



Traffic & Transportation Direction



Forest Glen Solar Farm

30L Delroy Road, Minore

Traffic Management Plan - Stage 2a

May 2025

Reference: 1012 tmp s2a 250509 final

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Traffic Management Plan - Stage 2a

Prepared for: X-Elio

Status: Final report

Date: 9 May 2025

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1. Introduction

1.1 Project Background

The Forest Glen Solar project (the Project) is a 90 megawatt (MW) alternating current development with battery storage of up to 25 MWh. The project is located approximately 16 km west of Dubbo in New South Wales (NSW).

X-Elio Pty Ltd (X-Elio) is the project owner and will engage a suitable engineering, procurement and construction (EPC) contractor to manage the works for the 90 MW AC solar project, solar project substation and ancillary operational facilities.

The Development Consent (DC) - Application Number: SSD-9451258 – requires the preparation of a Traffic Management Plan (TMP). Commitments relevant to traffic management were also made by NGH in the environmental impact statement (EIS) and the Amendment report for inclusion in the management plans.

X-Elio is the Proponent and ultimately takes responsibility for compliance with SSD-9451258. This responsibility is reflected in the management plans, programs and strategies developed for the project.

On 28 February 2023, the Director, Energy Assessments granted consent to the development application for the projects subject to conditions, under delegation from the Minister for Planning and Public Spaces and section 4.38 of the Environmental Planning and Assessment Act 1979 (the Act).

Amber Organisation Pty Ltd has been engaged by NGH, on behalf of X-Elio, to prepare this TMP to detail the proposed temporary traffic management measures to be implemented during the construction works for the project.

Figure 1 shows the proposed layout of the site in relation to the road network, access locations and existing infrastructure.

The primary traffic impacts relate to the traffic generation associated with the transport of materials and the workforce to and from the site, with these effects able to be managed with minimal impact to the road network.

This TMP applies only to on-site construction activities of the solar farm without the use of heavy vehicles requiring escort (Stage 2a as outlined in Section 1.3). Separate TMPs are to be prepared for the balance of the construction, operation and decommissioning phases of the project.

Stage 2a works are anticipated to start in March 2025 with a four month duration to June 2025 when Stage 2b commences and heavy vehicles requiring escort will be required for the on-site construction works.

This TMP has been prepared based on the available construction information at this time however, it cannot be guaranteed that the specific methodology described will be that employed at the time of construction.

Figure 1: Site Layout



Source: NGH Pty Ltd



1.2 Objectives

The key objective of this TMP is to ensure safe and efficient movement of vehicles to/from the site, whilst minimising disruptions and impacts, and maintaining a safe environment for vehicular traffic external to the site. More specifically, the objectives of the TMP are to:

- Provide a safe environment for the travelling public and construction personnel;
- Cater for the needs of all traffic;
- Communicate the purpose of the proposed traffic management measures; and
- Communicate the arrangements for and impacts of any management measures affecting traffic.

To assist in meeting these objectives the TMP provides information on:

- The Scope of Works;
- Site conditions;
- Permissible working times; and
- Procedures and responsibilities.

The Applicant shall ensure that the requirements of the document and other relevant information will be monitored and the TMP adjusted to meet changing requirements where necessary.

1.3 TMP Staging

The TMP is to be staged as follows:

- Stage 1a: Pre-construction works - Minor road upgrades of site access roads and establishment of Essential Energy's substation and switching station pad
- Stage 1b: Site compound and logistics area (hardstand) and fencing works
- Stage 2a: On-site construction activities including construction of the operations and maintenance building without OSOM deliveries.
- Stage 2b: On-site construction activities including construction of the operations and maintenance building with OSOM deliveries in accordance with condition B1 of the Development Consent
- Stage 3: Final road upgrades, which will include updating the entire Delroy Road including the intersections and sealing with bitumen.
- Stage 4: Operation of the Forest Glen Solar Farm.
- Stage 5: Decommissioning the Forest Glen Solar Farm at end of life.

This TMP applies to Stage 2a, with separate TMPs to be prepared for Stage 2b onwards.

This staging was formally approved by the Planning Secretary in letter dated 16 January 2025.

1.4 Statutory Requirements

This document fulfills Condition B8 of the Development Consent which requires the provision of a Traffic Management Plan and has been prepared with consideration to the other transport conditions outlined within the Development Consent. The matters relevant to transport outlined within Part B and Part C have been summarised within Table 1 and Table 2, respectively.

Table 1: Development Consent Requirements – Part B

CONDITION		REFERENCE LOCATION
Heavy Vehicles Requiring Escort and Heavy Vehicle Restrictions		
B1	The Applicant must ensure that the: a) development does not generate more than: i. 68 heavy vehicle movements a day during construction, upgrading and decommissioning; ii. 6 movements of heavy vehicles requiring escort during construction, upgrading and decommissioning; and iii. 6 heavy vehicle moments a day during operations; on the public road network; and b) length of any vehicles (excluding heavy vehicles requiring escort) used for the development does not exceed 26 metres, unless the Planning Secretary agrees otherwise.	Complies: Section 3.6.1 As this TMP only applies to Stage 2a no heavy vehicles requiring escort are required (refer Section 1.3); further detail of the traffic movements for these vehicles and the balance of construction, operational and decommissioning phases will be managed by way of future TMP/s.
B2	The Applicant must keep accurate records of the number of heavy vehicles, and heavy vehicles requiring escort, entering or leaving the site each day for the duration of the project.	Complies: Section 4.2
Access Route		
B3	All heavy vehicles associated with the development must travel to and from the site via Newell Highway, Minore Road and Delroy Road as identified in Figure 2 in Appendix 5.	Complies: Section 3.6.3
Site Access		
B4	All vehicles associated with the development must enter and exit the site via the primary access point, as identified in Appendix 1. In addition, vehicles may exit the site via the emergency exit point/s identified in Appendix 1 for emergency purposes.	Complies: Section 3.7.

Road Upgrades		
B5	Unless the Planning Secretary agrees otherwise, prior to commencing construction the Applicant must complete the road upgrades detailed in Figures 1 - 5 and Table 1 of Appendix 5. Unless the relevant roads authority agrees otherwise, these upgrades must comply with the current <i>Austroads Guidelines</i>, <i>Australian Standards</i> and <i>TfNSW supplements</i>, and be carried out to the satisfaction of the relevant roads authority.	Complies: Section 3.3, design plans included in Appendix A. The upgrades are staged with the bitumen seal to Delroy Road to be undertaken once construction is complete. Consultation with Council on the staging is included in Appendix B for reference. This approach was formally approved by the Planning Secretary in letter dated 3 October 2024.
Road Maintenance		
6	The Applicant must, in consultation with Council: a) undertake an independent dilapidation survey to assess the: i. existing condition of the access road on the transport route, prior to construction, upgrading or decommissioning works; and ii. condition of the access road on the transport route, following construction, upgrading or decommissioning works; b) repair the access road on the transport route if dilapidation surveys identify that the road has been damaged during construction, upgrading or decommissioning works. If there is a dispute about the repair of the access road, then either party may refer the matter to the Planning Secretary for resolution.	Complies: Section 5. Dilapidation surveys are to be completed prior to the commencement of Stage 2a.
Operating Conditions		
B7	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.	Complies: Section 4.4 . Measures to minimise mud and dirt on the public road network included in Section 4.7 and Table 8 Measures to manage the drainage network are outlined in Section 4.10.

Traffic Management Plan		
B8	Prior to commencing road upgrades identified in condition B5, 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:	Complies where applicable
	a) details of the transport route to be used for all development-related traffic;	Section 3.6.2, 3.6.3, 3.7
	b) details of the road upgrade works required by condition B5 of Schedule 3 of this consent;	Section 3.3
	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 B6 of Schedule 3 of this consent;	Section 5
	ii) temporary traffic controls, including detours and signage;	Temporary Traffic Control measures are discussed in Section 7, should they be required during Stage 2a.
	iii) notifying the local community about development-related traffic impacts;	Section 4.3
	iv) procedures for receiving and addressing complaints from the community about development related traffic;	Section 9.5
	v) minimising potential cumulative traffic impacts with other State significant development projects in the area, including other solar farms and wind farms;	Section 4.2
	vi) minimising potential for conflict with school buses and other road users as far as practicable, including preventing queuing on the public road network;	Section 4.2, 4.5
	vii) minimising dirt tracked onto the public road network from development-related traffic;	Section 4.7
	viii) details of the 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;	Section 4.8
	ix) encouraging car-pooling or ride sharing by employees;	Section 4.8
	x) scheduling of heavy vehicle movements to minimise convoy length or platoons, and to minimise conflict with light vehicles	Section 4.2
	xi) responding to local climate conditions that may affect road safety such as fog, dust, wet weather and flooding;	Section 4.11
	xii) monthly monitoring for, and responding to, any emergency repair and/or maintenance requirements; and	Section 4.9
	xiii) a traffic management system for managing heavy vehicles requiring escort;	Not applicable: Stage 2a works will not require heavy vehicles requiring escort.
	d) a driver's code of conduct that addresses:	

	xiv) driver fatigue;	Section 4.1 Appendix C – Driver Code of Conduct
	xv) procedures to ensure that drivers adhere to the designated transport routes and speed limits; and	Section 4.1 Appendix C – Driver Code of Conduct
	xvi) procedures to ensure that drivers implement safe driving practices.	Section 4.1 Appendix C – Driver Code of Conduct
	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.	Section 8.1 Appendix C – Driver Code of Conduct
	Following the Planning Secretary's approval, the Applicant must implement the Traffic Management Plan.	

Table 2: Development Consent Requirements – Environmental Management, Reporting and Auditing

CONDITION		REFERENCE LOCATION
Revision of Strategies, Plans and Programs		
C2	The Applicant must: a) update the strategies, plans or programs required under this consent to the satisfaction of the Planning Secretary prior to carrying out any upgrading or decommissioning activities on site; and b) review and, if necessary, revise the strategies, plans or programs required under this consent to the satisfaction of the Planning Secretary within 1 month of the: ▪ submission of an incident report under condition C10 of Schedule 2; ▪ submission of an audit report under condition C14 of Schedule 2; or ▪ any modification to the conditions of this consent.	Complies: Refer Section 10.3.
Staging, Combining and Updating Strategies, Plans or Programs		
C3	With the approval of the Planning Secretary, the development may be staged and the Applicant may: a) prepare and submit any strategy, plan or program required by this consent on a staged basis (if a clear description is provided as to the specific stage and scope of the development to which the strategy, plan or program applies, the relationship of the stage to any future stages and the trigger for updating the strategy, plan or program); b) combine any strategy, plan or program required by this consent (if a clear relationship is demonstrated between the strategies, plans or programs that are proposed to be combined); and c) update any strategy, plan or program required by this consent (to ensure the strategies, plans and programs required under this consent are updated on a regular basis and incorporate additional measures or amendments to improve the environmental performance of the development).	Complies: Refer Section 10.3.

Notifications 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.	Complies: Refer Section 10.4.
Incident Notification		
C10	The Applicant must notify the Department within 24 hours of becoming aware of an incident. The notification must be made via the NSW planning portal (Major Projects) and address details of the incident including: (a) date, time and location; (b) a brief description of what occurred and why it has been classified as an incident; (c) a description of what immediate steps were taken in relation to the incident; and (d) identifying a contact person for further communication regarding the incident.	Complies: Refer Section 9.4.
C10A	The Applicant must provide the Department with a subsequent incident report in accordance with Appendix 6 (Incident Notification and Reporting Requirements).	Refer Section 9.4.
Non-Compliance Notification		
C11	Within seven days of becoming aware of a non-compliance, the Applicant must notify the Department of the non-compliance. The notification must be in writing and must be submitted via the NSW planning portal (Major Projects). The notification must identify the development (including the development application number and name), set out the condition of this consent that the development is non-compliant with, why it does not comply, the reasons for the non-compliance (if known), and what actions have been undertaken, or will be undertaken, and when, to address the non-compliance. <i>Note: A non-compliance which has been notified as an incident does not need to also be notified as a non-compliance.</i>	Complies: Refer Section 9.4.and 9.4.1.
Independent Environmental Audit		
C14	Independent Environmental Audits of the development must be conducted and carried out in accordance with the Independent Audit Post Approval Requirements (2020) or as updated from time to time and published on the Department's website	Complies: Refer Section 9.6.

Access to Information		
C20	The Applicant must: a) make the following information publicly available on its website as relevant to the stage of the development: (i) the EIS; (ii) the final layout plans for the development; (iii) current statutory approvals for the development; (iv) approved strategies, plans or programs required under the conditions of this consent; (v) the proposed staging plans for the development if the construction, operation and/or decommissioning of the development is to be staged; (vi) a comprehensive summary of the monitoring results of the development, which have been reported in accordance with the various plans and programs approved under the conditions of this consent; (vii) how complaints about the development can be made; (viii) any independent environmental audit, and the Applicant's response to the recommendations in any audit; and (ix) any other matter required by the Planning Secretary; and b) keep this information up to date.	Complies: Refer Section 4.3.

1.4.1 Relevant Definitions

Traffic and transportation terms have been defined in the Development Consent as provided below:

Heavy vehicle: As defined by the Heavy Vehicle National Regulator under the Heavy Vehicle National Law (NSW)

Heavy vehicle requiring escort: Any vehicle that requires a pilot vehicle and/or escort vehicle, as defined by the National Heavy Vehicle Regulator's NSW Class 1 Load Carrying Vehicle Operator's Guide

Light vehicle: As defined by the Transport for NSW Vehicle standards information sheet VSI 05 Light vehicle dimension limits Rev 6 (TfNSW, 11 March 2015)

Vehicle movement: One vehicle entering and leaving the site

When used in this TMP, the words are consistent with the definition outlined in the Development Consent.

1.5 Road Authority Consultation

1.5.1 Stage 1a and 1b

A previous iteration of this TMP which covered Stage 1a and 1b was prepared in conjunction with consultation with Officers from Transport for NSW and Officers from Dubbo Regional Council. These third parties were provided a draft of the Stage 1a and 1b Traffic Management Plan for review via email on 23 July 2024.

TfNSW provided feedback to the draft TMP by recommending a minor change to Table 1 which has been incorporated to this revision. They otherwise noted that the draft was prepared in accordance with conditions B1, B2, B3 and B8 of the Notice of Determination.

Records of the consultation and feedback provided for the Stage 1a and 1b TMP are included in Appendix B for reference.

The Stage 1a and 1b TMP was formally approved by DPHI on the 4 November 2024 then again on 20 November 2024 to incorporate a minor changes.

1.5.2 Stage 2a

Officers from Transport for NSW and Officers from Dubbo Regional Council were provided a draft of the Stage 2a Traffic Management Plan (Revision A dated 20 January 2025) for review via the Major Projects portal.

TfNSW provided feedback in a letter dated 17 February 2025. Matters relevant to be addressed in a revised TMP are summarised in Table 3 along with a response and reference location.

Table 3: TfNSW Comments and Response

Matter	TfNSW Comment	Response	Reference Location
Bus Routes	<i>Confirm no impact on bus routes on the state road network, including school bus routes.</i>	No deliveries using heavy vehicles are to occur between 8:00am and 9:30am, and 2:30-4:00pm.	Section 4.8 and Table 8
Driver's Code of Conduct	<i>Outline the procedures to ensure compliance with the driver's code of conduct, including adhering to transport routes, speed limits, and safe driving practices.</i>	Additional measures and checks have been included in this revision of the TMP to ensure adherence to the Driver Code of Conduct.	Section 8.1 and 8.2, Table 8

2. Existing Road Environment

2.1 Site Location

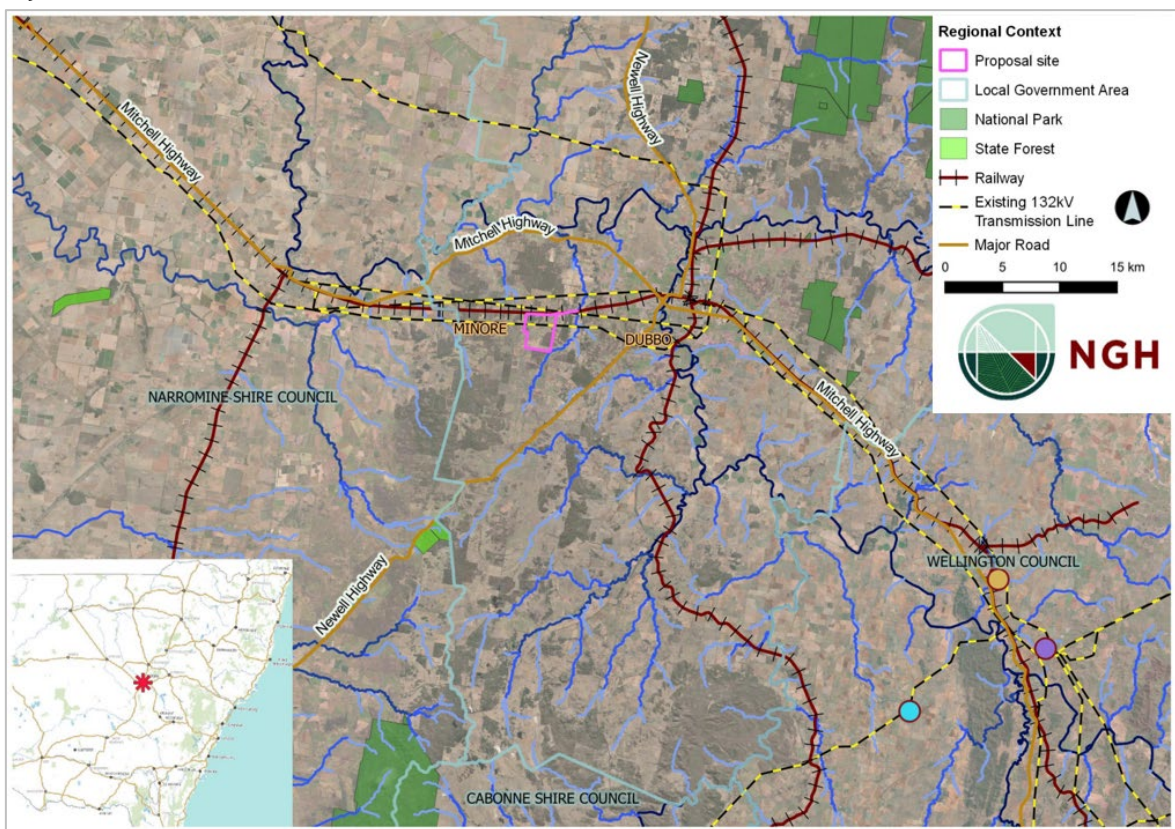
The Forest Glen Solar Farm is proposed to be located at Lot 6 DP 755102 and Lot 1 DP1198911, which is situated 16km west of Dubbo and has an area of approximately 774ha. The site is currently occupied by one dwelling within the southern portion of the site, with access provided via an existing connection with Delroy Road.

The site and the surrounding area are zoned RU1 Primary Production and are predominantly agricultural land use.

The Main Western Railway line is located north of the proposal site. However, the access route for the project does not cross the railway line.

The project site, regional context and surrounding transport environment are shown in Figure 2.

Figure 2: Site Location



Source: NGH

2.2 Road Network

Vehicles accessing the site are expected to primarily use Golden Highway, and to a lesser extent Mitchell Highway, which both connect with Newell Highway within Dubbo. Vehicles will then use the local road network via Minore Road and Delroy Road to access the site.

Golden Highway, Mitchell Highway and Newell Highway are State Roads under the care and management of Transport for New South Wales (TfNSW), and are described below:

- **Golden Highway** is located in the Hunter and Orana regions and runs in an eastbound direction from Newell Highway in Dubbo towards Newcastle where it connects with New England Highway. Within the Dubbo local government area (LGA) it typically has a sealed width of approximately 9.0 metres accommodating one lane of traffic in each direction, and has a speed limit of 100km/hr.
- **Mitchell Highway** extends northwest from its connection with Great Western Highway and Mid-Western Highway in Bathurst. The road runs through Dubbo and continues to the Queensland border. Within the Dubbo LGA it typically has a sealed width of approximately 9.0 metres accommodating one lane of traffic in each direction, and has a speed limit of 110km/hr.
- **Newell Highway** generally runs in a north-south alignment from West Wyalong to Tocomwal. Within the vicinity of the site, it accommodates one lane of traffic in each direction and has a sealed width of approximately 10.0 metres. It also has a posted speed limit of 60km/hr within Dubbo.

Minore Road is a municipal collector road that extends west from Newell Highway to its connection with Narromine Street. It has a sealed carriageway width of approximately 12.0 metres within Dubbo which narrows to 7.0 metres towards the site. It accommodates one lane of traffic in each direction and has a speed limit of 80km/hr west of the urban area.

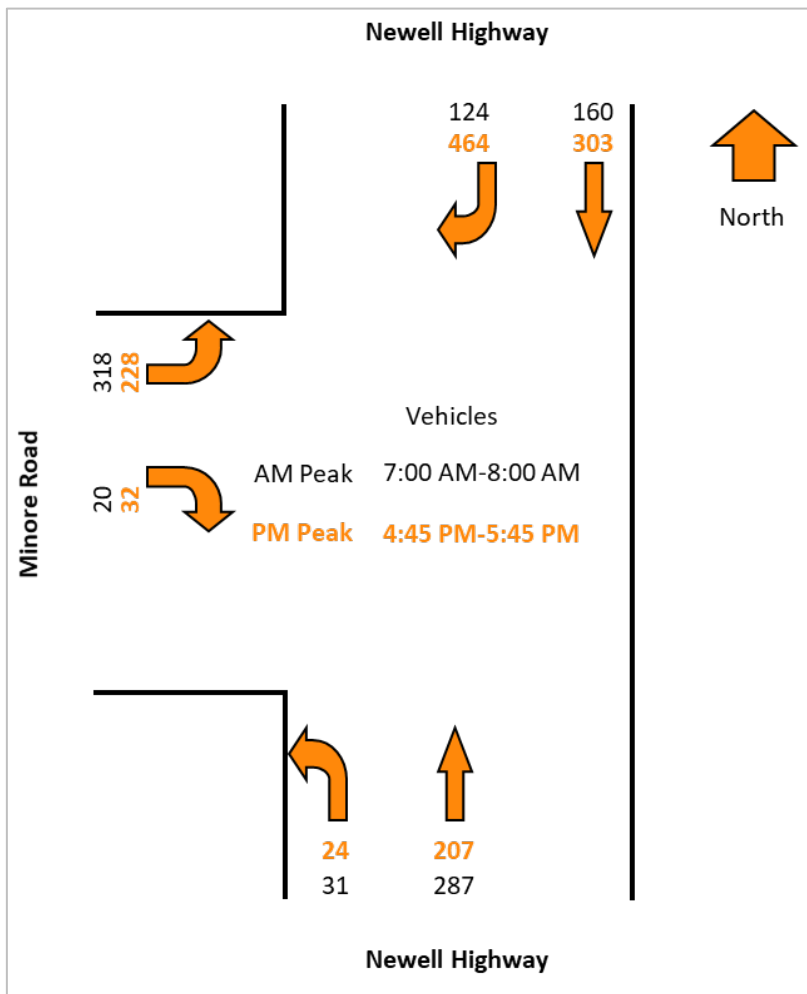
Delroy Road is also a local road that extends west from Minore Road for 3.6km to its connection with the site access. It has an unsealed carriageway width of approximately 5.5 metres and accommodates two-way vehicle access.

The intersection of Newell Highway with Minore Road is priority controlled with a Give Way sign provided for vehicles exiting Minore Road. Turning movements from Newell Highway are supported by a right turn lane and vehicles turning left are provided with basic left turn treatment. The intersection of Minore Road and Delroy Road is priority controlled.

2.3 Traffic Volumes

Amber commissioned a turning movement count survey at the intersection of Newell Highway and Minore Road in order to determine the existing traffic conditions at the intersection. The survey was undertaken on Tuesday 8 December 2020 from 6:00am to 8:00am and from 4:30pm to 6:30pm. The peak hour survey results are illustrated below in Figure 3.

Figure 3: Turning Movement Count Peak Hour Survey Results



The survey results indicate the morning peak hour occurred from 7:00am and the afternoon peak occurred from 4:45pm. The intersection accommodates a total of 940 and 1,258 vehicles per hour during the morning and evening peak hours, respectively.

Traffic volume data for Newell Highway was obtained from the TfNSW traffic volume viewer. The closest available data was located 370 metres east of Yuille Court, where the 2009 data recorded an average daily traffic count of 5,178 vehicles per day (vpd). The traffic count data also indicates that 19% of all traffic are heavy vehicles. Applying a growth rate of 1.5% to the 2009 data suggests Newell Highway currently accommodates in the order of 6,099vpd.

Traffic count data for Minore Road has been provided by Dubbo Regional Council and is outlined below:

- Minore Road west of St Andrews Drive (February 2016): 2,825vpd - 1% heavy vehicles;
- Minore Road west of Champagne Drive (February 2016): 950vpd;
- Minore Road east of St Andrews Drive (September 2007): 3,300vpd;

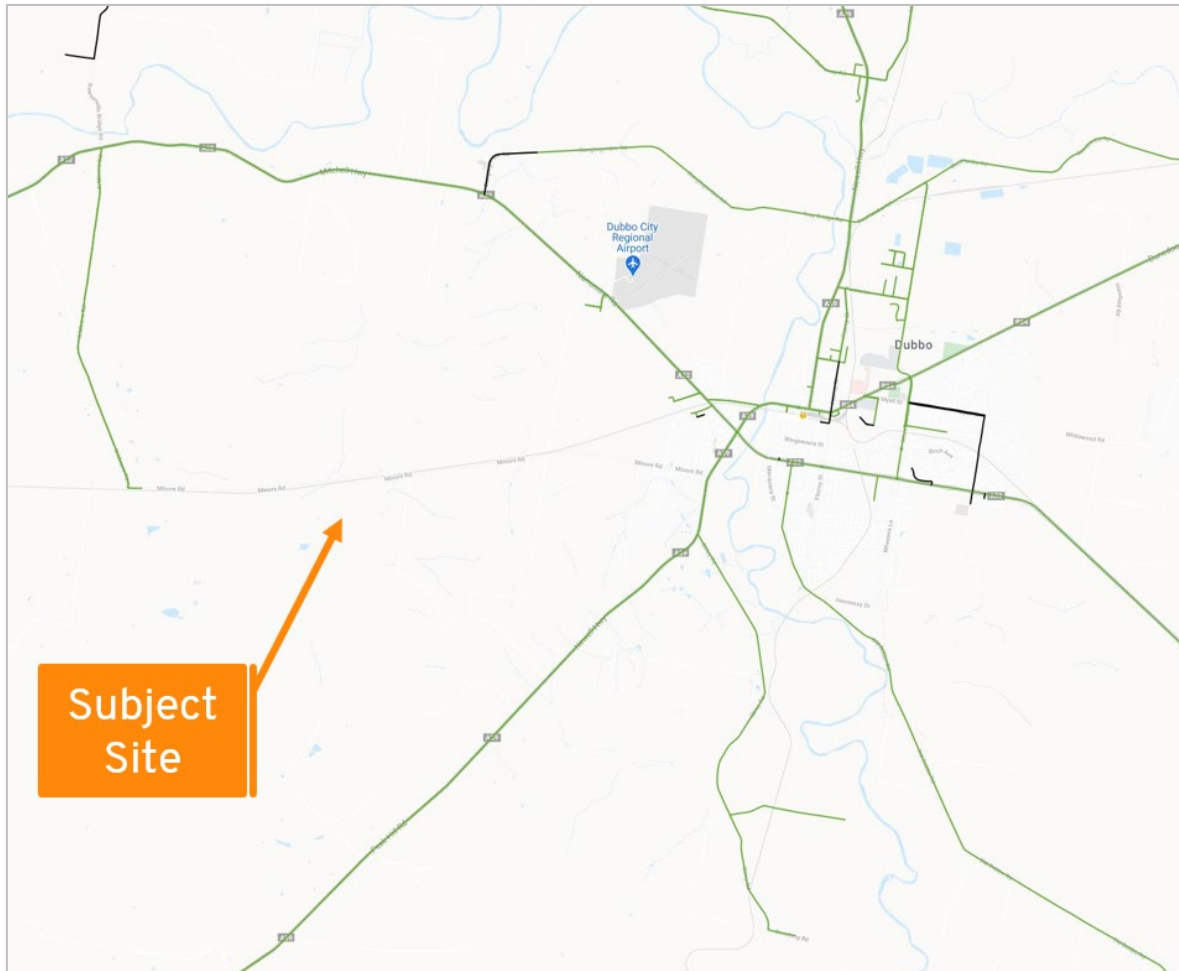
Council has suggested a growth rate of 1.0-1.5% for Minore Road. Therefore, Minore Road is estimated to currently accommodate approximately 4,184vpd.

Given Delroy Road services 7 residential property it is estimated that it currently accommodates in the order of 70 vehicle movements per day.

2.4 Restricted Vehicle Access

The TfNSW Restricted Vehicle Access Map for the surrounding area is provided within Figure 4. The green lines indicate approved B-Double routes while the black lines represent approved routes with travel conditions.

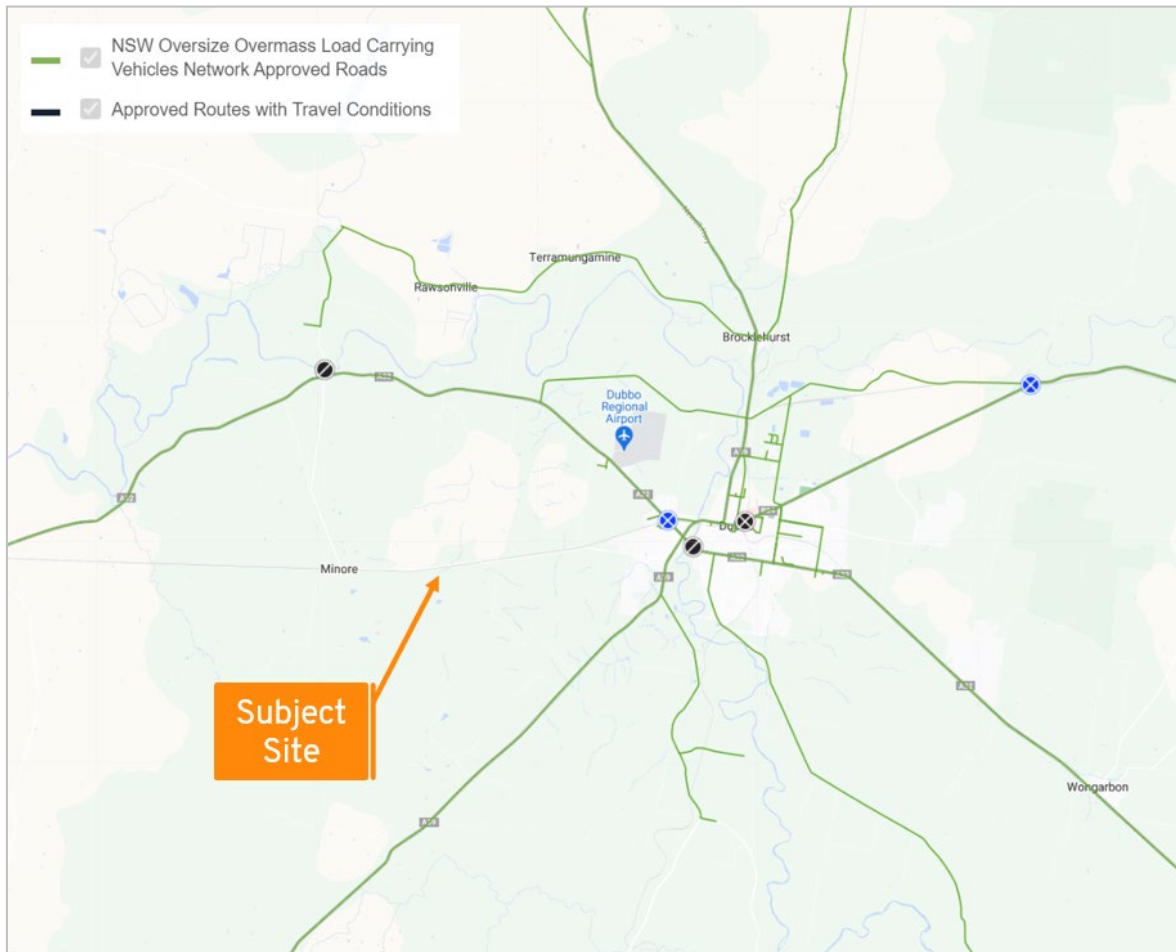
Figure 4: TfNSW Restricted Access Vehicle Map



Source: TfNSW Restricted Access Vehicle Map

Figure 4 indicates that the surrounding arterial road network are on approved for B-Double routes. An extract from the TfNSW Oversize Overmass Load Carrying Vehicles Network Map is shown in Figure 5.

Figure 5: TfNSW OSOM Vehicle Map



Source: TfNSW OSOM Network

Figure 5 shows that the surrounding arterial roads that access the site are approved for OSOM vehicles operating under Class 1 Load and Dimensions Mass Exemption Notices.

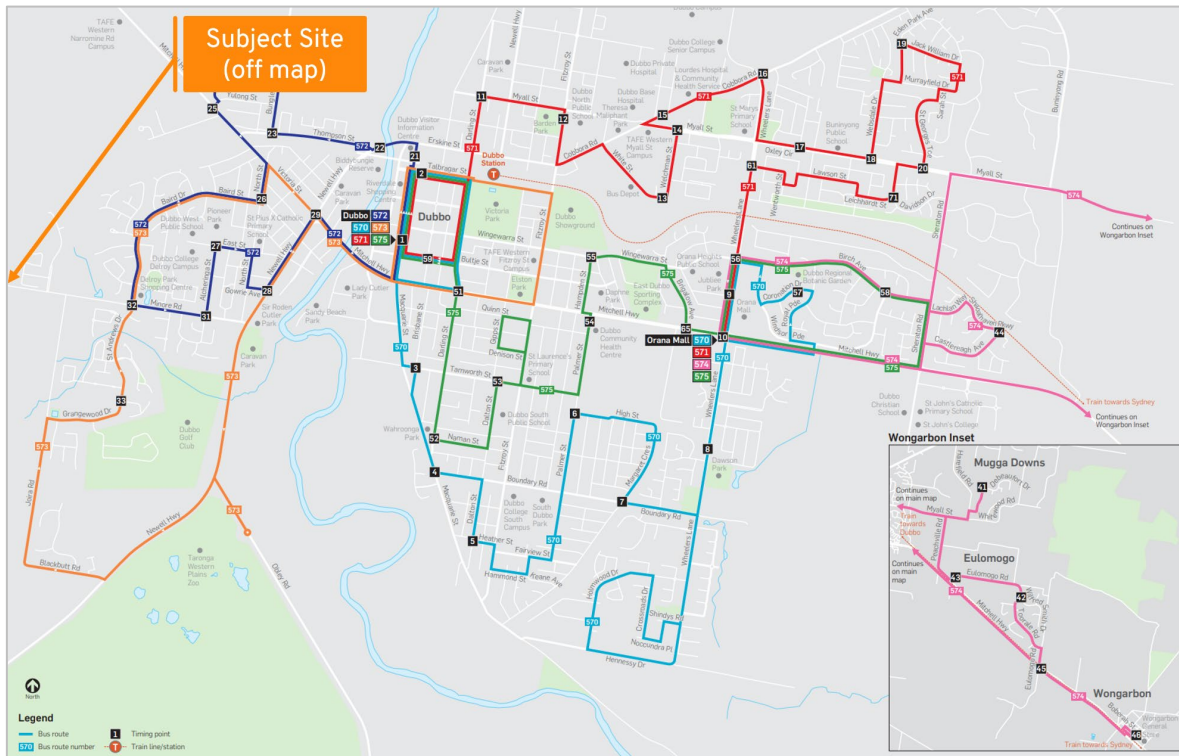
2.5 Public Transport Services

Bus services are operated within the vicinity of the site and are summarised below:

- Dubbo Bus Lines operate route 572 along Minore Road between St Andrews Drive and Alcheringa Street, with five other bus routes that operated in Dubbo (but not along Minore Road); and
- Ogden's Coaches operate along Minore Road with buses expected along the section used by the project between 7:40am-8:20am and 4:10pm-4:30pm.

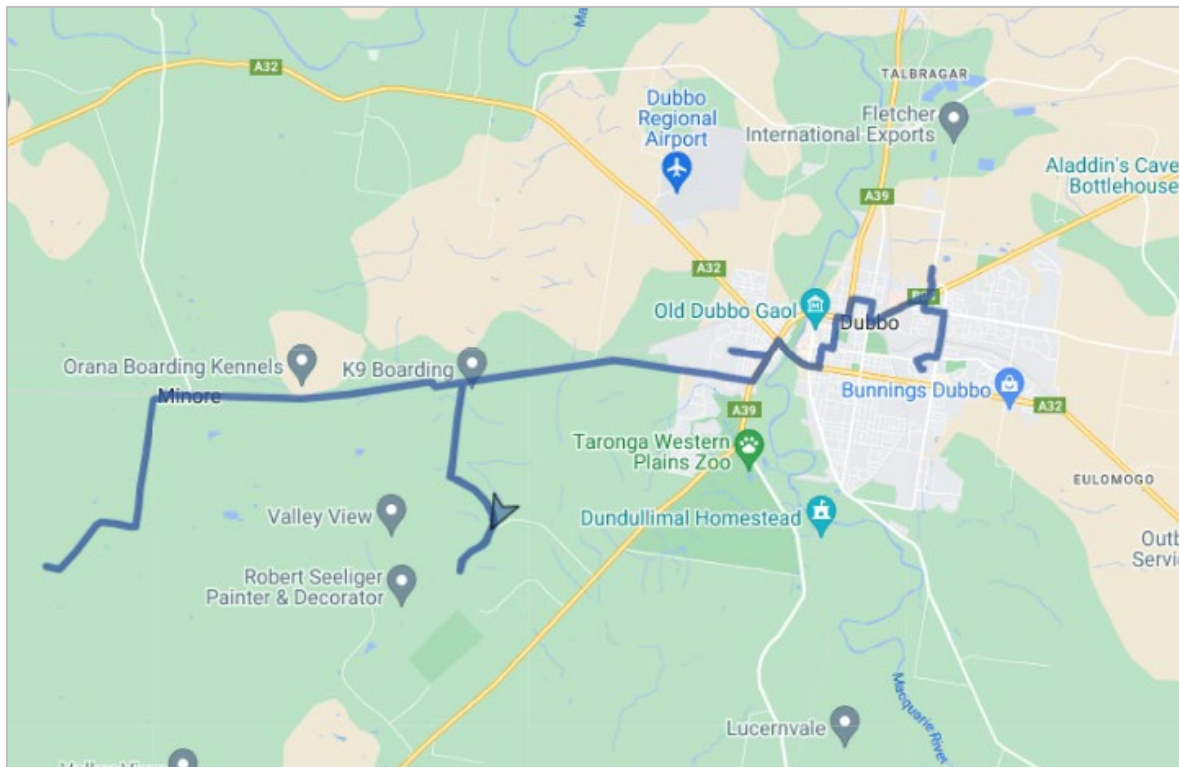
The Dubbo Bus Lines route map is shown in Figure 6, the bus route Figure 7, with the School Bus timetables included in Appendix E for reference.

Figure 6: Dubbo Bus Lines Services



Source: Dubbo Bus Lines

Figure 7: Dubbo School Bus Services near Site



Source: Ogden Coaches

The Dubbo Bus Line services typically operate with hourly frequency during business hours on weekdays, with less frequent services outside these periods. Figure 6 shows that the interface between the services on Minore Road and the site access route is relatively small.

In relation to the school bus routes, Ogden Coaches are to be contacted prior to construction to confirm the school bus information is still accurate. Contact details are provided below:

- Name: Phillip Cooper
- Phone: 02 6372 2489
- Email: phillip@ogdenscoaches.com.au

3. Construction Overview

3.1 Project Description

The Project will involve the construction and operation of a ground-mounted PV solar tracking array generating approximately 90 MW AC / 110 MW DC of renewable energy. The power generated will be exported to the national electricity grid. The development footprint will occupy approximately 444 ha of the 789 ha Project site.

Key development and infrastructure components will include:

- Single axis tracker Photovoltaic (PV) solar panels mounted on steel frames over most of the site (2.1 metres in height)
- Underground and overground electrical conduits and cabling to connect the arrays to the inverters and transformers
- Systems of inverter units and voltage step-up throughout the arrays
- National Energy Market (NEM) compliant metering arrangements for all energy exported to the grid as well as internal metering to measure battery and solar output
- Onsite substation 132kV / 33kV to connect onsite Essential Energy 132kV transmission line
- 132/33kV transformers and associated infrastructure
- BESS of 25 Megawatt hours (MWh) (i.e., 25MW power output for one hour), adjacent to the onsite substation and comprising of lithium ion batteries with inverters
- Between 12-15 shipping containers (40 foot each)
- Site office and maintenance building, vehicle parking areas, material laydown area, internal access tracks and perimeter security fencing
- Site access will be through Minore Road via Delroy Road approximately 1.9km east of the site
- Upgrade of intersection of Minore Road and Delroy Road

3.2 Stage 2a Works

Stage 2a works will involve activities required for the construction of the Project without the use of heavy vehicles requiring escort, as described within the EIS, including:

- 150,000 – 200,000 panels 2.4 metres (m) x 1.1 m 2.1 m in height
- Row spacing 17.1 m (7 m between panels)
- Steel posts to a depth of 2 m
- 20 to 25 power conversion units (PCUs)
- Approximately 3000 tracking structures
- Single axis tracking systems
- Onsite BESS (12 to 15 containers up to 25 MWh)
- Underground cabling
- Connection to Essential Energy transmission lines
- Permanent Ancillary Infrastructure:

- Site office
- Staff amenities including kitchen and bathroom
- Control protection equipment
- Water tanks
- Wastewater system
- Switch gear
- Temporary construction facilities:
 - Construction site offices and amenities
 - Car and bus parking area for construction staff
 - CCTV and Security fence.

No heavy vehicles requiring escort are required for Stage 2a.

The TMP will be updated for future stages of the project.

3.3 Road Upgrade Details

The required road upgrades are included in Condition B5 and Figure 1 - 5 of Appendix 5 the Development Consent. The staging of the road upgrade was approved by the Planning Secretary in the letter dated 3 October 2024 which is reproduced below in Table 4.

Table 4: Road Upgrades

Road	Location	Upgrade Requirements	Timing
Minore Road / Delroy Road	Intersection	<i>Works as shown in Figure 1 of this Appendix.</i> <i>The final design is to ensure that the intersection has sufficient width to accommodate two-way traffic flow, based upon the turning swept paths of 'design B-double 26.0' (utilising the Austroads design templates, with a turning speed of 5-15 km/hr), and to ensure that at no stage will a truck be required to cross over onto the wrong side of Delroy Road or Minore Road when either entering or exiting the intersection.</i>	Prior to commencing construction
Delroy Road – Stage 1	From Minore Road / Delroy Road intersection to the site access point	<i>Stage 1: Upgrades which would include, but would not be limited to the following activities:</i> <i>o Repair of existing creek crossing on Delroy Road, which is exhibiting stress fractures on the road surface.</i> <i>o Widening of the road where required to allow safe egress of construction vehicles.</i> <i>o Maintenance grading, placement of gravel, and compaction.</i> <i>o Reduction of the road speed limit/s as and if required.</i>	Prior to commencing construction

Road	Location	Upgrade Requirements	Timing
Delroy Road – Stage 3		<i>Final road upgrades along Delroy Road - including intersections and bitumen sealing, with full costs to be paid by X-ELIO. Following approval from the Planning Secretary, further assessments (as required) will be conducted by X-ELIO to ensure all upgrades remain within the development footprint and minimise impacts on areas with potential biodiversity concerns.</i>	Prior to the commencement of operations

Design plans have been developed of the road upgrades include measures and details to addresses these requirements. The design plans are attached to this TMP for reference in Appendix A.

Records of the consultation undertaken with road authorities are provided in Appendix B.

3.4 Project Schedule

Key project activities during Stage 2a are summarised in Table 5.

Table 5: Construction Details

Project Activity	Commencement (Month, Year)	Anticipated Duration	Staffing Requirements
Site Management / General Project Works	March 2024	14 months (partially into Stage 2b)	Up to 12 on-site
Civil Works	March 2024	12 months (partially into Stage 2b)	Up to 34 on-site
Electrical / Mechanical Preparation Works	April 2024	12 months (partially into Stage 2b)	Up to 80 on-site
Substation / Grid Connection Preparation Works	March 2024	10 months (partially into Stage 2b)	Up to 14 on-site

As shown, a total of up to 140 staff will be on-site during Stage 2a.

Project activities associated with stages of the project will be provided as part of future TMP/s.

3.5 Construction Times

Construction activities shall be undertaken during standard daytime construction hours, as follows:

- Monday to Friday: 7am – 6pm
- Saturday: 8am – 1pm
- 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; or
- Emergency work to avoid the loss of life, property and/or material harm to the environment.

Any other construction activities outside the approved hours require the approval of the Planning Secretary.

3.6 Traffic Movements

3.6.1 Traffic Generation

The expected traffic generated during Stage 2a can broadly be separated into the following categories:

- Light vehicles associated with transporting staff to/from the site, including shuttle buses;
- 8 to 13 metre long rigid trucks to deliver materials and smaller plant;
- Truck and Dog vehicles will be used to transport material to/from the site; and
- Articulated trucks to transport construction plant to site (mix of 19m and 26m B-Doubles).

Condition B1 (b) of the Development Consent requires the length of any vehicles (excluding heavy vehicles requiring escort) used for the development to not exceed 26 metres, unless the Planning Secretary agrees otherwise.

Vehicles used during Stage 2a will not exceed 26 metres, and no heavy vehicles requiring escort will be used for Stage 2a works.

The construction traffic volumes for Stage 2a of the project have been provided by the Applicant.

A peak of approximately 60 light vehicle movements per day is expected to occur for staff during Stage 2a.

The heavy vehicles for Stage 2a by construction activity are summarised in the detailed heavy vehicle forecast presented in Figure 8.

Figure 8: Heavy Vehicle Movements – Stage 2a

[illegible]

Source: Sante Group



As shown, during construction activities undertaken in Stage 2a, the site will generate no more than 68 heavy vehicles per day, with a peak of 68 heavy vehicles per day forecast.

No heavy vehicles requiring escort will be generated as part of the construction of Stage 2a. Heavy vehicles requiring escort that may be required for the project will be addressed in future stages of the TMP.

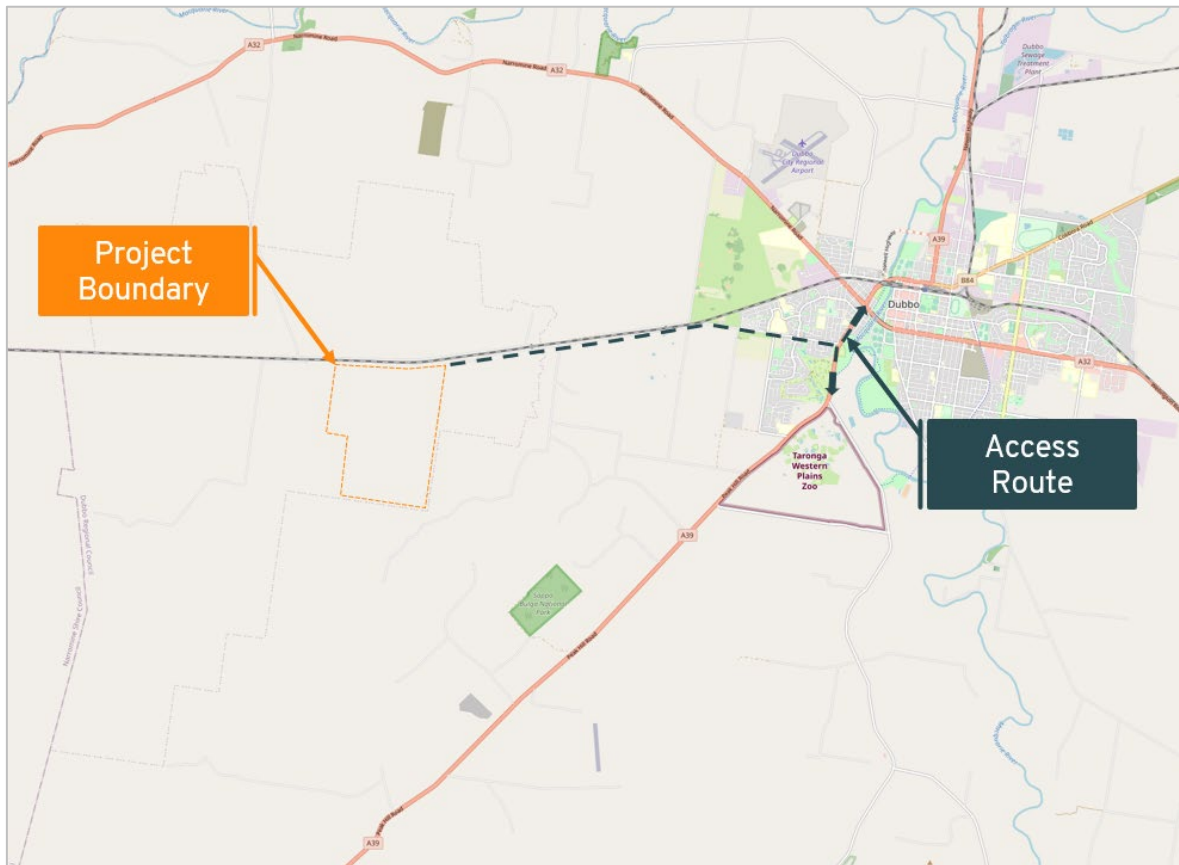
Vehicles movements will be provided for future project stages as part of updated TMPs.

3.6.2 Light Vehicle Access Route

The workforce is expected to primarily be located in Dubbo and other nearby towns.

All light vehicles will enter the site via site access and connection to Delroy Road and the connection to Minore Road, with the connection to the Newell Highway, with the access route for light vehicles shown within Figure 9.

Figure 9: Light Vehicle Access Route

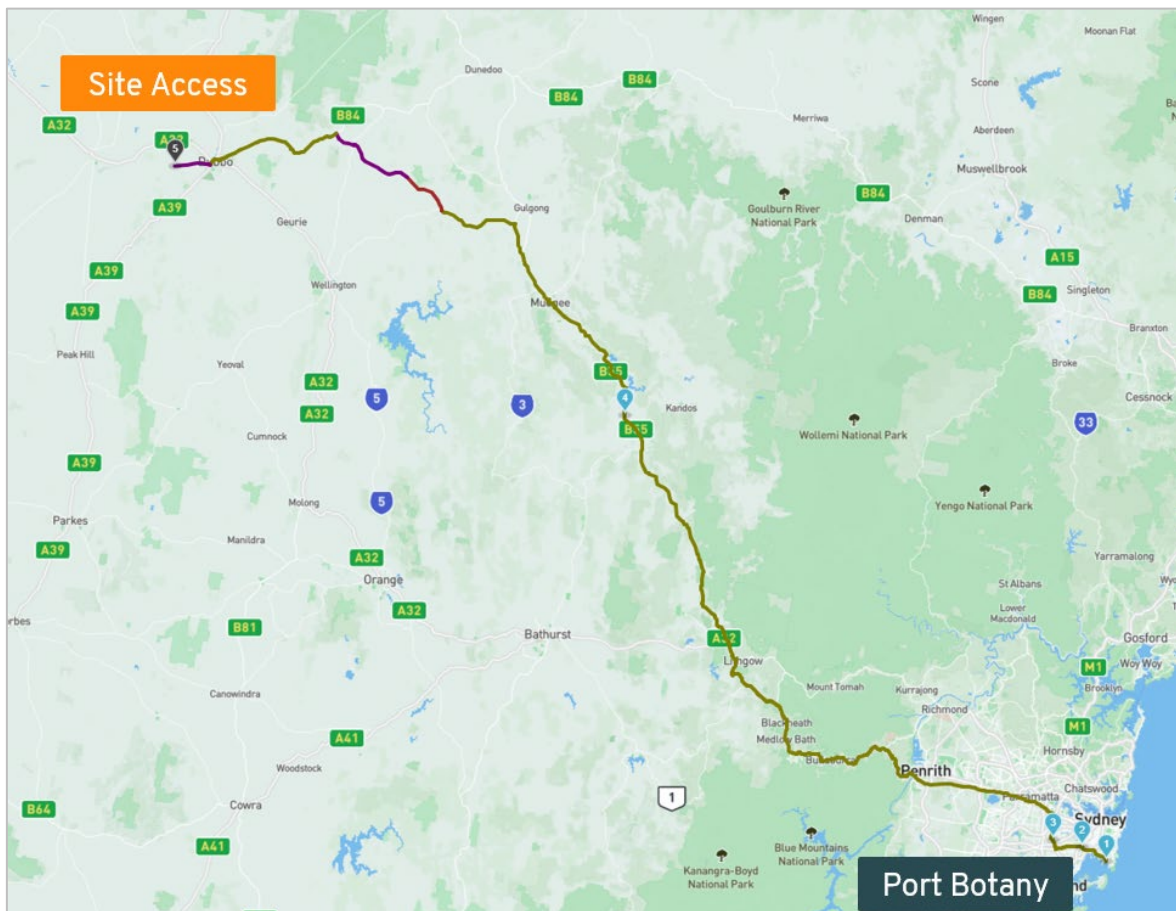


Source: OpenStreetMaps

3.6.3 Heavy Vehicle Access Route

Port Botany has been identified as the preferred location for the solar farm plant will be imported. Figure 10 shows the access route from the Port Botany to the site.

Figure 10: Heavy Vehicle Access Route from Port Botany

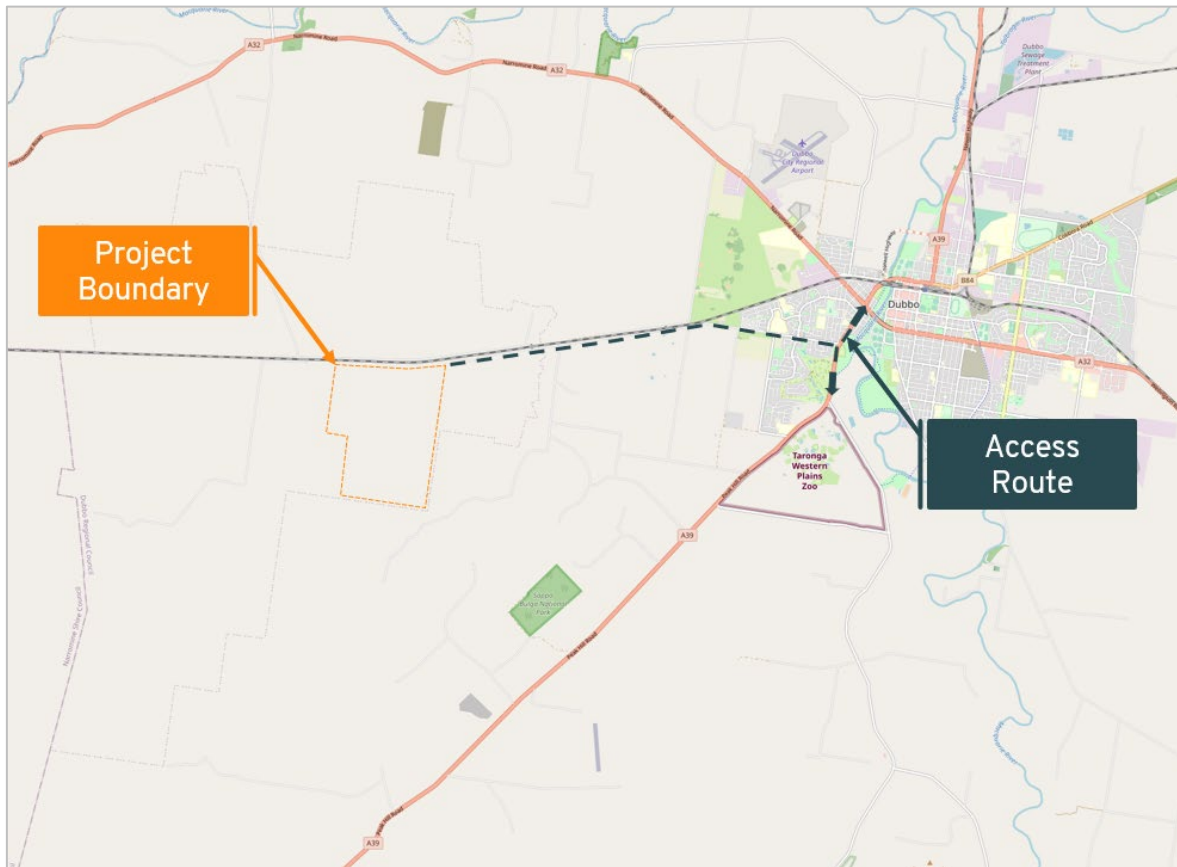


Source: NHVR Route Map, Route Code: 1F50D-2

This route is consistent with the haulage route provided in Figure 2 of Appendix 5 of the Development Consent. All heavy vehicles from Port Botany must use this route to site.

All other heavy vehicles transporting materials to and from other locations are to all access the site via Newell Highway, Minore Road and Delroy Road, as shown in Figure 11

Figure 11: Heavy Vehicle Access Route



Source: OpenStreetMaps

Condition B3 of the Development Consent requires all heavy vehicles associated with the development must travel to and from the site via Newell Highway, Minore Road and Delroy Road. This route is to be complied with at all times.

3.7 Site Access

Condition B4 of the Development Consent requires:

All vehicles associated with the development must enter and exit the site via the primary access point, as identified in Appendix 1 [of the Development Consent].

In addition, vehicles may exit the site via the emergency exit point/s identified in Appendix 1 for emergency purposes [of the Development Consent].

All motorists will comply with these conditions and will enter and exit the site via the primary access point unless there is an emergency.

3.8 Other Construction Stages and Operations

As this TMP only applies to Stage 2a, separate TMPs and associated consultation will be undertaken for other project stages as discussed in Section 1.3.

4. Traffic Management Strategy

4.1 Driver Protocols

Management of vehicular access to and from the site is essential to maintain the safety of the general public as well as the labour force. Exemplar driver protocols are to be implemented and a driver code of conduct established. The Drive Code of Conduct is provided within Appendix C. All vehicle drivers that visit the site are required to read, agree to and sign the Driver's Code of Conduct.

The following measures will be implemented by the X-Elio Project Manager and the relevant Construction Project Manager:

- Mandatory site induction given to all workers on the site which clearly sets out the TMP requirements including approved routes, speed restrictions and the Driver Code of Conduct.
- Monitoring complaint and safety incident registers (including near miss and hazard observation) are also tracked to address any incidences of non-compliance and improvement opportunities in relation to routes and driving behaviour.

4.2 Delivery Logistics

The Site Construction Manager will be responsible for managing the heavy vehicle movements to and from the site during Stage 2a. Their responsibilities comprise:

- Ensuring that accurate records are kept of heavy vehicles to and from the site. These will be reported monthly to X-Elio Project Manager. The records will list the number of heavy vehicles accessing the site each day, including:
 - The amount and type of material / plant transported;
 - The time each truck arrived and departed the site and the vehicle classification; and
 - The direction the vehicle was travelling to/from (i.e. north/east, south/west).
- Ensuring that the maximum number of heavy vehicle movements per day is adhered to;
- Schedule of next day and 2-day forecast of all deliveries, including inventory and timing;
- Transit time;
- Estimated time of arrival;
- Minimum daily communication with transport company/s; and
- Ensure construction drivers/staff must be provided a copy of assigned haulage routes.

The X-Elio Project Manager is to ensure that records of the heavy vehicles are kept for the life of the project.

Updates will be sought from nearby significant renewable projects by the X-Elio Project Manager on any increase to traffic volumes on the access route. This information will be provided to the Site Construction Manager for them to schedule deliveries outside periods when significant increases of traffic are expected on the access route.

The Site Construction Manager is to liaise with transport companies to ensure major deliveries are minimised:

- during peak hours and to avoid conflict with local traffic
- any school zones during peak school times, and
- during latent weather conditions such as fog, dust, wet weather and flooding.

Furthermore, the varying origins of the haulage movements and limited number of deliveries to site each day will limit the potential for haulage vehicles to form convoys or platoons.

4.3 Information and Communications

A Community Consultation Plan (CCP) has been developed to provide an approach to stakeholder and community communications for the Project. The plan identifies opportunities for providing information and consulting with the community and stakeholders during the Project. The plan contains:

- Identification of community stakeholders that are likely to be affected by the Project
- Issues and risks related to the engagement of each stakeholder group
- A consultation strategy for each stakeholder group
- A set of activities against the project development timeline to facilitate consultation

The plan will continue to be implemented during construction. X-Elio will provide regular updates about the progress of the project via the project website. Details regarding the specific requirements for maintaining this database and reporting will be included in the CCP.

In accordance with Condition C20 of the Development Consent, prior to construction commencing and during the construction period, X-Elio will provide make information available on the project website which include the status of works, contact details for any complaints or enquiries, and also include the:

- the EIS;
- the final layout plans for the development;
- current statutory approvals for the development;
- approved strategies, plans or programs required under the conditions of this consent;
- the proposed staging plans for the development if the construction, operation and/or decommissioning of the development is to be staged;
- a comprehensive summary of the monitoring results of the development, which have been reported in accordance with the various plans and programs approved under the conditions of this consent;
- how complaints about the development can be made;
- any independent environmental audit, and the Applicant's response to the recommendations in any audit; and
- any other matter required by the Planning Secretary.

The information is to be kept up to date.

X-Elio is required to consult and notify neighbours of the Forest Glen Solar Farm about any major deliveries which may require traffic control and disruption to access at least seven days before delivery. The notification will provide details of:

- The Project
- The construction period and construction hours
- Delivery traffic control and disruptions
- Contact information for Project management staff
- Complaint and incident reporting
- How to obtain further information

Any concerns raised by residents are to be addressed in accordance with the complaints procedure as outlined in Section 9.5.

4.4 On-Site Mitigation Measures

The following on-site traffic management measures will be implemented:

- All vehicles will enter the site through the designated access point and all vehicles will stop at security;
- Signage will be placed at the front entrance advising truck drivers of their requirement to minimise noise both on and off-site;
- On-site speed restrictions (40 km/hr maximum limit) will be implemented;
- Construction access track routes in proximity to any environmentally sensitive areas will be clearly signed as 'no-go zones' guided by relevant specialists;
- Appropriate dust suppression measures will be implemented, comprising:
 - Vehicles will drive at slower speeds when travelling on unsealed roads. This can reduce the amount of dust created and the amount of dirt tracked onto the public road network. Standard mitigation measures, such as a water trucks to dampen the roads and reduce the amount of dust in the air, shall be considered to reduce dust levels
 - Dust will be monitored visually and via weather reports throughout construction and managed to prevent dust leaving the development site, including dust from stockpiled materials
 - The Site Construction Manager will assess weather conditions and provide dust mitigation measures as required or modify activities to maintain reasonable dust levels
- A proactive erosion and sediment control plan will be implemented for on-site roads, hardstands and laydown areas;
- All internal roads will be constructed as all-weather roads;
- A maintenance program for on-site access tracks will be implemented to ensure safe access;
- Loading and unloading will occur within the site only and not off-site. No street or roads will be used for material storage at any time;
- Sufficient car parking will be provided on-site to ensure vehicles do not park on the surrounding road network. The amount of car parking on-site will be amended, if required;

- All car parking and loading areas will be designed to accommodate the associated design vehicle requirements; and
- Construction equipment will be parked in designated laydown areas and work areas, and will not use the parking designated for project staff and visitors.

4.5 Public Transport and School Buses

Delivery of larger plant is to be scheduled by the Site Construction Manager to occur outside of school bus service times to prevent larger vehicles interacting with school buses. Refer to Appendix E for the school bus timetable.

Specifically, no deliveries using heavy vehicles are to occur between 8:00am and 9:30am, and 2:30-4:00pm.

4.6 Hazardous Goods and Dangerous Materials

All transport vehicles will be required to operate in accordance with State Environmental Planning Policy No. 33 – Hazardous and Offensive Development, Australian Dangerous Goods Code and Australian Standard 4452 Storage and Handling of Toxic Substances including consideration of:

- classification of loads;
- packaging and performance testing;
- use of bulk containers and unit loads;
- marking and placarding;
- vehicle requirements;
- segregation and stowage;
- transfer of bulk dangerous goods;
- documentation;
- safety equipment;
- procedures during transport; and
- operations in emergencies.

The process for the safe transport and use of dangerous goods will be provided to drivers as a part of the training and induction processes as required.

4.7 Environment Management

Dust suppression measures are to be undertaken for Delroy Road by watering or other suitable measures by the Construction Contractor at regular intervals, in consultation with Council.

At regular intervals and/or as required as an outcome of a site inspection, Site Construction Manager will arrange for any material (mud, gravel) that has been deposited onto the public road network as a result of project activities to be cleaned, either via sweeping or wash down. This would be subject to the implementation of appropriate traffic management measures (signage, personnel etc.) to ensure the safety of members of the public and the road cleaning crew.

Vehicles leaving the works area will be in a clean condition prior to leaving the site to minimise dirt being tracked onto the public road network. It will be the driver's responsibility to ensure vehicles are in a clean condition prior to leaving the works area. Vehicles will be inspected by individual drivers and suitable cleaning materials provided by the Site Construction Manager.

4.8 Shuttle Buses and Car-Pooling

Shuttle buses will be used to transport staff to and from the site during construction.

Given the comparatively small to medium size nature of the project and workforce required, it is not anticipated that "park and ride" type facilities shall be required. Instead, shuttle busses will only pick-up and drop-off personnel at their accommodation.

If a "park and ride" is required, the pick-up parking locations for such facilities shall be located on private property (e.g. industrial complex within Dubbo industrial area), with both the property owner's and Dubbo Regional Council's consent.

On site, pick-up and drop-off will occur at the designated location, adjacent to the main site compound.

Should any personnel seek to use their own vehicle, justification would need to be provided to encourage and promote private motor vehicles are used to support car-pooling. The Contractor Project Manager will document staff that use private motor vehicles and their:

- Days of work;
- Start and finish times; and
- Route to work.

Opportunities to car-pool with other staff using private vehicles will be identified and car-pooling will be encouraged by the Contractor Project Manager. A summary of the car-pooling opportunities will also be provided to staff at induction and toolbox meetings.

The number of employees using their own vehicles to access the site will be recorded. This recorded data will be made available to the Planning Secretary if requested. The number of personnel using light vehicles to access and leave the site in place of the shuttle bus will be regularly monitored.

4.9 Emergency Repair or Maintenance Requirements

Monthly inspections will be undertaken of Delroy Road between Minore Road and the site access, and Minore Road between Delroy Road and Buddens Road on the transport route (5.5 kilometres) will be made by the Construction Project Manager with findings provided to the X-Elio Project Manager.

Should the inspections indicate the need for emergency repairs and or road maintenance issues the X-Elio Project Manager will be the first points of contact to resolve issues. Details and contact information of each of these positions will be provided to TfNSW, Council, and other relevant stakeholders.

In the event of emergency road repairs caused by construction traffic, appropriate permits and traffic management shall be adopted to complete the work with TfNSW and Council approval prior to works commencing.

4.10 Management of Drainage Infrastructure

The drainage network on Delroy Road between Minore Road and the site access, and Minore Road between Delroy Road and Buddens Road on the transport route (5.5 kilometres) will be visually monitored weekly and reported on monthly by the Construction Project Manager and X-Elio Project Manager, with the original condition as a baseline to ensure drainage capacity has not reduced.

Should any issues be identified the Construction Project Manager and X-Elio Project Manager will undertake necessary works to resolve issues working with the consent of Dubbo Regional Council.

4.11 Other Considerations

- All vehicles will enter and exit the site access locations in a forward direction.
- All permits for working within the road reserve must be received from the relevant authority prior to works commencing.
- Due to the location of the site, there is an inherent risk that adverse conditions may impact on the movement of transportation vehicles and transport of staff. Consideration for driving in the rain, fog, frost, icy conditions, bright sunlight, flood conditions, and within/near a bush fire is required, especially during the transportation using heavy vehicles that require escorts. Weather forecasts will be checked and posted daily in the site office by the Site Construction Manager. If adverse weather conditions are expected for the following day or days, staff will be informed through daily toolbox talks conducted by supervisors. The following mitigation measures will be implemented when travelling in adverse conditions:
 - Inspection of roads prior to using them to ensure that the road is safe. If there is black ice on the road, depending on the location, signage shall be installed and/or transportation movements will be stopped until it is safe to proceed;
 - Ban or restrict vehicle movements during periods where adverse conditions may impact on the operation of the road and the safety of workers and other road users;
 - Reduce the speed along the transportation route;
 - Provide additional warning for drivers on the road network;
 - Staff will be informed as part of the site induction and at daily toolbox talks, as required, on how to drive in adverse conditions relevant to the time of year, prevailing weather conditions and Project location;
 - Ensure that vehicles are fitted with equipment to assist them during adverse conditions (first aid kit, fire extinguisher, chains if required) and that drivers are able to communicate to one another with radio devices or via phone to either warn each other or call for assistance; and
 - Chains will not be permitted to be used on local roads for the commencement of a journey unless in an emergency.

5. Road Maintenance

A dilapidation survey of Delroy Road between Minore Road and the site access, and Minore Road between Delroy Road and Buddens Road on the transport route (5.5 kilometres), will be undertaken prior to the commencement of Stage 2a (as outlined in Section 1.3). The dilapidation survey will be undertaken in consultation with Dubbo Regional Council.

Additional surveys will be prepared for the following intervals as a minimum:

- Prior to the commencement of any upgrades;
- Within 3 months following the completion of construction or upgrades;
- Within one month prior to the commencement of decommissioning; and
- Within 3 months following completion of decommissioning

The surveys will involve a visual inspection of any existing damage on the above roads. The inspection will focus on structural and drainage aspects, such as potholes, visible rutting at wheel paths, cracking and surface deformation or depression. Recent maintenance activity, photos and location referencing of existing damage will be converted into a pre-construction dilapidation report which will be used as a baseline for future surveys.

If the dilapidation surveys identify that the road has been damaged during construction and/or upgrading the road will be repaired by a suitable road construction contractor appointed by X-Elio, in consultation with Dubbo Regional Council.

If there is a dispute about the repair of Delroy Road and Minore Road between the Applicant and the relevant roads authority, then either party may refer the matter to the Planning Secretary for resolution. The Planning Secretary's decision on the matter will be final and binding on both parties.

6. Traffic Management Responsibilities

The key management roles and responsibilities for the construction phase of the Project are described below.

X-Elio is the applicant and proponent for the Forest Glen Solar Farm. X-Elio has engaged contractors to undertake the construction activities associated with Stage 2a of the project.

6.1 X-Elio Project Manager

The X-Elio Project Manager as the Applicant representative has ultimate responsibility for the project and shall:

- Ensure all traffic control measures for this TMP are implemented and maintained in accordance with this plan and the relevant Acts, Codes, Standards and Guidelines;
- Ensure suitable communication and consultation with the affected stakeholders is maintained;
- Ensure inspections of the Traffic Controls are undertaken in accordance with the TMP, and results recorded. Any variations shall be actioned and documented;
- Arrange and/or undertake any necessary audits and incident investigations; and
- Review feedback from the Construction Project Manager.

6.2 Construction Project Manager

The Construction Project Manager shall:

- Oversee traffic control measures for this TMP are implemented and maintained in accordance with this plan and the relevant Acts, Codes, Standards and Guidelines;
- Undertaken suitable communication and consultation with the affected stakeholders is maintained;
- Oversee inspections of the Traffic Controls are undertaken in accordance with the TMP, and results recorded. Any variations shall be actioned and documented;
- Review feedback from field inspections, worksite personnel and members of the public, and take action to amend the traffic control measures as appropriate following approval from the Responsible Authority;
- Arrange and/or undertake any necessary audits and incident investigations; and
- Provide reports on the above to the X-Elio Project Manager.

6.3 Site Construction Manager

The Site Construction Manager is responsible for overseeing the day-to-day activities, and is therefore responsible for the practical application of the TMP, and shall:

- Instruct workers on the relevant safety standards, including the correct use of Personal Protective Equipment (PPE);
- Ensure traffic control measures are implemented and maintained in accordance with the TMP;

- Undertake and submit the required inspection and evaluation reports to the Construction Project Manager;
- Render assistance to road users and stakeholders when incidents arising out of the works affect the network performance or the safety of road users and workers; and
- Take appropriate action to correct unsafe conditions, including any necessary modifications to the TMP.

6.4 Site HSE Manager

The Site Health, Safety and Environment (HSE) Manager will ensure that all Workers and Subcontractors will:

- Correctly wear high visibility vests, in addition to other protective equipment required (e.g. footwear, eye protection, helmet, sun protection, etc) at all times whilst on the worksite;
- Comply with the requirements of the TMP and ensure no activity is undertaken that will endanger the safety of other workers or the general public; and
- Enter and leave the site by approved routes and in accordance with safe work practice.

7. Implementation

7.1 Hazard Identification, Risk Assessment and Control

In establishing adequate controls for the hazards, a structured approach shall be adopted via the use of the hierarchy of control as outlined below:

- Elimination
- Substitution
- Engineering
- Administration
- Personal Protection Equipment

Traffic management practices require that the Site Construction Manager evaluate all traffic arrangements before they are open to traffic and immediately following the opening to traffic. Adjustments are to be made as required and recorded, including reasons for the changes. The Supervisor is also required to evaluate the traffic arrangements when site conditions change, and new hazards that arise throughout the works will be subject to a risk assessment and incorporated onto the Risk Register.

7.2 Traffic Control Plans

Traffic Control Plans (TCPs) / Traffic Guidance Schemes (TGSs) will be prepared specifically for the major construction activities, as required. They will be designed in accordance with the Australian Standards and the TfNSW Traffic Control at Work Sites Guidelines.

Impacted local community members and developers will be notified of the nature of these traffic changes and their duration two weeks prior to implementation.

7.3 Traffic Control Devices

In the event traffic control devices are required, they will be erected in accordance with the TGS. Work will not commence or continue until all signs, devices and barricades are in place and operational in accordance with the requirements of the TMP.

A vehicle displaying a vehicle mounted warning device shall be used in advance of the signs and traffic control devices to protect workers setting out the signs or traffic cones associated with the taper.

The signs and traffic control devices are to be removed in the reverse order of installation.

The number, type and location of signs, devices and barricades shall be to a standard not less than the requirements of AS 1742.3:2019 (except where specifically detailed in this TMP with reasons for the variations). Devices no longer required shall be promptly and completely removed from road user's lines of sight.

7.3.1 Signs

Prior to the installation, all signs shall be checked for damage and cleanliness and repaired, replaced or cleaned as necessary. Signs and devices shall be erected in accordance with the locations and spacings shown on the drawings such that:

- They are properly displayed and securely mounted;
- They are within the driver's line of sight;
- They cannot be obscured from view;
- They do not obscure other devices from the driver's line of sight;
- They do not become a possible hazard to workers or vehicles; and
- They do not deflect traffic into an undesirable path.

All existing speed limit signs on the carriageway within the work site shall be covered for the duration of the works whilst temporary speed limit signs are in place.

7.3.2 Environmental Considerations

Weather forecasts are checked and posted daily in the site office. If adverse weather conditions are expected for the following day or days, staff will be informed through daily toolbox talks conducted by supervisors. Should traffic control be adversely affected by conditions, appropriate changes to the Traffic Control Devices are to be conducted to maintain safe conditions for workers, road users and pedestrians. Any changes are to be noted and implemented by a Traffic Controller, or a suitably qualified person, and the TMP is to be reviewed as soon as practical.

Adverse weather / environmental conditions would be communicated to staff at pre-start and daily Toolbox meetings.

In the event of heavy fog, sun glare, or other weather conditions that may affect the visibility of road signage, repeater signage is to be placed throughout the Work Zone.

8. Communicating TMP Requirements

Clear lines of communication through all levels and functions (e.g. management, staff and sub-contractors), is key to minimise impacts and achieving continual improvements in performance.

The methods of communication on-site will include site inductions, pre-start and toolbox meetings, and through Safe Work Method Statements (SWMS).

8.1 Site Inductions

All personnel entering the site are to go through a Site Induction that details the requirements of the TMP, Personal Protective Equipment (PPE), Occupational Health and Safety (OHS), and risk management procedures. All personnel wishing to enter the works zone are to be properly inducted before access is allowed.

The requirements of the TMP will be communicated to all personnel entering the site through the online induction prior to workers and visitors coming to the site, including delivery drivers' online induction and the Driver's Code of Conduct (Appendix C).

8.2 Pre-Start and Toolbox Meetings

A prestart meeting is to be conducted at the start of works, on a daily basis, and if unforeseen changes are required. Progress, hazard assessment and any new issues, information or changes are to be discussed. Safe Work Method Statements (SWMS) documentation is to be read and signed during prestart meetings.

All personnel will be reminded of the Driver's Code of Conduct (Appendix C) during the pre-start and Toolbox meetings.

8.3 Safe Work Method Statements

A site-specific SWMS is to be produced for the set up and shutdown of control of traffic on-site and is to be read through, discussed, and signed by all personnel working on site.

9. Monitoring and Measurement

9.1 Site Inspections and Record Keeping

The X-Elio Project Manager will ensure that the TMP is implemented and evaluated for effectiveness. The Construction Project Manager shall inspect and monitor traffic movements around the site in conjunction with the personnel who have erected the control measures. The outcomes of the inspection will be recorded for the information of the X-Elio Project Manager.

A record of the inspections should be kept indicating:

- When traffic controls were erected;
- When changes to controls occurred and why the changes were undertaken;
- Any significant incidents or observations associated with the traffic controls and their impacts on road users or adjacent properties.

Where significant changes to the work or traffic environment or adverse impacts are observed, the controls should be reviewed as a matter of urgency. Inspection Sheets shall be completed by the person undertaking the inspections and reviewed by the Construction Project Manager. All variations to the TMP/TGS, non-conformances, incidents and accidents shall be recorded. Copies of the completed report shall be forwarded to the X-Elio Project Manager.

9.2 TMP Auditing

One internal compliance audit shall be conducted following setting-up of the traffic management and prior to commencement of the works. Audit findings, recommendations and actions taken shall be documented and copies forwarded to the Site Construction Manager.

9.3 Incidents and Non-Compliances

9.3.1 Environmental Incidents

An Environmental Incident is defined as an unplanned event impacting or potentially impacting the environment with consequences.

Various environmental incidents may have the potential to occur on site, which may include but not be limited to the following:

- Spills of fuels, oils, chemicals and other hazardous materials
- Unauthorised discharge from sediment basins or other containment devices
- Unauthorised clearing or clearing beyond the extent of the Project boundary or premises
- Inadequate installation and subsequent failure of temporary erosion and sediment controls
- Unauthorised damage or interference to threatened species, threatened ecological communities or critical habitat
- Unauthorised harm or desecration to Aboriginal objects and Aboriginal places
- Unauthorised damage or destruction to any State or locally significant relic or Heritage item

- Unauthorised dredging or reclamation works within a watercourse
- Potential contamination of waterways or land
- Accidental starting of a fire or a fire breaking out of containment
- Any potential breach of legislation, including a potential breach of a condition of: An environment protection licence, approval, or any agency permit condition
- Works done that are not covered by the Project approval, or not found to be consistent with the approval, or done without a modification of the approval
- Works undertaken that are not in accordance with the Environmental Assessment documents
- Unauthorised dumping of waste.

Should an incident occur, the Construction Project Manager will ensure that work ceases in that area and that the site is not disturbed until the appropriate level of investigation is conducted to ensure that any potential evidence is preserved.

9.3.2 Incident Reporting

All workers (employees and contractors) are responsible for ensuring timely and effective initial internal reporting of Incidents that they are involved with or witness.

X-Elio are to be informed of any environmental incidents immediately verbally and within 24 hours in writing. Incident reports will include lessons learnt from each environmental incident occurring. Including lessons learnt from each environmental incident and proposed measures to prevent the occurrence of a similar incident. All efforts will be undertaken immediately to avoid and reduce impacts of incidents and suitable controls put in place. Incidents will be closed out as quickly as possible, taking all required action to resolve each environmental incident.

9.4 Incident Reporting

Any incident that results in harm to the environment and/or off-site receptors is to be regarded as an environmental incident. It is a mandatory requirement for any personnel working to respond to all hazards and events that have affected or have the potential to adversely affect the environment.

As defined in the Development Consent (DC) an incident is an occurrence or set of circumstances that causes or threatens to cause material harm to the environment, and as a consequence of that environmental harm, may cause harm to the health and safety of human beings, and which may or may not be or cause a non-compliance. Material harm is defined in the DC as harm that:

- involves actual harm to the environment that may include (but not be limited to) a leak, spill, emission other escape or deposit of a substance, and as a consequence of that environmental harm (pollution), may cause harm to the health or safety of people; or results in actual loss or property damage of an amount, or
- amounts in aggregate, exceeding \$10,000 (such loss includes the reasonable costs and expenses that would be incurred in taking all reasonable and practicable measures to prevent, mitigate or make good harm to the environment).

The Planning Secretary will be notified in writing via the Major Projects website X-Elio becomes aware of an incident and they will immediately notify the Department via this website.

Incident reporting requirements and responsibilities are set out in Table 6. The table identifies reportable based on the definition in the DC. It is X-Elio's responsibility to ensure that notifications are undertaken in accordance with the consent.

Table 6: Incident Notification Requirements and Responsibilities

Incident Level	Definition	Notification	Responsibility
Reportable	Causes or threatens to cause material harm to the environment (see definition in DC): - involves actual harm to the environment that may include (but not be limited to) a leak, spill, emission other escape or deposit of a substance, and as a consequence of that environmental harm (pollution), may cause harm to the health or safety of people; or - results in actual loss or property damage of an amount, or amounts in aggregate, exceeding \$10,000 (such loss includes the reasonable costs and expenses that would be incurred in taking all reasonable and practicable measures to prevent, mitigate or make good harm to the environment).	- Internal: to Construction Contractor - External: to X-Elio Project Manager, - DPHI: to the Planning Secretary, (immediately after X-Elio becomes aware of an incident)	- Construction Contractor - X-Elio Project Manager to report to DPHI, Planning Secretary

Subsequent notification requirements will be given, and reports submitted in accordance with the requirements set out in Appendix 6 of the Development Consent. This includes submission of a written incident notification addressing the requirements set out below to the Planning Secretary via the Major Projects website within seven days after X-Elio becomes aware of an incident. Notification is required to be given under this condition even if the Applicant fails to give the notification required under Condition C10, having given such notification, subsequently forms the view that an incident has not occurred.

The written incident notification will address the following requirements:

- date, time and location;
- a brief description of what occurred and why it has been classified as an incident;
- a description of what immediate steps were taken in relation to the incident; and
- identifying a contact person for further communication regarding the incident.

Within 7 days of the date on which the incident occurred or as otherwise agreed to by the Planning Secretary, X-Elio will 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. The written incident notification will include:

- identifies how the incident was detected;
- identifies when the Applicant became aware of the incident;
- identifies any actual or potential non-compliance with conditions of consent;
- identifies further action(s) that will be taken in relation to the incident; and
- a summary of the incident;
- outcomes of an incident investigation, including identification of the cause of the incident;

- details of the corrective and preventative actions that have been, or will be, implemented to address the incident and prevent recurrence, including the period for implementing any corrective and/or preventative actions; and
- details of any communication with other stakeholders regarding the incident.

The Applicant must submit any further reports as directed by the Planning Secretary.

Response agencies need to be informed by the construction contractor of pollution incidents quickly, so action can be coordinated to prevent or limit harm to the environment and human health generally. These are listed in Table 7.

Table 7: Response Agency Contact Details

Response Agency	Contact Details
Environment Protection Authority NSW (EPA NSW)	131 555 or (02) 9995 5555
Ministry of Health NSW	(02) 9391 9000
SafeWork NSW	131 050
The local authority, Dubbo Regional Council	(02) 6801 4000
Rural Fire Service	1800 679 737

9.4.1 Non-Compliance Notification and Response

A project non-compliance is defined in the DC as an occurrence, set of circumstances or development that is a breach of the consent but is not an incident.

Non-compliances will be reported and actioned through the incident management procedures detailed above.

In accordance with Condition C11, X-Elio will notify the Department in writing via the Major Projects website within 7 days after becoming aware of any non-compliance with the conditions of this consent.

A non-compliance which has been notified as an incident does not need to also be notified as a non-compliance.

9.5 Complaints Management

External complaints are defined as complaints received from parties outside of the normal lines of communication. Complaints and enquiries regarding the works will be received through the contact details provided on the Project website. All other complaints received are reportable incidents and shall be immediately reported to X-Elio.

On receiving a complaint, the X-Elio Project Manager will promptly conduct a review to determine the appropriate response and whether issues relating to the complaint could be avoided or minimised. Records of all complaints received and documents as per the CCP and will include the following details:

- Date and time of the complaint
- Method by which the complaint was made
- Any personal details of the complainant

- The nature of the complaint
- Action taken in relation to the complaint and any follow up
- Any monitoring to confirm that the complaint has been satisfactorily resolved
- If no action taken, reasons why

Attempts will be made to resolve all complaints in accordance with the CCP and this EMS. All complaints will be acknowledged within two (2) hours. An initial response to complaints will be provided within 24 hours of a complaint being received. A further detailed response, including steps taken to resolve the issue(s) that lead to the complaint, will be provided within 10 days. All complaints will be closed off in the stakeholder database. At all times the stakeholder will be kept informed of when they will receive a response.

The X-Elio Project Manager will apply an adaptive approach to ensure that corrective actions are applied in consultation with the appropriate construction staff to allow modifications and improvements in the management of any environmental issues resulting in community complaints.

Within one working day of receiving a complaint a written report will be prepared, this will outline the complaint and action taken to remedy the problem. A final report which will include proposed measures to prevent reoccurrence will be prepared within five (5) working days.

9.6 Independent Environmental Audits

In accordance with Condition C14 of the Development Consent, Independent Audits of the development must be conducted and carried out in accordance with the *Independent Audit Post Approval Requirements (2020)* or as updated from time to time and published on the Department's website.

The independent audits must be conducted and carried out at the frequency and in accordance with the *Independent Audit Post Approval Requirements (2020)* to the following frequency:

- within 3 months of commencing construction; and
- within 3 months of commencement of operations.

The proposed independent auditors must be agreed to in writing by the Planning Secretary prior to the commencement of an Independent Audit.

In accordance with the specific requirements of the *Independent Audit Post Approval Requirements (2020)*, X-Elio must:

- review and respond to each Independent Audit Report prepared under the conditions of consent;
- submit the response to the Planning Secretary; and
- make each Independent Audit Report, and response to it, publicly available within 60 days of submission to the Planning Secretary, unless otherwise agreed by the Planning Secretary.

Independent Audit Reports and X-Elio's response to audit findings must be submitted to the Planning Secretary within two months of undertaking the independent audit site inspection as outlined in the *Independent Audit Post Approvals Requirements (2020)* unless otherwise agreed by the Planning Secretary.

9.7 Management and Monitoring Summary

A summary of the management and minoring measures is provided within Table 8.

Table 8: Management and Monitoring Summary

Aspect	Potential Problems	Performance Criteria	Mitigation and Control Measures	Monitoring Requirements	Responsibility	Timing	Frequency
Heavy vehicle movements	Number of vehicles exceed DC approval during construction	Maximum limit of 68 heavy vehicle movements a day	Heavy vehicle deliveries will be scheduled to comply with this requirement. Delivery contractors to be advised of this prior to arranging any delivery to site.	Count and record number of vehicle movements	X-Elia and Contractor	Duration of construction	Daily
Heavy vehicle movements	Heavy vehicle platooning / convoys	No Heavy Vehicle movements resulting in platoons / convoys greater than 2 vehicles	Heavy vehicle deliveries will be scheduled and staggered to avoid platoons / convoys greater than 2 heavy vehicles.	Count and record number of vehicle movements	X-Elia and Contractor	Duration of construction	Daily
Heavy vehicle movements	Impact to School Busses	No Heavy Vehicle movements occurring during school peak periods	No heavy vehicle deliveries are to occur between 8:00am and 9:30am, and 2:30-4:00pm.	Count and record number of vehicle movements	X-Elia and Contractor	Duration of construction	Daily
Condition of road	Traffic use causes damage to road	Damaged road is left unrepaired	Emergency repair and/or maintenance is required	Check for evidence of damage	X-Elia and Contractor	Duration of construction	Monthly
Condition of road	Environmental and amenity impacts of dust, potential traffic hazard	Road environment free of excessive dust	Regula dust suppression measures are to be undertaken for Delroy Road by watering or other suitable measures, particularly during hot and dry conditions	Daily inspections of the road environment, monitor feedback from Council and the local community	X-Elia and Contractor	Duration of construction	Daily
Weather conditions	Conditions make driving hazardous	Vehicles should not be travelling in unsafe conditions	Consider options to reduce driver risk such as temporarily halting vehicle movements, re-routing, etc.	Check weather forecast and on-site conditions	X-Elia and Contractor	Duration of construction	Daily
Driver behaviour	Poor driver behaviour leads to incidents, accidents or near misses	No accidents	Encouraging good driver practice and reinforcing those messages during project meetings	Count and record number of incidents, accidents and near misses Ensure that all drivers have received a copy of the Driver Code of Conduct and are following the requirements.	X-Elia and Contractor	Duration of construction	Daily
Driver behaviour	The approved route not being followed by staff and deliveries	No use of roads other than those on the approved routes by staff and delivery drivers	Checking driver routes and reinforcing the approved routes to staff and delivery drivers during project meetings	Spot check of routes taken at site entry and adjoining local roads and monitoring any feedback from the Community, Council and TfNSW	X-Elia and Contractor	Duration of construction	Daily
Driver behaviour	Compliance with Driver Code of Conduct	Adherence to transport routes, speed limits and safe driving practices	Review of driver behaviour and adherence to speed limits / safe driving practices.	Spot checks on key routes to site and monitoring any feedback from the Community, Council and TfNSW	X-Elia and Contractor	Duration of construction	Weekly
Driver behaviour	Vehicles have excessive mud or dirt	Dirt transferred from the works area onto the external road network to be minimised	Vehicles exiting the works area are to be cleaned so that excessive mud and dirt is not transferred to external roads	Vehicles exiting the works area are to be inspected (and cleaned as required)	Vehicle Driver	Duration of construction	Daily



10. Management and Reporting

10.1 TMP Review and Improvement

As this project is of a long-term nature, a review of the effectiveness of the TMP will be undertaken by the X-Elio Project Manager on a monthly basis. Any updates to the TMP that are required to improve the effectiveness of the TMP as identified in the weekly effectiveness reviews will be undertaken by the Construction Project Manager in accordance with Section 9.1.

10.2 Variations to Standards and Plans

There are no departures from the requirements of AS 1742.3:2019 or TfNSW Traffic Control at Work Sites Guidelines.

On-site variations, if required, will only be made following approval by the X-Elio Project Manager. In emergency situations, on-site variations shall be made and recorded and the X-Elio Project Manager notified as soon as practicable.

Any updates to the TMP that are required as a result of updates to 1742.3:2019 or TfNSW Traffic Control at Work Sites Guidelines will be undertaken by the X-Elio Project Manager in accordance with Section 10.3

10.3 Update of Strategies, Plans or Programs

As this project is of a long-term nature, a review of the effectiveness of the TMP will be undertaken by the X-Elio Project Manager.

In accordance with Condition C2, the Applicant will:

- Update the strategies, plans or programs required under the Development Consent to the satisfaction of the Planning Secretary prior to carrying out any upgrading or decommissioning activities on site.
- Review and, if necessary, revise the strategies, plans or programs required under the Development to the satisfaction of the Planning Secretary within 1 month of the:
 - submission of an incident report under condition C10;
 - submission of an audit report under condition C14; or
 - any modification to the conditions of this consent.

As stated in Condition C3, with the approval of the Planning Secretary, the Applicant may submit any strategy, plan or program required by this consent. To ensure the strategies, plans or programs under the conditions of this consent are updated on a regular basis, the Applicant may at any time submit revised strategies, plans or programs to the Planning Secretary for approval. With the agreement of the Planning Secretary, the Applicant may prepare any revised strategy, plan or program without undertaking consultation with all the parties referred to under the relevant condition of this consent.

The Applicant will ensure that all development being carried out on site is covered by suitable strategies, plans or programs at all times.

If the submission of any strategy, plan or program is to be staged, then the relevant strategy, plan or program will clearly describe the specific stage to which the strategy, plan or program applies, the relationship of this stage to any future stages, and the trigger for updating the strategy, plan or program.

The Applicant will seek the approval of the Planning Secretary when submitting any strategy, plan or program required by this consent on a progressive basis.

To ensure the strategies, plans or programs under the conditions of this consent are updated on a regular basis, the Applicant may at any time submit revised strategies, plans or programs to the Planning Secretary for approval.

The Applicant will obtain the agreement of the Planning Secretary, when preparing any revised strategy, plan or program without undertaking consultation with all the parties referred to under the relevant condition of this consent.

The Applicant notes that while any strategy, plan or program may be submitted on a progressive basis, the Applicant will ensure that all development being carried out on site is covered by suitable strategies, plans or programs at all times.

The Applicant also notes that if the submission of any strategy, plan or program is to be staged, then the relevant strategy, plan or program will clearly describe the specific stage to which the strategy, plan or program applies, the relationship of this stage to any future stages, and the trigger for updating the strategy, plan or program.

10.4 Notification of Department

Prior to commencing the construction, operations, upgrading or decommissioning of the development or the cessation of operations, the Applicant will 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 will 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.

Appendix A

Road Design Plans



X-ELIO PTY. LTD.

FOREST GLEN SOLAR FARM

ACCESS ROAD DESIGN

FOR S138 APPROVAL



LOCALITY PLAN
NOT TO SCALE

NEARMAP IMAGE DATED: 27 JUNE 2024

DRAWING SCHEDULE

DRAWING NUMBER	DRAWING TITLE	REVISION NUMBER
P00549-CI-S138-1001	COVER SHEET, LOCALITY PLAN AND DRAWING SCHEDULE	8
P00549-CI-S138-1021	GENERAL NOTES	7
P00549-CI-S138-1031	GENERAL ARRANGEMENT PLAN	7
P00549-CI-S138-1051	EXISTING SITE SURVEY AND SERVICES	7
P00549-CI-S138-1101	EROSION AND SEDIMENT CONTROL PLAN - SHEET 1	7
P00549-CI-S138-1102	EROSION AND SEDIMENT CONTROL PLAN - SHEET 2	7
P00549-CI-S138-1103	EROSION AND SEDIMENT CONTROL PLAN - SHEET 3	7
P00549-CI-S138-1131	EROSION AND SEDIMENT CONTROL DETAILS	7
P00549-CI-S138-1201	CUT/FILL EARTHWORKS PLAN - SHEET 1	7
P00549-CI-S138-1202	CUT/FILL EARTHWORKS PLAN - SHEET 2	7
P00549-CI-S138-1203	CUT/FILL EARTHWORKS PLAN - SHEET 3	7
P00549-CI-S138-1321	CIVIL WORKS AND STORMWATER DRAINAGE PLAN - SHEET 1	7
P00549-CI-S138-1322	CIVIL WORKS AND STORMWATER DRAINAGE PLAN - SHEET 2	7
P00549-CI-S138-1323	CIVIL WORKS AND STORMWATER DRAINAGE PLAN - SHEET 3	7
P00549-CI-S138-1351	PAVEMENT, SIGNAGE AND LINE MARKING PLAN - SHEET 1	8
P00549-CI-S138-1352	PAVEMENT, SIGNAGE AND LINE MARKING PLAN - SHEET 2	7
P00549-CI-S138-1353	PAVEMENT, SIGNAGE AND LINE MARKING PLAN - SHEET 3	7
P00549-CI-S138-1381	TURNING PATH PLAN	7
P00549-CI-S138-1401	CIVIL WORKS DETAILS - SHEET 1	7
P00549-CI-S138-1402	CIVIL WORKS DETAILS - SHEET 2	7
P00549-CI-S138-1403	CIVIL WORKS DETAILS - SHEET 3	7
P00549-CI-S138-1501	TYPICAL ROAD CROSS SECTIONS	7
P00549-CI-S138-1521	ROAD LONGITUDINAL SECTIONS - SHEET 1	7
P00549-CI-S138-1522	ROAD LONGITUDINAL SECTIONS - SHEET 2	7
P00549-CI-S138-1523	ROAD LONGITUDINAL SECTIONS - SHEET 3	7
P00549-CI-S138-1541	ROAD CROSS SECTIONS - SHEET 1	7
P00549-CI-S138-1542	ROAD CROSS SECTIONS - SHEET 2	7
P00549-CI-S138-1543	ROAD CROSS SECTIONS - SHEET 3	7
P00549-CI-S138-1544	ROAD CROSS SECTIONS - SHEET 4	7



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8	06/02/2025	ROAD SIGNAGE RELOCATION	P.S.	A.M.	H.Y.
7	05/09/2024	ROAD AND PAVEMENT DESIGN UPDATES	P.S.	A.M.	G.d.S.
6	22/08/2024	ROAD AND PAVEMENT DESIGN UPDATES	C.M.	A.M.	G.d.S.
5	26/07/2024	ROAD AND PAVEMENT DESIGN UPDATES	P.S.	A.M.	G.d.S.
4	25/05/2023	RE-ISSUED FOR S138 APPROVAL	W.M.	A.M.	G.d.S.
3	06/04/2023	ISSUED FOR S138 APPROVAL	W.M.	A.M.	G.d.S.
2	23/02/2023	AMENDED TO COUNCIL COMMENTS	W.M.	A.M.	G.d.S.
1	16/01/2023	ISSUED FOR S138 APPROVAL	W.M.	A.M.	G.d.S.
Rev.	Date	Revision Description	Drawn	Design	Appd.

DO NOT SCALE			Drawn	Date	Client
Disclaimer and Copyright This document may only be used by GDS's Client in accordance with the terms of the retainer. GDS does not and shall not assume any responsibility or liability whatsoever to any third party arising out of any use or reliance by third party on the content of this document.			C.M.	06/02/2025	X-ELIO PTY. LTD.
			Drafting Checked	Date	Project
			P.S.	06/02/2025	FOREST GLEN SOLAR FARM
			Design	Date	ACCESS ROAD DESIGN
			A.M.	06/02/2025	Title
			Design Checked	Date	COVER SHEET, LOCALITY PLAN
			G.d.S.	06/02/2025	AND DRAWING SCHEDULE
			Approved	Date	Revision
			G.d.S.	06/02/2025	8
Datum			Drawing Number		
A.H.D.			P00549-CI-S138-1001		
Coordinates					
MGA 20					
Size					
A1					

DATE PLOTTED: 4 September 2024, 10:03 am BY: SHIRLEY PANCO

GENERAL

- 1. ALL WORKS TO BE CONSTRUCTED IN ACCORDANCE WITH DUBBO REGIONAL COUNCIL STANDARDS.
- 2. DUBBO REGIONAL COUNCIL STANDARD DETAILS TO BE USED WHERE POSSIBLE.
- 3. UTILITY ADJUSTMENTS AT DEVELOPERS EXPENSE.
- 4. CONDUITS TO BE PLACED WHERE REQUIRED BY THE RELEVANT AUTHORITIES.

SURVEY NOTES

- 1. THE EXISTING SITE CONDITIONS SHOWN ON THE FOLLOWING DRAWINGS HAVE BEEN INVESTIGATED BY ESLERS LAND CONSULTING (SURVEY DATED DATED 25 JUNE 2022), BEING REGISTERED SURVEYORS. THE INFORMATION IS SHOWN TO PROVIDE A BASIS FOR DESIGN.
- 2. GDS DOES NOT GUARANTEE THE ACCURACY OR COMPLETENESS OF THE SURVEY BASE OR ITS SUITABILITY AS A BASIS FOR CONSTRUCTION DRAWINGS. ALL SITE SET OUT AND CONTROL POINTS ARE TO BE CERTIFIED BY A REGISTERED SURVEYOR.
- 3. SHOULD DISCREPANCIES BE ENCOUNTERED DURING CONSTRUCTION BETWEEN THE SURVEY DATA AND ACTUAL FIELD DATA, CONTACT GDS.

EXISTING UNDERGROUND SERVICES NOTES

THE LOCATIONS OF UNDERGROUND SERVICES SHOWN IN THIS SET OF DRAWINGS HAVE BEEN PLOTTED FROM SURVEY INFORMATION AND SERVICE AUTHORITY INFORMATION. THE SERVICE INFORMATION HAS BEEN PREPARED ONLY TO SHOW THE APPROXIMATE POSITIONS OF ANY KNOWN SERVICES AND MAY NOT BE AS CONSTRUCTED OR ACCURATE.GDS CAN NOT GUARANTEE THAT THE SERVICES INFORMATION SHOWN ON THESE DRAWINGS ACCURATELY INDICATES THE PRESENCE OR ABSENCE OF SERVICES OR THEIR LOCATION AND WILL ACCEPT NO LIABILITY FOR INACCURACIES IN THE SERVICES' INFORMATION SHOWN FROM ANY CAUSE WHATSOEVER.

CONTRACTORS SHALL TAKE DUE CARE WHEN EXCAVATING ONSITE INCLUDING HAND EXCAVATION WHERE NECESSARY. CONTRACTORS ARE TO CONTACT THE RELEVANT SERVICE AUTHORITY PRIOR TO COMMENCEMENT OF EXCAVATION WORKS. CONTRACTORS ARE TO UNDERTAKE A SERVICES SEARCH, PRIOR TO COMMENCEMENT OF WORKS ON SITE. SEARCH RESULTS ARE TO BE KEPT ON SITE AT ALL TIMES.

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BULK EARTHWORKS NOTES

- 1. ORIGIN OF LEVELS: REFER SURVEY NOTES
- 2. STRIP ALL TOPSOIL/ORGANIC MATERIAL FROM CONSTRUCTION AREA AND REMOVE FROM SITE OR STOCK PILE AS DIRECTED BY SUPERINTENDENT.
- 3. EXCAVATED MATERIAL TO BE USED AS STRUCTURAL FILL PROVIDED THE PLACEMENT MOISTURE CONTENT OF THE MATERIAL IS +/- 2% OF THE OPTIMUM MOISTURE CONTENT.
- 4. COMPACT FILL AREAS AND SUBGRADE TO NOT LESS THAN:

LOCATION	STANDARD DRY DENSITY (AS 1289 ES.1.1.)
UNDER BUILDING SLABS ON GROUND	98%
UNDER ROADS AND CARPARKS	100%
LANDSCAPED AREAS UNLESS NOTED OTHERWISE	95%
- 5. FOR NON COHESIVE MATERIAL, COMPACT TO 75% DENSITY INDEX.
- 6. FREQUENCY OF COMPACTION TESTING SHALL BE NOT LESS THAN :-
(A) 1 TEST PER 1000m³ OF FILL PLACED PER 300 LAYER OF FILL.
(B) 3 TESTS PER VISIT
(C) 1 TEST PER 1000m³ OF EXPOSED SUBGRADE "LEVEL 1" TESTING SHALL BE TESTING IN ACCORDANCE WITH AS 3798.
- 7. FILLING TO BE PLACED IN MAXIMUM 150mm - LOOSE LAYERS AND COMPACTED AS SPECIFIED
- 8. NO FILLING SHALL TAKE PLACE TO EXPOSED SUBGRADE UNTIL THE AREA HAS BEEN PROOF ROLLED IN THE PRESENCE OF GDS AND APPROVAL GIVEN IN WRITING THAT FILLING CAN PROCEED.

EROSION AND SEDIMENT CONTROL NOTES

GENERAL INSTRUCTIONS

- 1. THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR THE CONTROL OF EROSION AND SEDIMENTATION TO THE SATISFACTION OF COUNCIL, SUPERINTENDENT, NSW OFFICE OF WATER, OFFICE OF ENVIRONMENT AND HERITAGE. THE EROSION AND SEDIMENTATION CONTROLS SHOWN ON THE DRAWINGS SHALL ONLY BE USED AS A GUIDE BY THE CONTRACTOR, AND SHALL REPRESENT THE MINIMUM REQUIREMENT ONLY.
- 2. THE CONTRACTOR SHALL ENSURE THAT ALL SOIL AND WATER MANAGEMENT WORKS ARE LOCATED AS DOCUMENTED OR AS OTHERWISE DIRECTED BY THE SUPERINTENDENT. ALL WORK SHALL BE GENERALLY CARRIED OUT IN ACCORDANCE WITH
 - a. LOCAL AUTHORITY REQUIREMENTS
 - b. EPA REQUIREMENTS
 - c. NSW DEPARTMENT OF HOUSING MANUAL "MANAGING URBAN STORMWATER, SOILS AND CONSTRUCTION", 4th EDITION, MARCH 2004.
- 3. MAINTAIN THE EROSION CONTROL DEVICES TO THE SATISFACTION OF THE SUPERINTENDENT AND THE LOCAL AUTHORITY.
- 4. WHEN STORMWATER PITS ARE CONSTRUCTED, PREVENT SITE RUNOFF ENTERING UNLESS SEDIMENT CONTROLS ARE ERECTED AROUND PITS.
- 5. CONTRACTOR IS TO ENSURE ALL EROSION & SEDIMENT CONTROL DEVICES ARE MAINTAINED IN GOOD WORKING ORDER AND OPERATE EFFECTIVELY. REPAIRS AND OR MAINTENANCE SHALL BE UNDERTAKEN AS REQUIRED, PARTICULARLY PRIOR TO AND FOLLOWING STORM EVENTS.

LAND DISTURBANCE

- 6. WHERE PRACTICAL, THE SOIL EROSION HAZARD ON THE SITE WILL BE KEPT AS LOW AS POSSIBLE. TO THIS END, WORKS SHOULD BE UNDERTAKEN IN THE FOLLOWING SEQUENCE:
 - a. INSTALL A SEDIMENT FENCE ALONG THE BOUNDARIES AS SHOWN ON PLAN. REFER DETAIL.
 - b. CONSTRUCT STABILISED CONSTRUCTION ENTRANCE TO LOCATION AS DETERMINED BY SUPERINTENDENT/ENGINEER. REFER DETAIL.
 - c. INSTALL SEDIMENT BASIN AS SHOWN ON PLAN (D) INSTALL SEDIMENT TRAPS AS SHOWN ON PLAN.
 - d. UNDERTAKE SITE DEVELOPMENT WORKS IN ACCORDANCE WITH THE ENGINEERING PLANS. WHERE POSSIBLE, PHASE DEVELOPMENT SO THAT LAND DISTURBANCE IS CONFINED TO AREAS OF WORKABLE SIZE

EROSION CONTROL

- 7. DURING WINDY WEATHER, LARGE, UNPROTECTED AREAS WILL BE KEPT MOIST (NOT WET) BY SPRINKLING WITH WATER TO KEEP DUST UNDER CONTROL.
- 8. FINAL SITE LANDSCAPING WILL BE UNDERTAKEN AS SOON AS POSSIBLE AND WITHIN 20 WORKING DAYS FROM COMPLETION OF CONSTRUCTION ACTIVITIES.
- 9. STOCKPILES WILL NOT BE LOCATED WITHIN 2 METRES OF HAZARD AREAS, INCLUDING LIKELY AREAS OF CONCENTRATED OR HIGH VELOCITY FLOWS SUCH AS WATERWAYS. WHERE THEY ARE BETWEEN 2 AND 5 METRES FROM SUCH AREAS, SPECIAL SEDIMENT CONTROL MEASURES SHOULD BE TAKEN TO MINIMISE POSSIBLE POLLUTION TO DOWNSLOPE WATERS, E.G. THROUGH INSTALLATION OF SEDIMENT FENCING.
- 10. ANY SAND USED IN THE CONCRETE CURING PROCESS (SPREAD OVER THE SURFACE) WILL BE REMOVED AS SOON AS POSSIBLE AND WITHIN 10 WORKING DAYS FROM PLACEMENT.
- 11. WATER WILL BE PREVENTED FROM ENTERING THE PERMANENT DRAINAGE SYSTEM UNLESS IT IS RELATIVELY SEDIMENT FREE, I.E. THE CATCHMENT AREA HAS BEEN PERMANENTLY LANDSCAPED AND/OR ANY LIKELY SEDIMENT HAS BEEN FILTERED THROUGH AN APPROVED STRUCTURE.
- 12. TEMPORARY SOIL AND WATER MANAGEMENT STRUCTURES WILL BE REMOVED ONLY AFTER THE LANDS THEY ARE PROTECTING ARE REHABILITATED.
- 13. ACCEPTABLE RECEPTORS WILL BE PROVIDED FOR CONCRETE AND MORTAR SLURRIES, PAINTS, ACID WASHINGS, LIGHT-WEIGHT WASTE MATERIALS AND LITTER.

TREE PROTECTION

- 14. THE TREES THAT ARE TO BE RETAINED ARE TO BE PROTECTED DURING ALL WORKS STRICTLY IN ACCORDANCE WITH AS1970-2009 PROTECTION OF TREES ON DEVELOPMENT SITES.
- 15. AT MINIMUM A 1.8m HIGH CHAIN-WIRE FENCE IS TO BE ERECTED AT LEAST THREE METRES FROM THE BASE OF EACH TREE AND IS TO BE IN PLACE PRIOR TO WORKS COMMENCING TO RESTRICT THE FOLLOWING OCCURRING:
 - 15.1. STOCKPILING OF MATERIALS WITHIN THE ROOT PROTECTION ZONE,
 - 15.2. PLACEMENT OF FILL WITHIN THE ROOT PROTECTION ZONE,
 - 15.3. PARKING OF VEHICLES WITHIN THE ROOT PROTECTION ZONE, AND
 - 15.4. COMPACTION OF SOIL WITHIN THE ROOT PROTECTION ZONE.
- 16. ALL AREAS WITHIN THE ROOT PROTECTION ZONE ARE TO BE MULCHED WITH COMPOSED LEAF MULCH TO A DEPTH OF NOT LESS THAN 100mm.
- 17. A SIGN IS TO BE ERECTED INDICATING THE TREES ARE PROTECTED.
- 18. THE INSTALLATION OF SERVICES WITHIN THE ROOT PROTECTION ZONE IS NOT TO BE UNDERTAKEN WITHOUT PRIOR CONSENT FROM COUNCIL

CIVIL WORKS NOTES

- 1. ORIGIN OF LEVELS:- REFER SURVEY NOTES.
- 2. CONTRACTOR MUST VERIFY ALL DIMENSIONS AND EXISTING LEVELS ON SITE PRIOR TO COMMENCEMENT OF WORK. ANY DISCREPANCIES TO BE REPORTED TO GDS.
- 3. MAKE SMOOTH CONNECTION WITH EXISTING WORKS.
- 4. ALL TRENCH BACKFILL MATERIAL SHALL BE COMPACTED TO THE SAME DENSITY AS THE ADJACENT MATERIAL.
- 5. ALL SERVICE TRENCHES UNDER VEHICULAR PAVEMENTS SHALL BE BACKFILLED WITH SAND TO 300mm ABOVE PIPE. WHERE PIPE IS UNDER PAVEMENTS BACKFILL REMAINDER OF TRENCH TO UNDERSIDE OF PAVEMENT WITH SAND OR APPROVED GRANULAR MATERIAL COMPACTED IN 150mm LAYERS TO MINIMUM 98% MODIFIED MAXIMUM DRY DENSITY IN ACCORDANCE WITH AS 1289 5.2.1. (OR A DENSITY INDEX OF NOT LESS THAN 75)
- 6. PROVIDE 10mm WIDE EXPANSION JOINTS BETWEEN BUILDINGS AND ALL CONCRETE OR UNIT PAVEMENTS.
- 7. ASPHALTIC CONCRETE SHALL CONFORM TO TNSW SPECIFICATION R116.
- 8. ALL BASECOURSE MATERIAL SHALL BE IGNEOUS ROCK QUARRIED MATERIAL TO COMPLY WITH TNSW FORM 3051, COMPACTED TO MINIMUM 98% MODIFIED DENSITY IN ACCORDANCE WITH AS 1289 5.2.1. FREQUENCY OF COMPACTION TESTING SHALL BE IN ACCORDANCE WITH COUNCIL ENGINEERING SPECIFICATIONS.
- 9. ALL SUB-BASE COURSE MATERIAL SHALL BE IGNEOUS ROCK QUARRIED MATERIAL TO COMPLY WITH TNSW FORM 3051, AND COMPACTED TO MINIMUM 95% MODIFIED DENSITY IN ACCORDANCE WITH A.S 1289 5.2.1 FREQUENCY OF COMPACTION TESTING SHALL NOT BE IN ACCORDANCE WITH COUNCIL ENGINEERING SPECIFICATIONS.
- 10. AS AN ALTERNATIVE TO THE USE OF IGNEOUS ROCK AS A SUB-BASE MATERIAL IN (9) A CERTIFIED RECYCLED CONCRETE MATERIAL COMPLYING WITH TNSW FORM 3051 WILL BE CONSIDERED. SUBJECT TO MATERIAL SAMPLES AND APPROPRIATE CERTIFICATIONS BEING PROVIDED TO THE SATISFACTION OF GDS.
- 11. SHOULD THE CONTRACTOR WISH TO USE A RECYCLED PRODUCT THIS SHALL BE CLEARLY INDICATED IN THEIR TENDER AND THE PRICE DIFFERENCE BETWEEN AN IGNEOUS PRODUCT AND A RECYCLED PRODUCT SHALL BE CLEARLY INDICATED.
- 12. WHERE NOTED ON THE DRAWINGS THAT WORKS ARE TO BE CARRIED BY OTHERS, (eg. ADJUSTMENT OF SERVICES), THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE CO-ORDINATION OF THESE WORKS.

PAVEMENT NOTES

- 1. REFER TO PAVEMENT DESIGN REPORT (**NAME OF REPORT**) PREPARED BY ERM (**DATE**) FOR ALL PAVEMENT AND GEOTECHNICAL DESIGN AND CONSTRUCTION SPECIFICATIONS.

STORMWATER DRAINAGE NOTES

- 1. PIPES 375 DIA. AND LARGER TO BE REINFORCED CONCRETE CLASS '2' APPROVED SPIGOT AND SOCKET WITH RUBBER RING JOINTS. U.N.O.
- 2. PIPES 300 DIA AND LESS SHALL BE DWV GRADE (CLASS SN8) uPVC WITH SOLVENT WELDED JOINTS.
- 3. EQUIVALENT STRENGTH FRC PIPES MAY BE USED.
- 4. ALL PIPES ARE TO BE UNIFORMLY SUPPORTED ALONG THE LENGTH OF THE BARREL BY SUITABLE FILL MATERIAL. REFER TO BEDDING SUPPORT TYPE.
- 5. PIPES WITH SOCKETS SHALL BE LAID IN BEDDING WHERE SUITABLE RECESSES HAVE BEEN PROVIDED TO ENSURE PIPES DO NOT BEAR ON THEIR SOCKETS.
- 6. ALL STORMWATER DRAINAGE LINES UNDER PROPOSED BUILDING SLABS TO BE uPVC PRESSURE PIPE GRADE 6. ENSURE ALL VERTICALS AND DOWNPIPES ARE uPVC PRESSURE PIPE, GRADE 6 FOR A MIN OF 3.0m IN HEIGHT.
- 7. PIPES TO BE INSTALLED TO TYPE HS1 SUPPORT IN ACCORDANCE WITH AS 3725 (2007) IN ALL CASES BACKFILL TRENCH WITH SAND TO 300mm ABOVE PIPE. WHERE PIPE IS UNDER PAVEMENTS BACKFILL REMAINDER OF TRENCH TO UNDERSIDE OF PAVEMENT WITH SAND OR APPROVED GRANULAR MATERIAL COMPACTED IN 150mm LAYERS TO MINIMUM 98% STANDARD MAXIMUM DRY DENSITY IN ACCORDANCE WITH AS 1289 5.2.1. (OR A DENSITY INDEX OF NOT LESS THAN 75).
- 8. REFER TO AS/NZS 3725:2007 TABLE B1 FOR REQUIRED FILL DEPTHS ABOVE PIPE BARREL PRIOR TO USE OF COMPACTION MACHINERY OR TRAVERSING OF PIPES BY GENERAL SITE EQUIPMENT.
- 9. WHERE CONSTRUCTION METHODS REQUIRE HIGHER CLASS PIPE, THE CONTRACTOR SHALL REFER TO AS 3725 (2007) TO DETERMINE THE APPROPRIATE PIPE CLASS. PROPOSED PIPE CLASS SHALL BE REVIEWED BY GDS PRIOR TO INSTALLATION.
- 10. ALL INTERNAL WORKS WITHIN PROPERTY BOUNDARIES ARE TO COMPLY WITH THE REQUIREMENTS OF AS/NZS 3500.3:2015.
- 11. PRECAST PITS MAY BE USED EXTERNAL TO THE BUILDING SUBJECT TO APPROVAL BY GDS.
- 12. ENLARGERS, CONNECTIONS AND JUNCTIONS TO BE PREFABRICATED FITTINGS WHERE PIPES ARE LESS THAN 300 DIA.
- 13. WHERE SUBSOIL DRAINS PASS UNDER FLOOR SLABS AND VEHICULAR PAVEMENTS, UNSLOTTED uPVC SEWER GRADE PIPE IS TO BE USED.
- 14. CARE IS TO BE TAKEN WITH LEVELS OF STORMWATER LINES. GRADES SHOWN ARE NOT TO BE REDUCED WITHOUT APPROVAL.
- 15. GRATES AND COVERS SHALL CONFORM TO AS 3996.
- 16. ALL BOX CULVERTS SHALL BE STRUCTURALLY DESIGNED BY THE MANUFACTURER AND DELIVERED TO SITE AS FIT FOR PURPOSE.
- 17. AT ALL TIMES DURING CONSTRUCTION OF STORMWATER PITS, ADEQUATE SAFETY PROCEDURES SHALL BE TAKEN TO ENSURE AGAINST THE POSSIBILITY OF PERSONNEL FALLING DOWN PITS.
- 18. ALL EXISTING STORMWATER DRAINAGE LINES AND PITS THAT ARE TO REMAIN ARE TO BE INSPECTED AND CLEANED. DURING THIS PROCESS ANY PART OF THE STORMWATER DRAINAGE SYSTEM THAT WARRANTS REPAIR SHALL BE REPORTED TO THE SUPERINTENDENT/ENGINEER FOR FURTHER DIRECTIONS.
- 19. SUBSOIL DRAINAGE LINES TO BE PLACED AS INDICATED ON DRAWINGS.
- 20. A MINIMUM OF 3M OF SUBSOIL LINE SHALL BE LAID INTO UPSTREAM SIDE OF COUNCIL PITS

FOR S138 APPROVAL

7	05/09/2024	ROAD AND PAVEMENT DESIGN UPDATES	P.S.	A.M.	G.d.S.	
6	22/08/2024	ROAD AND PAVEMENT DESIGN UPDATES	C.M.	A.M.	G.d.S.	
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3	06/04/2023	ISSUED FOR S138 APPROVAL	W.M.	A.M.	G.d.S.	
2	23/02/2023	AMENDED TO COUNCIL COMMENTS	W.M.	A.M.	G.d.S.	
1	16/01/2023	ISSUED FOR S138 APPROVAL	W.M.	A.M.	G.d.S.	
Rev.	Date	Revision Description	Drawn	Design	Appd.	

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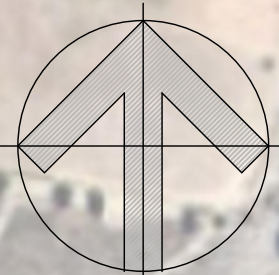


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			Drafting Checked	P.S.	05/09/2024	Project	FOREST GLEN SOLAR FARM ACCESS ROAD
			Design	A.M.	05/09/2024	Date	GENERAL NOTES
			Design Checked	G.d.S.	05/09/2024	Date	Revision
Datum			Coordinates			Size	
A.H.D.			MGA 20			A1	
Approved			G.d.S.			Date	
						05/09/2024	
Drawing Number						P00549-CI-S138-1021	

7

DATE PLOTTED: 4 September 2024, 10:04 am BY: SHIRLEY PANOD

XREFs: X-P00549-CI-S138-IMAGE: X-P00549-CI-S138-BOUNDARY; X-P00549-CI-S138-LIMIT OF WORK; X-P00549-CI-S138-Road Strims; X-P00549-CI-S138-STORMWATER
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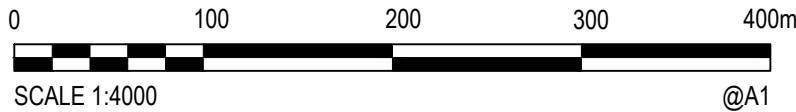
- EXTENT OF WORKS
- DESIGN

NOTES

- REFER DRG. 1021 FOR GENERAL NOTES.

FOR S138 APPROVAL

Rev.	Date	Revision Description	Drawn	Design	Appd.
7	05/09/2024	ROAD AND PAVEMENT DESIGN UPDATES	P.S.	A.M.	G.d.S.
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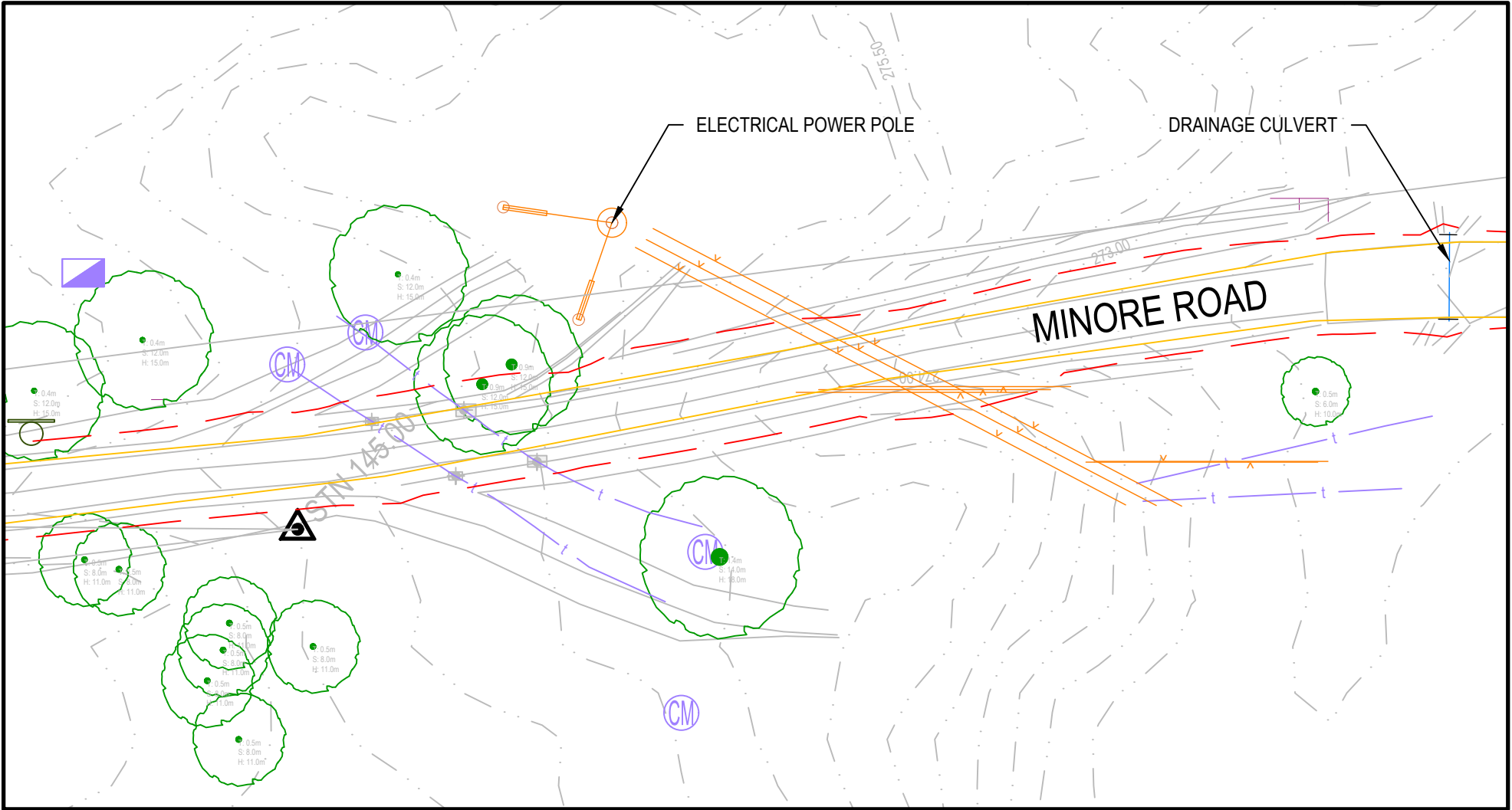
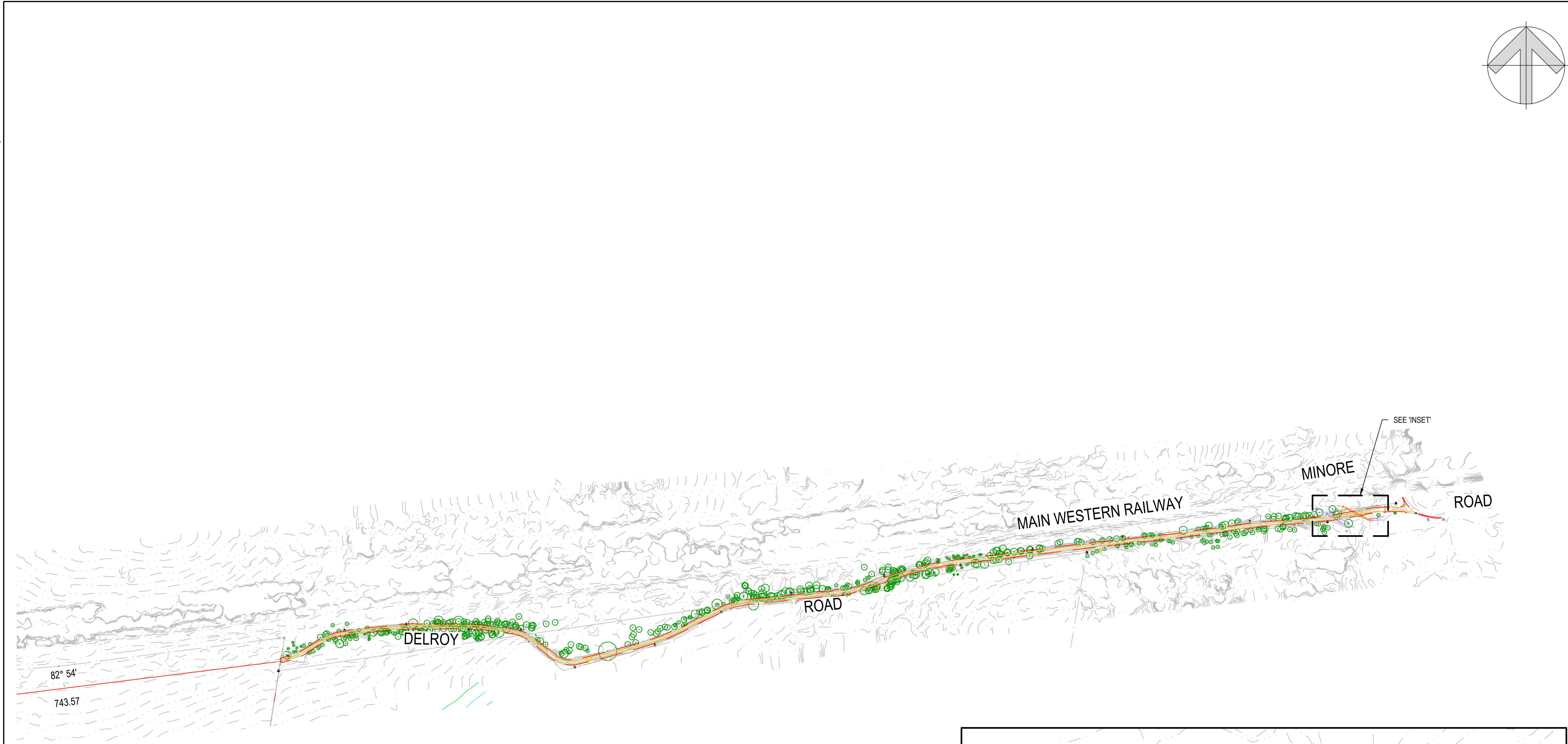
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Size
A1

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Drafting Checked P.S.	Date 05/09/2024	Project FOREST GLEN SOLAR FARM ACCESS ROAD
Design A.M.	Date 05/09/2024	Title GENERAL ARRANGEMENT PLAN
Design Checked G.d.S.	Date 05/09/2024	Revision 7
Approved G.d.S.	Date 05/09/2024	Drawing Number P00549-CI-S138-1031



LEGEND

- LIMIT OF WORK
- - - EXISTING CONTOUR
- SITE BOUNDARY
- EXISTING WATERCOURSE
- 20m RIPARIAN OFFSET
- 10m RIPARIAN OFFSET
- EXISTING TREE

EXISTING SERVICES

- EXISTING WATER - POTABLE
- EXISTING SEWER
- EXISTING OVERHEAD ELECTRICAL
- EXISTING ELECTRICAL
- EXISTING COMMUNICATIONS
- EXISTING COMMUNICATIONS PIT
- EXISTING COMMUNICATIONS MARKER
- EXISTING GAS
- EXISTING STORMWATER PIPE
- EXISTING POWER POLE
- EXISTING LIGHT POLE

REFER SURVEY NOTES FOR EXISTING SURVEY LEGEND.

NOTES

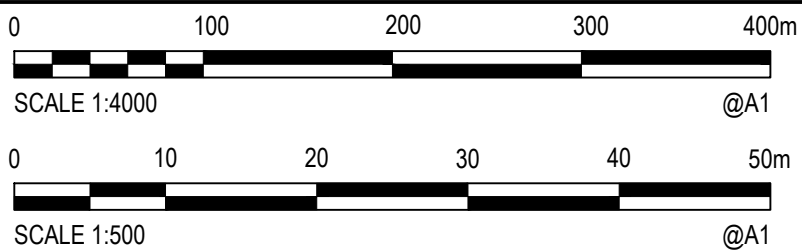
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Rev.	Date	Revision Description	Drawn	Design	Appd.
7	05/09/2024	ROAD AND PAVEMENT DESIGN UPDATES	P.S.	A.M.	G.d.S.
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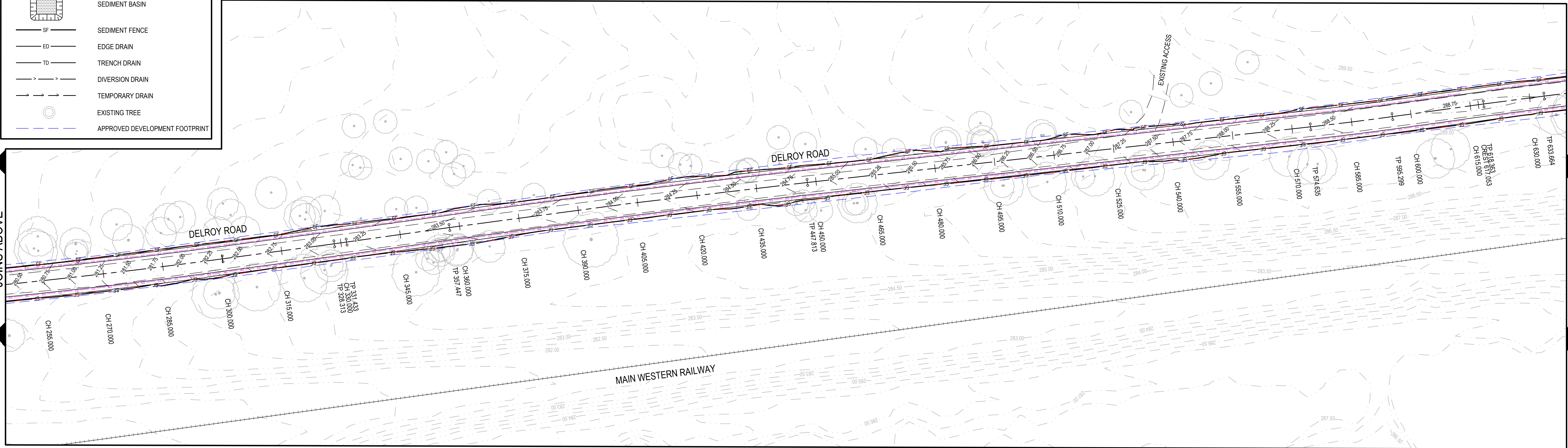
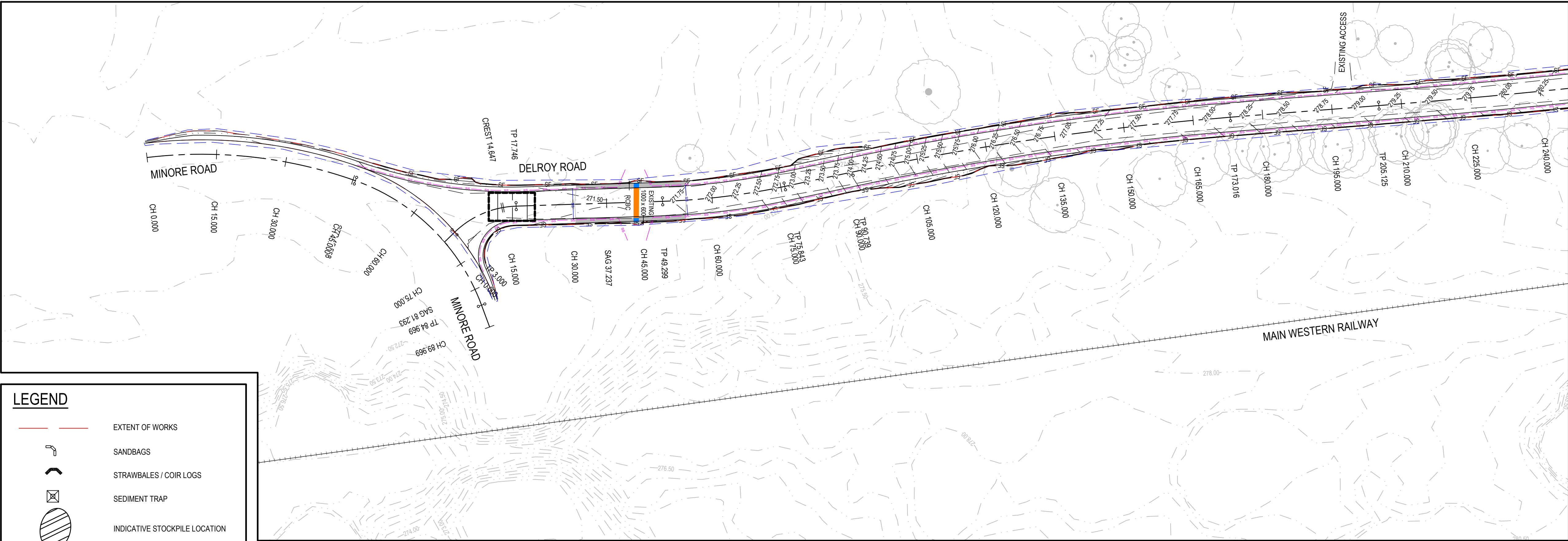
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Design A.M.	Date 05/09/2024
Design Checked G.d.S.	Date 05/09/2024
Approved G.d.S.	Date 05/09/2024

Client X-ELIO PTY. LTD.	Project FOREST GLEN SOLAR FARM ACCESS ROAD	Revision 7
Title EXISTING SITE SURVEY AND SERVICES		Drawing Number P00549-CI-S138-1051

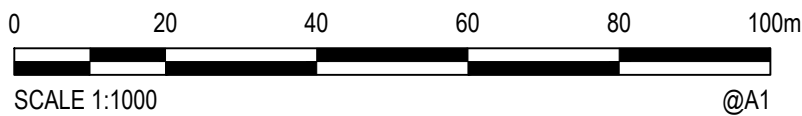


NOTES

1. REFER DRG. 1021 FOR GENERAL NOTES.
2. THIS PLAN IS TO BE READ IN CONJUNCTION WITH OTHER ENGINEERING PLANS AND ANY WRITTEN INSTRUCTIONS THAT MAY BE ISSUED.
3. THE CONTRACTOR SHALL IMPLEMENT ALL SOIL EROSION AND SEDIMENT CONTROL MEASURES PRIOR TO DISTURBANCE OF THE RELATED CATCHMENT AREA AND TO THE STANDARD OF 'MANAGING URBAN STORMWATER, SOIL & CONSTRUCTION' & DUBBO REGIONAL COUNCIL SPECIFICATIONS.
4. ALL SUBCONTRACTORS SHALL BE INFORMED OF THEIR RESPONSIBILITIES IN MINIMISING THE POTENTIAL FOR SOIL EROSION AND POLLUTION TO DOWN SLOPE AREAS.
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7. ALL SOIL EROSION AND SEDIMENT CONTROL STRUCTURES SHALL BE INSPECTED FOLLOWING EACH STORM EVENT AND ANY NECESSARY MAINTENANCE WORK SHALL BE UNDERTAKEN TO ENSURE THEIR CONTINUED PROPER OPERATION. SEDIMENT SHALL BE REMOVED FROM THE SOIL EROSION & SEDIMENT CONTROL STRUCTURES WHEN NO MORE THAN 40% CAPACITY HAS BEEN REACHED. THESE STRUCTURES SHALL CONTINUE IN PROPER OPERATION UNTIL ALL DEVELOPMENT ACTIVITIES HAS BEEN COMPLETED AND THE SITE FULLY ESTABLISHED.
8. TEMPORARY REHABILITATION SHALL BE UNDERTAKEN WITHIN 14 WORKING DAYS BEFORE EITHER WORKS CONTINUE OR PERMANENT REHABILITATION IS UNDERTAKEN.
9. REFER DRG. 1021 FOR TREE PROTECTION DETAIL.
10. REFER DRG. 1131 FOR TYPICAL SEDIMENT AND EROSION CONTROL DETAILS.

FOR S138 APPROVAL

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7	05/09/2024	ROAD AND PAVEMENT DESIGN UPDATES	P.S.	A.M.	G.d.S.
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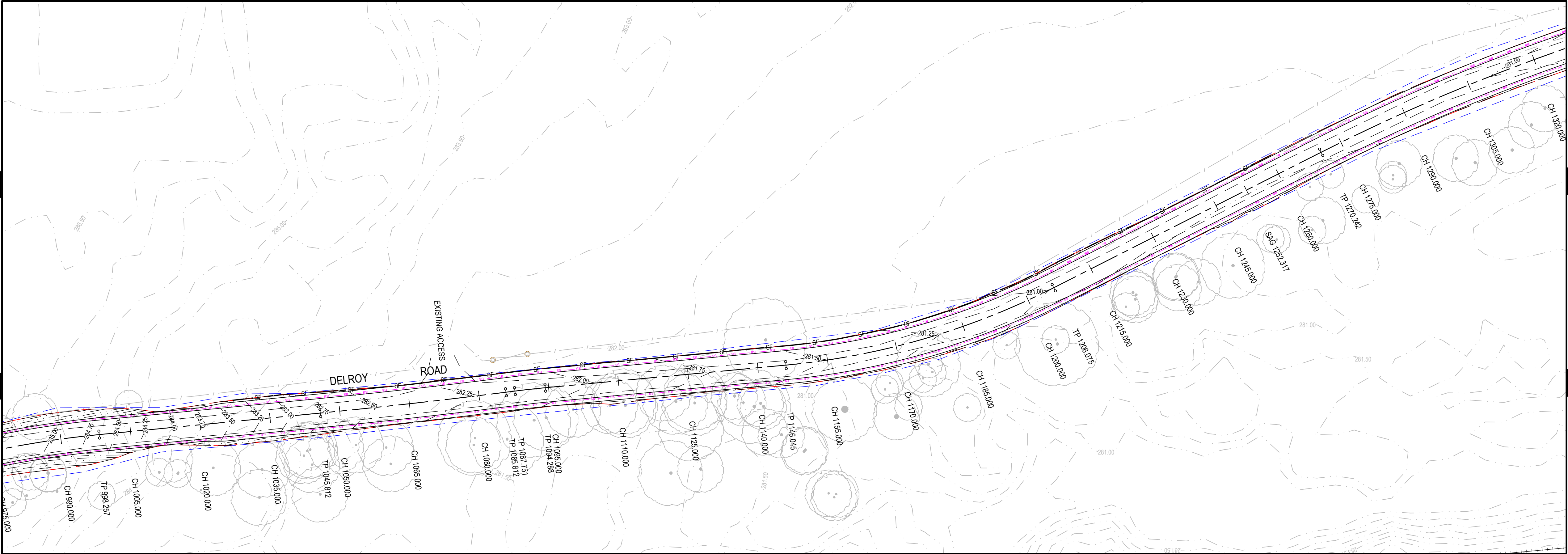
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Drafting Checked P.S.	Date 05/09/2024	Project FOREST GLEN SOLAR FARM ACCESS ROAD
Design A.M.	Date 05/09/2024	Title EROSION AND SEDIMENT CONTROL PLAN SHEET 1
Design Checked G.d.S.	Date 05/09/2024	Revision 7
Approved G.d.S.	Date 05/09/2024	Drawing Number P00549-CI-S138-1101

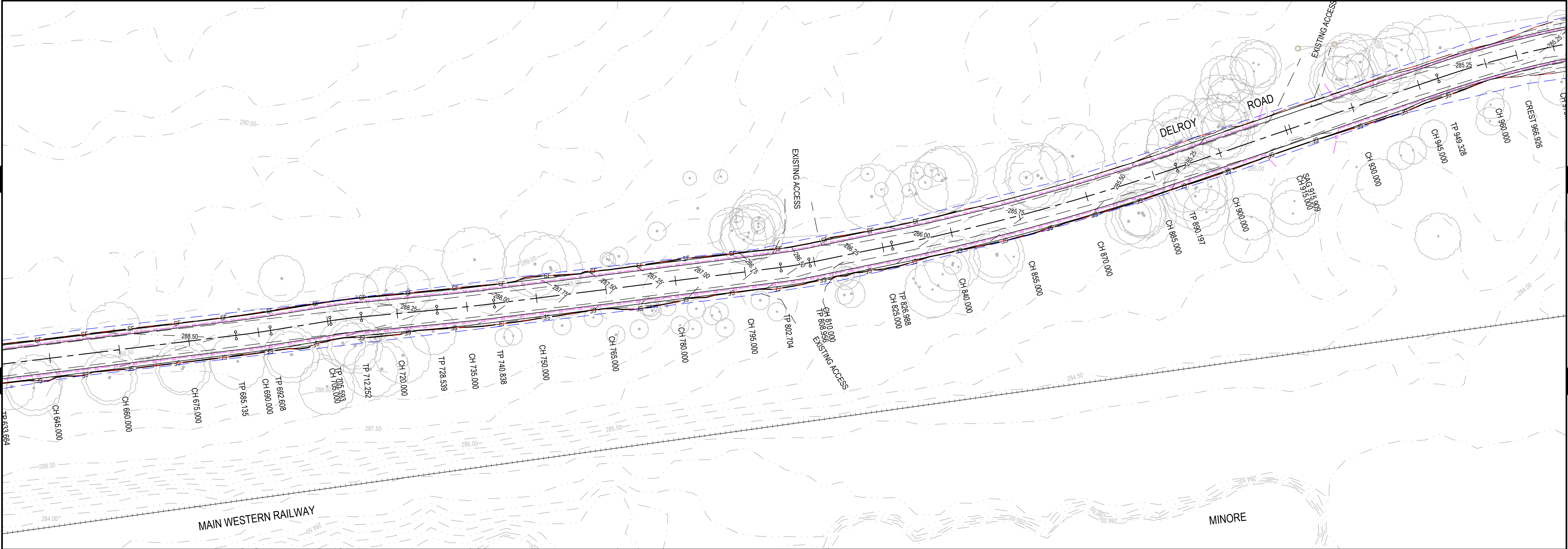
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CAD File: C:\1265\atagds\SYN\0713 - Forest Glen Solar Farm - Access Road_38404_Engineering\05_S138 - Road Design\P00549-CI-S138-101 to 1103.dwg
DATE PLOTTED: 4 September 2024 10:05 am BY: SHIRLEY PANCO

JOINS ABOVE

JOINS DRAWING 1101



JOINS DRAWING 1103



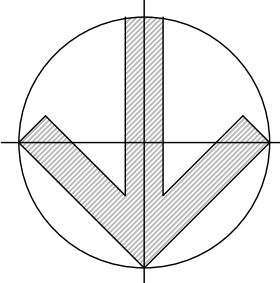
JOINS BELOW

LEGEND

- EXTENT OF WORKS
- SANDBAGS
- STRAWBALES / COIR LOGS
- SEDIMENT TRAP
- INDICATIVE STOCKPILE LOCATION
- STABILISED SITE ENTRY/EXIT WITH WHEEL WASH
- SEDIMENT BASIN
- SEDIMENT FENCE
- EDGE DRAIN
- TRENCH DRAIN
- DIVERSION DRAIN
- TEMPORARY DRAIN
- EXISTING TREE
- APPROVED DEVELOPMENT FOOTPRINT

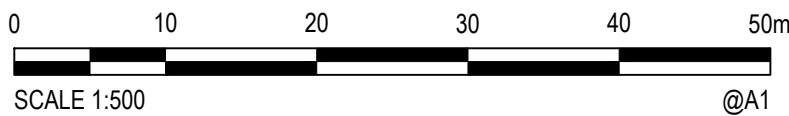
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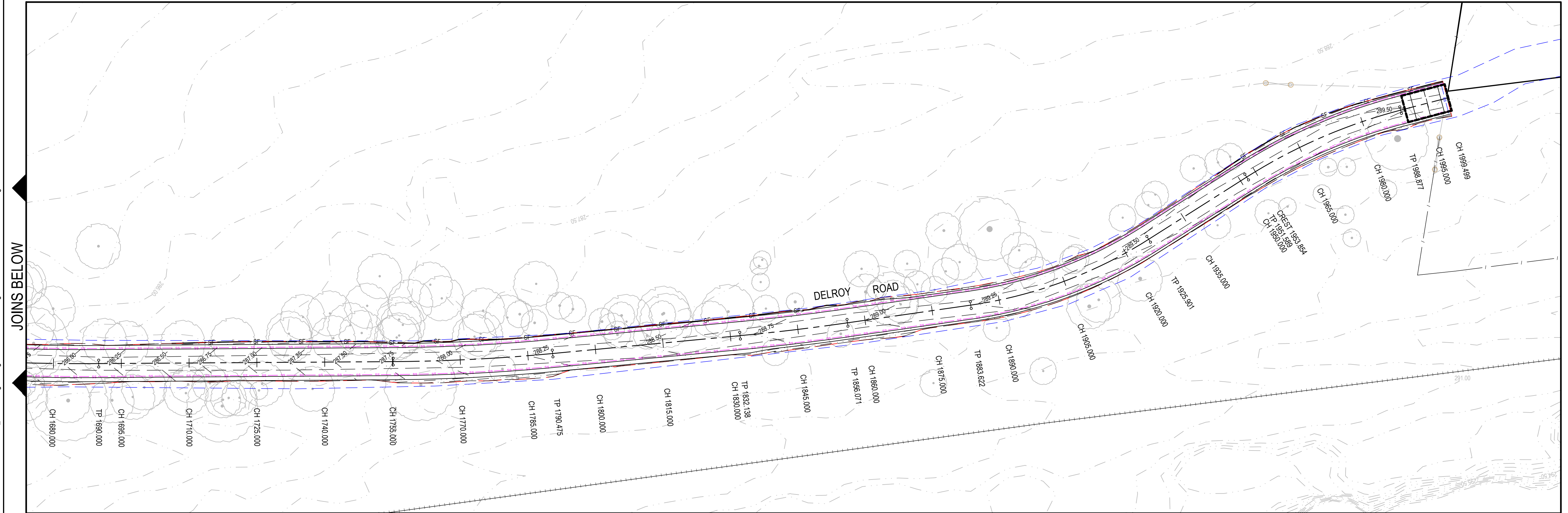
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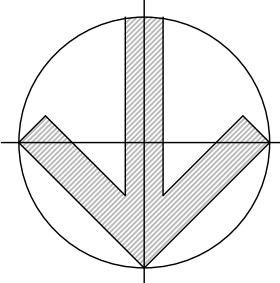
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Size
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Drawn C.M.	Date 05/09/2024	Client X-ELIO PTY. LTD.
Drafting Checked P.S.	Date 05/09/2024	Project FOREST GLEN SOLAR FARM ACCESS ROAD
Design A.M.	Date 05/09/2024	Title EROSION AND SEDIMENT CONTROL PLAN SHEET 2
Design Checked G.d.S.	Date 05/09/2024	Revision 7
Approved G.d.S.	Date 05/09/2024	Drawing Number P00549-CI-S138-1102



- # NOTES
1. REFER DRG. 1021 FOR GENERAL NOTES.
 2. THIS PLAN IS TO BE READ IN CONJUNCTION WITH OTHER ENGINEERING PLANS AND ANY WRITTEN INSTRUCTIONS THAT MAY BE ISSUED.
 3. THE CONTRACTOR SHALL IMPLEMENT ALL SOIL EROSION AND SEDIMENT CONTROL MEASURES PRIOR TO DISTURBANCE OF THE RELATED CATCHMENT AREA AND TO THE STANDARD OF 'MANAGING URBAN STORMWATER, SOIL & CONSTRUCTION' AND DUBBO REGIONAL COUNCIL SPECIFICATIONS.
 4. ALL SUBCONTRACTORS SHALL BE INFORMED OF THEIR RESPONSIBILITIES IN MINIMISING THE POTENTIAL FOR SOIL EROSION AND POLLUTION TO DOWN SLOPE AREAS.
 5. LAND DISTURBANCE SHALL BE LIMITED TO THAT NECESSARY FOR THE CONSTRUCTION OF THE PLANS OF WORKS. BUFFER ZONES AND LAND NOT TO BE DISTURBED SHALL BE CLEARLY MARKED WITH BARRIER FENCE. 'SILT' FENCE FOR STRAW BALE SEDIMENT TRAPS SHALL BE PLACED AT REGULAR INTERVALS IMMEDIATELY DOWNSLOPE OF ALL UNPROTECTED DISTURBED LANDS.
 6. THE LOCATION OF 'SILT' FENCES, BARRIER FENCES, SEDIMENT TRAPS AND OTHER DEVICES ARE INDICATIVE ONLY AND FINAL LOCATIONS ARE TO BE DECIDED ON SITE. VARIATIONS WILL BE PERMITTED TO BEST SUIT THE CIRCUMSTANCES. CONTRACTOR TO PREPARE DETAILED CONSTRUCTION SEDIMENT AND EROSION CONTROL PLAN.
 7. ALL SOIL EROSION AND SEDIMENT CONTROL STRUCTURES SHALL BE INSPECTED FOLLOWING EACH STORM EVENT AND ANY NECESSARY MAINTENANCE WORK SHALL BE UNDERTAKEN TO ENSURE THEIR CONTINUED PROPER OPERATION. SEDIMENT SHALL BE REMOVED FROM THE SOIL EROSION & SEDIMENT CONTROL STRUCTURES WHEN NO MORE THAN 40% CAPACITY HAS BEEN REACHED. THESE STRUCTURES SHALL CONTINUE IN PROPER OPERATION UNTIL ALL DEVELOPMENT ACTIVITIES HAVE BEEN COMPLETED AND THE SITE FULLY ESTABLISHED.
 8. TEMPORARY REHABILITATION SHALL BE UNDERTAKEN WITHIN 14 WORKING DAYS BEFORE EITHER WORKS CONTINUE OR PERMANENT REHABILITATION IS UNDERTAKEN.
 9. REFER DRG 1021 FOR TREE PROTECTION DETAIL.
 10. REFER DRG. 1131 FOR TYPICAL SEDIMENT AND EROSION CONTROL DETAILS.



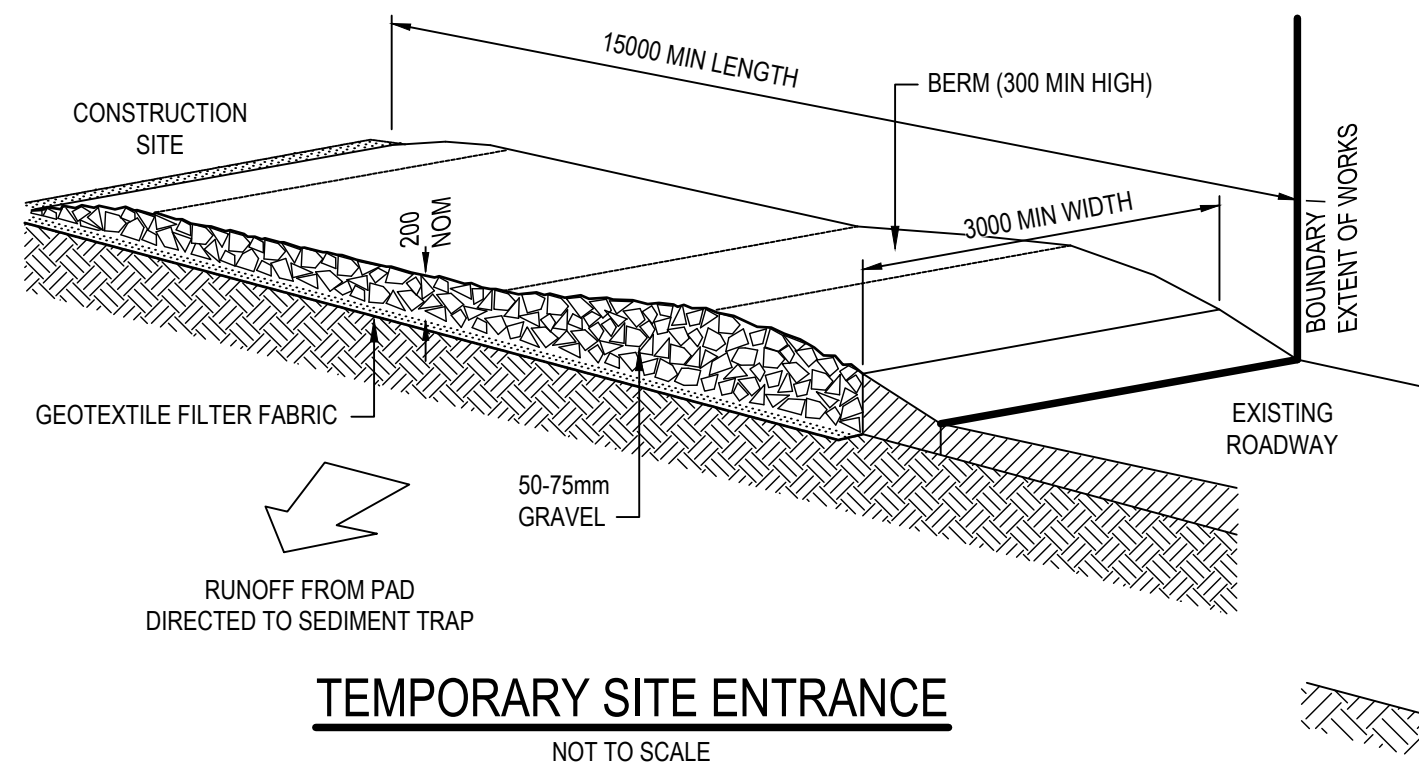
JOINS BELOW

Client	X-ELIO PTY. LTD.		
Project	FOREST GLEN SOLAR FARM ACCESS ROAD		
Title	EROSION AND SEDIMENT CONTROL PLAN SHEET 3		Revision
Drawing Number	P00549-CI-S138-1103		7

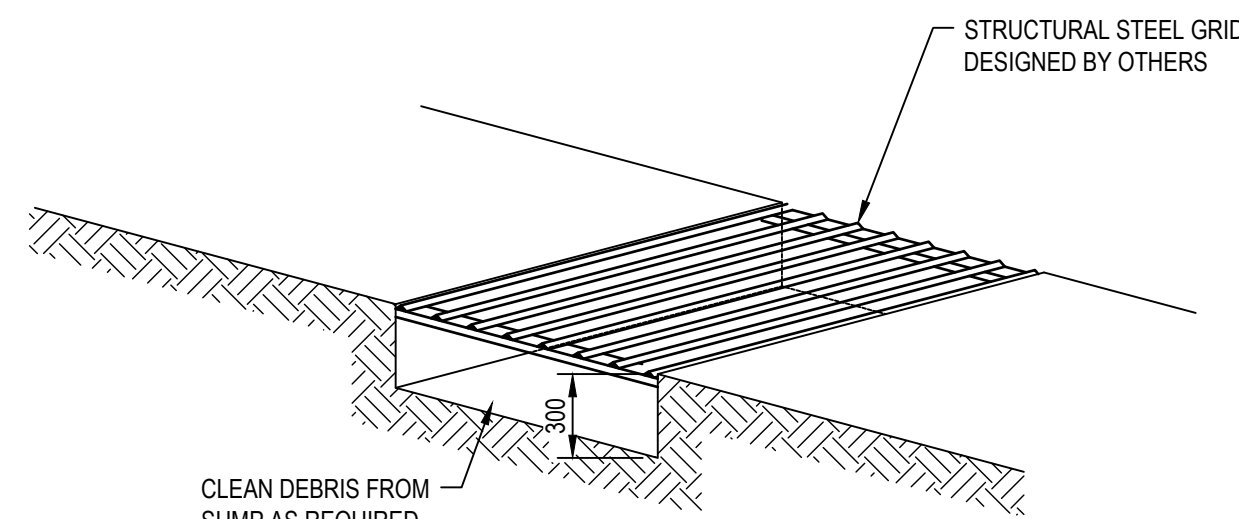
- THIS PLAN IS TO BE READ IN CONJUNCTION WITH OTHER ENGINEERING PLANS AND ANY WRITTEN INSTRUCTIONS THAT MAY BE ISSUED.
- THE CONTRACTOR SHALL IMPLEMENT ALL SOIL EROSION AND SEDIMENT CONTROL MEASURES PRIOR TO DISTURBANCE OF THE RELATED CATCHMENT AREA AND TO THE STANDARD OF 'MANAGING URBAN STORMWATER, SOIL & CONSTRUCTION' & COUNCIL SPECIFICATIONS.
- ALL SUBCONTRACTORS SHALL BE INFORMED OF THEIR RESPONSIBILITIES IN MINIMISING THE POTENTIAL FOR SOIL EROSION AND POLLUTION TO DOWN SLOPE AREAS.
- LAND DISTURBANCE SHALL BE LIMITED TO THAT NECESSARY FOR IMPLEMENTATION OF THE PLANS OF WORKS. BUFFER ZONES AND LAND NOT TO BE DISTURBED SHALL BE CLEARLY MARKED WITH BARRIER FENCE. 'SILT' FENCE FOR STRAW BALE SEDIMENT TRAPS SHALL BE PLACED AT REGULAR INTERVALS IMMEDIATELY DOWNSLOPE OF ALL UNPROTECTED DISTURBED LANDS.
- THE LOCATION OF 'SILT' FENCES, BARRIER FENCES, SEDIMENT TRAPS AND OTHER DEVICES ARE INDICATIVE ONLY AND FINAL LOCATIONS ARE TO BE DECIDED ON SITE. VARIATIONS WILL BE PERMITTED TO BEST SUIT THE CIRCUMSTANCES. CONTRACTOR TO PREPARE DETAILED CONSTRUCTION SEDIMENT AND EROSION CONTROL PLAN.
- ALL SOIL EROSION AND SEDIMENT CONTROL STRUCTURES SHALL BE INSPECTED FOLLOWING EACH STORM EVENT AND ANY NECESSARY MAINTENANCE WORK SHALL BE UNDERTAKEN TO ENSURE THEIR CONTINUED PROPER OPERATION. SEDIMENT SHALL BE REMOVED FROM THE SOIL EROSION & SEDIMENT CONTROL STRUCTURES WHEN NO MORE THAN 40% CAPACITY HAS BEEN REACHED. THESE STRUCTURES SHALL CONTINUE IN PROPER OPERATION UNTIL ALL DEVELOPMENT ACTIVITIES HAS BEEN COMPLETED AND THE SITE FULLY ESTABLISHED.
- WHERE THE AREA TO BE DISTURB CONTAINS TREES TO REMAIN, AN ARBORIST CONSULTANT SHOULD PROVIDE ADVICE ON PROCEDURES AND MEASURES TO BE PLACED.
- TEMPORARY REHABILITATION SHALL BE UNDERTAKEN WITHIN 14 WORKING DAYS BEFORE EITHER WORKS CONTINUE OR PERMANENT REHABILITATION IS UNDERTAKEN.
- ALL OF THE SOIL STORAGE, REVEGETATION AND SEDIMENT AND EROSION CONTROL MANAGEMENT DEVICES/MEASURES SHALL BE IMPLEMENTED TO NSW ENVIRONMENT PROTECTION AUTHORITY (EPA) AND DEPARTMENT OF LAND AND WATER REQUIREMENTS.
- ALL SEDIMENT AND EROSION CONTROL MANAGEMENT MEASURES/DEVICES SHOWN ON THE PLANS SHALL BE IMPLEMENTED PRIOR TO CONSTRUCTION, AND MAINTAINED DURING AND AFTER.

1. PLACE STOCKPILES MORE THAN 2 (PREFERABLY 5) METRES FROM EXISTING VEGETATION, CONCENTRATED WATER FLOW, ROADS AND HAZARD AREAS.
2. CONSTRUCT ON THE CONTOUR AS LOW, FLAT, ELONGATED MOUNDS
3. WHERE THERE IS SUFFICIENT AREA, TOPSOIL STOCKPILES SHALL BE LESS THAN 2m IN HEIGHT
4. WHERE THERE ARE TO BE IN PLACE FOR MORE THAN 10 DAYS, STABILISE FOLLOWING THE APPROVED ESCP OR SWMP TO REDUCE THE C-FACTOR TO LESS THAN 0.10
5. CONSTRUCT EARTH BANKS (STANDARD DRAWING 6-5) ON THE UPSLOPE SIDE TO DIVERT WATER AROUND STOCKPILES AND SEDIMENT FENCES (STANDARD DRAWING 6-8) 1m TO 2m DOWNSLOPE

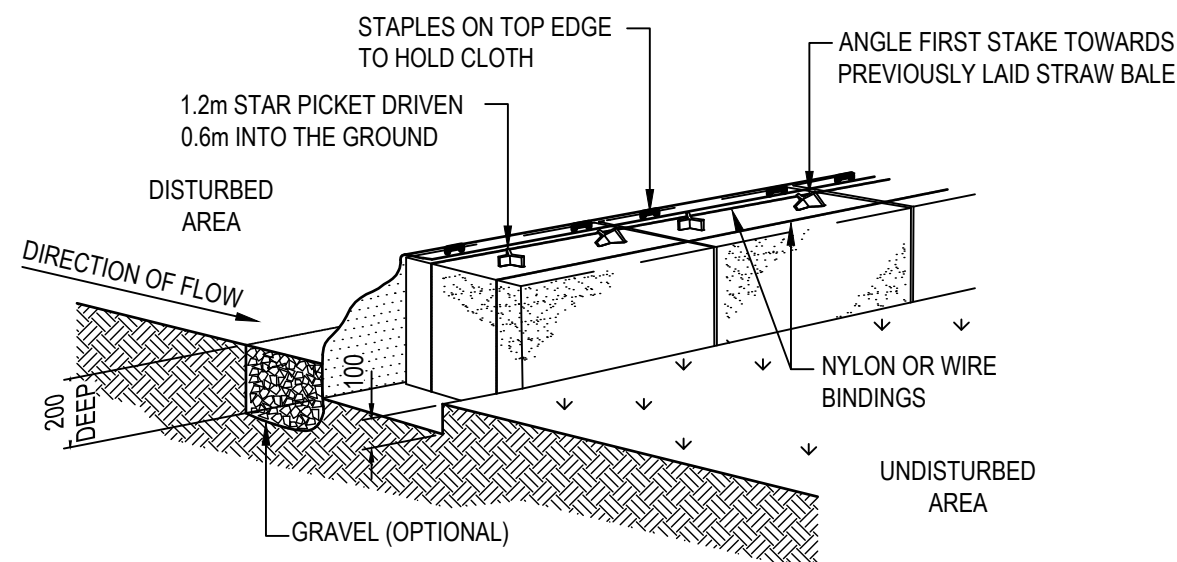
1. BUILD WITH GRADIENTS BETWEEN 1% AND 5%
2. AVOID REMOVING TREES AND SHRUBS IF POSSIBLE- WORK AROUND THEM
3. ENSURE THE STRUCTURES ARE FREE OF PROJECTIONS OR OTHER IRREGULARITIES THAT COULD IMPEDE WATER FLOW
4. BUILD THE DRAINS WITH CIRCULAR, PARABOLIC OR TRAPEZOIDAL CROSS SECTIONS, NOT V SHAPED
5. ENSURE THE BANKS ARE PROPERLY COMPACTED TO PREVENT FAILURE
6. COMPLETE PERMANENT OR TEMPORARY STABILISATION WITHIN 10 DAYS OF CONSTRUCTION



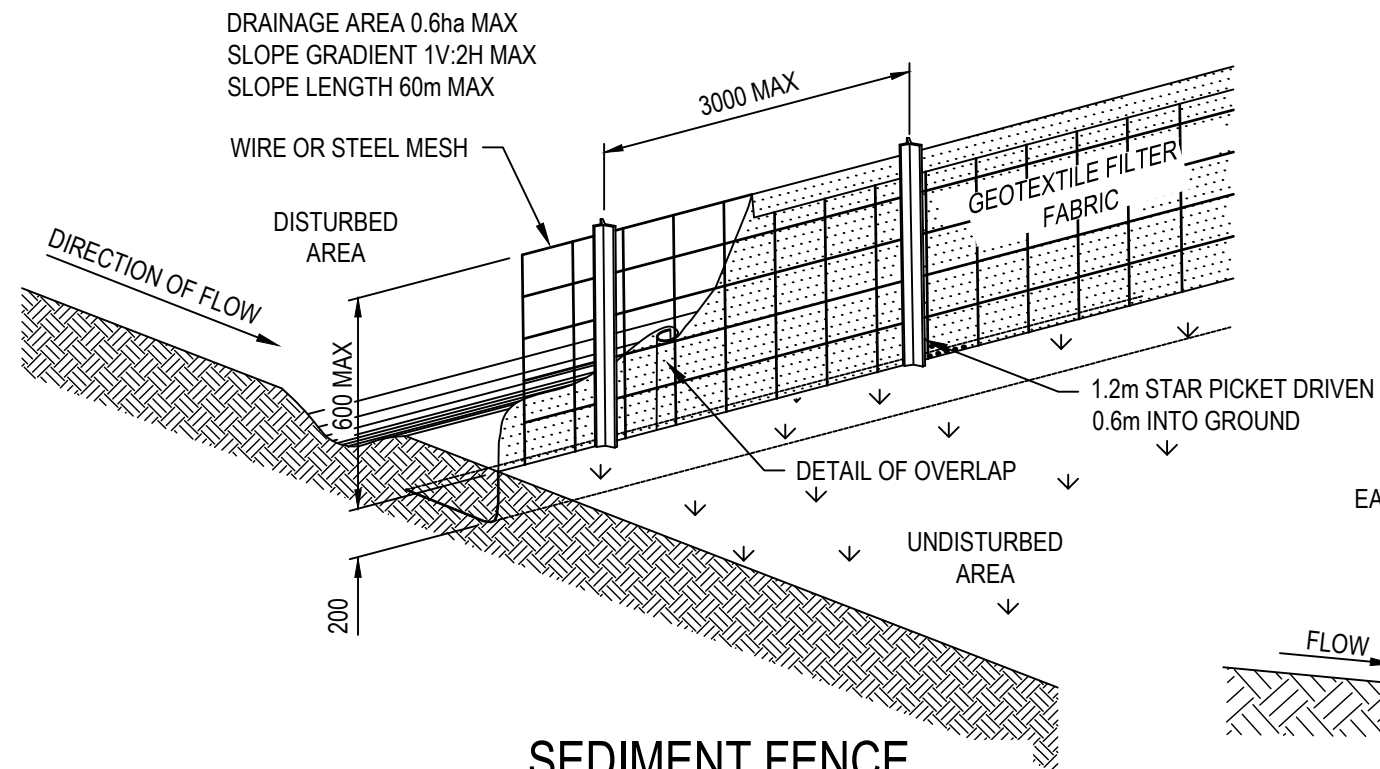
- THE TEMPORARY ACCESS SHALL BE MAINTAINED IN A CONDITION THAT PREVENTS TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC RIGHTS OF WAY.
- THIS MAY REQUIRE PERIODIC TOP DRESSING WITH ADDITIONAL GRAVEL AS CONDITIONS DEMAND AND REPAIR AND/OR CLEAN OUT OF ANY MEASURES USED TO TRAP SEDIMENT.
- ALL SEDIMENT SPILLED, DROPPED, WASHED OR TRACKED ONTO PUBLIC RIGHTS OF WAY MUST BE REMOVED IMMEDIATELY.



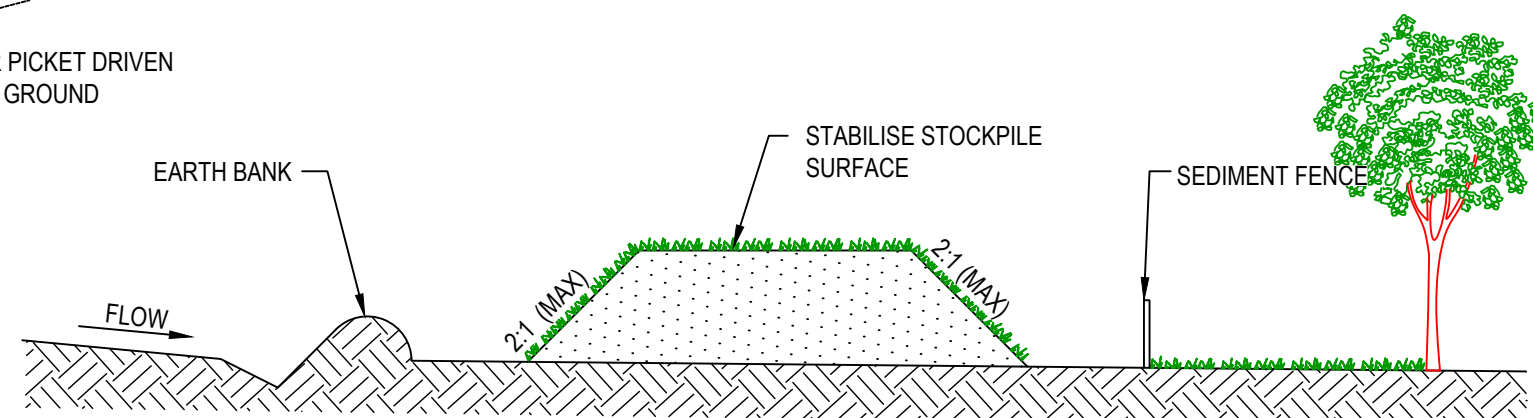
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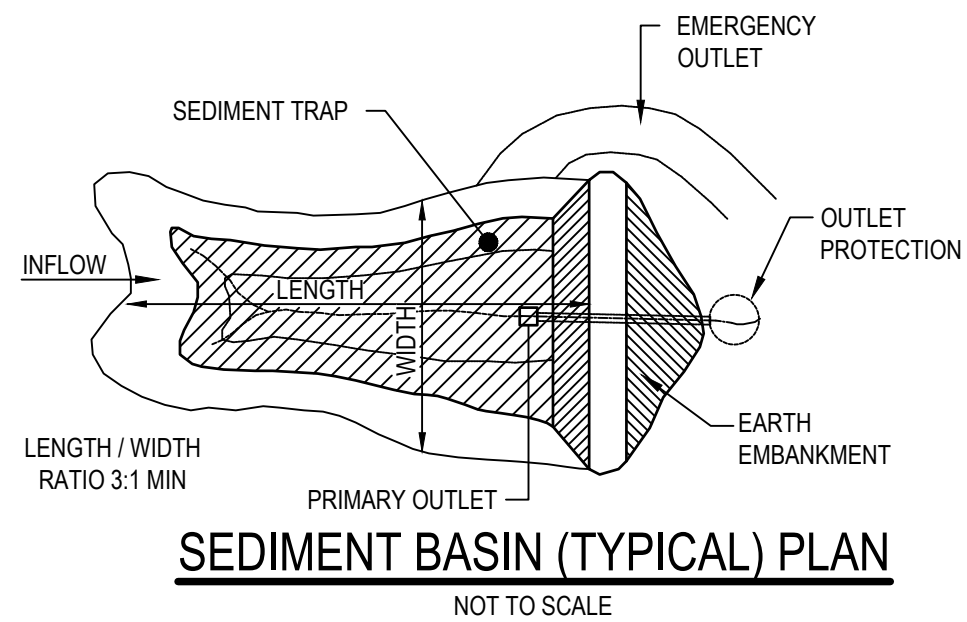
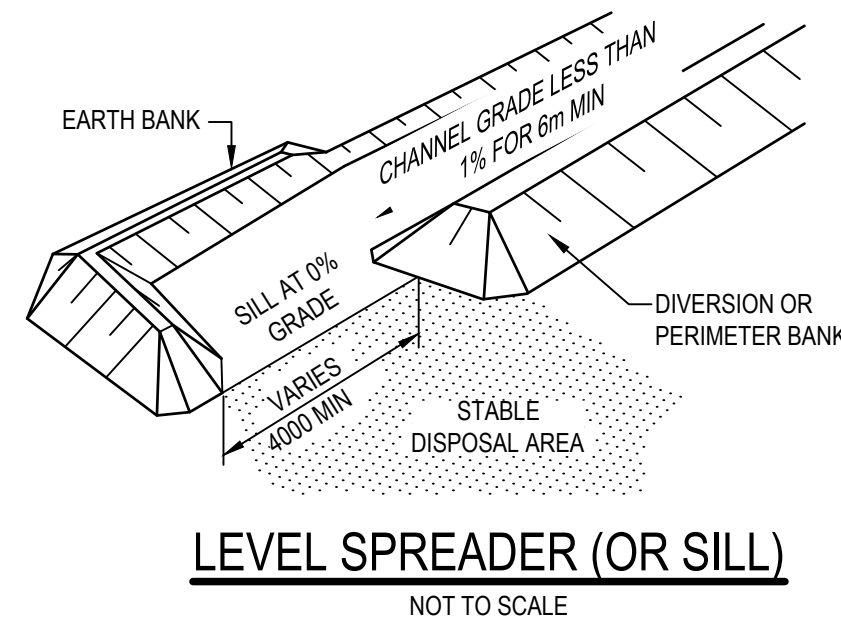
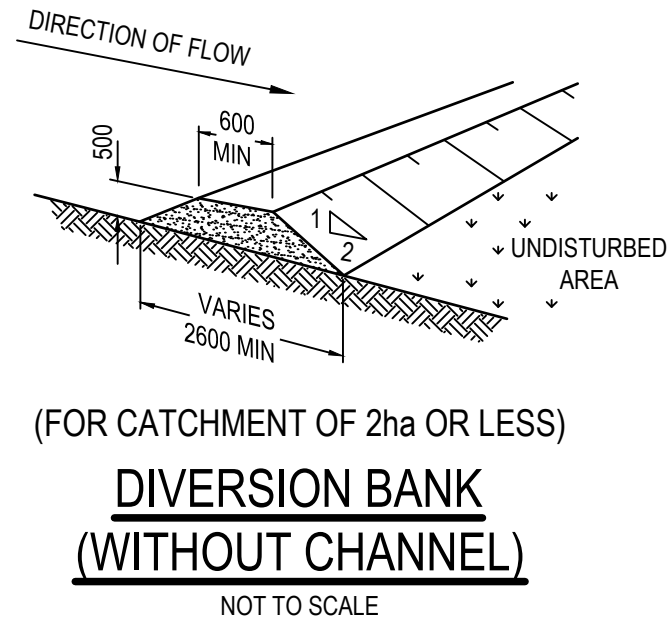
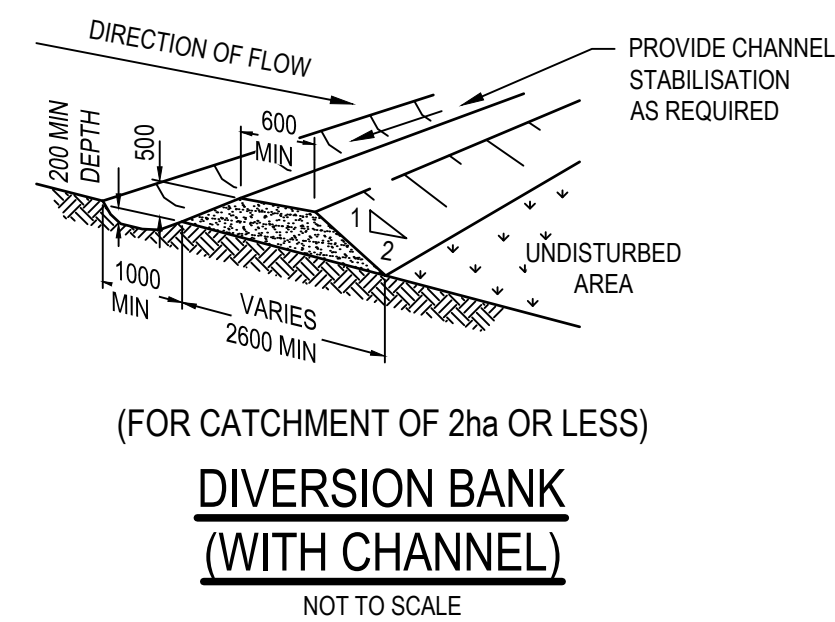
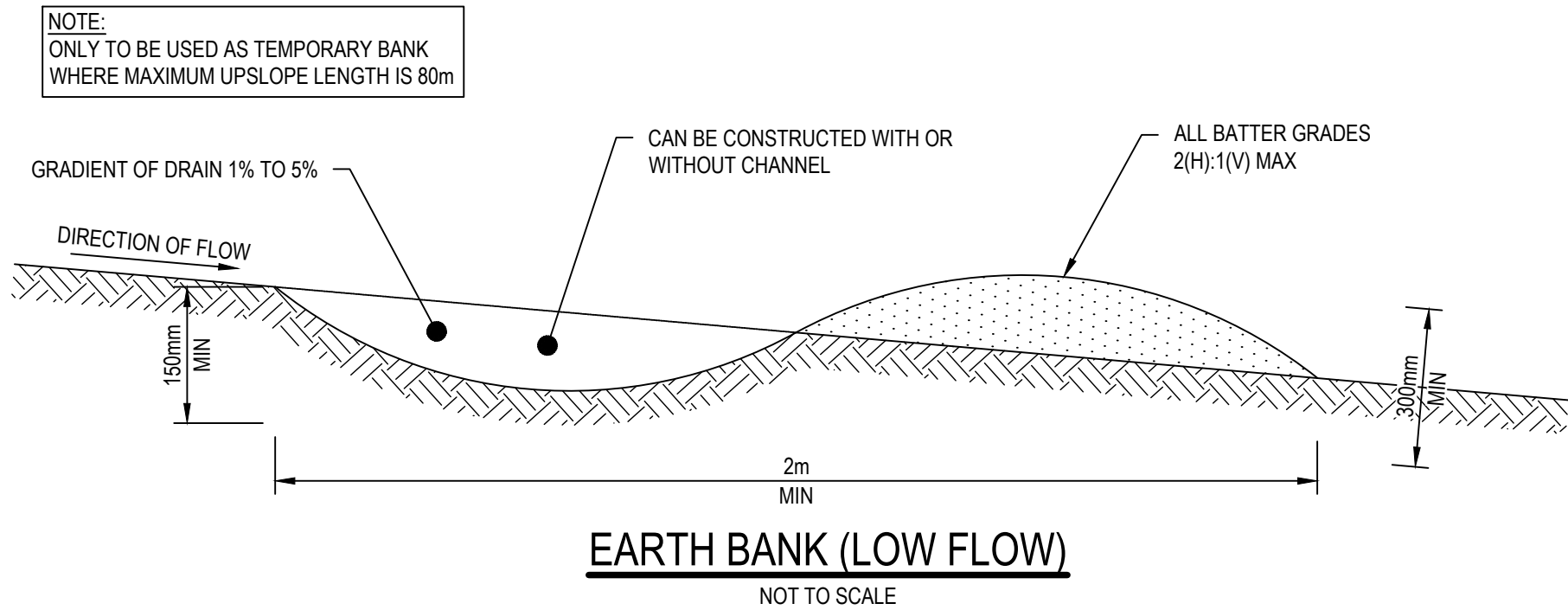
SEDIMENT FENCE
(GEOTEXTILE FILTER FABRIC & STRAW BALE)



SEDIMENT FENCE
(GEOTEXTILE FILTER FABRIC)



NOT TO SCALE



FOR S138 APPROVAL

[illegible]

PREPARED BY:



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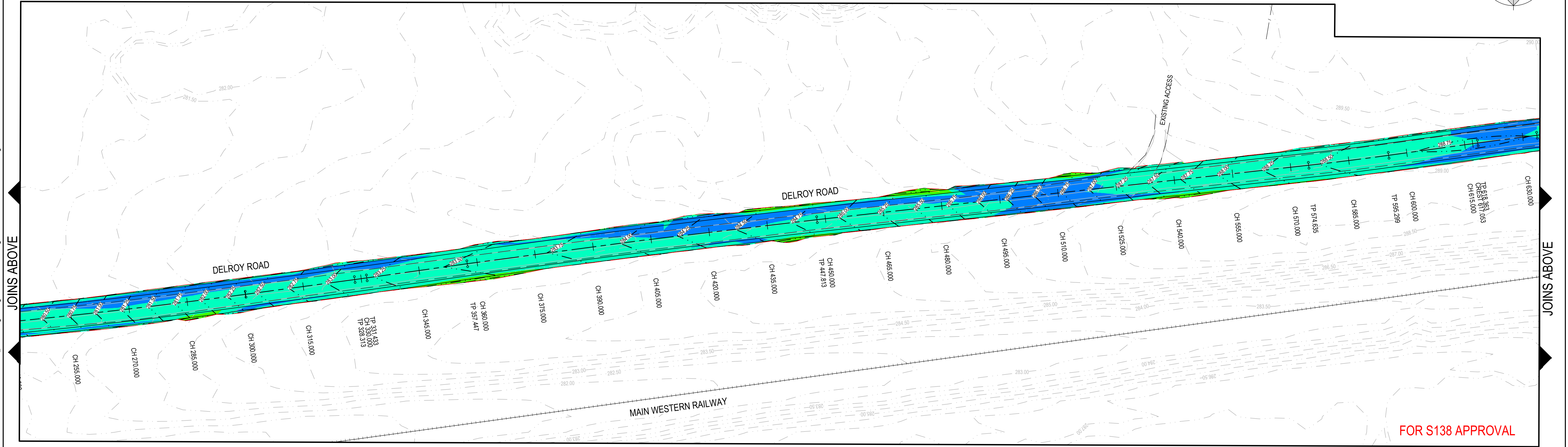




DO NOT SCALE			Drawn C.M.	Date 05/09/2024	Client X-ELIO PTY. LTD.
Disclaimer and Copyright This document may only be used by GDS's Client in accordance with the terms of the retainer. GDS does not and shall not assume any responsibility or liability whatsoever to any third party arising out of any use or reliance by third party on the content of this document.			Drafting Checked P.S.	Date 05/09/2024	Project FOREST GLEN SOLAR FARM ACCESS ROAD
			Design A.M.	Date 05/09/2024	Title EROSION AND SEDIMENT CONTROL DETAILS
			Design Checked G.d.S.	Date 05/09/2024	Revision
			Datum A.H.D.	Coordinates MGA 20	Size A1
7					

XREFs: X-P00549-CI-S138-CONTOURS EXISTING 500; X-P00549-CI-S138-LIMIT OF WORK; X-P00549-CI-S138-Contours Design; X-P00549-CI-S138-Road Strings; X-P00549-CI-S138-BEW; X-P00549-CI-S138-SURVEY
CAD File: C:\2\GIS\Adaptive\SYN\0713 - Forest Glen Solar Farm - Access Road_38404_Engineering\05_S138 - Road Design\00549-CI-S138-1201 to 1203.dwg

DATE PLOTTED: 4 September 2024 10:10 am BY: SHIRLEY PANOD



LEGEND		
	EXTENT OF WORKS	
	EXISTING CONTOURS	
	DESIGN CONTOURS	

BULK EARTHWORKS SUMMARY

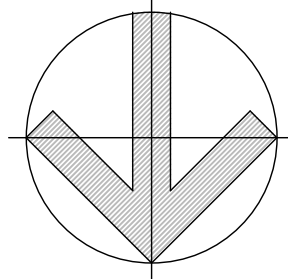
CUT	-589 306 m³
FILL	2,777 633 m³
BALANCE	2,188 327 m³ (IMPORT FILL)

NOTES

1. THE PLAN IS TO SHOW EARTHWORKS QUANTITIES PROPOSED AS PART OF THE DEVELOPMENT APPLICATION.
2. THE QUANTITIES PROVIDED ARE DIFFERENCE IN LEVEL BETWEEN DESIGN AND NATURAL SURFACE ONLY.
3. BULK EARTHWORKS DESIGN DOES NOT ALLOW FOR TOPSOIL STRIPPING, PAVEMENT BOXING OR BULKING FACTORS.

ELEVATIONS TABLE

NUMBER	MINIMUM ELEVATION	MAXIMUM ELEVATION	AREA	COLOR
1	-1.50	-1.25	4.506	
2	-1.25	-1.00	135.225	
3	-1.00	-0.75	110.734	
4	-0.75	-0.50	97.683	
5	-0.50	-0.25	251.992	
6	-0.25	0.00	2552.541	
7	0.00	0.25	9662.408	
8	0.25	0.50	4515.726	
9	0.50	0.75	13.915	



FOR S138 APPROVAL

Rev.	Date	Revision Description	Drawn	Design	Appd.
7	05/09/2024	ROAD AND PAVEMENT DESIGN UPDATES	P.S.	A.M.	G.d.S.
6	22/08/2024	ROAD AND PAVEMENT DESIGN UPDATES	C.M.	A.M.	G.d.S.
5	26/07/2024	ROAD AND PAVEMENT DESIGN UPDATES	P.S.	A.M.	G.d.S.
4	25/05/2023	RE-ISSUED FOR S138 APPROVAL	W.M.	A.M.	G.d.S.
3	06/04/2023	ISSUED FOR S138 APPROVAL	W.M.	A.M.	G.d.S.
2	23/02/2023	AMENDED TO COUNCIL COMMENTS	W.M.	A.M.	G.d.S.
1	16/01/2023	ISSUED FOR S138 APPROVAL	W.M.	A.M.	G.d.S.



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Datum
A.H.D.

Coordinates
MGA 20

Size
A1

Drawn C.M.	Date 05/09/2024
Drafting Checked P.S.	Date 05/09/2024
Design A.M.	Date 05/09/2024
Design Checked G.d.S.	Date 05/09/2024
Approved G.d.S.	Date 05/09/2024

Client
X-ELIO PTY. LTD.

Project
**FOREST GLEN SOLAR FARM
ACCESS ROAD**

Title
**CUT/FILL EARTHWORKS PLAN
SHEET 1**

Drawing Number
P00549-CI-S138-1201

Revision

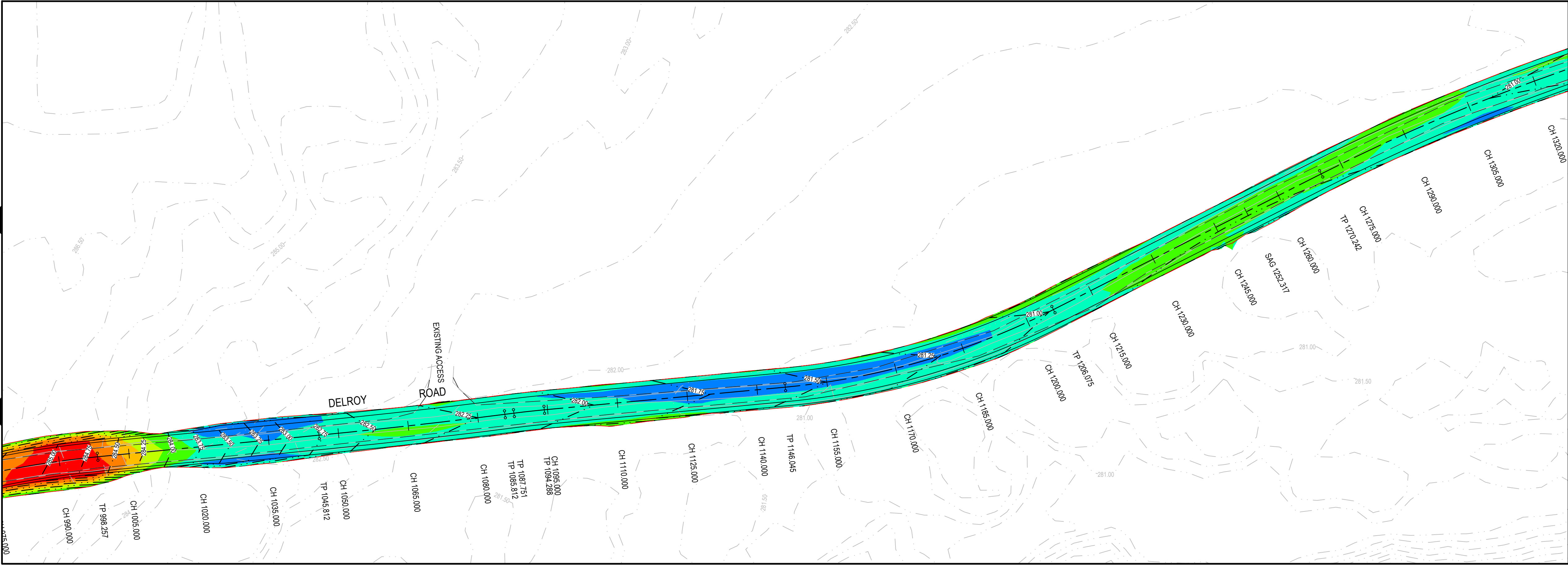
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XREFS: X-P00549-CI-S138-BOUNDARY; X-P00549-CI-S138-LIMIT OF WORK; X-P00549-CI-S138-Contours Design; X-P00549-CI-S138-Road Strings; X-P00549-CI-S138-BEW; X-P00549-CI-S138-SURVEY
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DATE PLOTTED: 4 September 2024 10:10 am BY: SHIRLEY PANOD

JOINS ABOVE

JOINS DRAWING 1201



JOINS DRAWING 1203

LEGEND

- EXTENT OF WORKS
- EXISTING CONTOURS
- DESIGN CONTOURS

BULK EARTHWORKS SUMMARY

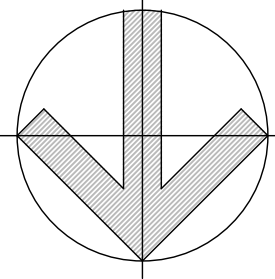
CUT	-589,306 m ³
FILL	2,777,633 m ³
BALANCE	2,188,327 m ³ (IMPORT FILL)

NOTES

- THE PLAN IS TO SHOW EARTHWORKS QUANTITIES PROPOSED AS PART OF THE DEVELOPMENT APPLICATION.
- THE QUANTITIES PROVIDED ARE DIFFERENCE IN LEVEL BETWEEN DESIGN AND NATURAL SURFACE ONLY.
- BULK EARTHWORKS DESIGN DOES NOT ALLOW FOR TOPSOIL STRIPPING, PAVEMENT BOXING OR BULKING FACTORS.

ELEVATIONS TABLE

NUMBER	MINIMUM ELEVATION	MAXIMUM ELEVATION	AREA	COLOR
1	-1.50	-1.25	4.506	Red
2	-1.25	-1.00	135.225	Red
3	-1.00	-0.75	110.734	Orange
4	-0.75	-0.50	97.683	Orange
5	-0.50	-0.25	251.992	Yellow
6	-0.25	0.00	2552.541	Yellow
7	0.00	0.25	9662.408	Green
8	0.25	0.50	4515.726	Blue
9	0.50	0.75	13.915	Blue



FOR S138 APPROVAL

Rev.	Date	Revision Description	Drawn	Design	Appd.
7	05/09/2024	ROAD AND PAVEMENT DESIGN UPDATES	P.S.	A.M.	G.d.S.
6	22/08/2024	ROAD AND PAVEMENT DESIGN UPDATES	C.M.	A.M.	G.d.S.
5	26/07/2024	ROAD AND PAVEMENT DESIGN UPDATES	P.S.	A.M.	G.d.S.
4	25/05/2023	RE-ISSUED FOR S138 APPROVAL	W.M.	A.M.	G.d.S.
3	06/04/2023	ISSUED FOR S138 APPROVAL	W.M.	A.M.	G.d.S.
2	23/02/2023	AMENDED TO COUNCIL COMMENTS	W.M.	A.M.	G.d.S.
1	16/01/2023	ISSUED FOR S138 APPROVAL	W.M.	A.M.	G.d.S.



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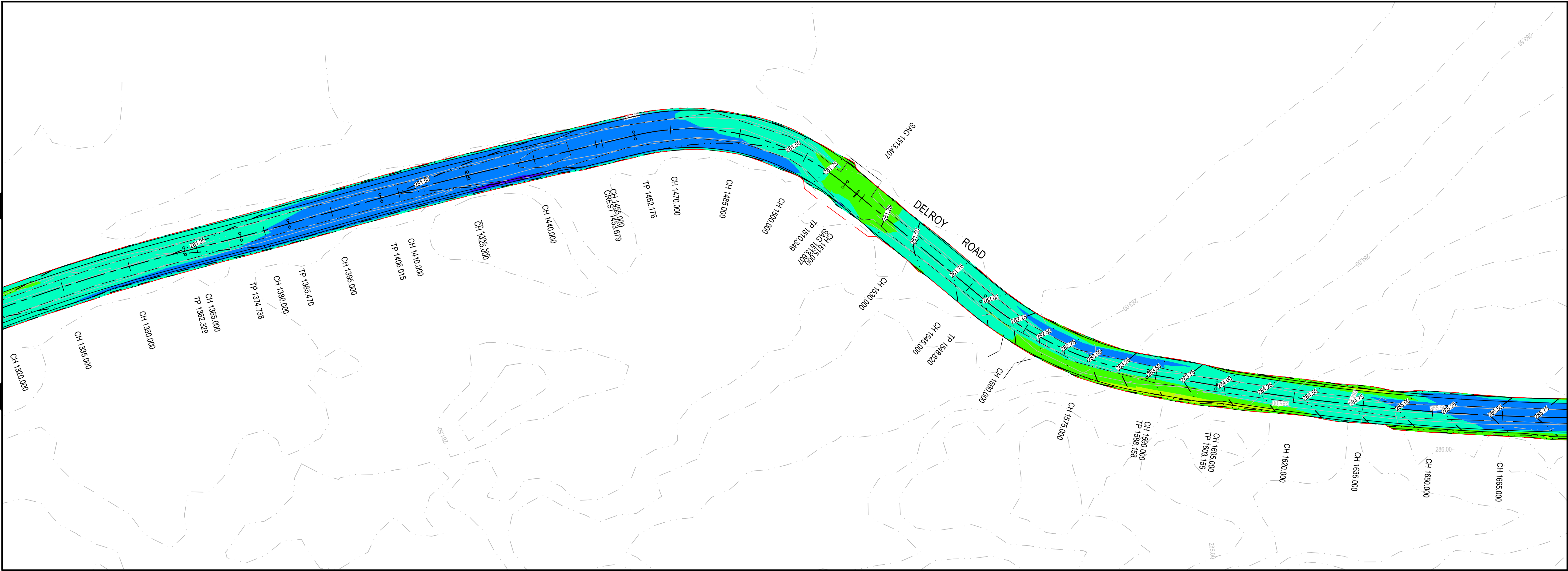
Datum
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Coordinates
MGA 20

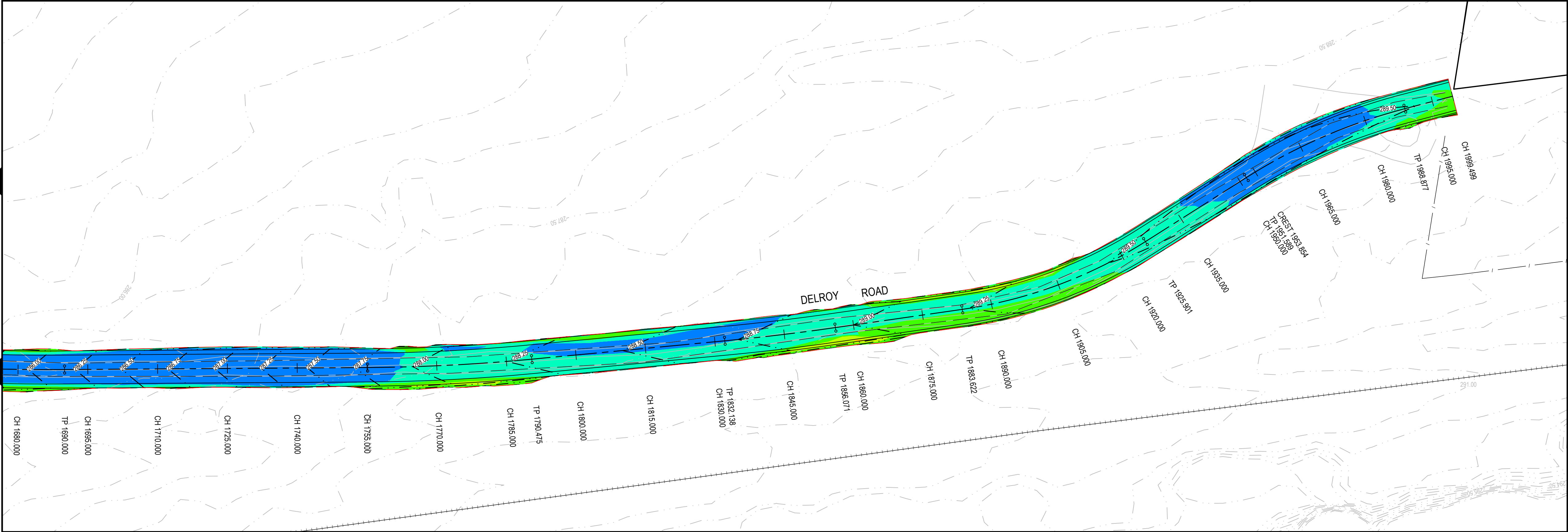
Size
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Drawn C.M.	Date 05/09/2024	Client X-ELIO PTY. LTD.
Drafting Checked P.S.	Date 05/09/2024	Project FOREST GLEN SOLAR FARM ACCESS ROAD
Design A.M.	Date 05/09/2024	Title CUT/FILL EARTHWORKS PLAN SHEET 2
Design Checked G.d.S.	Date 05/09/2024	Revision 7
Approved G.d.S.	Date 05/09/2024	Drawing Number P00549-CI-S138-1202

JOINS BELOW



JOINS BELOW



LEGEND

- EXTENT OF WORKS
- EXISTING CONTOURS
- DESIGN CONTOURS

BULK EARTHWORKS SUMMARY

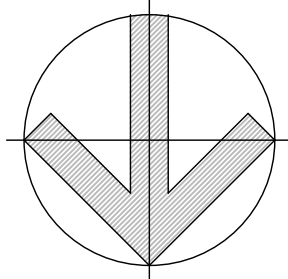
CUT	-589.306 m³
FILL	2,777.633 m³
BALANCE	2,188.327 m³ (IMPORT FILL)

NOTES

- THE PLAN IS TO SHOW EARTHWORKS QUANTITIES PROPOSED AS PART OF THE DEVELOPMENT APPLICATION.
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5	-0.50	-0.25	251.992	Yellow
6	-0.25	0.00	2552.541	Green
7	0.00	0.25	9662.408	Cyan
8	0.25	0.50	4515.726	Blue
9	0.50	0.75	13.915	Purple



FOR S138 APPROVAL

Rev.	Date	Revision Description	Drawn	Design	Appd.
7	05/09/2024	ROAD AND PAVEMENT DESIGN UPDATES	P.S.	A.M.	G.d.S.
6	22/08/2024	ROAD AND PAVEMENT DESIGN UPDATES	C.M.	A.M.	G.d.S.
5	26/07/2024	ROAD AND PAVEMENT DESIGN UPDATES	P.S.	A.M.	G.d.S.
4	25/05/2023	RE-ISSUED FOR S138 APPROVAL	W.M.	A.M.	G.d.S.
3	06/04/2023	ISSUED FOR S138 APPROVAL	W.M.	A.M.	G.d.S.
2	23/02/2023	AMENDED TO COUNCIL COMMENTS	W.M.	A.M.	G.d.S.
1	16/01/2023	ISSUED FOR S138 APPROVAL	W.M.	A.M.	G.d.S.



PREPARED BY:



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Datum: A.H.D. Coordinates: MGA 20 Size: A1

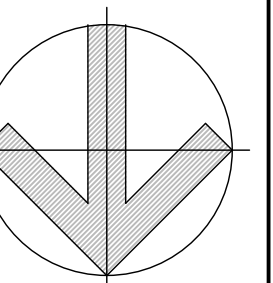
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Drafting Checked: P.S.	Date: 05/09/2024	Project: FOREST GLEN SOLAR FARM ACCESS ROAD
Design: A.M.	Date: 05/09/2024	Title: CUT/FILL EARTHWORKS PLAN SHEET 3
Design Checked: G.d.S.	Date: 05/09/2024	Drawing Number: P00549-CI-S138-1203
Approved: G.d.S.	Date: 05/09/2024	

Revision

7



1. CONTRACTOR TO NOTIFY ECOLOGIST IF TREE RETENTION IS POSSIBLE WITHOUT IMPACTING ROAD CONSTRUCTION.
2. CONTRACTOR TO NOTIFY ECOLOGIST OF ANY POTENTIAL IMPACTS PRIOR TO STARTING CONSTRUCTION TO CONFIRM APPROVAL OF TREE REMOVAL.

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7



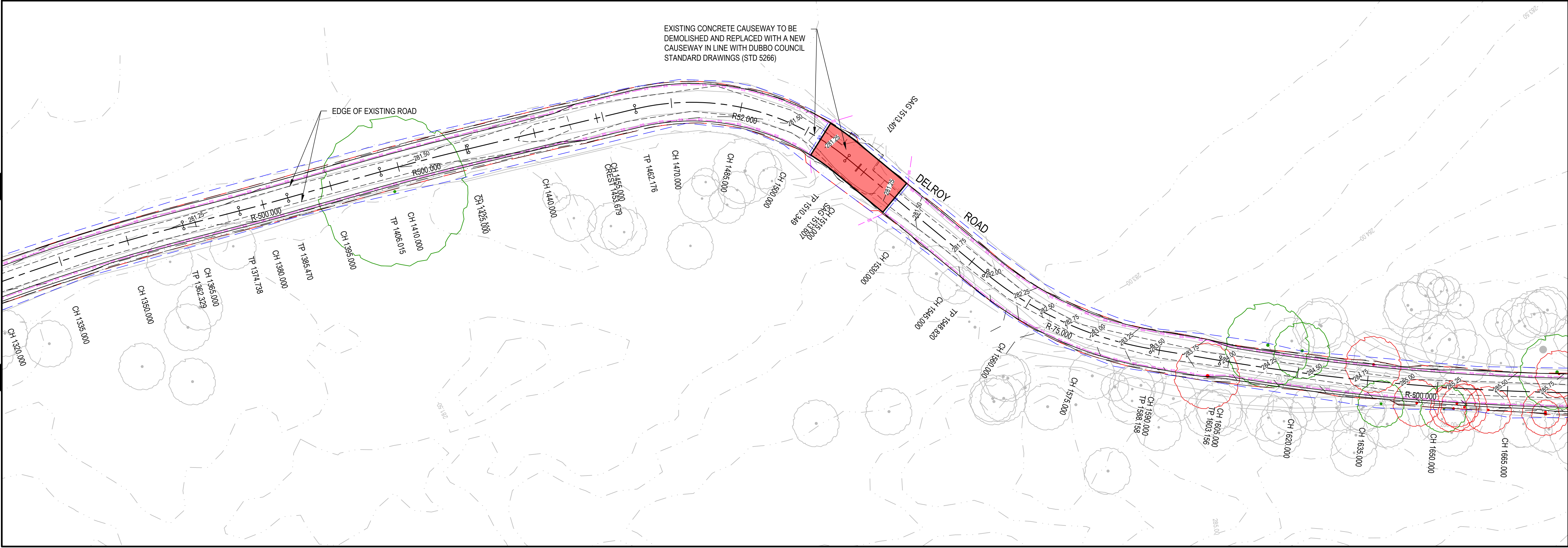
- ## NOTES
1. CONTRACTOR TO NOTIFY ECOLOGIST IF TREE RETENTION IS POSSIBLE WITHOUT IMPACTING ROAD CONSTRUCTION.
 2. CONTRACTOR TO NOTIFY ECOLOGIST OF ANY POTENTIAL IMPACTS PRIOR TO STARTING CONSTRUCTION TO CONFIRM APPROVAL OF TREE REMOVAL.



Client	X-ELIO PTY. LTD.	
Project	FOREST GLEN SOLAR FARM ACCESS ROAD	
Title	CIVIL WORKS AND STORMWATER DRAINAGE PLAN - SHEET 2	Revision
Drawing Number	P00549-CI-S138-1322	7

XREFs: X-P00549-CI-S138-BOUNDARY; X-P00549-CI-S138-LIMIT OF WORK; X-P00549-CI-S138-STORMWATER; X-P00549-CI-S138-Road Control; X-P00549-CI-S138-Road Strings; X-P00549-CI-S138-Contours Design; X-P00549-CI-S138-Trees; X-P00549-CI-S138-SURVEY; X-P00549-CI-S138-APPROVED DEV FOOTPRINT
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DATE PLOTTED: 4 September 2024 11:15 am BY: SHIRLEY PANOD

JOINS DRAWING 1322



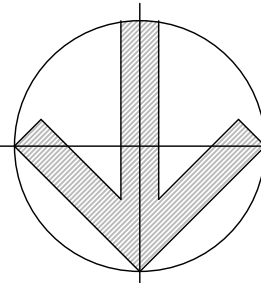
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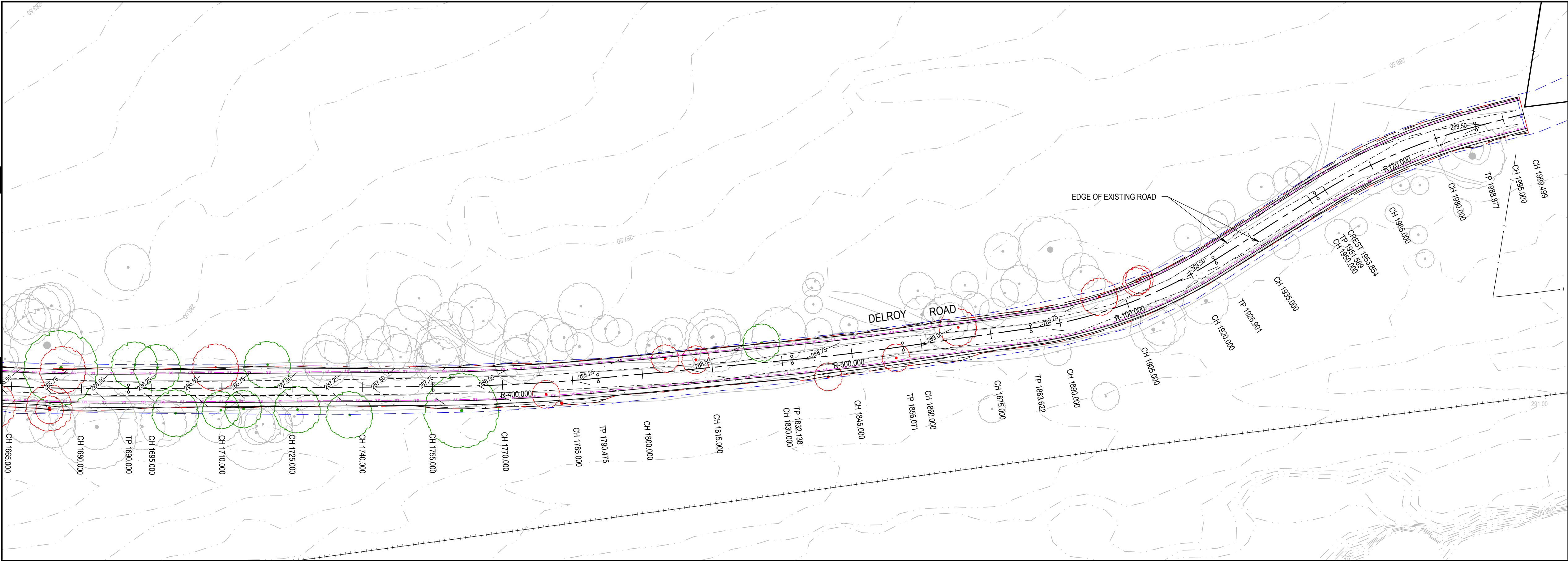
- EXTENT OF WORKS
- APPROVED DEVELOPMENT FOOTPRINT
- EXISTING CONTOUR
- PROPOSED CONTOUR
- PROPOSED / ULTIMATE STORMWATER PIPE
- EXISTING STORMWATER PIPE
- PROPOSED CAUSEWAY
- EXISTING WATER
- EXISTING SEWER
- EXISTING OVERHEAD ELECTRICAL
- EXISTING ELECTRICAL
- EXISTING COMMUNICATIONS
- EXISTING STORMWATER
- ROAD PAVEMENT SUBSOIL DRAINAGE
- PAVEMENT INTERFACE SUBSOIL DRAINAGE
- EXISTING TREE
- EXISTING TREE TO BE REMOVED. REFER TO NOTE 1.
- EXISTING TREE TO BE RETAINED. REFER TO NOTE 2.

NOTES

- CONTRACTOR TO NOTIFY ECOLOGIST IF TREE RETENTION IS POSSIBLE WITHOUT IMPACTING ROAD CONSTRUCTION.
- CONTRACTOR TO NOTIFY ECOLOGIST OF ANY POTENTIAL IMPACTS PRIOR TO STARTING CONSTRUCTION TO CONFIRM APPROVAL OF TREE REMOVAL.

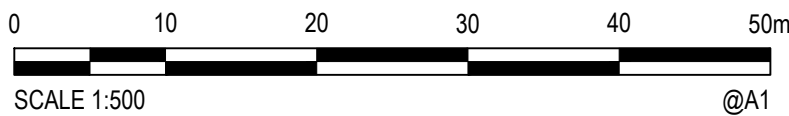


JOINS BELOW



FOR S138 APPROVAL

Rev.	Date	Revision Description	Drawn	Design	Appd.
7	05/09/2024	ROAD AND PAVEMENT DESIGN UPDATES	P.S.	A.M.	G.d.S.
6	22/08/2024	ROAD AND PAVEMENT DESIGN UPDATES	C.M.	A.M.	G.d.S.
5	26/07/2024	ROAD AND PAVEMENT DESIGN UPDATES	P.S.	A.M.	G.d.S.
4	25/05/2023	RE-ISSUED FOR S138 APPROVAL	W.M.	A.M.	G.d.S.
3	06/04/2023	ISSUED FOR S138 APPROVAL	W.M.	A.M.	G.d.S.
2	23/02/2023	AMENDED TO COUNCIL COMMENTS	W.M.	A.M.	G.d.S.
1	16/01/2023	ISSUED FOR S138 APPROVAL	W.M.	A.M.	G.d.S.



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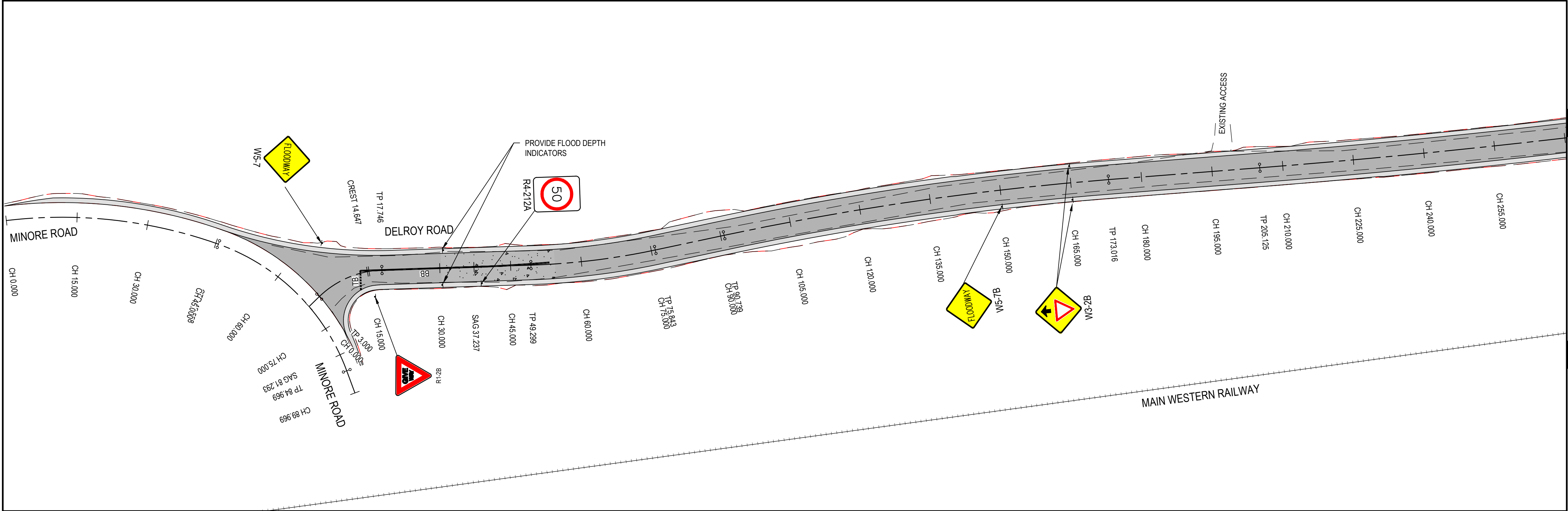
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Datum
A.H.D.

Coordinates
MGA 20

Size
A1

Drawn C.M.	Date 05/09/2024	Client X-ELIO PTY. LTD.
Drafting Checked P.S.	Date 05/09/2024	Project FOREST GLEN SOLAR FARM ACCESS ROAD
Design A.M.	Date 05/09/2024	Title CIVIL WORKS AND STORMWATER DRAINAGE PLAN - SHEET 3
Design Checked G.d.S.	Date 05/09/2024	Revision 7
Approved G.d.S.	Date 05/09/2024	Drawing Number P00549-CI-S138-1323



LEGEND

PAVEMENT TYPE 1

- UNBOUND GRANULAR 300mm SMZ (CBR 3%)
- 14mm SPRAYED SEAL (C240) WITH 7mm SCATTER COAT (3151, R106)
- 200mm CLASS 2 DGB (3051,R71, 102% SMDD)
- PARTIAL OVERLAY WITH 300mm IN-SITU STABILIZED SMZ (R50, R44, 102% SMDD)

ALTERNATIVE PAVEMENT

- SUBGRADE LESS THAN 3%
- DUAL COAT HOT BITUMEN SEAL
- 150mm THICKNESS BASECOURSE (DGB 20)
- 340mm THICKNESS SUB-BASE (CRUSHED SANDSTONE)
- 500mm SUB GRADE REPLACEMENT (CRUSHED SANDSTONE)

PAVEMENT DESIGN UNDER REVIEW

PAVEMENT TYPE 2

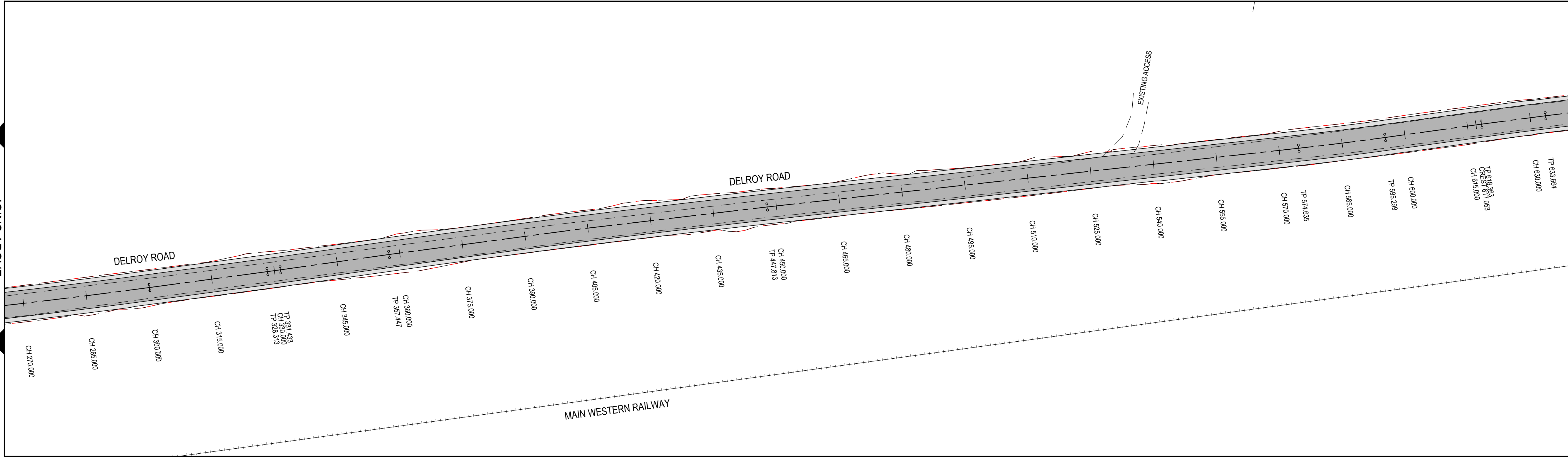
- DEEP LIFT (FLOODWAY) (CBR 3%)
- 14mm SPRAYED SEAL (PMB-S45R OR EQUIVALENT) WITH 7mm SCATTER COAT (3151, R106)
- 330mm HEAVILY BOUND BASE (3051,R75, 100% COMPACTIVE EFFORT)
- 300mm IN-SITU STABILIZED SMZ (R50, R44, 102% SMDD)

PROPOSED PAVEMENT ROAD SHOULDER

- UNBOUND GRANULAR 300mm SMZ (CBR 3%)
- 14mm SPRAYED SEAL (C240) WITH 7mm SCATTER COAT (3151, R106)
- 200mm CLASS 2 DGB (3051,R71, 102% SMDD)
- PARTIAL OVERLAY WITH 300mm IN-SITU STABILIZED SMZ (R50, R44, 102% SMDD)

NOTES:

- DESIGN ESA 1 x 107
- REFER TO REPORT PREPARED BY ENGINEERING RISK MANAGEMENT
REFERENCE: ERM0169-MEM-004
DATED: 17 AUGUST 2024
 - 50km/h - ROADWORKS SIGNAGE ARE TO BE REMOVED ONCE CONSTRUCTION OF THE DEVELOPMENT IS COMPLETE.



FOR S138 APPROVAL

Rev.	Date	Revision Description	Drawn	Design	Appd.
8	06/02/2025	ROAD SIGNAGE RELOCATION	P.S.	A.M.	H.Y.
7	05/09/2024	ROAD AND PAVEMENT DESIGN UPDATES	P.S.	A.M.	G.d.S.
6	22/08/2024	ROAD AND PAVEMENT DESIGN UPDATES	C.M.	A.M.	G.d.S.
5	26/07/2024	ROAD AND PAVEMENT DESIGN UPDATES	P.S.	A.M.	G.d.S.
4	25/05/2023	RE-ISSUED FOR S138 APPROVAL	W.M.	A.M.	G.d.S.
3	06/04/2023	ISSUED FOR S138 APPROVAL	W.M.	A.M.	G.d.S.
2	23/02/2023	AMENDED TO COUNCIL COMMENTS	W.M.	A.M.	G.d.S.
1	16/01/2023	ISSUED FOR S138 APPROVAL	W.M.	A.M.	G.d.S.



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Datum A.H.D. Coordinates MGA 20 Size A1

Drawn C.M.	Date 06/02/2025	Client
Drafting Checked P.S.	Date 06/02/2025	Project
Design A.M.	Date 06/02/2025	Title
Design Checked G.d.S.	Date 06/02/2025	Drawing Number
Approved G.d.S.	Date 06/02/2025	

X-ELIO PTY. LTD.

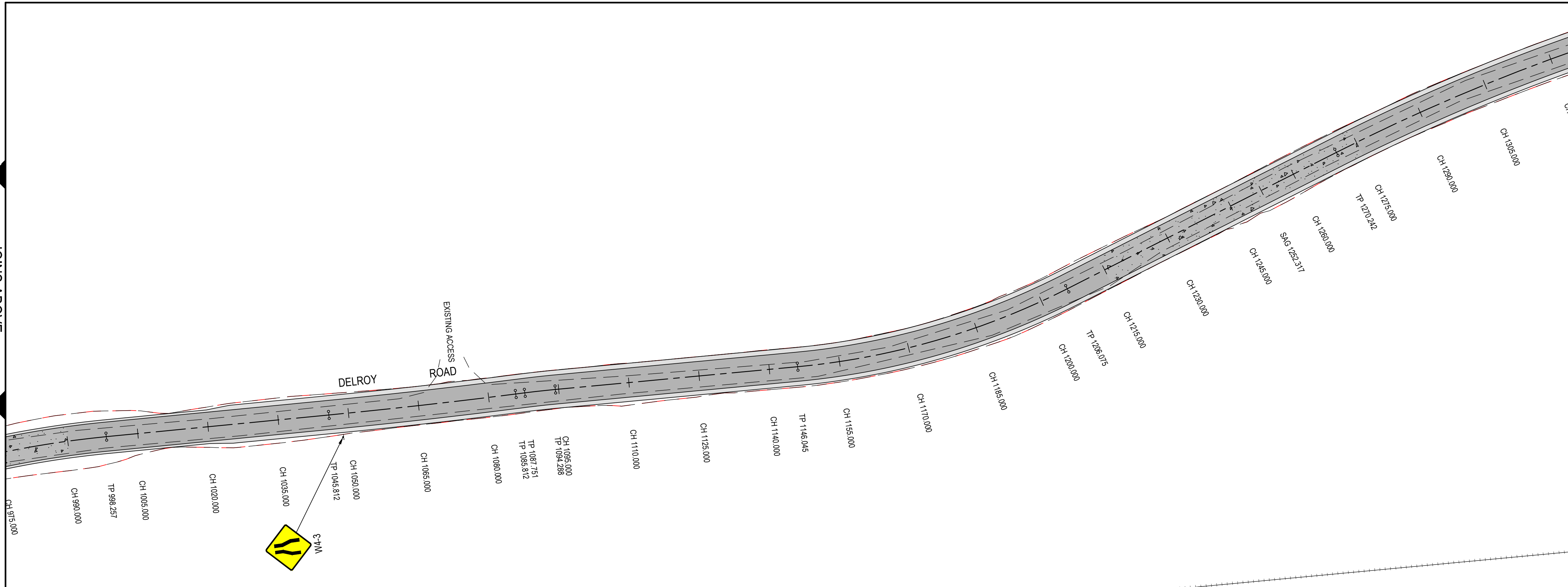
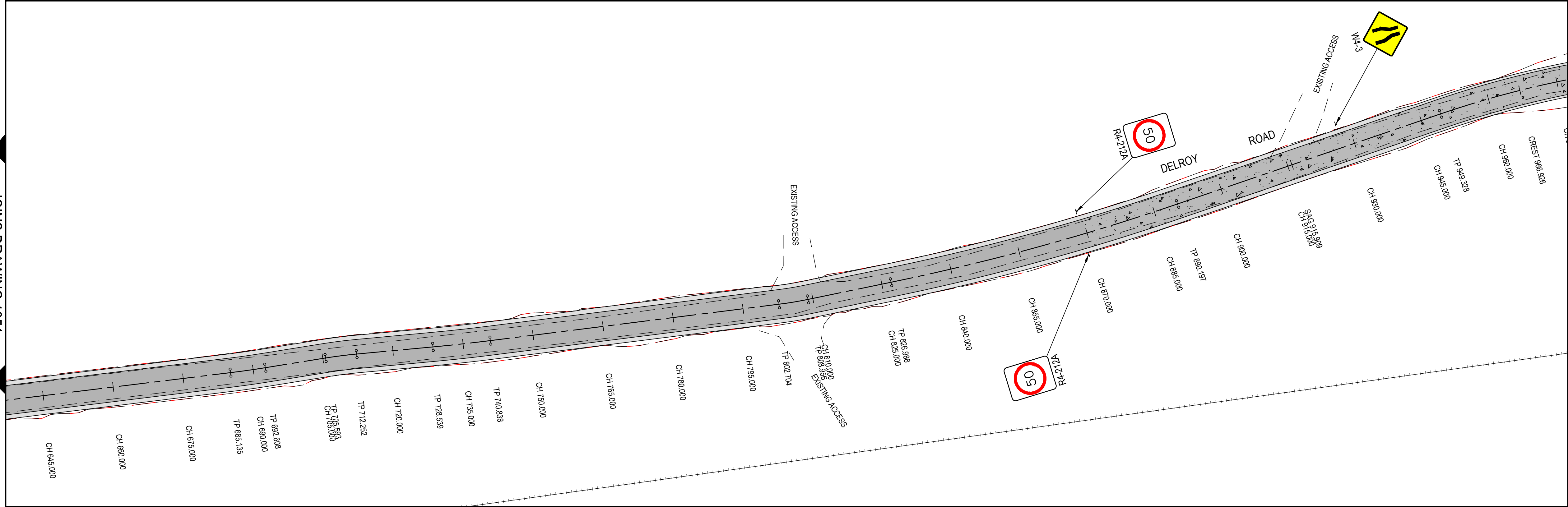
FOREST GLEN SOLAR FARM
ACCESS ROAD

PAVEMENT, SIGNAGE AND
LINE MARKING PLAN - SHEET 1

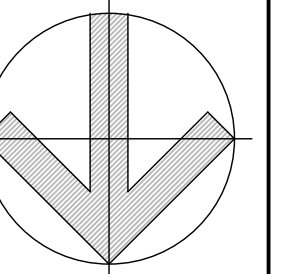
P00549-CI-S138-1351

Revision

8



1. REFER TO REPORT PREPARED BY ENGINEERING RISK MANAGEMENT
REFERENCE: ERM0169-MEM-004
DATED: 17 AUGUST 2024
2. 50km/h - ROADWORKS SIGNAGE ARE TO BE REMOVED ONCE
CONSTRUCTION OF THE DEVELOPMENT IS COMPLETE.

[illegible]

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Size	A1
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Drawn C.M.	Date 05/09/2024
Drafting Checked P.S.	Date 05/09/2024
Design A.M.	Date 05/09/2024
Design Checked G.d.S.	Date 05/09/2024
Approved G.d.S.	Date 05/09/2024

Project	FOREST GLEN SOLAR FARM ACCESS ROAD
---------	---------------------------------------

Title	PAVEMENT, SIGNAGE AND LINE MARKING PLAN - SHEET 2
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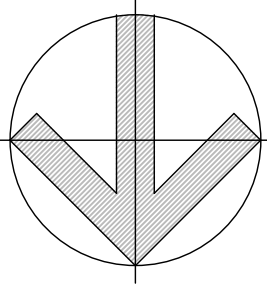
Drawing Number	P00549-CI-S138-1352
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7

FOR S138 APPROVAL



1. REFER TO REPORT PREPARED BY ENGINEERING RISK MANAGEMENT
REFERENCE: ERM0169-MEM-004
DATED: 17 AUGUST 2024
2. THE CONTRACTOR WILL PROVIDE ADDITIONAL TRAFFIC MANAGEMENT
FOR THE SECTION OF ROAD BETWEEN CH 1440 AND CH 1605 DUE TO
NARROW BRIDGE/FLOWWAY CROSSING. ONE OF THE FOLLOWING
TRAFFIC MANAGEMENT ARE TO BE IMPLEMENTED DURING
CONSTRUCTION:
 - i) RADIO PROCEDURE FOR LARGE TRUCKS AS THEY APPROACH THE
BEND.
 - ii) STOP AND GO WITH FLAGS AND SIGNAGE TO SLOW TRUCKS AND
DIRECT CONSTRUCTION TRAFFIC.
 - iii) ALTERNATIVE TRAFFIC MANAGEMENT PROCEDURES AS
DOCUMENTED IN CONTRACTORS TRAFFIC MANAGEMENT PLAN.
3. 50km/h - ROADWORKS SIGNAGE ARE TO BE REMOVED ONCE
CONSTRUCTION OF THE DEVELOPMENT IS COMPLETE.

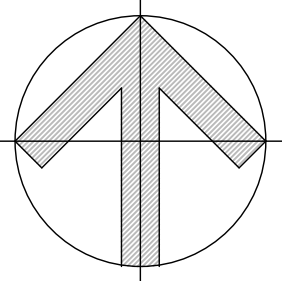


FOR S138 APPROVAL

7

DATE PLOTTED: 4 September 2024, 10:13 am BY: SHIRLEY PANOD

XREFs: X-P00549-CI-S138-CONTOURS EXISTING 250; X-P00549-CI-S138-BOUNDARY; X-P00549-CI-S138-LIMIT OF WORK; X-P00549-CI-S138-Contours Design; X-P00549-CI-S138-Road Strigs; X-P00549-CI-S138-Road Control; X-P00549-CI-S138-Vehicle Turning Paths; X-P00549-CI-S138-Road Signage
CAD File: C:\12\GIS\atag\SYN\10713 - Forest Glen Solar Farm - Access Road_38404_Engineering\05_S138 - Road Design\100549-CI-S138-1381.dwg

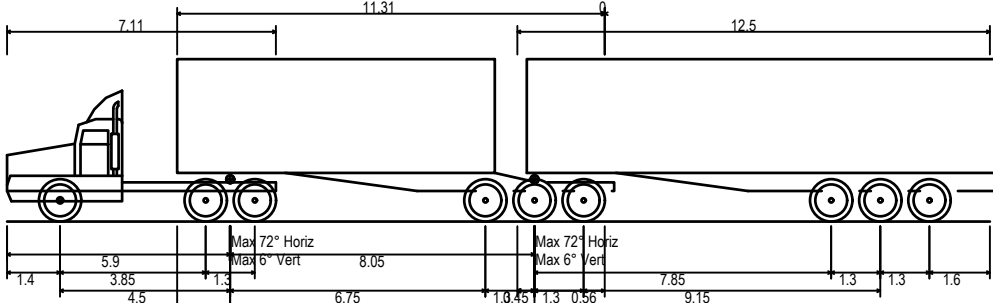


LEGEND

B-DOUBLE (26.0m)

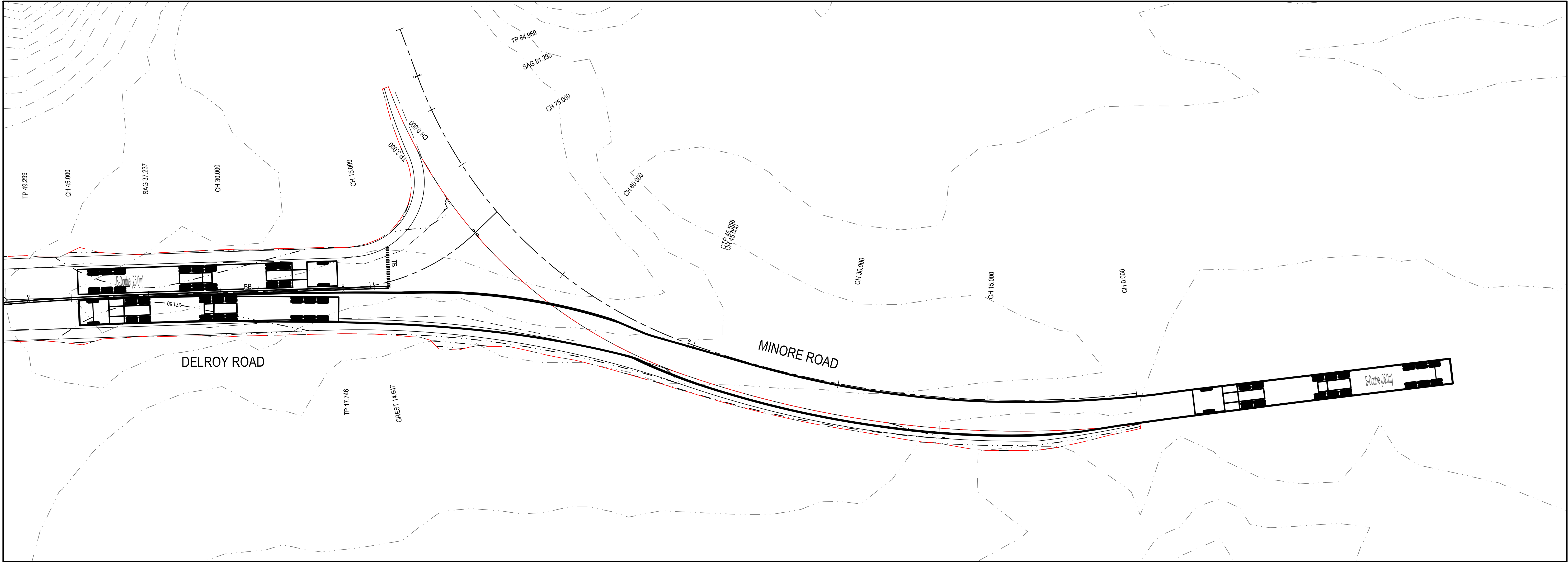


PLAN VIEW



ELEVATION

B-Double (26.0m)	26.000m
Overall Length	2.500m
Overall Width	4.300m
Overall Body Height	0.540m
Min Body Ground Clearance	2.500m
Track Width	6.00s
Lock-to-lock time	15.000m
Curb to Curb Turning Radius	

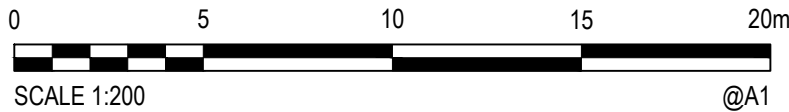


PLAN

SCALE 1:200

FOR S138 APPROVAL

Rev.	Date	Revision Description	Drawn	Design	Appd.
7	05/09/2024	ROAD AND PAVEMENT DESIGN UPDATES	P.S.	A.M.	G.d.S.
6	22/08/2024	ROAD AND PAVEMENT DESIGN UPDATES	C.M.	A.M.	G.d.S.
5	26/07/2024	ROAD AND PAVEMENT DESIGN UPDATES	P.S.	A.M.	G.d.S.
4	25/05/2023	RE-ISSUED FOR S138 APPROVAL	W.M.	A.M.	G.d.S.
3	06/04/2023	ISSUED FOR S138 APPROVAL	W.M.	A.M.	G.d.S.
2	23/02/2023	AMENDED TO COUNCIL COMMENTS	W.M.	A.M.	G.d.S.
1	16/01/2023	ISSUED FOR S138 APPROVAL	W.M.	A.M.	G.d.S.



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Coordinates
MGA 20

Size
A1

Drawn
C.M.

Date
05/09/2024

Client
X-ELIO PTY. LTD.

Drafting Checked
P.S.

Date
05/09/2024

Project
FOREST GLEN SOLAR FARM

Design
A.M.

Date
05/09/2024

Title
TURNING PATH PLAN

Design Checked
G.d.S.

Date
05/09/2024

Revision

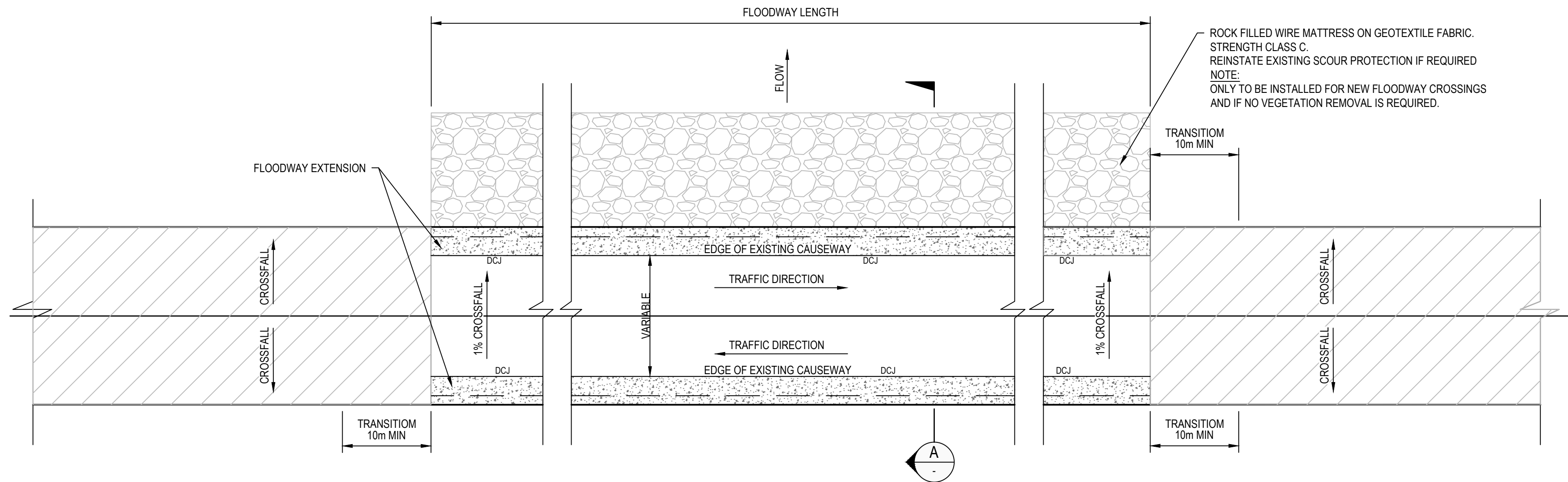
Approved
G.d.S.

Date
05/09/2024

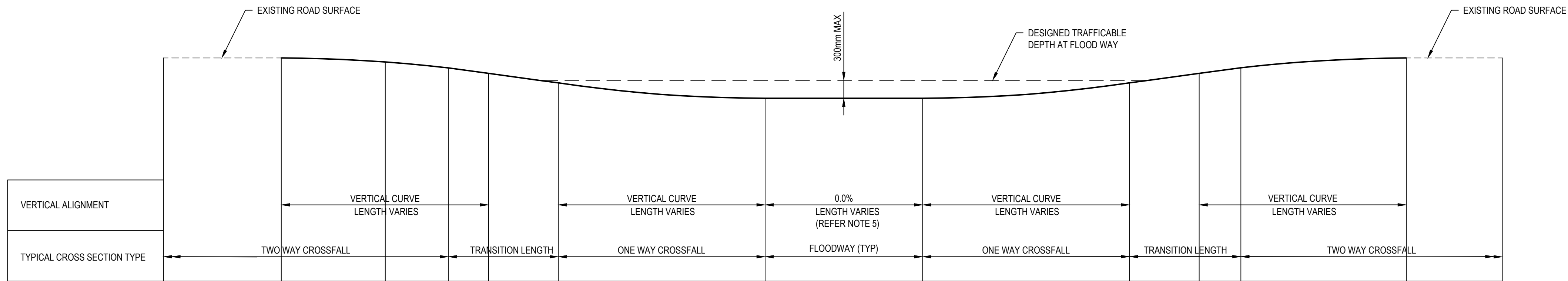
Drawing Number
P00549-CI-S138-1381

7

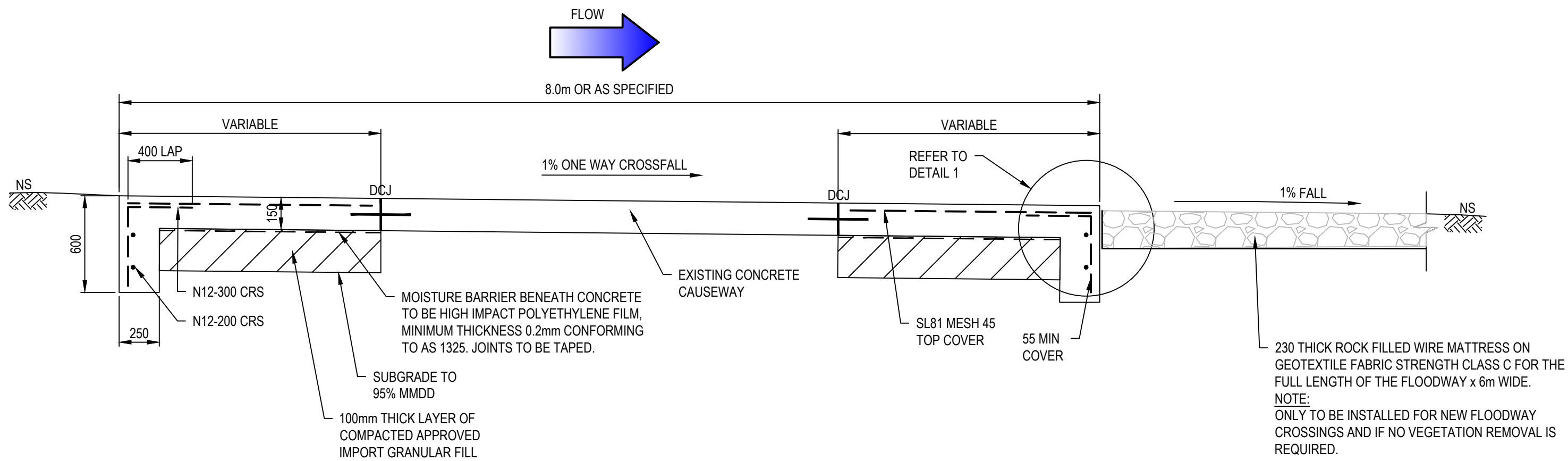
DATE PLOTTED: 4 September 2024 10:14 am BY: SHIRLEY PANOD



PLAN
NOT TO SCALE



FLOODWAY TYPICAL SECTION
NOT TO SCALE

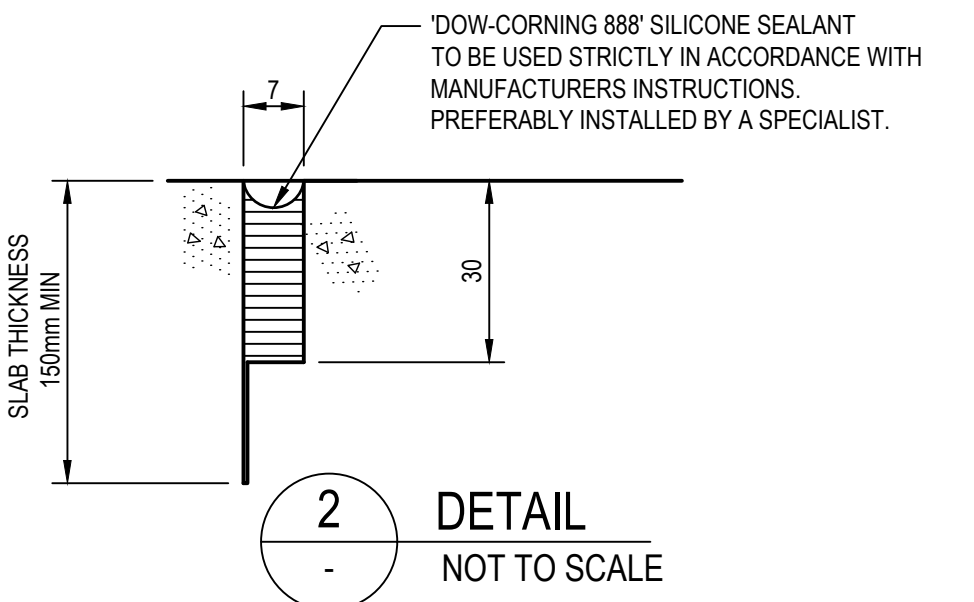
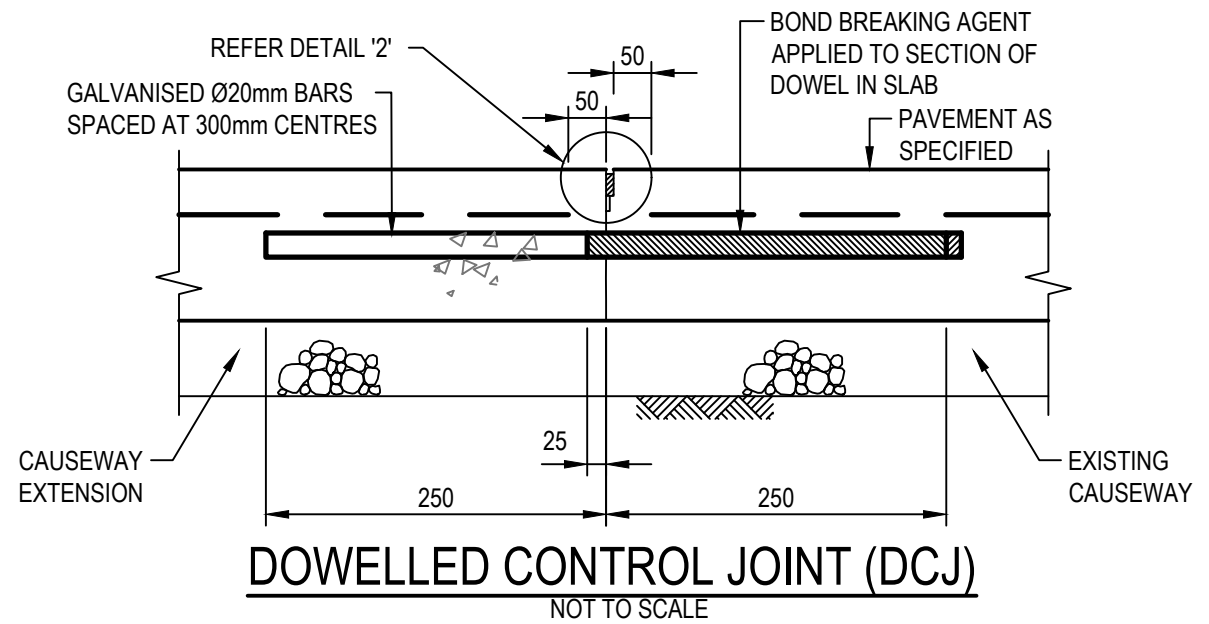
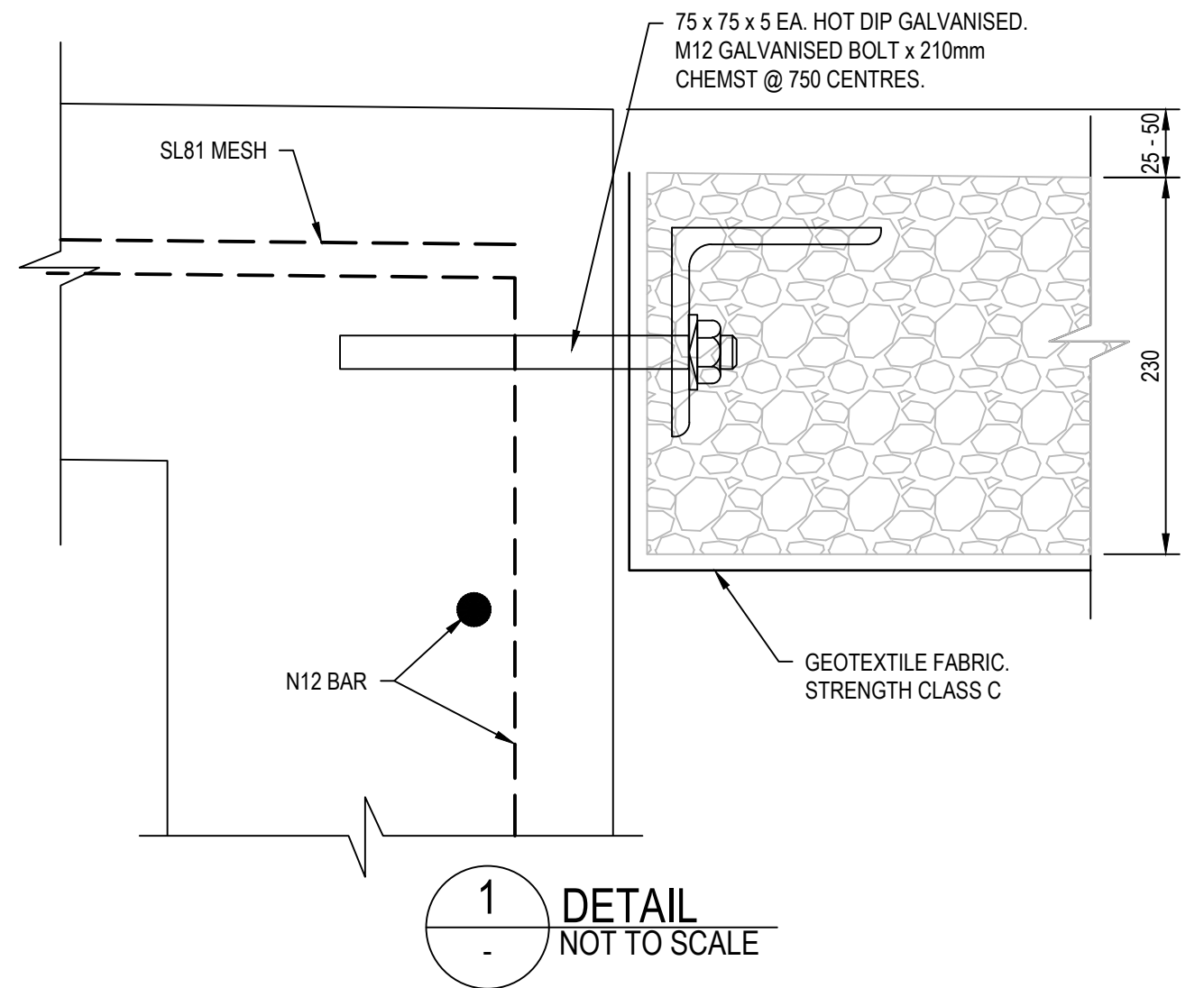


A SECTION
NOT TO SCALE

CONCRETE FLOODWAY ROAD CROSSING EXTENSION

NOTES:

- REFER TO DUBBO REGIONAL COUNCIL STANDARD DRAWING STD 5266.
- COMPLY WITH AS 3600 - 2009 AND AS 1379 - 2007.
- DESIGNED AS B1 EXPOSURE CATEGORY. USE N32 CONCRETE. 45mm TOP COVER AND 55mm SIDE COVER.
- VERTICAL CURVES ARE TO BE DESIGNED PER AUSTRROAD GUIDE ROAD DESIGN PART 3.
- AGREE LAYOUT AND DETAILS WITH SUPERINTENDANT ON SITE.
- DESIGN LENGTH SHALL BE AS DIRECTED BY THE SUPERINTENDANT.
- TURN TABLE DRAINS AWAY FROM FLOODWAY AT LEAST 10m TO 20m BEFORE FLOODWAY. AGREE DETAILS WITH SUPERINTENDANT
- DO NOT PROVIDE CONSTRUCTION OR EXPANSION JOINTS UNLESS OTHERWISE DIRECTED.
- CAST SLAB IN ALTERNATING TRANSVERSE STRIPS OF AGREED LENGTH TO ALLOW FOR SOME DRYING SHRINKAGE. ROUGHEN THE TRANSVERSE CONSTRUCTION JOINTS BETWEEN STRIPS BEFORE CASTING ABUTTING STRIP.
- PROVIDE FULL TENSILE LAP SPLICE IN MESH AND REINFORCEMENT ACROSS CONSTRUCTION JOINTS. CONCRETE TO HAVE A ROUGH SURFACE FINISH.
- IF FLOODWAY LIES WITHIN A HORIZONTAL CURVE, CONSULT DESIGNERS FOR SUITABLE TREATMENTS.
- PROJECT SPECIFIC DETAILS FOR THE VERTICAL ALIGNMENT - CHAINAGES, GRADES AND DESIGN CENTRELINE LEVELS SHOULD BE PREPARED SEPARATELY AND READ IN CONJUNCTION WITH THIS DRAWING.
- ALL DIMENSIONS ARE IN MILLIMETRES UNLESS NOTED OTHERWISE.
- PROVIDE ADVANCE WARNING FLOOD SIGNAGE FOR FLOODWAY AS FOLLOWS:
 - PROVIDE SIGN G9-9, "REDUCE SPEED", 300m PRIOR TO THE START OF THE CONCRETE FLOODWAY EDGE ON BOTH APPROACHES.
 - PROVIDE SIGN W5-7-1, "FLOODWAY", 300m PRIOR TO THE START OF THE CONCRETE FLOODWAY EDGE ON BOTH APPROACHES.
- PROVIDE FLOOD GAUGE POSTS IN ACCORDANCE WITH STANDARD DRAWING CS3501.
- CONCRETE AND STRUCTURAL DESIGNS ARE TO BE CERTIFIED BY A QUALIFIED STRUCTURAL ENGINEER PRIOR TO CONSTRUCTION.



FOR S138 APPROVAL

XREFs: CAD File: C:\12\Stalag\gds\SYN\0713 - Forest Glen Solar Farm - Access Road_38404 - Engineering\05_S138 - Road Design\P00549-CI-S138-1401.dwg

Rev.	Date	Revision Description	Drawn	Design	Appd.
7	05/09/2024	ROAD AND PAVEMENT DESIGN UPDATES	P.S.	A.M.	G.d.S.
6	22/08/2024	ROAD AND PAVEMENT DESIGN UPDATES	C.M.	A.M.	G.d.S.
5	26/07/2024	ROAD AND PAVEMENT DESIGN UPDATES	P.S.	A.M.	G.d.S.
4	25/05/2023	RE-ISSUED FOR S138 APPROVAL	W.M.	A.M.	G.d.S.
3	06/04/2023	ISSUED FOR S138 APPROVAL	W.M.	A.M.	G.d.S.
2	23/02/2023	AMENDED TO COUNCIL COMMENTS	W.M.	A.M.	G.d.S.
1	16/01/2023	ISSUED FOR S138 APPROVAL	W.M.	A.M.	G.d.S.

PREPARED BY:



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Datum
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Coordinates
MGA 20

Size
A1

Drawn
C.M.
Date
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P.S.
Date
05/09/2024
Design
A.M.
Date
05/09/2024
Design Checked
G.d.S.
Date
05/09/2024
Approved
G.d.S.
Date
05/09/2024

Client

X-ELIO PTY. LTD.

Project

FOREST GLEN SOLAR FARM
ACCESS ROAD

Title

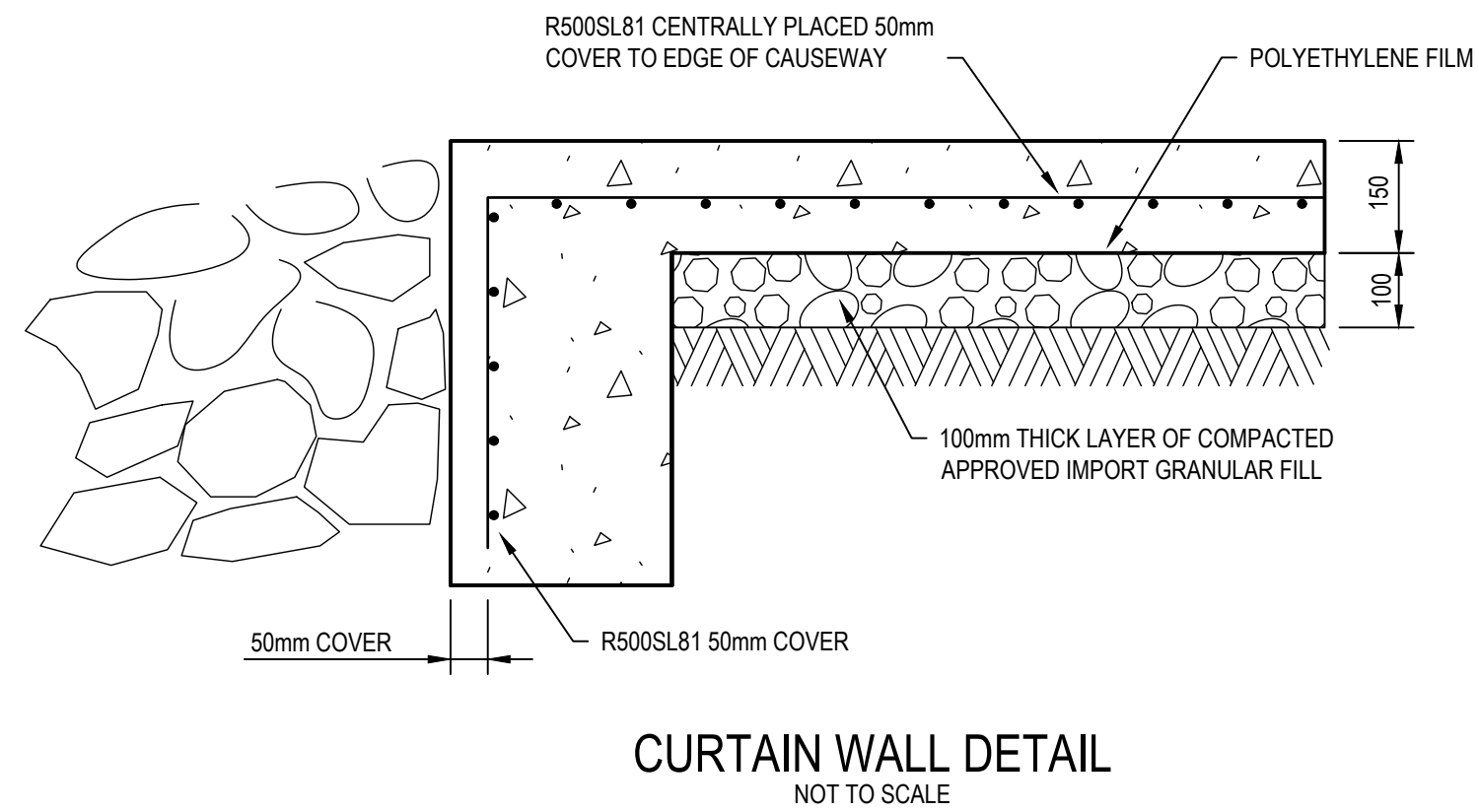
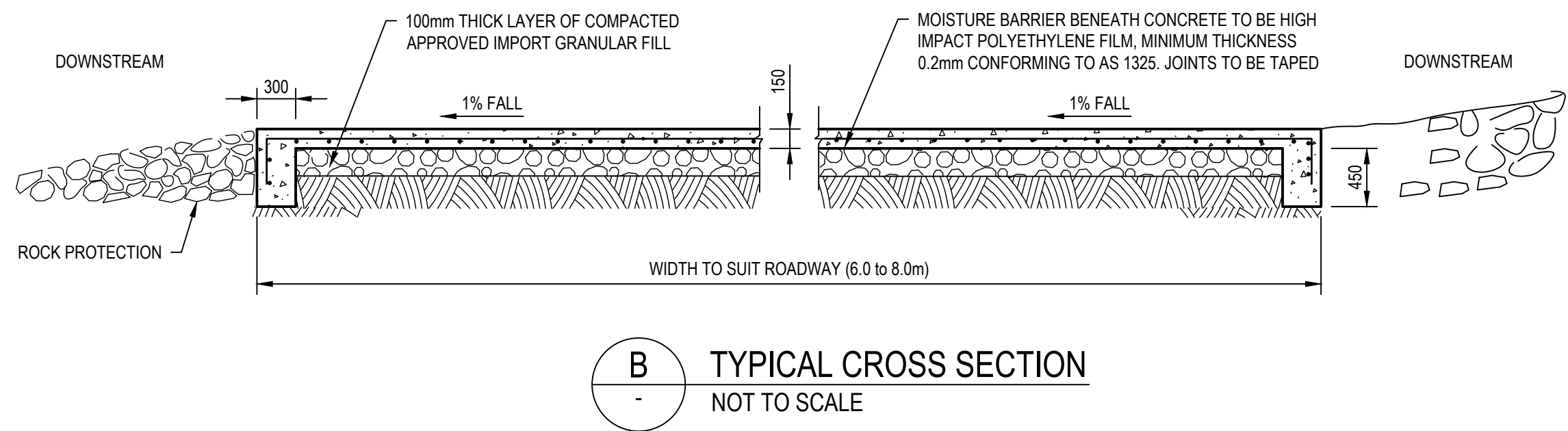
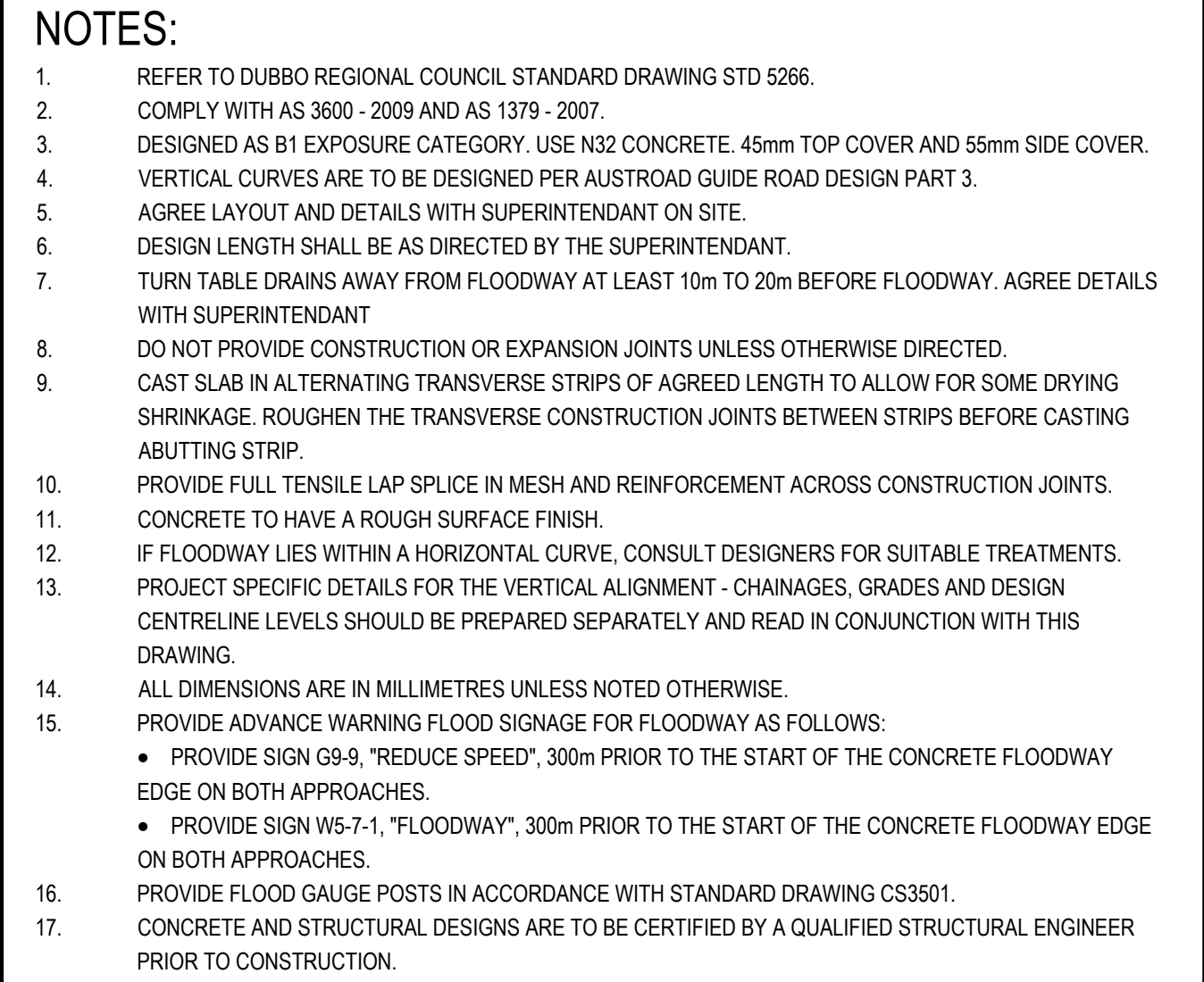
CIVIL WORKS DETAILS
SHEET 1

Drawing Number

P00549-CI-S138-1401

Revision

7

[illegible]

PREPARED BY:



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			Design A.M.	Date 05/09/2024	Title CIVIL WORKS DETAILS SHEET 2	
			Design Checked G.d.S.	Date 05/09/2024	Drawing Number P00549-CI-S138-1402	
			Datum A.H.D.	Coordinates MGA 20	Size A1	

PREPARED BY:



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Coordinates
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Approve	G.dS
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9/2024

P00

Number
P00549-CI-S138-1403

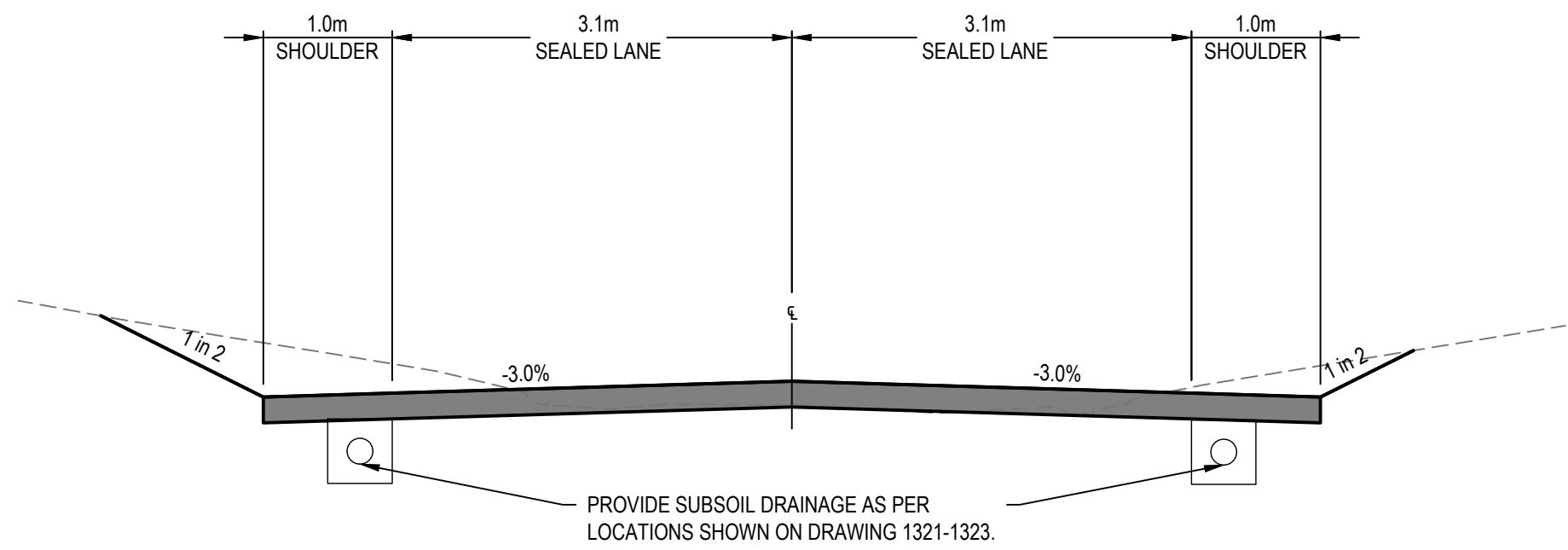
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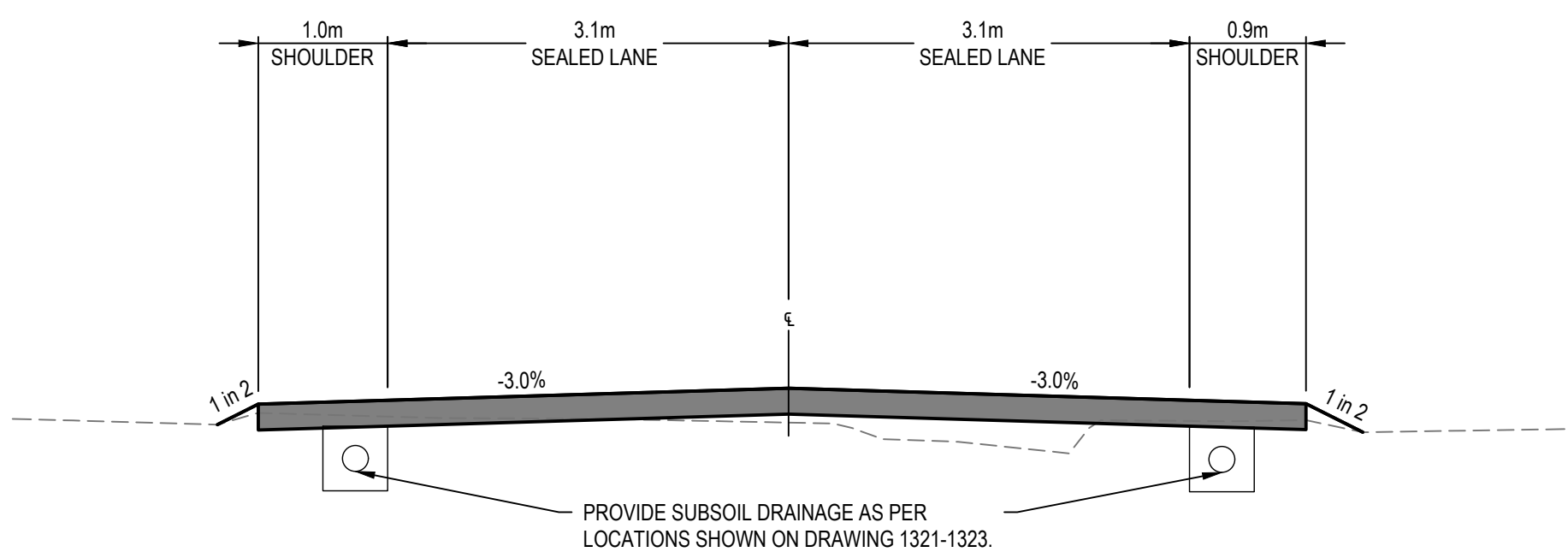
1. PROTECT FULL LENGTH OF EXCAVATED CHANNEL AS DIRECTED.
2. ALL DIMENSIONS ARE IN MILLIMETRES.
3. SIZE OF ROCK FILL - 80 MIN, 150 MAX.

FOR S138 APPROVAL

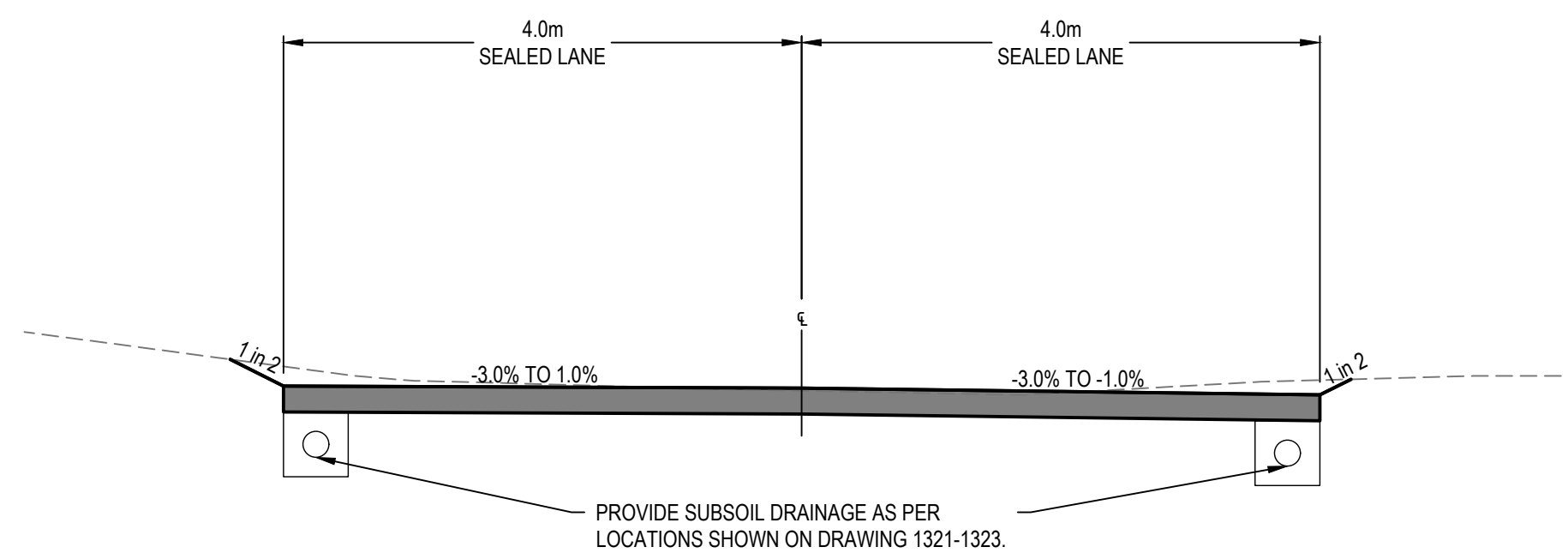
DATE PLOTTED: 4 September 2024 10:14 am BY: SHIRLEY PANOD



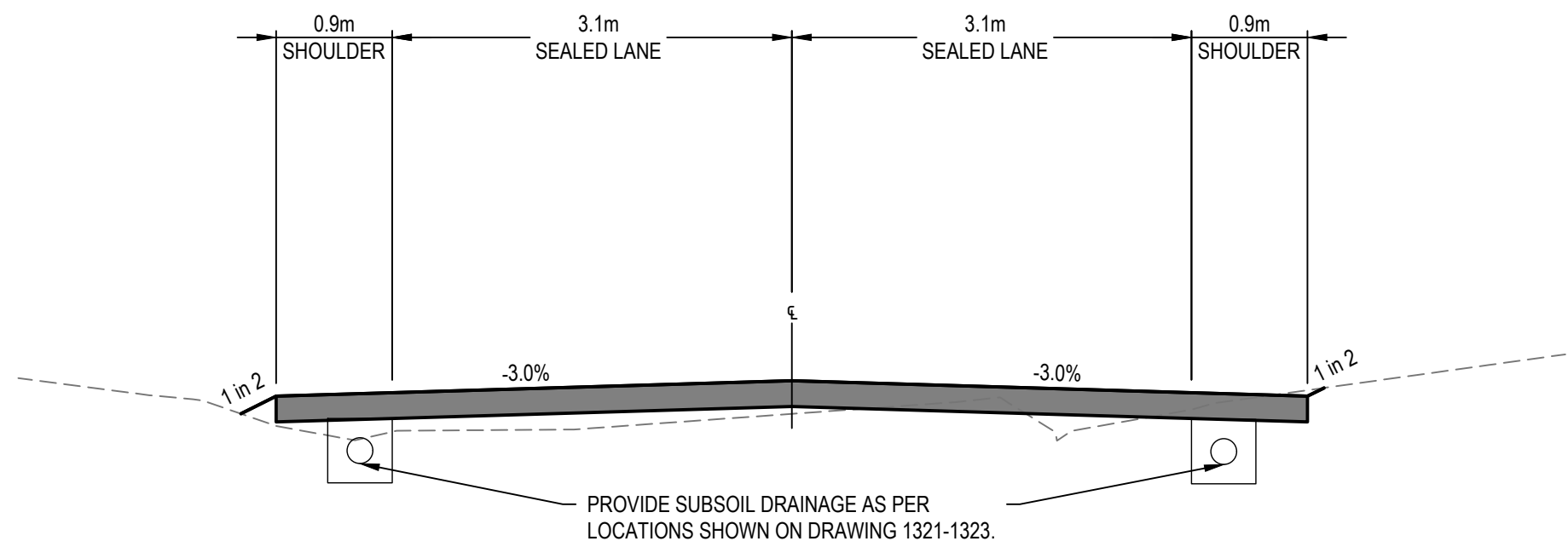
TYPICAL DELROY ROAD CROSS SECTION TYPE 1
CH. 0.000 TO 140.000
CH. 540.000 TO 630.000



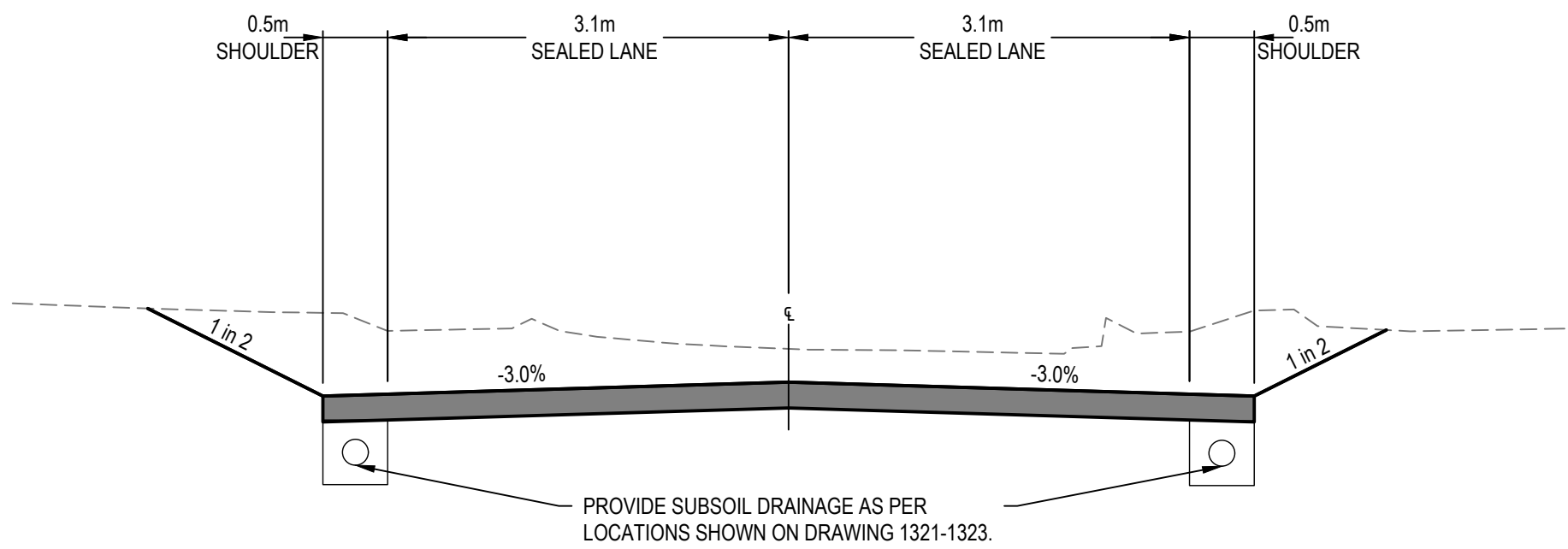
TYPICAL DELROY ROAD CROSS SECTION TYPE 4
CH. 760.000 TO 800.000
CH. 1020.000 TO 1340.000



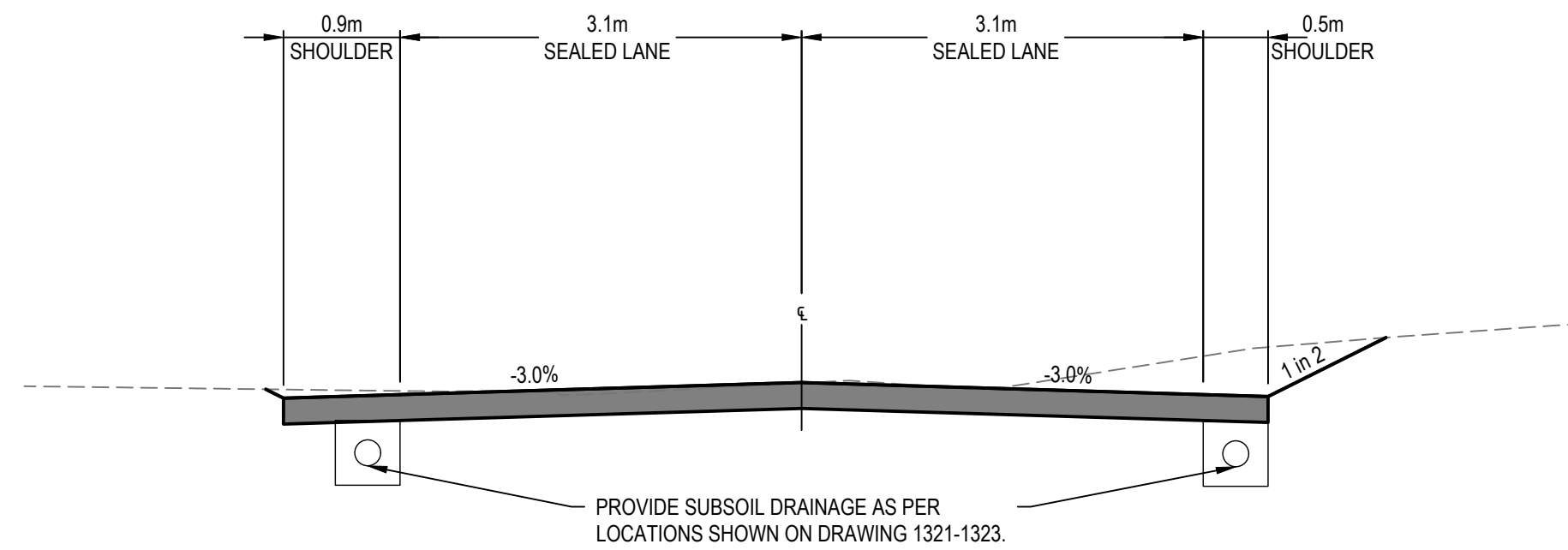
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CH. 1445.000 TO 1600.000



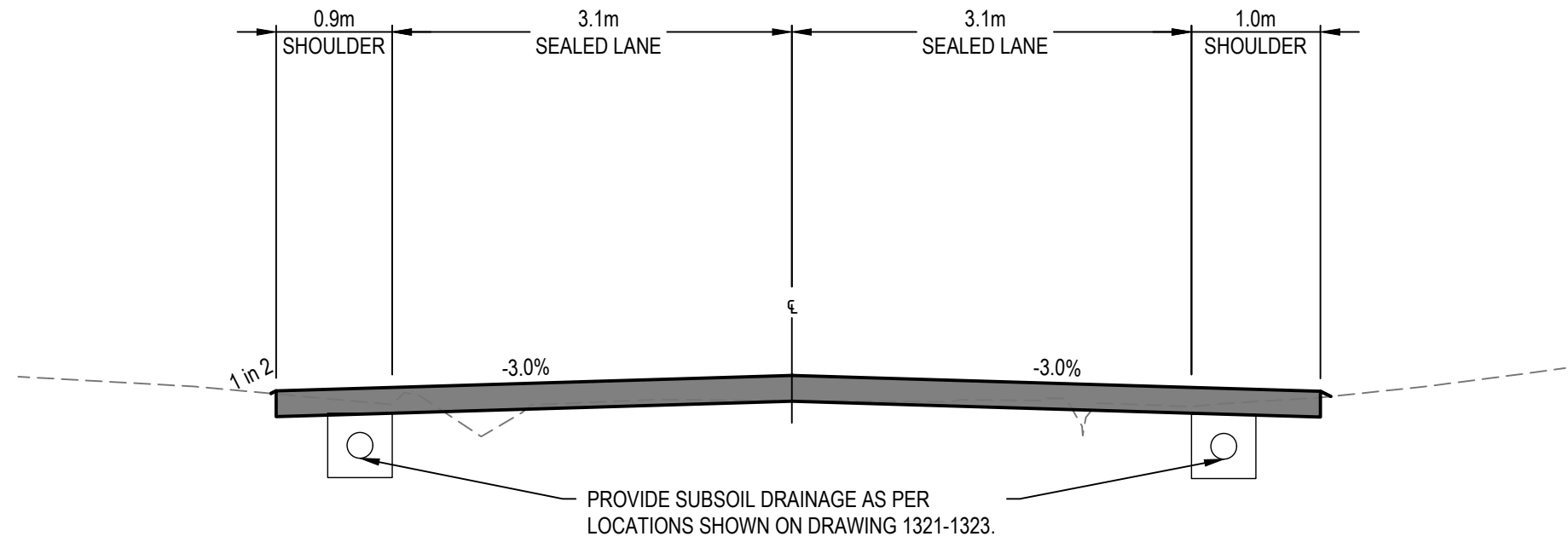
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CH. 140.000 TO 230.000
CH. 290.000 TO 540.000
CH. 630.000 TO 760.000
CH. 800.000 TO 940.000
CH. 1750.000 TO 1840.000



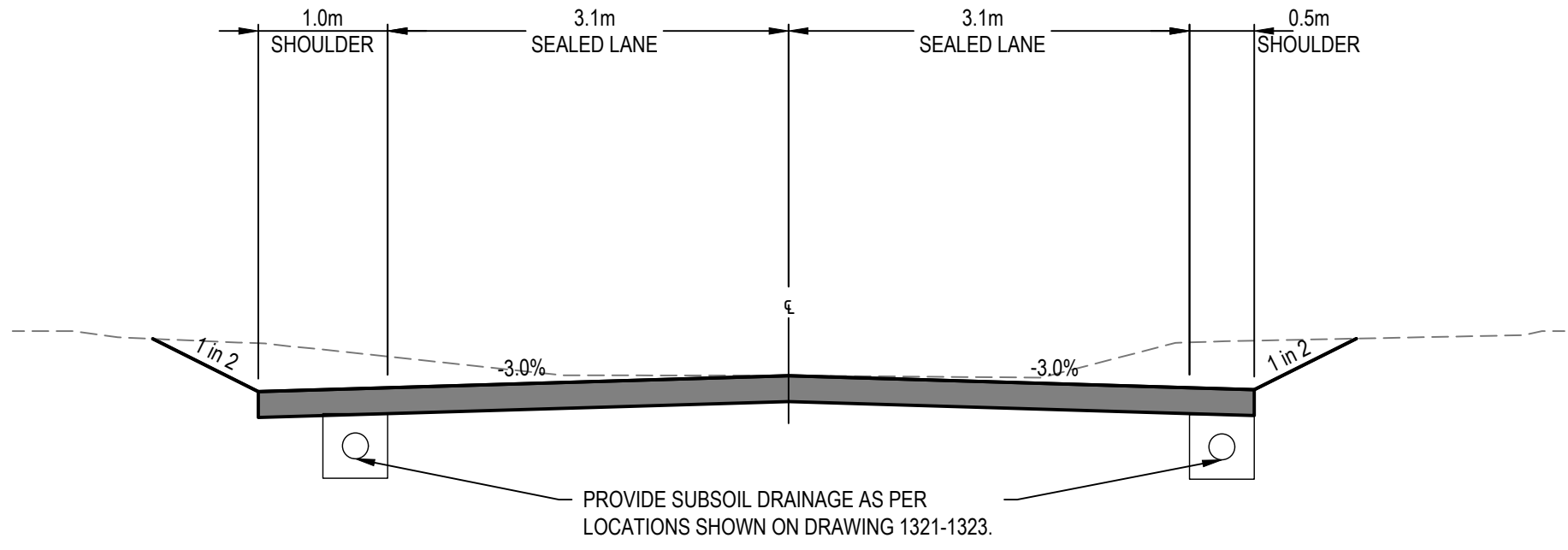
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CH. 940.000 TO 1020.000
CH. 1600.000 TO 1650.000
CH. 1860.000 TO END



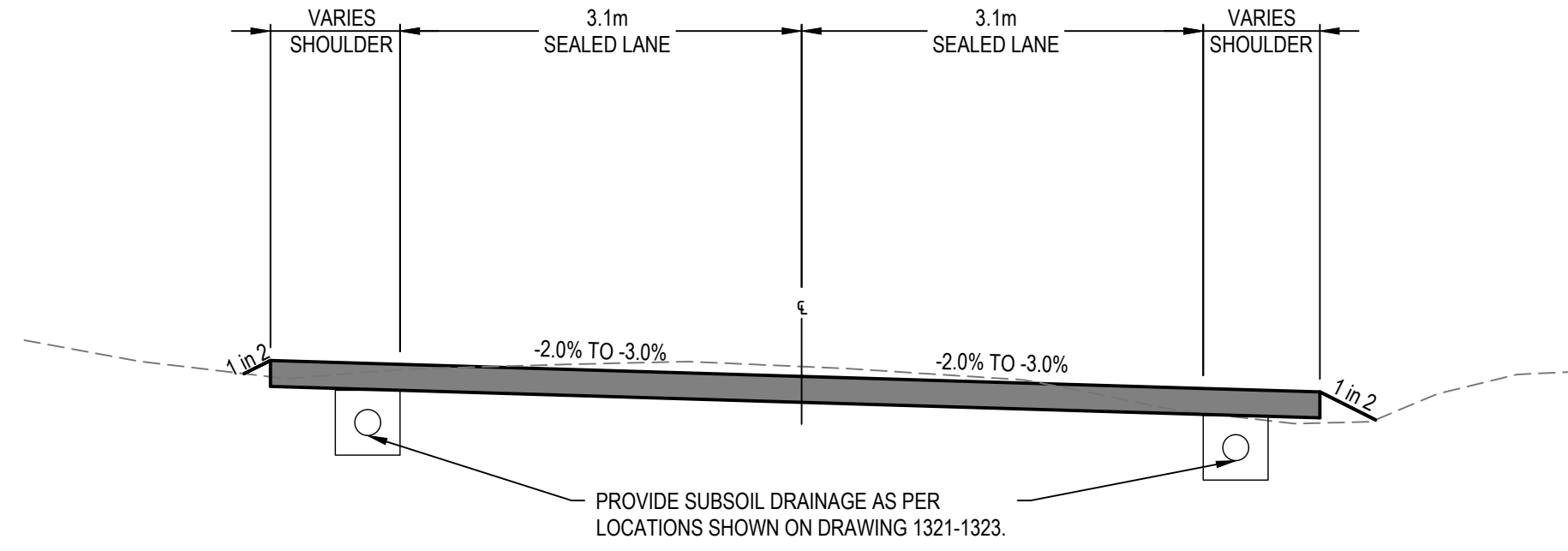
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CH. 1650.000 TO 1675.000
CH. 1840.000 TO 1870.000



TYPICAL DELROY ROAD CROSS SECTION TYPE 3
CH. 230.000 TO 290.000



TYPICAL DELROY ROAD CROSS SECTION TYPE 6
CH. 1020.000 TO 1445.000



TYPICAL DELROY ROAD CROSS SECTION TYPE 9
CH. 900.000 TO 1000.000
CH. 1215.000 TO 1275.000

FOR S138 APPROVAL

XREFs: X-P00549-CI-S138-Road.LS & CS
CAD File: C:\2024\GDS\SYN\0713 - Forest Glen Solar Farm - Access Road_38404_Engineering\05_S138 - Road Design\P00549-CI-S138-1501.dwg

Rev.	Date	Revision Description	Drawn	Design	Appd.
7	05/09/2024	ROAD AND PAVEMENT DESIGN UPDATES	P.S.	A.M.	G.d.S.
6	22/08/2024	ROAD AND PAVEMENT DESIGN UPDATES	C.M.	A.M.	G.d.S.
5	26/07/2024	ROAD AND PAVEMENT DESIGN UPDATES	P.S.	A.M.	G.d.S.
4	25/05/2023	RE-ISSUED FOR S138 APPROVAL	W.M.	A.M.	G.d.S.
3	06/04/2023	ISSUED FOR S138 APPROVAL	W.M.	A.M.	G.d.S.
2	23/02/2023	AMENDED TO COUNCIL COMMENTS	W.M.	A.M.	G.d.S.
1	16/01/2023	ISSUED FOR S138 APPROVAL	W.M.	A.M.	G.d.S.

PREPARED BY:



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Datum: A.H.D. Coordinates: MGA 20 Size: A1

Drawn C.M.	Date 05/09/2024	Client X-ELIO PTY. LTD.
Drafting Checked P.S.	Date 05/09/2024	Project FOREST GLEN SOLAR FARM ACCESS ROAD
Design A.M.	Date 05/09/2024	Title TYPICAL ROAD CROSS SECTIONS
Design Checked G.d.S.	Date 05/09/2024	Revision 7
Approved G.d.S.	Date 05/09/2024	Drawing Number P00549-CI-S138-1501

HORIZONTAL CURVES
VERTICAL CURVES
GRADIENT
DATUM RL 261.0

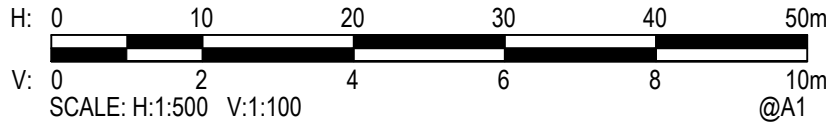
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DESIGN LEVEL	271.474 271.534 271.545 271.644 271.656 271.647 271.739 271.642 271.562 271.532 271.532 271.522 271.545 271.545 271.690 271.692 271.788 272.037 272.292 272.403 272.656 272.840 272.897 273.008 273.008 273.772 273.988 274.047 274.797 275.175 276.174 276.237 276.323 276.928 277.300 277.452 277.921 278.171 278.389 278.657 279.173 279.326 279.794 280.262 280.262 280.329 280.502 280.770 281.319 281.666 281.868 282.138 282.404 282.407 282.849 283.030 283.157 283.191 283.216 283.429 283.509 283.555 283.578 283.844 283.898 284.068 284.136 284.369 284.562 284.644 284.655 284.926 285.279 285.298 285.700 286.190 286.216 286.717 287.059 287.241 287.704 288.086 288.385 288.446 288.479 288.602 288.703 288.736 288.788 288.789 288.789 288.759 288.740 288.663 288.607 288.532 288.480 288.456 288.443 288.405
EXISTING LEVEL	271.467 271.558 271.578 271.735 271.758 271.739 271.726 271.576 271.541 271.541 271.541 271.541 271.541 271.702 271.690 271.692 271.802 272.015 272.292 272.403 272.656 272.659 272.897 273.196 273.196 273.772 273.988 274.047 274.601 274.973 276.056 276.237 276.323 276.853 277.197 277.320 277.739 277.965 278.173 278.642 278.985 279.143 279.616 280.073 280.073 280.329 280.514 281.095 281.666 281.868 282.138 282.404 282.407 282.849 283.030 283.157 283.191 283.216 283.429 283.509 283.555 283.578 283.844 283.898 284.068 284.136 284.369 284.562 284.644 284.655 284.926 285.279 285.298 285.700 286.190 286.216 286.717 287.059 287.241 287.704 288.086 288.385 288.446 288.479 288.602 288.703 288.736 288.788 288.789 288.789 288.759 288.740 288.663 288.607 288.532 288.480 288.456 288.443 288.405
CHAINAGE	0.000 3.536 11.036 14.647 17.746 18.536 30.000 34.237 37.237 41.737 45.737 49.237 49.299 52.756 60.000 67.756 75.000 75.843 82.756 90.000 90.739 100.119 105.000 120.000 122.619 135.000 145.119 150.000 165.000 173.016 180.000 195.000 205.125 210.000 225.000 240.000 247.665 255.000 270.000 285.000 292.386 300.000 300.089 315.000 322.386 323.313 330.000 331.433 345.000 352.386 359.000 360.000 375.000 386.013 390.000 401.013 405.000 420.000 435.000 435.731 447.813 450.000 465.000 465.731 480.000 495.000 495.731 510.000 520.873 525.000 540.000 555.000 570.000 570.873 585.000 595.299 600.000 615.000 617.033 618.363 630.000 630.664 645.000 660.000 675.000 685.135 690.000 692.608 700.000

DELROY ROAD LONGITUDINAL SECTION

SCALE 1:1000 HORI.
1:200 VERT.

FOR S138 APPROVAL

Rev.	Date	Revision Description	Drawn	Design	Appd.
7	05/09/2024	ROAD AND PAVEMENT DESIGN UPDATES	P.S.	A.M.	G.d.S.
6	22/08/2024	ROAD AND PAVEMENT DESIGN UPDATES	C.M.	A.M.	G.d.S.
5	26/07/2024	ROAD AND PAVEMENT DESIGN UPDATES	P.S.	A.M.	G.d.S.
4	25/05/2023	RE-ISSUED FOR S138 APPROVAL	W.M.	A.M.	G.d.S.
3	06/04/2023	ISSUED FOR S138 APPROVAL	W.M.	A.M.	G.d.S.
2	23/02/2023	AMENDED TO COUNCIL COMMENTS	W.M.	A.M.	G.d.S.
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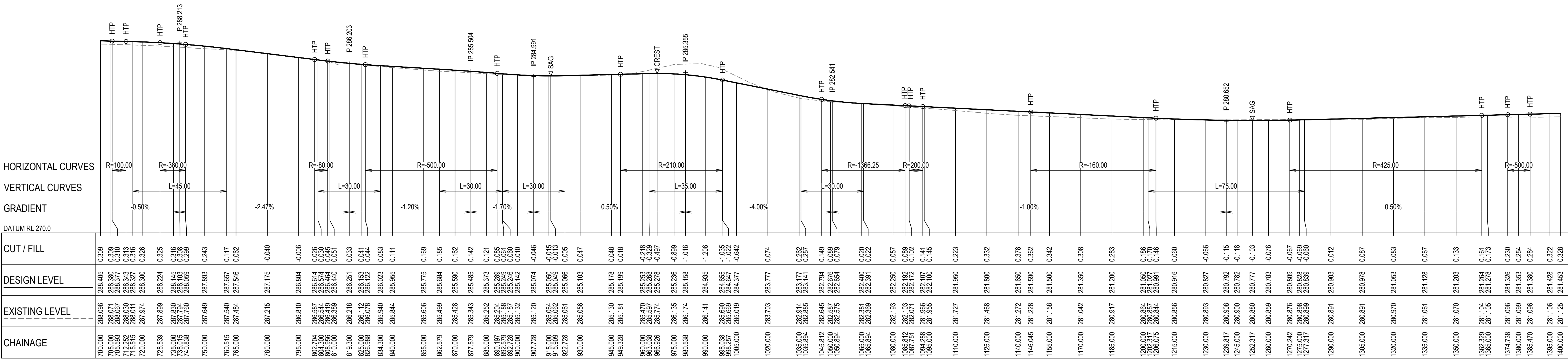
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Datum: A.H.D. Coordinates: MGA 20 Size: A1

Drawn C.M.	Date 05/09/2024	Client X-ELIO PTY. LTD.
Drafting Checked P.S.	Date 05/09/2024	Project FOREST GLEN SOLAR FARM ACCESS ROAD
Design A.M.	Date 05/09/2024	Title ROAD LONGITUDINAL SECTIONS SHEET 1
Design Checked G.d.S.	Date 05/09/2024	Revision 7
Approved G.d.S.	Date 05/09/2024	Drawing Number P00549-CI-S138-1521

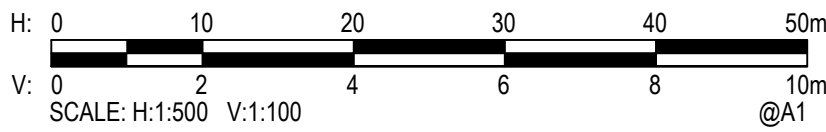


DELROY ROAD LONGITUDINAL SECTION

SCALE 1:1000 HORI.
1:200 VERT.

FOR S138 APPROVAL

Rev.	Date	Revision Description	Drawn	Design	Appd.
7	05/09/2024	ROAD AND PAVEMENT DESIGN UPDATES	P.S.	A.M.	G.d.S.
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4	25/05/2023	RE-ISSUED FOR S138 APPROVAL	W.M.	A.M.	G.d.S.
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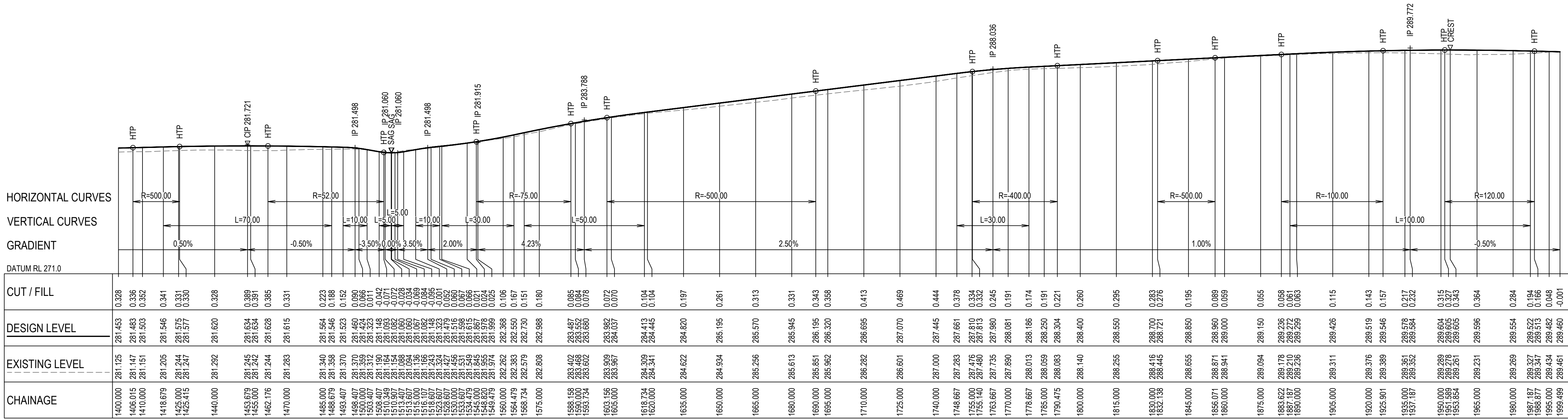
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Drawn C.M.	Date 05/09/2024	Client X-ELIO PTY. LTD.
Drafting Checked P.S.	Date 05/09/2024	Project FOREST GLEN SOLAR FARM ACCESS ROAD
Design A.M.	Date 05/09/2024	Title ROAD LONGITUDINAL SECTIONS SHEET 2
Design Checked G.d.S.	Date 05/09/2024	Revision 7
Approved G.d.S.	Date 05/09/2024	Drawing Number P00549-CI-S138-1522

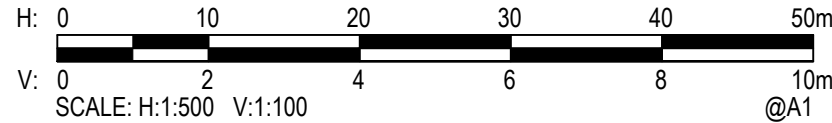


DELROY ROAD LONGITUDINAL SECTION

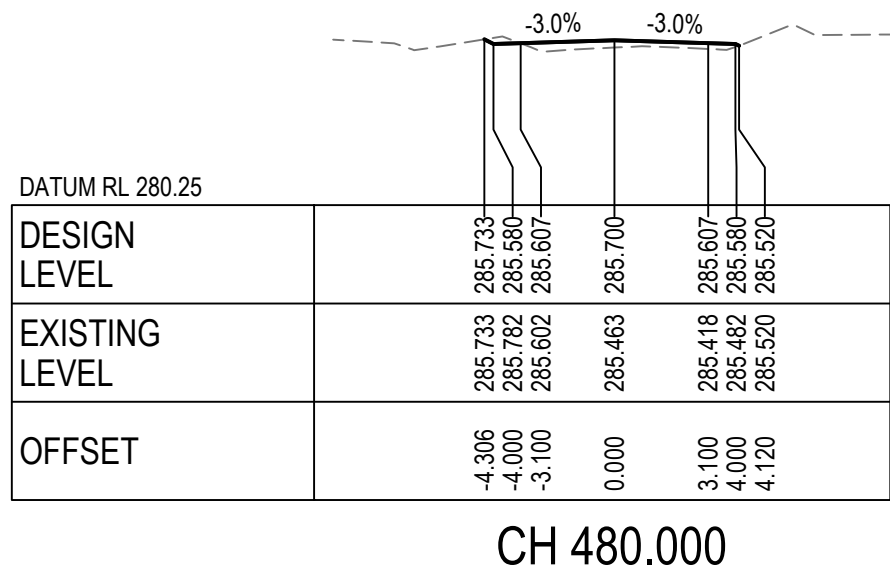
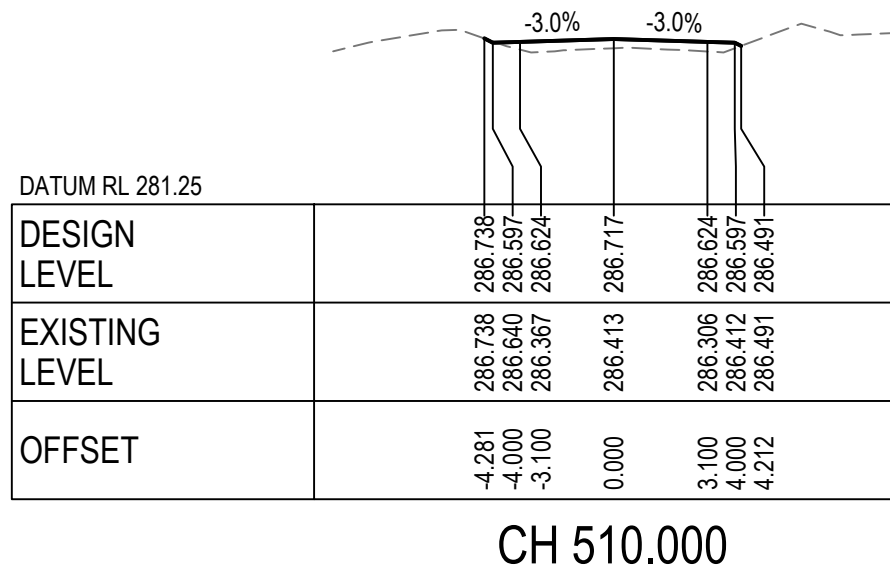
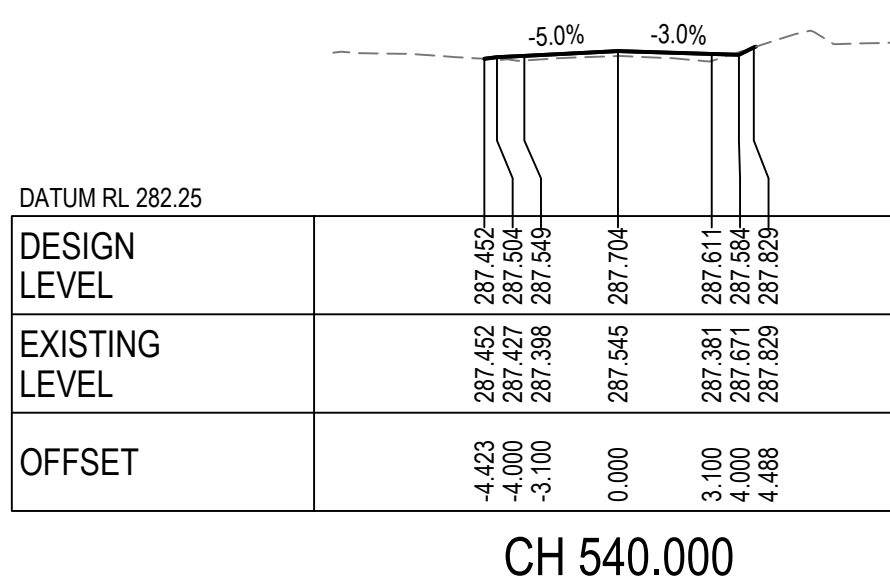
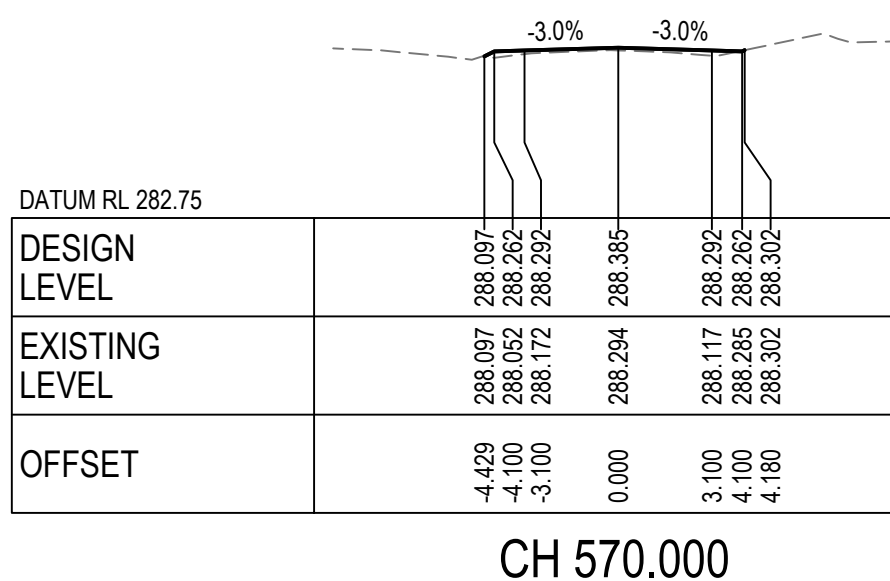
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FOR S138 APPROVAL

Rev.	Date	Revision Description	Drawn	Design	Appd.
7	05/09/2024	ROAD AND PAVEMENT DESIGN UPDATES	P.S.	A.M.	G.d.S.
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5	26/07/2024	ROAD AND PAVEMENT DESIGN UPDATES	P.S.	A.M.	G.d.S.
4	25/05/2023	RE-ISSUED FOR S138 APPROVAL	W.M.	A.M.	G.d.S.
3	06/04/2023	ISSUED FOR S138 APPROVAL	W.M.	A.M.	G.d.S.
2	23/02/2023	AMENDED TO COUNCIL COMMENTS	W.M.	A.M.	G.d.S.
1	16/01/2023	ISSUED FOR S138 APPROVAL	W.M.	A.M.	G.d.S.



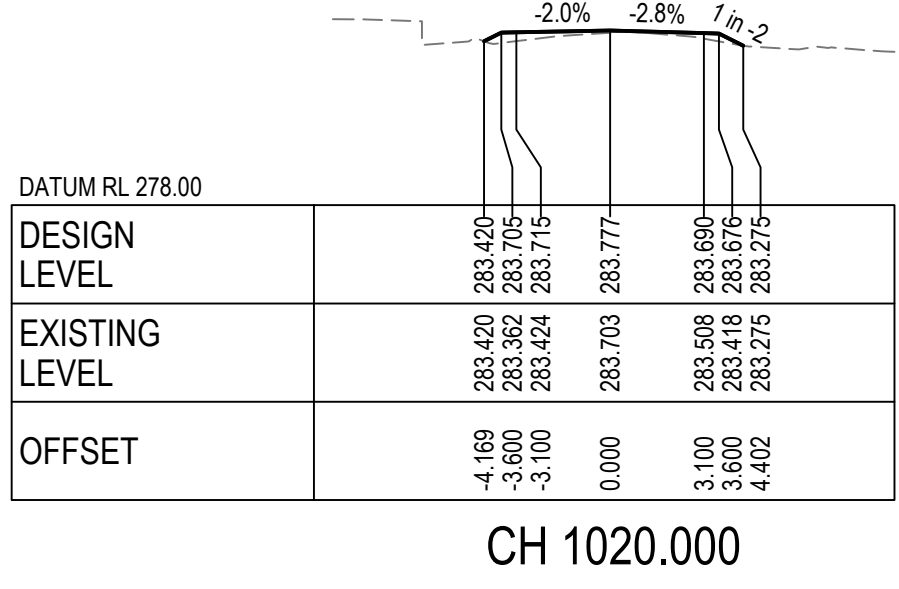
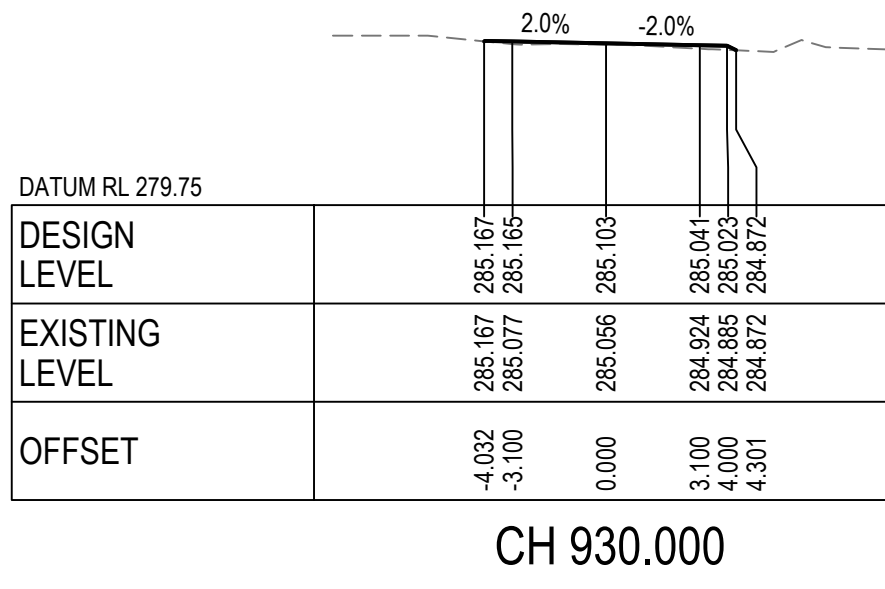
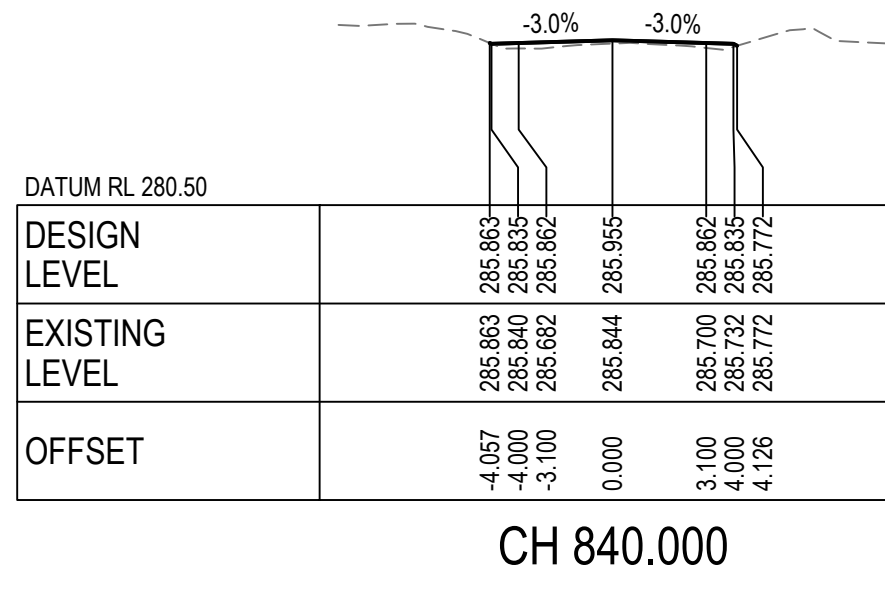
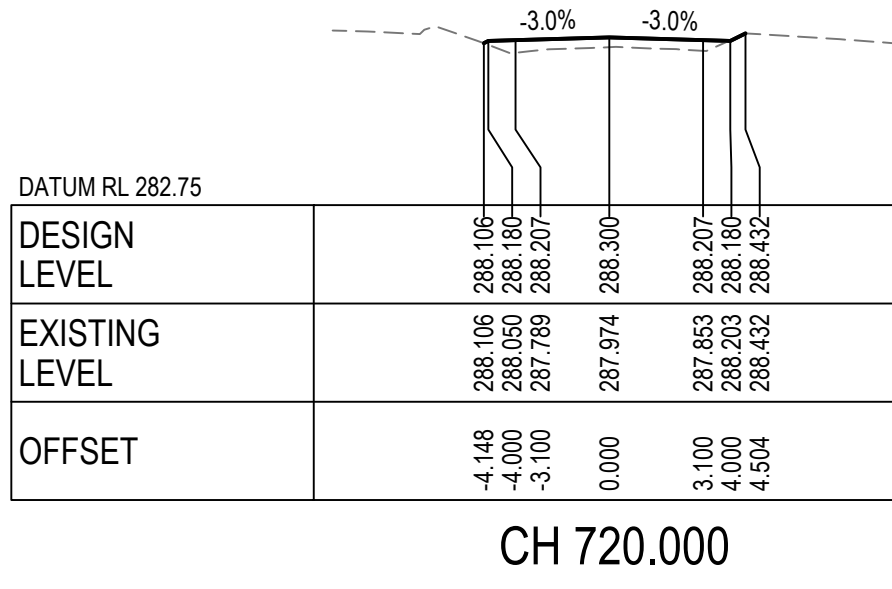
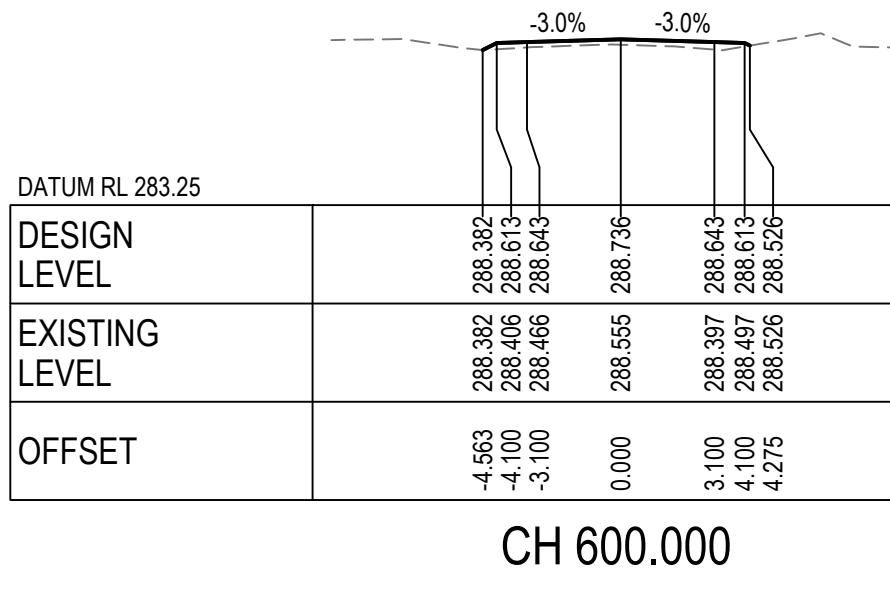
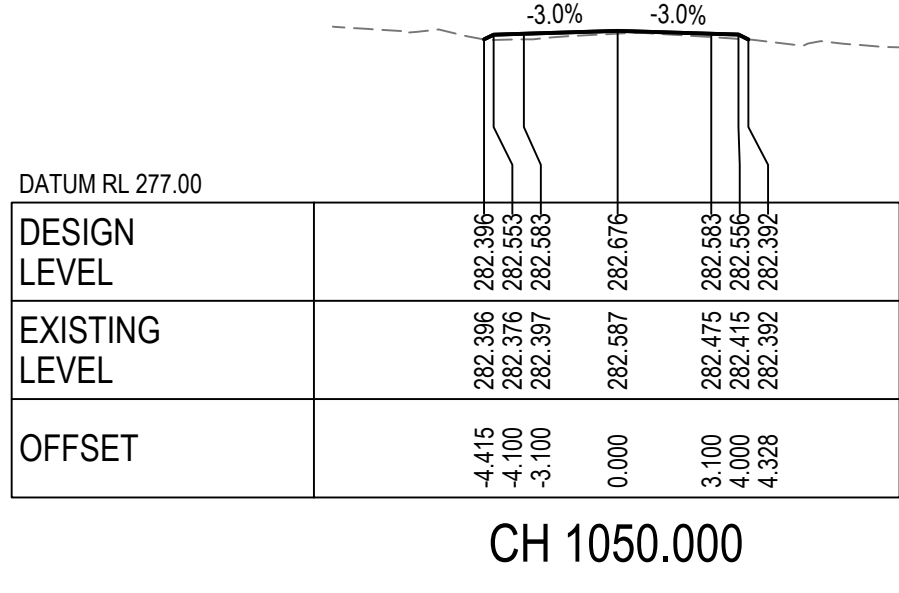
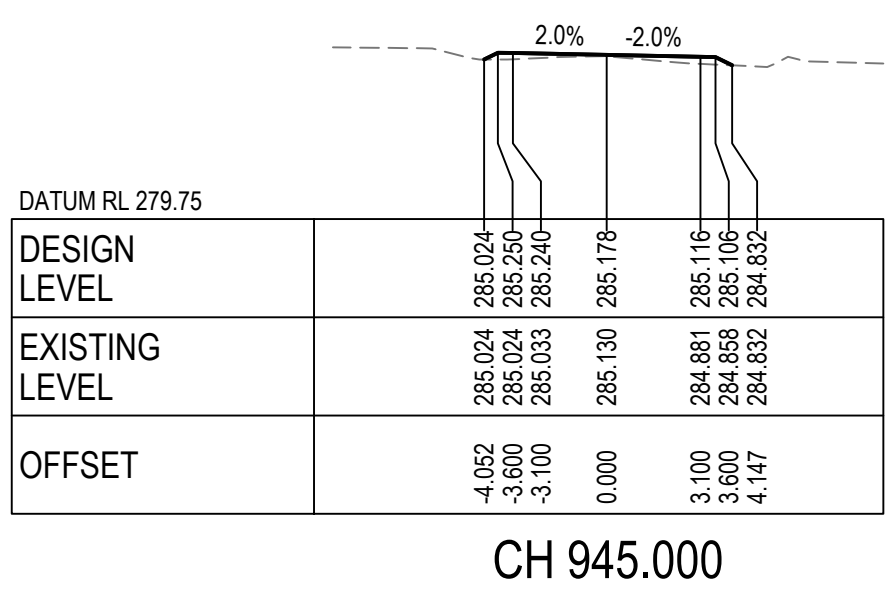
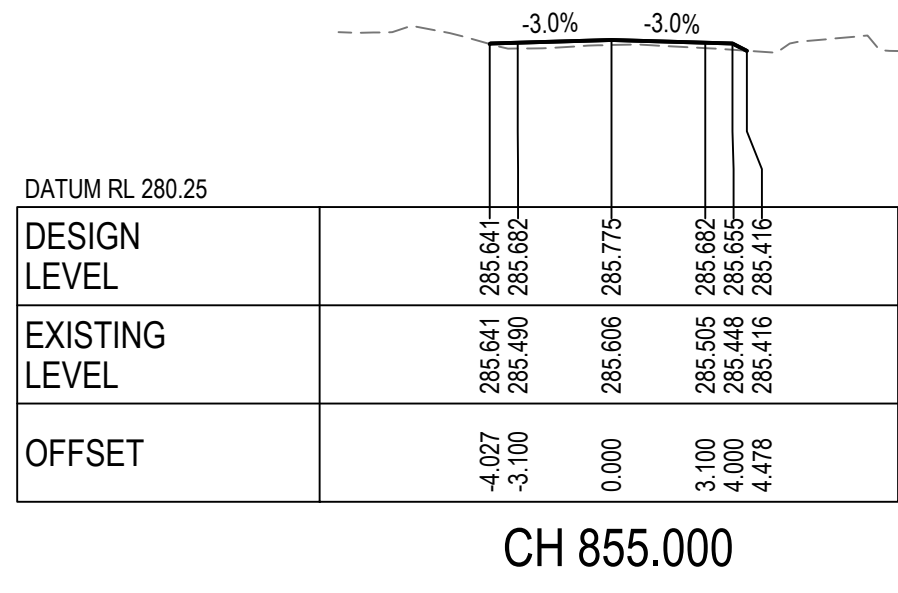
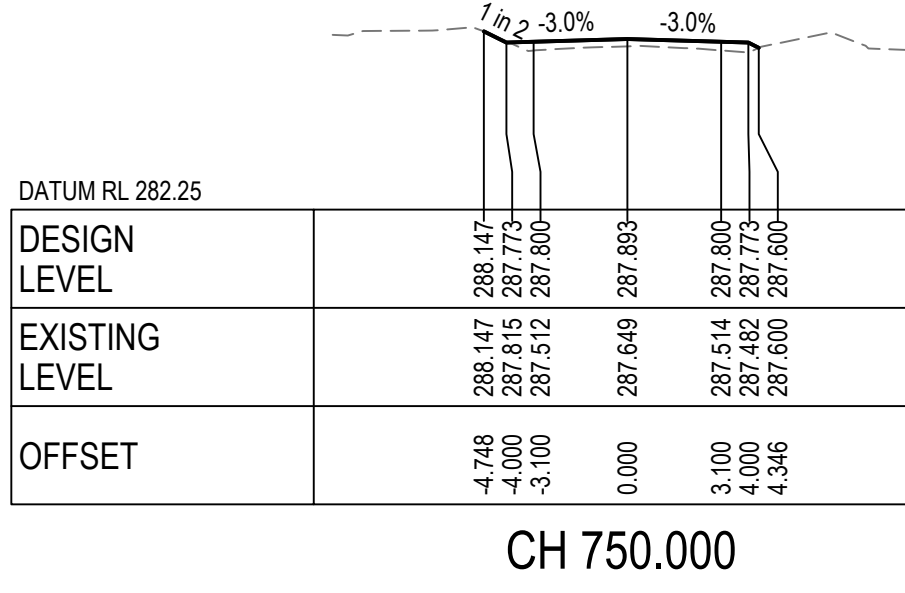
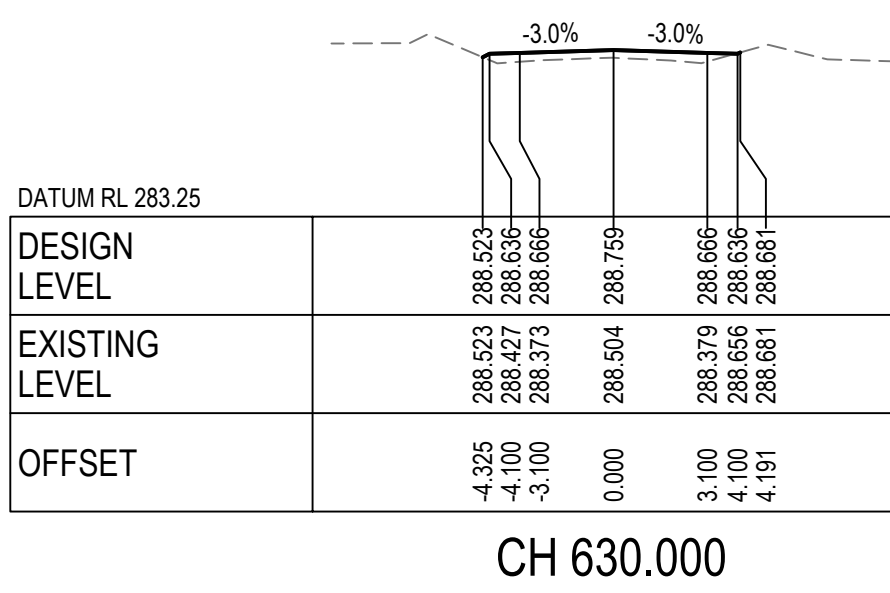
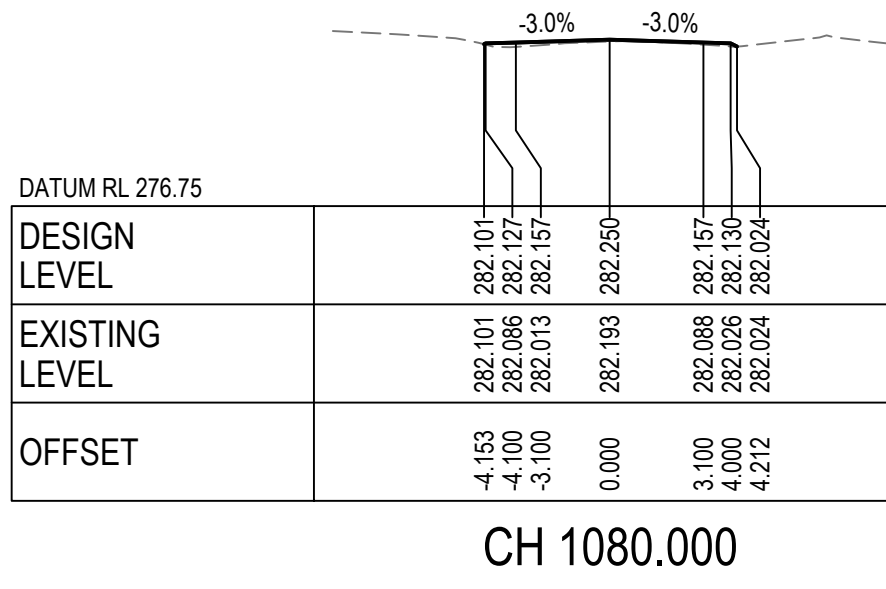
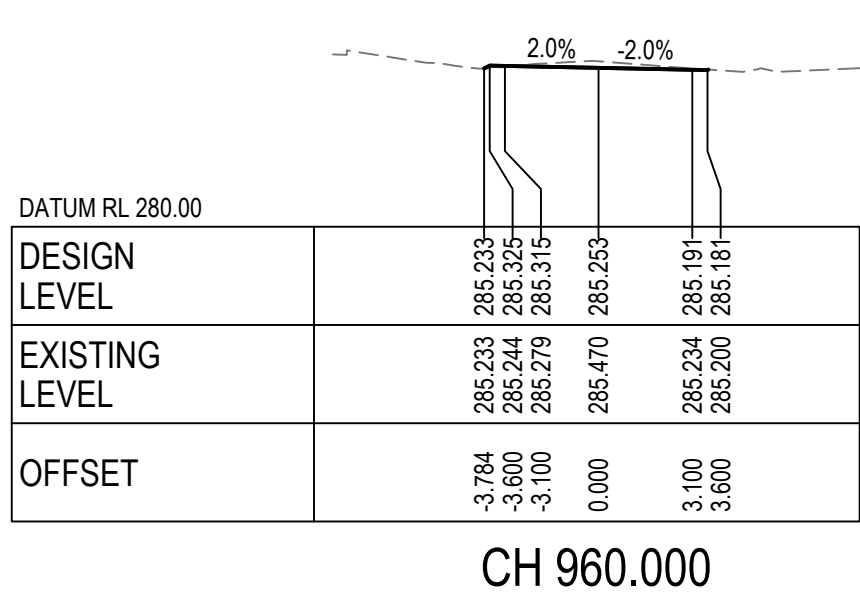
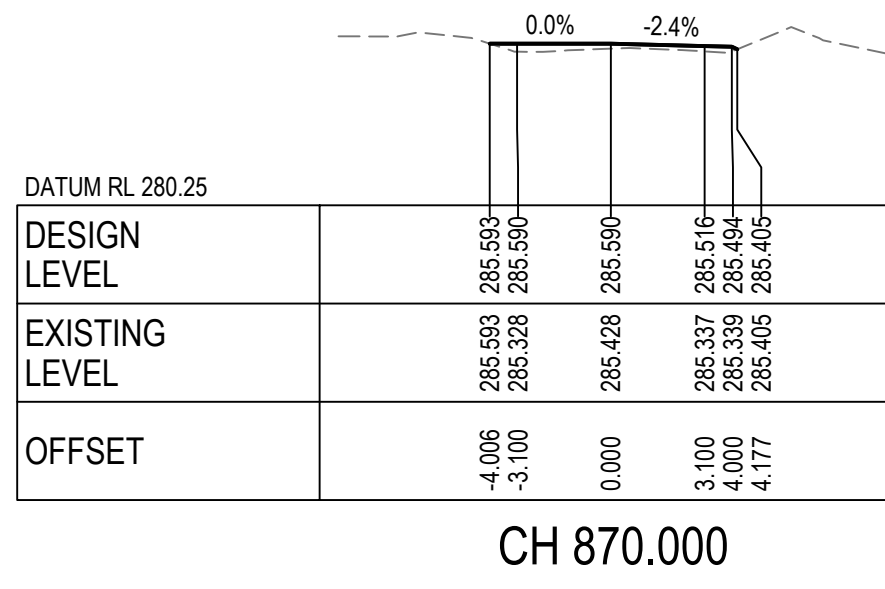
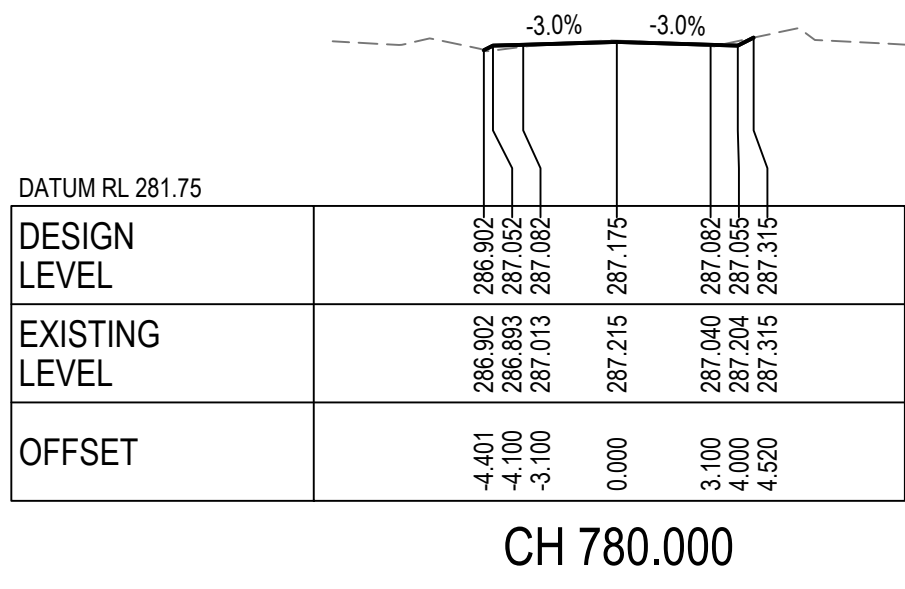
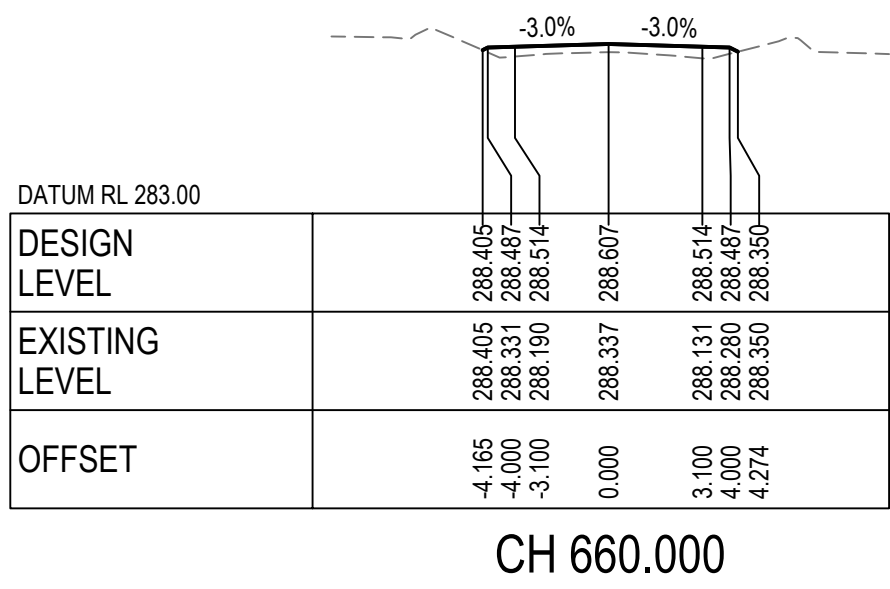
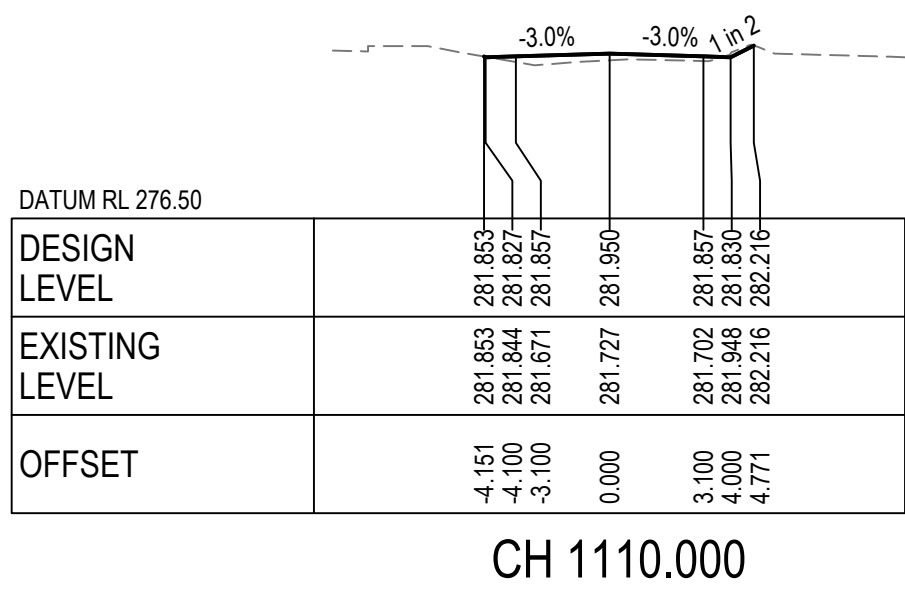
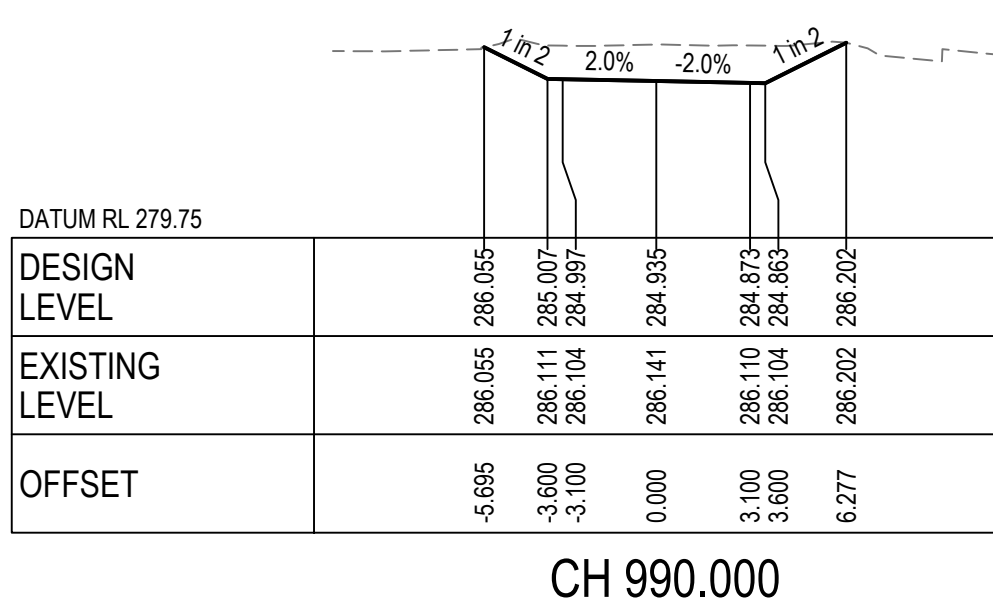
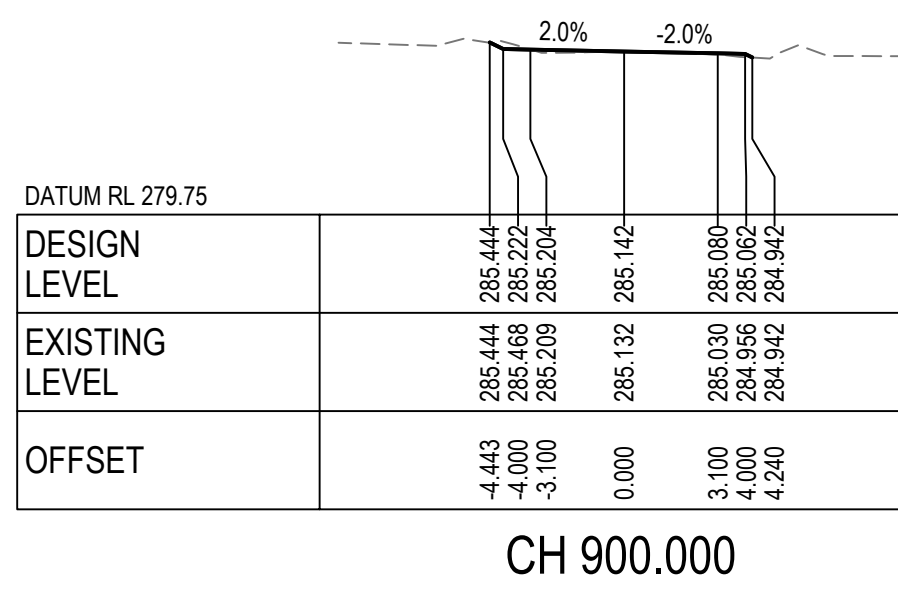
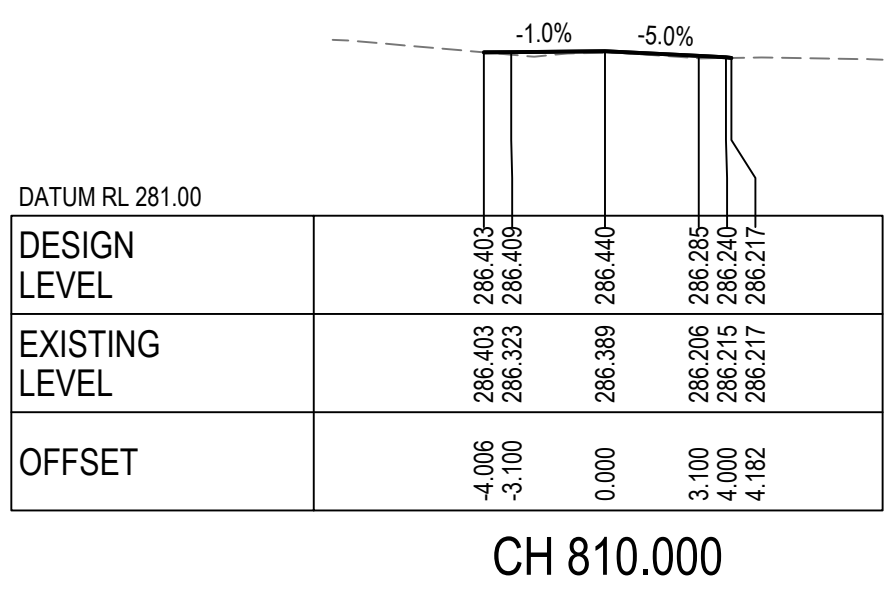
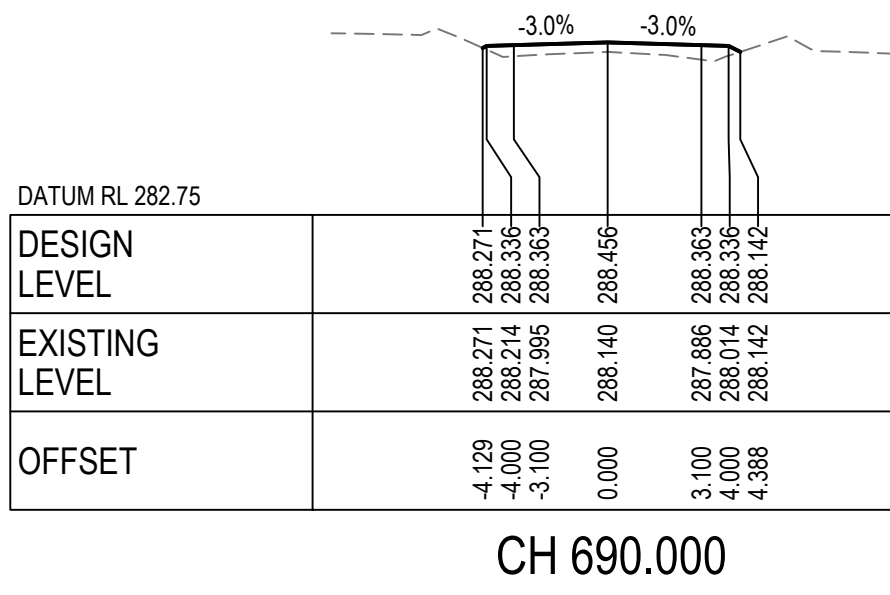
PREPARED BY:		DO NOT SCALE			Drawn C.M.	Date 05/09/2024	Client X-ELIO PTY. LTD.
	GROUP DEVELOPMENT SERVICES PTY LTD ABN: 55 613 295 195 PO Box 498, Pennant Hills NSW 1715 Phone: +61 2 9980 1000 Email: info@gdsland.com.au www.gdsland.com.au	Disclaimer and Copyright This document may only be used by GDS's Client in accordance with the terms of the retainer. GDS does not and shall not assume any responsibility or liability whatsoever to any third party arising out of any use or reliance by third party on the content of this document.			Drafting Checked P.S.	Date 05/09/2024	Project FOREST GLEN SOLAR FARM ACCESS ROAD
					Design A.M.	Date 05/09/2024	Title ROAD LONGITUDINAL SECTIONS SHEET 3
					Design Checked G.d.S.	Date 05/09/2024	
					Approved G.d.S.	Date 05/09/2024	
		Datum A.H.D.	Coordinates MGA 20	Size A1	Drawing Number P00549-CI-S138-1523		Revision 7



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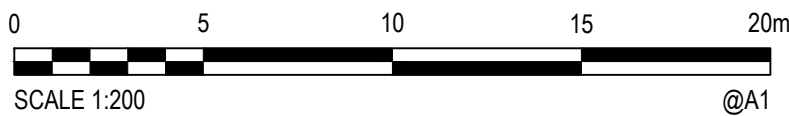
Drawn C.M.	Date 05/09/2024	Client X-ELIO PTY. LTD.	
Drafting Checked P.S.	Date 05/09/2024	Project FOREST GLEN SOLAR FARM ACCESS ROAD	
Design A.M.	Date 05/09/2024	Title ROAD CROSS SECTIONS SHEET 1	Revision
Design Checked G.D.S.	Date 05/09/2024	Drawing Number P00549-CI-S138-1541	7
Approved G.D.S.	Date 05/09/2024		

DATE PLOTTED: 4 September 2024 10:15 am BY: SHIRLEY PANOD
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CAD File: C:\1205\Road\gds\XPNP00713 - Forest Glen Solar Farm - Access Road_38404_Engineering\05_S138 - Road Design\P00549-CI-S138-1541 to 1544.dwg



FOR S138 APPROVAL

Rev.	Date	Revision Description	Drawn	Design	Appd.
7	05/09/2024	ROAD AND PAVEMENT DESIGN UPDATES	P.S.	A.M.	G.dS.
6	22/08/2024	ROAD AND PAVEMENT DESIGN UPDATES	C.M.	A.M.	G.dS.
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1	16/01/2023	ISSUED FOR S138 APPROVAL	W.M.	A.M.	G.dS.



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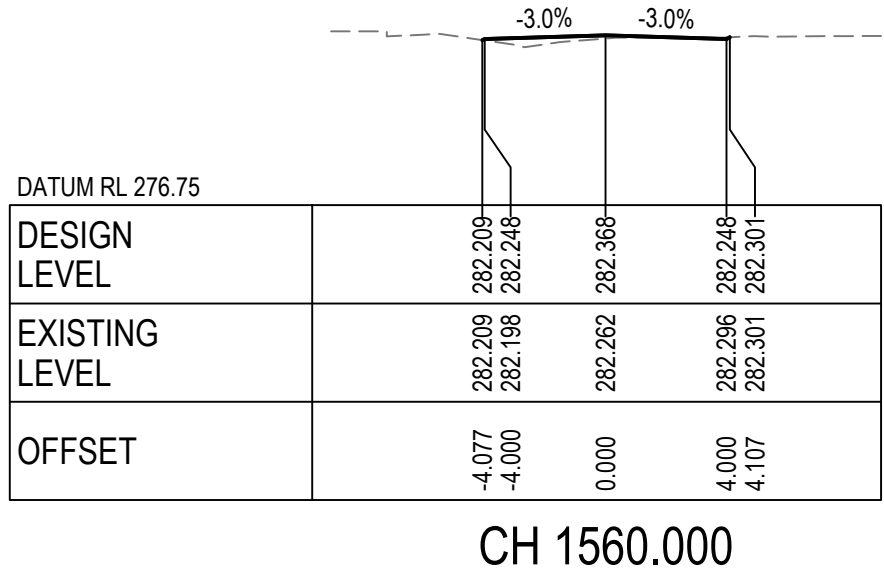
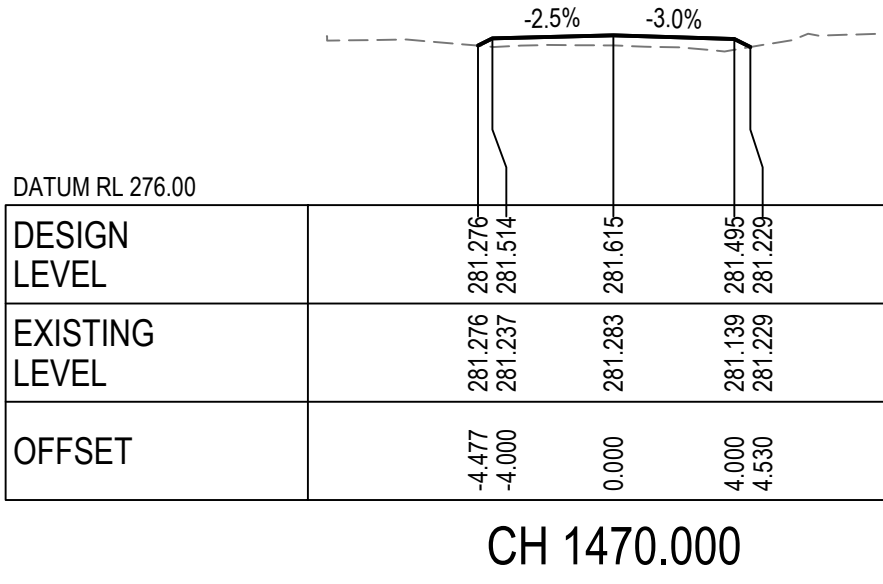
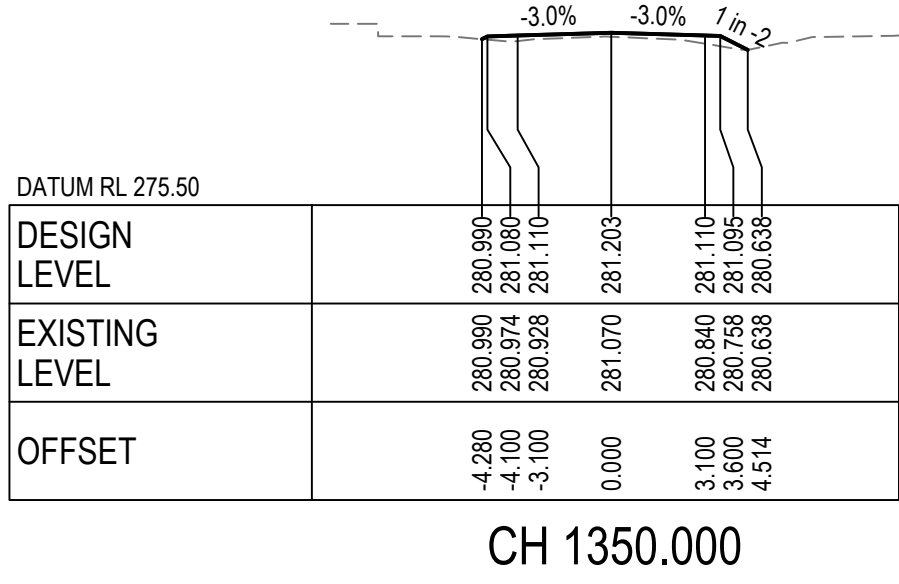
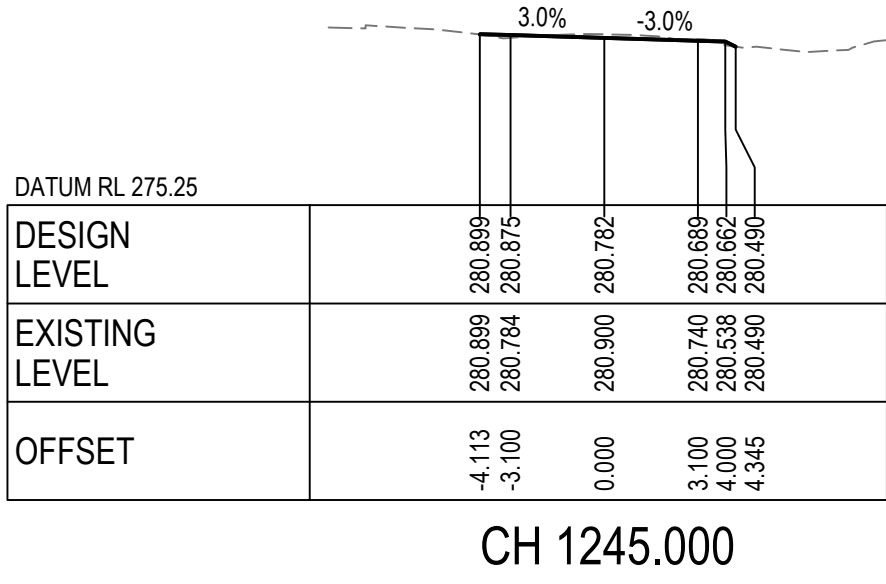
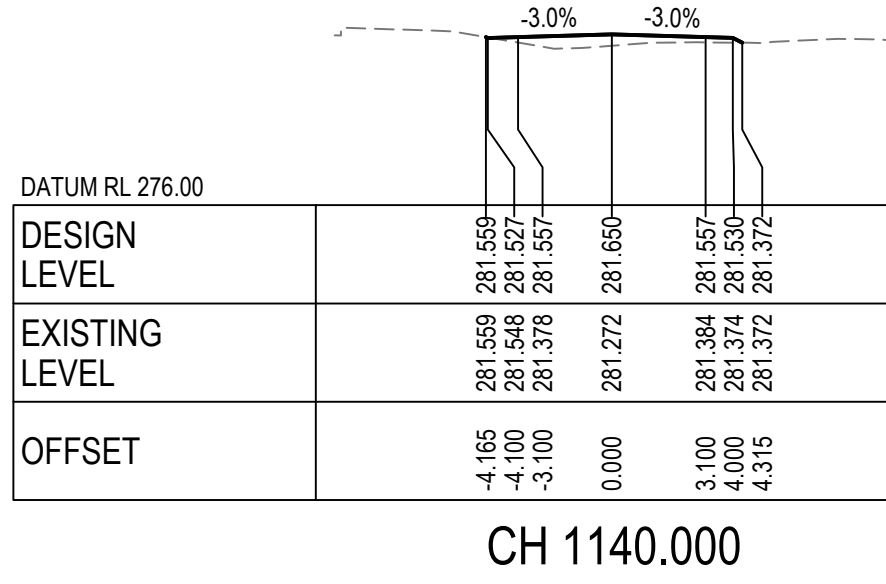
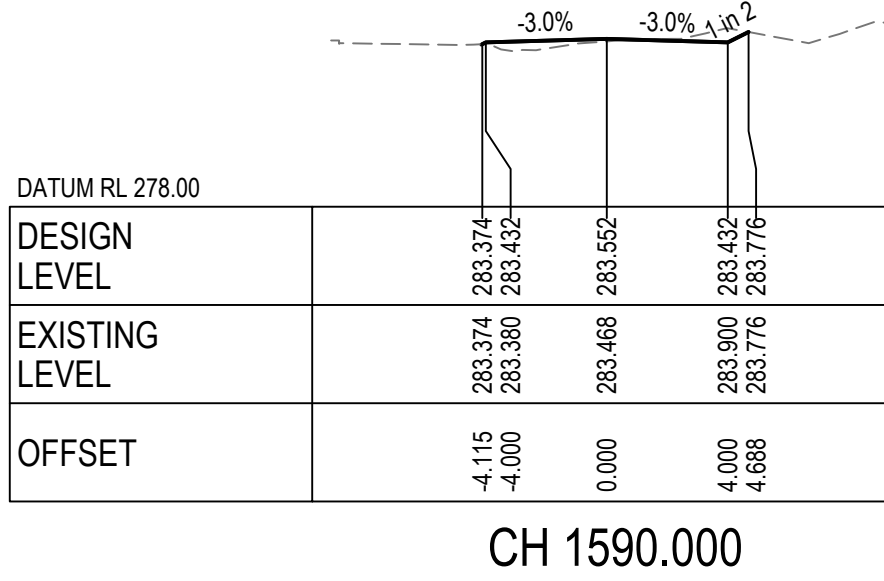
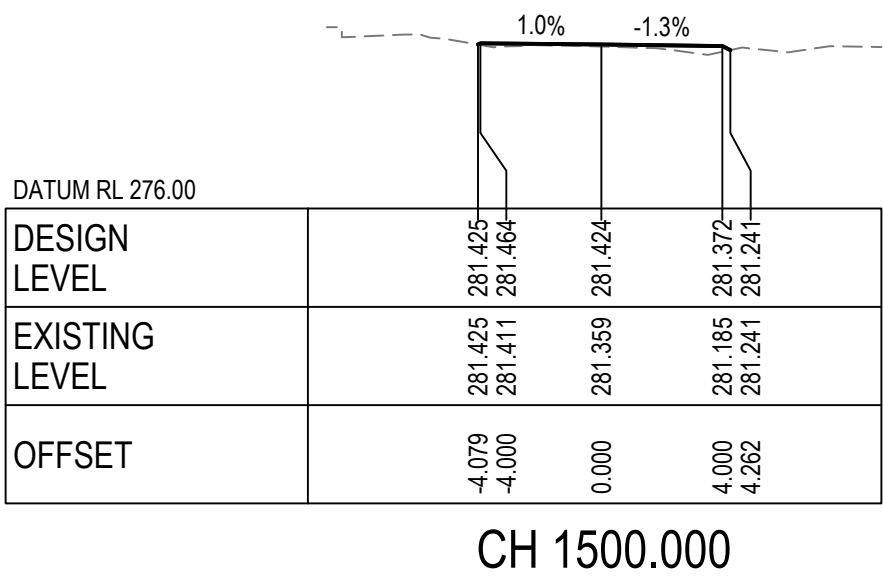
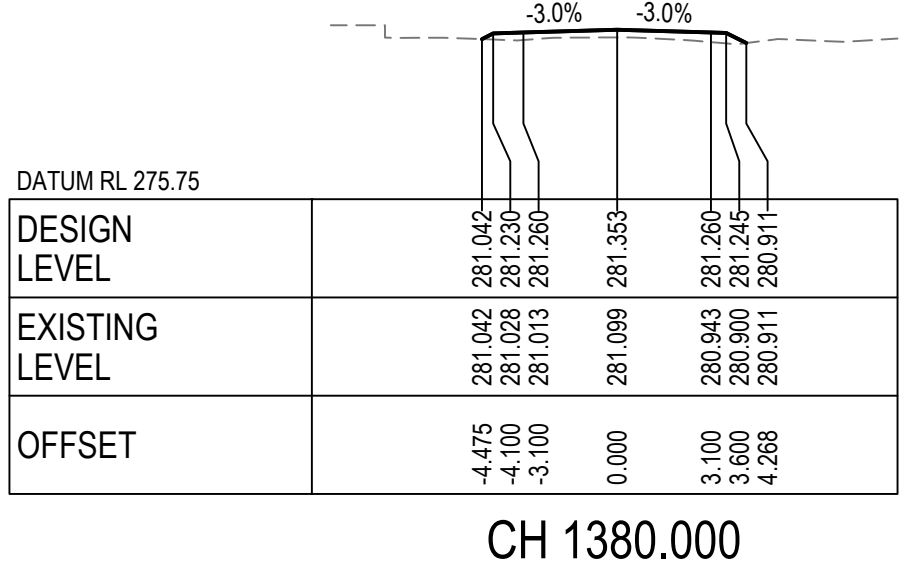
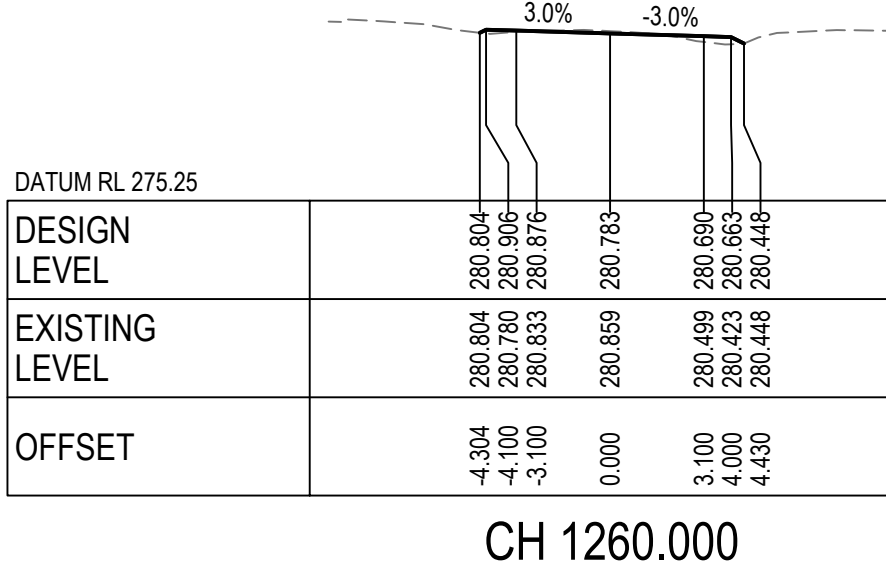
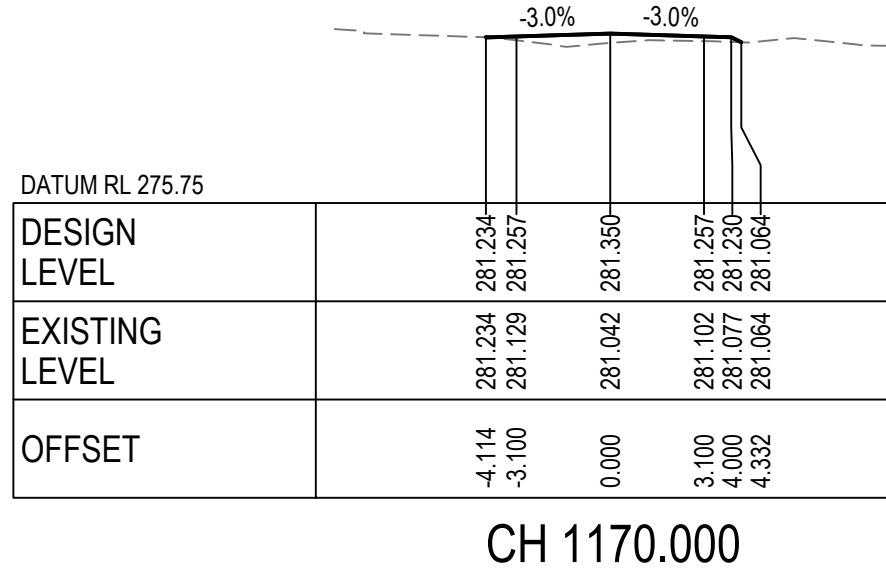
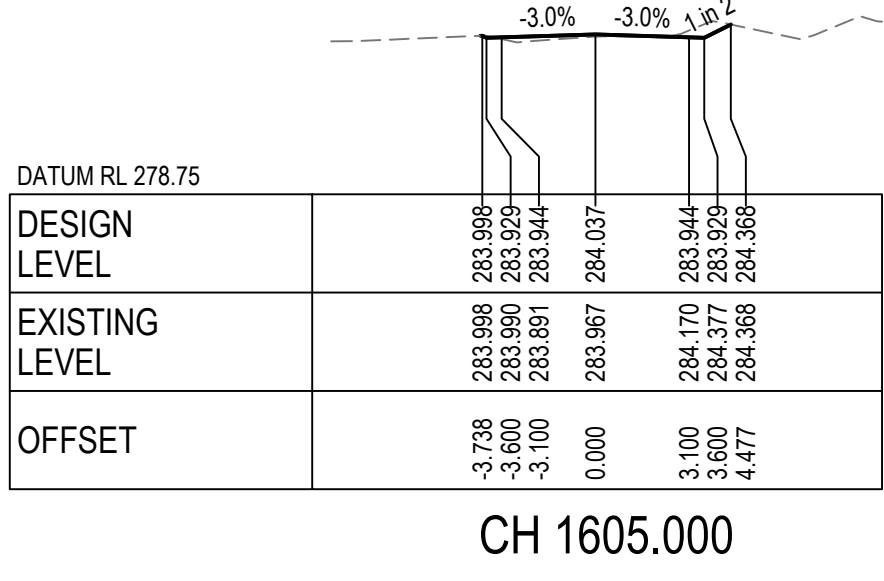
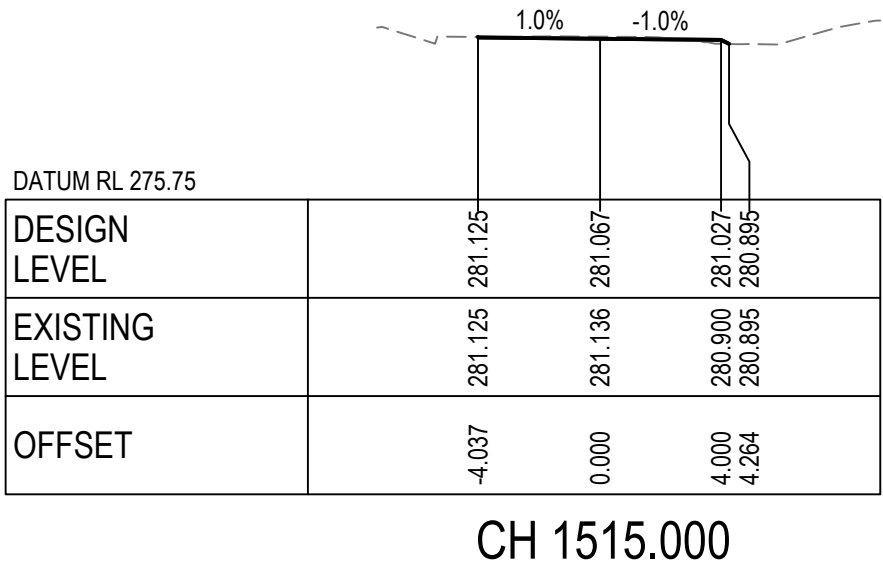
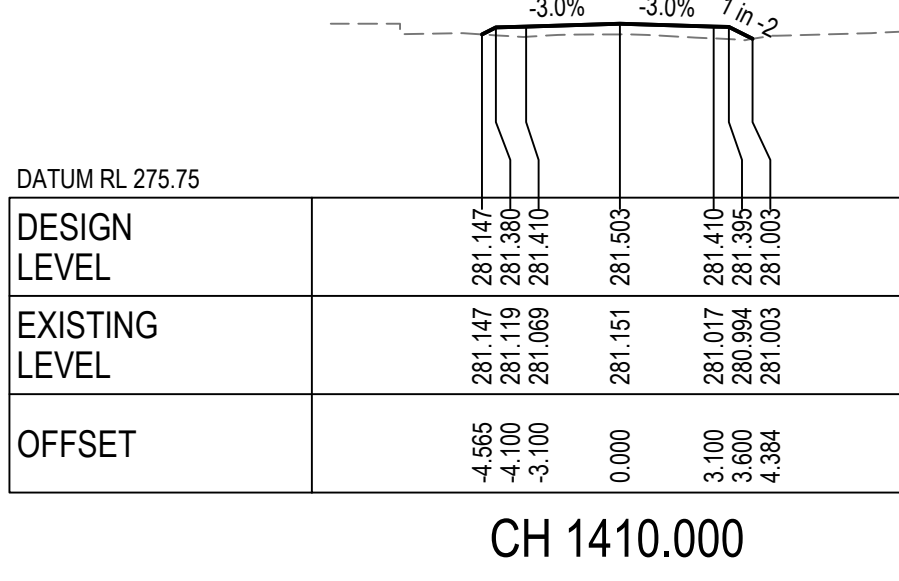
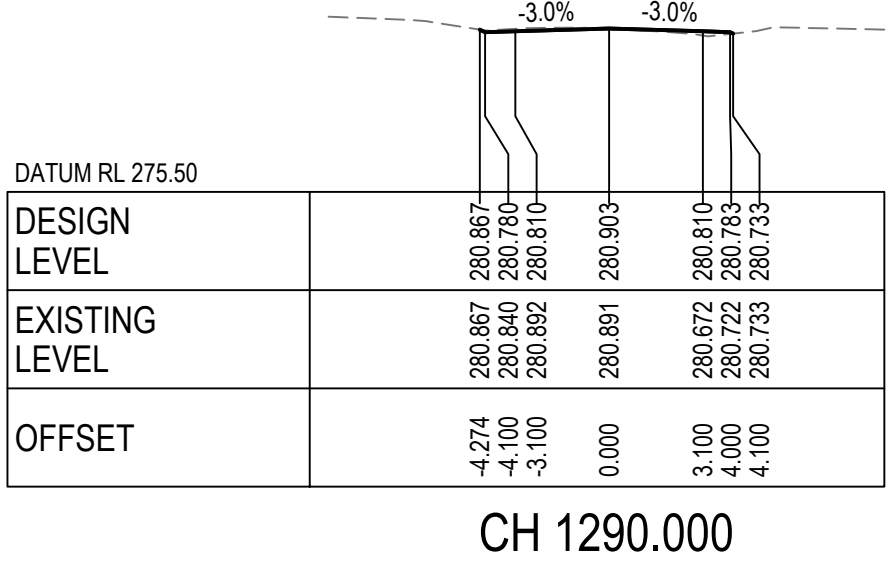
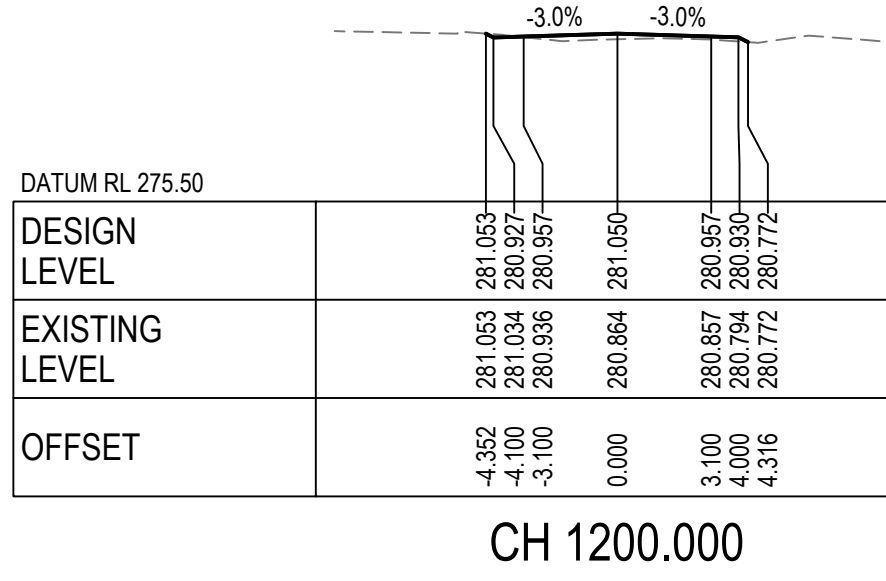
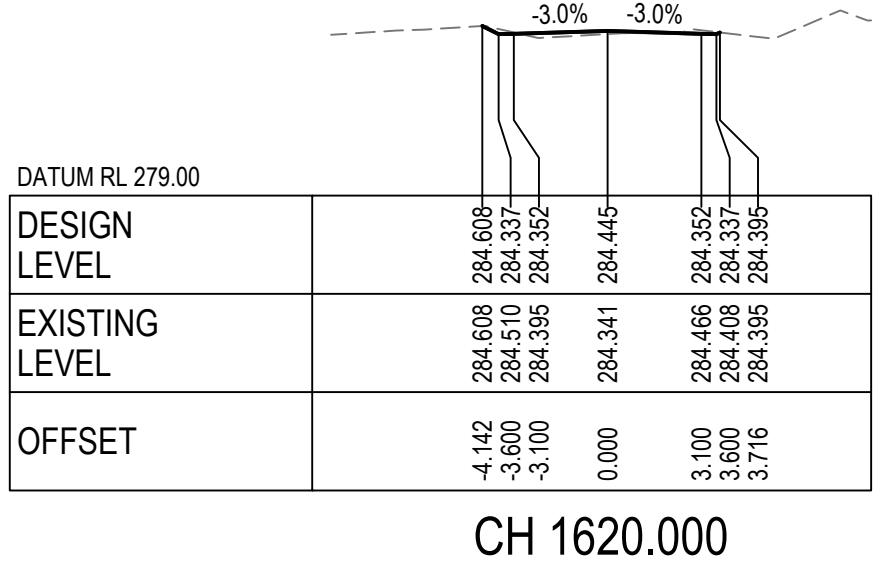
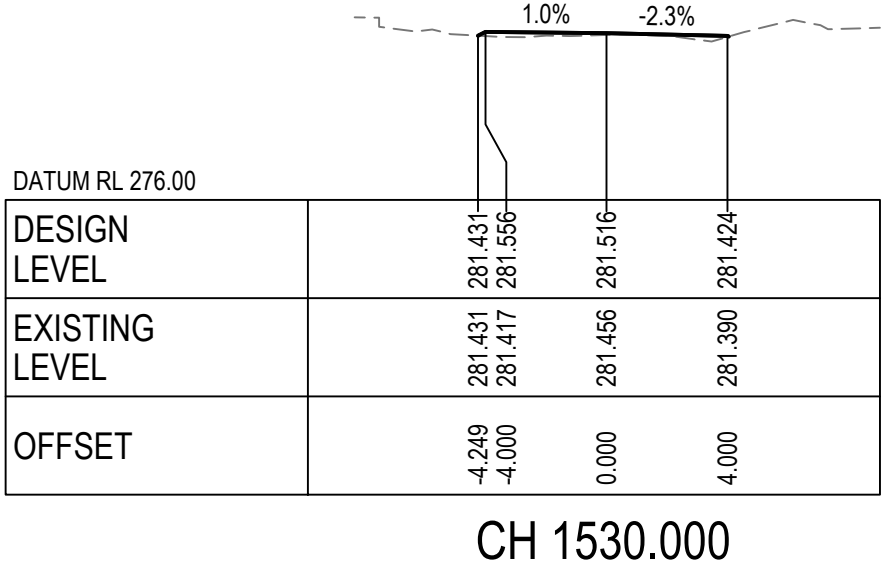
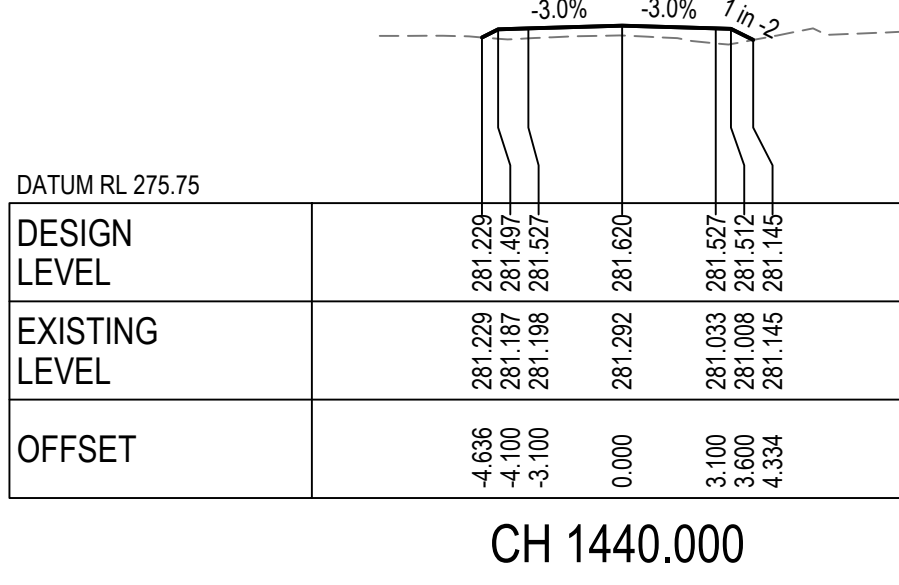
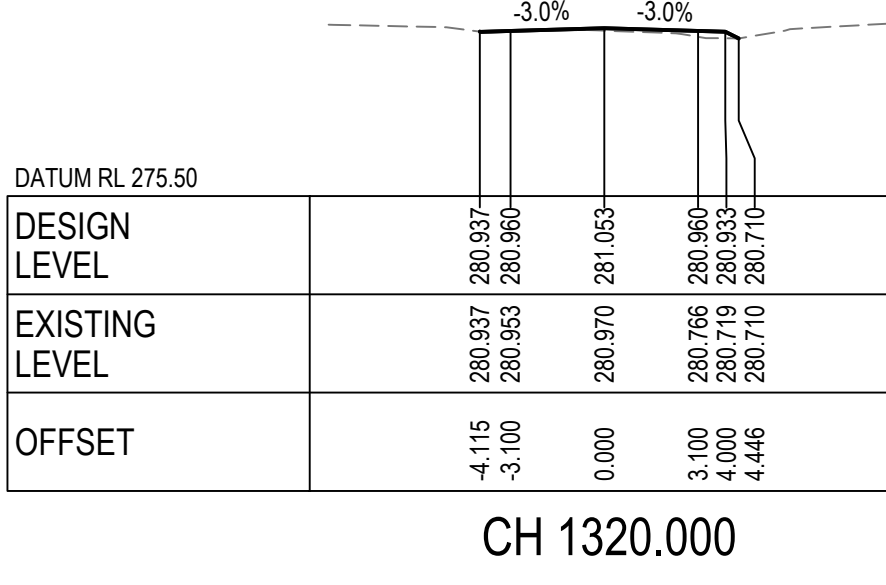
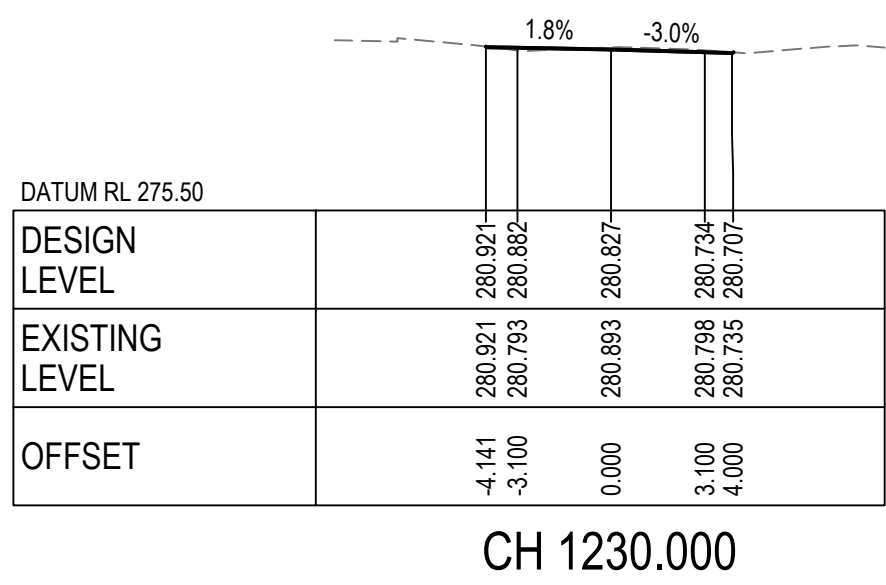
GROUP DEVELOPMENT SERVICES PTY LTD

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PO Box 498, Pennant Hills
NSW 1715
Phone: +61 2 9980 1000
Email: info@gdsland.com.au
www.gdsland.com.au

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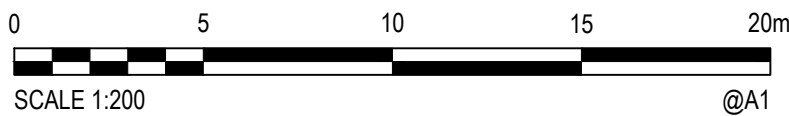
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Drawn C.M.	Date 05/09/2024	Client X-ELIO PTY. LTD.
Drafting Checked P.S.	Date 05/09/2024	Project FOREST GLEN SOLAR FARM ACCESS ROAD
Design A.M.	Date 05/09/2024	Title ROAD CROSS SECTIONS SHEET 2
Design Checked G.dS.	Date 05/09/2024	Revision 7
Approved G.dS.	Date 05/09/2024	Drawing Number P00549-CI-S138-1542



FOR S138 APPROVAL

Rev.	Date	Revision Description	Drawn	Design	Appd.
7	05/09/2024	ROAD AND PAVEMENT DESIGN UPDATES	P.S.	A.M.	G.d.S.
6	22/08/2024	ROAD AND PAVEMENT DESIGN UPDATES	C.M.	A.M.	G.d.S.
5	26/07/2024	ROAD AND PAVEMENT DESIGN UPDATES	P.S.	A.M.	G.d.S.
4	25/05/2023	RE-ISSUED FOR S138 APPROVAL	W.M.	A.M.	G.d.S.
3	06/04/2023	ISSUED FOR S138 APPROVAL	W.M.	A.M.	G.d.S.
2	23/02/2023	AMENDED TO COUNCIL COMMENTS	W.M.	A.M.	G.d.S.
1	16/01/2023	ISSUED FOR S138 APPROVAL	W.M.	A.M.	G.d.S.



PREPARED BY:

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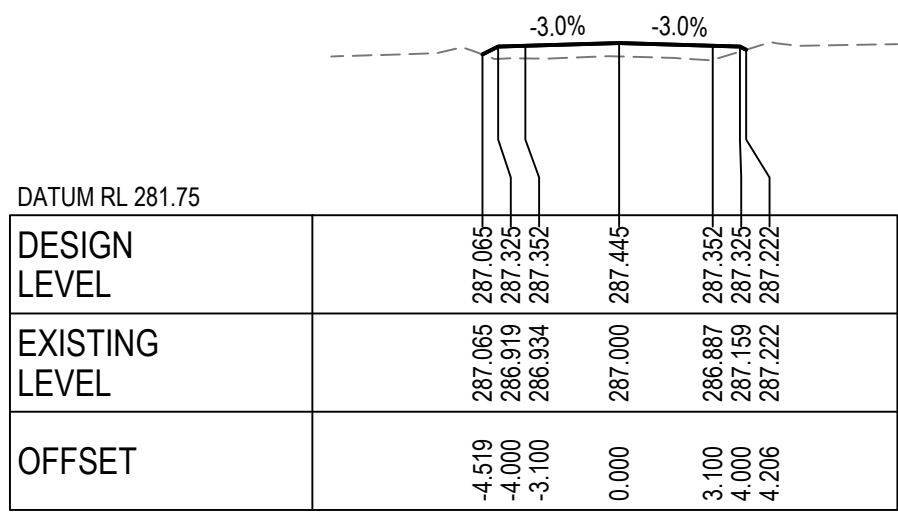
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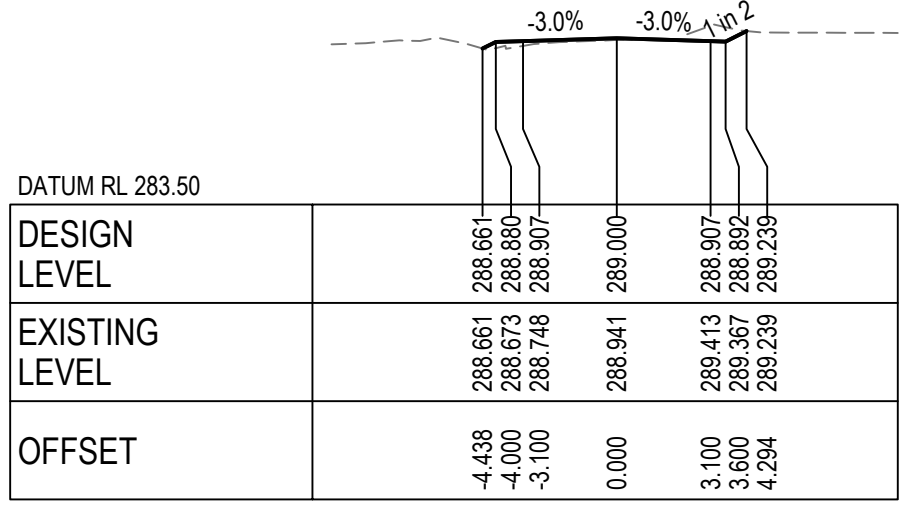
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Design A.M.	Date 05/09/2024	Title ROAD CROSS SECTIONS SHEET 3
Design Checked G.d.S.	Date 05/09/2024	Revision 7
Approved G.d.S.	Date 05/09/2024	Drawing Number P00549-CI-S138-1543

DATE PLOTTED: 4 September 2024 10:15 am BY: SHIRLEY PANOD

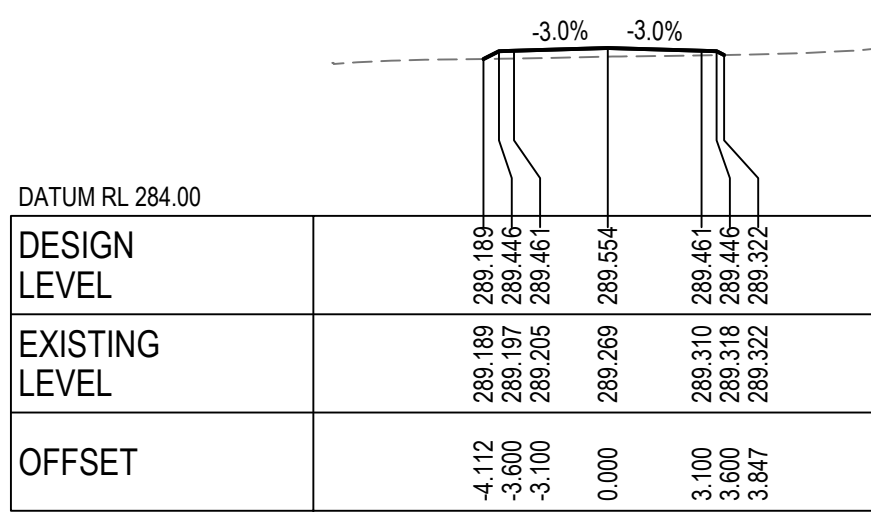
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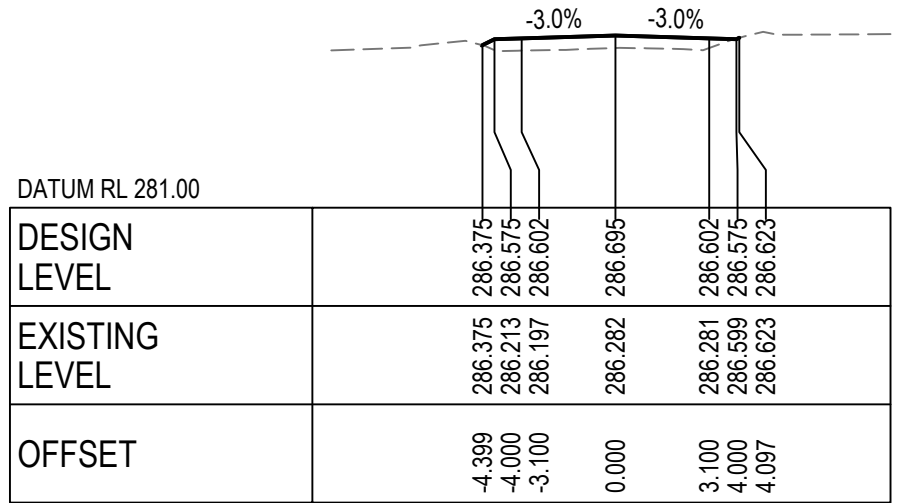
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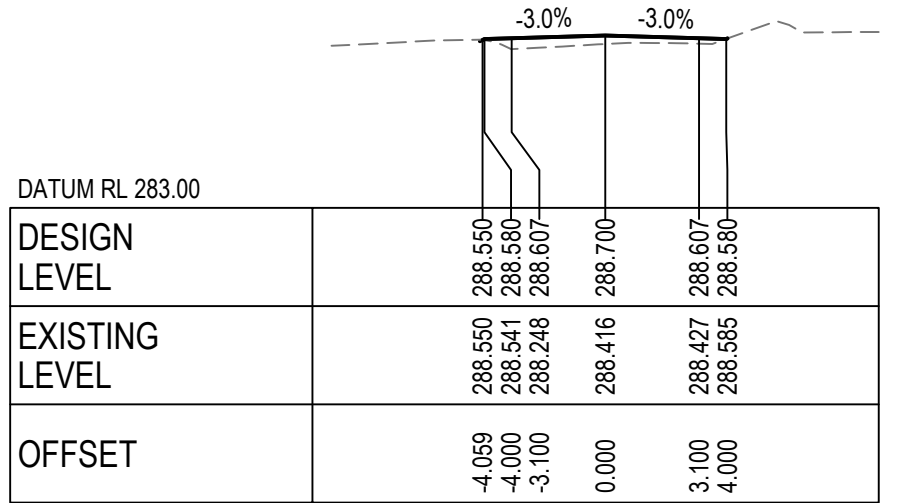
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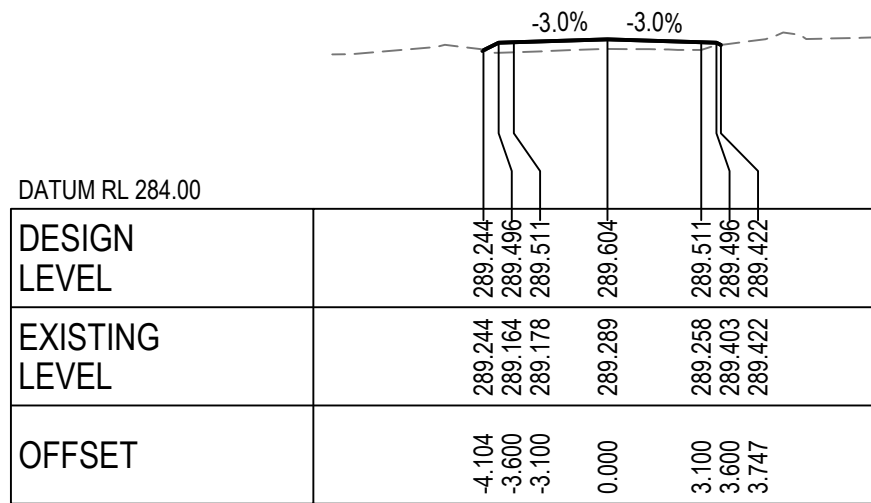
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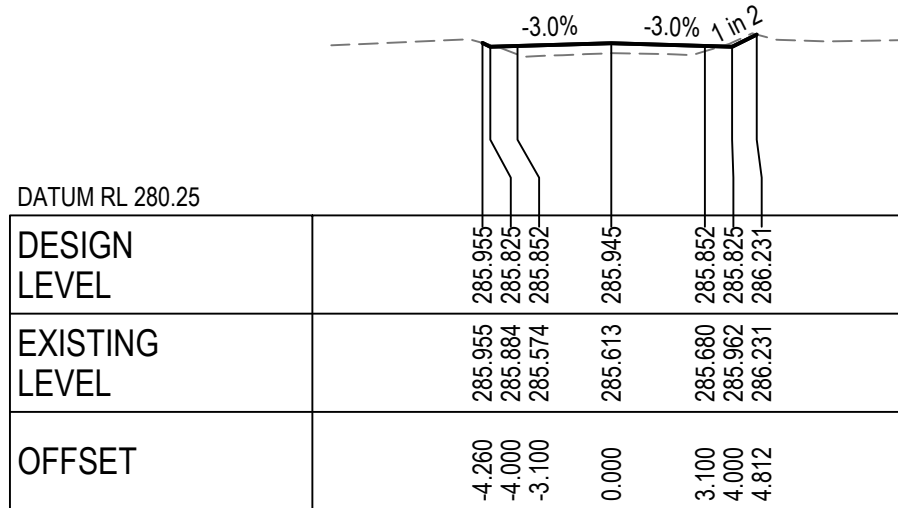
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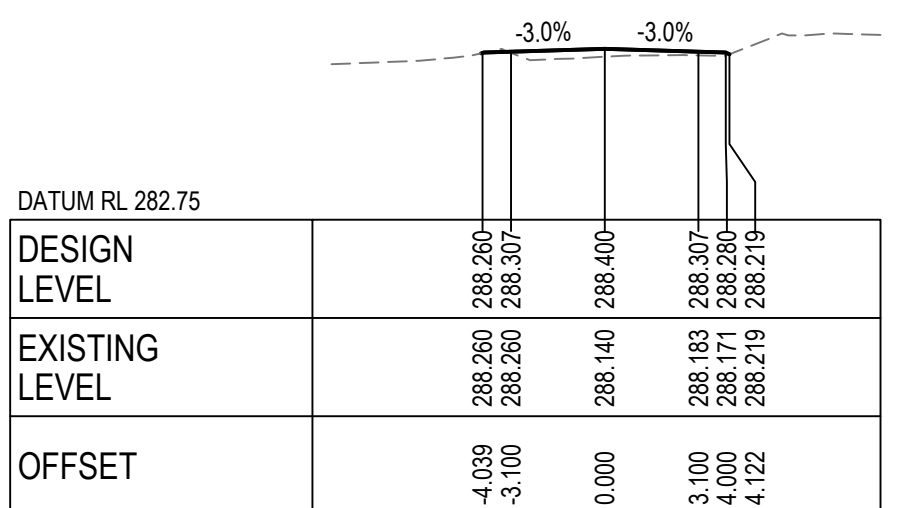
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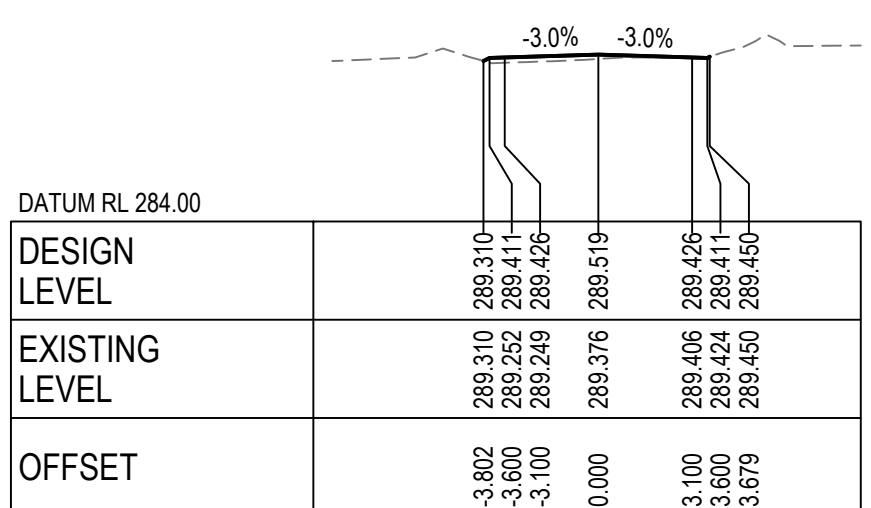
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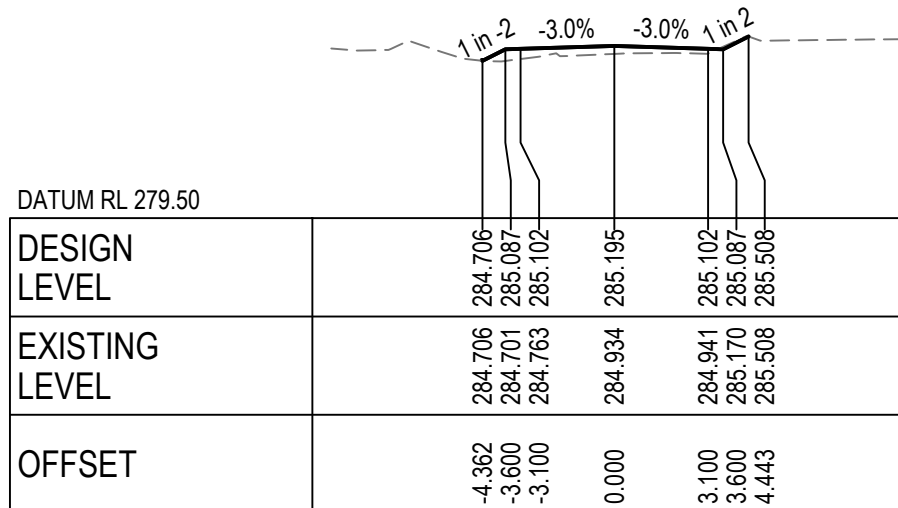
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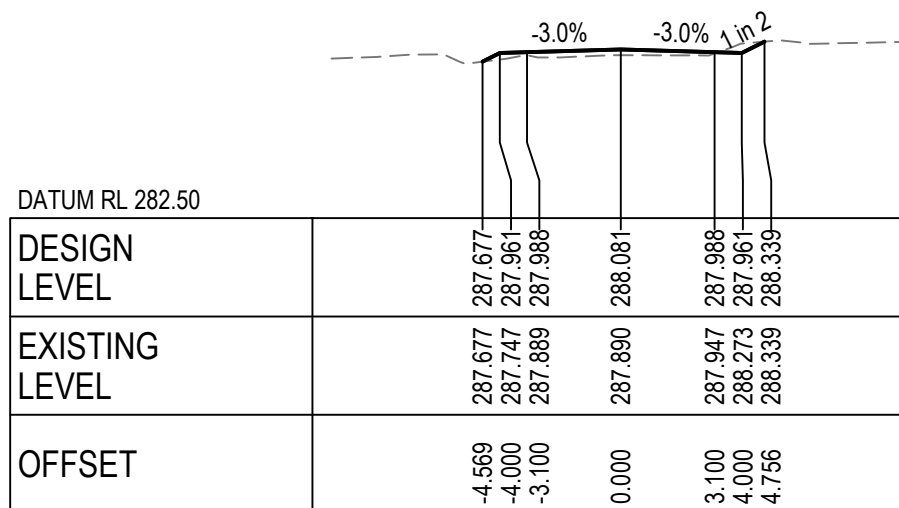
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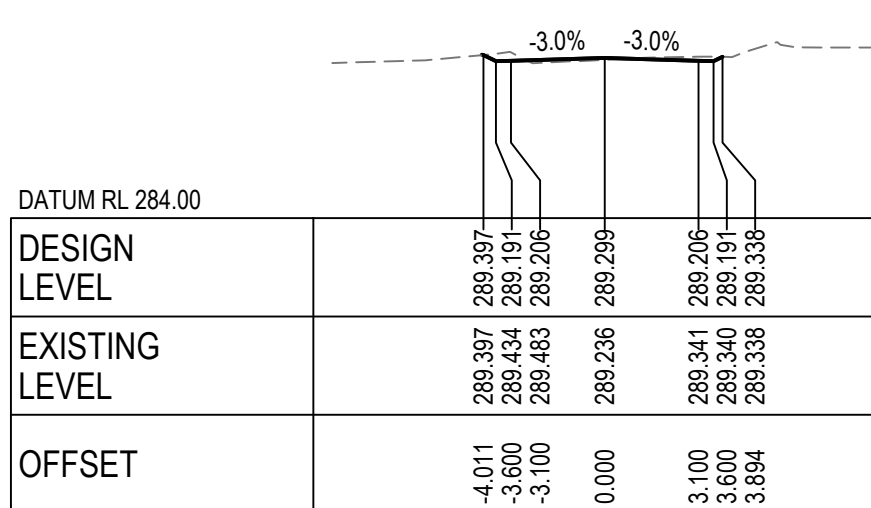
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CH 1650.000



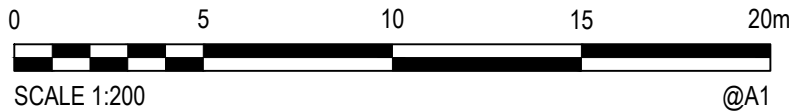
CH 1770.000



CH 1890.000

FOR S138 APPROVAL

Rev.	Date	Revision Description	Drawn	Design	Appd.
7	05/09/2024	ROAD AND PAVEMENT DESIGN UPDATES	P.S.	A.M.	G.d.s.
6	22/08/2024	ROAD AND PAVEMENT DESIGN UPDATES	C.M.	A.M.	G.d.s.
5	26/07/2024	ROAD AND PAVEMENT DESIGN UPDATES	P.S.	A.M.	G.d.s.
4	25/05/2023	RE-ISSUED FOR S138 APPROVAL	W.M.	A.M.	G.d.s.
3	06/04/2023	ISSUED FOR S138 APPROVAL	W.M.	A.M.	G.d.s.
2	23/02/2023	AMENDED TO COUNCIL COMMENTS	W.M.	A.M.	G.d.s.
1	16/01/2023	ISSUED FOR S138 APPROVAL	W.M.	A.M.	G.d.s.



PREPARED BY:

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A.H.D.

Coordinates
MGA 20

Size
A1

Drawn C.M.	Date 05/09/2024	Client X-ELIO PTY. LTD.
Drafting Checked P.S.	Date 05/09/2024	Project FOREST GLEN SOLAR FARM ACCESS ROAD
Design A.M.	Date 05/09/2024	Title ROAD CROSS SECTIONS SHEET 4
Design Checked G.d.s.	Date 05/09/2024	Revision 7
Approved G.d.s.	Date 05/09/2024	Drawing Number P00549-CI-S138-1544

Appendix B

Third Party Consultation



From: [Tulasi Lamichhane](#)
To: [Tom Dwyer](#)
Cc: [Peter James](#); [Musarrat Khan](#)
Subject: RE: Draft TMP for Comment - Forest Glen Solar Farm - SSD-9451258
Date: Thursday, 29 August 2024 4:14:08 PM
Attachments: [image001.png](#)
[image002.png](#)
[ATT00001.png](#)

Hi Tom,

Council Senior Traffic and Transport Engineer has reviewed the TMP for Forest Glen Solar Farm and approved it.

Can you please submit the modification report and updated plans due to the variation prior to commencement of the works.

Thank you.

Kind Regards,
Tulasi Lamichhane



Tulasi Lamichhane (He/Him)
Subdivision Engineer
Infrastructure Strategy & Design
P 02 6801 4927
Tulasi.Lamichhane@dubbo.nsw.gov.au

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From: Tom Dwyer <tdwyer@amberorg.com.au>
Sent: Thursday, August 8, 2024 10:18 AM
To: Tulasi Lamichhane <Tulasi.Lamichhane@dubbo.nsw.gov.au>
Cc: Peter James <Peter.James@dubbo.nsw.gov.au>
Subject: RE: Draft TMP for Comment - Forest Glen Solar Farm - SSD-9451258

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Hi Tulasi

Thanks for the update – do you happen to have an ETA?

Cheers

Tom

Tom Dwyer

BEng (CivInfra) (Hons) GradDipUrbPlanEnv MIEAust NER RPEV
Associate

Ph: +61 481 959 464



From: Tulasi Lamichhane <Tulasi.Lamichhane@dubbo.nsw.gov.au>
Sent: Thursday, August 8, 2024 10:16 AM
To: Tom Dwyer <tdwyer@amberorg.com.au>
Cc: Peter James <Peter.James@dubbo.nsw.gov.au>
Subject: RE: Draft TMP for Comment - Forest Glen Solar Farm - SSD-9451258

Hi Tom,

The TMP for Forest Glen Solar Farm is being reviewed by Council Senior Traffic Engineer and I will inform you about the outcome once the review is completed.

Thank you.

Kind Regards,
Tulasi Lamichhane



Tulasi Lamichhane (He/Him)
Subdivision Engineer
Infrastructure Strategy & Design
P 02 6801 4927
Tulasi.Lamichhane@dubbo.nsw.gov.au

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From: Tom Dwyer <tdwyer@amberorg.com.au>
Sent: Thursday, August 8, 2024 10:09 AM
To: Tulasi Lamichhane <Tulasi.Lamichhane@dubbo.nsw.gov.au>
Cc: Peter James <Peter.James@dubbo.nsw.gov.au>
Subject: RE: Draft TMP for Comment - Forest Glen Solar Farm - SSD-9451258

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resending the below as the file size was exceeded

Hi Tulasi

Just following up on comments to the draft TMP for the Forst Glen Solar Farm project.

The original email with TMP is also attached for reference.

Please don't hesitate to contact me with any questions or comments and look forward to hearing from you.

Kind regards
Tom

Tom Dwyer

BEng (CivInfra) (Hons) GradDipUrbPlanEnv MIEAust NER RPEV
Associate

Ph: +61 481 959 464



From: Tom Dwyer

Sent: Thursday, August 8, 2024 9:50 AM

To: Tulasi Lamichhane <Tulasi.Lamichhane@dubbo.nsw.gov.au>

Cc: Peter James <Peter.James@dubbo.nsw.gov.au>; steffi.fernando@x-elio.com; Oscar Sanz <oscar.sanz@x-elio.com>; David Canterbury <david.c@nghconsulting.com.au>; maddison.s@nghconsulting.com.au

Subject: RE: Draft TMP for Comment - Forest Glen Solar Farm - SSD-9451258

Hi Tulasi

Just following up on comments to the draft TMP for the Forst Glen Solar Farm project.

The original email and TMP are also attached for reference.

Please don't hesitate to contact me with any questions or comments and look forward to hearing from you.

Kind regards
Tom

Tom Dwyer

BEng (CivInfra) (Hons) GradDipUrbPlanEnv MIEAust NER RPEV
Associate

Ph: +61 481 959 464



From: Tom Dwyer

Sent: Friday, July 26, 2024 8:43 AM

To: Peter James <Peter.James@dubbo.nsw.gov.au>; Tulasi Lamichhane
<Tulasi.Lamichhane@dubbo.nsw.gov.au>

Subject: RE: Draft TMP for Comment - Forest Glen Solar Farm - SSD-9451258

Hi Peter

Thanks for the update – much appreciated.

[@Tulasi](#) feel free to be in touch with me if you have any questions as part of your review – my direct number is 0481 959 464.

Cheers

Tom

Tom Dwyer

BEng (CivInfra) (Hons) GradDipUrbPlanEnv MIEAust NER RPEV

Associate

Ph: +61 481 959 464



From: Peter James <Peter.James@dubbo.nsw.gov.au>

Sent: Friday, July 26, 2024 8:03 AM

To: Tom Dwyer <tdwyer@amberorg.com.au>

Cc: Tulasi Lamichhane <Tulasi.Lamichhane@dubbo.nsw.gov.au>

Subject: RE: Draft TMP for Comment - Forest Glen Solar Farm - SSD-9451258

Hi Tom,

I have forwarded your request to Tulasi Lamichhane, DRC Sub-division Engineer, for review and a response.

Let me know if you haven't heard back from him in a reasonable time please.

Thanks

Peter James



Senior Transport Asset Specialist
Infrastructure Delivery
P 02 6840 6409
Peter.James@dubbo.nsw.gov.au

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From: Tom Dwyer <tdwyer@amberorg.com.au>
Sent: Thursday, July 25, 2024 4:17 PM
To: Peter James <Peter.James@dubbo.nsw.gov.au>
Subject: RE: Draft TMP for Comment - Forest Glen Solar Farm - SSD-9451258

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Hi Peter

No – haven't had a response as yet – but thank you for following up and being in touch!

Cheers
Tom

Tom Dwyer
BEng (CivInfra) (Hons) GradDipUrbPlanEnv MIEAust NER RPEV
Associate

Ph: +61 481 959 464



From: Peter James <Peter.James@dubbo.nsw.gov.au>
Sent: Thursday, July 25, 2024 12:08 PM
To: Tom Dwyer <tdwyer@amberorg.com.au>
Subject: RE: Draft TMP for Comment - Forest Glen Solar Farm - SSD-9451258

Hi Tom,

Sorry for the late response, I have been on leave and have returned to a huge list of e-mails that I'm working through.

Has anyone from DRC responded to this yet?

If not, I'll chase it up with our Senior Traffic Engineer, Lachlan George.

Thanks



Peter James

Senior Transport Asset Specialist

Infrastructure Delivery

P 02 6840 6409

Peter.James@dubbo.nsw.gov.au

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From: Tom Dwyer <tdwyer@amberorg.com.au>

Sent: Tuesday, July 23, 2024 11:01 AM

To: Dubbo Regional Council <council@dubbo.nsw.gov.au>

Cc: Steffi Fernando <steffi.fernando@x-elio.com>; David Canterbury <david.c@nghconsulting.com.au>; Peter James <Peter.James@dubbo.nsw.gov.au>; Darryll Quigley <Darryll.Quigley@dubbo.nsw.gov.au>

Subject: Draft TMP for Comment - Forest Glen Solar Farm - SSD-9451258

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Hi there

Amber is assisting with the preparation of a TMP in relation to the Forest Glen Solar Farm which was approved in February 2023 (refer: [Forest Glen Solar Farm | Planning Portal - Department of Planning and Environment \(nsw.gov.au\)](#)).

We're seeking your feedback on the draft TMP with an aim to enable construction later this year.

A couple of items to note:

- The road design plans are currently being finalised. The TMP will be updated with finalised plans and consultation feedback in due course.
- The TMP is to be staged with the first stage (to which this applies) only applicable to the road upgrades.

I'd be happy to discuss if you have any questions or comments – don't hesitate to be in touch.

Kind regards
Tom

Tom Dwyer

BEng (CivInfra) (Hons) GradDipUrbPlanEnv MIEAust NER RPEV
Associate

Ph: +61 481 959 464



From: [Ruvimbo Timba](#)
To: [Tom Dwyer](#)
Cc: [Steffi Fernando](#); [Development Renewables](#); [David Canterbury](#); [Maddy Shaw](#); [Oscar Sanz](#)
Subject: Re: WST24/00287 - Draft TMP for Comment - Forest Glen Solar Farm - SSD-9451258
Date: Monday, 19 August 2024 9:13:41 AM
Attachments: [image001.png](#)
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[Outlook-425dikok.png](#)
[Outlook-iyvalkh1.png](#)
[TfNSW reply to NGH SSD-9451258 .pdf](#)

Good Morning David and Tom,

Please find attached TfNSW response to the draft TMP which has also been uploaded to the portal.

Ruvimbo Timba

Development Services Case Officer - Renewables
Development Services West
Regional and Outer Metropolitan
Transport for NSW

M 0473627129 E development.renewables@transport.nsw.gov.au

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From: Ruvimbo Timba <Ruvimbo.Timba@transport.nsw.gov.au>
Sent: Thursday, 8 August 2024 3:18 PM
To: Tom Dwyer <tdwyer@amberorg.com.au>
Cc: Steffi Fernando <steffi.fernando@x-elio.com>; Development Renewables <development.renewables@transport.nsw.gov.au>; David Canterbury <david.c@nghconsulting.com.au>; Maddy Shaw <maddison.s@nghconsulting.com.au>; Oscar Sanz <oscar.sanz@x-elio.com>
Subject: Re: WST24/00287 - Draft TMP for Comment - Forest Glen Solar Farm - SSD-9451258

Hi Tom,

This one is still under assessment but I aiming towards having comments back by the deadline in the portal, so on or before the 21st of August.

I will reach out if I have any questions or concerns before then.

Ruvimbo Timba

Development Services Case Officer - Renewables
Development Services West
Regional and Outer Metropolitan
Transport for NSW

M 0473627129 E development.renewables@transport.nsw.gov.au

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transport.nsw.gov.au



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for NSW**



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Please consider the environment before printing this email.

From: Tom Dwyer <tdwyer@amberorg.com.au>
Sent: Thursday, 8 August 2024 9:54 AM
To: Ruvimbo Timba <Ruvimbo.Timba@transport.nsw.gov.au>
Cc: Steffi Fernando <steffi.fernando@x-elio.com>; Development Renewables <development.renewables@transport.nsw.gov.au>; David Canterbury <david.c@nghconsulting.com.au>; Maddy Shaw <maddison.s@nghconsulting.com.au>; Oscar Sanz <oscar.sanz@x-elio.com>
Subject: RE: WST24/00287 - Draft TMP for Comment - Forest Glen Solar Farm - SSD-9451258

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Hi Ruvimbo

Just politely following up to see if there were any comments on the TMP – original email and TMP are also attached for reference.

Please don't hesitate to contact me with any questions or comments and look forward to hearing from you.

Kind regards
Tom

Tom Dwyer
BEng (CivInfra) (Hons) GradDipUrbPlanEnv MIEAust NER RPEV
Associate
Ph: +61 481 959 464



OFFICIAL

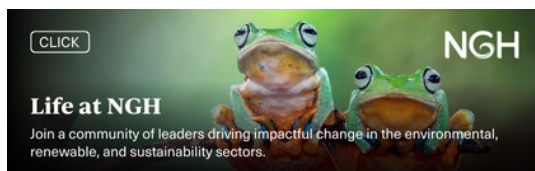
From: David Canterbury <david.c@nghconsulting.com.au>
Sent: Wednesday, July 24, 2024 2:27 PM
To: Ruvimbo Timba <Ruvimbo.Timba@transport.nsw.gov.au>; Development Renewables <development.renewables@transport.nsw.gov.au>; Tom Dwyer <tdwyer@amberorg.com.au>
Cc: Steffi Fernando <steffi.fernando@x-elio.com>
Subject: RE: WST24/00287 - Draft TMP for Comment - Forest Glen Solar Farm - SSD-9451258

Thanks Ruvimbo,

I can confirm the document uploaded to the portal was the same as the one provided by email.

Kind regards,

David Canterbury
Project Manager
m: 0403709813
e: david.c@nghconsulting.com.au
w: nghconsulting.com.au | [Our commitment to reconciliation](#)



From: Ruvimbo Timba <Ruvimbo.Timba@transport.nsw.gov.au>
Sent: Wednesday, July 24, 2024 2:24 PM
To: David Canterbury <david.c@nghconsulting.com.au>; Development Renewables <development.renewables@transport.nsw.gov.au>; Tom Dwyer <tdwyer@amberorg.com.au>
Cc: Steffi Fernando <steffi.fernando@x-elio.com>
Subject: Re: WST24/00287 - Draft TMP for Comment - Forest Glen Solar Farm - SSD-9451258

Hi David,

No need to withdraw, as long as you can confirm the documents provided via email and via the portal are the same, so we make sure we are reviewing the most up to date version of the report.

Ruvimbo Timba

Development Services Case Officer - Renewables
Development Services West
Regional and Outer Metropolitan
Transport for NSW

M 0473627129 E development.renewables@transport.nsw.gov.au

I work flexibly. Unless it suits you, I don't expect you to read or respond to my emails outside of your normal work hours.

transport.nsw.gov.au



Transport
for NSW



I acknowledge the Aboriginal people of the country on which I work, their traditions, culture and a shared history and identity. I also pay my respects to Elders past and present and recognise the continued connection to country.

Please consider the environment before printing this email.

OFFICIAL

From: David Canterbury <david.c@nghconsulting.com.au>

Sent: Wednesday, 24 July 2024 1:32 PM

To: Development Renewables <development.renewables@transport.nsw.gov.au>; Tom Dwyer <tdwyer@amberorg.com.au>; Ruvimbo Timba <Ruvimbo.Timba@transport.nsw.gov.au>

Cc: Steffi Fernando <steffi.fernando@x-elio.com>

Subject: RE: WST24/00287 - Draft TMP for Comment - Forest Glen Solar Farm - SSD-9451258

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Hi all,

I wasn't sure if this needed to be lodged through the Major Projects Portal so I have submitted it this morning along with our other Management Plans. [@Ruvimbo Timba](#) can please let me know if we are doubling up and if you need me to withdraw it from the portal.

Kind regards,

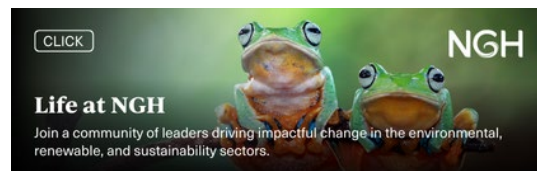
David Canterbury

Project Manager

m: 0403709813

e: david.c@nghconsulting.com.au

w: nghconsulting.com.au | [Our commitment to reconciliation](#)



OFFICIAL

From: Development Renewables <development.renewables@transport.nsw.gov.au>

Sent: Tuesday, July 23, 2024 3:12 PM

To: Tom Dwyer <tdwyer@amberorg.com.au>; Ruvimbo Timba <Ruvimbo.Timba@transport.nsw.gov.au>

Cc: David Canterbury <david.c@nghconsulting.com.au>; Steffi Fernando <steffi.fernando@x-elio.com>

Subject: WST24/00287 - Draft TMP for Comment - Forest Glen Solar Farm - SSD-9451258

Hi Tom,

I can confirm the Development Services West (Renewables) team has received your email.

The development assessment officer assigned to this matter is Ruvimbo Timba who can be reached at - ruvimbo.timba@transport.nsw.gov.au.

Reference - WST24/0287

Please ensure any future correspondence is sent to development.renewables@transport.nsw.gov.au.

Kind Regards,

Rosa Gillogly
Development Assessment Support Officer
Development Services West
Regional and Outer Metropolitan
Transport for NSW

E rosa.gillogly@transport.nsw.gov.au

transport.nsw.gov.au

Level 1 51-55 Currajong Street
Parkes NSW 2870

I work flexibly. Unless it suits you, I don't expect you to read or respond to my emails outside of your normal work hours.



**Transport
for NSW**



I recognise and acknowledge that modern New South Wales is an overlay on Aboriginal land and that many of the transport routes of today follow songlines Aboriginal people have followed for tens of thousands of years. I pay my respects to the Aboriginal people of NSW and Elders past and present.

Please consider the environment before printing this email.

OFFICIAL

From: Tom Dwyer <tdwyer@amberorg.com.au>

Sent: Tuesday, July 23, 2024 9:04 AM

To: Development Renewables <development.renewables@transport.nsw.gov.au>

Cc: David Canterbury <david.c@nghconsulting.com.au>; Steffi Fernando <steffi.fernando@x-elio.com>

Subject: Draft TMP for Comment - Forest Glen Solar Farm - SSD-9451258

You don't often get email from tdwyer@amberorg.com.au. [Learn why this is important](#)

CAUTION: This email is sent from an external source. Do not click any links or open attachments unless you recognise the sender and know the content is safe.

Hi there

Amber is assisting with the preparation of a TMP in relation to the Forest Glen Solar Farm which was approved in February 2023 (refer: [Forest Glen Solar Farm Planning Portal - Department of Planning and Environment \(nsw.gov.au\)](#)).

We're seeking your feedback on the draft TMP with an aim to enable construction later this year.

A couple of items to note:

- The road design plans are currently being finalised with feedback from Council. The TMP will be updated with finalised plans and consultation feedback in due course.
- The TMP is to be staged with the first stage (to which this applies) only applicable to the road upgrades.

I'd be happy to discuss if you have any questions or comments – don't hesitate to be in touch.

Kind regards
Tom

Tom Dwyer
BEng (CivInfra) (Hons) GradDipUrbPlanEnv MIEAust NER RPEV
Associate

Ph: +61 481 959 464



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Consider the environment. Please don't print this e-mail unless really necessary.

19 August 2024

TfNSW reference: WST24/00287/001, SF2024/139758

Your reference: SSD-9451258 (PAE-73824732)

David Canterbury
Project Manager
NGH Consulting
By Email: david.c@nghconsulting.com.au

Review of Draft Traffic Management Plan for Forest Glen Solar Farm – Stage 1

Dear David,

Reference is made to the draft Traffic Management Plan (TMP) submitted for Transport for NSW's (TfNSW) consideration in accordance with consent Condition B8 of Notice of Determination for SSD-9451258 issued on 28 February 2023.

TfNSW has reviewed the draft TMP for Stage 1 prepared by Amber Consulting, dated July 2024. The draft TMP is in accordance with conditions B1, B2, B3 and B8 of the Notice of Determination. TfNSW recommends the following change: Table 1 of the TMP incorrectly references Appendix A for the Drivers Code of Conduct, the correct reference should be Appendix C.

The Planning Secretary should be satisfied that the above matter has been adequately addressed prior to approving the TMP.

If you have any questions, please contact Ruvimbo Timba, Development Services Case Officer on 1300 019 680 or email development.renewables@transport.nsw.gov.au

Yours faithfully

A handwritten signature in blue ink, appearing to read "Andrew McIntyre".

Andrew McIntyre
Manager Development Services – West
Community and Place
Regional and Outer Metropolitan

Cc. Energy Assessments, Department of Planning, Housing and Infrastructure

OFFICIAL

Manuela Nieto Garcia
Country Manager – X-ELIO Australia
Level 4, 80 Market Street
Melbourne 3205

06th August 2024

Peter James
Dubbo Regional Council
Church St & Darling St
Dubbo, NSW, 2830

Dear Mr James,

Subject: Forest Glen (SSD: 9451258) permission for concurrent works and access road upgrades

I am writing formally to request permission from Dubbo Regional Council for approval of two vital aspects relating to Forest Glen Solar Farm.

Request 1: Permission to complete Access Road Upgrades in accordance with the Staged approach

In line with our request from 04th July 2024, we seek approval from Dubbo Regional Council to proceed with the upgrades to the access road in a staged manner.

- **Stage 1:** Minor upgrades, which would entail (but are not limited to) the following activities.
 - Repair of existing creek crossing on Delroy Road, which is exhibiting stress fractures on the road surface.
 - Widening of the road where required to allow safe egress of construction vehicles.
 - Maintenance grading, placement of gravel, and compaction.
 - Reduction of the road speed limit/s as and if required.
- **Stage 2:** Final road upgrades which will include updating the entire Delroy Road, including the intersections, and sealing with bitumen with full costs to be undertaken by X-ELIO.

Upon approval from Dubbo Regional Council, further assessments (such as a swept path analysis) will be conducted by X-ELIO to ensure all upgrades remain within the development footprint and minimise impacts on areas with potential biodiversity concerns.

Request 2: Permission to complete Site Compound works in parallel with Stage 1 Access Road Upgrades

We seek approval to commence and complete the site compound works for Forest Glen in parallel to completing Stage 1 Access Road upgrades as outlined above. This will include the site compound and logistics area (including hardstand), and fencing works essential for the overall project development.

Currently, Department of Planning, Housing, and Infrastructure view “site compound works” as construction activities which sequentially follow pre-construction activities such as access road upgrades. However, with Dubbo Regional Council’s approval of the concurrent approach, X-ELIO can commence access road upgrades, and in parallel complete site compound works.

This site compound will serve as a central location for storage of materials and coordination of construction activities. All works will comply with relevant regulations and standards to ensure safety and minimal disruption to the surrounding area and neighbours. In addition, all management plans relevant to construction (as defined in the conditions of consent) will be in place at this time.

The purpose of the concurrent approach is to prevent further delays to the project, and ensure construction is kept to a compact schedule, minimising impact on the surrounding community.

We believe that these requests are critical for the successful completion of the Forest Glen Solar Farm and are committed to working closely with Dubbo Regional Council to ensure all activities are conducted in compliance with relevant regulations and standards.

Please let us know if there are any specific conditions or additional information required to facilitate the approval process.

Thank you and we look forward to your response.

Yours sincerely,

Manuela Nieto Garcia



Country Manager
X-ELIO Australia

12/1010
ED24/171038
PJ:KCB



19 September 2024

Manuela Nieto Garcia
Country Manager
X-ELIO Australia
Level 4 80 Market Street
MELBOURNE VIC 3205
manuela.nieto@x-elio.com

Dear Manuela

**FOREST GLEN - PERMISSION FOR CONCURRENT WORKS AND ACCESS ROAD UPGRADES
YOUR REF: SSD:9451258**

I refer to your letter dated 6 August 2024 in relation to requests for concurrent works and access road upgrades associated with the Forest Glen Solar Farm.

Council can confirm that upon acceptance by X-Elio Australia of the following requirements, that a two stage approach for the upgrades of the Delroy Road will be accepted by Dubbo Regional Council.

Request 1: Permission to complete access road upgrades in accordance with the staged approach

- Stage 1: Upgrades which would include, but would not be limited to the following activities:
 - Repair of existing creek crossing on Delroy Road, which is exhibiting stress fractures on the road surface.
 - Widening of the road where required to allow safe egress of construction vehicles.
 - Maintenance grading, placement of gravel, and compaction.
 - Reduction of the road speed limit/s as and if required.
- **Stage 2:** Final road upgrades which would include updating the entire Delroy Road, including the intersections, and sealing with bitumen with full costs to be undertaken by X-ELIO



All communications to: **CHIEF EXECUTIVE OFFICER**

ABN 53 539 070 928

PO Box 81 Dubbo NSW 2830

T (02) 6801 4000 **F** (02) 6801 4259 **E** council@dubbo.nsw.gov.au

Civic Administration Building Church St Dubbo NSW 2830

W dubbo.nsw.gov.au

That upon approval from Council, further assessments (such as a swept path analysis) will be conducted by X-ELIO to ensure all upgrades remain within the development footprint and minimise impacts on areas with potential biodiversity concerns.

Requirements for request 1:

1. Following completion of the Stage 1 road upgrades, and during Solar farm haulage and construction activities, dust is to be suppressed on the Delroy Road by watering or other approved method.
Purpose: To reduce nuisance dust and to ensure public safety
2. Prior to the commencement of the Solar Farm commercial operations, the sections of Lot 51 DP755094 and Lot 52 DP755094 that are currently being used as Public Road shall be acquired and dedicated as Public Road at full cost to X-Elio Australia.
Purpose: To formalise the Public Road reserve and to vest to Dubbo Regional Council.
3. X-Elio Australia is to provide Dubbo Regional Council with a cost estimate to undertake the Delroy Road stage 2 road works.
Purpose: To allow the calculation of the “agreed value” of a cash bond or an original bank guarantee.
4. If in the opinion of Dubbo Regional Council the value of the cost estimate is insufficient to undertake the Delroy Road Stage 2 works, Council will undertake an internal cost estimate for use to calculate the ‘agreed value’.
Purpose: To allow the calculation of the ‘agreed value’ of a cash bond or an original bank guarantee.
5. X-Elio Australia is required to enter into a formal bond agreement with Dubbo Regional Council for the ‘agreed value’ of the Stage 2 Delroy Roadworks.
Purpose: To ensure that, if necessary, sufficient funds are available for Council to complete all or part of the Delroy Road Stage 2 road works.
6. If all or part of the Stage 2 road works have not been completed to the satisfaction of Dubbo Regional Council all or part of the cash bond or bank guarantee will be retained and used by Dubbo Regional Council to complete the Stage 2 road works, as necessary.
Purpose: To ensure that, if necessary, sufficient funds are available for Council to complete all or part of the Delroy Road Stage 2 road works.
7. At the completion of the 12 month term of the cash bond or original bank guarantee, and if the Applicant has completed all of the Stage 2 road works to Councils satisfaction, the cash bond / bank guarantee will be returned to X-Elio Australia.
Purpose: To ensure that the bond/bank guarantee is returned to the applicant.
8. In the event that Council is required to undertake all or part of the Stage 2 road works, any remaining cash bond / bank guarantee funds that have not been expended during the Stage 2 road works will be returned to X-Elio Australia.
Purpose: To ensure that, if necessary, sufficient funds are available for Council to complete all or part of the Delroy Road Stage 2 road works and that the unused portion of the cash bond/bank guarantee is returned to the applicant.

Request 2: Permission to complete site compound works in parallel with Stage 1 access road upgrades

Council can confirm that your request to complete site compound works in parallel to the Stage1 access road is acceptable to Council. This includes works for the site compound and logistics area (including hardstand), and fencing works essential for the overall project development.

The proposed access road upgrades (stages 1 & 2) shall be incorporated into documentation such as an addendum to the Modification Report dated November 2023, Traffic Management Plan and the like, to ensure that the proposal and requirements are reviewed and ultimately determined by the Department.

A number of the requirements are in essence 'development conditions' and these may need to be discussed further with the Department.

Should you have any enquiries in this matter, please do not hesitate to contact Council's Senior Transport Asset Specialist, Peter James, during normal office hours on 0428 634 034.

Yours faithfully



Luke Ryan
Director Infrastructure

cc: steffi.fernando@x-elio.com

17 February 2025

TfNSW reference: WST00287/002 | SF2024/139758

Your reference: SSD-9451258 | PAE-76157709

David Canterbury
NGH Consulting
By Email: david.c@nghconsulting.com.au

Cc. Energy Assessments, Department of Planning, Housing and Infrastructure

Review of Traffic Management Plan for Forest Glen Solar Farm Stage 2a

Dear David,

Reference is made to the Traffic Management Plan (TMP) submitted for Transport for NSW (TfNSW) consideration in accordance with consent Condition B8 of Notice of Determination for SSD-9451258, issued 28 February 2023.

TfNSW has reviewed the TMP prepared by Amber Organisation (Revision A), dated 20 January 2025. TfNSW requires the following matters to be addressed within a revised TMP: TfNSW requests a further review of the revised TMP prior to submission to DPHI for approval.

Additional matters to be addressed within the revised TMP:

1. Include Table 4 in Section 6.1 of the approved TIA for the project.
2. Confirm no impact on bus routes on the state road network, including school bus routes.
3. Outline the procedures to ensure compliance with the driver's code of conduct, including adhering to transport routes, speed limits, and safe driving practices.

If you have any questions, please contact Emily Lu, Development Services Case Officer on 1300 019 680 or email development.renewables@transport.nsw.gov.au

Yours faithfully,



Alexandra Power
Team Leader Development Services – Renewables
Transport Planning
Planning, Integration & Passenger

Cc. Energy Assessments, Department of Planning, Housing and Infrastructure

OFFICIAL

Appendix C

Driver Code of Conduct



Driver Code of Conduct

This code of conduct applies to all light and heavy vehicle drivers, and heavy vehicles requiring escort drivers, that regularly visit the site. They are required to read, agree to, and sign the Driver Code of Conduct.

This code of conduct will be communicated to all site workers during the site induction process. Workers will be reminded of the requirements of the code of conduct weekly in toolbox meetings.

The Driver Code of Conduct is to be enforced by the Applicant, and records of the code are to be stored and maintained by the Applicant.

Safe Driving Principles

The operators of all vehicles associated with the site shall respect all other road users. All on-site staff will receive a site induction, which will include:

- Details regarding the TMP and this code of conduct;
- Details of speed limit signs;
- Information on fatigue management;
- Reinforcement that they must drive to conditions;
- Details of vehicle inspections including maintenance records and risk assessments; and
- Details of inspections, and audits.

Regular toolbox meetings will be held to maintain awareness of required controls. Details of the traffic and access training and induction will focus on:

- Objectives of the TMP;
- Performance goals, which include:
 - To complete the solar farm with no Injuries,
 - Safety Key Performance Indicators (KPI's) to be completed including inspections, audits, and training.
- Access routes that are to be adopted as outlined within the TMP;
- Mitigation measures required to be implemented;
- Traffic and access monitoring and reporting requirements; and
- Incident investigation and response protocols.

Training is to be provided prior to start-up of any traffic and access related management tasks and updated if task, equipment or procedures are expected to, or have changed.

Primary Driver Code

The following requirements shall be adhered to at all times:

- Obey all laws and regulations.
- Do not drive whilst under the influence of alcohol, drugs, nor any medication which may affect ability to drive.
- Be medically fit to drive and must inform site coordinators if they have any medical condition which may affect their ability to drive.
- Drive in a considerate manner and respect the rights of others to use and share the road space.
- Report all vehicle defects to their employer. Serious defects (e.g. e.g. brakes, steering) must be corrected immediately, or an alternative vehicle supplied.
- Any vehicle incident resulting in injury or significant damage to property must be reported to the police.
- Report any near misses.
- Always adhere to the site working hours.
- Securely fasten and cover load with the appropriate use of ratchets straps, tarpaulins or covers (loose material), chains and load binders, for example. Relevant vehicular load limits are not to be exceeded and all loads are to be suitably balanced. The maximum rear overhang shall not exceed limits under by relevant road rules for respective vehicle types.
- Keep their vehicle clean and in good mechanical condition to reduce the environmental impact.
- Extra care should be taken when driving at dawn or dusk, being particularly watchful for wildlife and/or livestock.
- Vehicles must give way to pedestrians, cranes, forklifts, mobile plant, emergency vehicles and livestock.
- Drivers must adhere to the required access routes outlined within the TMP (Section 3.6.2 and 3.6.3 of the TMP).

The following provides further guidance as the required safety procedures for specific incidences:

- Drivers travelling to or from the site must do so safely, in full compliance with the law, including in respect of speed limits, following distances, forward sight when overtaking, being able to stop within the length of road visible (or half the length on roads without centrelines), and not driving carelessly or dangerously;
- Timing of deliveries are to be coordinated by the Applicant in order to prevent heavy vehicles travelling through school zones during peak times;
- When aware of any emergency vehicles, approaching from in front or behind, drivers must pull over well in advance to provide unimpeded movement;
- Drivers must reduce their speed and or stop in accordance with the law when passing a school bus which is slowing down, stopped, or accelerating in relation to picking up or setting down children;
- Drivers must reduce their speed in accordance with the law when:
 - Passing children walking, cycling or waiting on the side of the road;

- Passing an oncoming school bus;
- Passing someone riding or leading a horse along the road;
- Approaching an area where a stock shift is known to be occurring.
- Truck drivers must not use engine brakes in built up areas, except where the load being carried and the grade of the road make use of such braking absolutely necessary for safe driving;
- Truck drivers travelling on school bus routes at the same time as an oncoming school bus to use their CB radio to identify the location of the bus and pull over in a safe location before the school bus reaches and passes them;
- Truck drivers are to let traffic behind them pass at regular locations including those opportunities that occur at intersections, wide driveways, sections of road with adequate forward sight distance, gravel pits etc; and
- Dedicated rest stops are to be established and utilised by drivers to reduce driver fatigue.

Chain of Responsibility

Corporate entities, directors, partners, and managers are accountable for the actions of individuals under their supervision, even if not directly involved in driving or operating a heavy vehicle under the Heavy Vehicle National Law (HVNL). This is referred to as the "Chain of Responsibility" (CoR).

All entities on the CoR will be made aware of the Driver Code of Conduct, along with the responsibilities associated with safe loading practices and fatigue management.

Emergency Procedures

In the event of a breakdown, accident or road failure, the transporter crew shall do the following:

- Park the truck in locations where they maximise safety, considering overhanging components, and blind bends on approaches;
- Contact emergency services (including Police) as is appropriate in the case of an accident;
- Contact the project manager;
- Contact the Council or other road controlling authority as may be appropriate in the case of the incident;
- Contact the site manager to advise all other project traffic, and local traffic via CB radio as appropriate in the case of the incident; and
- Follow all instructions from Police and the road controlling authority.

In the case of an accident, the vehicles involved should not be moved until instructed by Police.

Driver Fatigue

Journey Management Plans

If a person travels more than 100 kilometres because of construction activities in a single trip, then a Journey Management Plan will be required. The person that the Journey Management Plan is for will be required to have breaks every two hours and contact a nominated person and once

they have reached their destination contact the nominated person to let them know they have reached their destination.

The Applicant will identify areas where there is a higher risk of workers becoming fatigued (such as long shifts or physically onerous tasks) and implement control measures to mitigate the risk. This includes ensuring sufficient breaks and rotating staff shifts.

Heavy Vehicle Fatigue Management

In addition to the measure outlines above, there are regulations that apply to heavy vehicles that come from the HVNL which is maintained and improved by the National Transport Commission (NTC) and administered and enforced by the National Heavy Vehicle Regulator (NHVR). The HVNL applies in all states and territories except Western Australia and the Northern Territory and commenced in 2014.

One of the five regulations is the Heavy Vehicle (Fatigue Management) National Regulation, which recognises that fatigue is a key risk and one of the biggest causes of crashes for heavy vehicle drivers.

The fatigue management regulations have four key requirements that apply not just to drivers and all other parties in the Chain of Responsibility (CoR):

- Drivers must not drive a fatigue regulated heavy vehicle on a road while impaired by fatigue. Other parties in the CoR must ensure they prevent a driver from doing this.
- Drivers must work within set limits and have minimum rest requirements. Other parties must not ask or allow drivers to exceed these limits.
- Drivers (or in some cases a driver's record keeper) must make an accurate and complete record of their work and rest time in either a National Driver Work Diary or, if driving within an area with a radius of 100km of the driver's base, alternative work records.
- Drivers must provide their work and rest records to their record keeper within set time frames. A record keeper must retain these records for three years.

Failure to comply with these requirements can result in enforcement action from the NHVR.

A copy of NHVR's Heavy vehicle driver fatigue requirements bulletin is attached in Appendix D. This document outlines the relevant requirements and includes links to further information related to work diaries, CoR, accreditation, trip plans, and safety management systems. This information is to be used and followed when applicable.

Maintenance Requirements

The operators of all vehicles associated with the site shall maintain a high level of maintenance. The following requirements shall be adhered to at all times:

- Ensure their vehicle complies with relevant State legislation in relation to roadworthiness and modifications;
- Undergo regular vehicle checks and maintenance; and
- Ensure their vehicles have correctly fitted mufflers to minimise noise disturbance.

Complaint Resolution and Disciplinary Procedure

All traffic related complaints will be managed in accordance with Section 9.5 of this TMP. All complaints will be collated via the following means and be responded within two business days:

Failure to comply with these complaint management procedures for safe transport may result in disciplinary action. Any subsequent breaches identified by the system shall result in disciplinary action.

Appendix D

NHVR Heavy Vehicle Driver Fatigue Requirements

Heavy vehicle driver fatigue requirements

Compliance and Enforcement bulletin 7

This bulletin provides practical advice to help heavy vehicle drivers and other parties to comply with the requirements of the Heavy Vehicle National Law (HVNL) as they relate to heavy vehicle driver fatigue.

What are my obligations under the HVNL?

Amendments to the HVNL in 2018 will introduce 'safety duties' that must be met by all parties in the Chain of Responsibility (CoR). This requirement means that all parties have a duty to ensure the safety of their transport activities, so far as is reasonably practicable.

Responsible parties in the chain include: employers, prime contractors, operators, schedulers, consignors, consignees, packers, loading managers, loaders, and unloaders.

In addition, the executive officers of each party in the chain must exercise 'due diligence' to ensure the safety of their business's transport activities. The law will require executive officers to:

- keep up-to-date with the safe conduct of transport activities in their business
- fully understand the hazards and risks associated with their transport activities and how these are being managed
- provide appropriate resources—including people, systems and equipment—to manage their safety hazards and risks effectively.

In terms of heavy vehicle driver fatigue, the safety duties provision of the HVNL places a requirement on responsible parties to prevent a driver from driving any heavy vehicle whilst fatigued, not just fatigue-regulated heavy vehicles.

These safety duties extend to identifying any fatigue risks to prevent or reduce potential harm or loss, to yourself and others.

What are the HVNL fatigue requirements?

Driver fatigue is a leading contributor to heavy vehicle crashes in Australia, with some studies showing fatigue involved in one eighth of Australian heavy vehicle crashes.

To assist drivers and operators of heavy vehicles to avoid driver fatigue, the HVNL sets four key requirements.



Four key HVNL requirements to avoid driver fatigue

Requirement	Description
1. Don't drive a heavy vehicle while fatigued	Drivers must not drive a fatigue-regulated heavy vehicle on a road while impaired by fatigue. Other parties in the CoR must ensure they prevent a driver from doing this.
2. Work within set limits	Drivers must work within set limits and have minimum rest requirements. Other parties must not ask or allow drivers to exceed these limits.
3. Keep work and rest records	Drivers (or in some cases a driver's record keeper) must make an accurate and complete record of their work and rest time in either a National Driver Work Diary or, if driving within an area with a radius of 100 km of the driver's base, alternative work records.
4. Provide records to record keeper	Drivers must provide their work and rest records to their record keeper within set time frames. A record keeper must retain these records for three years.

Understanding the HVNL fatigue requirements

1. Don't drive a heavy vehicle while fatigued

Under the HVNL, the safety duty for all heavy vehicle drivers is to not drive a fatigue-related heavy vehicle on a road while impaired by fatigue. A driver is impaired by fatigue when their ability to drive a heavy vehicle safely is affected by fatigue.

The HVNL defines fatigue as including (but not limited to) the following feelings and behaviours:

- feeling sleepy
- feeling physically or mentally tired, weary or drowsy
- feeling exhausted or lacking energy
- behaving in a way consistent with the above.

If a heavy vehicle driver is driving and experiences any of these symptoms, they must stop work immediately (as soon as it is safe to do so). The driver must not work again until they are no longer affected by fatigue.

Tip: Getting plenty of good quality rest and/or sleep are the most effective ways to prevent and recover from fatigue.

A driver can be impaired by fatigue at any time, even when they comply with work and rest hour limits. Regardless of how many hours they may have worked or rested, they must never drive if they are impaired by fatigue.

2. Work within set limits

The scientific evidence shows that fatigue increases the longer a person is awake and or the less sleep they have. To assist heavy vehicle drivers get enough time to sleep and to not work too long, the HVNL requires all heavy vehicle drivers to comply with set work and rest limits.

What is work and rest?

While driving is the most common type of work, it is important to note that any other task relating to the operation of a fatigue-regulated heavy vehicle is regarded as work, including for example:

- instructing/supervising another person driving a fatigue-regulated heavy vehicle
- loading or unloading a fatigue-regulated heavy vehicle
- inspecting, repairing or servicing a fatigue-regulated heavy vehicle
- inspecting or attending to a load (adjusting/securing load) of a fatigue-regulated heavy vehicle (a load includes passengers)
- cleaning and refuelling a fatigue-regulated heavy vehicle
- completing paperwork in relation to a fatigue-regulated heavy vehicle (organising loads/work)
- recording information or completing a document that is required under the HVNL
- helping another person or supervising any of the above
- occupying the driver seat of a fatigue-regulated heavy vehicle while its engine is running

Note: Exemptions may apply.

These tasks have been limited because they extend the time a person is awake, increasing the risk of being fatigued.

Rest in relation to the operation of a fatigue-regulated heavy vehicle is not doing any of the above.

What work and rest options are available?

The HVNL provides heavy vehicle drivers and operators with various work and rest hours options, each with their own work and rest limits. There are four options available:

1. Standard hours

2. Basic Fatigue Management (BFM) hours
3. Advanced Fatigue Management (AFM) hours
4. Exemption hours.

Note: The following link to the NHVR website provides the work and rest requirements for each of the work and rest hours options.

www.nhvr.gov.au/safety-accreditation-compliance/fatigue-management/work-and-rest-requirements

BFM and AFM provide increased levels of flexibility by managing fatigue risks through the National Heavy Vehicle Accreditation Scheme (NHVAS). Heavy vehicle drivers can only work under these hours if they have been inducted into an accredited operators system.

Exemptions enable operators and drivers to apply for work and rest hours not possible under any of the other work and rest options. Strict constraints apply.

3. Keep work and rest records

When does a driver need to carry a Work Diary?

A driver of a fatigue-regulated heavy vehicle is required to carry a Work Diary when they are, or if they have in the last 28 days, been:

- driving outside a radius of 100km from their driver base (100+km work)
- working under BFM or AFM
- working under an exemption.

At the request of an Authorised Officer, drivers must produce their Work Diary records for the previous 28 days. An Authorised Officer is a police officer, state or territory road agency officer or an NHVR officer.

Note: Some specific state and territory exemptions exist.

Completing a Work Diary (100+km work)

Drivers of a fatigue-regulated vehicle undertaking or planning to undertake a 100+km journey in a day must complete their Work Diary (including all work and rest) for that day. Detailed instructions on how to complete your Work Diary, including examples, are located at the beginning of your Work Diary.

Counting time

There are detailed instructions on pages 21-25 of the Work Diary explaining how to count time. It is important to remember when counting time that:

- each 24-hour period starts at the end of a major rest break relevant to the work/rest hours arrangement under which the driver is working (e.g. standard hours solo (at least) seven hours continuous rest).
- each 24-hour period ends exactly 24 hours after commencement.
- it is possible that you could have more than one 24-hour period running at the same time. This can occur when there are two major rest breaks within a 24-hour period.

Tip: A major rest break does not reset your 24-hour period; it commences another 24-hour period.

Recording work/rest in non-participating jurisdictions

If you are the driver of a fatigue-regulated heavy vehicle travelling into WA or NT for a period of seven days or less, you are required to comply with both the HVNL fatigue requirements and any relevant local laws. To demonstrate your compliance, you should complete your Work Diary as you would if you were working in a participating jurisdiction.

For periods of work longer than seven days carried out in a non-participating jurisdiction, the driver will need to comply with the local heavy vehicle driver fatigue, work rest and record keeping requirements. When driving a fatigue-regulated heavy vehicle and returning from a non-participating jurisdiction to a participating jurisdiction, the driver must complete their Work Diary from the beginning of the last major rest break taken prior to re-entering the participating jurisdiction.

Further information can be found on page 9 of the Work Diary instructions.

4. Provide records to record keeper within set time frames

Record keepers must keep a record of specific information for drivers of fatigue regulated heavy vehicles. A record keeper may be the:

- employer, if the driver is employed
- accredited operator, if the driver is working under BFM or AFM accreditation
- driver (as a self-employed or owner driver).

Drivers must provide their record keeper with their relevant work and rest hours totals and any other relevant vehicle information the record keeper may not reasonably have access to (registration numbers, dates the driver worked, etc.).

The record keeper determines the record location and notifies the driver. The record location is usually the driver's base.

All records must be:

- kept for three years after they are created
- kept at a location accessible to an Authorised Officer for audit or investigation purposes
- in a format that is readable and reasonably assumed it will be readable in at least three years from the date of its creation.

When do HVNL fatigue requirements apply?

The heavy vehicle driver fatigue requirements found in chapter 6 of the HVNL apply to drivers and other parties operating a fatigue-regulated heavy vehicle.

A fatigue-regulated heavy vehicle is defined as a:

- motor vehicle with a Gross Vehicle Mass (GVM) of more than 12t
- combination with a GVM of more than 12t
- fatigue-regulated bus (GVM greater than 4.5t and built or fitted to carry more than 12 adults including the driver).

Some vehicles have been specifically excluded from this definition, these include motor vehicles that are:

- built to operate primarily as a machine or implement off-road and are not capable of carrying goods or passengers by road
- or
- motorhomes.

For example, a truck with a GVM of 8.7t towing a trailer with a GVM of 3.4t (8.7t + 3.4t = 12.1t) would be classed as a fatigue-regulated heavy vehicle.

Tip: The manufacturer specifies the GVM and it can be located on the vehicle identification plate, registration label or papers.

What can I do to manage fatigue?

The implementation of a safety management system (SMS) that addresses the risks associated with fatigue will assist in satisfying the requirements of the HVNL as they relate to heavy vehicle driver fatigue.

While this bulletin is not intended to provide an exhaustive list, here are some examples of systems that can be established as part of an effective SMS:

- Reviewing driving or work schedules and work records of relevant drivers
- Regularly assessing fitness for duty of relevant drivers
- Reviewing contractual arrangements and documentation relating to the consignment and delivery of goods
- Reviewing loading and unloading times and delays at loading and unloading places
- Developing and adhering to trip plans
- Implementing formalised processes to engage and consult with other parties in the chain.

What actions can Authorised Officer's take?

Authorised Officers have powers relating to heavy vehicle driver fatigue requirements, including inspecting heavy vehicle driver's work and rest records.

Enforcement action for any breach of fatigue, work/rest hours or Work Diary requirements will depend on the nature and severity of the breach. Options available to Authorised Officers include (but are not limited to) formal warnings, infringement notices and court imposed penalties.

Drivers of fatigue-regulated heavy vehicles that are deemed to be driving while impaired by fatigue may face penalties and be prevented from working, even if they are complying with work and rest requirements.

Drivers of fatigue-regulated heavy vehicles may be directed to immediately stop work and not work again for a stated period if:

- the driver is impaired by fatigue
- the driver has committed a severe or critical work/rest hours breach
- the driver is unable to produce a Work Diary without a reasonable excuse
- the Work Diary produced cannot be relied on as an accurate record of the time the driver recently spent working or resting.

Where can I get more information?

Heavy vehicle driver fatigue or Work Diary requirements

This bulletin summarises the key obligations set out in the HVNL and is not exhaustive. Visit our website for more information about heavy vehicle driver fatigue or Work Diary requirements or contact us on 1300 MYNHVR (1300 696 487). www.nhvr.gov.au/safety-accreditation-compliance/fatigue-management

Chain of Responsibility (CoR)

More information is available on the NHVR website at: www.nhvr.gov.au/safety-accreditation-compliance/chain-of-responsibility

NHVAS

More information is available on the NHVR website at: www.nhvr.gov.au/safety-accreditation-compliance/national-heavy-vehicle-accreditation-scheme

Fatigue management exemptions

More information is available on the NHVR website at: www.nhvr.gov.au/safety-accreditation-compliance/fatigue-management/fatigue-management-exemptions

Safety Management Systems (SMS)

More information is available on the NHVR website at: www.nhvr.gov.au/safety-accreditation-compliance/safety-management-systems

For more information

Subscribe: www.nhvr.gov.au/subscribe
Visit: www.nhvr.gov.au
Email: info@nhvr.gov.au
Telephone: 1300 MYNHVR (1300 696 487)*

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Disclaimer: This information is only a guide and should not be relied upon as legal advice.
*Standard 1300 call charges apply. Please check with your phone provider.
Image source: Volvo Trucks Australia

Appendix E

School Bus Route Timetables



DA10 - S146 Minore AM

Monday to Friday
(Except Public Holidays)

A1	63L Lagoon Creek Road	7:40am
A2	19R Lagoon Creek Road	7:47am
A3	130R Minore Road	7:50am
A4	Cnr Minore/Conica Roads	7:55am
A5	Cnr Dungary/Curries Roads	8:00am
B1	Cnr Lonsdale/Dungary Roads	8:02am
B2	27L Lonsdale Road	8:06am
B3	Cnr Minore/Buddens Roads	8:12am
S1	Dubbo West Public School	8:20am
S2	Dubbo College Delroy Campus	8:22am
T1	Pioneer Park- Transfer Point	8:25am
S3	St Pius X Primary School	8:30am
S4	Dubbo Public School	8:36am
S5	Dubbo North Primary School	8:43am
S6	TAFE- Myall St Campus	8:47am
S7	Dubbo College Senior Campus	8:50am
S8	St Mary's Primary School	8:53am
S9	Orana Heights Public School	8:58am



Services marked as such will generally be serviced by fully accessible bus. However periodic maintenance can affect availability; please check before journey.



DP10 - S146 Minore PM

Monday to Friday
(Except Public Holidays)

S1	Orana Heights Primary School	3:15pm
S2	Dubbo College Senior Campus	3:21pm
S3	St Mary's Primary School	3:25pm
S4	TAFE- Myall Street Campus	3:30pm
S5	Dubbo North Public School	3:35pm
S6	Dubbo West Public School	3:45pm
S7	Dubbo College Delroy Campus	3:47pm
T1	Pioneer Park- Transfer Point	3:50pm
S8	St Pius X Primary School	3:52pm
A1	Cnr Minore/Buddens Roads	3:58pm
A2	Cnr Dungary/Curries Roads	4:00pm
A3	Cnr Lonsdale/Dungary Roads	4:05pm
A4	27L Lonsdale Road	4:08pm
A5	Cnr Minore/Conica Roads	4:13pm
B1	130R Minore Road	4:20pm
B2	19R Lagoon Creek Road	4:28pm
B3	63L Lagoon Creek Road	4:32pm



Services marked as such will generally be serviced by fully accessible bus. However periodic maintenance can affect availability; please check before journey.