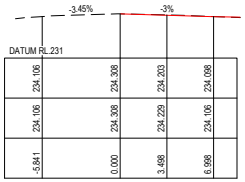
CH 30.000



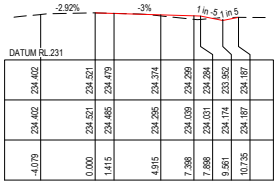
CH 105.000



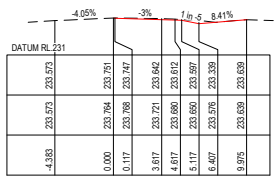
CH 180.000



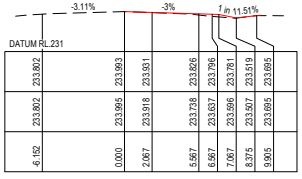
CH 240.000



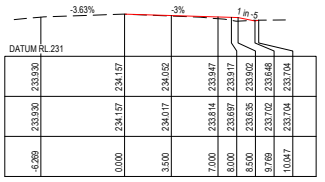
CH 300.000



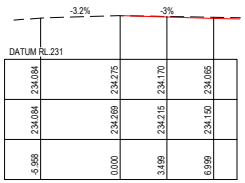
CH 15.000



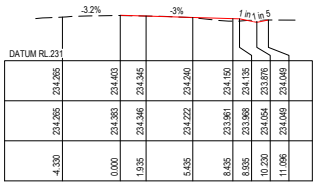
CH 90.000



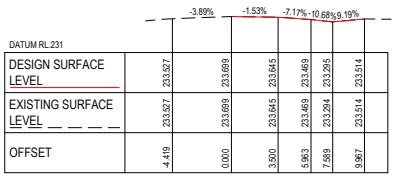
CH 165.000



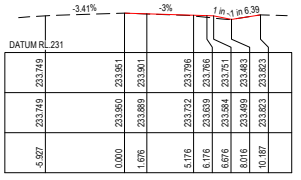
CH 225.000



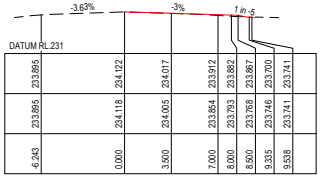
CH 285.000



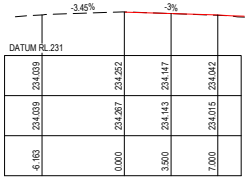
CH 0.000



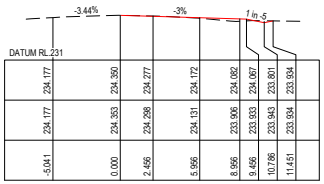
CH 75.000



CH 150.000



CH 210.000



CH 270.000

URANA ROAD

SCALE 1:200

REV	DATE	DESCRIPTION	AMD BY	APP BY
4	23.04.2024	ISSUED FOR APPROVAL	JLR	JMA
3	20.02.2024	ISSUED FOR DRAFT REVIEW	FMS	JMA
2	30.01.2024	ISSUED FOR CONCEPT DESIGN APPROVAL	FMS	JMA
1	29.01.2024	ISSUED FOR CONCEPT DESIGN APPROVAL	FMS	JMA

0 2 4 6 8 10m
SCALE 1:200 AT ORIGINAL SIZE

GPG Australia Pty Ltd

MAKER ENG

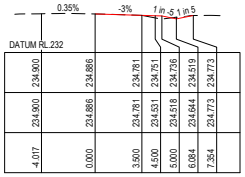
DRAWN: F.SOMERS	DESIGNED: J.RUSHTON
DRAFT CHECK: J.AGUSTIN	DESIGN CHECK: H.SMITH
APPROVED: J.AGUSTIN	
ISSUED FOR APPROVAL	

GLENELLEN SOLAR FARM ROAD UPGRADES
DETAILED DESIGN
ROAD CROSS SECTIONS

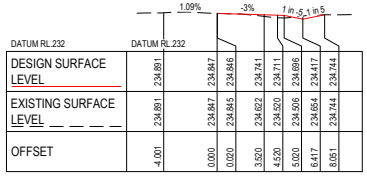
DRAWING NUMBER	SHEET No.	ORIG. SIZE	REVISION
MKRV0065-201-C0600	1 OF 2	A1	4

Josh Rushton, 11/11/2024, 4:38 PM

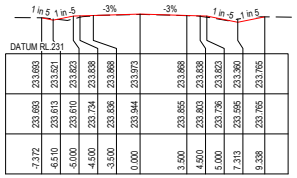
C:\12dSdata\12DSYNERGY\MKRV0065 Glenellen Solar Farm_198602 Design\Drawings\02 Stage 01\Xrefs\X-MKRV0065-201-GE-MKR A1.dwg



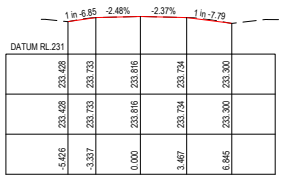
CH 350.000



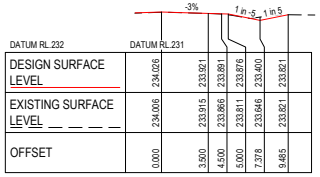
CH 345.000



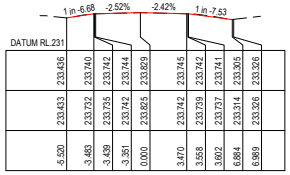
CH 45.000



CH 61.320



CH 34.276



CH 60.000

URANA ROAD
SCALE 1:200

WALLA WALLA JINDERA ROAD
SCALE 1:200

REV	DATE	DESCRIPTION	AMD BY	APP BY
4	23.04.2024	ISSUED FOR APPROVAL	JLR	JMA
3	20.02.2024	ISSUED FOR DRAFT REVIEW	FMS	JMA
2	30.01.2024	ISSUED FOR CONCEPT DESIGN APPROVAL	FMS	JMA
1	29.01.2024	ISSUED FOR CONCEPT DESIGN APPROVAL	FMS	JMA

0 2 4 6 8 10m
SCALE 1:200 AT ORIGINAL SIZE

GPG Australia Pty Ltd

MAKER ENG

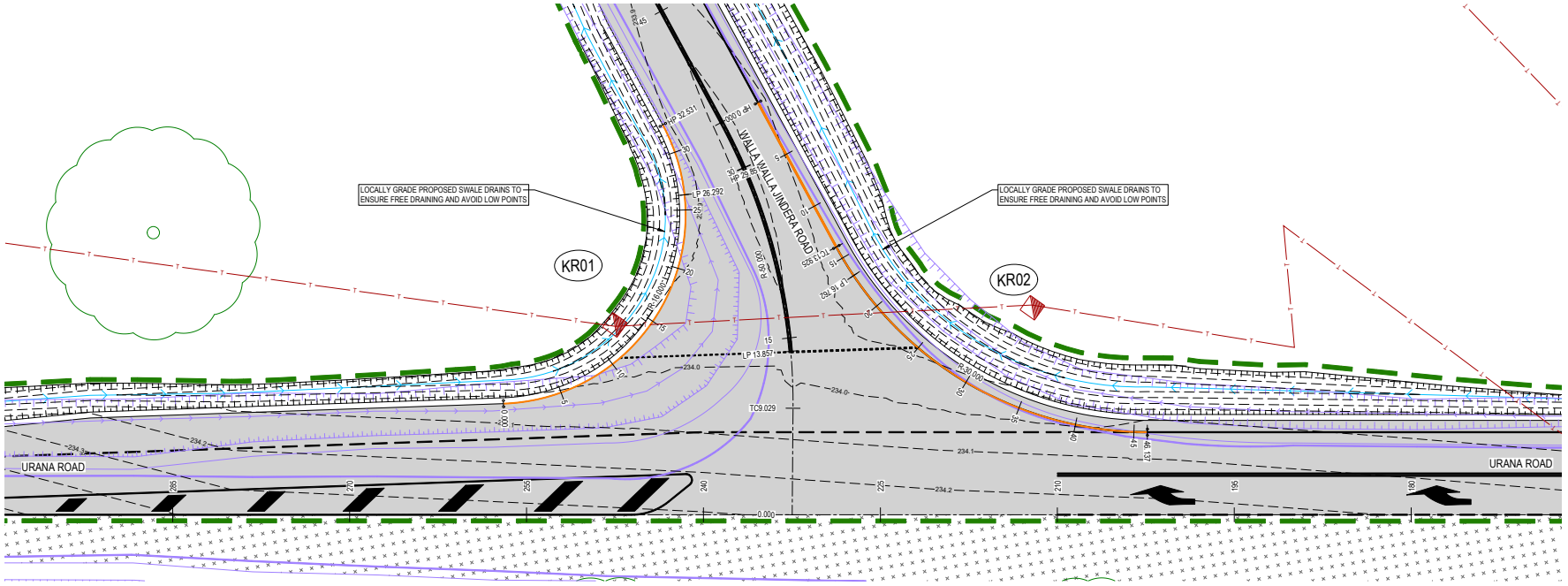
DRAWN: F.SOMERS	DESIGNED: J.RUSHTON
DRAFT CHECK: J.AGUSTIN	DESIGN CHECK: H.SMITH
APPROVED: J.AGUSTIN	
ISSUED FOR APPROVAL	

GLENELLEN SOLAR FARM ROAD UPGRADES
DETAILED DESIGN
ROAD CROSS SECTIONS

DRAWING NUMBER	SHEET No.	ORIG. SIZE	REVISION
MKRV0065-201-C0601	2 OF 2	A1	4

Josh Rushton, 11/10/2024, 4:38 PM

C:\12dSdata\12DSYNERGY\MKRV0065 Glenellen Solar Farm_198\02 Design\Drawings\02 Stage 01\Xrefs\X-MKRV0065-201-GE-MKR A1.dwg



KERB RETURN LAYOUT PLAN

SCALE 1:200

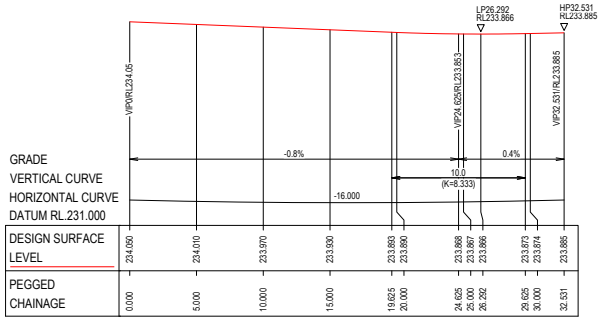
PROPOSED

LEGEND

- CIVIL WORKS BOUNDARY
- KERB RETURN ALIGNMENT (LIP OF KERB)
- CONTOURS (0.1m)
- ROAD CENTERLINE AND CHAINAGE
- OPEN DRAIN
- KERB RETURN LABELS
- PAVEMENT
- PAVEMENT MARKING
- LINE MARKING
- EDGE OF BITUMEN

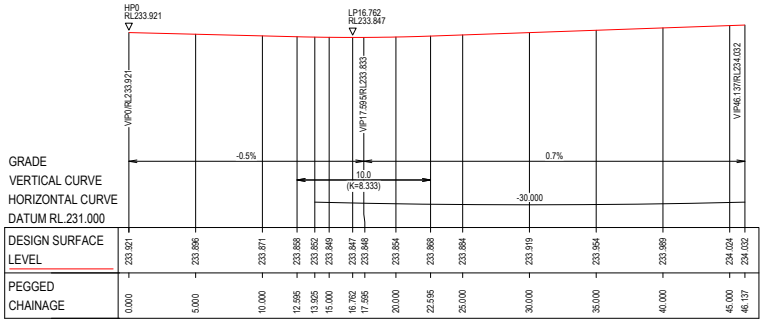
EXISTING

- LOT BOUNDARY
- ELECTRICAL ABOVE GROUND
- TELECOMMUNICATIONS
- LINEMARKING
- EDGE OF BITUMEN
- TREE (TO BE RETAINED)
- OPEN DRAIN



HOR : 1 IN 200
VERT: 1 IN 40

LONGITUDINAL SECTION - KR 01



HOR : 1 IN 200
VERT: 1 IN 40

LONGITUDINAL SECTION - KR 02

BEFORE YOU DIG www.byda.com.au

UTILITY INFORMATION SHOWN ON THE PLANS DOES NOT DEPICT ANY MORE THAN THE PRESENCE OF A SERVICE, BASED ON AVAILABLE DOCUMENTARY EVIDENCE. THE PRESENCE OF A UTILITY SERVICE, ITS SIZE AND LOCATION SHOULD BE CONFIRMED BY FIELD INSPECTION, PRIOR TO THE COMMENCEMENT OF WORKS AND THE RELEVANT UTILITY PLANS OBTAINED BY DIALLING PH 1100 (BEFORE YOU DIG). CAUTION SHOULD BE EXERCISED WHEN WORKING IN THE VICINITY OF ALL UTILITY SERVICES.

REV	DATE	DESCRIPTION	AMD BY	APP BY
4	23.04.2024	ISSUED FOR APPROVAL	JLR	JMA
3	20.02.2024	ISSUED FOR DRAFT REVIEW	FMS	JMA
2	30.01.2024	ISSUED FOR CONCEPT DESIGN APPROVAL	FMS	JMA
1	29.01.2024	ISSUED FOR CONCEPT DESIGN APPROVAL	FMS	JMA

HORIZONTAL 1:200 AT ORIGINAL SIZE 0 2 4 6 8 10m

VERTICAL 1:40 AT ORIGINAL SIZE 0 0.4 0.8 1.2 1.6 2m

GPG Australia Pty Ltd

MAKER ENG

DRAWN: F.SOMERS	DESIGNED: J.RUSHTON
DRAFT CHECK: J.AGUSTIN	DESIGN CHECK: H.SMITH
APPROVED: J.AGUSTIN	
ISSUED FOR APPROVAL	

GLENELLEN SOLAR FARM ROAD UPGRADES
DETAILED DESIGN
KERB RETURN LAYOUT AND SECTIONS

DRAWING NUMBER	SHEET No.	ORIG. SIZE	REVISION
MKRV0065-201-C0700		A1	4

Josh Rushton, 11/10/2024, 4:38 PM

C:\12dSdata\12DSYNERGY\MKRV0065 Glenellen Solar Farm_198\02 Design\Drawings\02 Stage 01\Xrefs\X-MKRV0065-201-GE-MKR A1.dwg

GENERAL NOTES

1. REFER TO VOLUME 1 OF MANAGING URBAN STORMWATER: SOILS AND CONSTRUCTION, LANDCOM, 2004 (THE BLUE BOOK) AND OTHER GUIDELINES APPROVED OR ENDORSED BY THE ENVIRONMENTAL PROTECTION AUTHORITY.
2. WASTE ENCLOSURES WILL BE USED FOR ALL RUBBISH ON SITE AND RUBBISH REMOVED FROM ENCLOSURE(S) WHEN REQUIRED OR FULL.
3. CONTRACTOR TO ENSURE ALL APPROVALS ARE OBTAINED PRIOR TO COMMENCEMENT OF CONSTRUCTION.

DUST MANAGEMENT

WHERE CONSTRUCTION WORK GENERATES DUST, ALL REASONABLE AND PRACTICABLE MEASURES SHOULD BE TAKEN TO MINIMISE THAT DUST.

THIS CAN OFTEN BE ACHIEVED BY:

1. STRIPPING AREAS PROGRESSIVELY AND ONLY WHERE IT IS NECESSARY FOR WORKS TO OCCUR.
2. EMPLOYING STABILISING METHODS SUCH AS MATTING, GRASSING OR MULCH.
3. DAMPENING THE GROUND WITH A LIGHT WATER SPRAY.
4. ROUGHENING SURFACE OF EXPOSED SOIL.
5. COVERING STOCKPILES AND LOCATING THEM WHERE THEY ARE PROTECTED FROM THE WIND.
6. RESTRICTING VEHICLE MOVEMENTS.
7. ALL LOADS TO BE COVERED WHEN TRANSPORTING MATERIAL OFF SITE.
8. CONSTRUCTING WIND BREAKS SUCH AS WIND FENCES.
9. A WATER CART OR SUFFICIENT WATER SPRAYS SHALL BE MADE AVAILABLE AT ALL TIMES. IN ADVERSE CONDITIONS WHEN DUST CANNOT BE ADEQUATELY CONTROLLED, WORKS WILL CEASE IN THESE AREAS UNTIL CONDITIONS IMPROVE.
10. WATER SHALL BE APPLIED TO SUPPRESS DUST FROM OPEN EARTHWORKS AS WELL AS UNPROTECTED STOCKPILES.
11. AREAS OF COMPLETED EARTHWORKS SHALL BE PROGRESSIVELY REHABILITATED WITH DRYLAND GRASS AND FENCED OFF AS SOON AS PRACTICABLE TO PREVENT FURTHER EROSION.
12. ALL WORK TO STOP IF DUST CONTINUES TO LEAVE SITE WHEN ALL ABOVE METHODS HAVE BEEN UNDERTAKEN eg. WINDS OVER 10m/s FOR A PERIOD GREATER THAN 10 MINUTES.

NOISE & DISRUPTION

ENSURE ALL CONSTRUCTION WORK THAT GENERATES NOISE IS MANAGED IN ACCORDANCE WITH THE EPA INTERIM CONSTRUCTION NOISE GUIDELINES

MONDAY - FRIDAY	7AM TO 6PM
SATURDAY	8AM TO 1PM
SUNDAY & PUBLIC HOLIDAYS	WORKS PROHIBITED

IN ADDITION:

1. SCHEDULE NOISY ACTIVITIES FOR THE LEAST SENSITIVE TIMES OF THE DAY SUCH AS MID-MORNING OR MID-AFTERNOON.
2. SELECT MACHINERY THAT PRODUCES LESS NOISE; AND

ENSURE MACHINERY IS WELL MAINTAINED.

DISPOSAL OF SPOIL

BEFORE DISPOSAL OF SPOIL OFF SITE, THE FOLLOWING INFORMATION MUST BE PROVIDED TO THE SUPERINTENDENT

1. WHERE WILL SPOIL ORIGINATE FROM.
2. WHO IS DISPOSING OF THE SPOIL.
3. WHERE THE SPOIL WILL BE TAKEN.
4. THE AMOUNT OF SPOIL TO BE TAKEN AWAY.
5. DESCRIPTION OF THE TYPE OF SPOIL TAKEN AWAY.
6. DETAILS OF HOW RECORDS WILL BE KEPT; AND
7. TIME FRAME TO COMPLETE WORKS

SPOIL MAY BE TAKEN TO AN APPROVED LANDFILL SITE WITHOUT APPROVAL. HOWEVER, IF THE SPOIL IS TAKEN TO AN AREA OTHER THAN APPROVED LANDFILL SITE, ENSURE THE ACCEPTOR OF THE SPOIL IS AWARE OF THE REQUIREMENTS SETOUT IN SECTION 8.2 OF THE ENVIRONMENT PROTECTION GUIDELINES FOR CONSTRUCTION AND LAND DEVELOPMENT IN THE ACT.

FIRE

BURNING OF WASTE MATERIALS ON THE SITE, SUCH AS PLASTICS, CHEMICALS OR WOOD THAT MAY BE PAINTED, CHEMICALLY TREATED OR CONTAMINATED WITH CHEMICALS IS ILLEGAL. A FIRE MAY BE PERMITTED FOR HEATING PURPOSES PROVIDED IT IS IN A BRAZIER OR CONSTRUCTED FIREPLACE. ONLY SEASONED, UNTREATED TIMBER CAN BE BURNT FOR HEATING PURPOSES.

ALL NOTES ARE TO BE READ IN CONJUNCTION WITH GREATER HUME SHIRE COUNCIL AND TRANSPORT FOR NSW (TFNSW) ENGINEERING SPECIFICATIONS. SHOULD A CONFLICT ARISE TRANSPORT FOR NSW (TFNSW) SPECIFCATIONS ARE TO TAKE PRECEDENCE

SEDIMENT CONTROL NOTES

1. SEDIMENT AND EROSION CONTROL DEVICES TO BE INSTALLED AND FULLY OPERATIONAL PRIOR TO STRIPPING OF SITE TOPSOIL.
2. SEDIMENT AND EROSION CONTROL DEVICES NOT TO BE DECOMMISSIONED UNTIL AT LEAST 70% REVEGETATION COVER HAS BEEN ESTABLISHED.
3. STOCK PILE/S TO BE LOCATED AWAY FROM DRAINAGE LINES AND SURFACE FLOW PATHS, CONTOURED STRIATIONS OR FURROWS TO BE PROVIDED TO STOCK PILES TO MINIMISE EROSION.
4. STABILISED CONSTRUCTION ENTRANCE TO BE CONSTRUCTED PRIOR TO ACCESS TO SITE BY CONSTRUCTION VEHICLES. AGGREGATE TO BE TURNED WHEN SEDIMENT BUILDS UP AND RENEWED WEEKLY OR WHEN REQUIRED.
5. WHERE STORMWATER DRAINAGE IS INSTALLED TO INTERNAL ROADWORKS, PROVIDE GRATED SUMP FILTER.
6. CONTRACTOR IS TO ESTABLISH A MAINTENANCE PROGRAM FOR SEDIMENT & EROSION CONTROL DEVICES TO ENSURE INSPECTION AFTER SIGNIFICANT RAINFALL AND THAT ANY REPAIRS NECESSARY ARE QUICKLY ATTENDED TO.
7. ALL NEW CONSTRUCTION WORK MUST BE CONTAINED WITHIN THE SITE EXCEPT FOR APPROVED SERVICE CONNECTIONS AND ROADWORKS.
8. REMOVE ANY SOIL FROM ROADS ADJACENT TO THE SITE AT THE END OF EACH DAY.
9. NO STORAGE OF CONSTRUCTION MATERIALS, PARKING OF VEHICLES NOR EQUIPMENT PERMITTED OUTSIDE SITE.
10. NO SITE SHEDS, STORAGE SHEDS, SITE AMENITIES TO BE ERECTED OUTSIDE OF SITE.
11. PROVIDE KERBSIDE FILTER ROLL TO EXISTING SUMPS / STORMWATER INLETS WITHIN AND ADJACENT TO THE SITE AND ANY ADDITIONAL LOCATIONS AS DETAILED.
12. KERBSIDE FILTER ROLLS TO BE REMOVED, CLEANED AND REINSTATED ON A WEEKLY BASIS AT A MINIMUM. TRAPPED SEDIMENT ABOUT SUMPS IS ALSO TO BE REMOVED. CLEANING IS ALSO TO TAKE PLACE IMMEDIATELY AFTER PERIODS OF RAINFALL DURING CONSTRUCTION.
13. ALL SERVICE TRENCHES TO BE BACKFILLED WITHIN 24 HOURS OF INSPECTION.
14. THE SITE FOREMAN IS TO CONTACT COUNCIL TO DISCUSS ANY MAJOR CHANGES TO SEDIMENT AND EROSION CONTROLS ON SITE PRIOR TO IMPLEMENTING THE CHANGES.
15. THE SITE FOREMAN WILL ENSURE CONTRACTORS ACCESS AND EXIT THE SITE USING ONLY APPROVED STABILISED ACCESS/EXIT POINTS AS DETAILED ON ENDORSED SEDIMENT AND EROSION CONTROL PLANS.
16. THE CONTRACTOR TO LIMIT STRIPPING OF TOPSOIL AND REMOVAL OF VEGETATION TO AREAS ESSENTIAL FOR UNDERTAKING THE WORKS.
17. DISTURBED AREAS TO BE RESTORED TO ORIGINAL CONDITION AS SOON AS PRACTICABLE.
18. THE CONTRACTOR SHALL LIMIT VEHICLES AND PLANT MOVEMENT TO PARKING AREAS AND ACCESS ROUTES AS APPROVED OR ONLY IN AREAS WHERE WORK IS PROCEEDING.
19. CONTRACTOR TO RETAIN A COPY OF THE APPROVED "EROSION AND SEDIMENT CONTROL PLAN" DURING LAND DEVELOPMENT IN THE SITE OFFICE.
20. SILT FENCES TO BE PLACED AROUND ALL STOCK PILES ON THE LOWER SIDE.
21. DIVERSION SWALES, IF APPLICABLE, MUST BE STABLE BEFORE RECEIVING STORMWATER FLOWS FROM UPSTREAM.

TOPSOIL MANAGEMENT

1. TOPSOIL SHALL BE STOCKPILED SEPARATED FROM GENERAL EXCAVATED MATERIAL.

HOURS OF OPERATION

SITE WORKS TO BE CONDUCTED ONLY BETWEEN THE FOLLOWING HOURS:

- WEEKDAYS 7.00am TO 6.00pm
- SATURDAYS 8.00am TO 1.00pm
- NO WORK ON SUNDAYS OR PUBLIC HOLIDAYS

MAINTENANCE SCHEDULE

WEEKLY:

1. TURN OVER STABILISED CONSTRUCTION ENTRY MATERIAL AND RENEW WHEN REQUIRED.
2. CHECK AND REINSTATE SILT CONTROL FENCES

DAILY:

1. SWEEP AND REMOVE DIRT AND ANY OTHER BUILDING MATERIAL FROM GUTTERS, FOOTPATHS OR ROADWAYS ADJACENT TO THE SITE BY CLOSE OF BUSINESS AND PRIOR TO RAIN AND WHEN REQUIRED. ALL NECESSARY STEPS SHOULD BE TAKEN THAT ARE PRACTICAL AND REASONABLE TO MINIMISE DUST POLLUTION ON LAND DEVELOPMENT AND CONSTRUCTION SITE.

DURING/AFTER WET WEATHER:

1. LIMIT CONSTRUCTION VEHICLE ACCESS TO SITE DURING AND IMMEDIATELY FOLLOWING WET WEATHER.
2. TESTING AND TREATMENT (FLOCCULATION) OF ANY DIRTY WATER DOWNSTREAM WILL LIKELY BE REQUIRED PRIOR TO DISCHARGE INTO THE HARBOUR. CONTRACTOR IS TO CONSULT WITH SUPERINTENDENT ON DISCHARGE CRITERIA PRIOR TO DISCHARGE.
3. CONTRACTOR TO ENSURE THE EXISTING CULVERTS AND CHANNELS REMAIN FREE FROM ANY OBSTRUCTION DURING CONSTRUCTION AND DURING INCLEMENT WEATHER SO THAT NO FLOODING OCCURS UPSTREAM AND INTO ANY NEIGHBORING PROPERTIES.

TREES

ALL TREES SHALL BE PROTECTED BY THE FOLLOWING MEASURES:

1. PROTECTIVE FENCING CONSTRUCTED OF 1.8m HIGH CHAIN WIRE MESH SUPPORTED BY ROBUST POSTS SHALL BE INSTALLED AT A MINIMUM RADIUS OF 3m FROM THE TRUNK OF EACH TREE.THIS FENCING SHALL BE INSTALLED PRIOR TO THE COMMENCEMENT OF ANY WORKS AND REMAIN IN PLACE UNTIL ALL WORKS ARE COMPLETED.SIGNAGE SHALL BE ERECTED ON THE FENCE WITH THE FOLLOWING WORDS CLEARLY DISPLAYED "TREE PROTECTION ZONE,DO NOT ENTER."
2. THE TREE PROTECTION ZONE WITHIN THE PROTECTIVE FENCING SHALL BE MULCHED WITH A MAXIMUM DEPTH 75mm OF SUITABLE ORGANIC MULCH (WOOD CHIPS OR COMPOST LEAF CHIP MULCH) AND KEPT REGULARLY WATERED FOR THE DURATION OF THE WORKS.
3. NO DEVELOPMENT OR ASSOCIATED ACTIVITY IS PERMITTED WITHIN THE FENCED TREE PROTECTION ZONE FOR THE DURATION OF THE WORKS.
4. ANY APPROVED WORKS WITHIN THIS TREE PROTECTION ZONE SHALL BE UNDER THE DIRECTION OF,AND TO THE SATISFACTION OF, A SUITABLY QUALIFIED AND EXPERIENCED ARBORIST. PLANT EIGHT (8) INDIGENOUS CANOPY TREES (ANGOPHORA) WITHIN LOT 7 BUT NOT WITHIN 3 METRES OF A BUILDING, WITH A MINIMUM POT SIZE OF 25 LITRES.

REV	DATE	DESCRIPTION	AMD BY	APP BY
4	23.04.2024	ISSUED FOR APPROVAL	JLR	JMA
3	20.02.2024	ISSUED FOR DRAFT REVIEW	FMS	JMA
2	30.01.2024	ISSUED FOR CONCEPT DESIGN APPROVAL	FMS	JMA
1	29.01.2024	ISSUED FOR CONCEPT DESIGN APPROVAL	FMS	JMA

Josh Rushton, 11/11/2020 4:38 PM

GPG Australia Pty Ltd

MAKER ENG

DRAWN: F.SOMERS	DESIGNED: J.RUSHTON
DRAFT CHECK: J.AGUSTIN	DESIGN CHECK: H.SMITH
APPROVED:	J.AGUSTIN
ISSUED FOR APPROVAL	

GLENELLEN SOLAR FARM ROAD UPGRADES
DETAILED DESIGN
SOIL AND WATER MANAGEMENT NOTES

DRAWING NUMBER	SHEET No.	ORIG. SIZE	REVISION
MKRV0065-201-C1500		A1	4

C:\12dS\data\12DSYNERGY\MRKV0065 Glenellen Solar Farm_198\02 Design\Drawings\02 Stage 01\Xrefs\X-MKRV0065-201-GE-MKR A1.dwg

LEGEND

PROPOSED

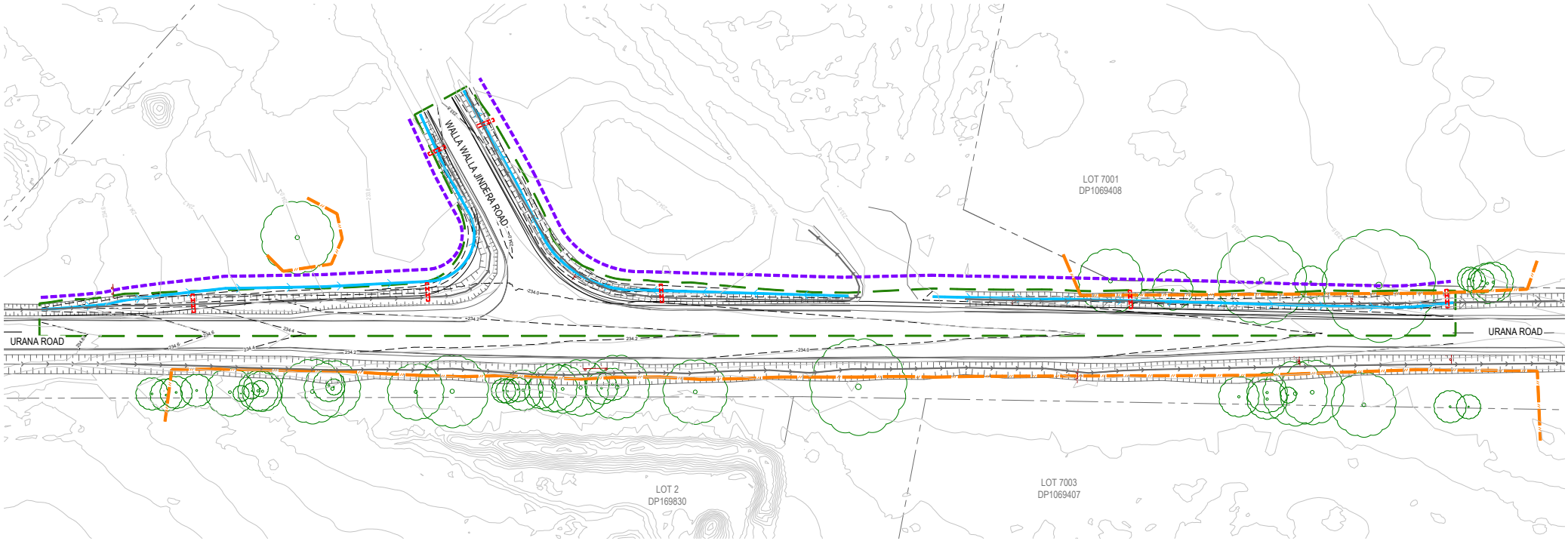
- CIVIL WORKS BOUNDARY
- TEMPORARY FENCING-TREE PROTECTION
- SEDIMENT FENCE
- STRAW BALES
- 7.0 CONTOURS (0.2m)

EXISTING

- LOT BOUNDARY
- 7.0 CONTOURS (0.2m)
- TREE (TO BE RETAINED)
- OPEN DRAIN
- TOP OF BATTER

NOTES:

1. TREE PROTECTION TO BE IN ACCORDANCE WITH ARBORIST REPORT AND COUNCIL STANDARDS



REV	DATE	DESCRIPTION	AMD BY	APP BY
4	23.04.2024	ISSUED FOR APPROVAL	JLR	JMA
3	20.02.2024	ISSUED FOR DRAFT REVIEW	FMS	JMA
2	30.01.2024	ISSUED FOR CONCEPT DESIGN APPROVAL	FMS	JMA
1	29.01.2024	ISSUED FOR CONCEPT DESIGN APPROVAL	FMS	JMA

0 7.5 15 22.5 30 37.5m
SCALE 1:750 AT ORIGINAL SIZE

GPG Australia Pty Ltd

MAKER ENG

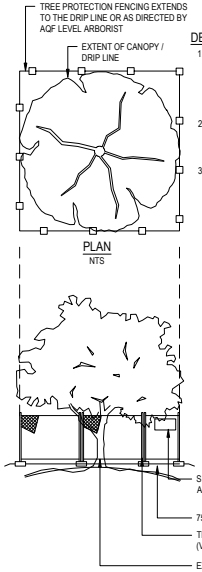
DRAWN: F.SOMERS	DESIGNED: J.RUSHTON
DRAFT CHECK: J.AGUSTIN	DESIGN CHECK: H.SMITH
APPROVED: J.AGUSTIN	
ISSUED FOR APPROVAL	

GLENELLEN SOLAR FARM ROAD UPGRADES
DETAILED DESIGN
SOIL AND WATER MANAGEMENT LAYOUT PLAN

DRAWING NUMBER	SHEET No.	ORIG. SIZE	REVISION
MKRV0065-201-C1501		A1	4

Josh Rushton, 11/10/2024, 4:38 PM

C:\12dSdata\12DSYNERGY\MKRV0065 Glenellen Solar Farm_198\02 Design\Drawings\02 Stage 01\Xrefs\X-MKRV0065-201-GE-MKR A1.dwg



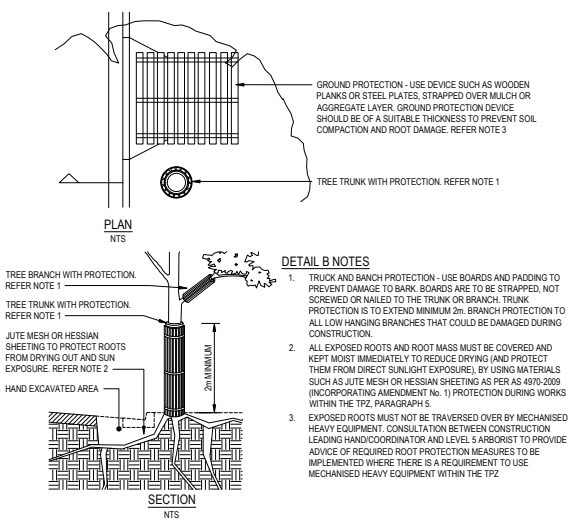
DETAIL A NOTES

1. PRIOR TO THE COMMENCEMENT OF ANY WORK ON SITE, EXISTING TREES TO BE RETAINED ARE TO BE PROTECTED FROM DAMAGE BY FENCING AS PER DETAIL PROVIDED. FENCING SHALL BE MAINTAINED IN GOOD AND EFFECTIVE ORDER UNTIL THE WORK IS COMPLETED. REFER PLAN THIS SHEET FOR LOCATION OF TREE PROTECTION FENCING.
2. FENCING TO ALIGN WITH OUTER EXTENT OF TREES BRANCHES (DRIP LINE). ANY VARIATION TO HAVE APPROVAL OF SUPERVISING AQF5 ARBORIST OR LANDSCAPE ARCHITECT.
3. ALL CARE TO BE TAKEN TO ENSURE TREES HEALTH IS PROTECT INCLUDING NOT RESTRICTED TO:
   - 3.1. NO STORAGE OF MATERIALS WITHIN TREE PROTECTION ZONE (TPZ); NO OIL, TAR BITUMEN, CEMENT, PAINT, OR OTHER MATERIALS BE ALLOWED TO CONTAMINATE TREE PROTECTION ZONE; NO MIXING OF CONCRETE, MORTAR OR WASHING PAINTING EQUIPMENT TO OCCUR WITHIN TPZ OR AREA DRAINING TOWARDS TPZ.
   - 3.2. NO LEVEL CHANGES WITHIN TREE PROTECTION ZONE
   - 3.3. NO LIGHTING OF FIRES BENEATH OR IN PROXIMITY TO TREE CANOPY
   - 3.4. NO ATTACHMENTS OR ROPES, GUYS, CABLES OR NOTICE BOARDS TO TREE
   - 3.5. PROVISION OF 75mm DEPTH WEED FREE, RECYCLED HARDWOOD CHIP/LEAF LITTER MULCH FROM AN APPROVED SOURCE

NOTE: FINAL EXTENT OF TPZ TO BE DETERMINED BY AN AQF LEVEL 5 ARBORIST FOR EVERY SITE

DETAIL A
TREE PROTECTION ZONE (TPZ) FENCING
(REFERENCE AS 4790)

HOLD POINT
NO EXCAVATION IS TO OCCUR WITHIN THE TREE PROTECTION ZONE. STOP WORK AND CONTACT AN AQF LEVEL 5 ARBORIST BEFORE PROCEEDING ANY FURTHER.

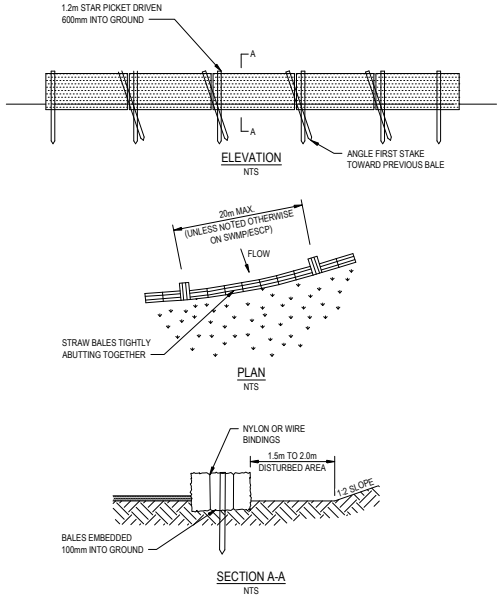


DETAIL B NOTES

1. TRUCK AND BANCH PROTECTION - USE BOARDS AND PADDING TO PREVENT DAMAGE TO BARK. BOARDS ARE TO BE STRAPPED, NOT SCREWED OR NAILED TO THE TRUNK OR BRANCH. TRUNK PROTECTION IS TO EXTEND MINIMUM 2m. BRANCH PROTECTION TO ALL LOW HANGING BRANCHES THAT COULD BE DAMAGED DURING CONSTRUCTION.
2. ALL EXPOSED ROOTS AND ROOT MASS MUST BE COVERED AND KEPT MOIST IMMEDIATELY TO REDUCE DRYING (AND PROTECT THEM FROM DIRECT SUNLIGHT EXPOSURE), BY USING MATERIALS SUCH AS JUTE MESH OR HESSIAN SHEETING AS PER AS 4970-2009 (INCORPORATING AMENDMENT No. 1) PROTECTION DURING WORKS WITHIN THE TPZ, PARAGRAPH 5.
3. EXPOSED ROOTS MUST NOT BE TRAVERSED OVER BY MECHANISED HEAVY EQUIPMENT. CONSULTATION BETWEEN CONSTRUCTION LEADING HAND/COORDINATOR AND LEVEL 5 ARBORIST TO PROVIDE ADVICE OF REQUIRED ROOT PROTECTION MEASURES TO BE IMPLEMENTED WHERE THERE IS A REQUIREMENT TO USE MECHANISED HEAVY EQUIPMENT WITHIN THE TPZ

DETAIL B
TREE PROTECTION - TYPICAL TREE TRUNK, BRANCH AND ROOT

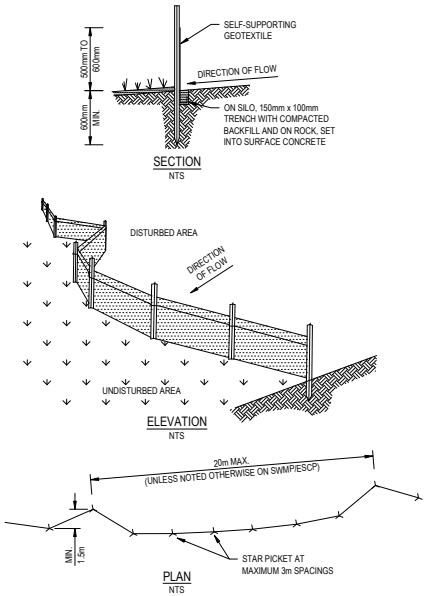
TREES ON DEVELOPMENT SITES TREE PROTECTION DETAILS
NTS



GENERAL CONSTRUCTION NOTES:

1. CONSTRUCTION STRAW BALE FILTER AS CLOSE AS POSSIBLE TO PARALLEL TO THE CONTOURS OF THE SITE OR THE TOE OF A SLOPE
2. PLACE BALES LENGTHWISE IN A ROW WITH ENDS TIGHTLY ABUTTING. USE STRAW TO FILL ANY GAPS BETWEEN BALES. STAIRS TO BE PLACED PARALLEL TO GROUND
3. MAXIMUM HEIGHT OF FILTER IS ONE BALE
4. ON SOFT MATERIALS, EMBED EACH BALE IN THE GROUND 75mm TO 100mm AND ANCHOR WITH TWO 1.2 STAR PICKETS. ANGLE THE FIST STAKE IN EACH BALE TOWARDS THE PREVIOUSLY LAID BALE. DRIVE STAKES 600mm INTO THE GROUND AND FLUSH WITH THE TOP OF THE BALES
5. WHERE A STRAW BALE FILTER IS CONSTRUCTED DOWNSLOW FROM THE TOE OF THE BATTER

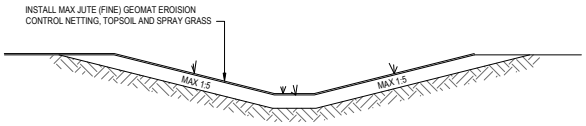
STRAW BALE FILTER SD 6-7
NTS



GENERAL CONSTRUCTION NOTES

1. CONSTRUCTION SEDIMENT FENCES AS CLOSE AS POSSIBLE TO PARALLEL TO THE CONTOURS OF THE SITE
2. DIVE 1.5m LONG STAR PICKETS INTO GROUND, 3m APART
3. DIG A 150mm DEEP TRENCH ALONG THE UPSLOPE LINE OF THE FENCE FOR THE BOTTOM OF THE FABRIC TO BE ENTRENCHED
4. BACKFILL TRENCH OVER BASE OF FABRIC
5. FIX SELF-SUPPORTING GEOTEXTILE TO UPSLOPE SIDE OF POSTS WITH WIRE TIES OR AS RECOMMENDED BY GEOTEXTILE MANUFACTURER
6. JOIN SECTIONS OF FABRIC AT A SUPPORT POST WITH A 150mm OVERLAP

SEDIMENT FENCE SD 6-8
NTS



TYPICAL OPEN DRAIN
NTS

REV	DATE	DESCRIPTION	AMD BY	APP BY
4	23.04.2024	ISSUED FOR APPROVAL	JLR	JMA
3	20.02.2024	ISSUED FOR DRAFT REVIEW	FMS	JMA
2	30.01.2024	ISSUED FOR CONCEPT DESIGN APPROVAL	FMS	JMA
1	29.01.2024	ISSUED FOR CONCEPT DESIGN APPROVAL	FMS	JMA

GPG Australia Pty Ltd

MAKER ENG

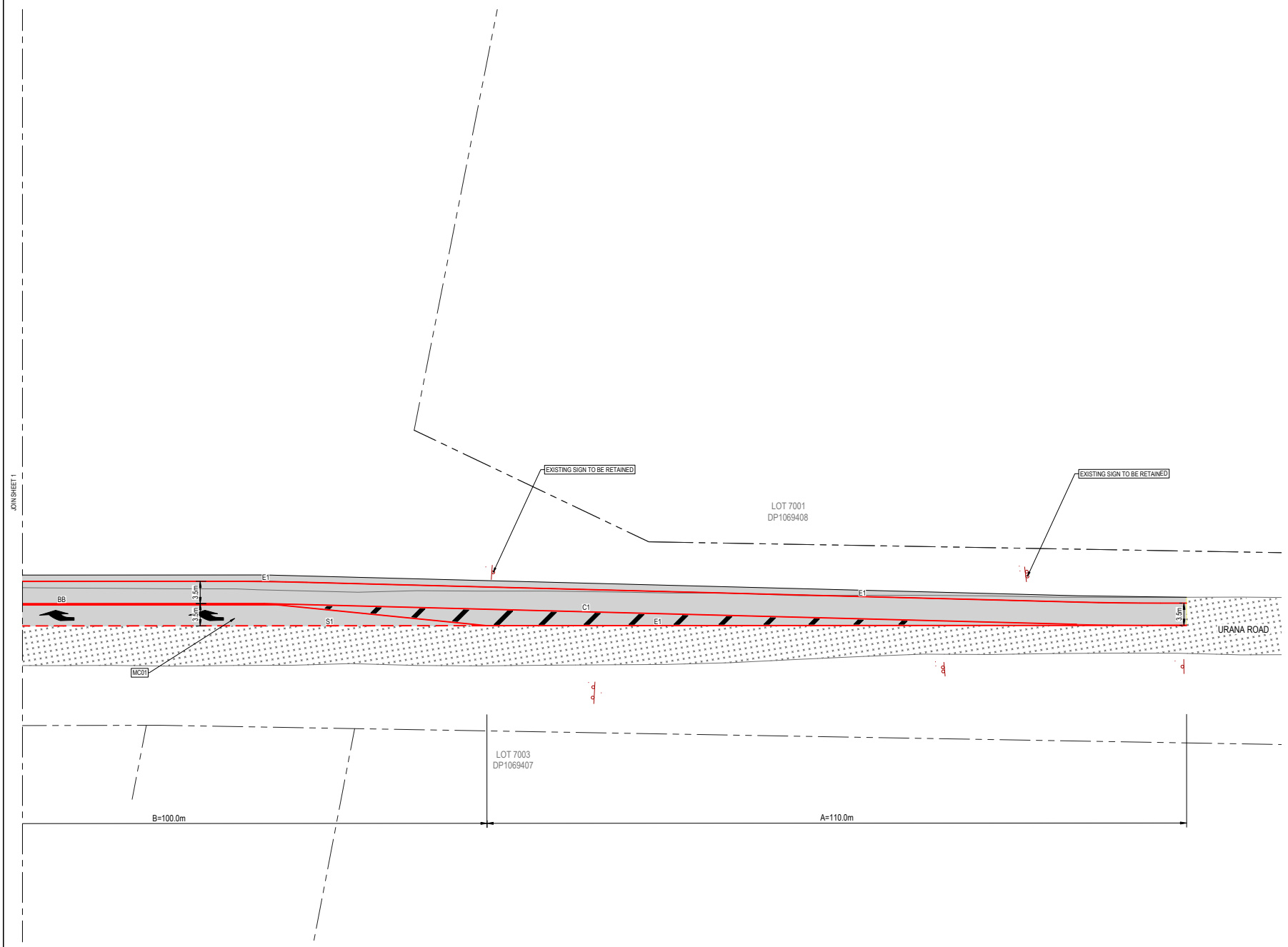
DRAWN: F.SOMERS	DESIGNED: J.RUSHTON
DRAFT CHECK: J.AGUSTIN	DESIGN CHECK: H.SMITH
APPROVED: J.AGUSTIN	
ISSUED FOR APPROVAL	

GLENELLEN SOLAR FARM ROAD UPGRADES
DETAILED DESIGN
SOIL AND WATER MANAGEMENT DETAILS

DRAWING NUMBER	SHEET No.	ORIG. SIZE	REVISION
MKRV0065-201-C1502		A1	4

Job Number, 11/10/2024, 4:38 PM

C:\12dSdata\12DSYNERGY\MKRV0065 Glenellen Solar Farm_198\02 Design\Drawings\02 Stage 01\Xrefs\X-MKRV0065-201-GE-MKR A1.dwg



PROPOSED

LEGEND

- BB — LINEMARKING - BB
- C1 — LINEMARKING - C1
- E1 — LINEMARKING - E1
- S1 — LINEMARKING - S1
- TB — LINEMARKING - TB
- TB1 — LINEMARKING - TB1
- NO PARKING CHEVRON PAINT
- RIGHT TURN ARROW
- NEW SIGN POST
- NEW STREET SIGN POST

EXISTING

- LINEMARKING
- SIGN
- LOT BOUNDARY
- ROAD EDGE

NOTES:

1. REFER TO RMS DELINEATION MANUAL FOR FURTHER DETAILS:
   - 1.1. SECTION 4 - LONGITUDINAL MARKINGS
   - 1.2. SECTION 6 - TRANSVERSE MARKINGS
   - 1.3. SECTION 11 - PAVEMENT MARKINGS AT ROUNDABOUTS
2. ALL TRAFFIC SIGN CODES REFER TO STANDARD RMS SIGNAGE

REV	DATE	DESCRIPTION	AMD BY	APP BY
4	23.04.2024	ISSUED FOR APPROVAL	JLR	JMA
3	20.02.2024	ISSUED FOR DRAFT REVIEW	FMS	JMA
2	30.01.2024	ISSUED FOR CONCEPT DESIGN APPROVAL	FMS	JMA
1	29.01.2024	ISSUED FOR CONCEPT DESIGN APPROVAL	FMS	JMA

0 3 6 9 12 15m
SCALE 1:300 AT ORIGINAL SIZE

GPG Australia Pty Ltd

MAKER ENG

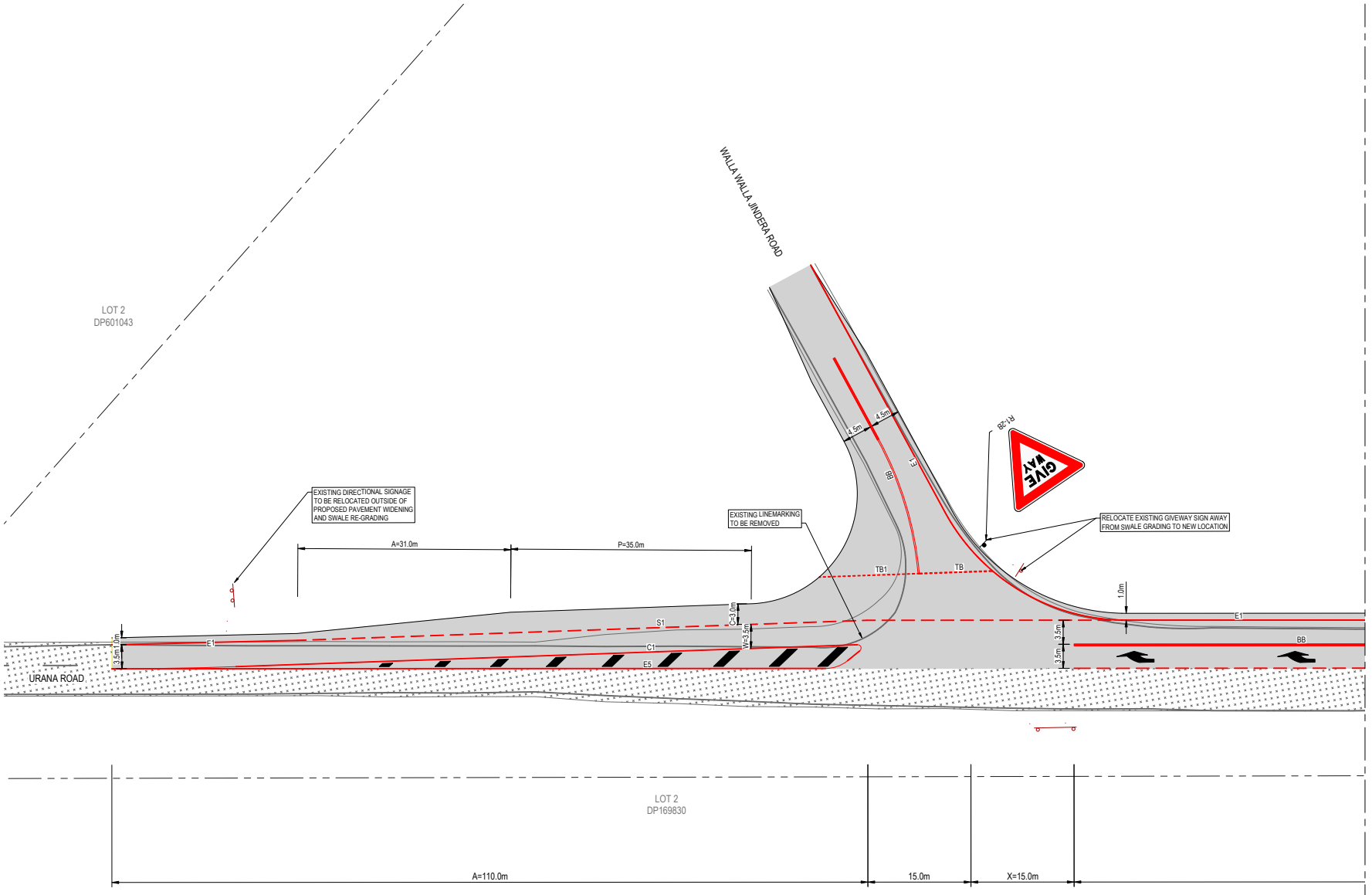
DRAWN: F.SOMERS	DESIGNED: J.RUSHTON
DRAFT CHECK: J.AGUSTIN	DESIGN CHECK: H.SMITH
APPROVED: J.AGUSTIN	
ISSUED FOR APPROVAL	

GLENELLEN SOLAR FARM ROAD UPGRADES
DETAILED DESIGN
LOCAL AREA TRAFFIC MANAGEMENT
LAYOUT PLAN

DRAWING NUMBER	SHEET No.	ORIG. SIZE	REVISION
MKRV0065-201-C1900	1 OF 2	A1	4

Josh Rushton, 11/10/2024, 4:38 PM

C:\12dSdata\12DSYNERGY\MKRV0065 Glenellen Solar Farm_198\02 Design\Drawings\02 Stage 01\Xrefs\X-MKRV0065-201-GE-MKR A1.dwg



LEGEND

PROPOSED

- BB — LINEMARKING - BB
- C1 — LINEMARKING - C1
- E1 — LINEMARKING - E1
- S1 — LINEMARKING - S1
- TB — LINEMARKING - TB
- TB1 — LINEMARKING - TB1
- NO PARKING CHEVRON PAINT
- RIGHT TURN ARROW
- NEW SIGN POST
- NEW STREET SIGN POST

EXISTING

- LINEMARKING
- SIGN
- LOT BOUNDARY
- ROAD EDGE

NOTES:

1. REFER TO RMS DELINEATION MANUAL FOR FURTHER DETAILS:
   - 1.1. SECTION 4 - LONGITUDINAL MARKINGS
   - 1.2. SECTION 6 - TRANSVERSE MARKINGS
   - 1.3. SECTION 11 - PAVEMENT MARKINGS AT ROUNDABOUTS
2. ALL TRAFFIC SIGN CODES REFER TO STANDARD RMS SIGNAGE

REV	DATE	DESCRIPTION	AMD BY	APP BY
4	23.04.2024	ISSUED FOR APPROVAL	JLR	JMA
3	20.02.2024	ISSUED FOR DRAFT REVIEW	FMS	JMA
2	30.01.2024	ISSUED FOR CONCEPT DESIGN APPROVAL	FMS	JMA
1	29.01.2024	ISSUED FOR CONCEPT DESIGN APPROVAL	FMS	JMA

0 3 6 9 12 15m
SCALE 1:300 AT ORIGINAL SIZE

GPG Australia Pty Ltd

MAKER ENG

DRAWN: F.SOMERS	DESIGNED: J.RUSHTON
DRAFT CHECK: J.AGUSTIN	DESIGN CHECK: H.SMITH
APPROVED: J.AGUSTIN	
ISSUED FOR APPROVAL	

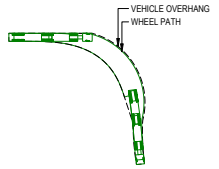
GLENELLEN SOLAR FARM ROAD UPGRADES
DETAILED DESIGN
LOCAL AREA TRAFFIC MANAGEMENT
LAYOUT PLAN

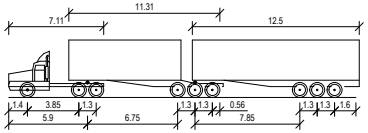
DRAWING NUMBER	SHEET No.	ORIG. SIZE	REVISION
MKRV0065-201-C1901	2 OF 2	A1	4

Josh Rushton, 11/10/2024, 4:38 PM

C:\12dSdata\12DSYNERGY\MKRV0065 Glenellen Solar Farm_198\02 Design\Drawings\02 Stage 01\Xrefs\X-MKRV0065-201-GE-MKR A1.dwg

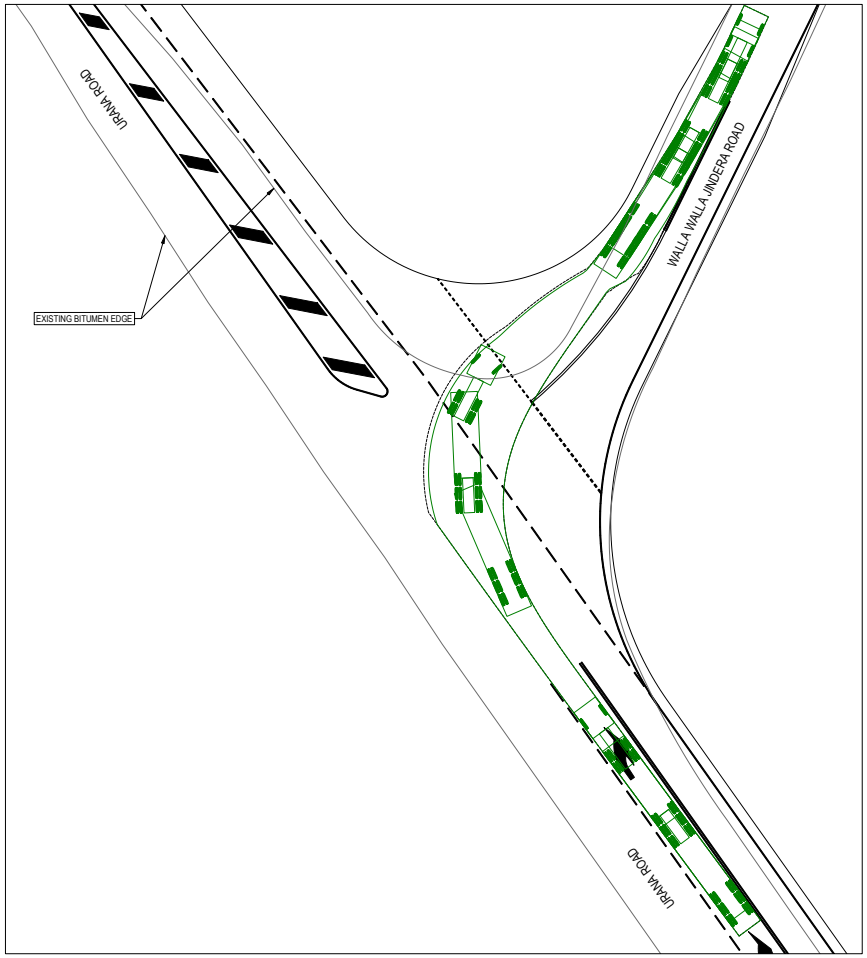
LEGEND



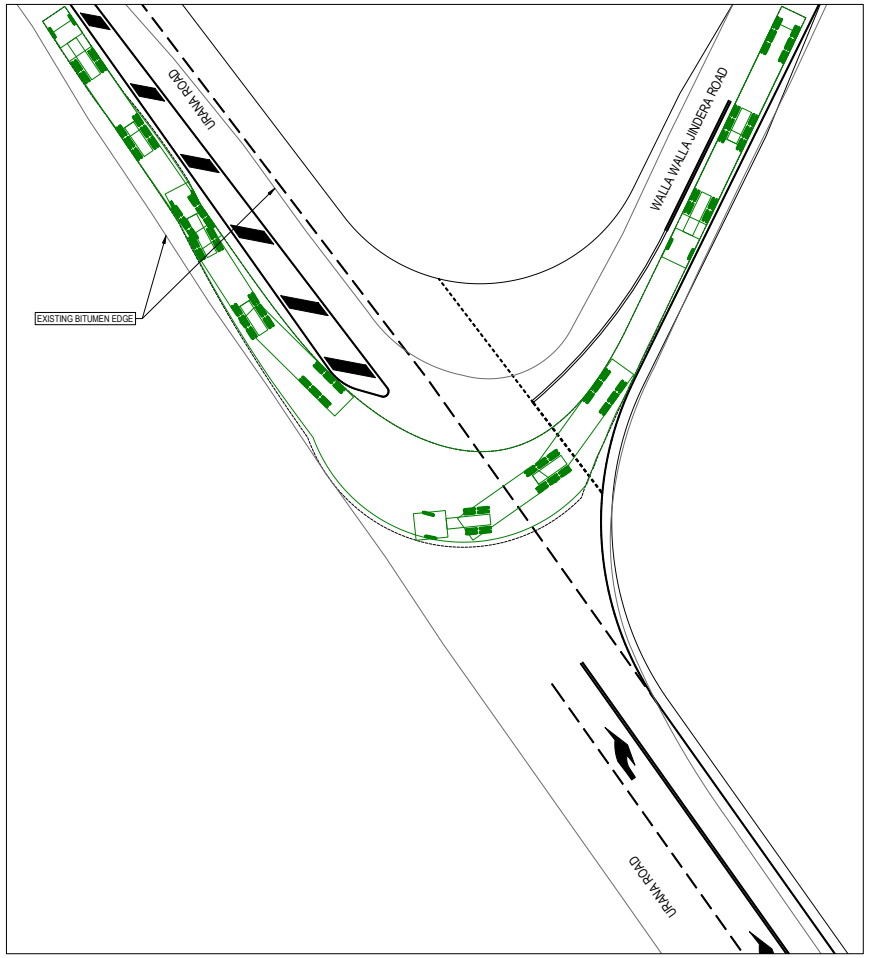


B-DOUBLE	
OVERALL LENGTH	26.000m
OVERALL WIDTH	2.500m
OVERALL BODY HEIGHT	4.300m
MIN BODY GROUND CLEARANCE	0.540m
TRACK WIDTH	2.500m
LOCK-TO-LOCK TIME	6.00s
KERB TO KERB TURNING RADIUS	12.500m

DESIGN VEHICLE



DESIGN VEHICLE



DESIGN VEHICLE

REV	DATE	DESCRIPTION	AMD BY	APP BY
4	23.04.2024	ISSUED FOR APPROVAL	JLR	JMA
3	20.02.2024	ISSUED FOR DRAFT REVIEW	FMS	JMA
2	30.01.2024	ISSUED FOR CONCEPT DESIGN APPROVAL	FMS	JMA
1	29.01.2024	ISSUED FOR CONCEPT DESIGN APPROVAL	FMS	JMA

0 2.5 5 7.5 10 12.5m
SCALE 1:250 AT ORIGINAL SIZE

GPG Australia Pty Ltd

MAKER ENG

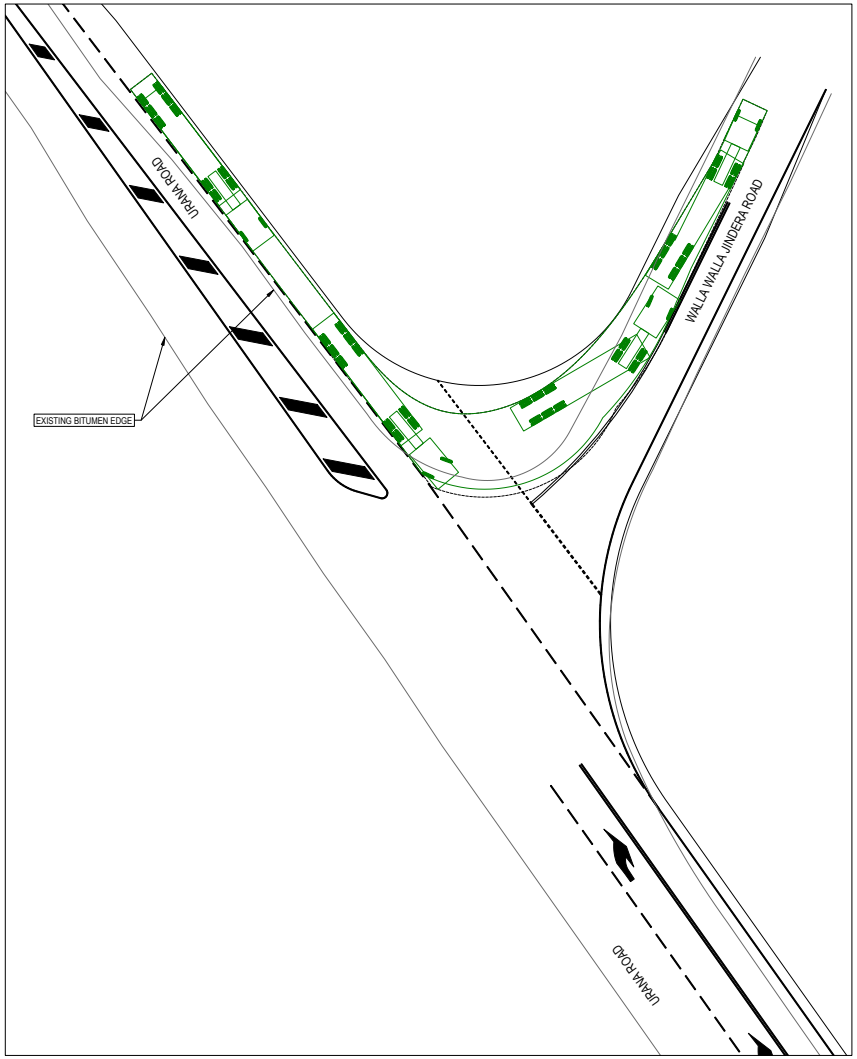
DRAWN: F.SOMERS	DESIGNED: J.RUSHTON
DRAFT CHECK: J.AGUSTIN	DESIGN CHECK: H.SMITH
APPROVED: J.AGUSTIN	
ISSUED FOR APPROVAL	

GLENELLEN SOLAR FARM ROAD UPGRADES
DETAILED DESIGN
SWEPT PATH ANALYSIS

DRAWING NUMBER	SHEET No.	ORIG. SIZE	REVISION
MKRV0065-201-C2050	1 OF 2	A1	4

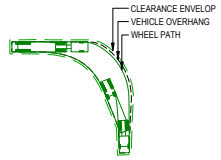
Job Number, 11/10/2024, 4:38 PM

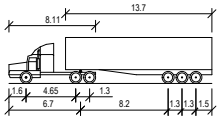
C:\12dSdata\12DSYNERGY\MKRV0065 Glenellen Solar Farm_198\02 Design\Drawings\02 Stage 01\Xrefs\X-MKRV0065-201-GE-MKR A1.dwg



DESIGN VEHICLE

LEGEND





PRIME MOVER AND SEMI -TRAILER	
OVERALL LENGTH	19.000m
OVERALL WIDTH	2.500m
OVERALL BODY HEIGHT	4.300m
MIN BODY GROUND CLEARANCE	0.540m
TRACK WIDTH	2.500m
LOCK-TO-LOCK TIME	6.00s
KERB TO KERB TURNING RADIUS	12.500m

DESIGN VEHICLE

REV	DATE	DESCRIPTION	AMD BY	APP BY
4	23.04.2024	ISSUED FOR APPROVAL	JLR	JMA
3	20.02.2024	ISSUED FOR DRAFT REVIEW	FMS	JMA
2	30.01.2024	ISSUED FOR CONCEPT DESIGN APPROVAL	FMS	JMA
1	29.01.2024	ISSUED FOR CONCEPT DESIGN APPROVAL	FMS	JMA

0 2.5 5 7.5 10 12.5m
SCALE 1:250 AT ORIGINAL SIZE

GPG Australia Pty Ltd

MAKER ENG

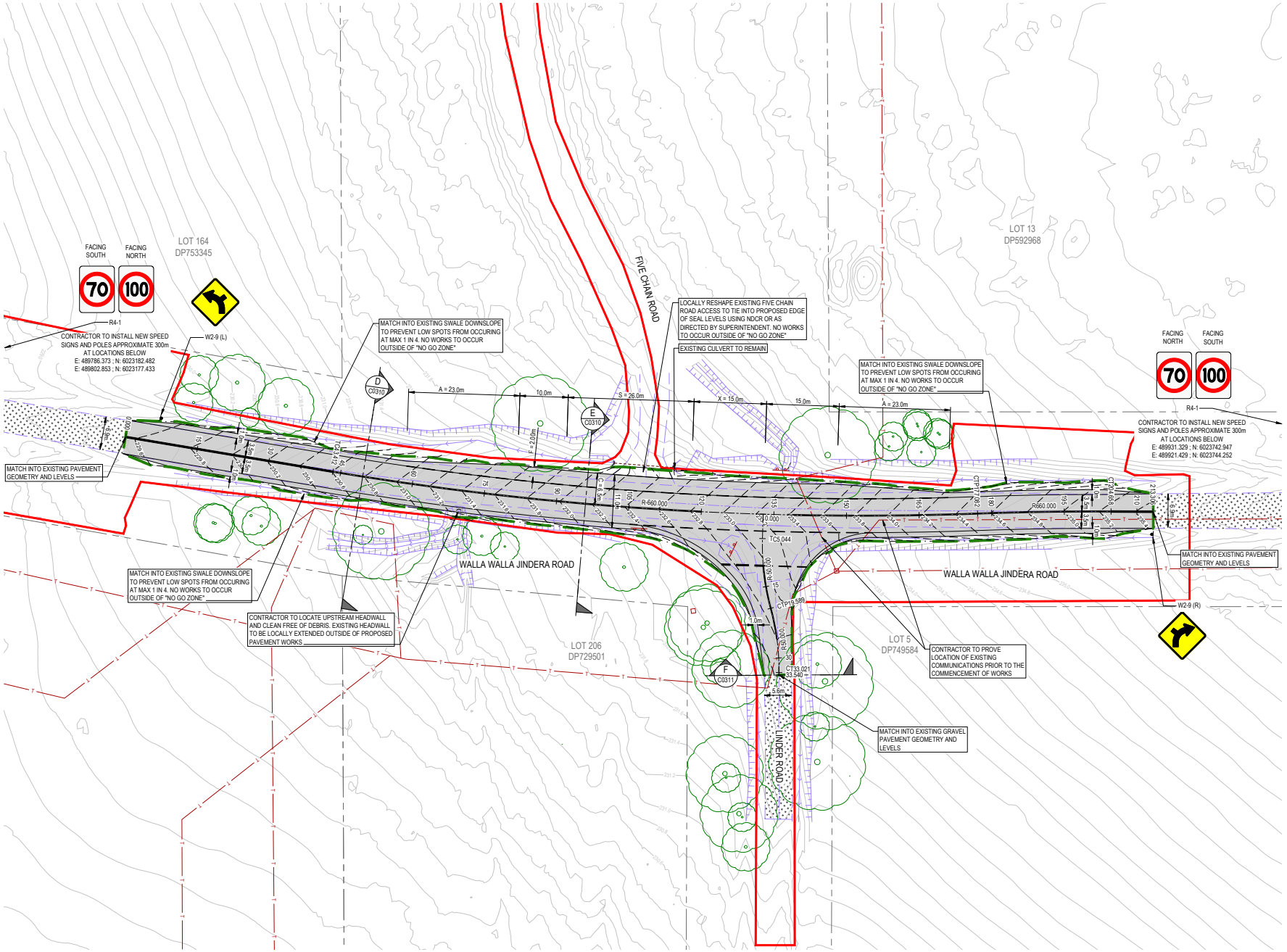
DRAWN: F.SOMERS	DESIGNED: J.RUSHTON
DRAFT CHECK: J.AGUSTIN	DESIGN CHECK: H.SMITH
APPROVED: J.AGUSTIN	
ISSUED FOR APPROVAL	

GLENELLEN SOLAR FARM ROAD UPGRADES
DETAILED DESIGN
SWEPT PATH ANALYSIS

DRAWING NUMBER	SHEET No.	ORIG. SIZE	REVISION
MKRV0065-201-C2051	2 OF 2	A1	4

Job Number, 11/10/2024, 4:38 PM

C:\12dSdata\12DSYNERGY\MKRV0065 Glenellen Solar Farm_198\02 Design\Drawings\02 Stage 01\Xrefs\X-MKRV0065-201-GE-MKR A1.dwg



PROPOSED

LEGEND

- CIVIL WORKS BOUNDARY
- ROAD CENTERLINE AND CHAINAGE
- OPEN DRAIN
- CONTOURS (0.2m)
- PAVEMENT
- LINE MARKING
- EDGE OF BITUMEN

EXISTING

- LOT BOUNDARY
- PAVEMENT
- CONTOURS (0.2m)
- ELECTRICAL ABOVE GROUND
- TELECOMMUNICATIONS
- LINEMARKING
- EDGE OF BITUMEN
- TREE (TO BE RETAINED)
- OPEN DRAIN
- SIGN
- NO GO ZONE

NO WORKS ARE TO OCCUR OUTSIDE OF "NO GONE ZONE"

BEFORE YOU DIG www.byda.com.au

UTILITY INFORMATION SHOWN ON THE PLANS DOES NOT DEPICT ANY MORE THAN THE PRESENCE OF A SERVICE, BASED ON AVAILABLE DOCUMENTARY EVIDENCE. THE PRESENCE OF A UTILITY SERVICE, ITS SIZE AND LOCATION SHOULD BE CONFIRMED BY FIELD INSPECTION, PRIOR TO THE COMMENCEMENT OF WORKS AND THE RELEVANT UTILITY PLANS OBTAINED BY DIALLING PH 1100 (BEFORE YOU DIG). CAUTION SHOULD BE EXERCISED WHEN WORKING IN THE VICINITY OF ALL UTILITY SERVICES.

REV	DATE	DESCRIPTION	AMD BY	APP BY
4	23.04.2024	ISSUED FOR APPROVAL	JLR	JMA
3	20.02.2024	ISSUED FOR DRAFT REVIEW	FMS	JMA
2	30.01.2024	ISSUED FOR CONCEPT DESIGN APPROVAL	FMS	JMA
1	29.01.2024	ISSUED FOR CONCEPT DESIGN APPROVAL	FMS	JMA

0 4 8 12 16 20m
SCALE 1:400 AT ORIGINAL SIZE

GPG Australia Pty Ltd

MAKER ENG

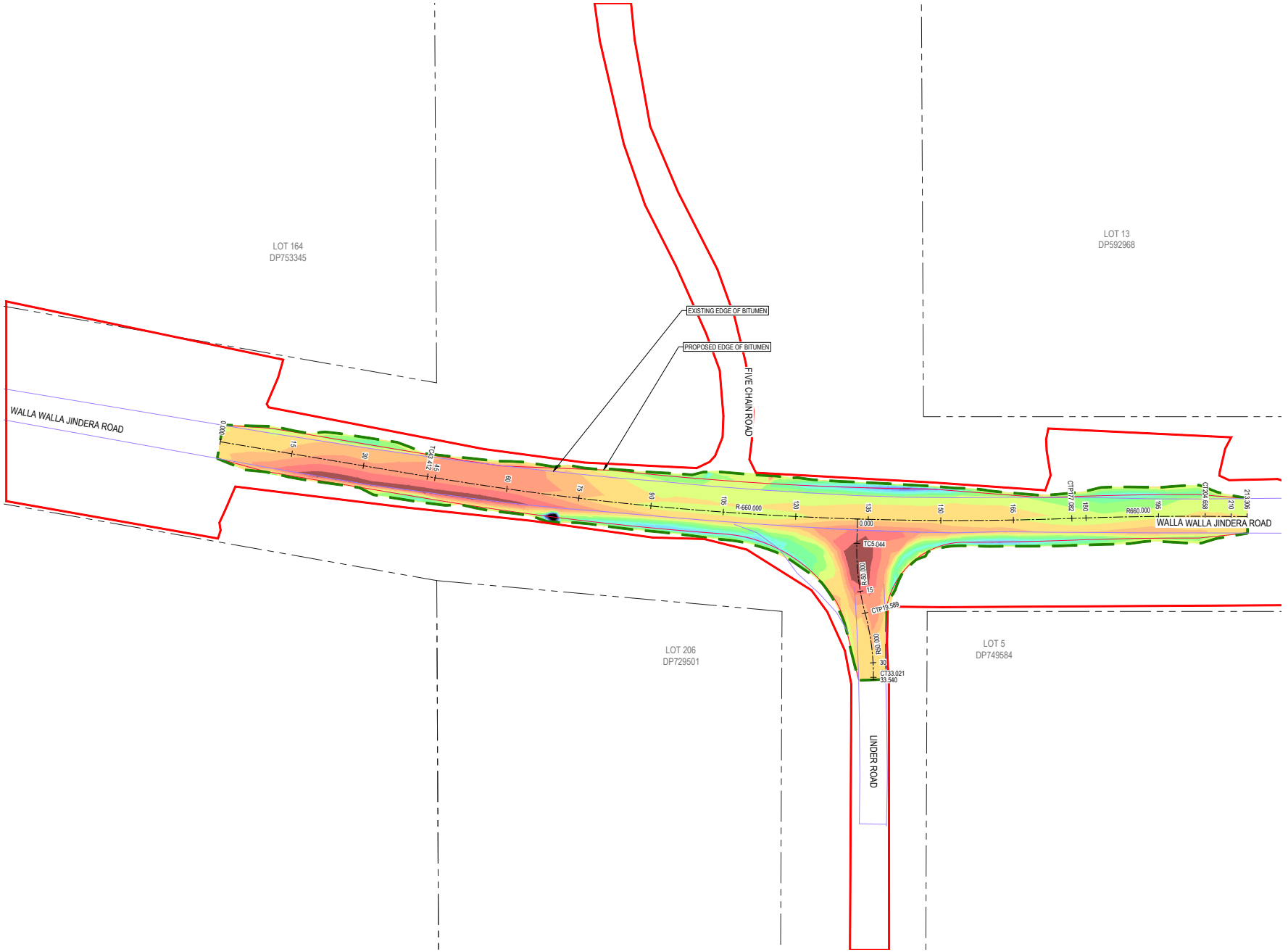
DRAWN: F.SOMERS	DESIGNED: J.RUSHTON
DRAFT CHECK: J.AGUSTIN	DESIGN CHECK: H.SMITH
APPROVED: J.AGUSTIN	
ISSUED FOR APPROVAL	

GLENELLEN SOLAR FARM ROAD UPGRADES
DETAILED DESIGN
CIVIL WORKS LAYOUT PLAN

DRAWING NUMBER	SHEET No.	ORIG. SIZE	REVISION
MKRV0065-202-C0100		A1	4

Job Number, 11/10/2024, 4:38 PM

C:\12dSdata\12DSYNERGY\MKRV0065 Glenellen Solar Farm_198602 Design\Drawings\02 Stage 01\Xrefs\X-MKRV0065-201-GE-MKR A1.dwg



PROPOSED **LEGEND**

- CIVIL WORKS BOUNDARY
- EDGE OF BITUMEN
- GREATER THAN -0.3m
- -0.3m TO -0.25m
- -0.25m TO -0.2m
- -0.2m TO -0.15m
- -0.15m TO -0.1m
- -0.1m TO -0.05m
- -0.05m TO 0.0m
- 0.0m TO 0.05m
- 0.05m TO 0.1m
- 0.1m TO 0.15m
- 0.15m TO 0.2m
- 0.2m TO 0.25m
- 0.25m TO 0.3m
- 0.3m TO 0.35m
- 0.35m TO 0.4m
- 0.4m TO 0.45m
- GREATER THAN 0.45m

EXISTING

- LOT BOUNDARY
- EDGE OF BITUMEN
- NO GO ZONE

TOTAL EARTHWORKS

CUT	132 Cu.m
FILL	73 Cu.m
NET <FILL>	59 Cu.m

NOTES:

1. VOLUMES EXCLUDE SERVICE TRENCHES AND PAVEMENT

BEFORE YOU DIG www.byda.com.au

UTILITY INFORMATION SHOWN ON THE PLANS DOES NOT DEPICT ANY MORE THAN THE PRESENCE OF A SERVICE, BASED ON AVAILABLE DOCUMENTARY EVIDENCE. THE PRESENCE OF A UTILITY SERVICE, ITS SIZE AND LOCATION SHOULD BE CONFIRMED BY FIELD INSPECTION, PRIOR TO THE COMMENCEMENT OF WORKS AND THE RELEVANT UTILITY PLANS OBTAINED BY DIALLING PH 1100 (BEFORE YOU DIG). CAUTION SHOULD BE EXERCISED WHEN WORKING IN THE VICINITY OF ALL UTILITY SERVICES.

REV	DATE	DESCRIPTION	AMD BY	APP BY
4	23.04.2024	ISSUED FOR APPROVAL	JLR	JMA
3	20.02.2024	ISSUED FOR DRAFT REVIEW	FMS	JMA
2	30.01.2024	ISSUED FOR CONCEPT DESIGN APPROVAL	FMS	JMA
1	29.01.2024	ISSUED FOR CONCEPT DESIGN APPROVAL	FMS	JMA

0 4 8 12 16 20m
SCALE 1:400 AT ORIGINAL SIZE

GPG Australia Pty Ltd

MAKER ENG

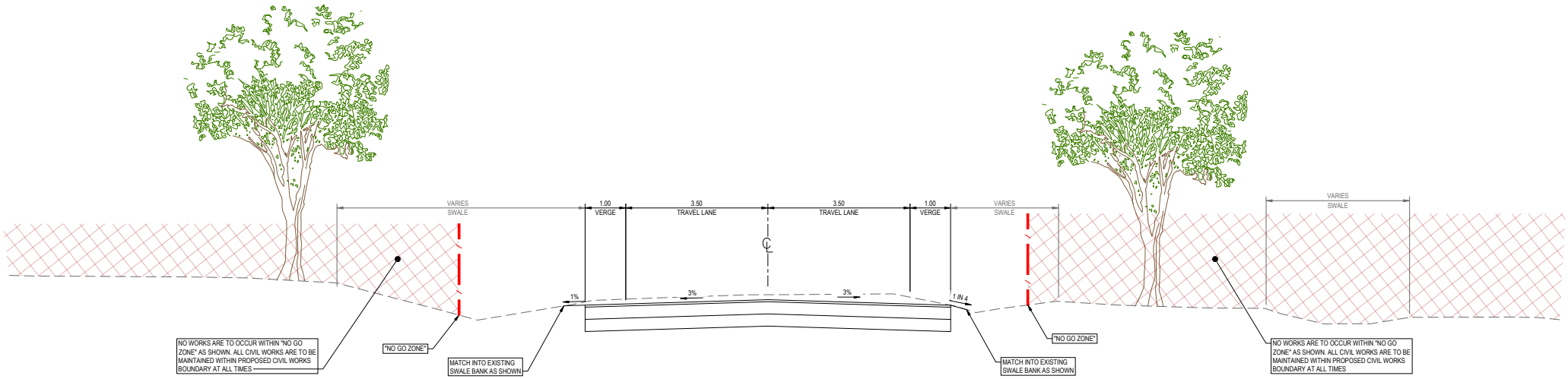
DRAWN: F.SOMERS	DESIGNED: J.RUSHTON
DRAFT CHECK: J.AGUSTIN	DESIGN CHECK: H.SMITH
APPROVED: J.AGUSTIN	
ISSUED FOR APPROVAL	

GLENELLEN SOLAR FARM ROAD UPGRADES
DETAILED DESIGN
BULK EARTHWORKS LAYOUT PLAN

DRAWING NUMBER	SHEET No.	ORIG. SIZE	REVISION
MKRV0065-202-C0200		A1	4

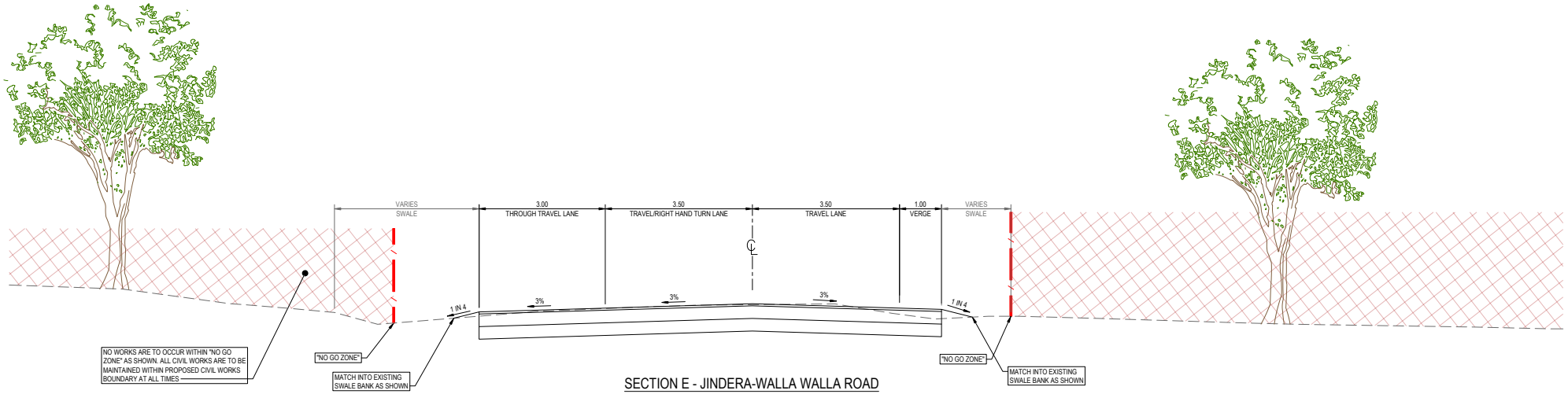
Job Number, 11/10/2024, 4:38 PM

C:\12dSdata\12DSYNERGY\MKRV0065 Glenellen Solar Farm_198\02 Design\Drawings\02 Stage 01\Xrefs\X-MKRV0065-201-GE-MKR A1.dwg



SECTION D - JINDERA-WALLA WALLA ROAD

SCALE 1:50



SECTION E - JINDERA-WALLA WALLA ROAD

SCALE 1:50

REV	DATE	DESCRIPTION	AMD BY	APP BY
4	23.04.2024	ISSUED FOR APPROVAL	JLR	JMA
3	20.02.2024	ISSUED FOR DRAFT REVIEW	FMS	JMA
2	30.01.2024	ISSUED FOR CONCEPT DESIGN APPROVAL	FMS	JMA
1	29.01.2024	ISSUED FOR CONCEPT DESIGN APPROVAL	FMS	JMA

0 0.5 1.0 1.5 2.0 2.5m

SCALE 1:50 AT ORIGINAL SIZE

GPG Australia Pty Ltd

MAKER ENG

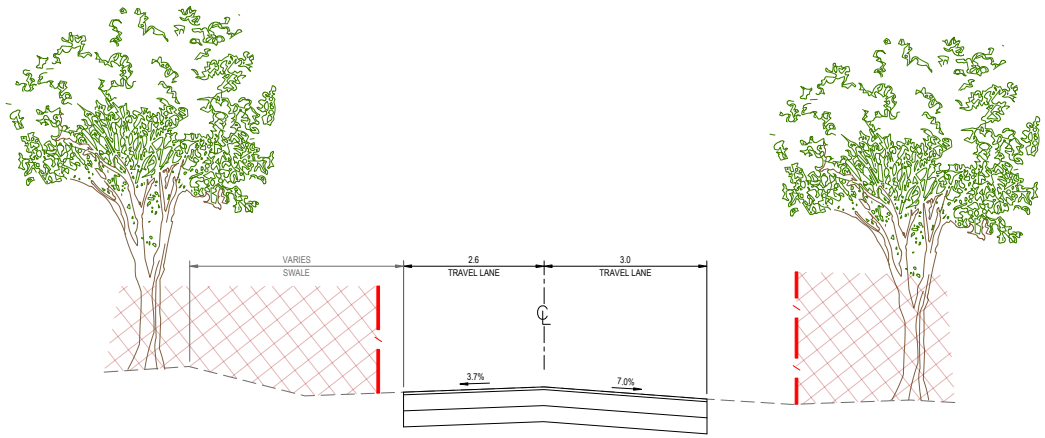
DRAWN: F.SOMERS	DESIGNED: J.RUSHTON
DRAFT CHECK: J.AGUSTIN	DESIGN CHECK: H.SMITH
APPROVED: J.AGUSTIN	
ISSUED FOR APPROVAL	

GLENELLEN SOLAR FARM ROAD UPGRADES
DETAILED DESIGN
TYPICAL SECTIONS

DRAWING NUMBER	SHEET No.	ORIG. SIZE	REVISION
MKRV0065-202-C0310	1 OF 2	A1	4

Josh Rushton, 11/11/2024, 4:38 PM

C:\12dSdata\12DSYNERGY\MKRV0065 Glenellen Solar Farm_198\02 Design\Drawings\02 Stage 01\Xrefs\X-MKRV0065-201-GE-MKR A1.dwg



SECTION F - LINDNER ROAD TIE IN

SCALE 1:50

REV	DATE	DESCRIPTION	AMD BY	APP BY
4	23.04.2024	ISSUED FOR APPROVAL	JLR	JMA
3	20.02.2024	ISSUED FOR DRAFT REVIEW	FMS	JMA
2	30.01.2024	ISSUED FOR CONCEPT DESIGN APPROVAL	FMS	JMA
1	29.01.2024	ISSUED FOR CONCEPT DESIGN APPROVAL	FMS	JMA

0 0.5 1.0 1.5 2.0 2.5m

SCALE 1:50 AT ORIGINAL SIZE

GPG Australia Pty Ltd

MAKER ENG

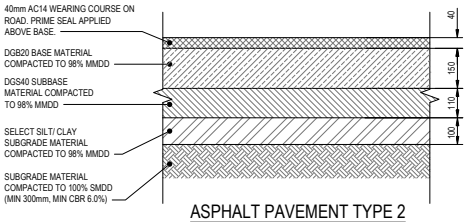
DRAWN: F.SOMERS	DESIGNED: J.RUSHTON
DRAFT CHECK: J.AGUSTIN	DESIGN CHECK: H.SMITH
APPROVED: J.AGUSTIN	
ISSUED FOR APPROVAL	

GLENELLEN SOLAR FARM ROAD UPGRADES
DETAILED DESIGN
TYPICAL SECTIONS

DRAWING NUMBER	SHEET No.	ORIG. SIZE	REVISION
MKRV0065-202-C0311	2 OF 2	A1	4

Job Number, 11/10/2024, 4:38 PM

C:\12dSdata\12DSYNERGY\MKRV0065 Glenellen Solar Farm_198\02 Design\Drawings\02 Stage 01\Xrefs\X-MKRV0065-201-GE-MKR A1.dwg

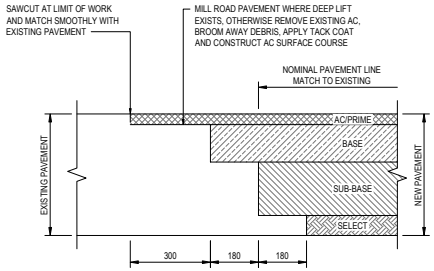


ASPHALT PAVEMENT TYPE 2

SCALE: 1:10

NOTES

1. SELECT FILL MATERIAL SHOULD HAVE A CBR>33% AND A PLASTICITY INDEX (PI)<15% IN ITS ORIGINAL STATE BEFORE ADDITION OF ADDITIVE.
2. SELECT FILL MATERIAL SHOULD BE MODIFIED WITH APPROPRIATE ADDITIVE IF CBR<33% AND/OR PI>15%.
3. SELECT FILL SPECIFICATION TAKEN FROM TfNSW QA SPECIFICATION 3071.



TYPICAL JUNCTION WITH EXISTING PAVEMENT

SCALE: 1:10

REV	DATE	DESCRIPTION	AMD BY	APP BY
4	23.04.2024	ISSUED FOR APPROVAL	JLR	JMA
3	20.02.2024	ISSUED FOR DRAFT REVIEW	FMS	JMA
2	30.01.2024	ISSUED FOR CONCEPT DESIGN APPROVAL	FMS	JMA
1	29.01.2024	ISSUED FOR CONCEPT DESIGN APPROVAL	FMS	JMA

0 0.5 1.0 1.5 2.0 2.5m

SCALE 1:50 AT ORIGINAL SIZE

GPG Australia Pty Ltd

MAKER ENG

DRAWN: F.SOMERS	DESIGNED: J.RUSHTON
DRAFT CHECK: J.AGUSTIN	DESIGN CHECK: H.SMITH
APPROVED: J.AGUSTIN	

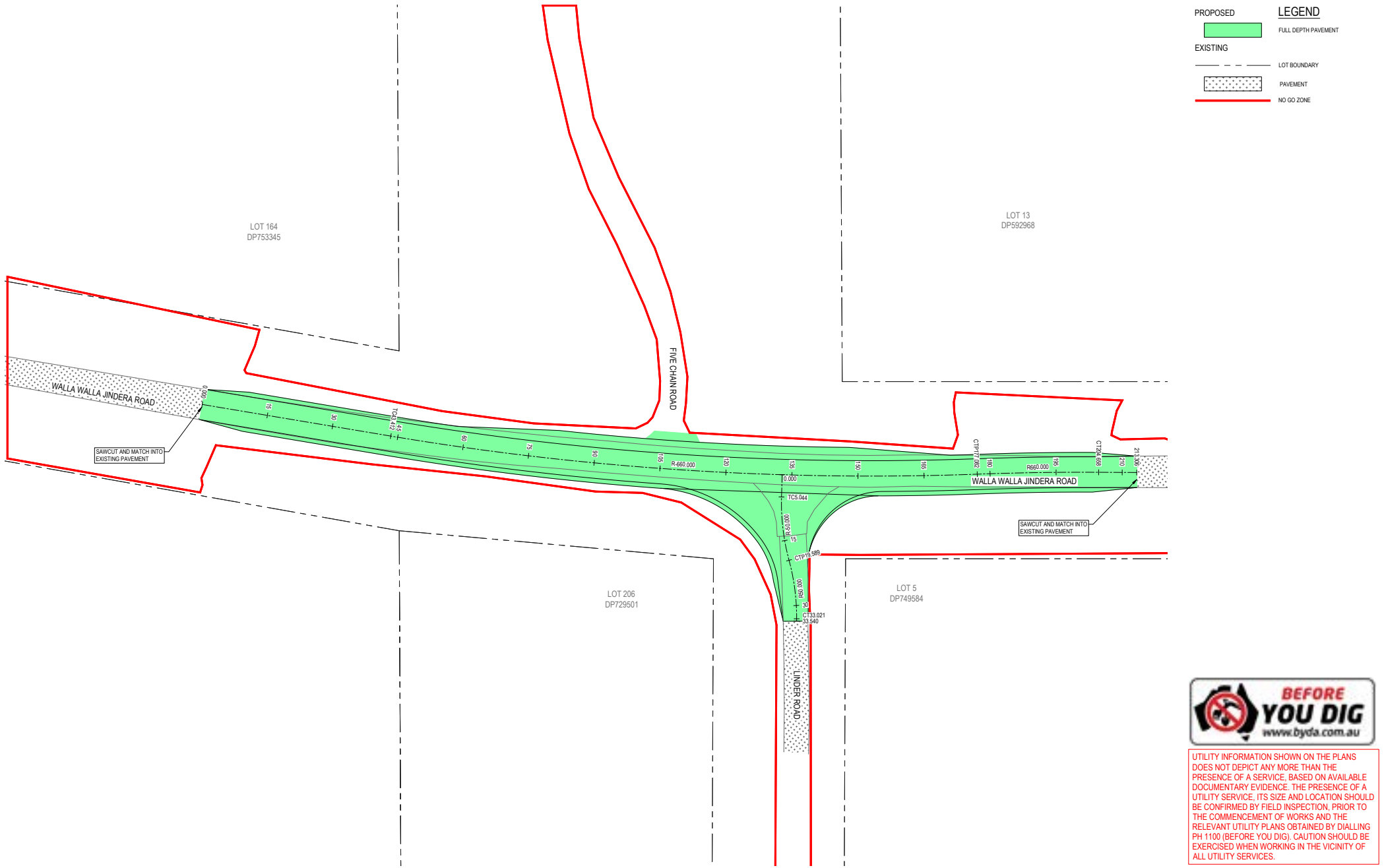
ISSUED FOR APPROVAL

GLENELLEN SOLAR FARM ROAD UPGRADES
DETAILED DESIGN
CIVIL DETAILS

DRAWING NUMBER	SHEET No.	ORIG. SIZE	REVISION
MKRV0065-202-C0350		A1	4

Josh Rushton, 11/10/2024, 4:38 PM

C:\12dSdata\12DSYNERGY\MKRV0065 Glenellen Solar Farm_198\02 Design\Drawings\02 Stage 01\Xrefs\X-MKRV0065-201-GE-MKR A1.dwg



BEFORE YOU DIG www.byda.com.au

UTILITY INFORMATION SHOWN ON THE PLANS DOES NOT DEPICT ANY MORE THAN THE PRESENCE OF A SERVICE, BASED ON AVAILABLE DOCUMENTARY EVIDENCE. THE PRESENCE OF A UTILITY SERVICE, ITS SIZE AND LOCATION SHOULD BE CONFIRMED BY FIELD INSPECTION, PRIOR TO THE COMMENCEMENT OF WORKS AND THE RELEVANT UTILITY PLANS OBTAINED BY DIALLING PH 1100 (BEFORE YOU DIG). CAUTION SHOULD BE EXERCISED WHEN WORKING IN THE VICINITY OF ALL UTILITY SERVICES.

REV	DATE	DESCRIPTION	AMD BY	APP BY
4	23.04.2024	ISSUED FOR APPROVAL	JLR	JMA
3	20.02.2024	ISSUED FOR DRAFT REVIEW	FMS	JMA
2	30.01.2024	ISSUED FOR CONCEPT DESIGN APPROVAL	FMS	JMA
1	29.01.2024	ISSUED FOR CONCEPT DESIGN APPROVAL	FMS	JMA

0 4 8 12 16 20m
SCALE 1:400 AT ORIGINAL SIZE

GPG Australia Pty Ltd

MAKER ENG

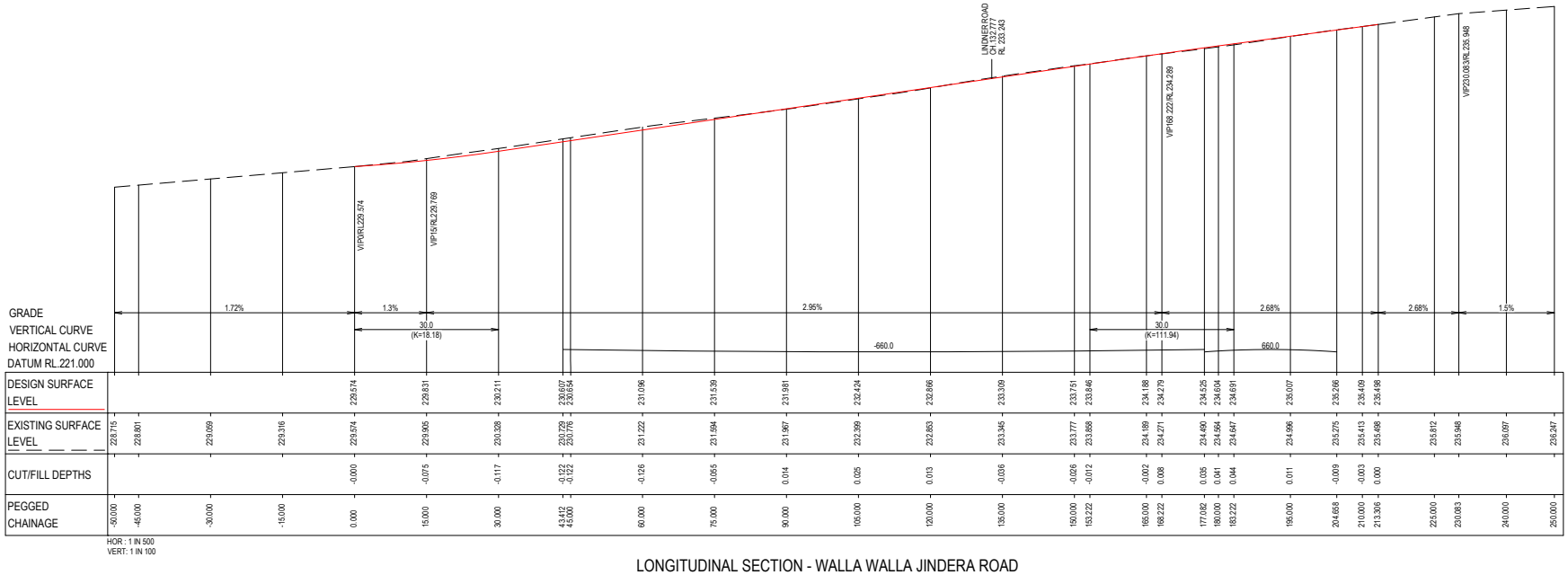
DRAWN: F.SOMERS	DESIGNED: J.RUSHTON
DRAFT CHECK: J.AGUSTIN	DESIGN CHECK: H.SMITH
APPROVED: J.AGUSTIN	
ISSUED FOR APPROVAL	

GLENELLEN SOLAR FARM ROAD UPGRADES
DETAILED DESIGN
PAVEMENT LAYOUT PLAN

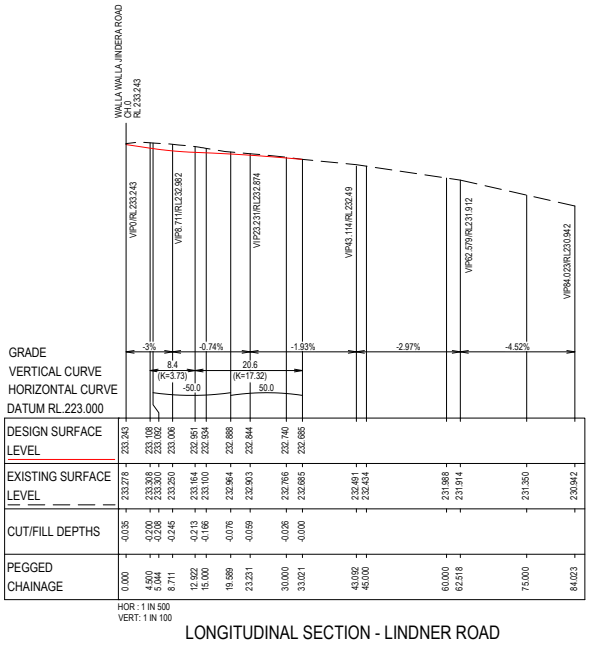
DRAWING NUMBER	SHEET No.	ORIG. SIZE	REVISION
MKRV0065-202-C0400		A1	4

Jain Rushton, 10/11/2023 4:38 PM

C:\12dSdata\12DSYNERGY\MRKV0065 Glenellen Solar Farm_198\02 Design\Drawings\02 Stage 01\Xrefs\X-MKRV0065-201-GE-MKR A1.dwg



LONGITUDINAL SECTION - WALLA WALLA JINDERA ROAD



LONGITUDINAL SECTION - LINDNER ROAD

REV	DATE	DESCRIPTION	AMD BY	APP BY
4	23.04.2024	ISSUED FOR APPROVAL	JLR	JMA
3	20.02.2024	ISSUED FOR DRAFT REVIEW	FMS	JMA
2	30.01.2024	ISSUED FOR CONCEPT DESIGN APPROVAL	FMS	JMA
1	29.01.2024	ISSUED FOR CONCEPT DESIGN APPROVAL	FMS	JMA

HORIZONTAL 1:500 AT ORIGINAL SIZE 0 5 10 15 20 25m
VERTICAL 1:100 AT ORIGINAL SIZE 0 1 2 3 4 5m

GPG Australia Pty Ltd

MAKER ENG

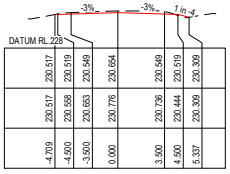
DRAWN: F.SOMERS	DESIGNED: J.RUSHTON
DRAFT CHECK: J.AGUSTIN	DESIGN CHECK: H.SMITH
APPROVED: J.AGUSTIN	
ISSUED FOR APPROVAL	

GLENELLEN SOLAR FARM ROAD UPGRADES
DETAILED DESIGN
ROAD LONGITUDINAL SECTIONS

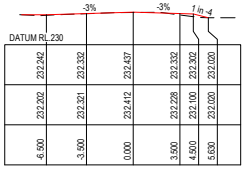
DRAWING NUMBER	SHEET No.	ORIG. SIZE	REVISION
MKRV0065-202-C0500		A1	4

Josh Rushton, 11/1/2024, 4:38 PM

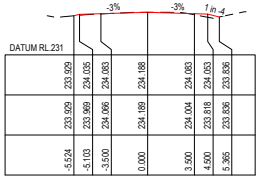
C:\12dSdata\12DSYNERGY\MKRV0065 Glenellen Solar Farm_198\02 Design\Drawings\02 Stage 01\Xrefs\X-MKRV0065-201-GE-MKR A1.dwg



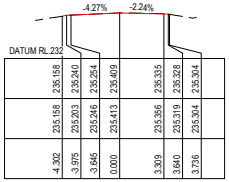
CH 45.000



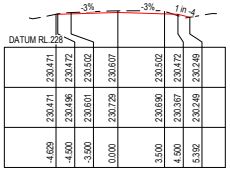
CH 105.456



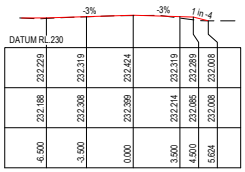
CH 165.000



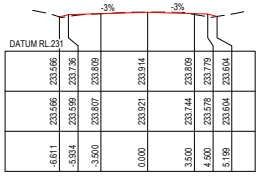
CH 210.000



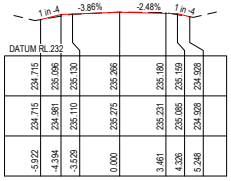
CH 43.412



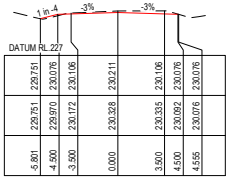
CH 105.000



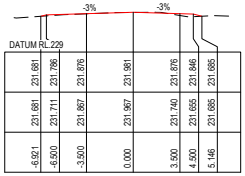
CH 155.508



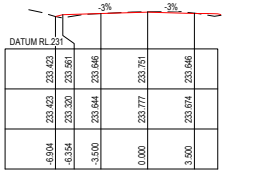
CH 204.658



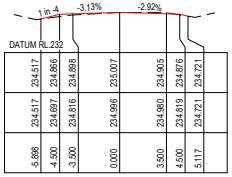
CH 30.000



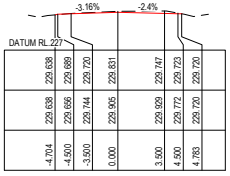
CH 90.000



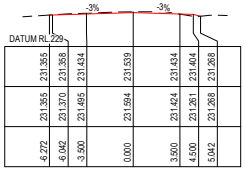
CH 150.000



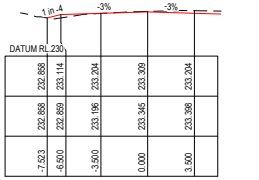
CH 195.000



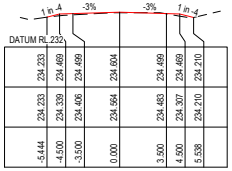
CH 15.000



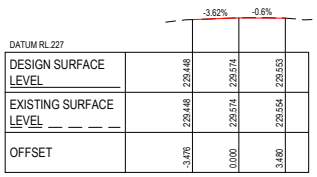
CH 75.000



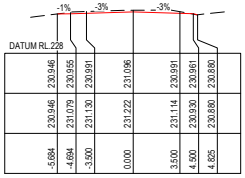
CH 135.000



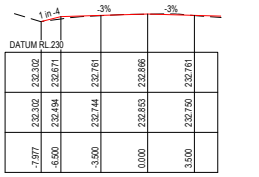
CH 180.000



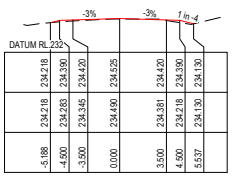
CH 0.000



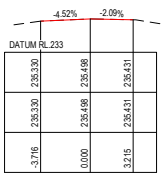
CH 60.000



CH 120.000



CH 177.082



CH 213.306

WALLA WALLA JINDERA ROAD

SCALE 1:200

REV	DATE	DESCRIPTION	AMD BY	APP BY
4	23.04.2024	ISSUED FOR APPROVAL	JLR	JMA
3	20.02.2024	ISSUED FOR DRAFT REVIEW	FMS	JMA
2	30.01.2024	ISSUED FOR CONCEPT DESIGN APPROVAL	FMS	JMA
1	29.01.2024	ISSUED FOR CONCEPT DESIGN APPROVAL	FMS	JMA

0 2 4 6 8 10m
SCALE 1:200 AT ORIGINAL SIZE

GPG Australia Pty Ltd

MAKER ENG

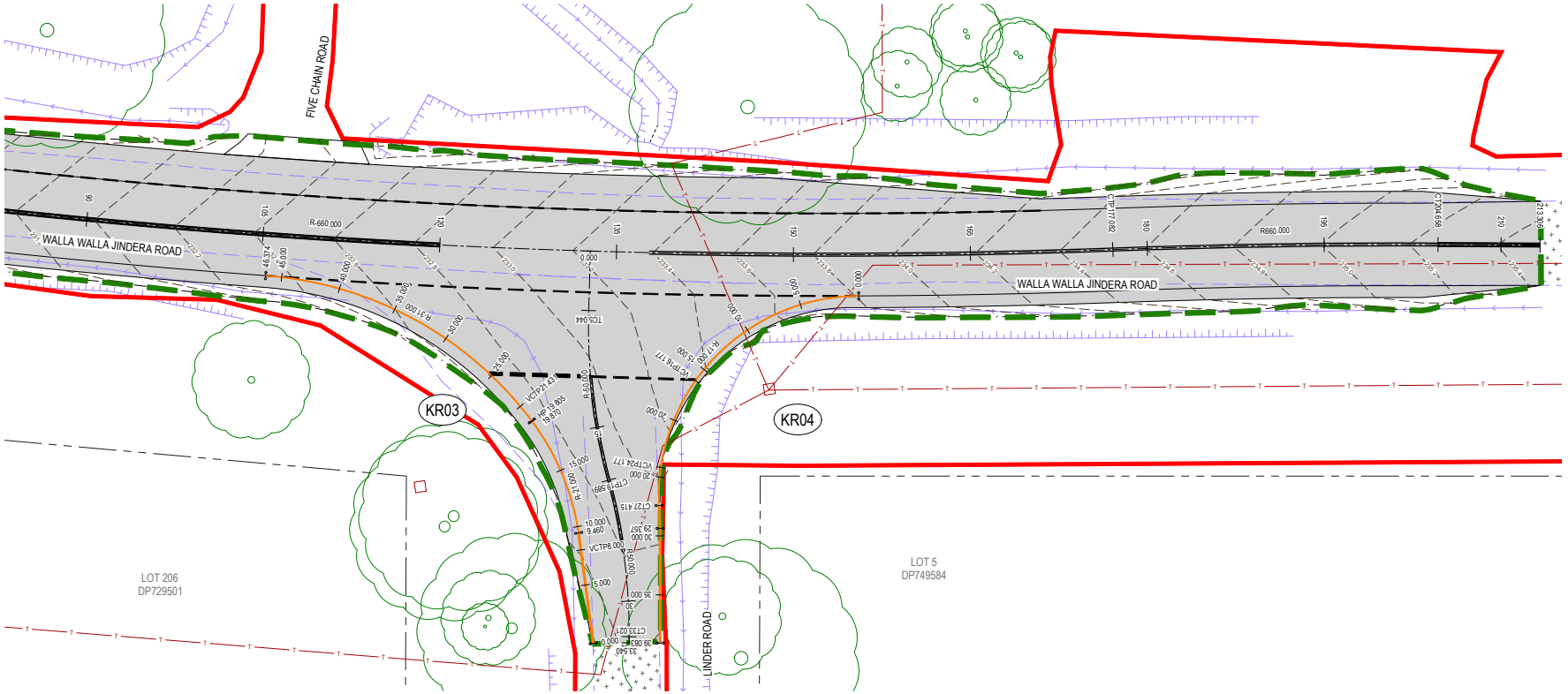
DRAWN: F.SOMERS	DESIGNED: J.RUSHTON
DRAFT CHECK: J.AGUSTIN	DESIGN CHECK: H.SMITH
APPROVED: J.AGUSTIN	
ISSUED FOR APPROVAL	

GLENELLEN SOLAR FARM ROAD UPGRADES
DETAILED DESIGN
ROAD CROSS SECTIONS

DRAWING NUMBER	SHEET No.	ORIG. SIZE	REVISION
MKRV0065-202-C0600		A1	4

Josh Rushton, 11/1/2024, 4:38 PM

C:\12dSdata\12DSYNERGY\MKRV0065 Glenellen Solar Farm_198\02 Design\Drawings\02 Stage 01\Xrefs\X-MKRV0065-201-GE-MKR A1.dwg



LEGEND

PROPOSED

- CIVIL WORKS BOUNDARY
- KERB RETURN ALIGNMENT (LIP OF KERB)
- CONTOURS (0.2m)
- ROAD CENTERLINE AND CHAINAGE
- OPEN DRAIN
- KERB RETURN LABELS
- PAVEMENT
- PAVEMENT MARKING
- LINE MARKING
- EDGE OF BITUMEN

EXISTING

- LOT BOUNDARY
- ELECTRICAL ABOVE GROUND
- TELECOMMUNICATIONS
- LINEMARKING
- EDGE OF BITUMEN
- TREE (TO BE RETAINED)
- OPEN DRAIN
- SIGN
- NO GO ZONE

BEFORE YOU DIG www.byda.com.au

UTILITY INFORMATION SHOWN ON THE PLANS DOES NOT DEPICT ANY MORE THAN THE PRESENCE OF A SERVICE, BASED ON AVAILABLE DOCUMENTARY EVIDENCE. THE PRESENCE OF A UTILITY SERVICE, ITS SIZE AND LOCATION SHOULD BE CONFIRMED BY FIELD INSPECTION, PRIOR TO THE COMMENCEMENT OF WORKS AND THE RELEVANT UTILITY PLANS OBTAINED BY DIALLING PH 1100 (BEFORE YOU DIG). CAUTION SHOULD BE EXERCISED WHEN WORKING IN THE VICINITY OF ALL UTILITY SERVICES.

REV	DATE	DESCRIPTION	AMD BY	APP BY
4	23.04.2024	ISSUED FOR APPROVAL	JLR	JMA
3	20.02.2024	ISSUED FOR DRAFT REVIEW	FMS	JMA
2	30.01.2024	ISSUED FOR CONCEPT DESIGN APPROVAL	FMS	JMA
1	29.01.2024	ISSUED FOR CONCEPT DESIGN APPROVAL	FMS	JMA

0 2 4 6 8 10m
SCALE 1:200 AT ORIGINAL SIZE

GPG Australia Pty Ltd

MAKER ENG

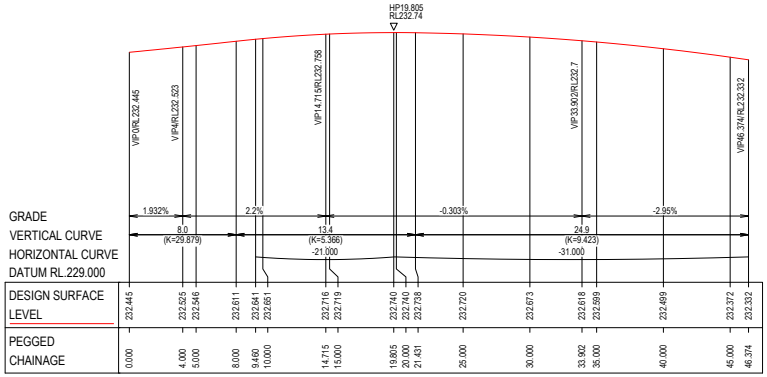
DRAWN: F.SOMERS	DESIGNED: J.RUSHTON
DRAFT CHECK: J.AGUSTIN	DESIGN CHECK: H.SMITH
APPROVED: J.AGUSTIN	
ISSUED FOR APPROVAL	

GLENELLEN SOLAR FARM ROAD UPGRADES
DETAILED DESIGN
KERB RETURN LAYOUT PLAN

DRAWING NUMBER	SHEET No.	ORIG. SIZE	REVISION
MKRV0065-202-C0700		A1	4

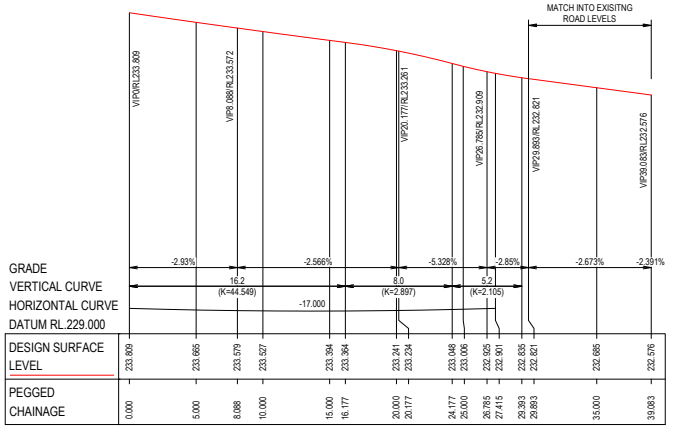
Job Number, 11/10/2024, 4:38 PM

C:\12dSdata\12DSYNERGY\MKRV0065 Glenellen Solar Farm_198\02 Design\Drawings\02 Stage 01\Xrefs\X-MKRV0065-201-GE-MKR A1.dwg



HOR : 1 IN 200
VERT: 1 IN 40

LONGITUDINAL SECTION - KR 03



HOR : 1 IN 200
VERT: 1 IN 40

LONGITUDINAL SECTION - KR 04

REV	DATE	DESCRIPTION	AMD BY	APP BY
4	23.04.2024	ISSUED FOR APPROVAL	JLR	JMA
3	20.02.2024	ISSUED FOR DRAFT REVIEW	FMS	JMA
2	30.01.2024	ISSUED FOR CONCEPT DESIGN APPROVAL	FMS	JMA
1	29.01.2024	ISSUED FOR CONCEPT DESIGN APPROVAL	FMS	JMA

HORIZONTAL 1:200 AT ORIGINAL SIZE 0 2 4 6 8 10m
VERTICAL 1:40 AT ORIGINAL SIZE 0 0.4 0.8 1.2 1.6 2m

GPG Australia Pty Ltd

MAKER ENG

DRAWN: F.SOMERS	DESIGNED: J.RUSHTON
DRAFT CHECK: J.AGUSTIN	DESIGN CHECK: H.SMITH
APPROVED: J.AGUSTIN	
ISSUED FOR APPROVAL	

GLENELLEN SOLAR FARM ROAD UPGRADES
DETAILED DESIGN
KERB RETURN LONGITUDINAL SECTIONS

DRAWING NUMBER	SHEET No.	ORIG. SIZE	REVISION
MKRV0065-202-C0701		A1	4

Josh Rushton, 11/10/2024, 4:38 PM

C:\12dSdata\12DSYNERGY\MKRV0065 Glenellen Solar Farm_198\02 Design\Drawings\02 Stage 01\Xrefs\X-MKRV0065-201-GE-MKR A1.dwg

GENERAL NOTES

1. REFER TO VOLUME 1 OF MANAGING URBAN STORMWATER: SOILS AND CONSTRUCTION, LANDCOM, 2004 (THE BLUE BOOK) AND OTHER GUIDELINES APPROVED OR ENDORSED BY THE ENVIRONMENTAL PROTECTION AUTHORITY.
2. WASTE ENCLOSURES WILL BE USED FOR ALL RUBBISH ON SITE AND RUBBISH REMOVED FROM ENCLOSURE(S) WHEN REQUIRED OR FULL.
3. CONTRACTOR TO ENSURE ALL APPROVALS ARE OBTAINED PRIOR TO COMMENCEMENT OF CONSTRUCTION.

DUST MANAGEMENT

WHERE CONSTRUCTION WORK GENERATES DUST, ALL REASONABLE AND PRACTICABLE MEASURES SHOULD BE TAKEN TO MINIMISE THAT DUST.

THIS CAN OFTEN BE ACHIEVED BY:

1. STRIPPING AREAS PROGRESSIVELY AND ONLY WHERE IT IS NECESSARY FOR WORKS TO OCCUR.
2. EMPLOYING STABILISING METHODS SUCH AS MATTING, GRASSING OR MULCH.
3. DAMPENING THE GROUND WITH A LIGHT WATER SPRAY.
4. ROUGHENING SURFACE OF EXPOSED SOIL.
5. COVERING STOCKPILES AND LOCATING THEM WHERE THEY ARE PROTECTED FROM THE WIND.
6. RESTRICTING VEHICLE MOVEMENTS.
7. ALL LOADS TO BE COVERED WHEN TRANSPORTING MATERIAL OFF SITE.
8. CONSTRUCTING WIND BREAKS SUCH AS WIND FENCES.
9. A WATER CART OR SUFFICIENT WATER SPRAYS SHALL BE MADE AVAILABLE AT ALL TIMES. IN ADVERSE CONDITIONS WHEN DUST CANNOT BE ADEQUATELY CONTROLLED, WORKS WILL CEASE IN THESE AREAS UNTIL CONDITIONS IMPROVE.
10. WATER SHALL BE APPLIED TO SUPPRESS DUST FROM OPEN EARTHWORKS AS WELL AS UNPROTECTED STOCKPILES.
11. AREAS OF COMPLETED EARTHWORKS SHALL BE PROGRESSIVELY REHABILITATED WITH DRYLAND GRASS AND FENCED OFF AS SOON AS PRACTICABLE TO PREVENT FURTHER EROSION.
12. ALL WORK TO STOP IF DUST CONTINUES TO LEAVE SITE WHEN ALL ABOVE METHODS HAVE BEEN UNDERTAKEN eg. WINDS OVER 10m/s FOR A PERIOD GREATER THAN 10 MINUTES.

NOISE & DISRUPTION

ENSURE ALL CONSTRUCTION WORK THAT GENERATES NOISE IS MANAGED IN ACCORDANCE WITH THE EPA INTERIM CONSTRUCTION NOISE GUIDELINES

MONDAY - FRIDAY	7AM TO 6PM
SATURDAY	8AM TO 1PM
SUNDAY & PUBLIC HOLIDAYS	WORKS PROHIBITED

IN ADDITION:

1. SCHEDULE NOISY ACTIVITIES FOR THE LEAST SENSITIVE TIMES OF THE DAY SUCH AS MID-MORNING OR MID-AFTERNOON.
2. SELECT MACHINERY THAT PRODUCES LESS NOISE; AND

ENSURE MACHINERY IS WELL MAINTAINED.

DISPOSAL OF SPOIL

BEFORE DISPOSAL OF SPOIL OFF SITE, THE FOLLOWING INFORMATION MUST BE PROVIDED TO THE SUPERINTENDENT

1. WHERE WILL SPOIL ORIGINATE FROM.
2. WHO IS DISPOSING OF THE SPOIL.
3. WHERE THE SPOIL WILL BE TAKEN.
4. THE AMOUNT OF SPOIL TO BE TAKEN AWAY.
5. DESCRIPTION OF THE TYPE OF SPOIL TAKEN AWAY.
6. DETAILS OF HOW RECORDS WILL BE KEPT; AND
7. TIME FRAME TO COMPLETE WORKS

SPOIL MAY BE TAKEN TO AN APPROVED LANDFILL SITE WITHOUT APPROVAL. HOWEVER, IF THE SPOIL IS TAKEN TO AN AREA OTHER THAN APPROVED LANDFILL SITE, ENSURE THE ACCEPTOR OF THE SPOIL IS AWARE OF THE REQUIREMENTS SETOUT IN SECTION 8.2 OF THE ENVIRONMENT PROTECTION GUIDELINES FOR CONSTRUCTION AND LAND DEVELOPMENT IN THE ACT.

FIRE

BURNING OF WASTE MATERIALS ON THE SITE, SUCH AS PLASTICS, CHEMICALS OR WOOD THAT MAY BE PAINTED, CHEMICALLY TREATED OR CONTAMINATED WITH CHEMICALS IS ILLEGAL. A FIRE MAY BE PERMITTED FOR HEATING PURPOSES PROVIDED IT IS IN A BRAZIER OR CONSTRUCTED FIREPLACE. ONLY SEASONED, UNTREATED TIMBER CAN BE BURNT FOR HEATING PURPOSES.

ALL NOTES ARE TO BE READ IN CONJUNCTION WITH GREATER HUME SHIRE COUNCIL AND TRANSPORT FOR NSW (TFNSW) ENGINEERING SPECIFICATIONS. SHOULD A CONFLICT ARISE TRANSPORT FOR NSW (TFNSW) SPECIFCATIONS ARE TO TAKE PRECEDENCE

SEDIMENT CONTROL NOTES

1. SEDIMENT AND EROSION CONTROL DEVICES TO BE INSTALLED AND FULLY OPERATIONAL PRIOR TO STRIPPING OF SITE TOPSOIL.
2. SEDIMENT AND EROSION CONTROL DEVICES NOT TO BE DECOMMISSIONED UNTIL AT LEAST 70% REVEGETATION COVER HAS BEEN ESTABLISHED.
3. STOCK PILE/S TO BE LOCATED AWAY FROM DRAINAGE LINES AND SURFACE FLOW PATHS, CONTOURED STRIATIONS OR FURROWS TO BE PROVIDED TO STOCK PILES TO MINIMISE EROSION.
4. STABILISED CONSTRUCTION ENTRANCE TO BE CONSTRUCTED PRIOR TO ACCESS TO SITE BY CONSTRUCTION VEHICLES. AGGREGATE TO BE TURNED WHEN SEDIMENT BUILDS UP AND RENEWED WEEKLY OR WHEN REQUIRED.
5. WHERE STORMWATER DRAINAGE IS INSTALLED TO INTERNAL ROADWORKS, PROVIDE GRATED SUMP FILTER.
6. CONTRACTOR IS TO ESTABLISH A MAINTENANCE PROGRAM FOR SEDIMENT & EROSION CONTROL DEVICES TO ENSURE INSPECTION AFTER SIGNIFICANT RAINFALL AND THAT ANY REPAIRS NECESSARY ARE QUICKLY ATTENDED TO.
7. ALL NEW CONSTRUCTION WORK MUST BE CONTAINED WITHIN THE SITE EXCEPT FOR APPROVED SERVICE CONNECTIONS AND ROADWORKS.
8. REMOVE ANY SOIL FROM ROADS ADJACENT TO THE SITE AT THE END OF EACH DAY.
9. NO STORAGE OF CONSTRUCTION MATERIALS, PARKING OF VEHICLES NOR EQUIPMENT PERMITTED OUTSIDE SITE.
10. NO SITE SHEDS, STORAGE SHEDS, SITE AMENITIES TO BE ERECTED OUTSIDE OF SITE.
11. PROVIDE KERBSIDE FILTER ROLL TO EXISTING SUMPS / STORMWATER INLETS WITHIN AND ADJACENT TO THE SITE AND ANY ADDITIONAL LOCATIONS AS DETAILED.
12. KERBSIDE FILTER ROLLS TO BE REMOVED, CLEANED AND REINSTATED ON A WEEKLY BASIS AT A MINIMUM. TRAPPED SEDIMENT ABOUT SUMPS IS ALSO TO BE REMOVED. CLEANING IS ALSO TO TAKE PLACE IMMEDIATELY AFTER PERIODS OF RAINFALL DURING CONSTRUCTION.
13. ALL SERVICE TRENCHES TO BE BACKFILLED WITHIN 24 HOURS OF INSPECTION.
14. THE SITE FOREMAN IS TO CONTACT COUNCIL TO DISCUSS ANY MAJOR CHANGES TO SEDIMENT AND EROSION CONTROLS ON SITE PRIOR TO IMPLEMENTING THE CHANGES.
15. THE SITE FOREMAN WILL ENSURE CONTRACTORS ACCESS AND EXIT THE SITE USING ONLY APPROVED STABILISED ACCESS/EXIT POINTS AS DETAILED ON ENDORSED SEDIMENT AND EROSION CONTROL PLANS.
16. THE CONTRACTOR TO LIMIT STRIPPING OF TOPSOIL AND REMOVAL OF VEGETATION TO AREAS ESSENTIAL FOR UNDERTAKING THE WORKS.
17. DISTURBED AREAS TO BE RESTORED TO ORIGIINAL CONDITION AS SOON AS PRACTICABLE.
18. THE CONTRACTOR SHALL LIMIT VEHICLES AND PLANT MOVEMENT TO PARKING AREAS AND ACCESS ROUTES AS APPROVED OR ONLY IN AREAS WHERE WORK IS PROCEEDING.
19. CONTRACTOR TO RETAIN A COPY OF THE APPROVED "EROSION AND SEDIMENT CONTROL PLAN" DURING LAND DEVELOPMENT IN THE SITE OFFICE.
20. SILT FENCES TO BE PLACED AROUND ALL STOCK PILES ON THE LOWER SIDE.
21. DIVERSION SWALES, IF APPLICABLE, MUST BE STABLE BEFORE RECEIVING STORMWATER FLOWS FROM UPSTREAM.

TOPSOIL MANAGEMENT

1. TOPSOIL SHALL BE STOCKPILED SEPARATED FROM GENERAL EXCAVATED MATERIAL.

HOURS OF OPERATION

SITE WORKS TO BE CONDUCTED ONLY BETWEEN THE FOLLOWING HOURS:

- WEEKDAYS 7.00am TO 6.00pm
- SATURDAYS 8.00am TO 1.00pm
- NO WORK ON SUNDAYS OR PUBLIC HOLIDAYS

MAINTENANCE SCHEDULE

WEEKLY:

1. TURN OVER STABILISED CONSTRUCTION ENTRY MATERIAL AND RENEW WHEN REQUIRED.
2. CHECK AND REINSTATE SILT CONTROL FENCES

DAILY:

1. SWEEP AND REMOVE DIRT AND ANY OTHER BUILDING MATERIAL FROM GUTTERS, FOOTPATHS OR ROADWAYS ADJACENT TO THE SITE BY CLOSE OF BUSINESS AND PRIOR TO RAIN AND WHEN REQUIRED. ALL NECESSARY STEPS SHOULD BE TAKEN THAT ARE PRACTICAL AND REASONABLE TO MINIMISE DUST POLLUTION ON LAND DEVELOPMENT AND CONSTRUCTION SITE.

DURING/AFTER WET WEATHER:

1. LIMIT CONSTRUCTION VEHICLE ACCESS TO SITE DURING AND IMMEDIATELY FOLLOWING WET WEATHER.
2. TESTING AND TREATMENT (FLOCCULATION) OF ANY DIRTY WATER DOWNSTREAM WILL LIKELY BE REQUIRED PRIOR TO DISCHARGE INTO THE HARBOUR. CONTRACTOR IS TO CONSULT WITH SUPERINTENDENT ON DISCHARGE CRITERIA PRIOR TO DISCHARGE.
3. CONTRACTOR TO ENSURE THE EXISTING CULVERTS AND CHANNELS REMAIN FREE FROM ANY OBSTRUCTION DURING CONSTRUCTION AND DURING INCLEMENT WEATHER SO THAT NO FLOODING OCCURS UPSTREAM AND INTO ANY NEIGHBORING PROPERTIES.

TREES

ALL TREES SHALL BE PROTECTED BY THE FOLLOWING MEASURES:

1. PROTECTIVE FENCING CONSTRUCTED OF 1.8m HIGH CHAIN WIRE MESH SUPPORTED BY ROBUST POSTS SHALL BE INSTALLED AT A MINIMUM RADIUS OF 3m FROM THE TRUNK OF EACH TREE.THIS FENCING SHALL BE INSTALLED PRIOR TO THE COMMENCEMENT OF ANY WORKS AND REMAIN IN PLACE UNTIL ALL WORKS ARE COMPLETED.SIGNAGE SHALL BE ERECTED ON THE FENCE WITH THE FOLLOWING WORDS CLEARLY DISPLAYED "TREE PROTECTION ZONE.DO NOT ENTER."
2. THE TREE PROTECTION ZONE WITHIN THE PROTECTIVE FENCING SHALL BE MULCHED WITH A MAXIMUM DEPTH 75mm OF SUITABLE ORGANIC MULCH (WOOD CHIPS OR COMPOST LEAF CHIP MULCH) AND KEPT REGULARLY WATERED FOR THE DURATION OF THE WORKS.
3. NO DEVELOPMENT OR ASSOCIATED ACTIVITY IS PERMITTED WITHIN THE FENCED TREE PROTECTION ZONE FOR THE DURATION OF THE WORKS.
4. ANY APPROVED WORKS WITHIN THIS TREE PROTECTION ZONE SHALL BE UNDER THE DIRECTION OF,AND TO THE SATISFACTION OF, A SUITABLY QUALIFIED AND EXPERIENCED ARBORIST. PLANT EIGHT (8) INDIGENOUS CANOPY TREES (ANGOPHORA) WITHIN LOT 7 BUT NOT WITHIN 3 METRES OF A BUILDING, WITH A MINIMUM POT SIZE OF 25 LITRES.

REV	DATE	DESCRIPTION	AMD BY	APP BY
4	23.04.2024	ISSUED FOR APPROVAL	JLR	JMA
3	20.02.2024	ISSUED FOR DRAFT REVIEW	FMS	JMA
2	30.01.2024	ISSUED FOR CONCEPT DESIGN APPROVAL	FMS	JMA
1	29.01.2024	ISSUED FOR CONCEPT DESIGN APPROVAL	FMS	JMA

GPG Australia Pty Ltd

MAKER ENG

DRAWN: F.SOMERS	DESIGNED: J.RUSHTON
DRAFT CHECK: J.AGUSTIN	DESIGN CHECK: H.SMITH
APPROVED: J.AGUSTIN	

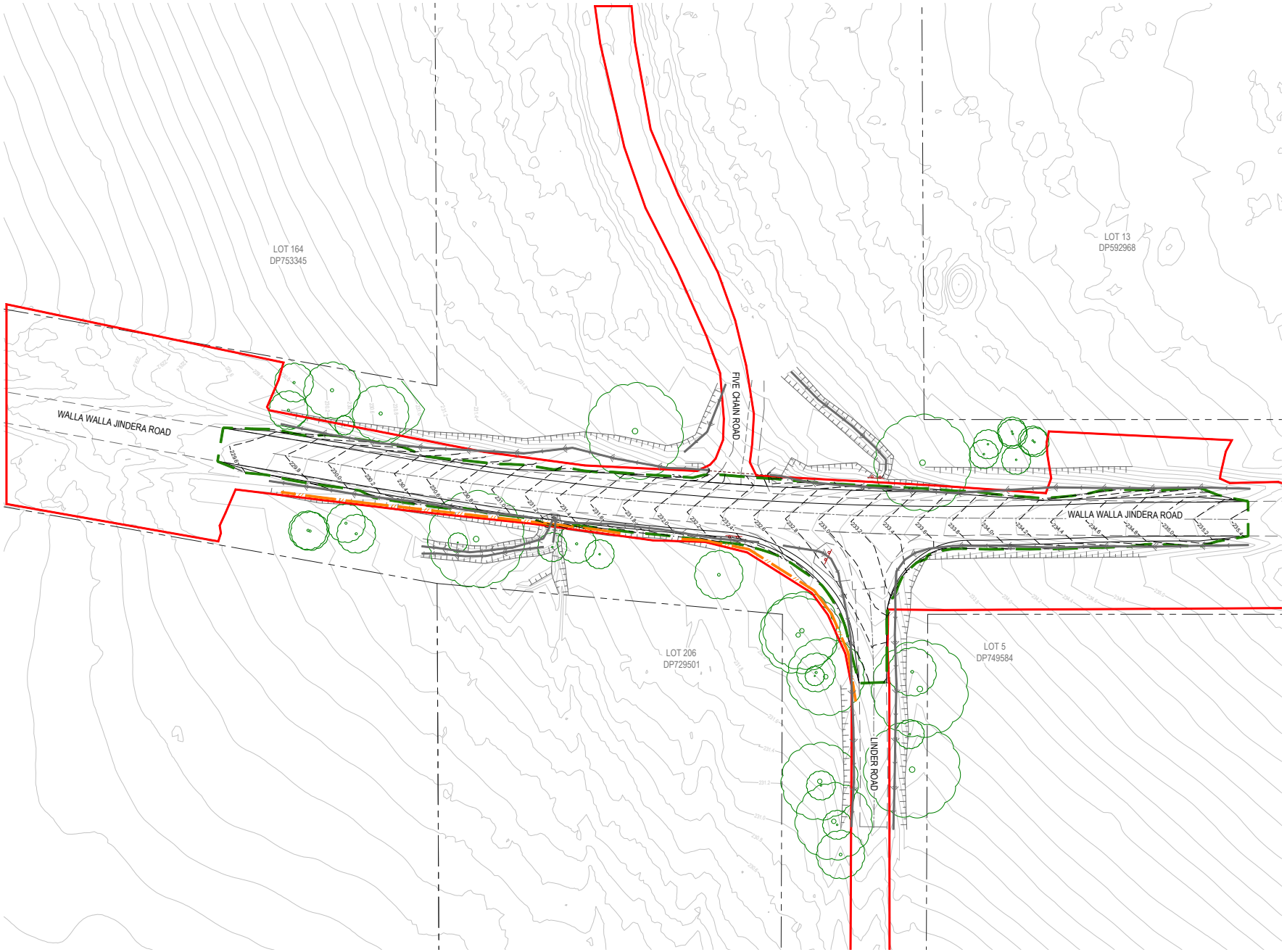
ISSUED FOR APPROVAL

GLENELLEN SOLAR FARM ROAD UPGRADES
DETAILED DESIGN
SOIL AND WATER MANAGEMENT NOTES

DRAWING NUMBER	SHEET No.	ORIG. SIZE	REVISION
MKRV0065-202-C1500		A1	4

Job Plotted: 11/11/2024 4:38 PM

C:\12dSdata\12DSYNERGY\MKRV0065 Glenellen Solar Farm_198\02 Design\Drawings\02 Stage 01\Xrefs\X-MKRV0065-201-GE-MKR A1.dwg



PROPOSED

LEGEND

- CIVIL WORKS BOUNDARY
- OPEN DRAIN
- TEMPORARY FENCING-TREE PROTECTION
- SEDIMENT FENCE
- STRAW BALES
- 7.0 CONTOURS (0.5m)
- KERB INLET SEDIMENT TRAP

EXISTING

- LOT BOUNDARY
- 7.0 CONTOURS (0.2m)
- TREE (TO BE RETAINED)
- OPEN DRAIN
- TOP OF BATTER

NOTES:

1. TREE PROTECTION TO BE IN ACCORDANCE WITH ARBORIST REPORT AND COUNCIL STANDARDS

BEFORE YOU DIG www.byda.com.au

UTILITY INFORMATION SHOWN ON THE PLANS DOES NOT DEPICT ANY MORE THAN THE PRESENCE OF A SERVICE, BASED ON AVAILABLE DOCUMENTARY EVIDENCE. THE PRESENCE OF A UTILITY SERVICE, ITS SIZE AND LOCATION SHOULD BE CONFIRMED BY FIELD INSPECTION, PRIOR TO THE COMMENCEMENT OF WORKS AND THE RELEVANT UTILITY PLANS OBTAINED BY DIALLING PH 1100 (BEFORE YOU DIG). CAUTION SHOULD BE EXERCISED WHEN WORKING IN THE VICINITY OF ALL UTILITY SERVICES.

REV	DATE	DESCRIPTION	AMD BY	APP BY
4	23.04.2024	ISSUED FOR APPROVAL	JLR	JMA
3	20.02.2024	ISSUED FOR DRAFT REVIEW	FMS	JMA
2	30.01.2024	ISSUED FOR CONCEPT DESIGN APPROVAL	FMS	JMA
1	29.01.2024	ISSUED FOR CONCEPT DESIGN APPROVAL	FMS	JMA

0 4 8 12 16 20m
SCALE 1:400 AT ORIGINAL SIZE

GPG Australia Pty Ltd

MAKER ENG

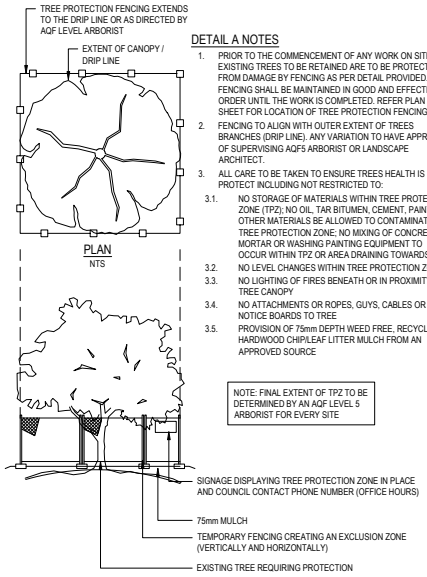
DRAWN: F.SOMERS	DESIGNED: J.RUSHTON
DRAFT CHECK: J.AGUSTIN	DESIGN CHECK: H.SMITH
APPROVED: J.AGUSTIN	
ISSUED FOR APPROVAL	

GLENELLEN SOLAR FARM ROAD UPGRADES
DETAILED DESIGN
SOIL AND WATER MANAGEMENT LAYOUT PLAN

DRAWING NUMBER	SHEET No.	ORIG. SIZE	REVISION
MKRV0065-202-C1501		A1	4

Job Number, 11/10/2024, 4:38 PM

C:\12dSdata\12DSYNERGY\MKRV0065 Glenellen Solar Farm_198\02 Design\Drawings\02 Stage 01\Xrefs\X-MKRV0065-201-GE-MKR A1.dwg



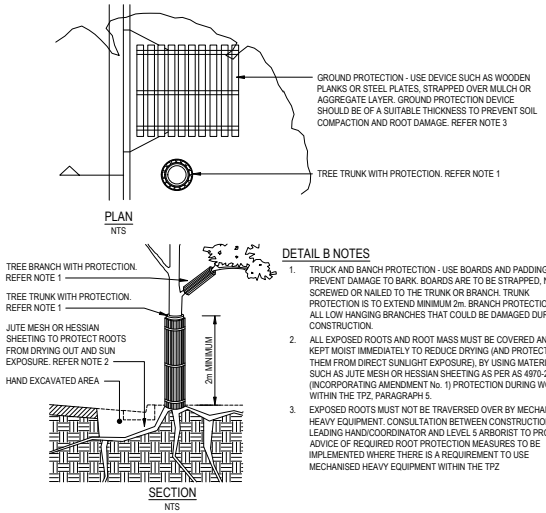
DETAIL A NOTES

1. PRIOR TO THE COMMENCEMENT OF ANY WORK ON SITE, EXISTING TREES TO BE RETAINED ARE TO BE PROTECTED FROM DAMAGE BY FENCING AS PER DETAIL PROVIDED. FENCING SHALL BE MAINTAINED IN GOOD AND EFFECTIVE ORDER UNTIL THE WORK IS COMPLETED. REFER PLAN THIS SHEET FOR LOCATION OF TREE PROTECTION FENCING.
2. FENCING TO ALIGN WITH OUTER EXTENT OF TREES BRANCHES (DRIP LINE). ANY VARIATION TO HAVE APPROVAL OF SUPERVISING AQFS ARBORIST OR LANDSCAPE ARCHITECT.
3. ALL CARE TO BE TAKEN TO ENSURE TREES HEALTH IS PROTECT INCLUDING NOT RESTRICTED TO:
   - 3.1. NO STORAGE OF MATERIALS WITHIN TREE PROTECTION ZONE (TPZ); NO OIL, TAR BITUMEN, CEMENT, PAINT, OR OTHER MATERIALS BE ALLOWED TO CONTAMINATE TREE PROTECTION ZONE; NO MIXING OF CONCRETE, MORTAR OR WASHING PAINTING EQUIPMENT TO OCCUR WITHIN TPZ OR AREA DRAINING TOWARDS TPZ.
   - 3.2. NO LEVEL CHANGES WITHIN TREE PROTECTION ZONE
   - 3.3. NO LIGHTING OF FIRES BENEATH OR IN PROXIMITY TO TREE CANOPY
   - 3.4. NO ATTACHMENTS OR ROPES, GUYS, CABLES OR NOTICE BOARDS TO TREE
   - 3.5. PROVISION OF 75mm DEPTH WEED FREE, RECYCLED HARDWOOD CHIP/LEAF LITTER MULCH FROM AN APPROVED SOURCE

NOTE: FINAL EXTENT OF TPZ TO BE DETERMINED BY AN AQF LEVEL 5 ARBORIST FOR EVERY SITE

DETAIL A
TREE PROTECTION ZONE (TPZ) FENCING
(REFERENCE AS 4790)

HOLD POINT
NO EXCAVATION IS TO OCCUR WITHIN THE TREE PROTECTION ZONE. STOP WORK AND CONTACT AN AQF LEVEL 5 ARBORIST BEFORE PROCEEDING ANY FURTHER.

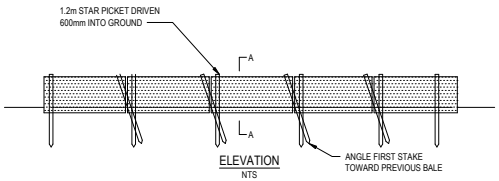


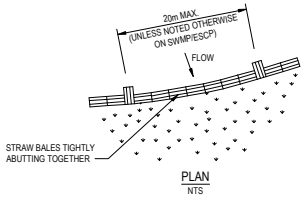
DETAIL B NOTES

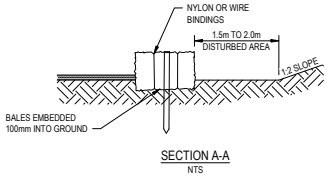
1. TRUCK AND BANCH PROTECTION - USE BOARDS AND PADDING TO PREVENT DAMAGE TO BARK. BOARDS ARE TO BE STRAPPED, NOT SCREWED OR NAILED TO THE TRUNK OR BRANCH. TRUNK PROTECTION IS TO EXTEND MINIMUM 2m. BRANCH PROTECTION TO ALL LOW HANGING BRANCHES THAT COULD BE DAMAGED DURING CONSTRUCTION.
2. ALL EXPOSED ROOTS AND ROOT MASS MUST BE COVERED AND KEPT MOIST IMMEDIATELY TO REDUCE DRYING (AND PROTECT THEM FROM DIRECT SUNLIGHT EXPOSURE), BY USING MATERIALS SUCH AS JUTE MESH OR HESSIAN SHEETING AS PER AS 4970-2009 (INCORPORATING AMENDMENT No. 1) PROTECTION DURING WORKS WITHIN THE TPZ, PARAGRAPH 5.
3. EXPOSED ROOTS MUST NOT BE TRAVERSED OVER BY MECHANISED HEAVY EQUIPMENT. CONSULTATION BETWEEN CONSTRUCTION LEADING HAND/COORDINATOR AND LEVEL 5 ARBORIST TO PROVIDE ADVICE OF REQUIRED ROOT PROTECTION MEASURES TO BE IMPLEMENTED WHERE THERE IS A REQUIREMENT TO USE MECHANISED HEAVY EQUIPMENT WITHIN THE TPZ

DETAIL B
TREE PROTECTION - TYPICAL TREE TRUNK, BRANCH AND ROOT

TREES ON DEVELOPMENT SITES TREE PROTECTION DETAILS
NTS



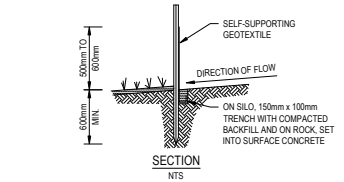


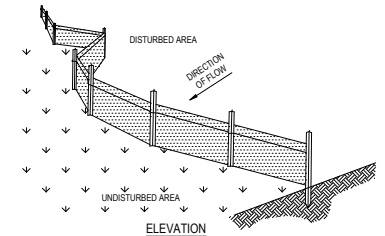


GENERAL CONSTRUCTION NOTES:

1. CONSTRUCTION STRAW BALE FILTER AS CLOSE AS POSSIBLE TO PARALLEL TO THE CONTOURS OF THE SITE OR THE TOE OF A SLOPE
2. PLACE BALES LENGTHWISE IN A ROW WITH ENDS TIGHTLY ABUTTING. USE STRAW TO FILL ANY GAPS BETWEEN BALES. STAIRS TO BE PLACED PARALLEL TO GROUND
3. MAXIMUM HEIGHT OF FILTER IS ONE BALE
4. ON SOFT MATERIALS, EMBED EACH BALE IN THE GROUND 75mm TO 100mm AND ANCHOR WITH TWO 1.2 STAR PICKETS. ANGLE THE FIST STAKE IN EACH BALE TOWARDS THE PREVIOUSLY LAID BALE. DRIVE STAKES 600mm INTO THE GROUND AND FLUSH WITH THE TOP OF THE BALES
5. WHERE A STRAW BALE FILTER IS CONSTRUCTED DOWNSLOW FROM THE TOE OF THE BATTER

STRAW BALE FILTER SD 6-7
NTS

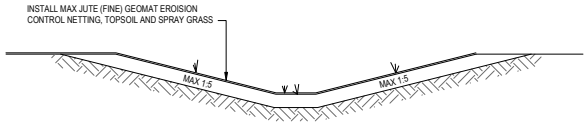




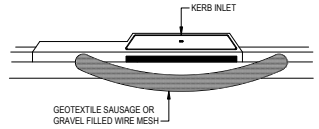
GENERAL CONSTRUCTION NOTES

1. CONSTRUCTION SEDIMENT FENCES AS CLOSE AS POSSIBLE TO PARALLEL TO THE CONTOURS OF THE SITE
2. DIVE 1.5m LONG STAR PICKETS INTO GROUND, 3m APART
3. DIG A 150mm DEEP TRENCH ALONG THE UPSLOPE LINE OF THE FENCE FOR THE BOTTOM OF THE FABRIC TO BE ENTRENCHED
4. BACKFILL TRENCH OVER BASE OF FABRIC
5. FIX SELF-SUPPORTING GEOTEXTILE TO UPSLOPE SIDE OF POSTS WITH WIRE TIES OR AS RECOMMENDED BY GEOTEXTILE MANUFACTURER
6. JOIN SECTIONS OF FABRIC AT A SUPPORT POST WITH A 150mm OVERLAP

SEDIMENT FENCE SD 6-8
NTS



TYPICAL OPEN DRAIN
NTS



KERB INLET SEDIMENT TRAP
NTS

REV	DATE	DESCRIPTION	AMD BY	APP BY
4	23.04.2024	ISSUED FOR APPROVAL	JLR	JMA
3	20.02.2024	ISSUED FOR DRAFT REVIEW	FMS	JMA
2	30.01.2024	ISSUED FOR CONCEPT DESIGN APPROVAL	FMS	JMA
1	29.01.2024	ISSUED FOR CONCEPT DESIGN APPROVAL	FMS	JMA

GPG Australia Pty Ltd

MAKER ENG

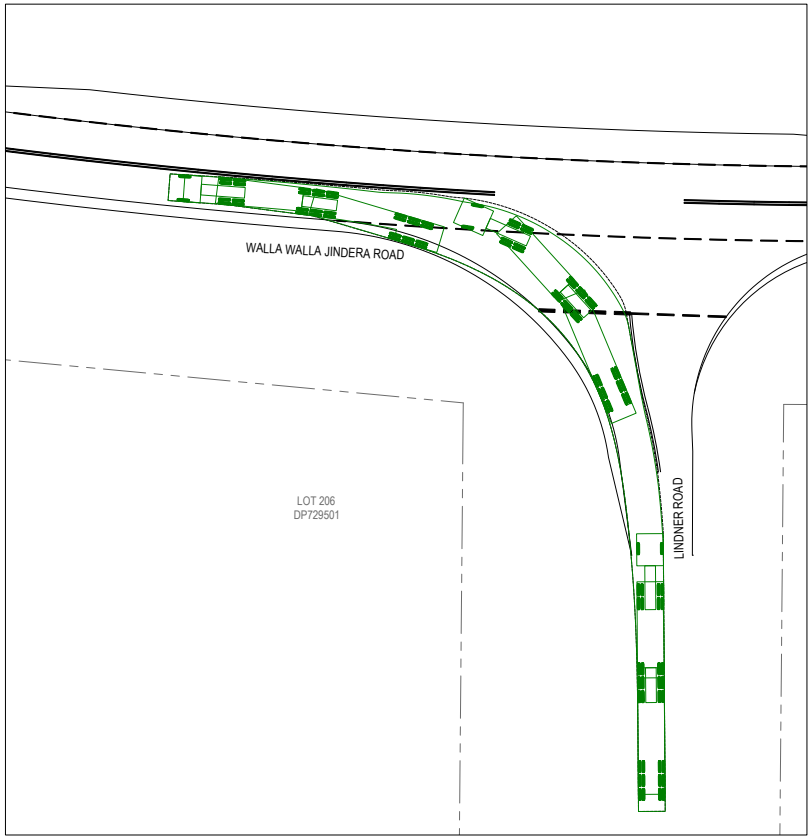
DRAWN: F.SOMERS	DESIGNED: J.RUSHTON
DRAFT CHECK: J.AGUSTIN	DESIGN CHECK: H.SMITH
APPROVED: J.AGUSTIN	
ISSUED FOR APPROVAL	

GLENELLEN SOLAR FARM ROAD UPGRADES
DETAILED DESIGN
SOIL AND WATER MANAGEMENT DETAILS

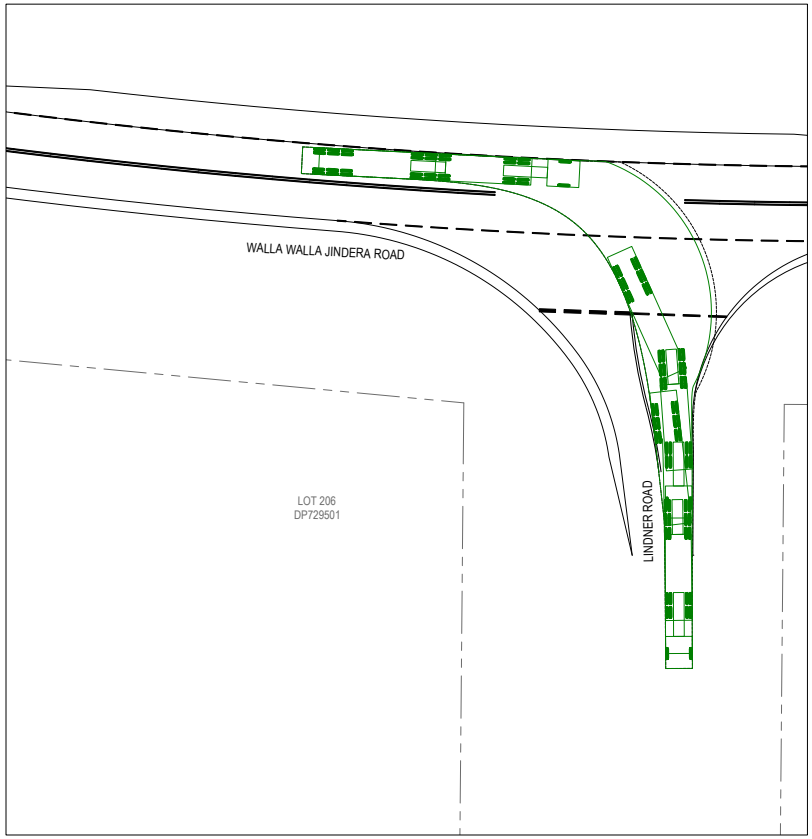
DRAWING NUMBER	SHEET No.	ORIG. SIZE	REVISION
MKRV0065-202-C1502		A1	4

Josh Rushton, 11/10/2024, 4:38 PM

C:\12dSdata\12DSYNERGY\MKRV0065 Glenellen Solar Farm_198\02 Design\Drawings\02 Stage 01\Xrefs\X-MKRV0065-201-GE-MKR A1.dwg

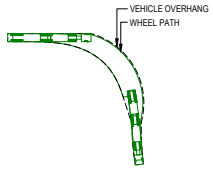


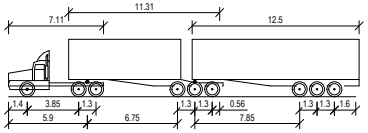
DESIGN VEHICLE



DESIGN VEHICLE

LEGEND





B-DOUBLE	
OVERALL LENGTH	26.000m
OVERALL WIDTH	2.500m
OVERALL BODY HEIGHT	4.300m
MIN BODY GROUND CLEARANCE	0.540m
TRACK WIDTH	2.500m
LOCK-TO-LOCK TIME	6.00s
KERB TO KERB TURNING RADIUS	12.500m

DESIGN VEHICLE

REV	DATE	DESCRIPTION	AMD BY	APP BY
4	23.04.2024	ISSUED FOR APPROVAL	JLR	JMA
3	20.02.2024	ISSUED FOR DRAFT REVIEW	FMS	JMA
2	30.01.2024	ISSUED FOR CONCEPT DESIGN APPROVAL	FMS	JMA
1	29.01.2024	ISSUED FOR CONCEPT DESIGN APPROVAL	FMS	JMA

0 2.5 5 7.5 10 12.5m
SCALE 1:250 AT ORIGINAL SIZE

GPG Australia Pty Ltd

MAKER ENG

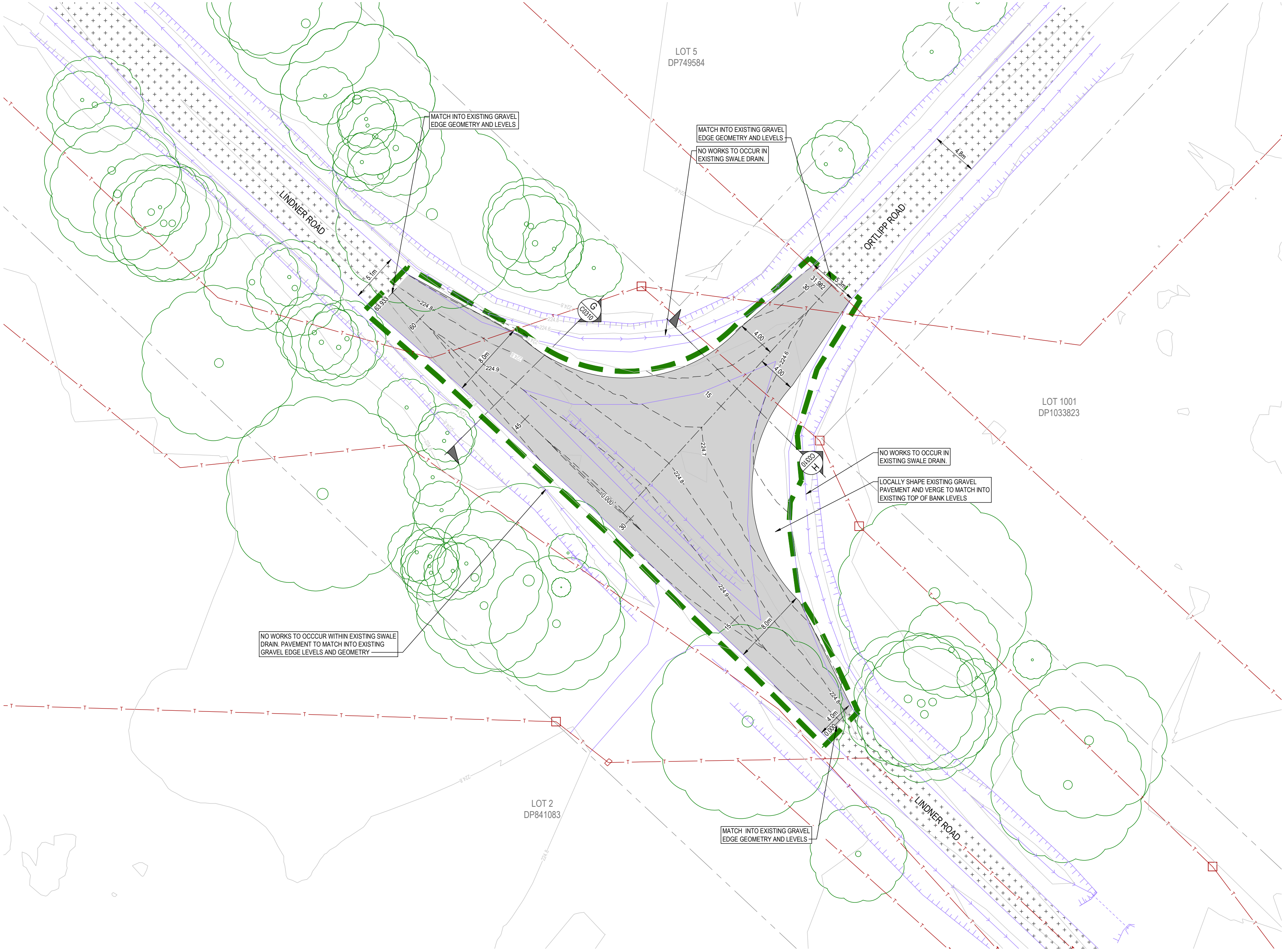
DRAWN: F.SOMERS	DESIGNED: J.RUSHTON
DRAFT CHECK: J.AGUSTIN	DESIGN CHECK: H.SMITH
APPROVED: J.AGUSTIN	
ISSUED FOR APPROVAL	

GLENELLEN SOLAR FARM ROAD UPGRADES
DETAILED DESIGN
SWEPT PATH ANALYSIS

DRAWING NUMBER	SHEET No.	ORIG. SIZE	REVISION
MKRV0065-202-C2050		A1	4

Josh Rushton, 11/11/2024, 4:38 PM

C:\12dSdata\12DSYNERGY\MKRV0065 Glenellen Solar Farm_198\02 Design\Drawings\02 Stage 01\Xrefs\X-MKRV0065-201-GE-MKR A1.dwg



PROPOSED

LEGEND

- CIVIL WORKS BOUNDARY
- ROAD CENTERLINE AND CHAINAGE
- OPEN DRAIN
- CONTOURS (0.1m)
- PAVEMENT
- EDGE OF BITUMEN

EXISTING

- LOT BOUNDARY
- PAVEMENT
- CONTOURS (0.2m)
- ELECTRICAL ABOVE GROUND
- TELECOMMUNICATIONS
- LINEMARKING
- EDGE OF BITUMEN
- TREE (TO BE RETAINED)
- OPEN DRAIN
- SIGN

BEFORE YOU DIG
www.byda.com.au

UTILITY INFORMATION SHOWN ON THE PLANS DOES NOT DEPICT ANY MORE THAN THE PRESENCE OF A SERVICE, BASED ON AVAILABLE DOCUMENTARY EVIDENCE. THE PRESENCE OF A UTILITY SERVICE, ITS SIZE AND LOCATION SHOULD BE CONFIRMED BY FIELD INSPECTION, PRIOR TO THE COMMENCEMENT OF WORKS AND THE RELEVANT UTILITY PLANS OBTAINED BY DIALLING PH 1100 (BEFORE YOU DIG). CAUTION SHOULD BE EXERCISED WHEN WORKING IN THE VICINITY OF ALL UTILITY SERVICES.

REV	DATE	DESCRIPTION	AMD BY	APP BY
4	23.04.2024	ISSUED FOR APPROVAL	JLR	JMA
3	20.02.2024	ISSUED FOR DRAFT REVIEW	FMS	JMA
2	30.01.2024	ISSUED FOR CONCEPT DESIGN APPROVAL	FMS	JMA
1	29.01.2024	ISSUED FOR CONCEPT DESIGN APPROVAL	FMS	JMA

0 2 4 6 8 10m
SCALE 1:200 AT ORIGINAL SIZE

GPG Australia Pty Ltd

MAKER ENG

DRAWN: F.SOMERS	DESIGNED: J.RUSHTON
DRAFT CHECK: J.AGUSTIN	DESIGN CHECK: H.SMITH
APPROVED: J.AGUSTIN	

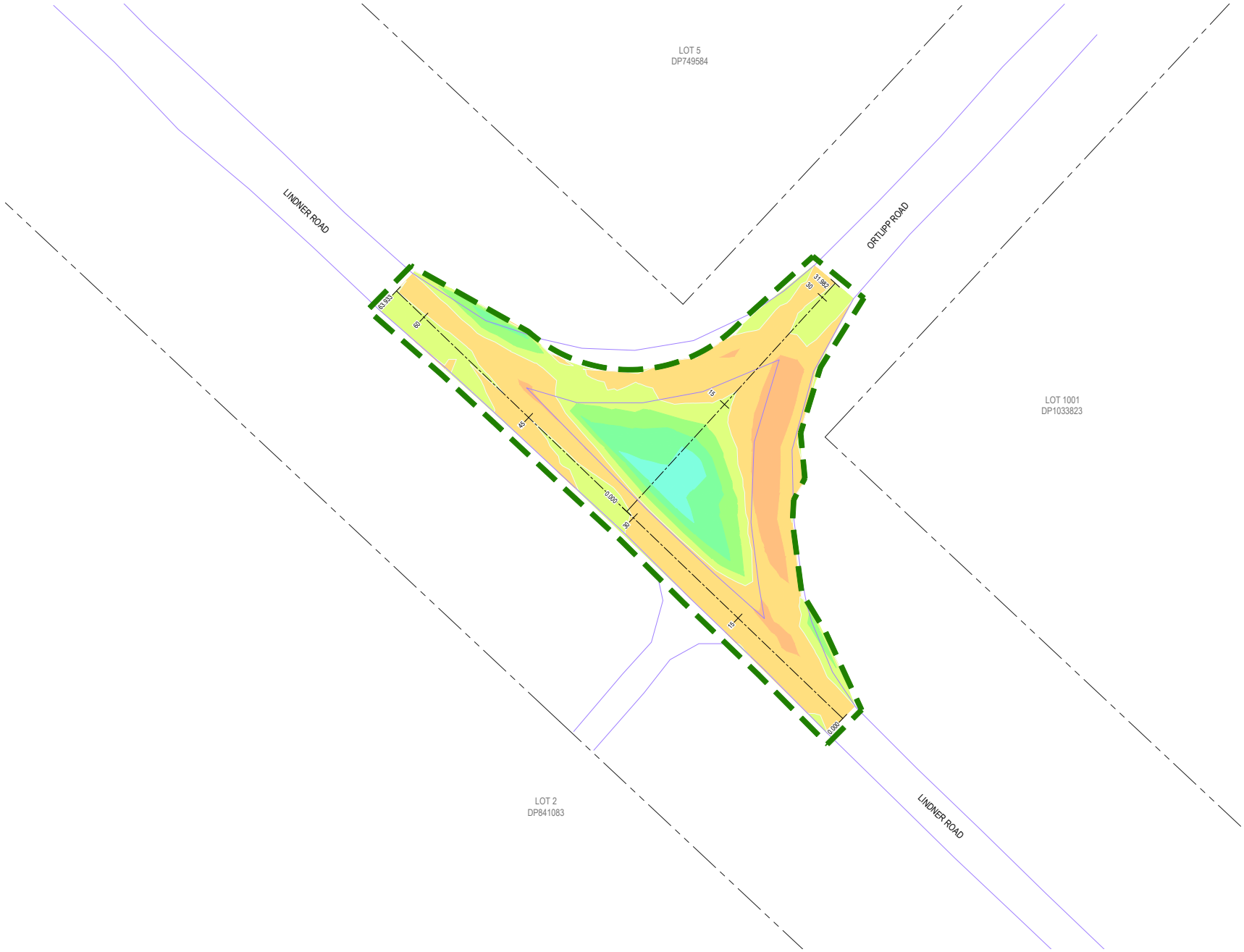
ISSUED FOR APPROVAL

GLENELLEN SOLAR FARM ROAD UPGRADES
DETAILED DESIGN
CIVIL WORKS LAYOUT PLAN

DRAWING NUMBER	SHEET No.	ORIG. SIZE	REVISION
MKRV0065-203-C0100		A1	4

Josh Rushton, 11/11/2020 4:38 PM

C:\12d\data\12DSYNERGY\MRKV0065 Glenellen Solar Farm_198\02 Design\Drawings\02 Stage 01\Xrefs\X-MKRV0065-201-GE-MKR A1.dwg



LEGEND

PROPOSED

- CIVIL WORKS BOUNDARY
- EDGE OF BITUMEN
- GREATER THAN -0.3m
- -0.3m TO -0.25m
- -0.25m TO -0.2m
- -0.2m TO -0.15m
- -0.15m TO -0.1m
- -0.1m TO -0.05m
- -0.05m TO 0.0m
- 0.0m TO 0.05m
- 0.05m TO 0.1m
- 0.1m TO 0.15m
- 0.15m TO 0.2m
- 0.2m TO 0.25m
- 0.25m TO 0.3m
- 0.3m TO 0.35m
- 0.35m TO 0.4m
- 0.4m TO 0.45m
- GREATER THAN 0.45m

EXISTING

- LOT BOUNDARY
- EDGE OF BITUMEN

TOTAL EARTHWORKS	
CUT	13.4 Cu.m
FILL	20.8 Cu.m
NET <FILL>	7.4 Cu.m

NOTES:

1. VOLUMES EXCLUDE SERVICE TRENCHES AND PAVEMENT

BEFORE YOU DIG www.byda.com.au

UTILITY INFORMATION SHOWN ON THE PLANS DOES NOT DEPICT ANY MORE THAN THE PRESENCE OF A SERVICE, BASED ON AVAILABLE DOCUMENTARY EVIDENCE. THE PRESENCE OF A UTILITY SERVICE, ITS SIZE AND LOCATION SHOULD BE CONFIRMED BY FIELD INSPECTION, PRIOR TO THE COMMENCEMENT OF WORKS AND THE RELEVANT UTILITY PLANS OBTAINED BY DIALLING PH 1100 (BEFORE YOU DIG). CAUTION SHOULD BE EXERCISED WHEN WORKING IN THE VICINITY OF ALL UTILITY SERVICES.

REV	DATE	DESCRIPTION	AMD BY	APP BY
4	23.04.2024	ISSUED FOR APPROVAL	JLR	JMA
3	20.02.2024	ISSUED FOR DRAFT REVIEW	FMS	JMA
2	30.01.2024	ISSUED FOR CONCEPT DESIGN APPROVAL	FMS	JMA
1	29.01.2024	ISSUED FOR CONCEPT DESIGN APPROVAL	FMS	JMA

0 1.0 3.0 4.5 6.0 7.5m
SCALE 1:150 AT ORIGINAL SIZE

GPG Australia Pty Ltd

MAKER ENG

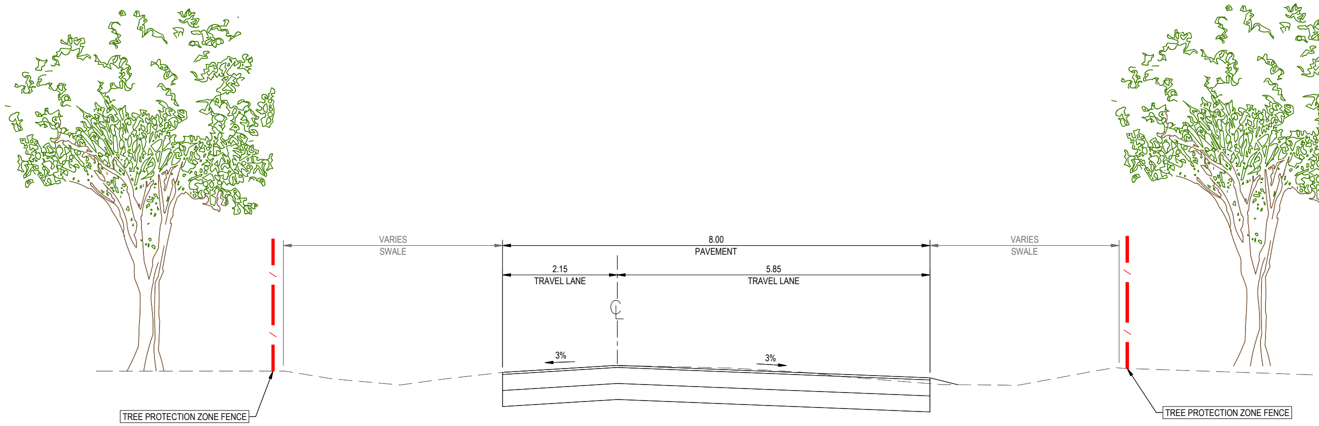
DRAWN: F.SOMERS	DESIGNED: J.RUSHTON
DRAFT CHECK: J.AGUSTIN	DESIGN CHECK: H.SMITH
APPROVED: J.AGUSTIN	
ISSUED FOR APPROVAL	

GLENELLEN SOLAR FARM ROAD UPGRADES
DETAILED DESIGN
BULK EARTHWORKS LAYOUT PLAN

DRAWING NUMBER	SHEET No.	ORIG. SIZE	REVISION
MKRV0065-203-C0200		A1	4

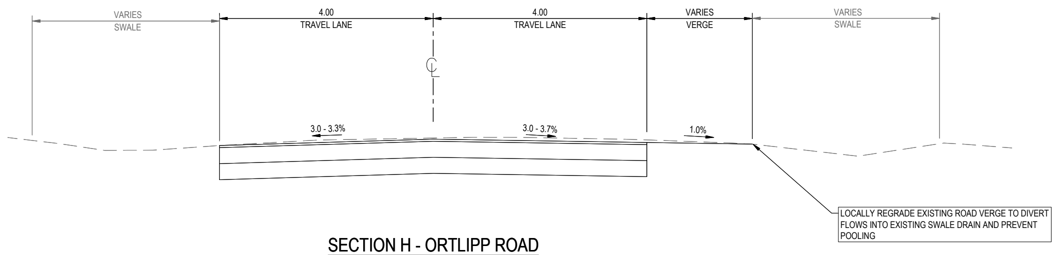
Job Number, 11/10/2024, 4:38 PM

C:\12dSdata\12DSYNERGY\MKRV0065 Glenellen Solar Farm_198\02 Design\Drawings\02 Stage 01\Xrefs\X-MKRV0065-201-GE-MKR A1.dwg



SECTION G - LINDNER ROAD

SCALE 1:50



SECTION H - ORTLIPP ROAD

SCALE 1:50

REV	DATE	DESCRIPTION	AMD BY	APP BY
4	23.04.2024	ISSUED FOR APPROVAL	JLR	JMA
3	20.02.2024	ISSUED FOR DRAFT REVIEW	FMS	JMA
2	30.01.2024	ISSUED FOR CONCEPT DESIGN APPROVAL	FMS	JMA
1	29.01.2024	ISSUED FOR CONCEPT DESIGN APPROVAL	FMS	JMA

0 0.5 1.0 1.5 2.0 2.5m
SCALE 1:50 AT ORIGINAL SIZE

GPG Australia Pty Ltd

MAKER ENG

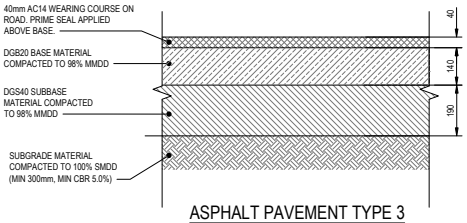
DRAWN: F.SOMERS	DESIGNED: J.RUSHTON
DRAFT CHECK: J.AGUSTIN	DESIGN CHECK: H.SMITH
APPROVED:	J.AGUSTIN
ISSUED FOR APPROVAL	

GLENELLEN SOLAR FARM ROAD UPGRADES
DETAILED DESIGN
TYPICAL SECTIONS

DRAWING NUMBER	SHEET No.	ORIG. SIZE	REVISION
MKRV0065-203-C0310		A1	4

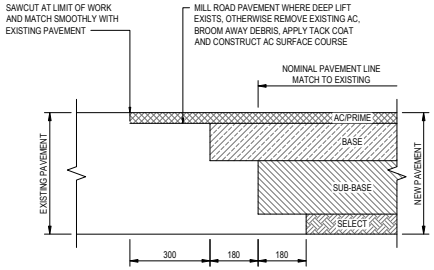
Josh Rushton, 11/11/2020 4:38 PM

C:\12dS\data\12DSYNERGY\MKRV0065 Glenellen Solar Farm_198\02 Design\Drawings\02 Stage 01\Xrefs\X-MKRV0065-201-GE-MKR A1.dwg



ASPHALT PAVEMENT TYPE 3

SCALE: 1:10



TYPICAL JUNCTION WITH EXISTING PAVEMENT

SCALE: 1:10

REV	DATE	DESCRIPTION	AMD BY	APP BY
4	23.04.2024	ISSUED FOR APPROVAL	JLR	JMA
3	20.02.2024	ISSUED FOR DRAFT REVIEW	FMS	JMA
2	30.01.2024	ISSUED FOR CONCEPT DESIGN APPROVAL	FMS	JMA
1	29.01.2024	ISSUED FOR CONCEPT DESIGN APPROVAL	FMS	JMA

0 0.5 1.0 1.5 2.0 2.5m

SCALE 1:50 AT ORIGINAL SIZE

GPG Australia Pty Ltd

MAKER ENG

DRAWN: F.SOMERS	DESIGNED: J.RUSHTON
DRAFT CHECK: J.AGUSTIN	DESIGN CHECK: H.SMITH
APPROVED: J.AGUSTIN	

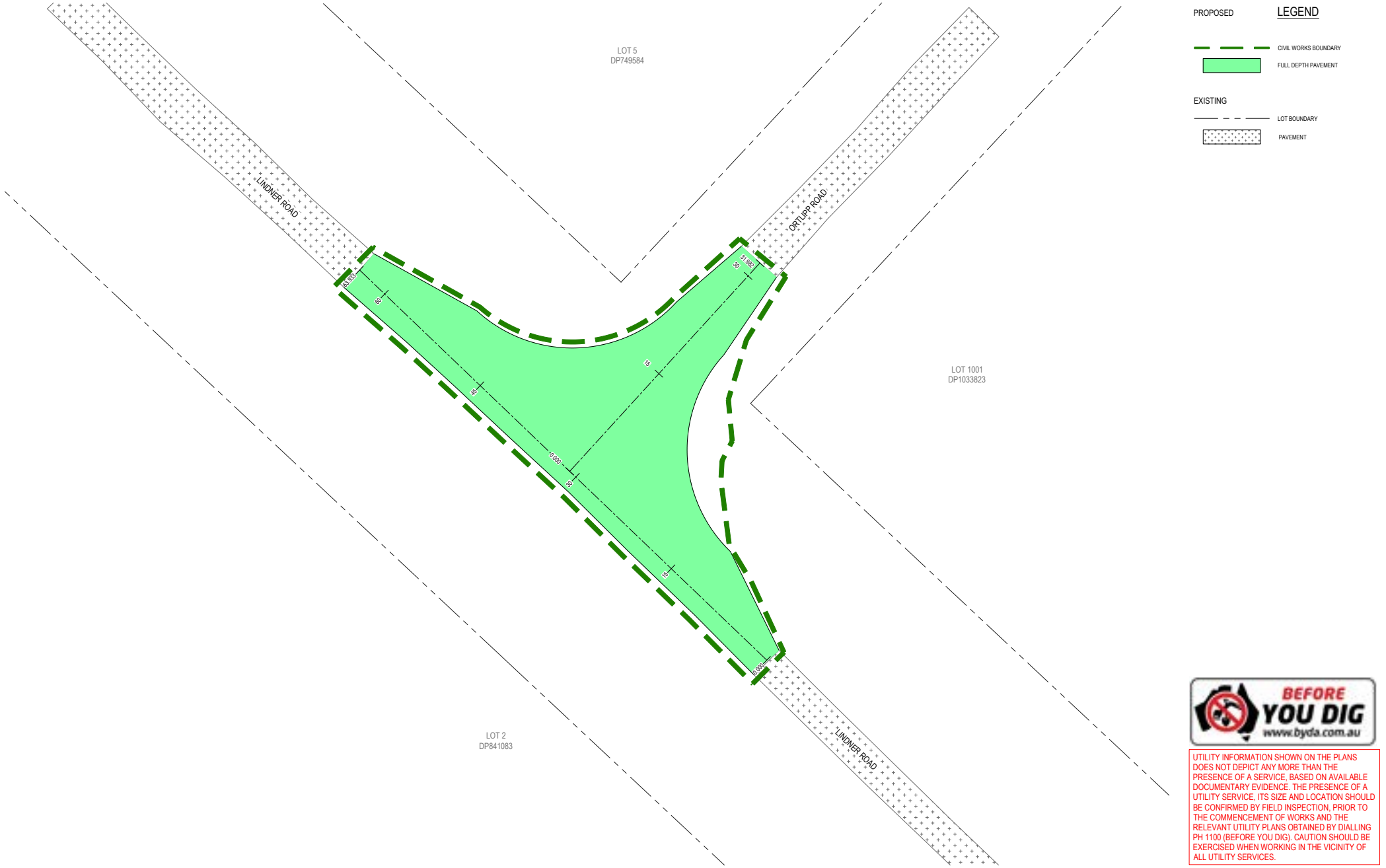
ISSUED FOR APPROVAL

GLENELLEN SOLAR FARM ROAD UPGRADES
DETAILED DESIGN
CIVIL DETAILS

DRAWING NUMBER	SHEET No.	ORIG. SIZE	REVISION
MKRV0065-203-C0350		A1	4

Job Number, 11/10/2024, 4:38 PM

C:\12dSdata\12DSYNERGY\MKRV0065 Glenellen Solar Farm_198\02 Design\Drawings\02 Stage 01\Xrefs\X-MKRV0065-201-GE-MKR A1.dwg



BEFORE YOU DIG www.byda.com.au

UTILITY INFORMATION SHOWN ON THE PLANS DOES NOT DEPICT ANY MORE THAN THE PRESENCE OF A SERVICE, BASED ON AVAILABLE DOCUMENTARY EVIDENCE. THE PRESENCE OF A UTILITY SERVICE, ITS SIZE AND LOCATION SHOULD BE CONFIRMED BY FIELD INSPECTION, PRIOR TO THE COMMENCEMENT OF WORKS AND THE RELEVANT UTILITY PLANS OBTAINED BY DIALLING PH 1100 (BEFORE YOU DIG). CAUTION SHOULD BE EXERCISED WHEN WORKING IN THE VICINITY OF ALL UTILITY SERVICES.

REV	DATE	DESCRIPTION	AMD BY	APP BY
4	23.04.2024	ISSUED FOR APPROVAL	JLR	JMA
3	20.02.2024	ISSUED FOR DRAFT REVIEW	FMS	JMA
2	30.01.2024	ISSUED FOR CONCEPT DESIGN APPROVAL	FMS	JMA
1	29.01.2024	ISSUED FOR CONCEPT DESIGN APPROVAL	FMS	JMA

0 2 4 6 8 10m
SCALE 1:200 AT ORIGINAL SIZE

GPG Australia Pty Ltd

MAKER ENG

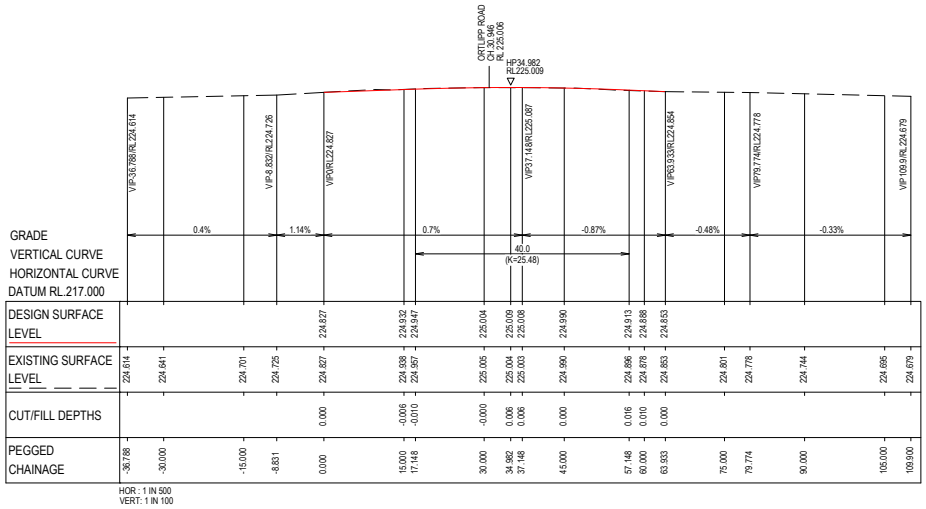
DRAWN: F.SOMERS	DESIGNED: J.RUSHTON
DRAFT CHECK: J.AGUSTIN	DESIGN CHECK: H.SMITH
APPROVED: J.AGUSTIN	
ISSUED FOR APPROVAL	

GLENELLEN SOLAR FARM ROAD UPGRADES
DETAILED DESIGN
PAVEMENT LAYOUT PLAN

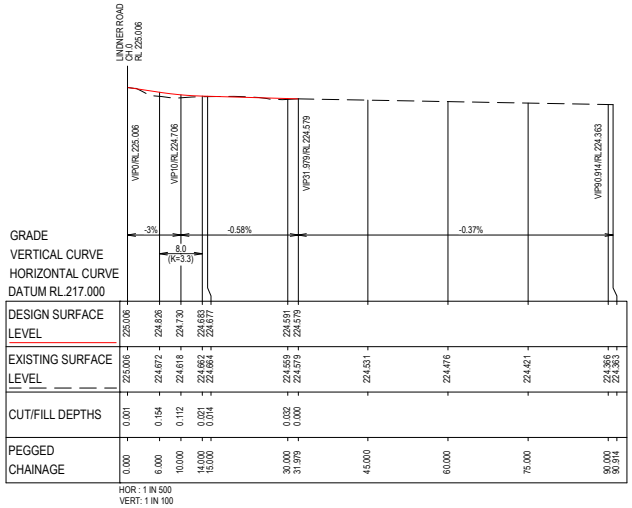
DRAWING NUMBER	SHEET No.	ORIG. SIZE	REVISION
MKRV0065-203-C0400		A1	4

Job Number, 11/10/2024, 4:38 PM

C:\12dSdata\12DSYNERGY\MKRV0065 Glenellen Solar Farm_198\02 Design\Drawings\02 Stage 01\Xrefs\X-MKRV0065-201-GE-MKR A1.dwg



LONGITUDINAL SECTION - LINDNER ROAD



LONGITUDINAL SECTION - ORTLIPP ROAD

REV	DATE	DESCRIPTION	AMD BY	APP BY
4	23.04.2024	ISSUED FOR APPROVAL	JLR	JMA
3	20.02.2024	ISSUED FOR DRAFT REVIEW	FMS	JMA
2	30.01.2024	ISSUED FOR CONCEPT DESIGN APPROVAL	FMS	JMA
1	29.01.2024	ISSUED FOR CONCEPT DESIGN APPROVAL	FMS	JMA

HORIZONTAL 1:500 AT ORIGINAL SIZE
VERTICAL 1:100 AT ORIGINAL SIZE
0 5 10 15 20 25m
0 1 2 3 4 5m

GPG Australia Pty Ltd

MAKER ENG

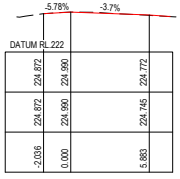
DRAWN: F.SOMERS	DESIGNED: J.RUSHTON
DRAFT CHECK: J.AGUSTIN	DESIGN CHECK: H.SMITH
APPROVED: J.AGUSTIN	
ISSUED FOR APPROVAL	

GLENELLEN SOLAR FARM ROAD UPGRADES
DETAILED DESIGN
ROAD LONGITUDINAL SECTIONS

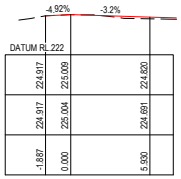
DRAWING NUMBER	SHEET No.	ORIG. SIZE	REVISION
MKRV0065-203-C0500		A1	4

Josh Rushton, 11/10/2024, 4:38 PM

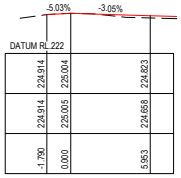
C:\12dSdata\12DSYNERGY\MKRV0065 Glenellen Solar Farm_198\02 Design\Drawings\02 Stage 01\Xrefs\X-MKRV0065-201-GE-MKR A1.dwg



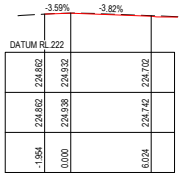
CH 45.000



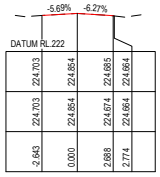
CH 34.982



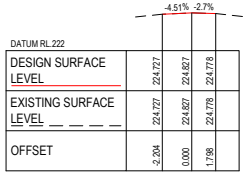
CH 30.000



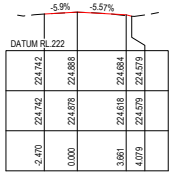
CH 15.000



CH 63.933



CH 0.000



CH 60.000

LINDNER ROAD

SCALE 1:200

REV	DATE	DESCRIPTION	AMD BY	APP BY
4	23.04.2024	ISSUED FOR APPROVAL	JLR	JMA
3	20.02.2024	ISSUED FOR DRAFT REVIEW	FMS	JMA
2	30.01.2024	ISSUED FOR CONCEPT DESIGN APPROVAL	FMS	JMA
1	29.01.2024	ISSUED FOR CONCEPT DESIGN APPROVAL	FMS	JMA

0 2 4 6 8 10m
SCALE 1:200 AT ORIGINAL SIZE

GPG Australia Pty Ltd

MAKER ENG

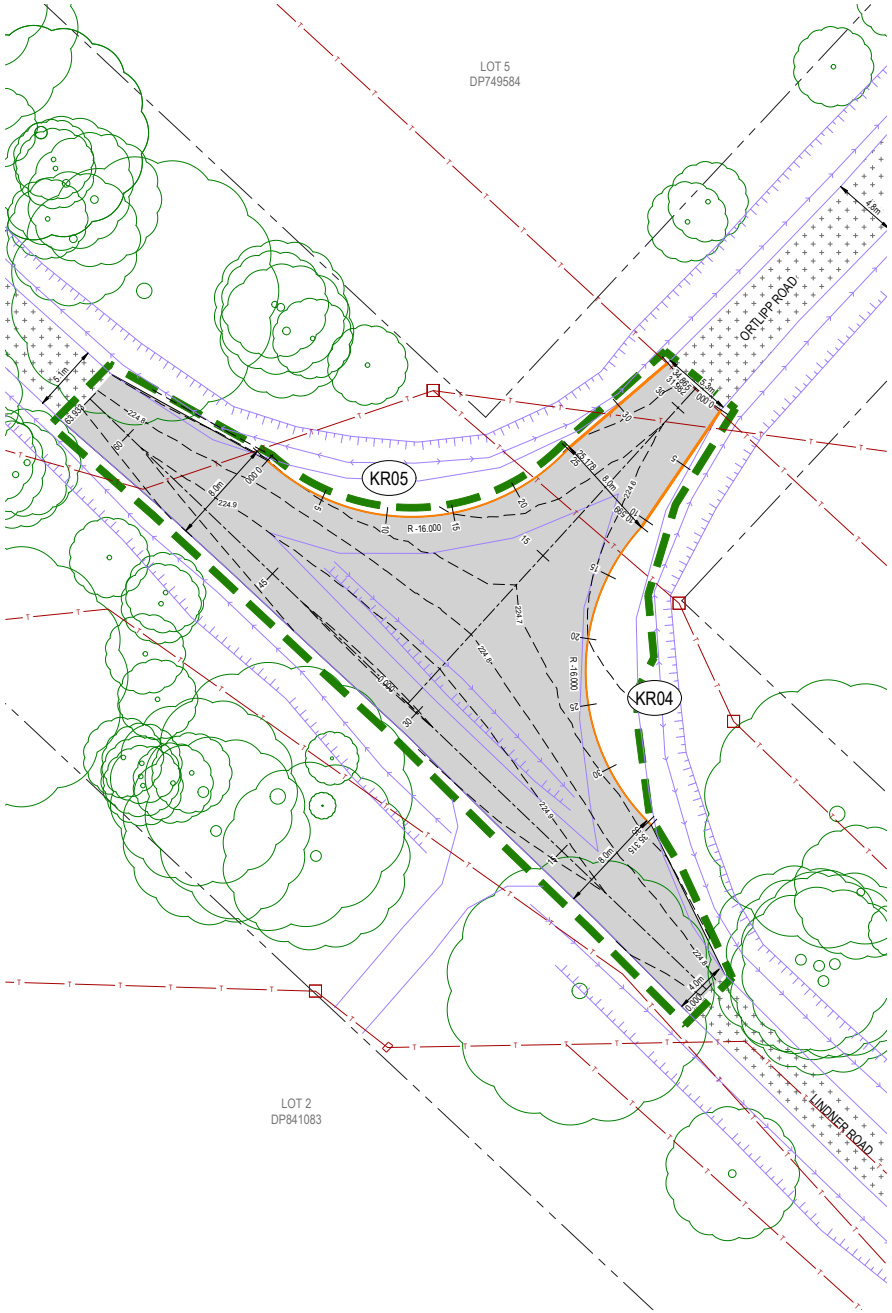
DRAWN: F.SOMERS	DESIGNED: J.RUSHTON
DRAFT CHECK: J.AGUSTIN	DESIGN CHECK: H.SMITH
APPROVED: J.AGUSTIN	
ISSUED FOR APPROVAL	

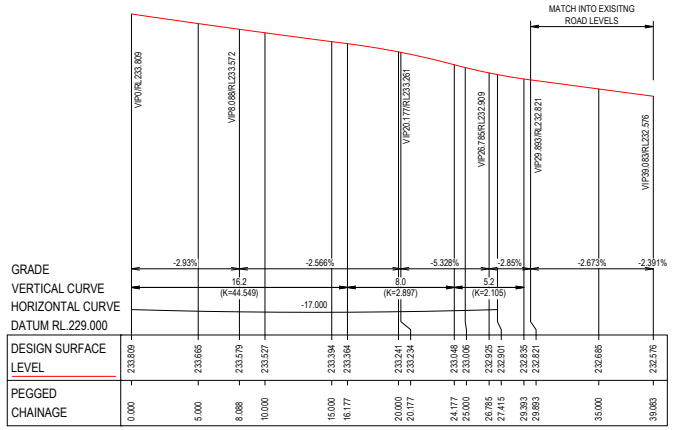
GLENELLEN SOLAR FARM ROAD UPGRADES
DETAILED DESIGN
ROAD CROSS SECTIONS

DRAWING NUMBER	SHEET No.	ORIG. SIZE	REVISION
MKRV0065-203-C0600		A1	4

Josh Paulsen, 11/11/2024, 4:38 PM

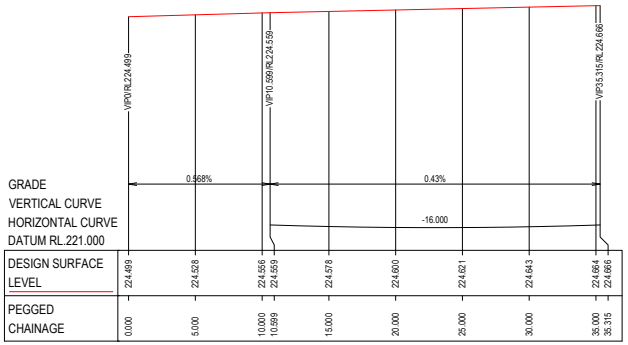
C:\12dSdata\12DSYNERGY\MKRV0065 Glenellen Solar Farm_198\02 Design\Drawings\02 Stage 01\Xrefs\X-MKRV0065-201-GE-MKR A1.dwg





HOR : 1 IN 200
VERT: 1 IN 40

LONGITUDINAL SECTION - KR 04



HOR : 1 IN 200
VERT: 1 IN 40

LONGITUDINAL SECTION - KR 05

LEGEND

PROPOSED

- CIVIL WORKS BOUNDARY
- KERB RETURN ALIGNMENT (LIP OF KERB)
- CONTOURS (0.1m)
- ROAD CENTERLINE AND CHAINAGE
- KERB RETURN LABELS
- EDGE OF BITUMEN

EXISTING

- LOT BOUNDARY
- ELECTRICAL ABOVE GROUND
- TELECOMMUNICATIONS
- LINEMARKING
- EDGE OF BITUMEN
- TREE (TO BE RETAINED)
- OPEN DRAIN

BEFORE YOU DIG www.byda.com.au

UTILITY INFORMATION SHOWN ON THE PLANS DOES NOT DEPICT ANY MORE THAN THE PRESENCE OF A SERVICE, BASED ON AVAILABLE DOCUMENTARY EVIDENCE. THE PRESENCE OF A UTILITY SERVICE, ITS SIZE AND LOCATION SHOULD BE CONFIRMED BY FIELD INSPECTION, PRIOR TO THE COMMENCEMENT OF WORKS AND THE RELEVANT UTILITY PLANS OBTAINED BY DIALLING PH 1100 (BEFORE YOU DIG). CAUTION SHOULD BE EXERCISED WHEN WORKING IN THE VICINITY OF ALL UTILITY SERVICES.

REV	DATE	DESCRIPTION	AMD BY	APP BY
4	23.04.2024	ISSUED FOR APPROVAL	JLR	JMA
3	20.02.2024	ISSUED FOR DRAFT REVIEW	FMS	JMA
2	30.01.2024	ISSUED FOR CONCEPT DESIGN APPROVAL	FMS	JMA
1	29.01.2024	ISSUED FOR CONCEPT DESIGN APPROVAL	FMS	JMA

SCALE 1:200 AT ORIGINAL SIZE

GPG Australia Pty Ltd

MAKER ENG

DRAWN: F.SOMERS	DESIGNED: J.RUSHTON
DRAFT CHECK: J.AGUSTIN	DESIGN CHECK: H.SMITH
APPROVED: J.AGUSTIN	
ISSUED FOR APPROVAL	

GLENELLEN SOLAR FARM ROAD UPGRADES
DETAILED DESIGN
KERB RETURN LAYOUT AND SECTIONS

DRAWING NUMBER	SHEET No.	ORIG. SIZE	REVISION
MKRV0065-203-C0700		A1	4

Josh Rushton, 11/11/2024, 4:38 PM

C:\12dSdata\12DSYNERGY\MKRV0065 Glenellen Solar Farm_198\02 Design\Drawings\02 Stage 01\Xrefs\X-MKRV0065-201-GE-MKR A1.dwg

GENERAL NOTES

1. REFER TO VOLUME 1 OF MANAGING URBAN STORMWATER: SOILS AND CONSTRUCTION, LANDCOM, 2004 (THE BLUE BOOK) AND OTHER GUIDELINES APPROVED OR ENDORSED BY THE ENVIRONMENTAL PROTECTION AUTHORITY.
2. WASTE ENCLOSURES WILL BE USED FOR ALL RUBBISH ON SITE AND RUBBISH REMOVED FROM ENCLOSURE(S) WHEN REQUIRED OR FULL.
3. CONTRACTOR TO ENSURE ALL APPROVALS ARE OBTAINED PRIOR TO COMMENCEMENT OF CONSTRUCTION.

DUST MANAGEMENT

WHERE CONSTRUCTION WORK GENERATES DUST, ALL REASONABLE AND PRACTICABLE MEASURES SHOULD BE TAKEN TO MINIMISE THAT DUST.

THIS CAN OFTEN BE ACHIEVED BY:

1. STRIPPING AREAS PROGRESSIVELY AND ONLY WHERE IT IS NECESSARY FOR WORKS TO OCCUR.
2. EMPLOYING STABILISING METHODS SUCH AS MATTING, GRASSING OR MULCH.
3. DAMPENING THE GROUND WITH A LIGHT WATER SPRAY.
4. ROUGHENING SURFACE OF EXPOSED SOIL.
5. COVERING STOCKPILES AND LOCATING THEM WHERE THEY ARE PROTECTED FROM THE WIND.
6. RESTRICTING VEHICLE MOVEMENTS.
7. ALL LOADS TO BE COVERED WHEN TRANSPORTING MATERIAL OFF SITE.
8. CONSTRUCTING WIND BREAKS SUCH AS WIND FENCES.
9. A WATER CART OR SUFFICIENT WATER SPRAYS SHALL BE MADE AVAILABLE AT ALL TIMES. IN ADVERSE CONDITIONS WHEN DUST CANNOT BE ADEQUATELY CONTROLLED, WORKS WILL CEASE IN THESE AREAS UNTIL CONDITIONS IMPROVE.
10. WATER SHALL BE APPLIED TO SUPPRESS DUST FROM OPEN EARTHWORKS AS WELL AS UNPROTECTED STOCKPILES.
11. AREAS OF COMPLETED EARTHWORKS SHALL BE PROGRESSIVELY REHABILITATED WITH DRYLAND GRASS AND FENCED OFF AS SOON AS PRACTICABLE TO PREVENT FURTHER EROSION.
12. ALL WORK TO STOP IF DUST CONTINUES TO LEAVE SITE WHEN ALL ABOVE METHODS HAVE BEEN UNDERTAKEN eg. WINDS OVER 10m/s FOR A PERIOD GREATER THAN 10 MINUTES.

NOISE & DISRUPTION

ENSURE ALL CONSTRUCTION WORK THAT GENERATES NOISE IS MANAGED IN ACCORDANCE WITH THE EPA INTERIM CONSTRUCTION NOISE GUIDELINES

MONDAY - FRIDAY	7AM TO 6PM
SATURDAY	8AM TO 1PM
SUNDAY & PUBLIC HOLIDAYS	WORKS PROHIBITED

IN ADDITION:

1. SCHEDULE NOISY ACTIVITIES FOR THE LEAST SENSITIVE TIMES OF THE DAY SUCH AS MID-MORNING OR MID-AFTERNOON.
2. SELECT MACHINERY THAT PRODUCES LESS NOISE; AND

ENSURE MACHINERY IS WELL MAINTAINED.

DISPOSAL OF SPOIL

BEFORE DISPOSAL OF SPOIL OFF SITE, THE FOLLOWING INFORMATION MUST BE PROVIDED TO THE SUPERINTENDENT

1. WHERE WILL SPOIL ORIGINATE FROM.
2. WHO IS DISPOSING OF THE SPOIL.
3. WHERE THE SPOIL WILL BE TAKEN.
4. THE AMOUNT OF SPOIL TO BE TAKEN AWAY.
5. DESCRIPTION OF THE TYPE OF SPOIL TAKEN AWAY.
6. DETAILS OF HOW RECORDS WILL BE KEPT; AND
7. TIME FRAME TO COMPLETE WORKS

SPOIL MAY BE TAKEN TO AN APPROVED LANDFILL SITE WITHOUT APPROVAL. HOWEVER, IF THE SPOIL IS TAKEN TO AN AREA OTHER THAN APPROVED LANDFILL SITE, ENSURE THE ACCEPTOR OF THE SPOIL IS AWARE OF THE REQUIREMENTS SETOUT IN SECTION 8.2 OF THE ENVIRONMENT PROTECTION GUIDELINES FOR CONSTRUCTION AND LAND DEVELOPMENT IN THE ACT.

FIRE

BURNING OF WASTE MATERIALS ON THE SITE, SUCH AS PLASTICS, CHEMICALS OR WOOD THAT MAY BE PAINTED, CHEMICALLY TREATED OR CONTAMINATED WITH CHEMICALS IS ILLEGAL. A FIRE MAY BE PERMITTED FOR HEATING PURPOSES PROVIDED IT IS IN A BRAZIER OR CONSTRUCTED FIREPLACE. ONLY SEASONED, UNTREATED TIMBER CAN BE BURNT FOR HEATING PURPOSES.

ALL NOTES ARE TO BE READ IN CONJUNCTION WITH GREATER HUME SHIRE COUNCIL AND TRANSPORT FOR NSW (TFNSW) ENGINEERING SPECIFICATIONS. SHOULD A CONFLICT ARISE TRANSPORT FOR NSW (TFNSW) SPECIFCATIONS ARE TO TAKE PRECEDENCE

SEDIMENT CONTROL NOTES

1. SEDIMENT AND EROSION CONTROL DEVICES TO BE INSTALLED AND FULLY OPERATIONAL PRIOR TO STRIPPING OF SITE TOPSOIL.
2. SEDIMENT AND EROSION CONTROL DEVICES NOT TO BE DECOMMISSIONED UNTIL AT LEAST 70% REVEGETATION COVER HAS BEEN ESTABLISHED.
3. STOCK PILE/S TO BE LOCATED AWAY FROM DRAINAGE LINES AND SURFACE FLOW PATHS, CONTOURED STRIATIONS OR FURROWS TO BE PROVIDED TO STOCK PILES TO MINIMISE EROSION.
4. STABILISED CONSTRUCTION ENTRANCE TO BE CONSTRUCTED PRIOR TO ACCESS TO SITE BY CONSTRUCTION VEHICLES. AGGREGATE TO BE TURNED WHEN SEDIMENT BUILDS UP AND RENEWED WEEKLY OR WHEN REQUIRED.
5. WHERE STORMWATER DRAINAGE IS INSTALLED TO INTERNAL ROADWORKS, PROVIDE GRATED SUMP FILTER.
6. CONTRACTOR IS TO ESTABLISH A MAINTENANCE PROGRAM FOR SEDIMENT & EROSION CONTROL DEVICES TO ENSURE INSPECTION AFTER SIGNIFICANT RAINFALL AND THAT ANY REPAIRS NECESSARY ARE QUICKLY ATTENDED TO.
7. ALL NEW CONSTRUCTION WORK MUST BE CONTAINED WITHIN THE SITE EXCEPT FOR APPROVED SERVICE CONNECTIONS AND ROADWORKS.
8. REMOVE ANY SOIL FROM ROADS ADJACENT TO THE SITE AT THE END OF EACH DAY.
9. NO STORAGE OF CONSTRUCTION MATERIALS, PARKING OF VEHICLES NOR EQUIPMENT PERMITTED OUTSIDE SITE.
10. NO SITE SHEDS, STORAGE SHEDS, SITE AMENITIES TO BE ERECTED OUTSIDE OF SITE.
11. PROVIDE KERBSIDE FILTER ROLL TO EXISTING SUMPS / STORMWATER INLETS WITHIN AND ADJACENT TO THE SITE AND ANY ADDITIONAL LOCATIONS AS DETAILED.
12. KERBSIDE FILTER ROLLS TO BE REMOVED, CLEANED AND REINSTATED ON A WEEKLY BASIS AT A MINIMUM. TRAPPED SEDIMENT ABOUT SUMPS IS ALSO TO BE REMOVED. CLEANING IS ALSO TO TAKE PLACE IMMEDIATELY AFTER PERIODS OF RAINFALL DURING CONSTRUCTION.
13. ALL SERVICE TRENCHES TO BE BACKFILLED WITHIN 24 HOURS OF INSPECTION.
14. THE SITE FOREMAN IS TO CONTACT COUNCIL TO DISCUSS ANY MAJOR CHANGES TO SEDIMENT AND EROSION CONTROLS ON SITE PRIOR TO IMPLEMENTING THE CHANGES.
15. THE SITE FOREMAN WILL ENSURE CONTRACTORS ACCESS AND EXIT THE SITE USING ONLY APPROVED STABILISED ACCESS/EXIT POINTS AS DETAILED ON ENDORSED SEDIMENT AND EROSION CONTROL PLANS.
16. THE CONTRACTOR TO LIMIT STRIPPING OF TOPSOIL AND REMOVAL OF VEGETATION TO AREAS ESSENTIAL FOR UNDERTAKING THE WORKS.
17. DISTURBED AREAS TO BE RESTORED TO ORIGIINAL CONDITION AS SOON AS PRACTICABLE.
18. THE CONTRACTOR SHALL LIMIT VEHICLES AND PLANT MOVEMENT TO PARKING AREAS AND ACCESS ROUTES AS APPROVED OR ONLY IN AREAS WHERE WORK IS PROCEEDING.
19. CONTRACTOR TO RETAIN A COPY OF THE APPROVED "EROSION AND SEDIMENT CONTROL PLAN" DURING LAND DEVELOPMENT IN THE SITE OFFICE.
20. SILT FENCES TO BE PLACED AROUND ALL STOCK PILES ON THE LOWER SIDE.
21. DIVERSION SWALES, IF APPLICABLE, MUST BE STABLE BEFORE RECEIVING STORMWATER FLOWS FROM UPSTREAM.

TOPSOIL MANAGEMENT

1. TOPSOIL SHALL BE STOCKPILED SEPARATED FROM GENERAL EXCAVATED MATERIAL.

HOURS OF OPERATION

SITE WORKS TO BE CONDUCTED ONLY BETWEEN THE FOLLOWING HOURS:

- WEEKDAYS 7.00am TO 6.00pm
- SATURDAYS 8.00am TO 1.00pm
- NO WORK ON SUNDAYS OR PUBLIC HOLIDAYS

MAINTENANCE SCHEDULE

WEEKLY:

1. TURN OVER STABILISED CONSTRUCTION ENTRY MATERIAL AND RENEW WHEN REQUIRED.
2. CHECK AND REINSTATE SILT CONTROL FENCES

DAILY:

1. SWEEP AND REMOVE DIRT AND ANY OTHER BUILDING MATERIAL FROM GUTTERS, FOOTPATHS OR ROADWAYS ADJACENT TO THE SITE BY CLOSE OF BUSINESS AND PRIOR TO RAIN AND WHEN REQUIRED. ALL NECESSARY STEPS SHOULD BE TAKEN THAT ARE PRACTICAL AND REASONABLE TO MINIMISE DUST POLLUTION ON LAND DEVELOPMENT AND CONSTRUCTION SITE.

DURING/AFTER WET WEATHER:

1. LIMIT CONSTRUCTION VEHICLE ACCESS TO SITE DURING AND IMMEDIATELY FOLLOWING WET WEATHER.
2. TESTING AND TREATMENT (FLOCCULATION) OF ANY DIRTY WATER DOWNSTREAM WILL LIKELY BE REQUIRED PRIOR TO DISCHARGE INTO THE HARBOUR. CONTRACTOR IS TO CONSULT WITH SUPERINTENDENT ON DISCHARGE CRITERIA PRIOR TO DISCHARGE.
3. CONTRACTOR TO ENSURE THE EXISTING CULVERTS AND CHANNELS REMAIN FREE FROM ANY OBSTRUCTION DURING CONSTRUCTION AND DURING INCLEMENT WEATHER SO THAT NO FLOODING OCCURS UPSTREAM AND INTO ANY NEIGHBORING PROPERTIES.

TREES

ALL TREES SHALL BE PROTECTED BY THE FOLLOWING MEASURES:

1. PROTECTIVE FENCING CONSTRUCTED OF 1.8m HIGH CHAIN WIRE MESH SUPPORTED BY ROBUST POSTS SHALL BE INSTALLED AT A MINIMUM RADIUS OF 3m FROM THE TRUNK OF EACH TREE.THIS FENCING SHALL BE INSTALLED PRIOR TO THE COMMENCEMENT OF ANY WORKS AND REMAIN IN PLACE UNTIL ALL WORKS ARE COMPLETED.SIGNAGE SHALL BE ERECTED ON THE FENCE WITH THE FOLLOWING WORDS CLEARLY DISPLAYED "TREE PROTECTION ZONE.DO NOT ENTER."
2. THE TREE PROTECTION ZONE WITHIN THE PROTECTIVE FENCING SHALL BE MULCHED WITH A MAXIMUM DEPTH 75mm OF SUITABLE ORGANIC MULCH (WOOD CHIPS OR COMPOST LEAF CHIP MULCH) AND KEPT REGULARLY WATERED FOR THE DURATION OF THE WORKS.
3. NO DEVELOPMENT OR ASSOCIATED ACTIVITY IS PERMITTED WITHIN THE FENCED TREE PROTECTION ZONE FOR THE DURATION OF THE WORKS.
4. ANY APPROVED WORKS WITHIN THIS TREE PROTECTION ZONE SHALL BE UNDER THE DIRECTION OF,AND TO THE SATISFACTION OF, A SUITABLY QUALIFIED AND EXPERIENCED ARBORIST. PLANT EIGHT (8) INDIGENOUS CANOPY TREES (ANGOPHORA) WITHIN LOT 7 BUT NOT WITHIN 3 METRES OF A BUILDING, WITH A MINIMUM POT SIZE OF 25 LITRES.

REV	DATE	DESCRIPTION	AMD BY	APP BY
4	23.04.2024	ISSUED FOR APPROVAL	JLR	JMA
3	20.02.2024	ISSUED FOR DRAFT REVIEW	FMS	JMA
2	30.01.2024	ISSUED FOR CONCEPT DESIGN APPROVAL	FMS	JMA
1	29.01.2024	ISSUED FOR CONCEPT DESIGN APPROVAL	FMS	JMA

GPG Australia Pty Ltd

MAKER ENG

DRAWN: F.SOMERS	DESIGNED: J.RUSHTON
DRAFT CHECK: J.AGUSTIN	DESIGN CHECK: H.SMITH
APPROVED: J.AGUSTIN	

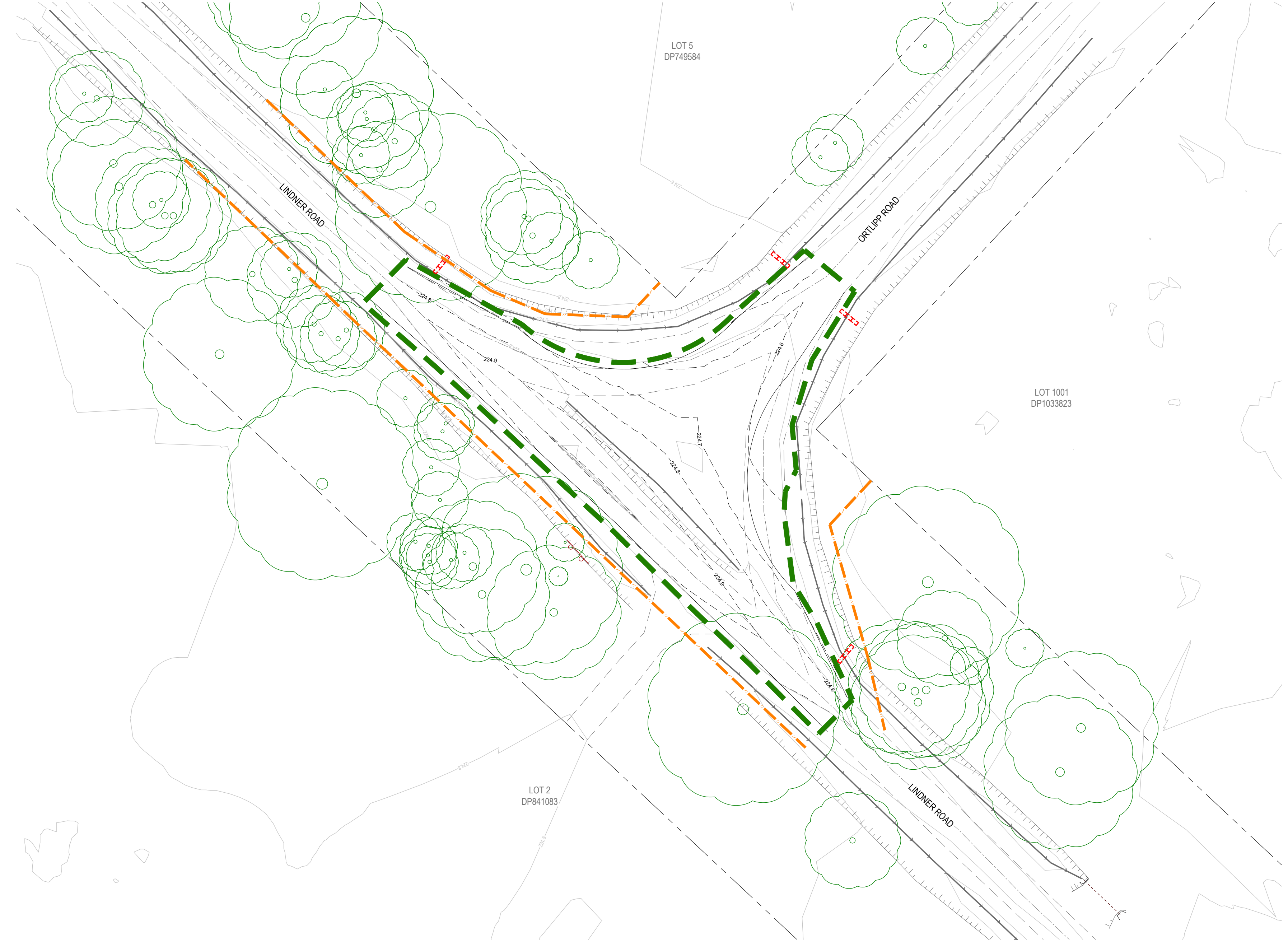
ISSUED FOR APPROVAL

GLENELLEN SOLAR FARM ROAD UPGRADES
DETAILED DESIGN
SOIL AND WATER MANAGEMENT NOTES

DRAWING NUMBER	SHEET No.	ORIG. SIZE	REVISION
MKRV0065-203-C1500		A1	4

Job Number, 11/10/2024, 4:38 PM

C:\12dSdata\12DSYNERGY\MKRV0065 Glenellen Solar Farm_198\02 Design\Drawings\02 Stage 01\Xrefs\X-MKRV0065-201-GE-MKR A1.dwg



LEGEND

PROPOSED

- CIVIL WORKS BOUNDARY
- TEMPORARY FENCING-TREE PROTECTION
- SEDIMENT FENCE
- STRAW BALES
- CONTOURS (0.2m)

EXISTING

- LOT BOUNDARY
- CONTOURS (0.2m)
- TREE (TO BE RETAINED)
- OPEN DRAIN
- TOP OF BATTER

NOTES:

1. TREE PROTECTION TO BE IN ACCORDANCE WITH ARBORIST REPORT AND COUNCIL STANDARDS

BEFORE YOU DIG
www.byda.com.au

UTILITY INFORMATION SHOWN ON THE PLANS DOES NOT DEPICT ANY MORE THAN THE PRESENCE OF A SERVICE, BASED ON AVAILABLE DOCUMENTARY EVIDENCE. THE PRESENCE OF A UTILITY SERVICE, ITS SIZE AND LOCATION SHOULD BE CONFIRMED BY FIELD INSPECTION, PRIOR TO THE COMMENCEMENT OF WORKS AND THE RELEVANT UTILITY PLANS OBTAINED BY DIALLING PH 1100 (BEFORE YOU DIG). CAUTION SHOULD BE EXERCISED WHEN WORKING IN THE VICINITY OF ALL UTILITY SERVICES.

Josh Rushton, 11/11/2020 4:38 PM

REV	DATE	DESCRIPTION	AMD BY	APP BY
4	23.04.2024	ISSUED FOR APPROVAL	JLR	JMA
3	20.02.2024	ISSUED FOR DRAFT REVIEW	FMS	JMA
2	30.01.2024	ISSUED FOR CONCEPT DESIGN APPROVAL	FMS	JMA
1	29.01.2024	ISSUED FOR CONCEPT DESIGN APPROVAL	FMS	JMA

0 2 4 6 8 10m
SCALE 1:200 AT ORIGINAL SIZE

GPG Australia Pty Ltd

MAKER ENG

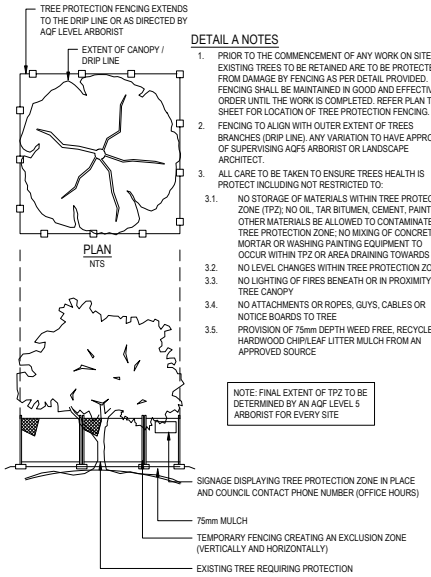
DRAWN: F.SOMERS	DESIGNED: J.RUSHTON
DRAFT CHECK: J.AGUSTIN	DESIGN CHECK: H.SMITH
APPROVED: J.AGUSTIN	

ISSUED FOR APPROVAL

GLENELLEN SOLAR FARM ROAD UPGRADES
DETAILED DESIGN
SOIL AND WATER MANAGEMENT LAYOUT PLAN

DRAWING NUMBER	SHEET No.	ORIG. SIZE	REVISION
MKRV0065-203-C1501		A1	4

C:\12dS\data\12DSYNERGY\MRKV0065 Glenellen Solar Farm_198\02 Design\Drawings\02 Stage 01\Xrefs\X-MKRV0065-201-GE-MKR A1.dwg



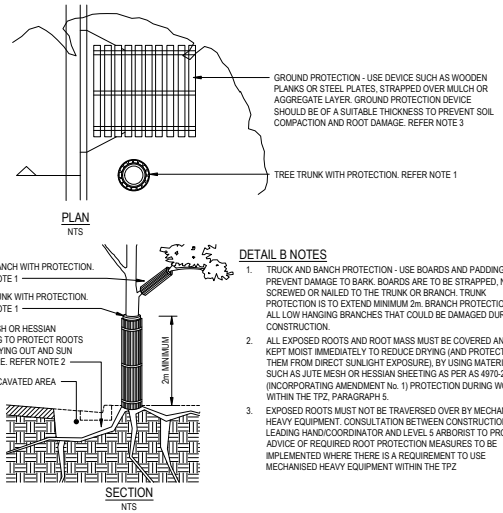
DETAIL A NOTES

1. PRIOR TO THE COMMENCEMENT OF ANY WORK ON SITE, EXISTING TREES TO BE RETAINED ARE TO BE PROTECTED FROM DAMAGE BY FENCING AS PER DETAIL PROVIDED. FENCING SHALL BE MAINTAINED IN GOOD AND EFFECTIVE ORDER UNTIL THE WORK IS COMPLETED. REFER PLAN THIS SHEET FOR LOCATION OF TREE PROTECTION FENCING.
2. FENCING TO ALIGN WITH OUTER EXTENT OF TREES BRANCHES (DRIP LINE). ANY VARIATION TO HAVE APPROVAL OF SUPERVISING AQF5 ARBORIST OR LANDSCAPE ARCHITECT.
3. ALL CARE TO BE TAKEN TO ENSURE TREES HEALTH IS PROTECT INCLUDING NOT RESTRICTED TO:
   - 3.1. NO STORAGE OF MATERIALS WITHIN TREE PROTECTION ZONE (TPZ); NO OIL, TAR BITUMEN, CEMENT, PAINT, OR OTHER MATERIALS BE ALLOWED TO CONTAMINATE TREE PROTECTION ZONE; NO MIXING OF CONCRETE, MORTAR OR WASHING PAINTING EQUIPMENT TO OCCUR WITHIN TPZ OR AREA DRAINING TOWARDS TPZ.
   - 3.2. NO LEVEL CHANGES WITHIN TREE PROTECTION ZONE
   - 3.3. NO LIGHTING OF FIRES BENEATH OR IN PROXIMITY TO TREE CANOPY
   - 3.4. NO ATTACHMENTS OR ROPES, GUYS, CABLES OR NOTICE BOARDS TO TREE
   - 3.5. PROVISION OF 75mm DEPTH WEED FREE, RECYCLED HARDWOOD CHIP/LEAF LITTER MULCH FROM AN APPROVED SOURCE

NOTE: FINAL EXTENT OF TPZ TO BE DETERMINED BY AN AQF LEVEL 5 ARBORIST FOR EVERY SITE

DETAIL A
TREE PROTECTION ZONE (TPZ) FENCING
(REFERENCE AS 4790)

HOLD POINT
NO EXCAVATION IS TO OCCUR WITHIN THE TREE PROTECTION ZONE. STOP WORK AND CONTACT AN AQF LEVEL 5 ARBORIST BEFORE PROCEEDING ANY FURTHER.

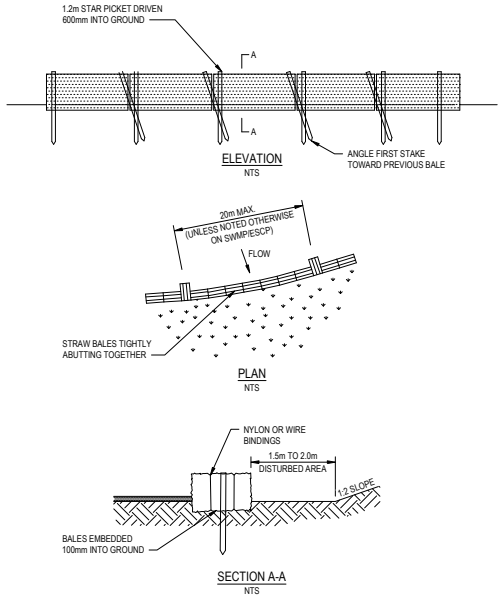


DETAIL B NOTES

1. TRUCK AND BANCH PROTECTION - USE BOARDS AND PADDING TO PREVENT DAMAGE TO BARK. BOARDS ARE TO BE STRAPPED, NOT SCREWED OR NAILED TO THE TRUNK OR BRANCH. TRUNK PROTECTION IS TO EXTEND MINIMUM 2m. BRANCH PROTECTION TO ALL LOW HANGING BRANCHES THAT COULD BE DAMAGED DURING CONSTRUCTION.
2. ALL EXPOSED ROOTS AND ROOT MASS MUST BE COVERED AND KEPT MOIST IMMEDIATELY TO REDUCE DRYING (AND PROTECT THEM FROM DIRECT SUNLIGHT EXPOSURE), BY USING MATERIALS SUCH AS JUTE MESH OR HESSIAN SHEETING AS PER AS 4970-2009 (INCORPORATING AMENDMENT No. 1) PROTECTION DURING WORKS WITHIN THE TPZ, PARAGRAPH 5.
3. EXPOSED ROOTS MUST NOT BE TRAVERSED OVER BY MECHANISED HEAVY EQUIPMENT. CONSULTATION BETWEEN CONSTRUCTION LEADING HAND/COORDINATOR AND LEVEL 5 ARBORIST TO PROVIDE ADVICE OF REQUIRED ROOT PROTECTION MEASURES TO BE IMPLEMENTED WHERE THERE IS A REQUIREMENT TO USE MECHANISED HEAVY EQUIPMENT WITHIN THE TPZ

DETAIL B
TREE PROTECTION - TYPICAL TREE TRUNK, BRANCH AND ROOT

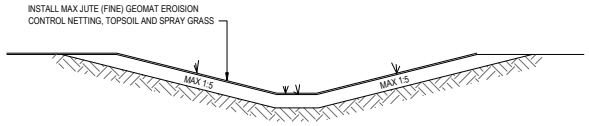
TREES ON DEVELOPMENT SITES TREE PROTECTION DETAILS
NTS



GENERAL CONSTRUCTION NOTES:

1. CONSTRUCTION STRAW BALE FILTER AS CLOSE AS POSSIBLE TO PARALLEL TO THE CONTOURS OF THE SITE OR THE TOE OF A SLOPE
2. PLACE BALES LENGTHWISE IN A ROW WITH ENDS TIGHTLY ABUTTING. USE STRAW TO FILL ANY GAPS BETWEEN BALES. STAIRS TO BE PLACED PARALLEL TO GROUND
3. MAXIMUM HEIGHT OF FILTER IS ONE BALE
4. ON SOFT MATERIALS, EMBED EACH BALE IN THE GROUND 75mm TO 100mm AND ANCHOR WITH TWO 1.2 STAR PICKETS. ANGLE THE FIST STAKE IN EACH BALE TOWARDS THE PREVIOUSLY LAID BALE. DRIVE STAKES 600mm INTO THE GROUND AND FLUSH WITH THE TOP OF THE BALES
5. WHERE A STRAW BALE FILTER IS CONSTRUCTED DOWNSLOW FROM THE TOE OF THE BATTER

STRAW BALE FILTER SD 6-7
NTS



TYPICAL OPEN DRAIN
NTS

REV	DATE	DESCRIPTION	AMD BY	APP BY
4	23.04.2024	ISSUED FOR APPROVAL	JLR	JMA
3	20.02.2024	ISSUED FOR DRAFT REVIEW	FMS	JMA
2	30.01.2024	ISSUED FOR CONCEPT DESIGN APPROVAL	FMS	JMA
1	29.01.2024	ISSUED FOR CONCEPT DESIGN APPROVAL	FMS	JMA

GPG Australia Pty Ltd

MAKER ENG

DRAWN: F.SOMERS	DESIGNED: J.RUSHTON
DRAFT CHECK: J.AGUSTIN	DESIGN CHECK: H.SMITH
APPROVED: J.AGUSTIN	
ISSUED FOR APPROVAL	

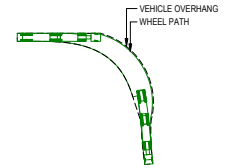
GLENELLEN SOLAR FARM ROAD UPGRADES
DETAILED DESIGN
SOIL AND WATER MANAGEMENT DETAILS

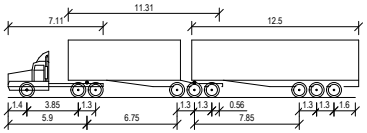
DRAWING NUMBER	SHEET No.	ORIG. SIZE	REVISION
MKRV0065-203-C1502		A1	4

Josh Rushton, 11/11/2024, 4:38 PM

C:\12dSdata\12DSYNERGY\MKRV0065 Glenellen Solar Farm_198\02 Design\Drawings\02 Stage 01\Xrefs\X-MKRV0065-201-GE-MKR A1.dwg

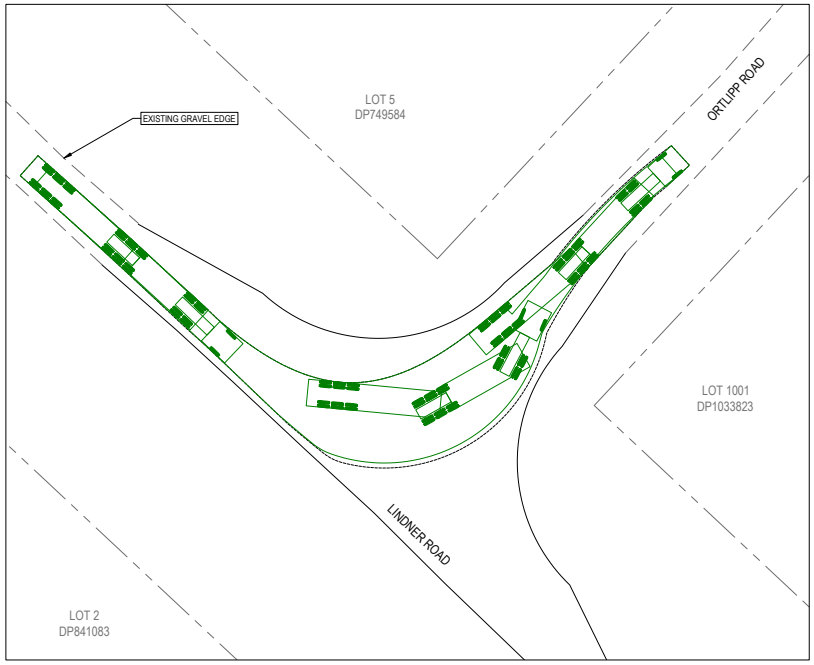
LEGEND



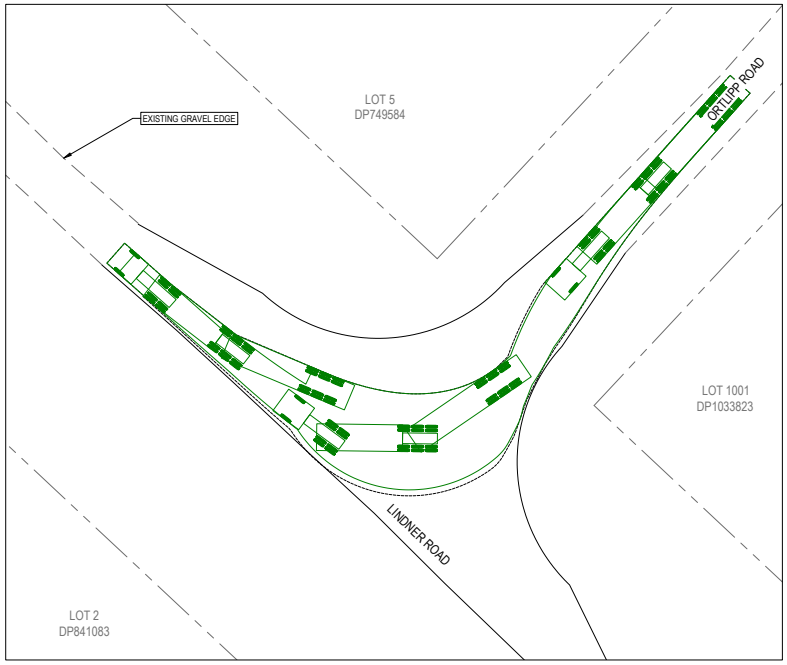


B-DOUBLE	
OVERALL LENGTH	26.000m
OVERALL WIDTH	2.500m
OVERALL BODY HEIGHT	4.300m
MIN BODY GROUND CLEARANCE	0.540m
TRACK WIDTH	2.500m
LOCK-TO-LOCK TIME	6.00s
KERB TO KERB TURNING RADIUS	12.500m

DESIGN VEHICLE



DESIGN VEHICLE



DESIGN VEHICLE

REV	DATE	DESCRIPTION	AMD BY	APP BY
4	23.04.2024	ISSUED FOR APPROVAL	JLR	JMA
3	20.02.2024	ISSUED FOR DRAFT REVIEW	FMS	JMA
2	30.01.2024	ISSUED FOR CONCEPT DESIGN APPROVAL	FMS	JMA
1	29.01.2024	ISSUED FOR CONCEPT DESIGN APPROVAL	FMS	JMA

0 2.5 5 7.5 10 12.5m
SCALE 1:250 AT ORIGINAL SIZE

GPG Australia Pty Ltd

MAKER ENG

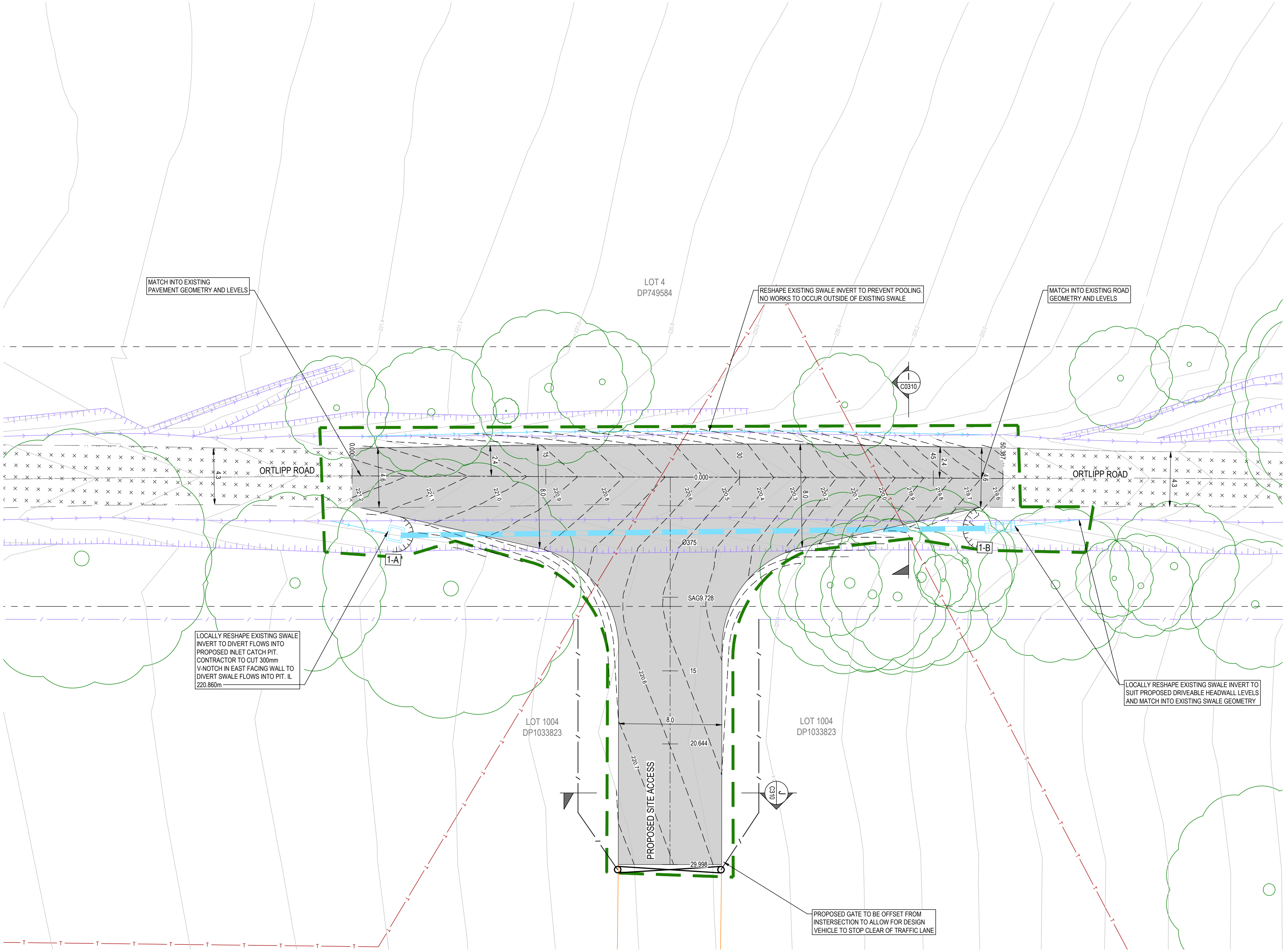
DRAWN: F.SOMERS	DESIGNED: J.RUSHTON
DRAFT CHECK: J.AGUSTIN	DESIGN CHECK: H.SMITH
APPROVED: J.AGUSTIN	
ISSUED FOR APPROVAL	

GLENELLEN SOLAR FARM ROAD UPGRADES
DETAILED DESIGN
SWEPT PATH ANALYSIS

DRAWING NUMBER	SHEET No.	ORIG. SIZE	REVISION
MKRV0065-203-C2050		A1	4

Job Number, 11/10/2024, 4:38 PM

C:\12dSdata\12DSYNERGY\MKRV0065 Glenellen Solar Farm_198\02 Design\Drawings\02 Stage 01\Xrefs\X-MKRV0065-201-GE-MKR A1.dwg



PROPOSED

LEGEND

- CIVIL WORKS BOUNDARY
- ROAD CENTERLINE AND CHAINAGE
- CONTOURS (0.2m)
- PAVEMENT
- EDGE OF BITUMEN
- GATE
- INDICATIVE FENCE
- STORMWATER PIPES
- DRIVEABLE HEADWALL

EXISTING

- LOT BOUNDARY
- PAVEMENT
- CONTOURS (0.2m)
- ELECTRICAL ABOVE GROUND
- TELECOMMUNICATIONS
- LINEMARKING
- EDGE OF BITUMEN
- TREE (TO BE RETAINED)
- OPEN DRAIN
- FENCE
- SIGN

FUTURE

- INTERNAL ACCESS

BEFORE YOU DIG
www.byda.com.au

UTILITY INFORMATION SHOWN ON THE PLANS DOES NOT DEPICT ANY MORE THAN THE PRESENCE OF A SERVICE, BASED ON AVAILABLE DOCUMENTARY EVIDENCE. THE PRESENCE OF A UTILITY SERVICE, ITS SIZE AND LOCATION SHOULD BE CONFIRMED BY FIELD INSPECTION, PRIOR TO THE COMMENCEMENT OF WORKS AND THE RELEVANT UTILITY PLANS OBTAINED BY DIALLING PH 1100 (BEFORE YOU DIG). CAUTION SHOULD BE EXERCISED WHEN WORKING IN THE VICINITY OF ALL UTILITY SERVICES.

REV	DATE	DESCRIPTION	AMD BY	APP BY
4	23.04.2024	ISSUED FOR APPROVAL	JLR	JMA
3	20.02.2024	ISSUED FOR DRAFT REVIEW	FMS	JMA
2	30.01.2024	ISSUED FOR CONCEPT DESIGN APPROVAL	FMS	JMA
1	29.01.2024	ISSUED FOR CONCEPT DESIGN APPROVAL	FMS	JMA

0 1.5 3.0 4.5 6.0 7.5m
SCALE 1:150 AT ORIGINAL SIZE

GPG Australia Pty Ltd

MAKER ENG

DRAWN: F.SOMERS	DESIGNED: J.RUSHTON
DRAFT CHECK: J.AGUSTIN	DESIGN CHECK: H.SMITH
APPROVED:	J.AGUSTIN

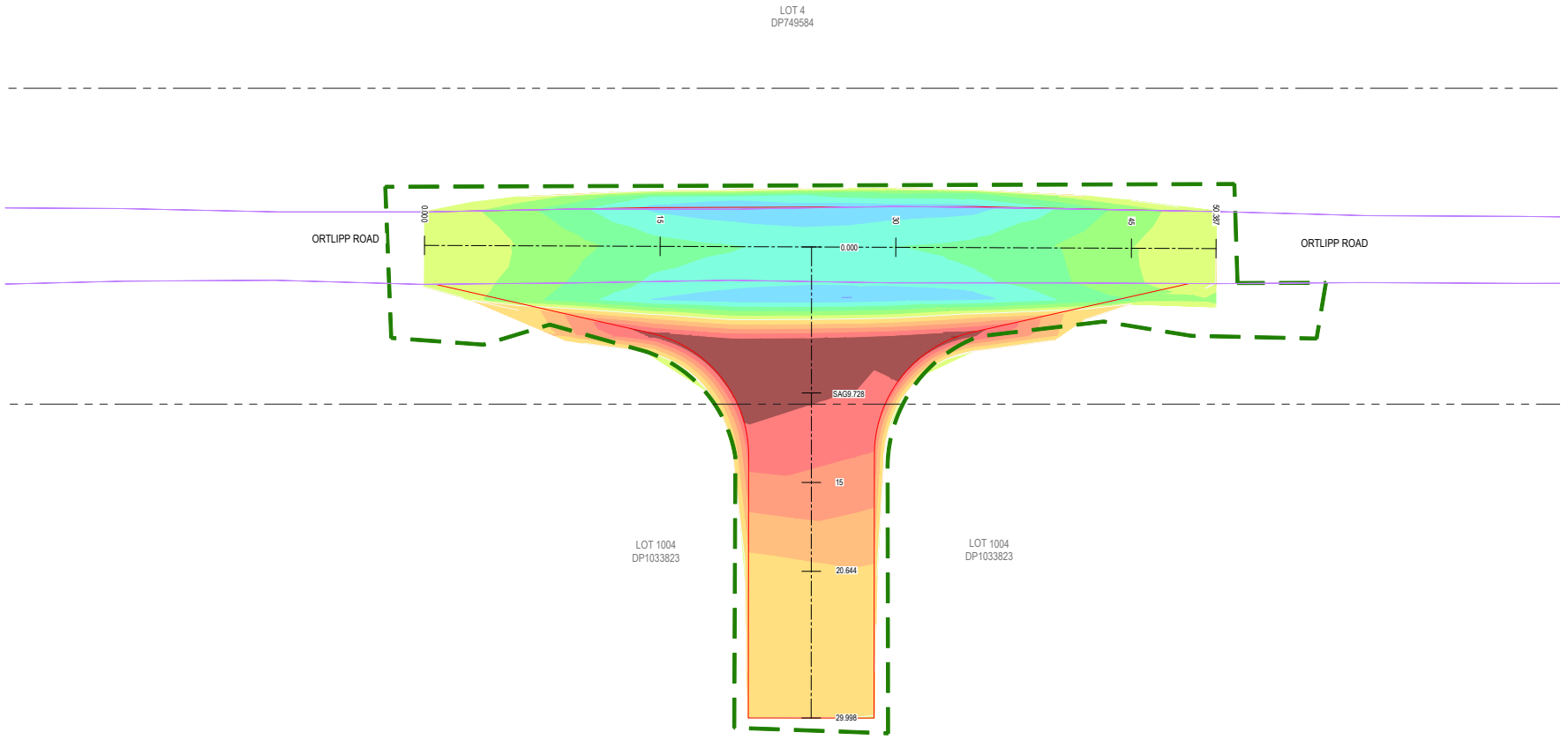
ISSUED FOR APPROVAL

GLENELLEN SOLAR FARM ROAD UPGRADES
DETAILED DESIGN
CIVIL WORKS LAYOUT PLAN

DRAWING NUMBER	SHEET No.	ORIG. SIZE	REVISION
MKRV0065-204-C0100		A1	4

Josh Rushton, 11/11/2020 4:38 PM

C:\12dS\data\12DSYNERGY\MRKV0065 Glenellen Solar Farm_198\02 Design\Drawings\02 Stage 01\Xrefs\X-MKRV0065-201-GE-MKR A1.dwg



LEGEND

PROPOSED

- CIVIL WORKS BOUNDARY
- EDGE OF BITUMEN
- GREATER THAN -0.3m
- -0.3m TO -0.25m
- -0.25m TO -0.2m
- -0.2m TO -0.15m
- -0.15m TO -0.1m
- -0.1m TO -0.05m
- -0.05m TO 0.0m
- 0.0m TO 0.05m
- 0.05m TO 0.1m
- 0.1m TO 0.15m
- 0.15m TO 0.2m
- 0.2m TO 0.25m
- 0.25m TO 0.3m
- 0.3m TO 0.35m
- 0.35m TO 0.4m
- 0.4m TO 0.45m
- GREATER THAN 0.45m

EXISTING

- LOT BOUNDARY
- EDGE OF BITUMEN

TOTAL EARTHWORKS

CUT	32.5 Cu.m
FILL	45.0 Cu.m
NET <FILL>	12.5 Cu.m

NOTES:

1. VOLUMES EXCLUDE SERVICE TRENCHES AND PAVEMENT

BEFORE YOU DIG www.byda.com.au

UTILITY INFORMATION SHOWN ON THE PLANS DOES NOT DEPICT ANY MORE THAN THE PRESENCE OF A SERVICE, BASED ON AVAILABLE DOCUMENTARY EVIDENCE. THE PRESENCE OF A UTILITY SERVICE, ITS SIZE AND LOCATION SHOULD BE CONFIRMED BY FIELD INSPECTION, PRIOR TO THE COMMENCEMENT OF WORKS AND THE RELEVANT UTILITY PLANS OBTAINED BY DIALLING PH 1100 (BEFORE YOU DIG). CAUTION SHOULD BE EXERCISED WHEN WORKING IN THE VICINITY OF ALL UTILITY SERVICES.

REV	DATE	DESCRIPTION	AMD BY	APP BY
4	23.04.2024	ISSUED FOR APPROVAL	JLR	JMA
3	20.02.2024	ISSUED FOR DRAFT REVIEW	FMS	JMA
2	30.01.2024	ISSUED FOR CONCEPT DESIGN APPROVAL	FMS	JMA
1	29.01.2024	ISSUED FOR CONCEPT DESIGN APPROVAL	FMS	JMA

0 1.5 3.0 4.5 6.0 7.5m
SCALE 1:150 AT ORIGINAL SIZE

GPG Australia Pty Ltd

MAKER ENG

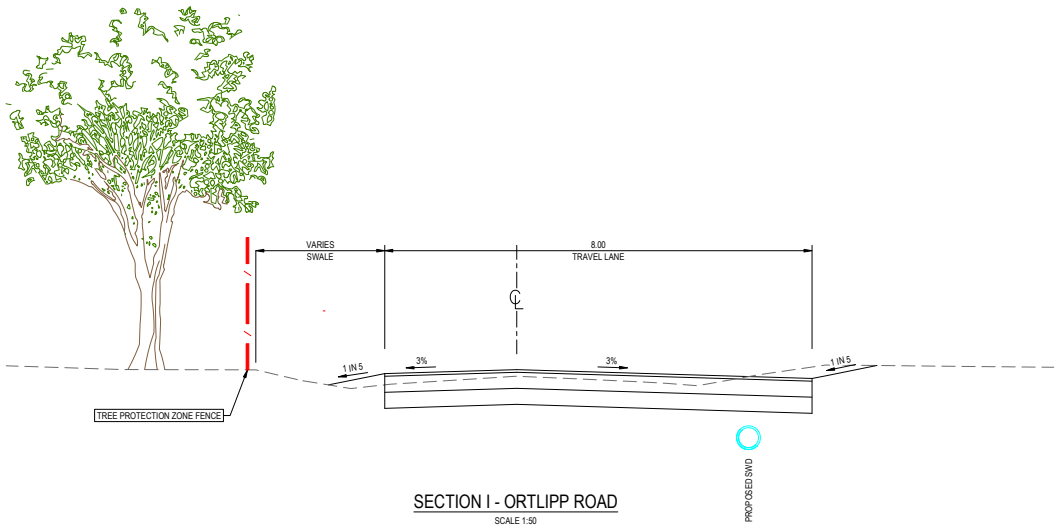
DRAWN: F.SOMERS	DESIGNED: J.RUSHTON
DRAFT CHECK: J.AGUSTIN	DESIGN CHECK: H.SMITH
APPROVED: J.AGUSTIN	
ISSUED FOR APPROVAL	

GLENELLEN SOLAR FARM ROAD UPGRADES
DETAILED DESIGN
BULK EARTHWORKS LAYOUT PLAN

DRAWING NUMBER	SHEET No.	ORIG. SIZE	REVISION
MKRV0065-204-C0200		A1	4

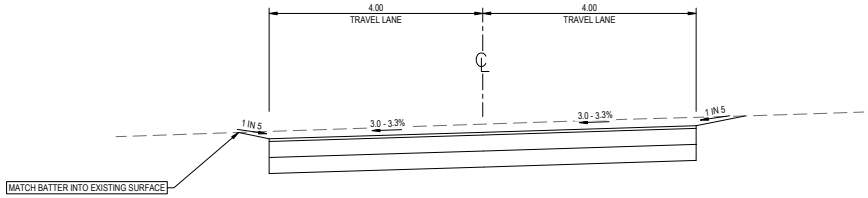
Job Number, 11/1/2024, 4:38 PM

C:\12dSdata\12DSYNERGY\MKRV0065 Glenellen Solar Farm_198\02 Design\Drawings\02 Stage 01\Xrefs\X-MKRV0065-201-GE-MKR A1.dwg



SECTION I - ORTLIPP ROAD

SCALE 1:50



SECTION J - PROPOSED SITE ACCESS

SCALE 1:50

REV	DATE	DESCRIPTION	AMD BY	APP BY
4	23.04.2024	ISSUED FOR APPROVAL	JLR	JMA
3	20.02.2024	ISSUED FOR DRAFT REVIEW	FMS	JMA
2	30.01.2024	ISSUED FOR CONCEPT DESIGN APPROVAL	FMS	JMA
1	29.01.2024	ISSUED FOR CONCEPT DESIGN APPROVAL	FMS	JMA

0 0.5 1.0 1.5 2.0 2.5m

SCALE 1:50 AT ORIGINAL SIZE

GPG Australia Pty Ltd

MAKER ENG

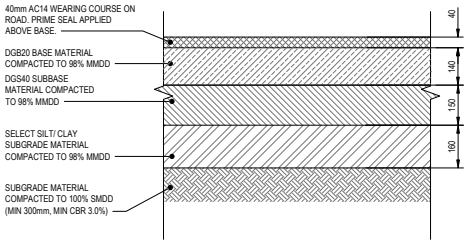
DRAWN: F.SOMERS	DESIGNED: J.RUSHTON
DRAFT CHECK: J.AGUSTIN	DESIGN CHECK: H.SMITH
APPROVED: J.AGUSTIN	
ISSUED FOR APPROVAL	

GLENELLEN SOLAR FARM ROAD UPGRADES
DETAILED DESIGN
TYPICAL SECTIONS

DRAWING NUMBER	SHEET No.	ORIG. SIZE	REVISION
MKRV0065-204-C0310		A1	4

Last Plotted: 11/11/2024 4:38 PM

C:\12dSdata\12DSYNERGY\MKRV0065 Glenellen Solar Farm_198\02 Design\Drawings\02 Stage 01\Xrefs\X-MKRV0065-201-GE-MKR A1.dwg

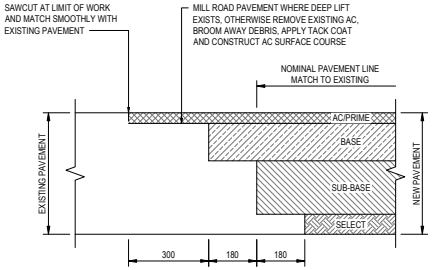


ASPHALT PAVEMENT TYPE 4

SCALE: 1:10

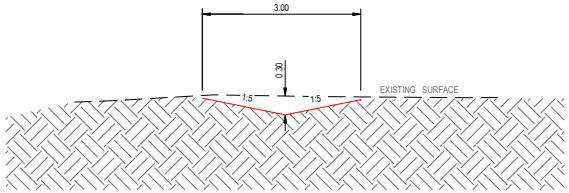
NOTES

1. SELECT FILL MATERIAL SHOULD HAVE A CBR>33% AND A PLASTICITY INDEX (PI)<15% IN ITS ORIGINAL STATE BEFORE ADDITION OF ADDITIVE.
2. SELECT FILL MATERIAL SHOULD BE MODIFIED WITH APPROPRIATE ADDITIVE IF CBR<33% AND/OR PI>15%.
3. SELECT FILL SPECIFICATION TAKEN FROM TINSW QA SPECIFICATION 3071.



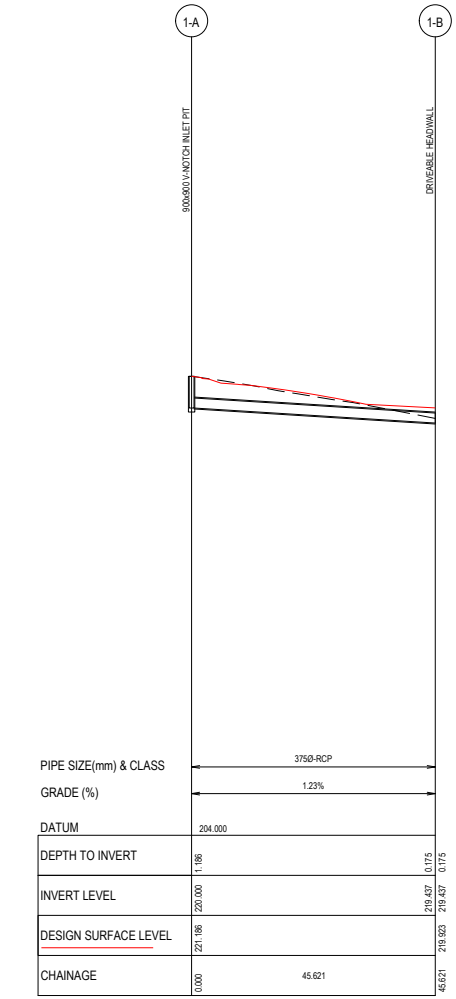
TYPICAL JUNCTION WITH EXISTING PAVEMENT

SCALE: 1:10



TYPICAL SWALE

SCALE 1:50



PIT SCHEDULE

PIT DATA								PIPE DATA						
PIT NAME	PIT TYPE	FALL THROUGH PIT (m)	DEPTH TO INVERT (m)	EASTING (m)	NORTHING (m)	LID LEVEL (m)	PIT SIZE	PIPE NAME	PIPE TYPE	UPSTREAM INVERT LEVEL (m)	DOWNSTREAM INVERT LEVEL (m)	PIPE DIAMATER (m)	PIPE LENGTH (m)	PIPE GRADE (%)
1-A	V-NOTCH INLET PIT		1.19	490993.387	6023846.280	221.186	900 x 900	1-A to 1-B	RCP	220.000	219.437	0.375	45.621	1.23
1-B	DRIVEABLE ENDWALL		0.38	491024.192	6023879.931	219.812	0							

REV	DATE	DESCRIPTION	AMD BY	APP BY
4	23.04.2024	ISSUED FOR APPROVAL	JLR	JMA
3	20.02.2024	ISSUED FOR DRAFT REVIEW	FMS	JMA
2	30.01.2024	ISSUED FOR CONCEPT DESIGN APPROVAL	FMS	JMA
1	29.01.2024	ISSUED FOR CONCEPT DESIGN APPROVAL	FMS	JMA

0 0.5 1.0 1.5 2.0 2.5m
SCALE 1:50 AT ORIGINAL SIZE

GPG Australia Pty Ltd

MAKER ENG

DRAWN: F.SOMERS	DESIGNED: J.RUSHTON
DRAFT CHECK: J.AGUSTIN	DESIGN CHECK: H.SMITH
APPROVED: J.AGUSTIN	
ISSUED FOR APPROVAL	

GLENELLEN SOLAR FARM ROAD UPGRADES
DETAILED DESIGN
CIVIL DETAILS

DRAWING NUMBER	SHEET No.	ORIG. SIZE	REVISION
MKRV0065-204-C0350		A1	4

Job Number, 11/10/2024, 4:38 PM

C:\12dSdata\12DSYNERGY\MKRV0065 Glenellen Solar Farm_198\02 Design\Drawings\02 Stage 01\Xrefs\X-MKRV0065-201-GE-MKR A1.dwg

PROPOSED

LEGEND

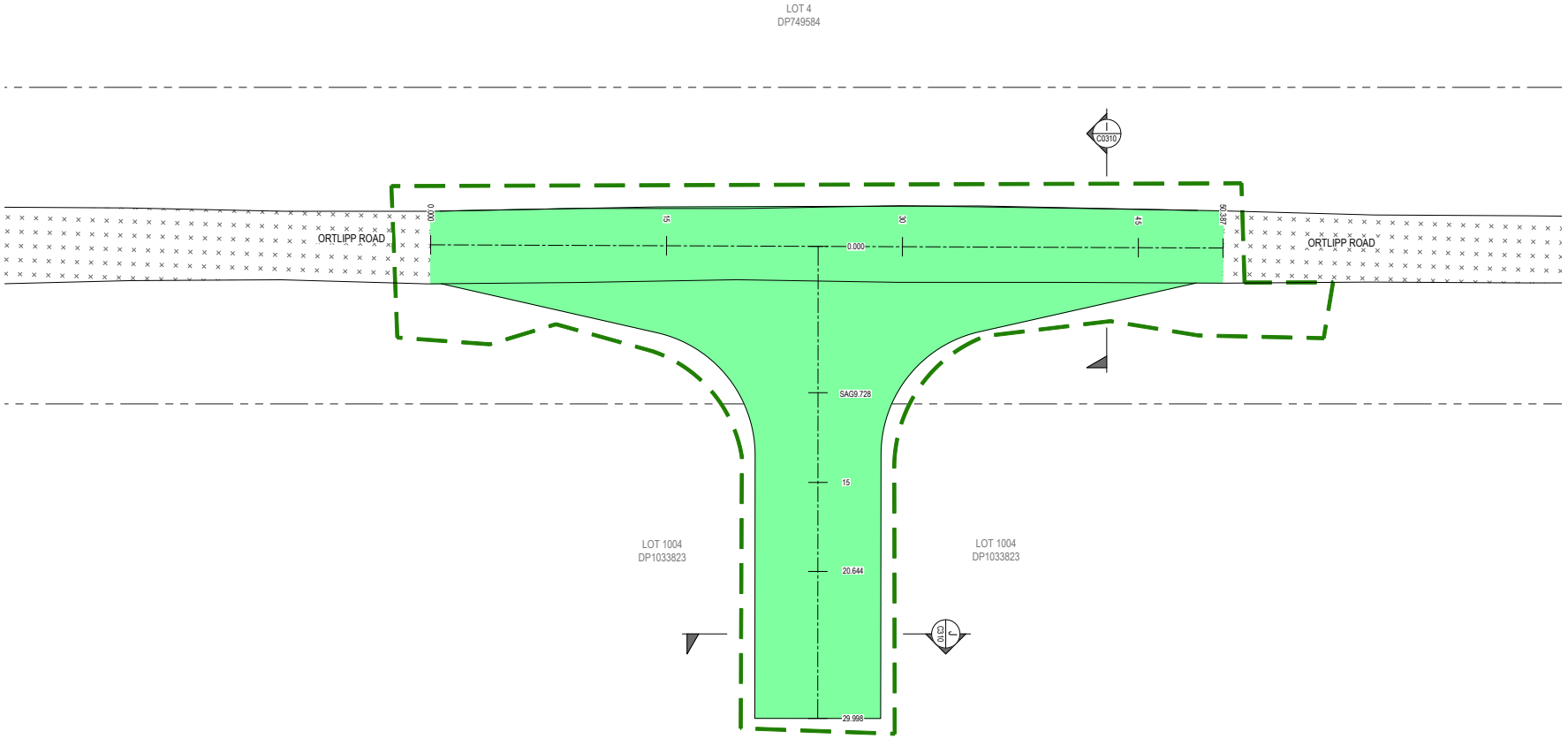
CIVIL WORKS BOUNDARY

FULL DEPTH PAVEMENT

EXISTING

LOT BOUNDARY

PAVEMENT



BEFORE YOU DIG www.byda.com.au

UTILITY INFORMATION SHOWN ON THE PLANS DOES NOT DEPICT ANY MORE THAN THE PRESENCE OF A SERVICE, BASED ON AVAILABLE DOCUMENTARY EVIDENCE. THE PRESENCE OF A UTILITY SERVICE, ITS SIZE AND LOCATION SHOULD BE CONFIRMED BY FIELD INSPECTION, PRIOR TO THE COMMENCEMENT OF WORKS AND THE RELEVANT UTILITY PLANS OBTAINED BY DIALLING PH 1100 (BEFORE YOU DIG). CAUTION SHOULD BE EXERCISED WHEN WORKING IN THE VICINITY OF ALL UTILITY SERVICES.

REV	DATE	DESCRIPTION	AMD BY	APP BY
4	23.04.2024	ISSUED FOR APPROVAL	JLR	JMA
3	20.02.2024	ISSUED FOR DRAFT REVIEW	FMS	JMA
2	30.01.2024	ISSUED FOR CONCEPT DESIGN APPROVAL	FMS	JMA
1	29.01.2024	ISSUED FOR CONCEPT DESIGN APPROVAL	FMS	JMA

0 1.5 3.0 4.5 6.0 7.5m

SCALE 1:150 AT ORIGINAL SIZE

GPG Australia Pty Ltd

MAKER ENG

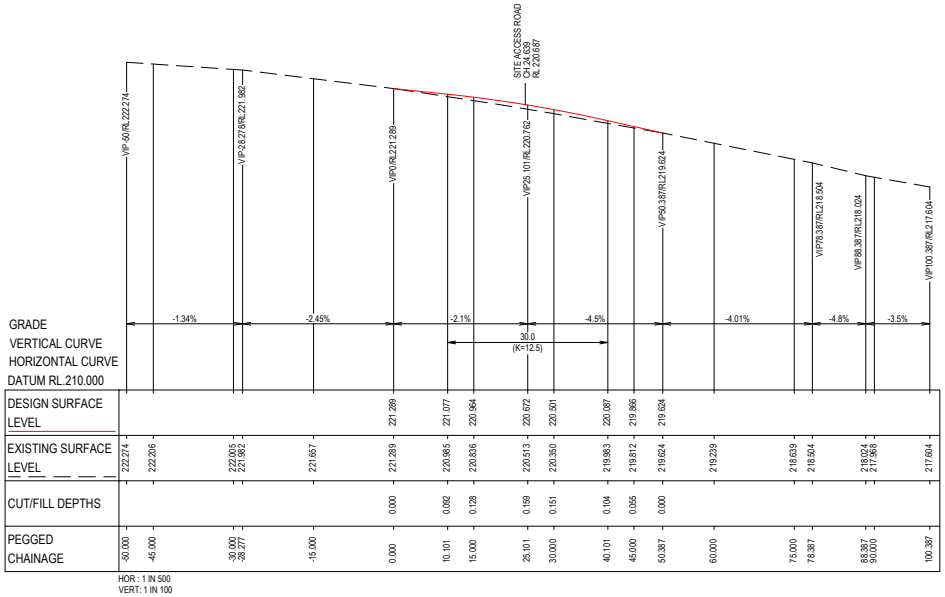
DRAWN: F.SOMERS	DESIGNED: J.RUSHTON
DRAFT CHECK: J.AGUSTIN	DESIGN CHECK: H.SMITH
APPROVED: J.AGUSTIN	
ISSUED FOR APPROVAL	

GLENELLEN SOLAR FARM ROAD UPGRADES
DETAILED DESIGN
PAVEMENT LAYOUT PLAN

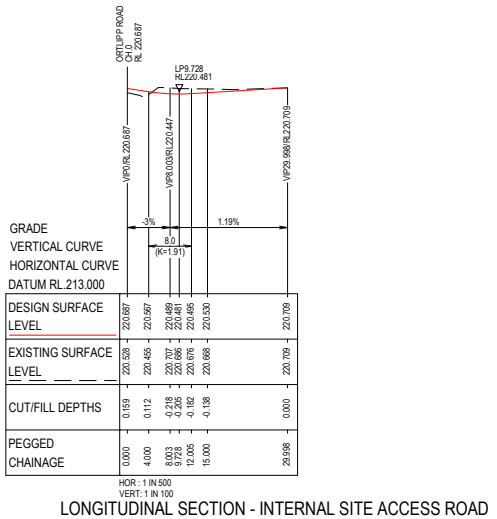
DRAWING NUMBER	SHEET No.	ORIG. SIZE	REVISION
MKRV0065-204-C0400		A1	4

Job Number, 11/10/2024, 4:38 PM

C:\12dSdata\12DSYNERGY\MKRV0065 Glenellen Solar Farm_198\02 Design\Drawings\02 Stage 01\Xrefs\X-MKRV0065-201-GE-MKR A1.dwg



LONGITUDINAL SECTION - ORTLIPP ROAD



LONGITUDINAL SECTION - INTERNAL SITE ACCESS ROAD

REV	DATE	DESCRIPTION	AMD BY	APP BY
4	23.04.2024	ISSUED FOR APPROVAL	JLR	JMA
3	20.02.2024	ISSUED FOR DRAFT REVIEW	FMS	JMA
2	30.01.2024	ISSUED FOR CONCEPT DESIGN APPROVAL	FMS	JMA
1	29.01.2024	ISSUED FOR CONCEPT DESIGN APPROVAL	FMS	JMA

HORIZONTAL 1:500 AT ORIGINAL SIZE 0 5 10 15 20 25m
VERTICAL 1:100 AT ORIGINAL SIZE 0 1 2 3 4 5m

GPG Australia Pty Ltd

MAKER ENG

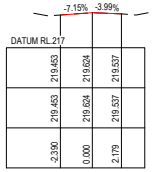
DRAWN: F.SOMERS	DESIGNED: J.RUSHTON
DRAFT CHECK: J.AGUSTIN	DESIGN CHECK: H.SMITH
APPROVED: J.AGUSTIN	
ISSUED FOR APPROVAL	

GLENELLEN SOLAR FARM ROAD UPGRADES
DETAILED DESIGN
ROAD LONGITUDINAL SECTIONS

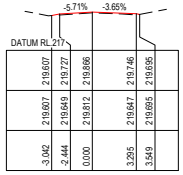
DRAWING NUMBER	SHEET No.	ORIG. SIZE	REVISION
MKRV0065-204-C0500		A1	4

Josh Rushton, 11/11/2024, 4:38 PM

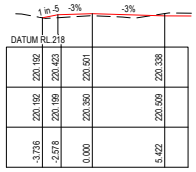
C:\12dSdata\12DSYNERGY\MKRV0065 Glenellen Solar Farm_198\02 Design\Drawings\02 Stage 01\Xrefs\X-MKRV0065-201-GE-MKR A1.dwg



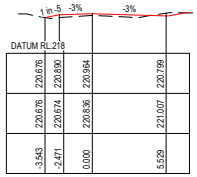
CH 50.387



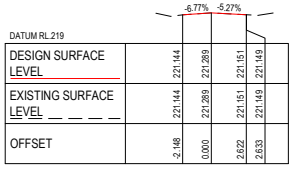
CH 45.000



CH 30.000



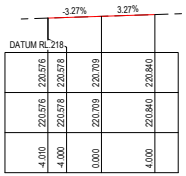
CH 15.000



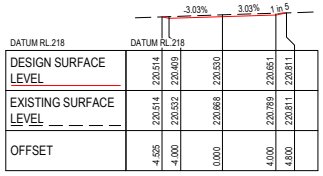
CH 0.000

ORTLIP ROAD

SCALE 1:200



CH 29.998



CH 15.000

INTERNAL SITE ACCESS

SCALE 1:200

REV	DATE	DESCRIPTION	AMD BY	APP BY
4	23.04.2024	ISSUED FOR APPROVAL	JLR	JMA
3	20.02.2024	ISSUED FOR DRAFT REVIEW	FMS	JMA
2	30.01.2024	ISSUED FOR CONCEPT DESIGN APPROVAL	FMS	JMA
1	29.01.2024	ISSUED FOR CONCEPT DESIGN APPROVAL	FMS	JMA

0 2 4 6 8 10m
SCALE 1:200 AT ORIGINAL SIZE

GPG Australia Pty Ltd

MAKER ENG

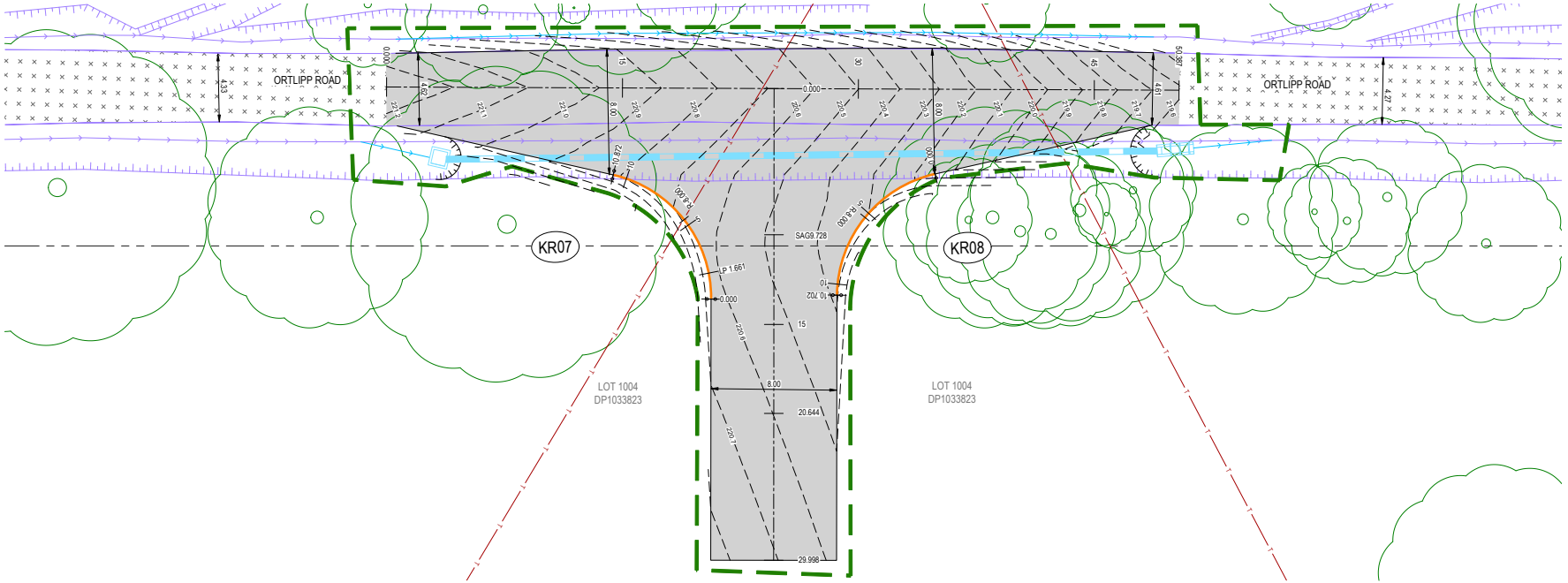
DRAWN: F.SOMERS	DESIGNED: J.RUSHTON
DRAFT CHECK: J.AGUSTIN	DESIGN CHECK: H.SMITH
APPROVED: J.AGUSTIN	
ISSUED FOR APPROVAL	

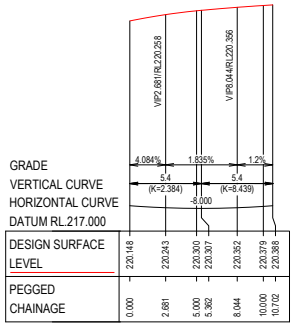
GLENELLEN SOLAR FARM ROAD UPGRADES
DETAILED DESIGN
ROAD CROSS SECTIONS

DRAWING NUMBER	SHEET No.	ORIG. SIZE	REVISION
MKRV0065-204-C0600		A1	4

Josh Rushton, 11/11/2024, 4:38 PM

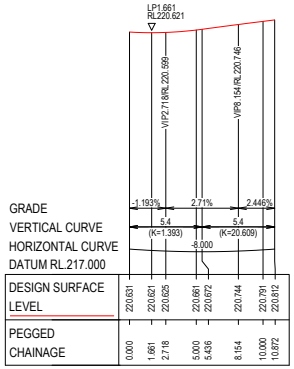
C:\12dSdata\12DSYNERGY\MKRV0065 Glenellen Solar Farm_198\02 Design\Drawings\02 Stage 01\Xrefs\X-MKRV0065-201-GE-MKR A1.dwg





HOR : 1 IN 200
VERT: 1 IN 40

LONGITUDINAL SECTION - KR 08



HOR : 1 IN 200
VERT: 1 IN 40

LONGITUDINAL SECTION - KR 07

BEFORE YOU DIG
www.byda.com.au

UTILITY INFORMATION SHOWN ON THE PLANS DOES NOT DEPICT ANY MORE THAN THE PRESENCE OF A SERVICE, BASED ON AVAILABLE DOCUMENTARY EVIDENCE. THE PRESENCE OF A UTILITY SERVICE, ITS SIZE AND LOCATION SHOULD BE CONFIRMED BY FIELD INSPECTION, PRIOR TO THE COMMENCEMENT OF WORKS AND THE RELEVANT UTILITY PLANS OBTAINED BY DIALLING PH 1100 (BEFORE YOU DIG). CAUTION SHOULD BE EXERCISED WHEN WORKING IN THE VICINITY OF ALL UTILITY SERVICES.

REV	DATE	DESCRIPTION	AMD BY	APP BY
4	23.04.2024	ISSUED FOR APPROVAL	JLR	JMA
3	20.02.2024	ISSUED FOR DRAFT REVIEW	FMS	JMA
2	30.01.2024	ISSUED FOR CONCEPT DESIGN APPROVAL	FMS	JMA
1	29.01.2024	ISSUED FOR CONCEPT DESIGN APPROVAL	FMS	JMA

0 1.5 3.0 4.5 6.0 7.5m
SCALE 1:150 AT ORIGINAL SIZE

GPG Australia Pty Ltd

MAKER ENG

DRAWN: F.SOMERS	DESIGNED: J.RUSHTON
DRAFT CHECK: J.AGUSTIN	DESIGN CHECK: H.SMITH
APPROVED: J.AGUSTIN	
ISSUED FOR APPROVAL	

GLENELLEN SOLAR FARM ROAD UPGRADES
DETAILED DESIGN
KERB RETURN LAYOUT AND SECTIONS

DRAWING NUMBER	SHEET No.	ORIG. SIZE	REVISION
MKRV0065-204-C0700		A1	4

Josh Rushton, 11/10/2024, 4:38 PM

C:\12dSData\12DSYNERGY\MKRV0065 Glenellen Solar Farm_198\02 Design\Drawings\02 Stage 01\Xrefs\X-MKRV0065-201-GE-MKR A1.dwg

GENERAL NOTES

1. REFER TO VOLUME 1 OF MANAGING URBAN STORMWATER: SOILS AND CONSTRUCTION, LANDCOM, 2004 (THE BLUE BOOK) AND OTHER GUIDELINES APPROVED OR ENDORSED BY THE ENVIRONMENTAL PROTECTION AUTHORITY.
2. WASTE ENCLOSURES WILL BE USED FOR ALL RUBBISH ON SITE AND RUBBISH REMOVED FROM ENCLOSURE(S) WHEN REQUIRED OR FULL.
3. CONTRACTOR TO ENSURE ALL APPROVALS ARE OBTAINED PRIOR TO COMMENCEMENT OF CONSTRUCTION.

DUST MANAGEMENT

WHERE CONSTRUCTION WORK GENERATES DUST, ALL REASONABLE AND PRACTICABLE MEASURES SHOULD BE TAKEN TO MINIMISE THAT DUST.

THIS CAN OFTEN BE ACHIEVED BY:

1. STRIPPING AREAS PROGRESSIVELY AND ONLY WHERE IT IS NECESSARY FOR WORKS TO OCCUR.
2. EMPLOYING STABILISING METHODS SUCH AS MATTING, GRASSING OR MULCH.
3. DAMPENING THE GROUND WITH A LIGHT WATER SPRAY.
4. ROUGHENING SURFACE OF EXPOSED SOIL.
5. COVERING STOCKPILES AND LOCATING THEM WHERE THEY ARE PROTECTED FROM THE WIND.
6. RESTRICTING VEHICLE MOVEMENTS.
7. ALL LOADS TO BE COVERED WHEN TRANSPORTING MATERIAL OFF SITE.
8. CONSTRUCTING WIND BREAKS SUCH AS WIND FENCES.
9. A WATER CART OR SUFFICIENT WATER SPRAYS SHALL BE MADE AVAILABLE AT ALL TIMES. IN ADVERSE CONDITIONS WHEN DUST CANNOT BE ADEQUATELY CONTROLLED, WORKS WILL CEASE IN THESE AREAS UNTIL CONDITIONS IMPROVE.
10. WATER SHALL BE APPLIED TO SUPPRESS DUST FROM OPEN EARTHWORKS AS WELL AS UNPROTECTED STOCKPILES.
11. AREAS OF COMPLETED EARTHWORKS SHALL BE PROGRESSIVELY REHABILITATED WITH DRYLAND GRASS AND FENCED OFF AS SOON AS PRACTICABLE TO PREVENT FURTHER EROSION.
12. ALL WORK TO STOP IF DUST CONTINUES TO LEAVE SITE WHEN ALL ABOVE METHODS HAVE BEEN UNDERTAKEN eg. WINDS OVER 10m/s FOR A PERIOD GREATER THAN 10 MINUTES.

NOISE & DISRUPTION

ENSURE ALL CONSTRUCTION WORK THAT GENERATES NOISE IS MANAGED IN ACCORDANCE WITH THE EPA INTERIM CONSTRUCTION NOISE GUIDELINES

MONDAY - FRIDAY	7AM TO 6PM
SATURDAY	8AM TO 1PM
SUNDAY & PUBLIC HOLIDAYS	WORKS PROHIBITED

IN ADDITION:

1. SCHEDULE NOISY ACTIVITIES FOR THE LEAST SENSITIVE TIMES OF THE DAY SUCH AS MID-MORNING OR MID-AFTERNOON.
2. SELECT MACHINERY THAT PRODUCES LESS NOISE; AND

ENSURE MACHINERY IS WELL MAINTAINED.

DISPOSAL OF SPOIL

BEFORE DISPOSAL OF SPOIL OFF SITE, THE FOLLOWING INFORMATION MUST BE PROVIDED TO THE SUPERINTENDENT

1. WHERE WILL SPOIL ORIGINATE FROM.
2. WHO IS DISPOSING OF THE SPOIL.
3. WHERE THE SPOIL WILL BE TAKEN.
4. THE AMOUNT OF SPOIL TO BE TAKEN AWAY.
5. DESCRIPTION OF THE TYPE OF SPOIL TAKEN AWAY.
6. DETAILS OF HOW RECORDS WILL BE KEPT; AND
7. TIME FRAME TO COMPLETE WORKS

SPOIL MAY BE TAKEN TO AN APPROVED LANDFILL SITE WITHOUT APPROVAL. HOWEVER, IF THE SPOIL IS TAKEN TO AN AREA OTHER THAN APPROVED LANDFILL SITE, ENSURE THE ACCEPTOR OF THE SPOIL IS AWARE OF THE REQUIREMENTS SETOUT IN SECTION 8.2 OF THE ENVIRONMENT PROTECTION GUIDELINES FOR CONSTRUCTION AND LAND DEVELOPMENT IN THE ACT.

FIRE

BURNING OF WASTE MATERIALS ON THE SITE, SUCH AS PLASTICS, CHEMICALS OR WOOD THAT MAY BE PAINTED, CHEMICALLY TREATED OR CONTAMINATED WITH CHEMICALS IS ILLEGAL. A FIRE MAY BE PERMITTED FOR HEATING PURPOSES PROVIDED IT IS IN A BRAZIER OR CONSTRUCTED FIREPLACE. ONLY SEASONED, UNTREATED TIMBER CAN BE BURNT FOR HEATING PURPOSES.

ALL NOTES ARE TO BE READ IN CONJUNCTION WITH GREATER HUME SHIRE COUNCIL AND TRANSPORT FOR NSW (TFNSW) ENGINEERING SPECIFICATIONS. SHOULD A CONFLICT ARISE TRANSPORT FOR NSW (TFNSW) SPECIFCATIONS ARE TO TAKE PRECEDENCE

SEDIMENT CONTROL NOTES

1. SEDIMENT AND EROSION CONTROL DEVICES TO BE INSTALLED AND FULLY OPERATIONAL PRIOR TO STRIPPING OF SITE TOPSOIL.
2. SEDIMENT AND EROSION CONTROL DEVICES NOT TO BE DECOMMISSIONED UNTIL AT LEAST 70% REVEGETATION COVER HAS BEEN ESTABLISHED.
3. STOCK PILE/S TO BE LOCATED AWAY FROM DRAINAGE LINES AND SURFACE FLOW PATHS, CONTOURED STRIATIONS OR FURROWS TO BE PROVIDED TO STOCK PILES TO MINIMISE EROSION.
4. STABILISED CONSTRUCTION ENTRANCE TO BE CONSTRUCTED PRIOR TO ACCESS TO SITE BY CONSTRUCTION VEHICLES. AGGREGATE TO BE TURNED WHEN SEDIMENT BUILDS UP AND RENEWED WEEKLY OR WHEN REQUIRED.
5. WHERE STORMWATER DRAINAGE IS INSTALLED TO INTERNAL ROADWORKS, PROVIDE GRATED SUMP FILTER.
6. CONTRACTOR IS TO ESTABLISH A MAINTENANCE PROGRAM FOR SEDIMENT & EROSION CONTROL DEVICES TO ENSURE INSPECTION AFTER SIGNIFICANT RAINFALL AND THAT ANY REPAIRS NECESSARY ARE QUICKLY ATTENDED TO.
7. ALL NEW CONSTRUCTION WORK MUST BE CONTAINED WITHIN THE SITE EXCEPT FOR APPROVED SERVICE CONNECTIONS AND ROADWORKS.
8. REMOVE ANY SOIL FROM ROADS ADJACENT TO THE SITE AT THE END OF EACH DAY.
9. NO STORAGE OF CONSTRUCTION MATERIALS, PARKING OF VEHICLES NOR EQUIPMENT PERMITTED OUTSIDE SITE.
10. NO SITE SHEDS, STORAGE SHEDS, SITE AMENITIES TO BE ERECTED OUTSIDE OF SITE.
11. PROVIDE KERBSIDE FILTER ROLL TO EXISTING SUMPS / STORMWATER INLETS WITHIN AND ADJACENT TO THE SITE AND ANY ADDITIONAL LOCATIONS AS DETAILED.
12. KERBSIDE FILTER ROLLS TO BE REMOVED, CLEANED AND REINSTATED ON A WEEKLY BASIS AT A MINIMUM. TRAPPED SEDIMENT ABOUT SUMPS IS ALSO TO BE REMOVED. CLEANING IS ALSO TO TAKE PLACE IMMEDIATELY AFTER PERIODS OF RAINFALL DURING CONSTRUCTION.
13. ALL SERVICE TRENCHES TO BE BACKFILLED WITHIN 24 HOURS OF INSPECTION.
14. THE SITE FOREMAN IS TO CONTACT COUNCIL TO DISCUSS ANY MAJOR CHANGES TO SEDIMENT AND EROSION CONTROLS ON SITE PRIOR TO IMPLEMENTING THE CHANGES.
15. THE SITE FOREMAN WILL ENSURE CONTRACTORS ACCESS AND EXIT THE SITE USING ONLY APPROVED STABILISED ACCESS/EXIT POINTS AS DETAILED ON ENDORSED SEDIMENT AND EROSION CONTROL PLANS.
16. THE CONTRACTOR TO LIMIT STRIPPING OF TOPSOIL AND REMOVAL OF VEGETATION TO AREAS ESSENTIAL FOR UNDERTAKING THE WORKS.
17. DISTURBED AREAS TO BE RESTORED TO ORIGIINAL CONDITION AS SOON AS PRACTICABLE.
18. THE CONTRACTOR SHALL LIMIT VEHICLES AND PLANT MOVEMENT TO PARKING AREAS AND ACCESS ROUTES AS APPROVED OR ONLY IN AREAS WHERE WORK IS PROCEEDING.
19. CONTRACTOR TO RETAIN A COPY OF THE APPROVED "EROSION AND SEDIMENT CONTROL PLAN" DURING LAND DEVELOPMENT IN THE SITE OFFICE.
20. SILT FENCES TO BE PLACED AROUND ALL STOCK PILES ON THE LOWER SIDE.
21. DIVERSION SWALES, IF APPLICABLE, MUST BE STABLE BEFORE RECEIVING STORMWATER FLOWS FROM UPSTREAM.

TOPSOIL MANAGEMENT

1. TOPSOIL SHALL BE STOCKPILED SEPARATED FROM GENERAL EXCAVATED MATERIAL.

HOURS OF OPERATION

SITE WORKS TO BE CONDUCTED ONLY BETWEEN THE FOLLOWING HOURS:

- WEEKDAYS 7.00am TO 6.00pm
- SATURDAYS 8.00am TO 1.00pm
- NO WORK ON SUNDAYS OR PUBLIC HOLIDAYS

MAINTENANCE SCHEDULE

WEEKLY:

1. TURN OVER STABILISED CONSTRUCTION ENTRY MATERIAL AND RENEW WHEN REQUIRED.
2. CHECK AND REINSTATE SILT CONTROL FENCES

DAILY:

1. SWEEP AND REMOVE DIRT AND ANY OTHER BUILDING MATERIAL FROM GUTTERS, FOOTPATHS OR ROADWAYS ADJACENT TO THE SITE BY CLOSE OF BUSINESS AND PRIOR TO RAIN AND WHEN REQUIRED. ALL NECESSARY STEPS SHOULD BE TAKEN THAT ARE PRACTICAL AND REASONABLE TO MINIMISE DUST POLLUTION ON LAND DEVELOPMENT AND CONSTRUCTION SITE.

DURING/AFTER WET WEATHER:

1. LIMIT CONSTRUCTION VEHICLE ACCESS TO SITE DURING AND IMMEDIATELY FOLLOWING WET WEATHER.
2. TESTING AND TREATMENT (FLOCCULATION) OF ANY DIRTY WATER DOWNSTREAM WILL LIKELY BE REQUIRED PRIOR TO DISCHARGE INTO THE HARBOUR. CONTRACTOR IS TO CONSULT WITH SUPERINTENDENT ON DISCHARGE CRITERIA PRIOR TO DISCHARGE.
3. CONTRACTOR TO ENSURE THE EXISTING CULVERTS AND CHANNELS REMAIN FREE FROM ANY OBSTRUCTION DURING CONSTRUCTION AND DURING INCLEMENT WEATHER SO THAT NO FLOODING OCCURS UPSTREAM AND INTO ANY NEIGHBORING PROPERTIES.

TREES

ALL TREES SHALL BE PROTECTED BY THE FOLLOWING MEASURES:

1. PROTECTIVE FENCING CONSTRUCTED OF 1.8m HIGH CHAIN WIRE MESH SUPPORTED BY ROBUST POSTS SHALL BE INSTALLED AT A MINIMUM RADIUS OF 3m FROM THE TRUNK OF EACH TREE.THIS FENCING SHALL BE INSTALLED PRIOR TO THE COMMENCEMENT OF ANY WORKS AND REMAIN IN PLACE UNTIL ALL WORKS ARE COMPLETED.SIGNAGE SHALL BE ERECTED ON THE FENCE WITH THE FOLLOWING WORDS CLEARLY DISPLAYED "TREE PROTECTION ZONE.DO NOT ENTER."
2. THE TREE PROTECTION ZONE WITHIN THE PROTECTIVE FENCING SHALL BE MULCHED WITH A MAXIMUM DEPTH 75mm OF SUITABLE ORGANIC MULCH (WOOD CHIPS OR COMPOST LEAF CHIP MULCH) AND KEPT REGULARLY WATERED FOR THE DURATION OF THE WORKS.
3. NO DEVELOPMENT OR ASSOCIATED ACTIVITY IS PERMITTED WITHIN THE FENCED TREE PROTECTION ZONE FOR THE DURATION OF THE WORKS.
4. ANY APPROVED WORKS WITHIN THIS TREE PROTECTION ZONE SHALL BE UNDER THE DIRECTION OF,AND TO THE SATISFACTION OF, A SUITABLY QUALIFIED AND EXPERIENCED ARBORIST. PLANT EIGHT (8) INDIGENOUS CANOPY TREES (ANGOPHORA) WITHIN LOT 7 BUT NOT WITHIN 3 METRES OF A BUILDING, WITH A MINIMUM POT SIZE OF 25 LITRES.

REV	DATE	DESCRIPTION	AMD BY	APP BY
4	23.04.2024	ISSUED FOR APPROVAL	JLR	JMA
3	20.02.2024	ISSUED FOR DRAFT REVIEW	FMS	JMA
2	30.01.2024	ISSUED FOR CONCEPT DESIGN APPROVAL	FMS	JMA
1	29.01.2024	ISSUED FOR CONCEPT DESIGN APPROVAL	FMS	JMA

GPG Australia Pty Ltd

MAKER ENG

DRAWN: F.SOMERS	DESIGNED: J.RUSHTON
DRAFT CHECK: J.AGUSTIN	DESIGN CHECK: H.SMITH
APPROVED: J.AGUSTIN	

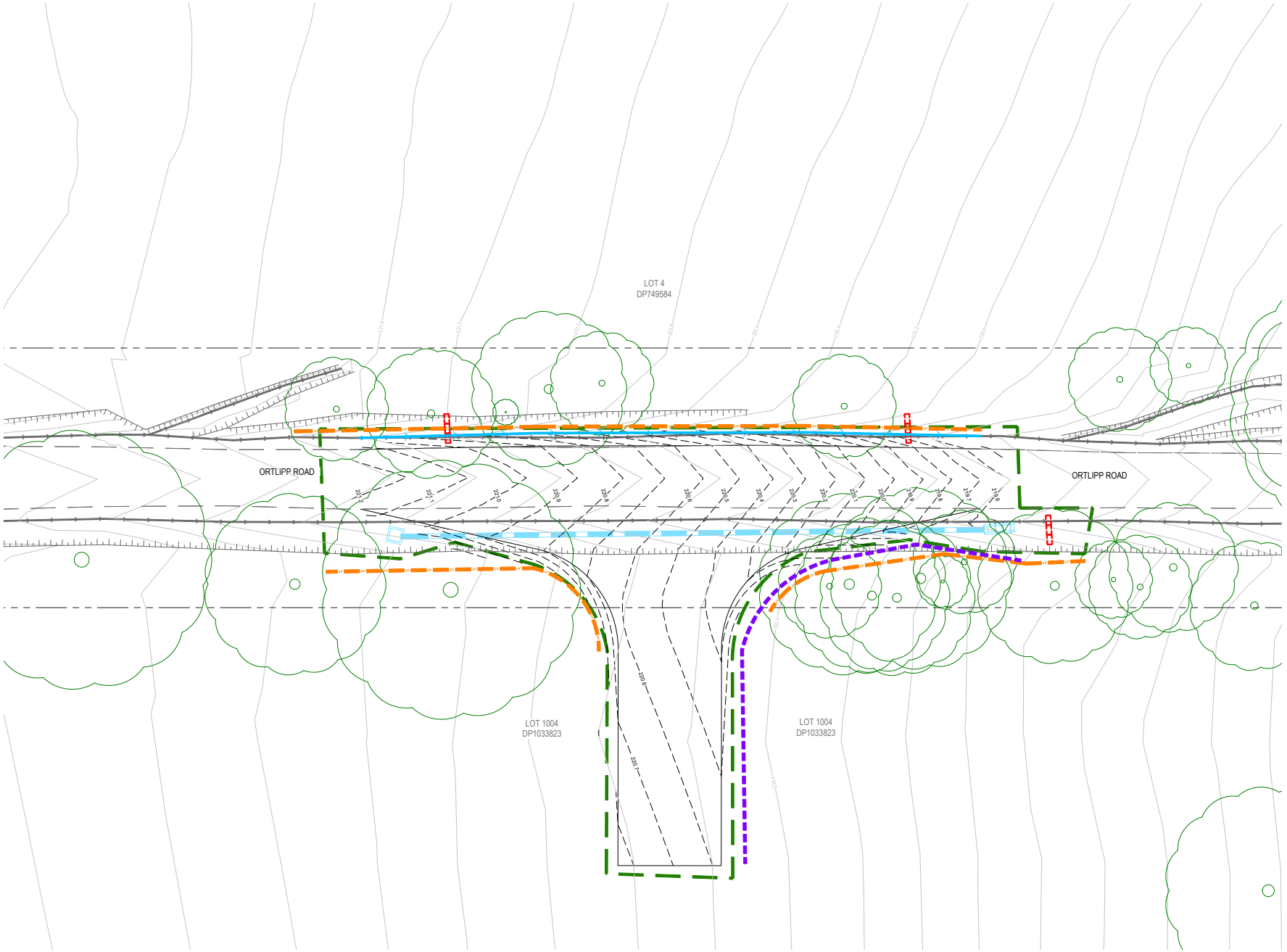
ISSUED FOR APPROVAL

GLENELLEN SOLAR FARM ROAD UPGRADES
DETAILED DESIGN
SOIL AND WATER MANAGEMENT NOTES

DRAWING NUMBER	SHEET No.	ORIG. SIZE	REVISION
MKRV0065-204-C1500		A1	4

Job Number, 11/10/2024, 4:38 PM

C:\12dSdata\12DSYNERGY\MKRV0065 Glenellen Solar Farm_198\02 Design\Drawings\02 Stage 01\Xrefs\X-MKRV0065-201-GE-MKR A1.dwg



PROPOSED

LEGEND

- CIVIL WORKS BOUNDARY
- TEMPORARY FENCING-TREE PROTECTION
- SEDIMENT FENCE
- STRAW BALES
- 7.0 — CONTOURS (0.2m)

EXISTING

- LOT BOUNDARY
- 7.0 — CONTOURS (0.2m)
- TREE (TO BE RETAINED)
- OPEN DRAIN
- TOP OF BATTER

NOTES:

1. TREE PROTECTION TO BE IN ACCORDANCE WITH ARBORIST REPORT AND COUNCIL STANDARDS

BEFORE YOU DIG www.byda.com.au

UTILITY INFORMATION SHOWN ON THE PLANS DOES NOT DEPICT ANY MORE THAN THE PRESENCE OF A SERVICE, BASED ON AVAILABLE DOCUMENTARY EVIDENCE. THE PRESENCE OF A UTILITY SERVICE, ITS SIZE AND LOCATION SHOULD BE CONFIRMED BY FIELD INSPECTION, PRIOR TO THE COMMENCEMENT OF WORKS AND THE RELEVANT UTILITY PLANS OBTAINED BY DIALLING PH 1100 (BEFORE YOU DIG). CAUTION SHOULD BE EXERCISED WHEN WORKING IN THE VICINITY OF ALL UTILITY SERVICES.

REV	DATE	DESCRIPTION	AMD BY	APP BY
4	23.04.2024	ISSUED FOR APPROVAL	JLR	JMA
3	20.02.2024	ISSUED FOR DRAFT REVIEW	FMS	JMA
2	30.01.2024	ISSUED FOR CONCEPT DESIGN APPROVAL	FMS	JMA
1	29.01.2024	ISSUED FOR CONCEPT DESIGN APPROVAL	FMS	JMA

0 7.5 15 22.5 30 37.5m
SCALE 1:750 AT ORIGINAL SIZE

GPG Australia Pty Ltd

MAKER ENG

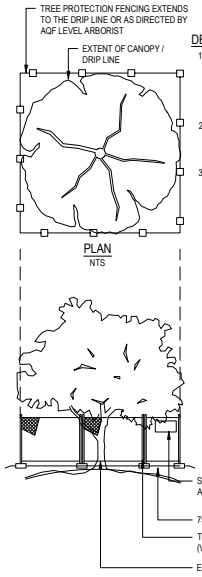
DRAWN: F.SOMERS	DESIGNED: J.RUSHTON
DRAFT CHECK: J.AGUSTIN	DESIGN CHECK: H.SMITH
APPROVED: J.AGUSTIN	
ISSUED FOR APPROVAL	

GLENELLEN SOLAR FARM ROAD UPGRADES
DETAILED DESIGN
SOIL AND WATER MANAGEMENT LAYOUT PLAN

DRAWING NUMBER	SHEET No.	ORIG. SIZE	REVISION
MKRV0065-204-C1501		A1	4

Job Number, 11/10/2024, 4:38 PM

C:\12d\5\data\12DSYNERGY\MKRV0065 Glenellen Solar Farm_198\02 Design\Drawings\02 Stage 01\Xrefs\X-MKRV0065-201-GE-MKR A1.dwg



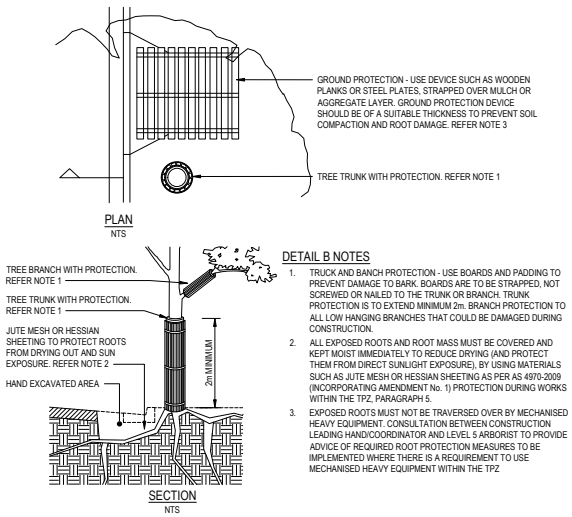
DETAIL A NOTES

1. PRIOR TO THE COMMENCEMENT OF ANY WORK ON SITE, EXISTING TREES TO BE RETAINED ARE TO BE PROTECTED FROM DAMAGE BY FENCING AS PER DETAIL PROVIDED. FENCING SHALL BE MAINTAINED IN GOOD AND EFFECTIVE ORDER UNTIL THE WORK IS COMPLETED. REFER PLAN THIS SHEET FOR LOCATION OF TREE PROTECTION FENCING.
2. FENCING TO ALIGN WITH OUTER EXTENT OF TREES BRANCHES (DRIP LINE). ANY VARIATION TO HAVE APPROVAL OF SUPERVISING AQF5 ARBORIST OR LANDSCAPE ARCHITECT.
3. ALL CARE TO BE TAKEN TO ENSURE TREES HEALTH IS PROTECT INCLUDING NOT RESTRICTED TO:
   - 3.1. NO STORAGE OF MATERIALS WITHIN TREE PROTECTION ZONE (TPZ); NO OIL, TAR BITUMEN, CEMENT, PAINT, OR OTHER MATERIALS BE ALLOWED TO CONTAMINATE TREE PROTECTION ZONE; NO MIXING OF CONCRETE, MORTAR OR WASHING PAINTING EQUIPMENT TO OCCUR WITHIN TPZ OR AREA DRAINING TOWARDS TPZ.
   - 3.2. NO LEVEL CHANGES WITHIN TREE PROTECTION ZONE
   - 3.3. NO LIGHTING OF FIRES BENEATH OR IN PROXIMITY TO TREE CANOPY
   - 3.4. NO ATTACHMENTS OR ROPES, GUYS, CABLES OR NOTICE BOARDS TO TREE
   - 3.5. PROVISION OF 75mm DEPTH WEED FREE, RECYCLED HARDWOOD CHIP/LEAF LITTER MULCH FROM AN APPROVED SOURCE

NOTE: FINAL EXTENT OF TPZ TO BE DETERMINED BY AN AQF LEVEL 5 ARBORIST FOR EVERY SITE

DETAIL A
TREE PROTECTION ZONE (TPZ) FENCING
(REFERENCE AS 4790)

HOLD POINT
NO EXCAVATION IS TO OCCUR WITHIN THE TREE PROTECTION ZONE. STOP WORK AND CONTACT AN AQF LEVEL 5 ARBORIST BEFORE PROCEEDING ANY FURTHER.

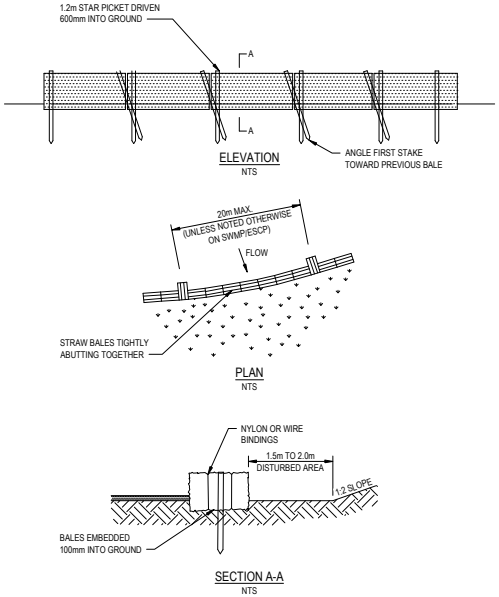


DETAIL B NOTES

1. TRUCK AND BANCH PROTECTION - USE BOARDS AND PADDING TO PREVENT DAMAGE TO BARK. BOARDS ARE TO BE STRAPPED, NOT SCREWED OR NAILED TO THE TRUNK OR BRANCH. TRUNK PROTECTION IS TO EXTEND MINIMUM 2m. BRANCH PROTECTION TO ALL LOW HANGING BRANCHES THAT COULD BE DAMAGED DURING CONSTRUCTION.
2. ALL EXPOSED ROOTS AND ROOT MASS MUST BE COVERED AND KEPT MOIST IMMEDIATELY TO REDUCE DRYING (AND PROTECT THEM FROM DIRECT SUNLIGHT EXPOSURE), BY USING MATERIALS SUCH AS JUTE MESH OR HESSIAN SHEETING AS PER AS 4970-2009 (INCORPORATING AMENDMENT No. 1) PROTECTION DURING WORKS WITHIN THE TPZ. PARAGRAPH 5.
3. EXPOSED ROOTS MUST NOT BE TRAVERSED OVER BY MECHANISED HEAVY EQUIPMENT. CONSULTATION BETWEEN CONSTRUCTION LEADING HAND/COORDINATOR AND LEVEL 5 ARBORIST TO PROVIDE ADVICE OF REQUIRED ROOT PROTECTION MEASURES TO BE IMPLEMENTED WHERE THERE IS A REQUIREMENT TO USE MECHANISED HEAVY EQUIPMENT WITHIN THE TPZ

DETAIL B
TREE PROTECTION - TYPICAL TREE TRUNK, BRANCH AND ROOT

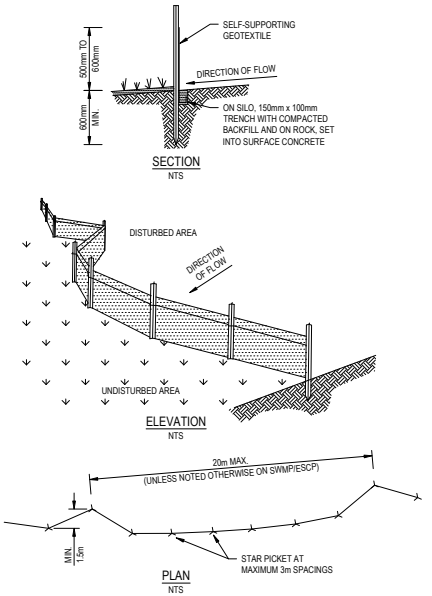
TREES ON DEVELOPMENT SITES TREE PROTECTION DETAILS
NTS



GENERAL CONSTRUCTION NOTES:

1. CONSTRUCTION STRAW BALE FILTER AS CLOSE AS POSSIBLE TO PARALLEL TO THE CONTOURS OF THE SITE OR THE TOE OF A SLOPE
2. PLACE BALES LENGTHWISE IN A ROW WITH ENDS TIGHTLY ABUTTING. USE STRAW TO FILL ANY GAPS BETWEEN BALES. STAIRS TO BE PLACED PARALLEL TO GROUND
3. MAXIMUM HEIGHT OF FILTER IS ONE BALE
4. ON SOFT MATERIALS, EMBED EACH BALE IN THE GROUND 75mm TO 100mm AND ANCHOR WITH TWO 1.2 STAR PICKETS. ANGLE THE FIST STAKE IN EACH BALE TOWARDS THE PREVIOUSLY LAID BALE. DRIVE STAKES 600mm INTO THE GROUND AND FLUSH WITH THE TOP OF THE BALES
5. WHERE A STRAW BALE FILTER IS CONSTRUCTED DOWNSLOW FROM THE TOE OF THE BATTER

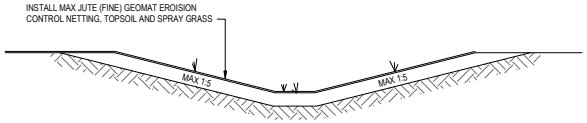
STRAW BALE FILTER SD 6-7
NTS



GENERAL CONSTRUCTION NOTES

1. CONSTRUCTION SEDIMENT FENCES AS CLOSE AS POSSIBLE TO PARALLEL TO THE CONTOURS OF THE SITE
2. DIVE 1.5m LONG STAR PICKETS INTO GROUND, 3m APART
3. DIG A 150mm DEEP TRENCH ALONG THE UPSLOPE LINE OF THE FENCE FOR THE BOTTOM OF THE FABRIC TO BE ENTRENCHED
4. BACKFILL TRENCH OVER BASE OF FABRIC
5. FIX SELF-SUPPORTING GEOTEXTILE TO UPSLOPE SIDE OF POSTS WITH WIRE TIES OR AS RECOMMENDED BY GEOTEXTILE MANUFACTURER
6. JOIN SECTIONS OF FABRIC AT A SUPPORT POST WITH A 150mm OVERLAP

SEDIMENT FENCE SD 6-8
NTS



TYPICAL OPEN DRAIN
NTS

REV	DATE	DESCRIPTION	AMD BY	APP BY
4	23.04.2024	ISSUED FOR APPROVAL	JLR	JMA
3	20.02.2024	ISSUED FOR DRAFT REVIEW	FMS	JMA
2	30.01.2024	ISSUED FOR CONCEPT DESIGN APPROVAL	FMS	JMA
1	29.01.2024	ISSUED FOR CONCEPT DESIGN APPROVAL	FMS	JMA

GPG Australia Pty Ltd

MAKER ENG

DRAWN: F.SOMERS	DESIGNED: J.RUSHTON
DRAFT CHECK: J.AGUSTIN	DESIGN CHECK: H.SMITH
APPROVED: J.AGUSTIN	
ISSUED FOR APPROVAL	

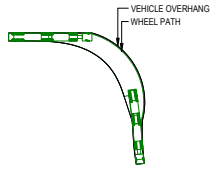
GLENELLEN SOLAR FARM ROAD UPGRADES
DETAILED DESIGN
SOIL AND WATER MANAGEMENT DETAILS

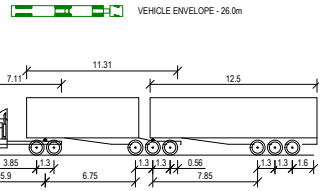
DRAWING NUMBER	SHEET No.	ORIG. SIZE	REVISION
MKRV0065-204-C1502		A1	4

Josh Rushton, 11/10/2024, 4:38 PM

C:\12dSdata\12DSYNERGY\MKRV0065 Glenellen Solar Farm_198\02 Design\Drawings\02 Stage 01\Xrefs\X-MKRV0065-201-GE-MKR A1.dwg

LEGEND

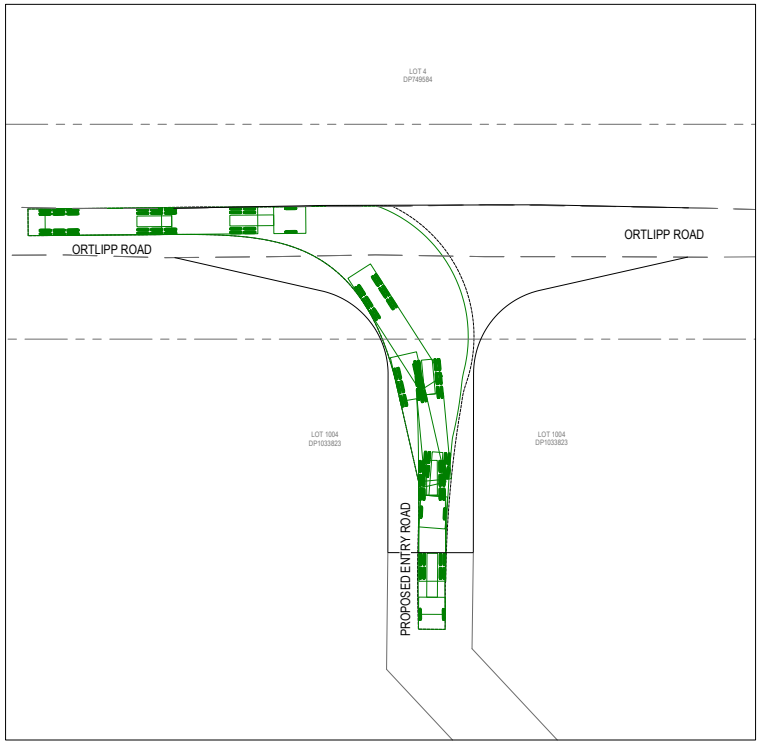




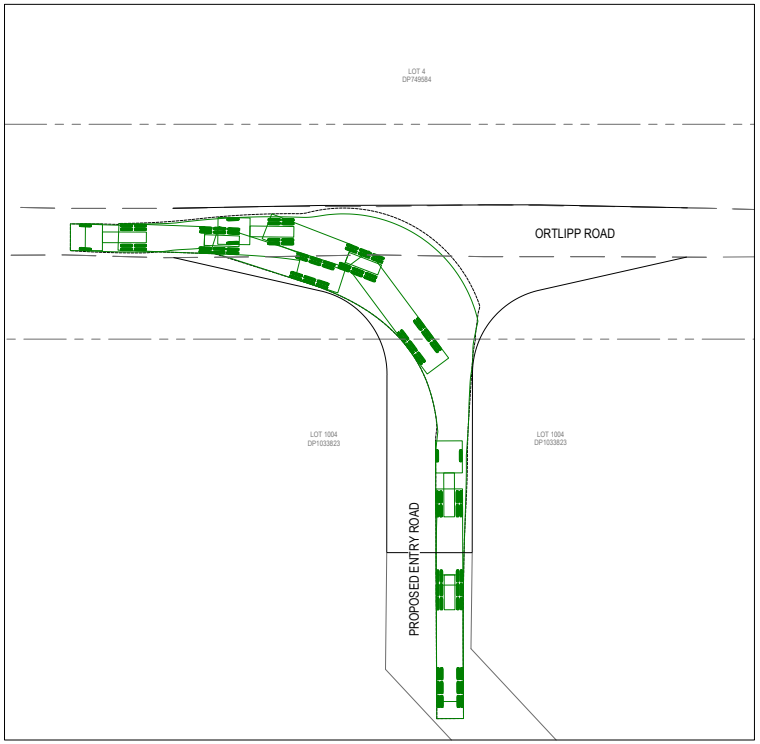
B-DOUBLE

OVERALL LENGTH	26.000m
OVERALL WIDTH	2.500m
OVERALL BODY HEIGHT	4.300m
MIN BODY GROUND CLEARANCE	0.540m
TRACK WIDTH	2.500m
LOCK-TO-LOCK TIME	6.00s
KERB TO KERB TURNING RADIUS	12.500m

DESIGN VEHICLE



DESIGN VEHICLE



DESIGN VEHICLE

REV	DATE	DESCRIPTION	AMD BY	APP BY
4	23.04.2024	ISSUED FOR APPROVAL	JLR	JMA
3	20.02.2024	ISSUED FOR DRAFT REVIEW	FMS	JMA
2	30.01.2024	ISSUED FOR CONCEPT DESIGN APPROVAL	FMS	JMA
1	29.01.2024	ISSUED FOR CONCEPT DESIGN APPROVAL	FMS	JMA

0 2.5 5 7.5 10 12.5m
SCALE 1:250 AT ORIGINAL SIZE

GPG Australia Pty Ltd

MAKER ENG

DRAWN: F.SOMERS	DESIGNED: J.RUSHTON
DRAFT CHECK: J.AGUSTIN	DESIGN CHECK: H.SMITH
APPROVED: J.AGUSTIN	
ISSUED FOR APPROVAL	

GLENELLEN SOLAR FARM ROAD UPGRADES
DETAILED DESIGN
SWEPT PATH ANALYSIS

DRAWING NUMBER	SHEET No.	ORIG. SIZE	REVISION
MKRV0065-204-C2050		A1	4

Job Number, 11/1/2024 4:38 PM

C:\12dSdata\12DSYNERGY\MKRV0065 Glenellen Solar Farm_198\02 Design\Drawings\02 Stage 01\Xrefs\X-MKRV0065-201-GE-MKR A1.dwg

Appendix E

GENERAL NOTES

1. This Traffic Guidance Scheme (TGS) has been designed in accordance with:
   - NSW Government Traffic Control at Work Sites (TCAWS) Version 6.1 dated February 2022.
   - AS 1742.3-2019: Manual of Uniform Traffic Control Devices - Part 3 Traffic Control for Works on Roads (AS 1742.3).

2. Implementation of this TGS is to be undertaken by a suitably qualified person holding the 'Implement Traffic Control Plans' (ITCP) qualification, managed by SafeWork NSW.

3. Traffic controllers that are required under this TGS are to hold the 'Traffic Control' (TC) qualification, managed by SafeWork NSW.

4. Workers performing the temporary traffic management (TTM) are to wear appropriate Personal Protective Equipment (PPE).

5. Workers performing the TTM are to adhere to site safety policies including Safe Work Method Statement (SWMS) issued by the principal contractor, builder or traffic control company that is implementing the TGS.

6. In accordance with Clause 4.3.4 of AS 1742.3, signs are to face towards approaching traffic approximately at right angles to the line of sight from the driver to the sign.

   At curved alignments, the sign shall be placed approximately at right angles to the line of sight of a motorist 50 metres in advance of the sign as shown below.

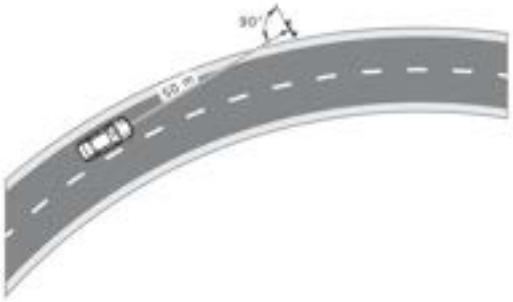


Figure 4.1 — Orientation of sign at curved alignments

Source: AS 1742.3

7. Positioning of signs and devices are to be in accordance with Clause 4.3.2 of AS 1742.3:
   (a) Are properly displayed and securely mounted.
   (b) Are within the line of sight of the intended road user.
   (c) Are not and cannot be obscured from view (e.g. by vegetation or parked cars).
   (d) Do not obscure other devices from the line of sight of the intended road user.
   (e) Do not become a possible hazard to workers, pedestrians, people with disabilities (e.g. trip hazards for people with vision impairment), cyclists or vehicles.
   (f) Do not direct pedestrians, cyclists or vehicles into an undesirable path.
   (g) Do not restrict sight distance for drivers entering from side roads or streets, or private driveways.
   (h) Are not installed using supports that could be a hazard if struck by a vehicle.

8. Temporary signs and devices under this TGS are to be removed or covered when not in use, during breaks (e.g. lunch) or at the end of a work shift.

9. Maintenance of temporary signs and devices are to be in accordance with Section 6.3 of TCAWS with particular attention to the following:
   - Signs and devices displayed must remain appropriate for changing circumstances during the work.
   - Signs which are not required between shifts must be covered.
   - Sign placement, including covers must be checked after weather events.
   - Signs and devices must be in good condition.
   - Damaged or disfigured signs in the work environment must be replaced as soon as possible, especially if the warnings displayed are not clear.
   - Signs and devices erected before they are required must be covered by a suitable, opaque material in accordance with AS 1742.3. The cover must be removed immediately prior to the commencement of work.

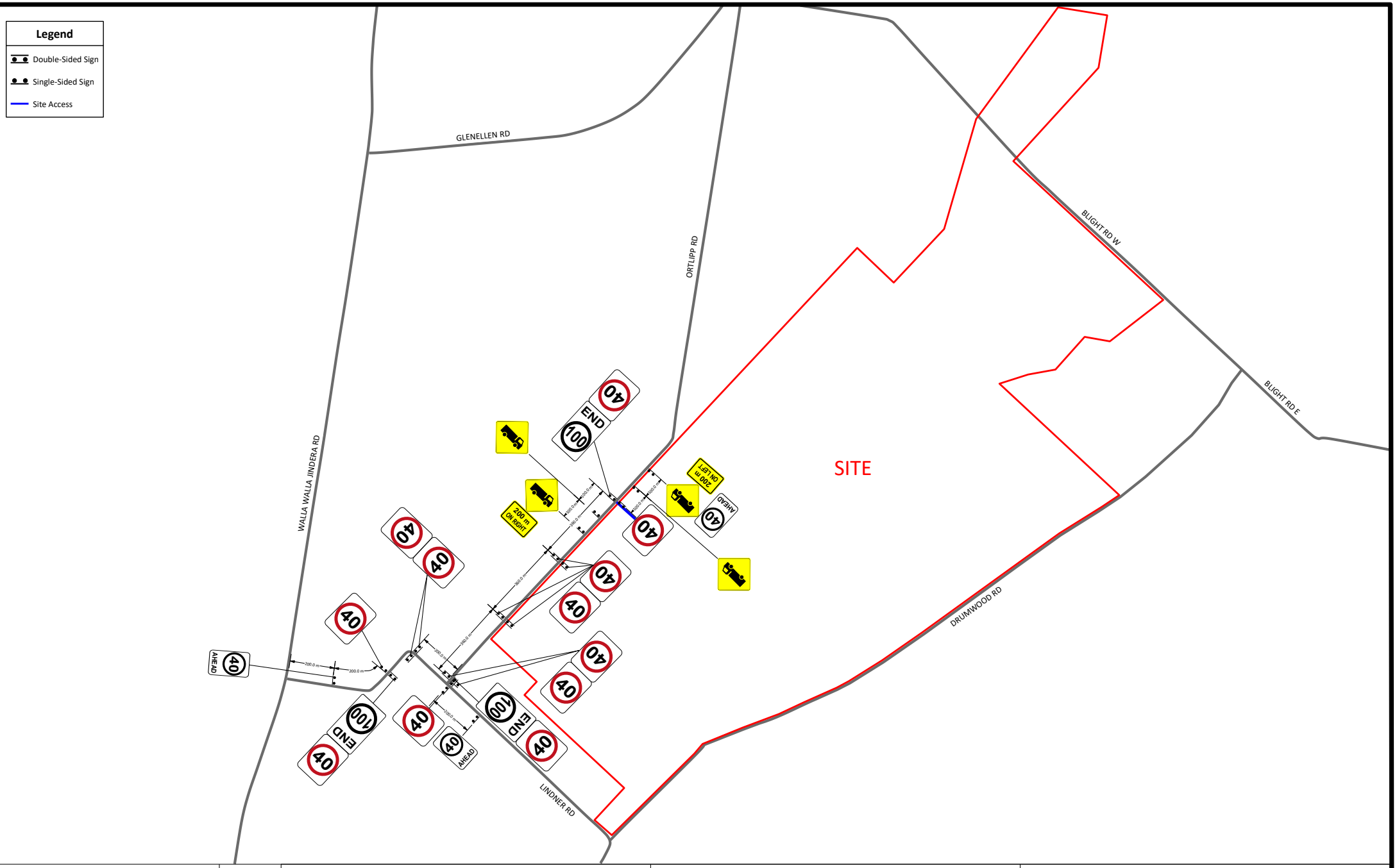
   Note: Covering signs with hessian material does not sufficiently inhibit the sign's retroflective performance and should not be used. Additionally, dark coloured and plastic materials may cause overheating or excessive moisture build-up and therefore damage to the sign.

10. Dimension D values in accordance with Section 6.2.6 of TCAWS.

11. Traffic controllers are to manage pedestrians and cyclists only. Traffic controllers are to assist exiting drivers in identifying a safe gap in traffic before leaving the Works Zone / site.

12. Traffic controllers are to communicate to each other via two-way radio.

Traffic Guidance Scheme Prepared By	North	Project	Plan Title	Plan No.	Revision No.
pdc CONSULTANTS		Glenellen Solar Farm	General Notes	000	-
		Project No. 0888	Accreditation Name: Julius Boncato Card No: TCT 0038351 (Prepare a Work Zone Traffic Management Plan)	Date 12/01/2024	



Traffic Guidance Scheme Prepared By pdc CONSULTANTS	North	Project Glenellen Solar Farm	Plan Title Ortlipp Road & Lindner Road Temporary Speed Zone Traffic Guidance Scheme	Plan No. 001	Revision No. -
		Project No. 0888	Accreditation Name: Julius Boncato Card No: TCT 0038351 (Prepare a Work Zone Traffic Management Plan)	Date 12/01/2024	

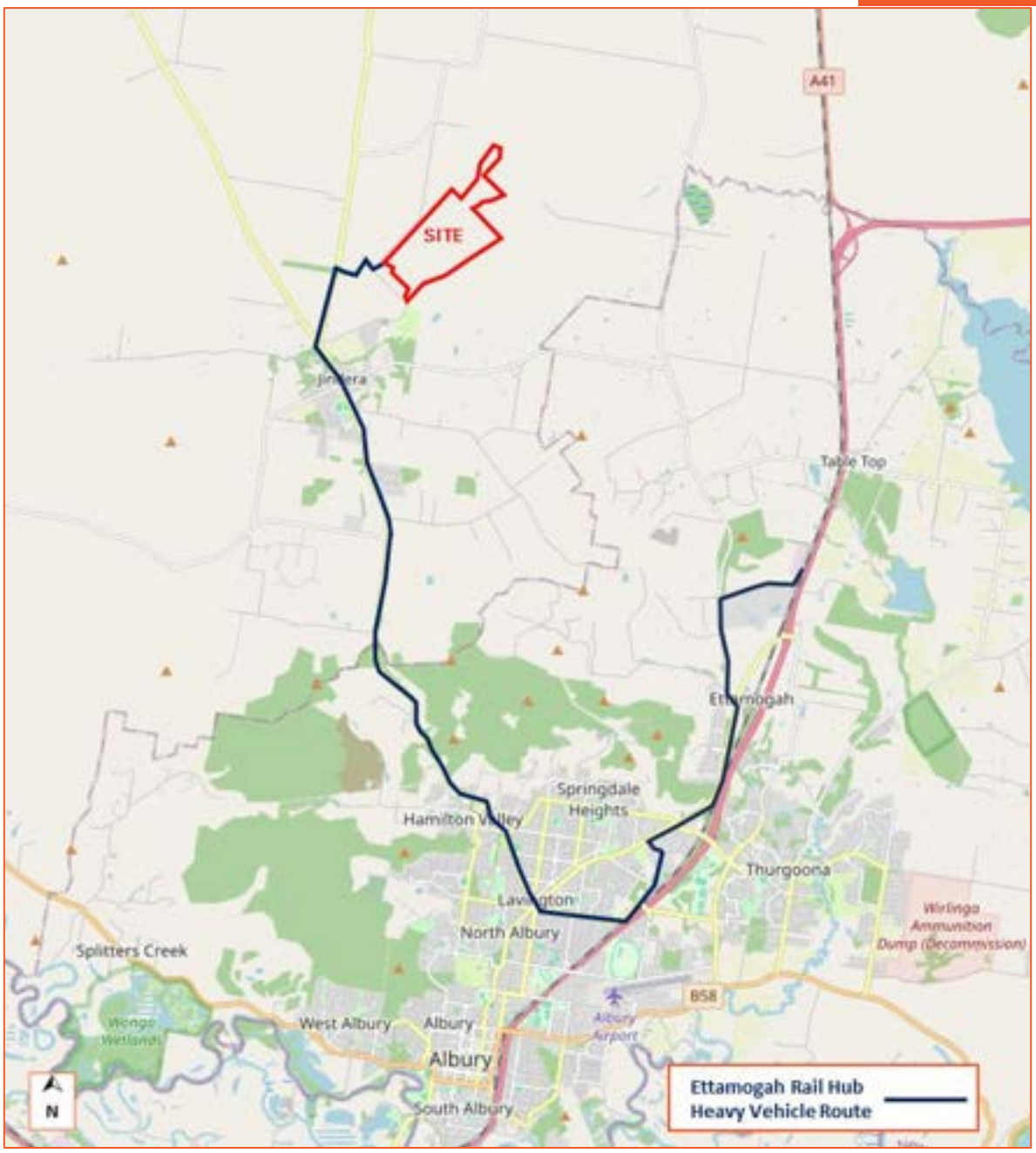
Appendix F

Driver Code of Conduct

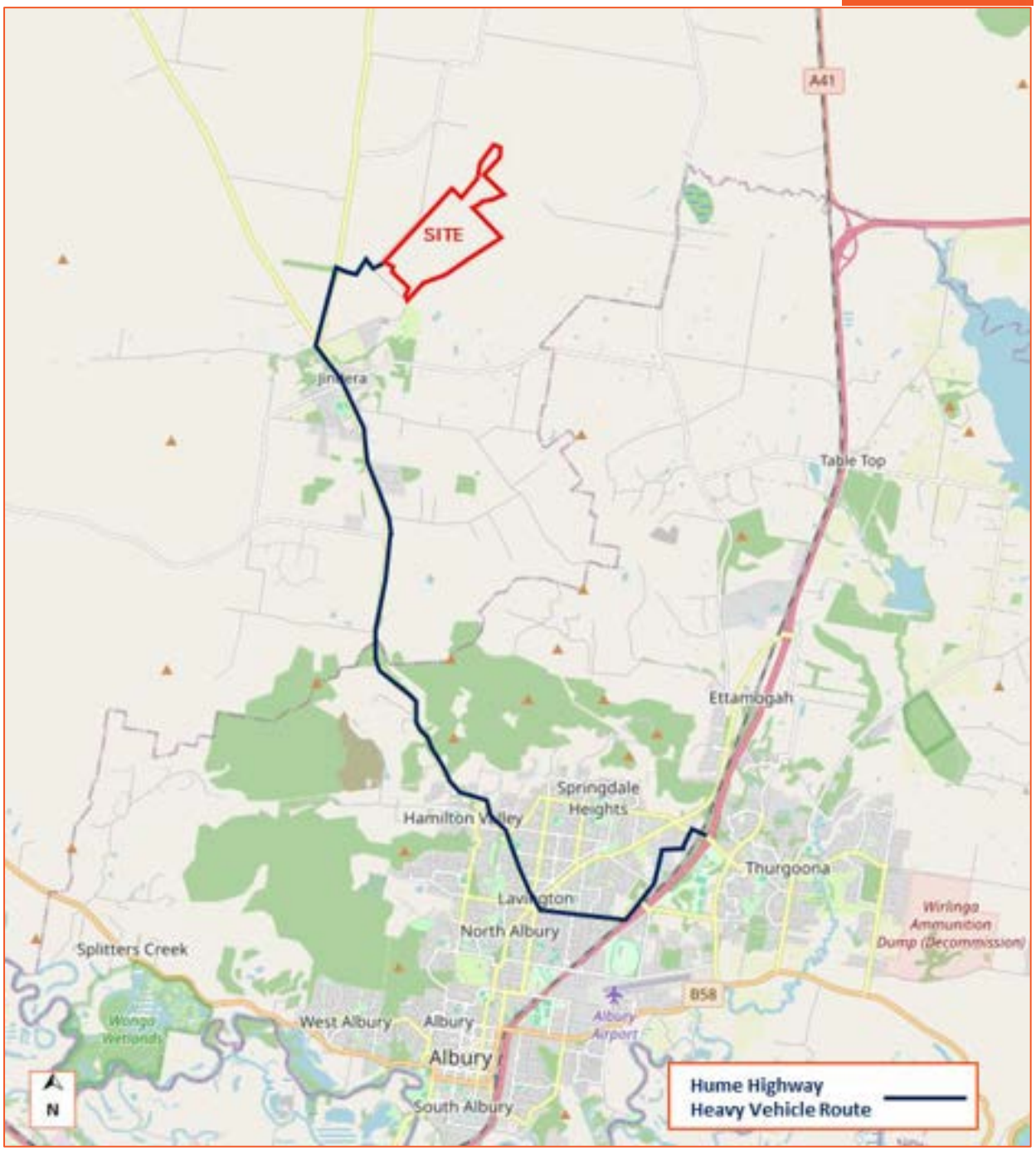
All vehicle operators accessing the site must:

- Take reasonable care for his or her own personal health and safety.
- Not adversely, by way of actions or otherwise, impact on the health and safety of other persons.
- Notify their employer if they are not fit for duty prior to commencing their shift.
- Obey all applicable road rules and laws at all times.
- Obey the applicable driving hours in accordance with legislation and take all reasonable steps to manage their fatigue and not drive with high levels of drowsiness.
- Obey all on-site signposted speed limits and comply with directions of traffic control supervisors in relation to movements in and around temporary or fixed work areas.
- Adhere to the designated truck routes when entering and exiting the site as shown in **Map 1** and **Map 2**.
- All deliveries and imports from the Ettamogah Rail Hub are to be in accordance with **Map 1** via Hub Road, Gerogery Road, Wagga Road to Union Road before continuing to the site All deliveries and imports via the Hume Highway are to be in accordance with **Map 2** via Hume Highway, Thurgoona Drive, Catherine Crescent, Dallinger Road, Union Road, Urana Road, Walla Walla Jinderra Road, Lindner Road and Ortlipp Road.
- Driving on unapproved truck routes is prohibited. The necessary travel permits shall be held and made available to inspectors as required.
- Prohibited from travel and parking within the township of Jindera (along Urana Road between Pioneer Drive and Walla Walla Jindera Road) during school zone times of 8am to 9.30am and 2.30pm to 4pmForward Enter and forward exit the site only via the main accessway on Ortlipp Road.
- Prohibited from using Glenellen Road and Drummond Road.
- Load and unload material on-site is designated areas only.
- Ensure all loads are safely restrained, as necessary.
- Ensure no mud, dust or debris are tracked onto the public road network, with vehicle checks to be undertaken prior to exiting the site.
- Operate their vehicles in a safe and professional manner, with consideration for all other road users.
- Enter and exit the site onto Ortlipp Road only, in a forward direction.
- Hold a current Australian State or Territory issued driver's licence.
- Notify their employer or operator immediately should the status or conditions of their driver's license change in any way.
- Comply with other applicable workplace policies, including a zero tolerance of driving while under the influence of alcohol and/or illicit drugs.
- Drivers are to manage their fatigue through regular breaks every two hours. If feeling drowsy or fatigues, drivers are to immediately stop in a safe location to rest.

- Drivers are to plan their journey accordingly with regular rest breaks and adequate break time is achieved. Minimising lengthy journeys is to be adopted and use of adequate rest stops shall be undertaken.
- Drivers are to produced logged driving hours to the EPC to ensure driver fatigue is being reviewed and managed.
- Not use mobile phones when driving a vehicle or operating equipment. If the use of a mobile device is required, the driver shall pull over in a safe and legal location prior to the use of any mobile device.
- Advise management of any situations in which you know, or think may, present a threat to workplace health and safety.
- Drive according to prevailing conditions (such as during inclement weather) and reduce speed, if necessary.
- Have necessary identification documentation at hand and ready to present to security staff on entry and departure from the site, as necessary, to avoid unnecessary delays to other vehicles.



Map 1: Truck Route from Ettamogah Rail Hub



Map 2: Truck Route from Hume Highway

Appendix G

APPENDIX 8:
INCIDENT NOTIFICATION AND REPORTING REQUIREMENTS

WRITTEN INCIDENT NOTIFICATION REQUIREMENTS

1. A written incident notification addressing the requirements set out below must be submitted to the Planning Secretary via the Major Projects website within seven days after the Applicant becomes awareof an incident. Notification is required to be given under this condition even if the Applicant fails to givethe notification required under F or, having given such notification, subsequently forms the view that an incident has not occurred.

2. Written notification of an incident must:

   (a) identify the development and application number;

   (b) provide details of the incident (date, time, location, a brief description of what occurred andwhy it is classified as an incident);

   (c) identify how the incident was detected;

   (d) identify when the applicant became aware of the incident;

   (e) identify any actual or potential non-compliance with conditions of consent;

   (f) describe what immediate steps were taken in relation to the incident;

   (g) identify further action(s) that will be taken in relation to the incident; and

   (h) identify a project contact for further communication regarding the incident.

3. Within 30 days of the date on which the incident occurred or as otherwise agreed to by the Planning Secretary, the Applicant must provide the Planning Secretary and any relevant public authorities (as determined by the Planning Secretary) with a detailed report on the incident addressing all requirements below, and such further reports as may be requested.

4. The Incident Report must include:

   (a) a summary of the incident;

   (b) outcomes of an incident investigation, including identification of the cause of the incident;

   (c) details of the corrective and preventative actions that have been, or will be, implemented toaddress the incident and prevent recurrence; and

   (d) details of any communication with other stakeholders regarding the incident.

PDC CONSULTANTS
+61 2 7900 6514 | pdcconsultants.com.au