

# MEMO

<b>To:</b>	<b>NZ Clean Energy Ltd, Attn: Tracey Morse</b>	<b>Date:</b>	<b>07.03.25</b>
<b>From:</b>	<b>Joshua Raynes – Environmental Engineer</b>	<b>CC:</b>	
<b>Reviewed:</b>	Bronwyn Rhynd, Environmental Engineer	<b>CKL Ref:</b>	<b>A23288</b>
<b>Re:</b>	<b>1352 Homebush Road, Darfield- RC245775- RFI response Earthworks &amp; OLFP</b>		

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This memo responds to the Selwyn District Council (SDC) Request for Information (RFI) with specific regard to the topic of earthworks and overland flow within the email from Jane Anderson dated 26/02/25 as stated below, with respect to resource consent application RC245577:

## SDC RFI:

### *“Earthworks and overland flows*

*I have been speaking with the Development Engineering Manager, Ms Chrissie Reid and Richard Bigsby Resource Consents Team Leader regarding the application and the RFI response provided on 17 January relating to flooding and earthworks. For clarity, the Council is concerned that the significant level of earthworks proposed (36,800m<sup>3</sup>) has the potential to result in adverse effects on the overland flow paths and potentially on the water race function. Further information is required to determine whether the proposed earthworks will result in changes to existing land drainage patterns. She has requested a net cut to fill plan to clarify whether these works will have a net zero result.*

- 1. Please provide a net cut to fill plan to confirm that no changes to land drainage patterns will result from the proposed earthworks*
- 2. In the event that the result are not zero, please provide further information regarding how this will be addressed”*

## CKL Response:

The proposal for the earthworks includes areas of stripped topsoil for access tracks as shown in the CKL plans 2000-2002 & 3004. This stripped topsoil from the access track is to be spread over a width of 10-15m adjacent to the track to minimise the depth (of fill) and any potential impact on the OLFP that may be present in this area. This will result in approximately 100-150mm depth of topsoil being added to the existing natural ground level adjacent the access tracks. At this point in the design, i.e. prior to detailed design, a cut and fill plan is not deemed necessary due to the minor nature of the proposed earthworks and the minor fill depth.

The water race through the site is predominantly fed by the Kowai River as part of the Malvern Water Race Scheme for irrigation purposes and therefore results in a moderately small cross section. This coupled with the incredibly flat nature of the site results in predominantly sheet flow, of surface flow runoff due to rainfall, as shown in the Canterbury Flood Model GIS where the water races have minimal impact on the floodplains/OLFP's. Therefore, the minimal ground level changes (of 0.1m-0.15m depth over 10m – 15m width) proposed are not going to alter the flow of water across the site or in/around the water race.

# AGRIVOLTAIC FACILITY

## 1352 HOMEBUSH ROAD, DARFIELD

### DARFIELD SOLAR AND ENERGY LTD



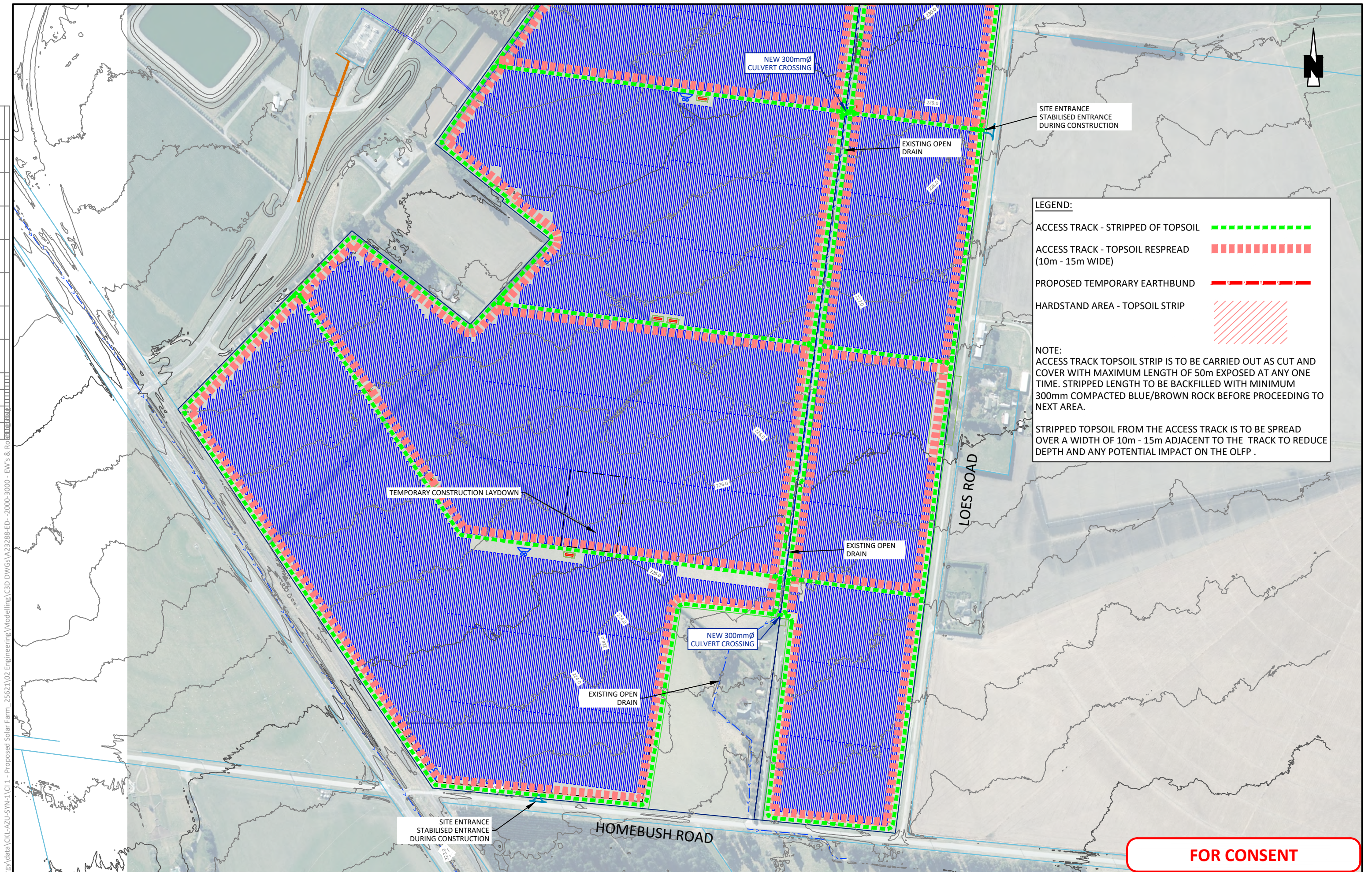
DRAWING INDEX							
SHEET NUMBER		SHEET TITLE	REVISION AND ISSUE DATE (YY.MM.DD)				
			11.06.24	30.07.24	27.02.25	-	-
A23288	2000	EARTHWORKS TOPSOIL STRIP & RESPREAD	0	1	2		
A23288	2001	EARTHWORKS TOPSOIL STRIP & RESPREAD	0		1		
A23288	2002	EARTHWORKS HARDSTAND AREA EROSION SEDIMENT C	0		1		
A23288	3000	ROAD LAYOUT LAYOUT OVERVIEW PLAN	0	1			
A23288	3001	ROAD LAYOUT ACCESS TRACKS SHEET 1	0	1			
A23288	3002	ROAD LAYOUT ACCESS TRACKS SHEET 2	0				
A23288	3003	ROAD LAYOUT ACCESS TRACKS SUBSTATION AREA	0				
A23288	3004	ROAD LAYOUT ACCESS TRACKS TYPICAL SECTIONS	0		1		



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CKL PROJECT NUMBER : **A23288**  
DATE OF ISSUE : **11-06-24**  
ISSUED FOR : **RESOURCE CONSENT**



**LEGEND:**

ACCESS TRACK - STRIPPED OF TOPSOIL

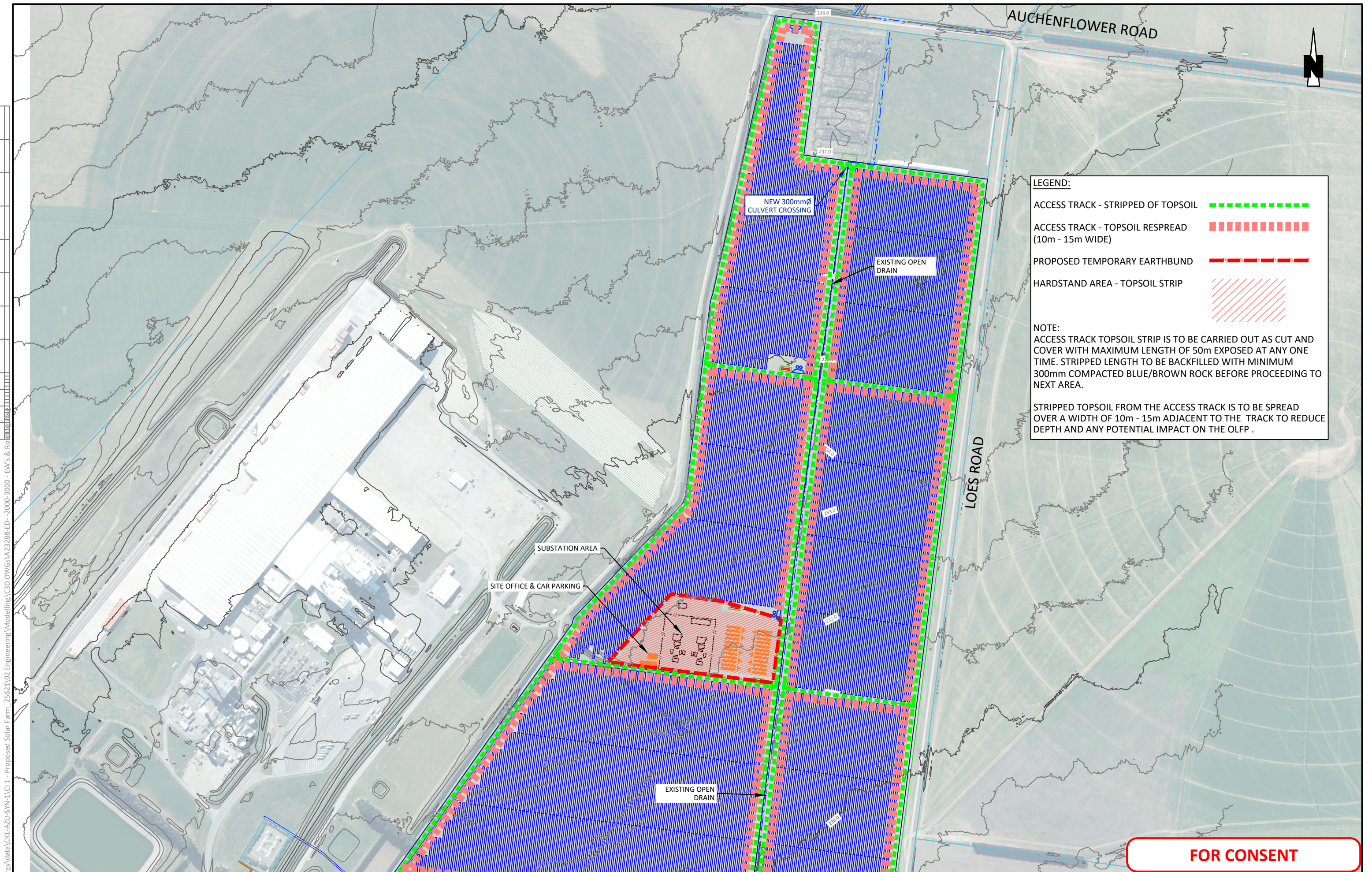
ACCESS TRACK - TOPSOIL RESPREAD (10m - 15m WIDE)

PROPOSED TEMPORARY EARTHBOUND

HARDSTAND AREA - TOPSOIL STRIP

**NOTE:**  
ACCESS TRACK TOPSOIL STRIP IS TO BE CARRIED OUT AS CUT AND COVER WITH MAXIMUM LENGTH OF 50m EXPOSED AT ANY ONE TIME. STRIPPED LENGTH TO BE BACKFILLED WITH MINIMUM 300mm COMPACTED BLUE/BROWN ROCK BEFORE PROCEEDING TO NEXT AREA.  
  
STRIPPED TOPSOIL FROM THE ACCESS TRACK IS TO BE SPREAD OVER A WIDTH OF 10m - 15m ADJACENT TO THE TRACK TO REDUCE DEPTH AND ANY POTENTIAL IMPACT ON THE OLFP .

**FOR CONSENT**



**LEGEND:**

ACCESS TRACK - STRIPPED OF TOPSOIL ----

ACCESS TRACK - TOPSOIL RESPREAD (10m - 15m WIDE) ----

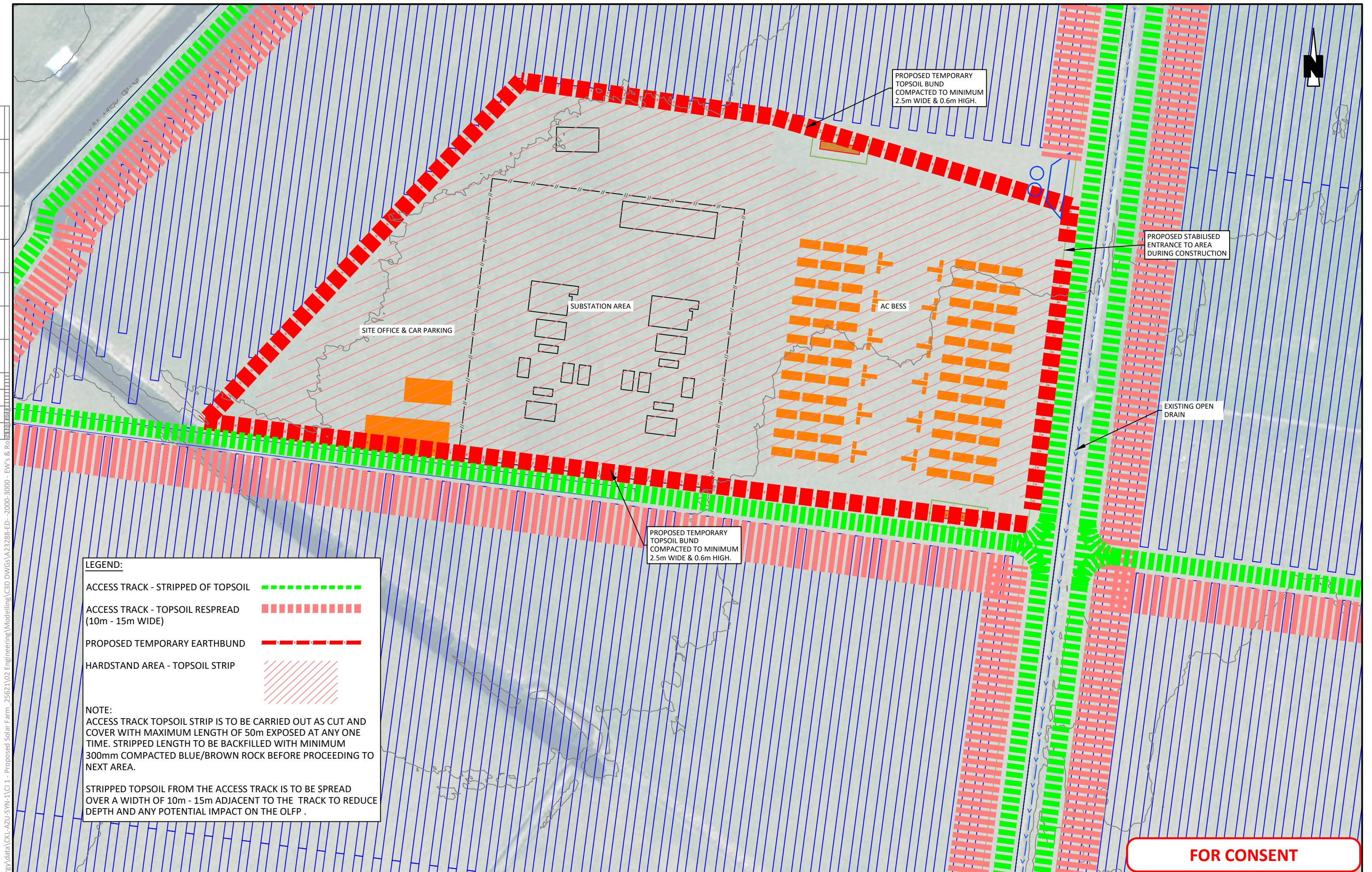
PROPOSED TEMPORARY EARTHBOUND ----

HARDSTAND AREA - TOPSOIL STRIP / / / / /

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**LEGEND:**

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ACCESS TRACK - TOPSOIL RESPREAD (10m - 15m WIDE)

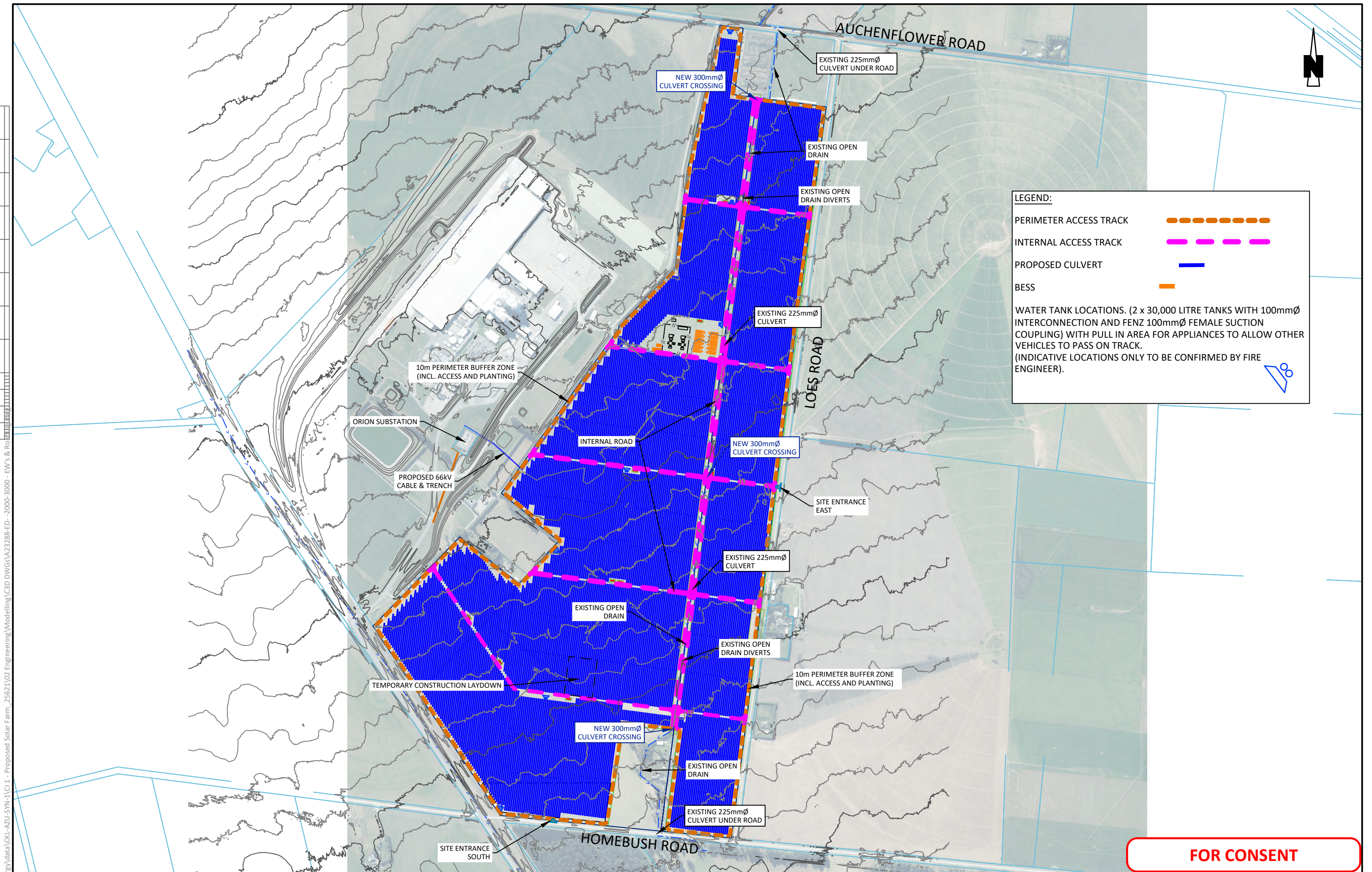
PROPOSED TEMPORARY EARTHBOUND

HARDSTAND AREA - TOPSOIL STRIP

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FOR CONSENT



**LEGEND:**

PERIMETER ACCESS TRACK     

INTERNAL ACCESS TRACK     

PROPOSED CULVERT     

BESS     

WATER TANK LOCATIONS. (2 x 30,000 LITRE TANKS WITH 100mmØ INTERCONNECTION AND FENZ 100mmØ FEMALE SUCTION COUPLING) WITH PULL IN AREA FOR APPLIANCES TO ALLOW OTHER VEHICLES TO PASS ON TRACK. (INDICATIVE LOCATIONS ONLY TO BE CONFIRMED BY FIRE ENGINEER).

**FOR CONSENT**

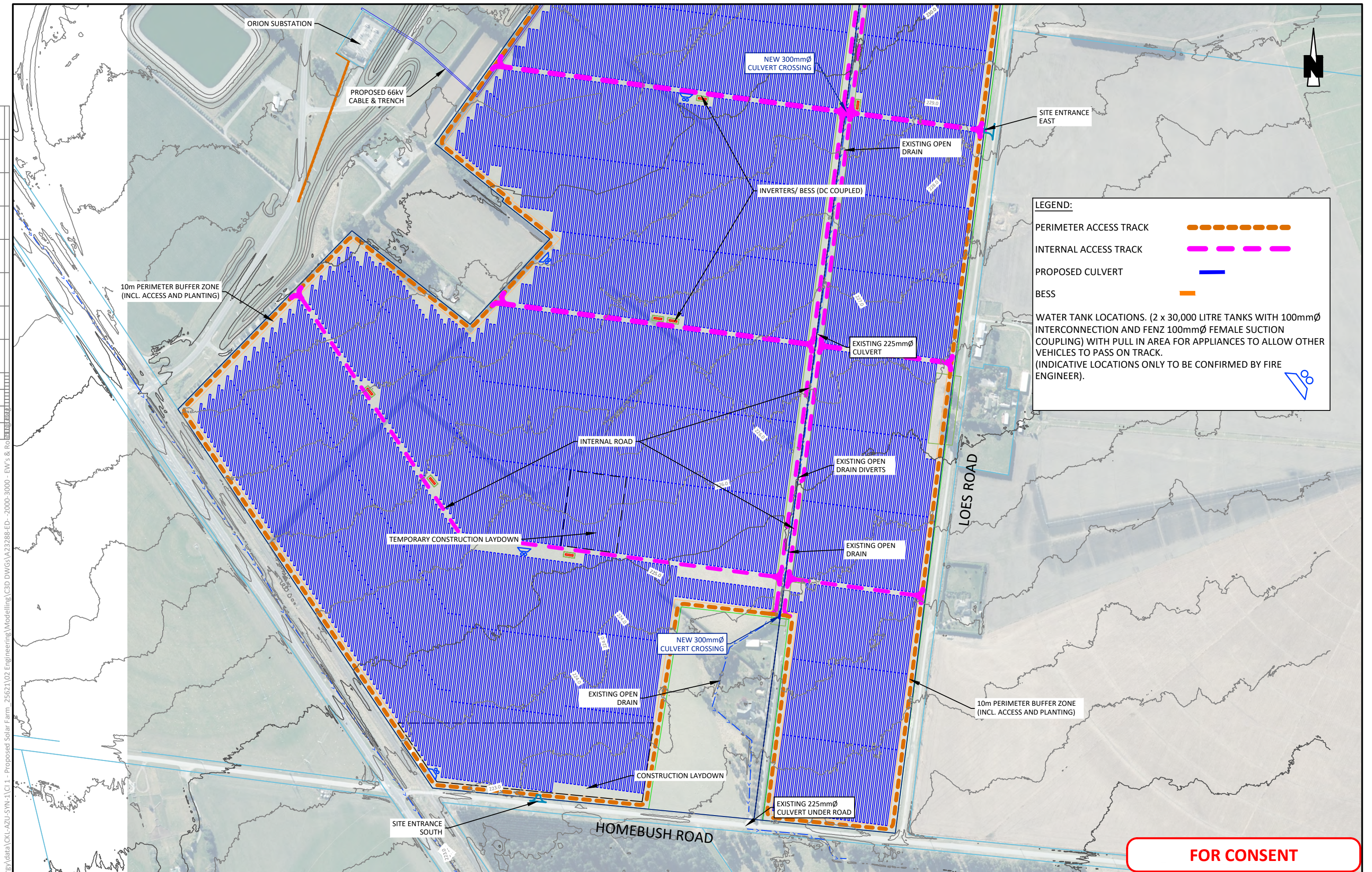


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**AGRIVOLTAIC FACILITY  
DARFIELD SOLAR AND ENERGY LTD  
1352 HOMEBUSH ROAD, DARFIELD**

**ROAD LAYOUT  
LAYOUT OVERVIEW PLAN**

Issue	Description	Checked	Date	Designed:	GCW	Date	Scale:
1	Construction Laydown updated		30.07.24	Designed:	GCW	11.06.24	1:10000
0			11.06.24	Drawn:	GCW	11.06.24	(A3 Original)
				Checked:		11.06.24	
				Job No:	Dwg No:	Rev:	
				A23288	3000	1	



**LEGEND:**

PERIMETER ACCESS TRACK

INTERNAL ACCESS TRACK

PROPOSED CULVERT

BESS

WATER TANK LOCATIONS. (2 x 30,000 LITRE TANKS WITH 100mmØ INTERCONNECTION AND FENZ 100mmØ FEMALE SUCTION COUPLING) WITH PULL IN AREA FOR APPLIANCES TO ALLOW OTHER VEHICLES TO PASS ON TRACK. (INDICATIVE LOCATIONS ONLY TO BE CONFIRMED BY FIRE ENGINEER).

**FOR CONSENT**



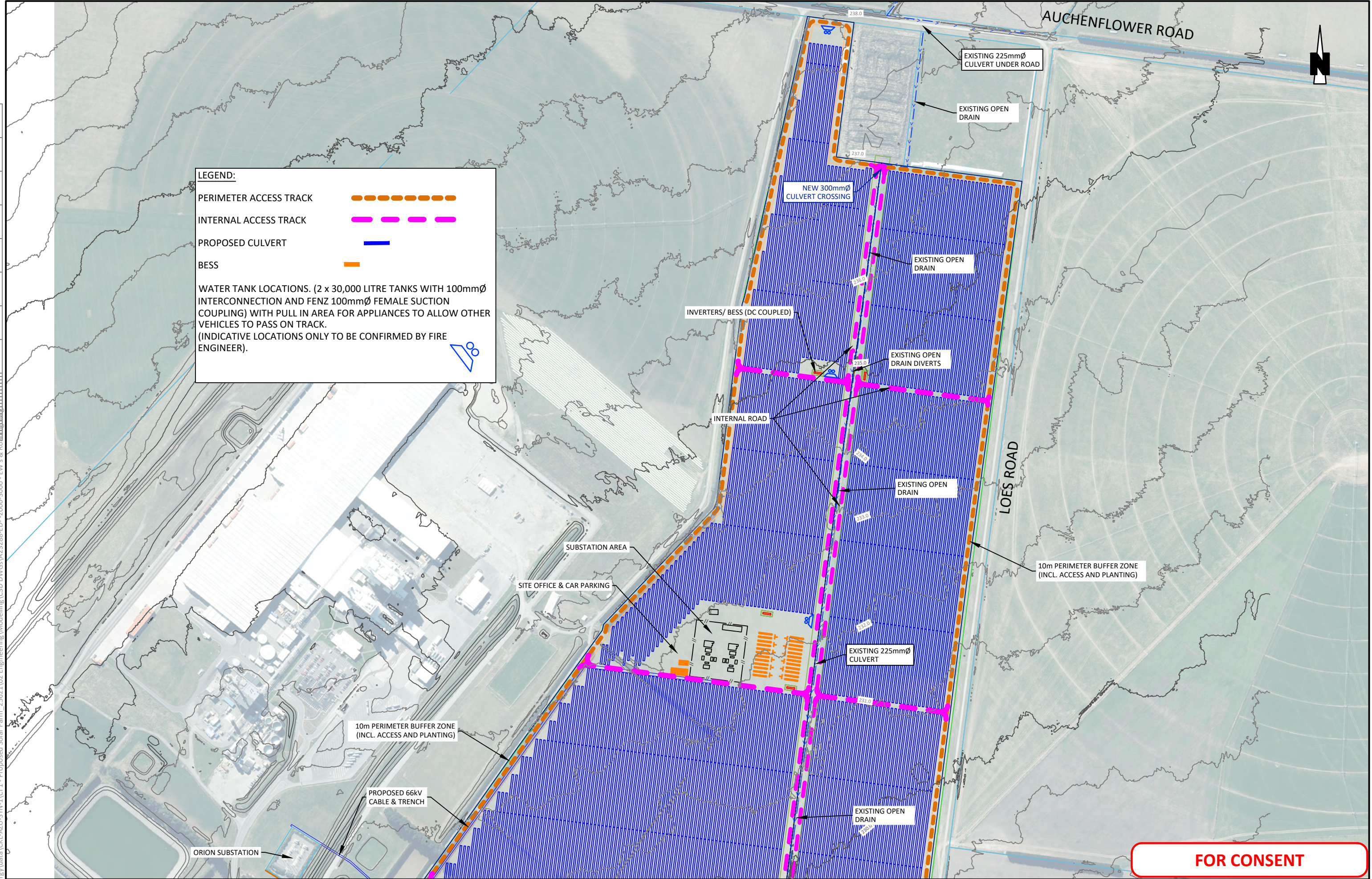
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**ROAD LAYOUT  
ACCESS TRACKS  
SHEET 1**


Issue	Description	Checked	Date	Designed:	Date	Scale:
1	Construction Laydown updated		30.07.24	GCW	11.06.24	<b>1:5000</b> (A3 Original)
0			11.06.24	Drawn: GCW	11.06.24	
				Checked:	11.06.24	
			Job No:		Dwg No:	Rev:
			<b>A23288</b>		<b>3001</b>	<b>1</b>





**LEGEND:**

PERIMETER ACCESS TRACK      

INTERNAL ACCESS TRACK      

PROPOSED CULVERT      

BESS      

WATER TANK LOCATIONS. (2 x 30,000 LITRE TANKS WITH 100mmØ INTERCONNECTION AND FENZ 100mmØ FEMALE SUCTION COUPLING) WITH PULL IN AREA FOR APPLIANCES TO ALLOW OTHER VEHICLES TO PASS ON TRACK.  
(INDICATIVE LOCATIONS ONLY TO BE CONFIRMED BY FIRE ENGINEER). 

**FOR CONSENT**



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**ROAD LAYOUT  
ACCESS TRACKS  
SHEET 2**

Issue	Description	Checked	Date	Date	Scale:
0			11.06.24	Designed: GCW Drawn: GCW Checked: 11.06.24	1:5000 (A3 Original)
			Job No:	Dwg No:	Rev:
			A23288	3002	0

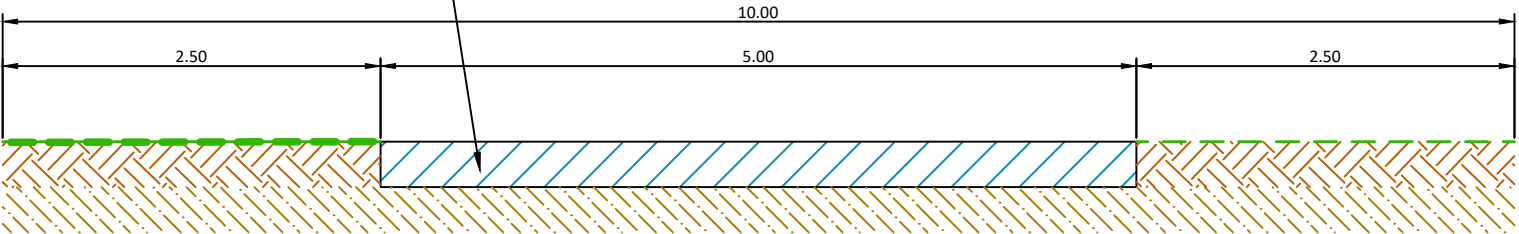


**FOR CONSENT**



STRIPPED TOPSOIL TO BE SPREAD ADJACENT TO TRACK.  
SPREAD WIDTH TO BE APPROX 10m - 15m WIDE.  
APPROX DEPTH 100mm - 150mm

STRIP TOPSOIL AND REPLACE WITH  
MINIMUM 300mm PAVEMENT.  
100mm GAP 40  
200- 250mm BLUE/ BROWN ROCK  
(TO BE CONFIRMED)

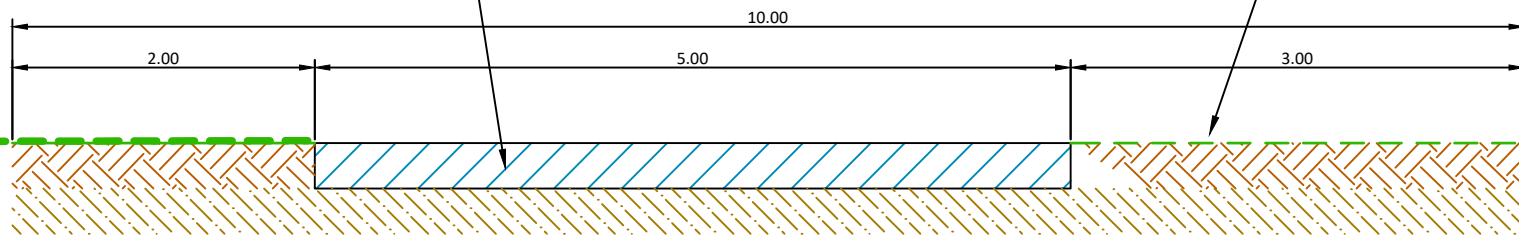


INTERNAL SERVICE/ ACCESS TRACK  
SCALE 1:50

STRIPPED TOPSOIL TO BE SPREAD ON OPPOSITE SIDE  
OF TRACK FROM THE EXISTING OPEN DRAIN.  
SPREAD WIDTH TO BE APPROX 10m - 15m WIDE.  
APPROX DEPTH 100mm - 150mm

STRIP TOPSOIL AND REPLACE WITH  
MINIMUM 300mm PAVEMENT.  
100mm GAP 40  
200- 250mm BLUE/ BROWN ROCK  
(TO BE CONFIRMED)

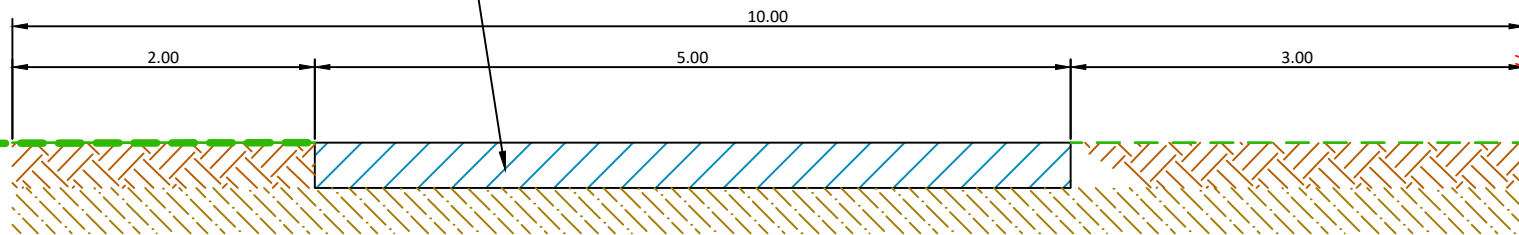
MINIMUM 3.0m BUFFER  
TO WATER RACE



ACCESS TRACK ADJACENT TO OPEN DRAIN  
SCALE 1:50

STRIPPED TOPSOIL TO BE SPREAD ADJACENT TO TRACK.  
SPREAD WIDTH TO BE APPROX 10m - 15m WIDE.  
APPROX DEPTH 100mm - 150mm

STRIP TOPSOIL AND REPLACE WITH  
MINIMUM 300mm PAVEMENT.  
100mm GAP 40  
200- 250mm BLUE/ BROWN ROCK  
(TO BE CONFIRMED)



PERIMETER SERVICE/ ACCESS TRACK  
SCALE 1:50

FOR CONSENT



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ROAD LAYOUT  
ACCESS TRACKS  
TYPICAL SECTIONS

Issue	Description	Checked	Date	Designed:		Date	Dwg No:		Rev:	Scale:
1	Noted added for topsoil strip		27.02.25	GCW		11.06.24				1:50
0			11.06.24	GCW		11.06.24				(A3 Original)
				Checked:		11.06.24	Job No:			
							A23288			
							3004			
							1			