

Traffic Impact Assessment Report

Baiada – Grenfell Farms

1 November 2021

Document Control

Document: Project Name: Baiada Grenfell Poultry Farm
PSA Job Number: 1228
Report Name: Traffic Impact Assessment Report

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Revision History

VERSION	DATE	DETAILS	AUTHOR	AUTHORISATION
V5	1 November 2021	FINAL	Ryan Peel	 Hannah Richardson

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LIST OF ACRONYMS

AADT	Annual Average Daily Traffic
BAL	Basic Left
BAR	Basic Right
HV	Heavy Vehicle
LV	Light Vehicle
SISD	Safe Intersection Site Distance
TIA	Traffic Impact Assessment
WSC	Weddin Shire Council

1 INTRODUCTION

PSA Consulting (Australia) has been engaged by Baiada Properties Pty Limited to undertake a Traffic Impact Assessment (TIA) to accompany a development application for the proposed poultry farm development on Lot 1 DP1022013, Lots 1-3 DP1206485 and Lot 22 DP866857, Grenfell NSW. The development involves the building of four poultry farms with ten sheds per farm to provide a maximum capacity of 560,560 birds across the property. The proposed farm will be accessed via Gooloogong Road, Grenfell, the location of which is shown below in Figure 1.

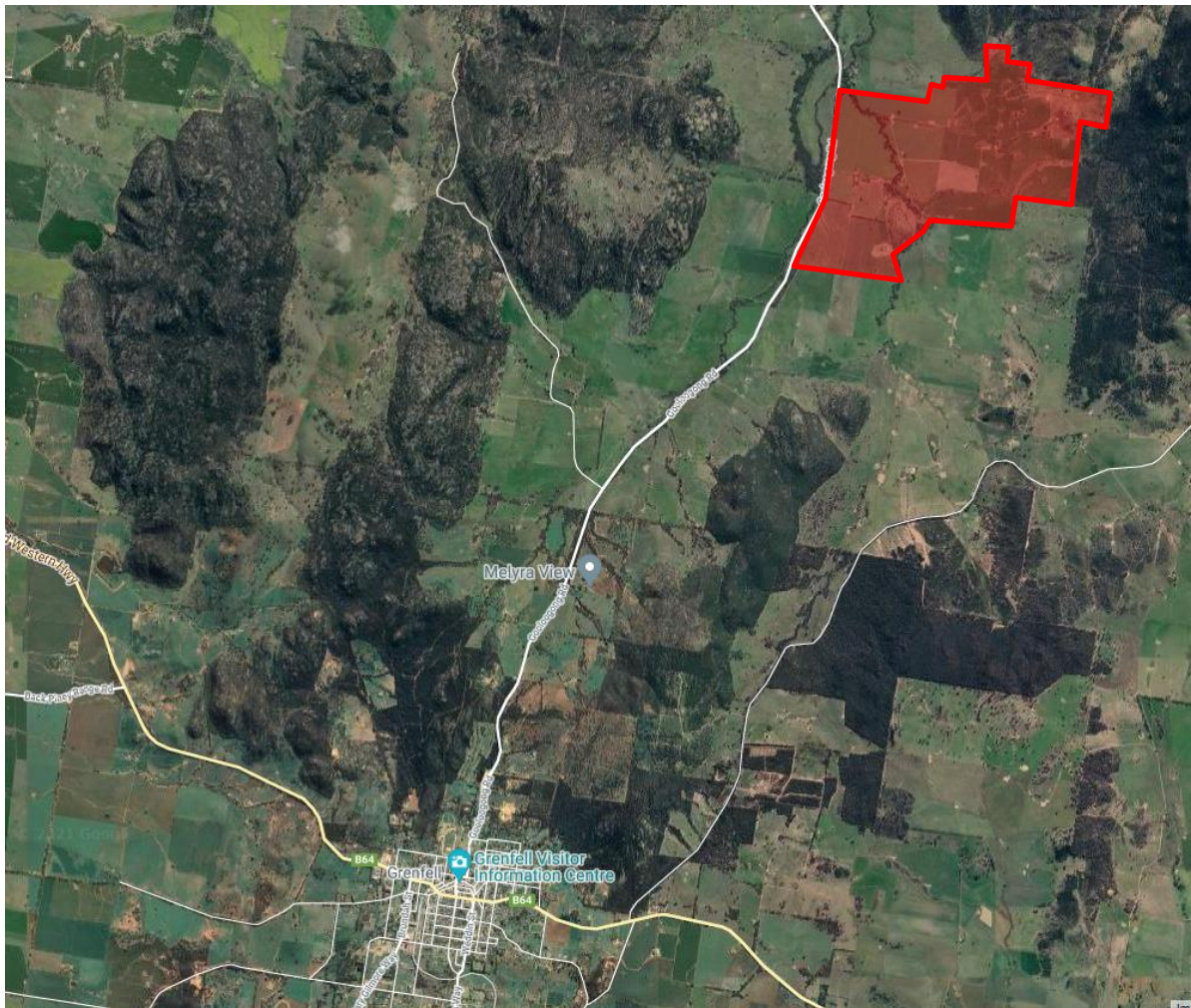


Figure 1: Locality Plan (Source: Google Maps)

2 EXISTING CONDITIONS

2.1 ROAD NETWORK

The proposed poultry farm is located at 1130 Gooloogong Road, approximately 12km north of the Mid-Western highway which runs east/west through the town of Grenfell. Gooloogong Road is a two lane, two-way road, and has a sealed width of approximately 9.5m. Gooloogong Road is classified a Regional Road, as per the Transport for NSW Road Network Classifications, as shown in Figure 2. The posted speed limit for Gooloogong Road is 100km/h, lowering to 80km/h as southbound traffic approaches the township of Grenfell. Access to/from the site for heavy vehicles will also be via Gooloogong Road.

Heavy vehicles will access the site from Gooloogong Rd, turning into the existing gravel driveway before making their way to the farms.

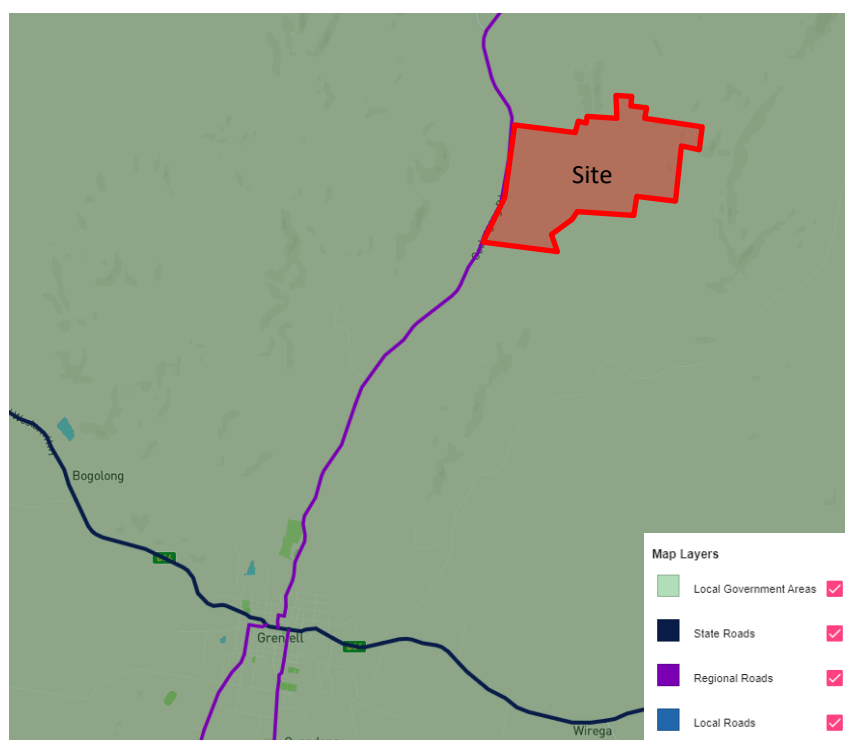


Figure 2: Road Classification (Source: Transport for NSW)

Gooloogong Road is currently an accepted route for B-Double vehicles, as per the Transport for NSW *Combined Higher Mass Limits (HML) and Restricted Access Vehicle (RAV) Map*, shown in Figure 3. Increasingly, transportation of the agricultural products is being undertaken by A-Doubles and as such, this has been adopted as the largest design vehicle for the site. However, it is noted that Gooloogong Road is not an approved route for A-Double vehicles (shown in Figure 4), and should the use be proposed, a permit will need to be acquired from the National Heavy Vehicle Regulator (NHVR) in order for the necessary vehicles to access the site.

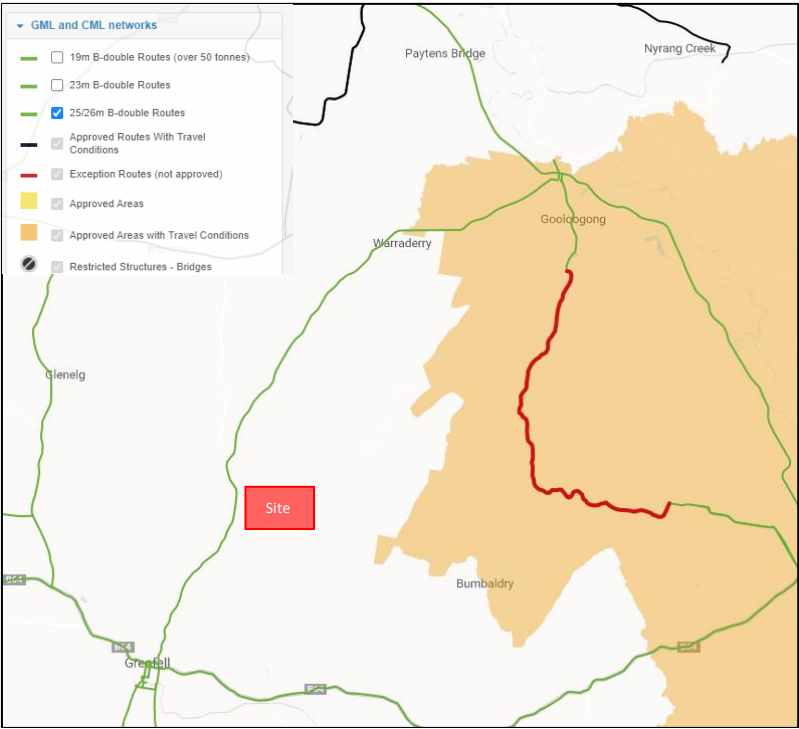


Figure 3: NSW Combined Higher Mass Limits (HML) and Restricted Access Vehicle (RAV) Map (Source: Transport for NSW)

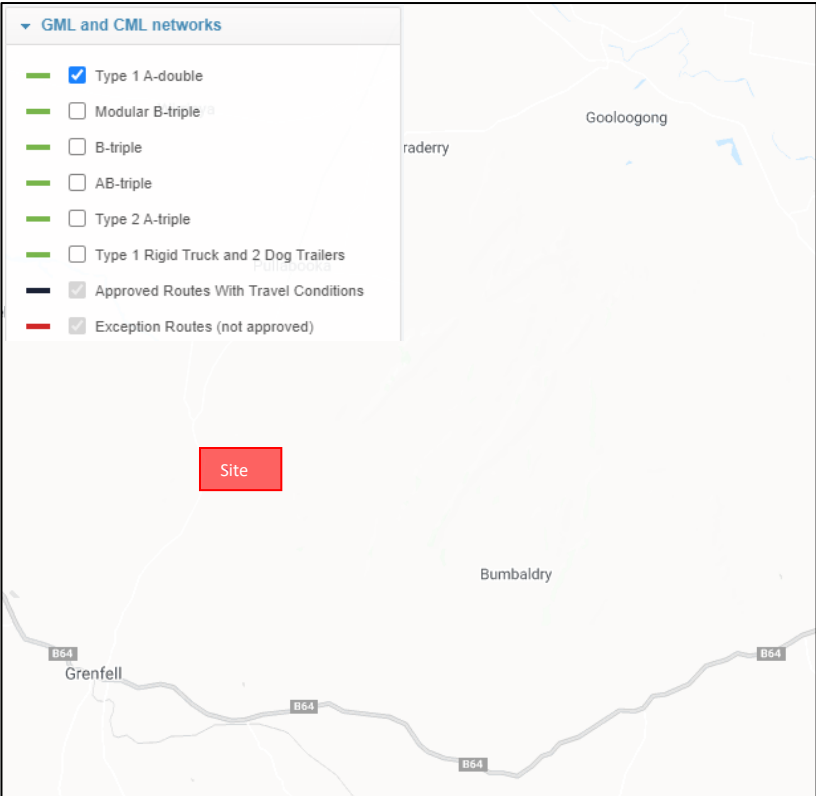


Figure 4: NSW Road Train Network Map (Source: Transport for NSW)

2.2 EXISTING SITE

The proposed site has an existing approval for construction of a Poultry Breeder / Production Farm issued by the Weddin Shire Council (WSC) in 2002 (reference 75/2002). While this approval has physically commenced and remains in force and effect, this approval will not be pursued in this form due to changes in poultry standards and an increase in the number of sheds and birds on the site.

3 DEVELOPMENT PROFILE

The proposed development involves the construction of farms, each farm consisting of 10 poultry sheds, giving a total of 40 sheds. Of the 4 farms, one will be used for rearing, two used for breeding, and one used for both rearing and breeding. A site layout plan of the proposed development can be seen in Figure 5.



Figure 5: Proposed Site Layout Plan (Source: PSA Consulting)

As shown in the plan, the primary site entrance will be from Gooloogong Rd, with all vehicles accessing the site from this location. It is expected that the development will reach full operation in the year 2025.

4 IMPACT ASSESSMENT

4.1 ASSESSMENT PARAMETERS

It is a standard requirement when analysing traffic impacts to adopt a 10-year design horizon from the year of opening/full operation of the proposed development. As such, the following development parameters have been adopted for the purposes of this assessment:

- Traffic count – 2019
- Year of full operation 2025
- 10-year design horizon 2035

4.2 EXISTING AND FUTURE YEAR BACKGROUND TRAFFIC VOLUMES

Historic traffic counts were obtained by the Weddin Shire Council for a section of Gooloogong Road on the outskirts of Grenfell, roughly 8km from the site access. Due to the limited entry and exit points on the road between the count site

and the development site, it is reasonable to assume that a similar volume of traffic will also be travelling through the Gooloogong Road / Site access intersection. Background traffic volumes for Gooloogong Road are provided in Appendix A.

In 2019, the bidirectional traffic AADT was 410 vehicles, with approximately 61 (15%) of these being heavy vehicles. It has been assumed that an equal split of occurs over the day such that 205 vehicles were travelling northbound and 205 vehicles were travelling southbound. As the traffic counts were not collected by time, it is assumed that roughly 10% of the AADT would travel during the AM and PM peak times (8:00AM-9:00AM and 4:00PM-5:00PM respectively). Therefore, the impacts of the development generated traffic on the road network will be assessed for the AM and PM peak hours.

The background traffic volumes during these times are shown below in Figure 6.

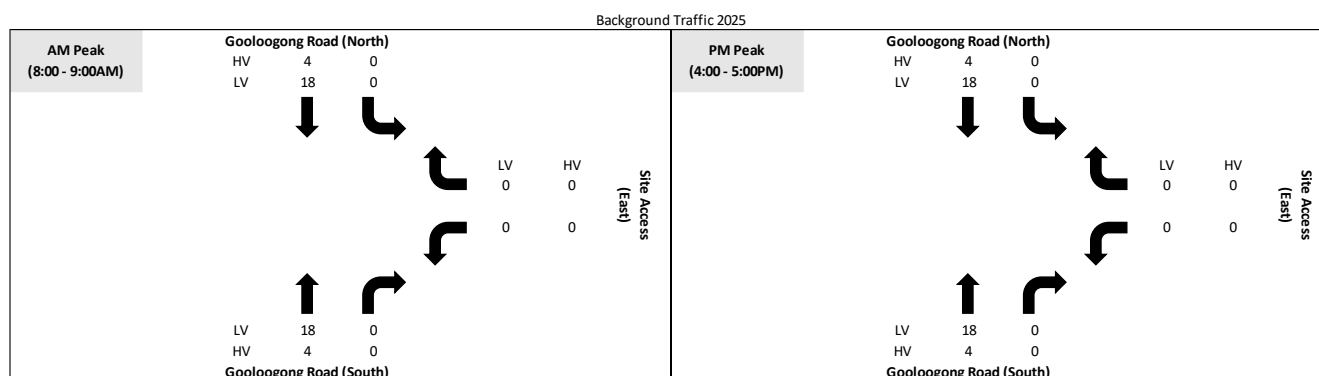


Figure 6: Background Peak Hour Traffic Volumes (Source: PSA Consulting)

4.3 DEVELOPMENT TRAFFIC GENERATION AND DISTRIBUTION

Traffic generated by the development has been obtained through consultation with Baiada Properties. Average traffic generated by the development is shown below in Table 1.

Table 1: Total Traffic Generation (Source: Baiada Properties & PSA Consulting)

PURPOSE	VEHICLE TYPE	AVERAGE DAILY TRIPS*	AVERAGE WEEKLY TRIPS
Staff	Light Vehicle	41.5	290.3
Cleanout HV	Heavy Vehicle	1.1	8.0
Bedding Delivery	Heavy Vehicle	0.2	1.3
Birds In	Heavy Vehicle	0.2	1.2
Birds Out	Heavy Vehicle	0.3	2.3
Feed	Heavy Vehicle	2.0	13.9
Eggs Out	Heavy Vehicle	1.9	13.4
Gas	Heavy Vehicle	0.2	1.2
Supplies & Consumables Deliveries	Heavy Vehicle	1.1	8.0
Waste General	Heavy Vehicle	1.1	8.0
Waste – Eggs & Mortalities	Heavy Vehicle	4.0	28.2

*For the purposes of this assessment, a vehicle trip is defined as a vehicle either entering or exiting the development

An estimate of the daily traffic movements entering and exiting the development is shown below in Table 2.

Table 2: Daily Traffic Generation (Source: Baiada Properties & PSA Consulting)

VEHICLE TYPE	VEHICLES ENTERING DEVELOPMENT	VEHICLES EXITING DEVELOPMENT	TOTAL VEHICLE TRIPS
Light Vehicles	21	21	42
Heavy Vehicles	7	7	14
TOTAL	28	28	56

A conservative estimate of the traffic entering and exiting the development during the identified peak hour is shown below. It is assumed that all Light Vehicles will enter and exit the development site during the AM and PM Peak Hours respectively.

Table 3: AM and PM Peak Hour Traffic Generation (Source: Baiada Properties & PSA Consulting)

VEHICLE TYPE	AM PEAK		PM PEAK	
	VEHICLES ENTERING DEVELOPMENT	VEHICLES EXITING DEVELOPMENT	VEHICLES ENTERING DEVELOPMENT	VEHICLES EXITING DEVELOPMENT
Light Vehicles	21	0	0	21
Heavy Vehicles	3	3	3	3
TOTAL	24	3	3	24

The above estimates assume the following, which are considered to be conservative:

- It is assumed that all light vehicles will entering the development site during the AM Peak, and will leave the site during the PM Peak.
- Based on the information provided by Baiada Properties, 20% of Heavy Vehicles will enter/exit the site to/from the north, and 80% will enter/exit the site to/from the south.
- For Light Vehicles, 25% will enter/exit to/from the north, and 75% will enter/exit to/from the south.
- A background traffic growth rate of 3% per year will be applied to for the forecasted background traffic.

The distribution of traffic after consultation with Baiada Properties is shown in Figure 7.

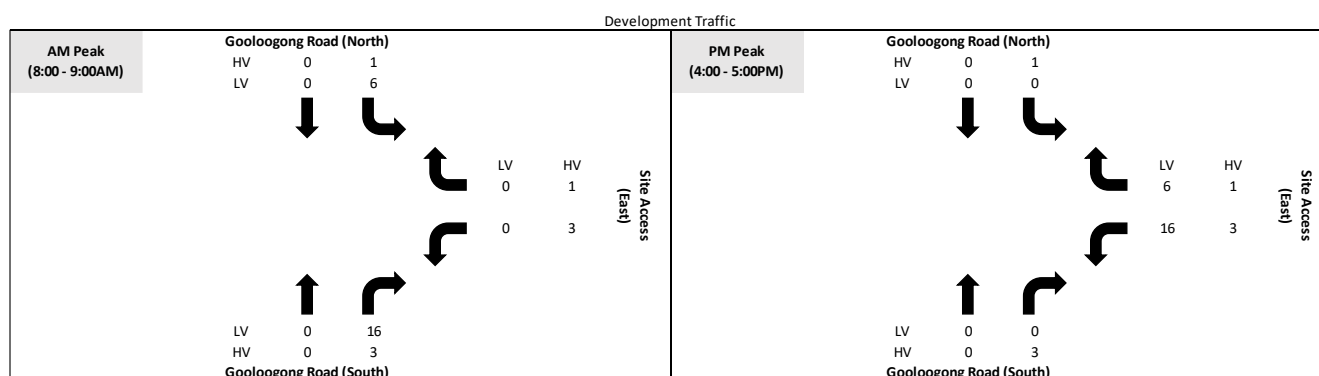


Figure 7: Site Development Peak Hour Traffic (Source: PSA Consulting)

Construction traffic is not anticipated to exceed the volumes that will be experienced during full operation of the site. As such, it is not necessary to conduct an investigation into the impacts of construction specific traffic.

4.4 TRAFFIC IMPACT ASSESSMENT

Using the assumptions above, and a conservative background traffic growth rate of 3%, future year background traffic volumes have been calculated and combined with the development generated traffic volumes to obtain the design traffic volumes for this assessment. The scenarios analysed for this assessment are the year of opening and the 10-year design horizon.

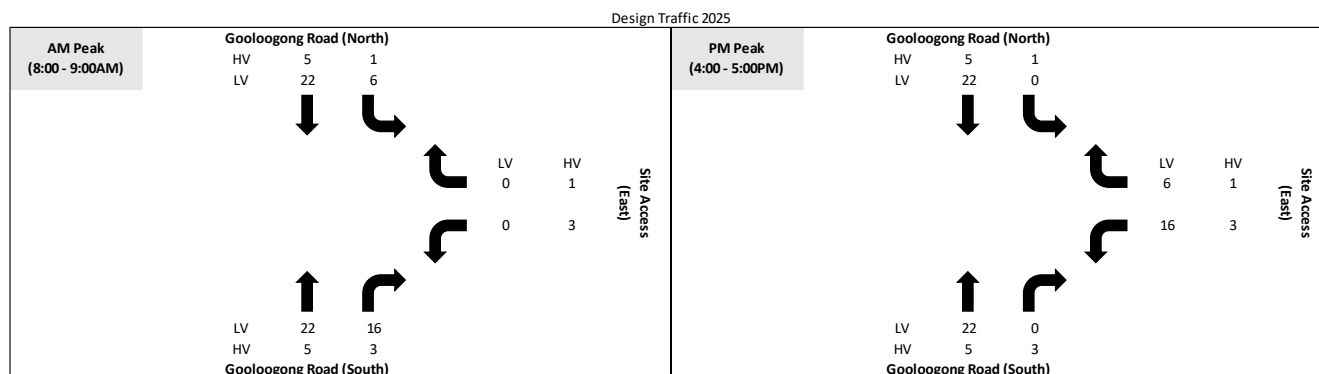


Figure 8: 2025 Year of Opening Design Traffic (Source: PSA Consulting)

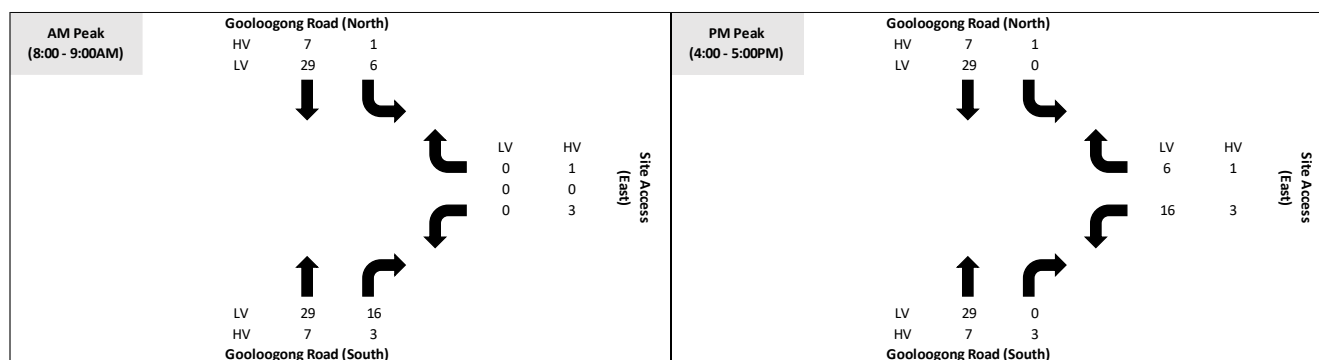


Figure 9: 2035 10-Year Design Horizon Traffic (Source: PSA Consulting)

Austrroads *Guide to Traffic Management Part 3: Traffic Study and Analysis Methods (2009)* lists the intersection capacity – uninterrupted flow conditions for a range of traffic volumes for unsignalised intersections. This table is shown in Figure 10.

Figure 10: Intersection Capacity - Uninterrupted Flow Conditions

Major Road Types ¹	Major Road Flow (vph) ²	Minor Road Flow (vph) ³
Two-Lane	400	250
	500	200
	650	100
Four-Lane	1000	100
	1500	50
	2000	25

Notes

1. Major road is through road i.e. has priority
2. Major road design volumes include through and turning movements
3. Minor road design volumes include through and turning volumes

As the year of opening and 10-year design horizon traffic volumes are less than those in the table, it is deemed unnecessary to carry out an intersection analysis.

4.4.1 Assessment of Turn Warrants

A turn warrants assessment has been carried out for the Gooloogong Road and site access T-intersection. Both the year of opening (2025) and 10-year design horizon (2035) traffic volumes have been analysed. The turn warrants have been assessed using Figure 4A-10b – Warrants for turn treatments on the major road at unsignalled intersections from Austroads *Guide to Road Design Part 4: Intersections and Crossings*. This figure has been reproduced in Figure 11 and Figure 12 (2025 year of opening and 10-year design horizon respectively).

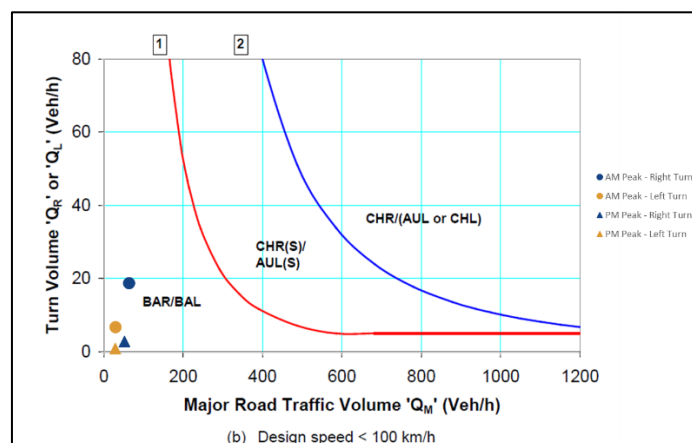


Figure 11: Turn Warrants Assessment 2025 Year of Opening (Source: Austroads & PSA Consulting)

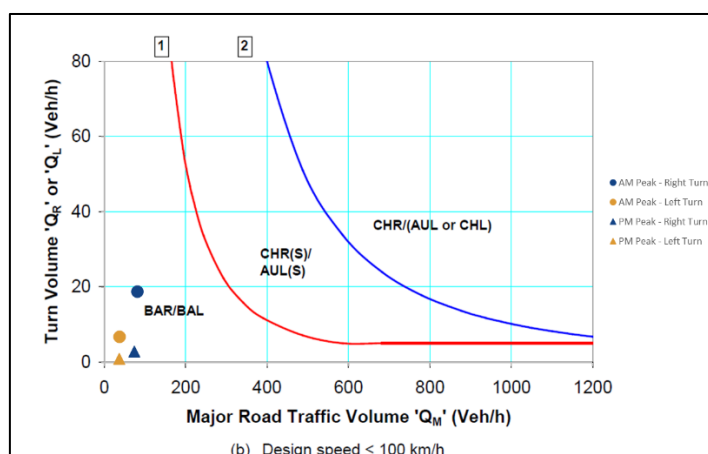


Figure 12: Turn Warrants Assessment 2035 Design Horizon (Source: Austroads & PSA Consulting)

As shown in the above figures, the turning volumes for both the year of opening and the 10-year design horizon warrant the construction of both a Basic Right (BAR) and Basic Left (BAL) at the intersection of Gooloogong Rd and the development site access. It is also recommended that this construction should also include sealing the shoulder widening for the intersection.

The features of a Basic Right and Basic Left turn treatments, as per Chapter 4A (Unsignalled and Signalled Intersections) of Austroads *Guide to Road Design* are shown in Figure 13.

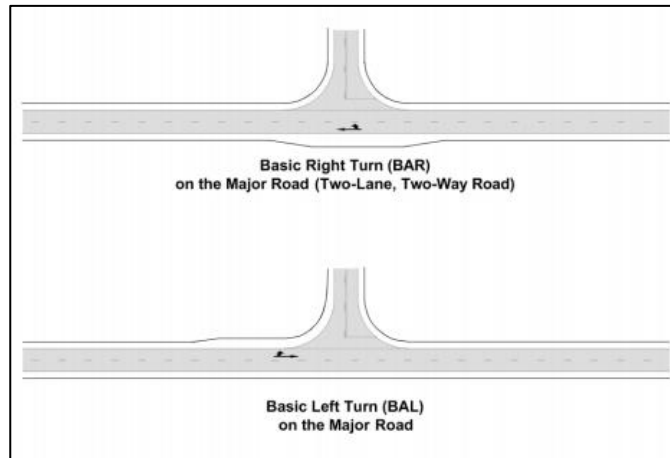


Figure 13: Rural Basic BA turn treatments (Source: Austroads)

5 ON-SITE PARKING REQUIREMENTS

The Weddin Shire Council Development Control Plan 2014 does not require a specific parking rate be met for intensive animal industries. As such, it is expected that the proposed development will suitably provide parking for each staff member on site at any one time plus an additional allowance for visitors and contractors. There is sufficient space on the site for parking and manoeuvring to be provided for all staff and visitors.

6 SITE ACCESS

6.1 SAFETY ASSESSMENT

The main concern with safety is the Gooloogong Road / Site access intersection, as all light and heavy vehicles will access the site from this location. Therefore, an assessment has been carried out on its safety to ensure it is in a satisfactory condition to handle additional traffic volumes.

As per Austroads *Guide to Road Design Chapter 4A*, a safe intersection sight distance (SISD) for a 100km/h design speed road is 211m. Figure 14 and Figure 15 show Gooloogong Road facing each direction from the site access.



Figure 14: Gooloogong Road Facing North (Source: Google Street View)



Figure 15: Gooloogong Road Facing South (Source: Google Street View)

As shown in the figures above, the sight distance available in each direction easily exceeds the requirements stated in Austroads. Therefore, there are deemed to be no sight distance related issues with this intersection.

7 SWEPT PATH ASSESSMENT

Swept path analysis has been undertaken for the site access, as well as for manoeuvring to all 4 sheds within the farm. Traffic generation and distribution information has been obtained through consultation with Baiada Properties, which listed B-Doubles and A-Doubles accessing and manoeuvring through the site. The following locations on the site were examined using Autocad and Autoturn modelling software:

- Site access to/from Gooloogong Road (both directions);
- Sheds 1-4 site manoeuvring;
- The T-intersections providing access to Sheds 2 and 3; and
- The T-intersection providing access to Shed 1 and the site driveway

A 26.0m long A-Double vehicle template was used for the swept path analysis for each of the above locations. It was found that the A-Double could manoeuvre throughout the site, and was able to both enter or exit the site without leaving the existing driveway. If longer heavy vehicles will access the site in the future, it is recommended that the driveway access to the site be widened to accommodate the longer vehicles.

Refer to Appendix B for each swept path movement undertaken.

8 PUBLIC AND ACTIVE TRANSPORT LINKAGES

There are no public or active transport facilities within the vicinity of the development site. It is expected that all staff will utilize private vehicles to access the site.

9 SUMMARY

The key finding from the traffic impact assessment for the proposed Poultry Farms at 1130 Gooloogong Road is that it is not considered to result on the external road network. This has been demonstrated in the forecasted turning volumes for the site. It was found that there is sufficient site distance for the site access on Gooloogong Road, and that the necessary design vehicles are able to manoeuvre throughout the site. It is recommended to widen the existing driveway access on Gooloogong Road to access the site safely if longer heavy vehicles are to enter the site in the future. Permits will need to be obtained from the National Heavy Vehicle Regulator for A-double trucks to access the site along Gooloogong Road.

Based on the findings from this TIA, it is concluded that there are no major adverse traffic impacts on the surrounding road network caused by the proposed Grenfell Poultry Farm.

APPENDIX 1: BACKGROUND TRAFFIC COUNTS

AP01

MetroCount Traffic Executive **Class Speed Matrix**

ClassMatrix-50 -- English (ENU)

Datasets:

Site: [104N] MR237 (Gooloogong Road) near Wheatleys Road
Attribute: Rural
Direction: 5 - South bound A>B, North bound B>A. **Lane:** 0
Survey Duration: 13:04 Thursday, 10 October, 2013 => 16:33 Thursday, 24 October, 2013,
Zone:
File: 2013-10-24_GOOLOOGONG_ROAD_(MR237).EC0 (Regular)
Identifier: A9736X3T MC56-L5 [MC55] (c)Microcom 19Oct04
Algorithm: Factory default axle (v5.02)
Data type: Axle sensors - Paired (Class/Speed/Count)

Profile:

Filter time: 00:00 Friday, 11 October, 2013 => 00:00 Thursday, 24 October, 2013 (13)
Included classes: 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12
Speed range: 8 - 161 km/h.
Direction: North, East, South, West (bound), P = North, Lane = 0-16
Separation: Headway > 0 sec, Span 0 - 91.44 metre
Name: Default Profile
Scheme: Vehicle classification (ARX)
Units: Metric (metre, kilometre, m/s, km/h, kg, tonne)
In profile: Vehicles = 1973 / 2182 (90.42%)

Class Speed Matrix

ClassMatrix-50

Site: 104N.0.1SN
Description: MR237 (Gooloogong Road) near Wheatleys Road
Filter time: 00:00 Friday, 11 October, 2013 => 00:00 Thursday, 24 October, 2013
Scheme: Vehicle classification (ARX)
Filter: Cls(1-12) Dir(NESW) Sp(8,161) Headway(>0) Span(0 - 91.44) Lane(0-16)

Class													
km/h	MC 1	SV 2	SVT 3	TB2 4	TB3 5	T4 6	ART3 7	ART4 8	ART5 9	ART6 10	BD 11	DRT 12	Total
8- 16	.	.	.	.	.	.	.	.	.	.	.	.	0 0.0%
16- 24	.	.	.	.	1	.	.	.	.	.	.	.	1 0.1%
24- 32	2	4	1	1	2	.	.	.	.	.	.	.	10 0.5%
32- 40	2	3	.	.	1	.	.	2	1	.	.	.	9 0.5%
40- 48	.	14	.	1	2	.	.	.	.	.	.	.	17 0.9%
48- 56	.	9	1	.	1	.	.	.	.	.	.	.	11 0.6%
56- 64	.	5	4	.	.	.	.	.	.	.	.	.	9 0.5%
64- 72	.	26	3	1	.	.	.	.	1	1	.	.	32 1.6%
72- 80	2	53	6	5	1	.	3	1	1	1	.	.	73 3.7%
80- 89	3	136	30	17	2	.	1	4	.	3	.	.	196 9.9%
89- 97	8	340	25	34	14	.	2	4	5	12	6	.	450 22.8%
97-105	16	414	18	42	18	.	1	1	2	16	3	.	531 26.9%
105-113	12	285	11	40	14	.	3	1	1	4	3	.	374 19.0%
113-121	8	119	1	24	7	1	2	1	.	.	.	.	163 8.3%
121-129	3	48	1	15	2	.	.	.	.	.	.	.	69 3.5%
129-137	.	8	.	3	.	.	.	.	.	1	.	.	12 0.6%
137-145	5	5	.	.	1	.	.	.	.	.	.	.	11 0.6%
145-153	1	4	.	.	.	.	.	.	.	.	.	.	5 0.3%
153-161	.	.	.	.	.	.	.	.	.	.	.	.	0 0.0%
Total	62 3.1%	1473 74.7%	101 5.1%	183 9.3%	66 3.3%	1 0.1%	12 0.6%	14 0.7%	11 0.6%	38 1.9%	12 0.6%	0 0.0%	1973

MetroCount Traffic Executive **Class Speed Matrix**

ClassMatrix-51 -- English (ENU)

Datasets:

Site: [GOOLOGONG RD] GOOLOGONG RD
Attribute: 33.8807819,148.1648434
Direction: 7 - North bound A>B, South bound B>A. **Lane:** 0
Survey Duration: 00:00 Saturday, 15 December, 2018 => 16:14 Wednesday, 16 January, 2019,
Zone:
File: 2019-01-15_GOOLOOGONG_ROAD_(MR237).EC0 (Plus)
Identifier: E69262M9 MC56-6 [MC55] (c)Microcom 02/03/01
Algorithm: Factory default axle (v5.02)
Data type: Axle sensors - Paired (Class/Speed/Count)

Profile:

Filter time: 00:00 Sunday, 16 December, 2018 => 00:00 Wednesday, 16 January, 2019 (31)
Included classes: 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12
Speed range: 8 - 161 km/h.
Direction: North, East, South, West (bound), P = North, Lane = 0-16
Separation: Headway > 0 sec, Span 0 - 91.44 metre
Name: Default Profile
Scheme: Vehicle classification (ARX)
Units: Metric (metre, kilometre, m/s, km/h, kg, tonne)
In profile: Vehicles = 12540 / 13188 (95.09%)

Class Speed Matrix

ClassMatrix-51

Site: GOOLOGONG RD.0.1NS
Description: GOOLOGONG RD
Filter time: 00:00 Sunday, 16 December, 2018 => 00:00 Wednesday, 16 January, 2019
Scheme: Vehicle classification (ARX)
Filter: Cls(1-12) Dir(NESW) Sp(8,161) Headway(>0) Span(0 - 91.44) Lane(0-16)

Class													
	MC	SV	SVT	TB2	TB3	T4	ART3	ART4	ART5	ART6	BD	DRT	Total
km/h	1	2	3	4	5	6	7	8	9	10	11	12	
8- 16	2	2	.	.	.	.	.	.	.	.	.	.	4 0.0%
16- 24	4	7	.	.	.	.	.	.	.	.	.	.	11 0.1%
24- 32	9	21	5	2	2	.	.	.	1	.	.	.	40 0.3%
32- 40	.	165	23	7	3	.	2	.	.	3	.	.	203 1.6%
40- 48	1	561	107	34	25	1	.	.	.	14	4	.	747 6.0%
48- 56	6	1369	246	154	65	7	16	4	6	39	32	1	1945 15.5%
56- 64	14	2247	336	211	56	11	16	12	8	61	75	2	3049 24.3%
64- 72	8	2483	300	231	32	6	14	8	8	95	76	.	3261 26.0%
72- 80	11	1685	112	169	10	3	8	2	4	35	22	1	2062 16.4%
80- 89	5	697	36	69	1	1	4	1	3	7	2	.	826 6.6%
89- 97	5	222	11	29	2	.	1	.	.	.	.	.	270 2.2%
97-105	2	57	1	18	.	.	3	1	.	.	.	.	82 0.7%
105-113	.	17	.	10	.	.	.	.	.	.	.	.	27 0.2%
113-121	.	4	.	3	.	.	.	.	.	.	.	.	7 0.1%
121-129	.	4	.	.	.	.	.	.	.	.	.	.	4 0.0%
129-137	.	1	.	.	.	.	.	.	.	.	.	.	1 0.0%
137-145	.	.	.	.	.	.	.	.	.	.	.	.	0 0.0%
145-153	.	1	.	.	.	.	.	.	.	.	.	.	1 0.0%
153-161	.	.	.	.	.	.	.	.	.	.	.	.	0 0.0%
Total	67	9543	1177	937	196	29	64	28	30	254	211	4	12540
	0.5%	76.1%	9.4%	7.5%	1.6%	0.2%	0.5%	0.2%	0.2%	2.0%	1.7%	0.0%	

MetroCount Traffic Executive **Class Speed Matrix**

ClassMatrix-52 -- English (ENU)

Datasets:

Site: [Goologong Road] Goologong Road Boundary
Attribute: -33.655944, 148.312381
Direction: 7 - North bound A>B, South bound B>A. **Lane:** 0
Survey Duration: 00:00 Tuesday, 22 January, 2019 => 10:38 Wednesday, 6 February, 2019,
Zone:
File: 2019-01-22_GOOLOOGONG_ROAD_(MR237).EC0 (Regular)
Identifier: FN48ZGMR MC56-L5 [MC55] (c)Microcom 19Oct04
Algorithm: Factory default axle (v5.02)
Data type: Axle sensors - Paired (Class/Speed/Count)

Profile:

Filter time: 00:00 Wednesday, 23 January, 2019 => 00:00 Wednesday, 6 February, 2019 (14)
Included classes: 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12
Speed range: 8 - 161 km/h.
Direction: North, East, South, West (bound), P = North, Lane = 0-16
Separation: Headway > 0 sec, Span 0 - 91.44 metre
Name: Default Profile
Scheme: Vehicle classification (ARX)
Units: Metric (metre, kilometre, m/s, km/h, kg, tonne)
In profile: Vehicles = 2436 / 2720 (89.56%)

Class Speed Matrix

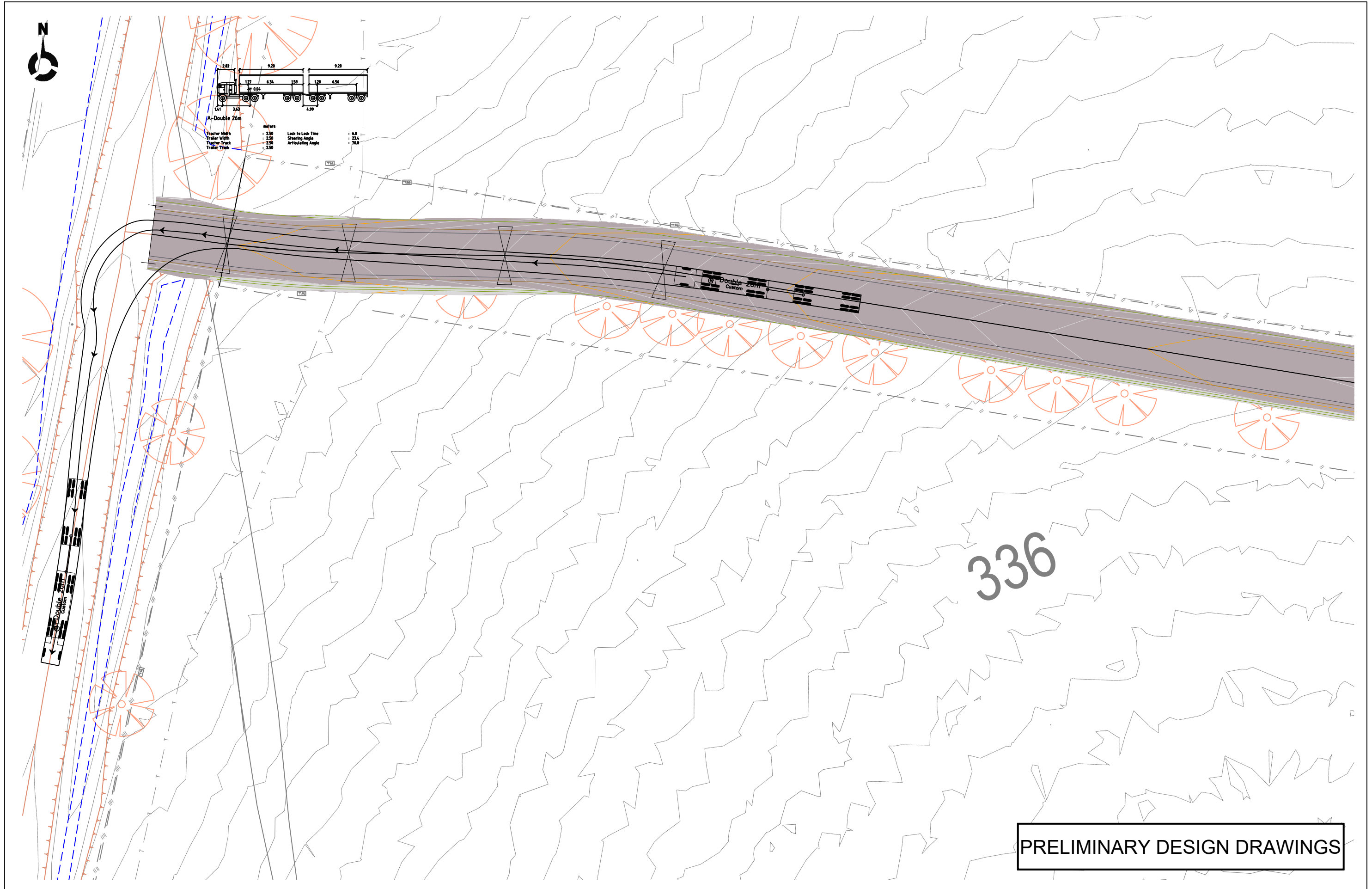
ClassMatrix-52

Site: Goologong Road.0.1NS
Description: Goologong Road Boundary
Filter time: 00:00 Wednesday, 23 January, 2019 => 00:00 Wednesday, 6 February, 2019
Scheme: Vehicle classification (ARX)
Filter: Cls(1-12) Dir(NESW) Sp(8,161) Headway(>0) Span(0 - 91.44) Lane(0-16)

Class													
km/h	MC 1	SV 2	SVT 3	TB2 4	TB3 5	T4 6	ART3 7	ART4 8	ART5 9	ART6 10	BD 11	DRT 12	Total
8- 16	.	.	.	.	.	.	.	.	.	.	.	.	0 0.0%
16- 24	.	.	.	.	.	.	.	.	.	.	.	.	0 0.0%
24- 32	1	.	.	.	.	.	.	.	.	.	.	.	1 0.0%
32- 40	.	.	.	.	.	.	.	.	.	.	.	.	0 0.0%
40- 48	.	2	2	1	1	.	.	.	.	.	.	.	6 0.2%
48- 56	.	5	.	.	1	.	.	.	.	.	1	.	7 0.3%
56- 64	.	4	.	.	1	.	.	.	.	.	.	.	5 0.2%
64- 72	.	16	2	6	.	.	.	.	.	1	.	.	25 1.0%
72- 80	.	29	9	18	.	.	1	.	.	2	.	.	59 2.4%
80- 89	.	96	21	19	6	1	1	1	1	4	3	.	153 6.3%
89- 97	6	291	33	54	3	.	2	7	6	18	24	.	444 18.2%
97-105	10	620	37	108	24	1	2	7	3	67	100	1	980 40.2%
105-113	13	323	12	72	16	.	2	3	1	11	27	.	480 19.7%
113-121	.	130	7	31	4	.	4	1	.	.	.	.	177 7.3%
121-129	2	42	1	16	3	.	.	2	.	.	.	.	66 2.7%
129-137	.	12	.	8	.	.	.	.	.	.	.	.	20 0.8%
137-145	.	4	.	1	.	.	.	.	.	.	.	.	5 0.2%
145-153	.	4	.	.	1	.	.	.	.	.	.	.	5 0.2%
153-161	1	2	.	.	.	.	.	.	.	.	.	.	3 0.1%
Total	33 1.4%	1580 64.9%	124 5.1%	334 13.7%	60 2.5%	2 0.1%	12 0.5%	21 0.9%	11 0.5%	103 4.2%	155 6.4%	1 0.0%	2436

APPENDIX 2: SWEPT PATHS

AP02



PRELIMINARY DESIGN DRAWINGS

REVISION	DESCRIPTION	BY	DATE
1	ORIGINAL ISSUE	R.P	20.07.2021
2	UPDATED A-DOUBLE DIMENSIONS	R.P	12.08.2021



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DRAWING TITLE
EXIT TO GRENFELL SWEEP PATH

CLIENT
BAIADA

PROJECT
GRENFELL FARMS

LOCATION
1130 GOOLOOGONG ROAD, GRENFELL, NSW

DRAWING DATE
AUGUST 2021

ORIGINAL SIZE: A1 SCALE A3: 1:600

SCALE
0 6 12 18m

SCALE 1:300 (A1)

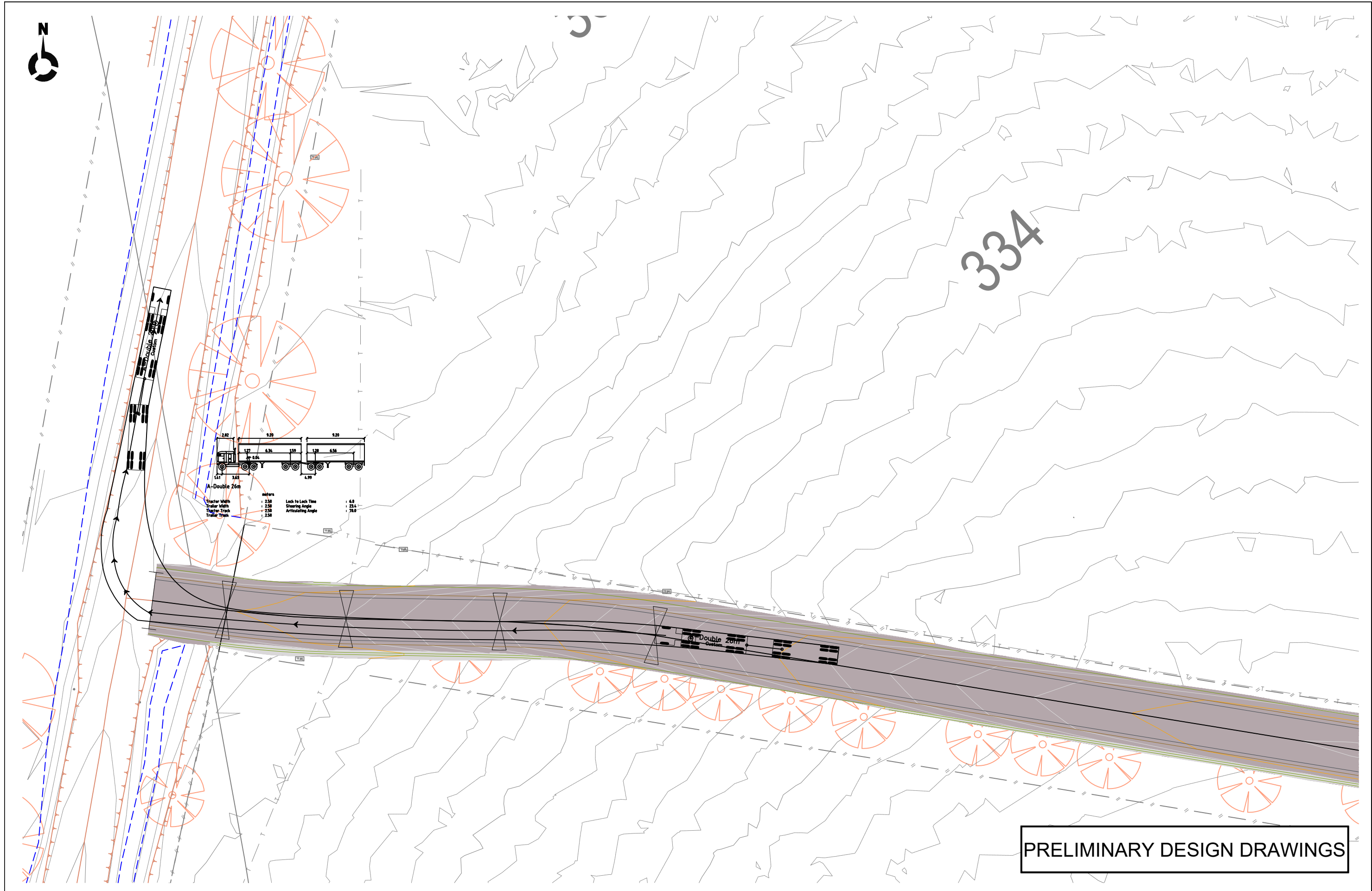
DRAWN BY
R.P

CHECKED BY
H.R

APPROVED BY
PROJECT NO.

DRAWING NO.
1228

REVISION
SK01 2



PRELIMINARY DESIGN DRAWINGS

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1	ORIGINAL ISSUE	R.P	20.07.2021
2	UPDATED A-DOUBLE DIMENSIONS	R.P	12.08.2021



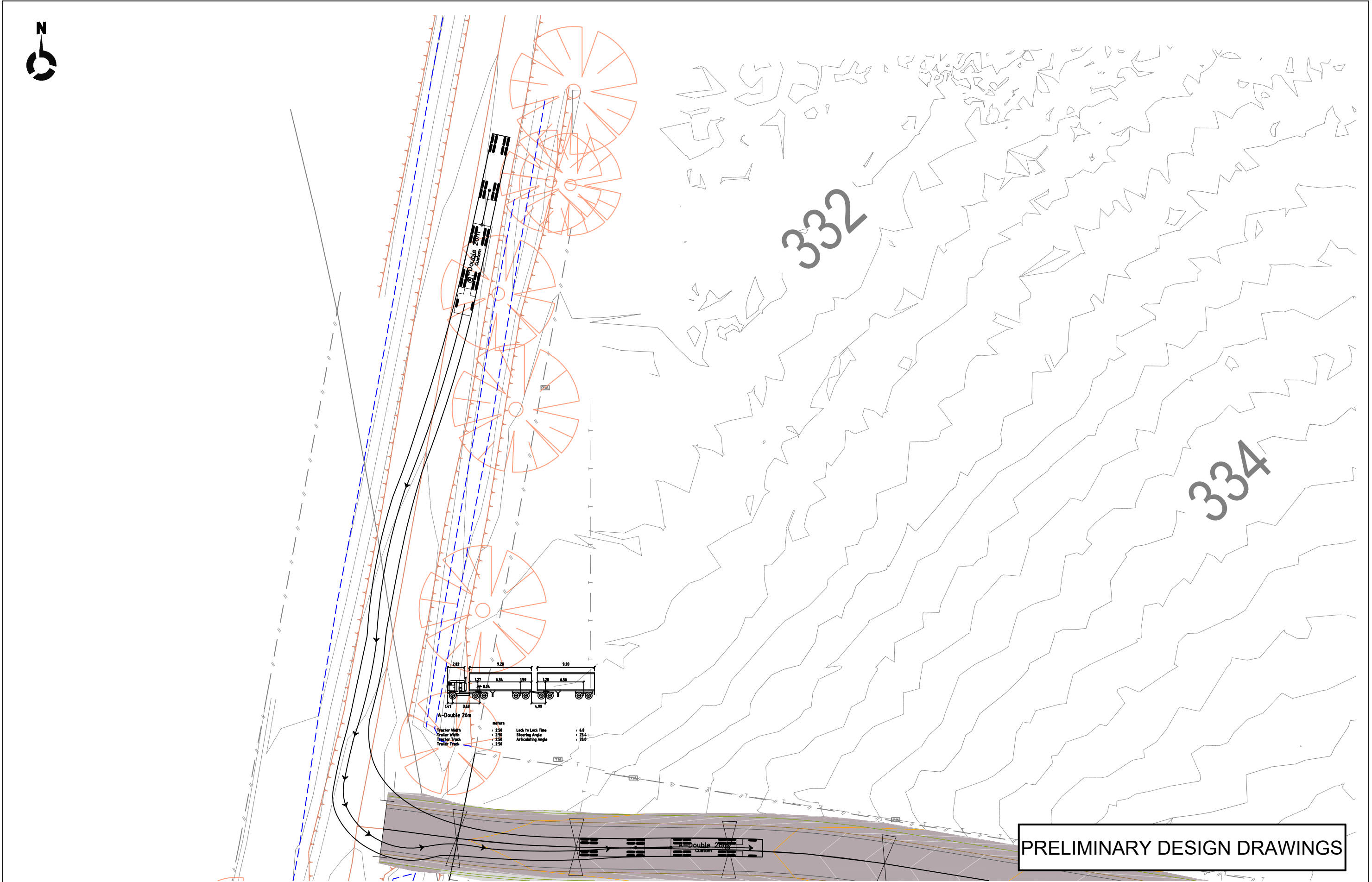
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DRAWING TITLE	EXIT TO GOOLOOGONG SWEEP PATH
CLIENT	BAIADA
PROJECT	GRENFELL FARMS
LOCATION	1130 GOOLOOGONG ROAD, GRENFELL, NSW

DRAWING DATE	AUGUST 2021	DRAWN BY	R.P
ORIGINAL SIZE: A1	SCALE A3: 1:600	CHECKED BY	H.R
SCALE	0 6 12 18m	APPROVED BY	H.R
SCALE 1:300 (A1)		PROJECT NO.	1228
		DRAWING NO.	SK02
		REVISION	2



REVISION	DESCRIPTION	BY	DATE
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DRAWING TITLE

ENTRY FROM GOOLOOGONG SWEEP PATH

CLIENT

BAIADA

PROJECT

GRENFELL FARMS

LOCATION

1130 GOOLOOGONG ROAD, GRENFELL, NSW

DRAWING DATE

AUGUST 2021

ORIGINAL SIZE: A1 SCALE A3: 1:500

SCALE

0 5 10 15m

SCALE 1:250 (A1)

DRAWN BY

R.P

CHECKED BY

H.R

APPROVED BY

PROJECT NO.

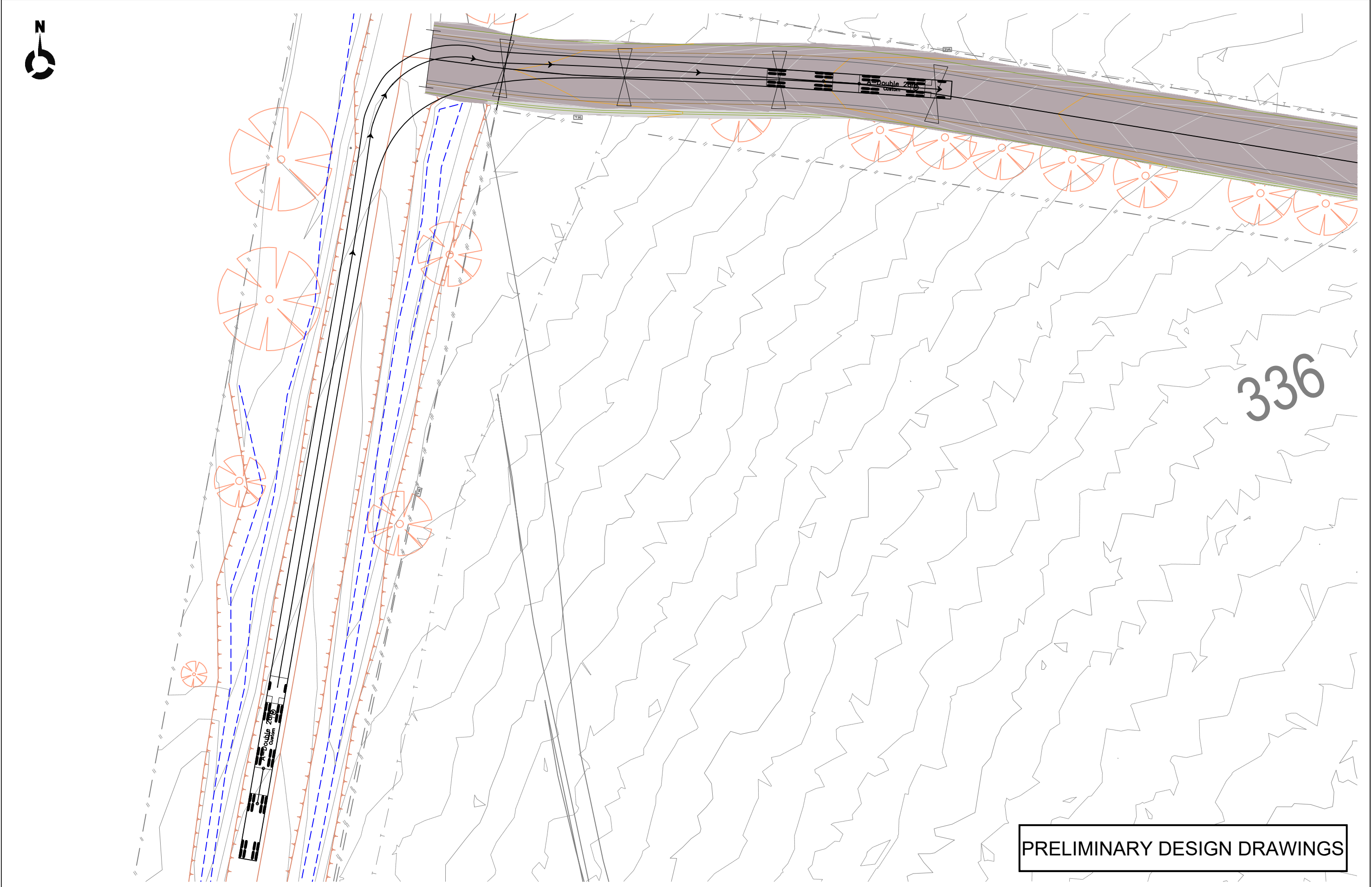
1228

DRAWING NO.

SK03

REVISION

2



PRELIMINARY DESIGN DRAWINGS

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1	ORIGINAL ISSUE	R.P	20.07.2021
2	UPDATED A-DOUBLE DIMENSIONS	R.P	12.08.2021



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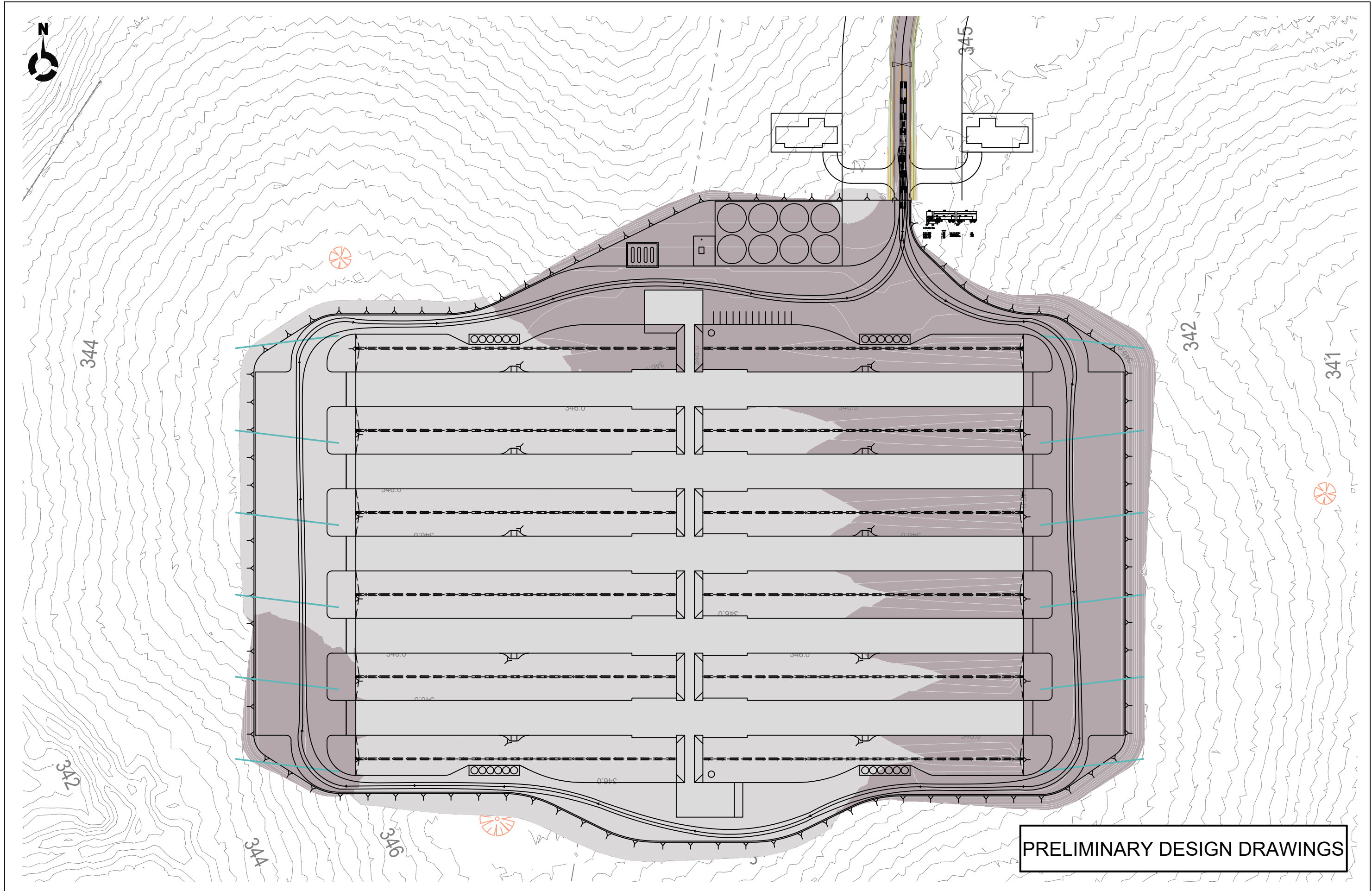
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DRAWING TITLE	ENTRY FROM GRENFELL SWEEP PATH BAIADA GRENFELL FARMS 1130 GOOLOOGONG ROAD, GRENFELL, NSW	DRAWING DATE	AUGUST 2021		DRAWN BY	R.P		
CLIENT		ORIGINAL SIZE	A1	SCALE A3:	1:500	CHECKED BY	H.R	
PROJECT		SCALE			APPROVED BY	H.R		
LOCATION		SCALE 1:250 (A1)		PROJECT NO.	1228	DRAWING NO.	SK04	REVISION



REVISION	DESCRIPTION	BY	DATE
1	ORIGINAL ISSUE	R.P	20.07.2021
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DRAWING TITLE
FARM 1 SWEPT PATH

CLIENT
BAIADA

PROJECT
GRENFELL FARMS

LOCATION
1130 GOOLOOGONG ROAD, GRENFELL, NSW

DRAWING DATE
AUGUST 2021

ORIGINAL SIZE: A1 SCALE A3: 1:1500
SCALE

SCALE 1:750(A1)

DRAWN BY
R.P

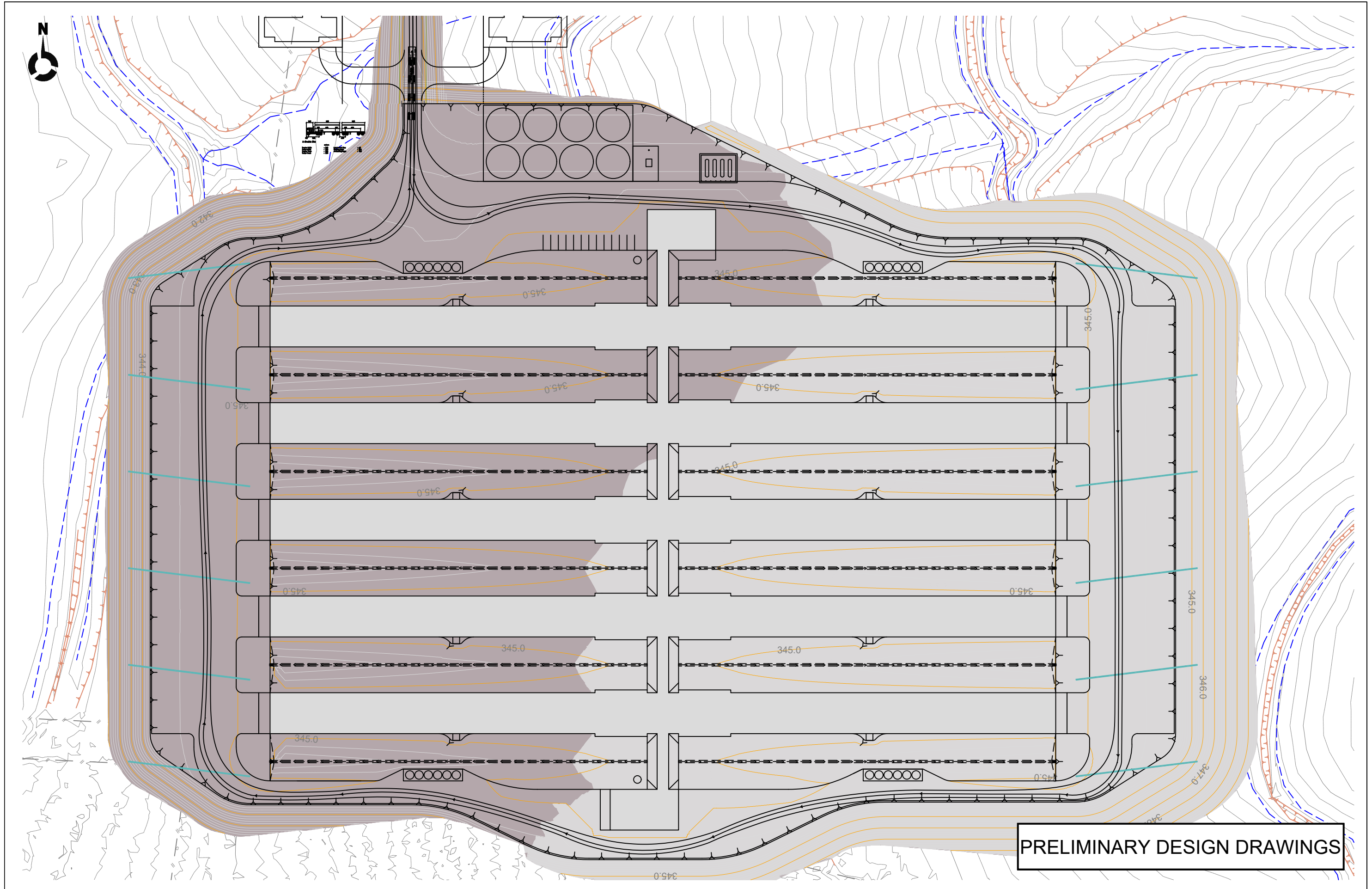
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H.R

PROJECT NO.
1228

DRAWING NO.
SK05

REVISION
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DRAWING TITLE
CLIENT
PROJECT
LOCATION

FARM 2 SWEEP PATH
BAIADA
GRENFELL FARMS
1130 GOOLOOGONG ROAD, GRENFELL, NSW

DRAWING DATE
ORIGINAL SIZE
SCALE

AUGUST 2021
A1
SCALE A3: 1:1500
SCALE

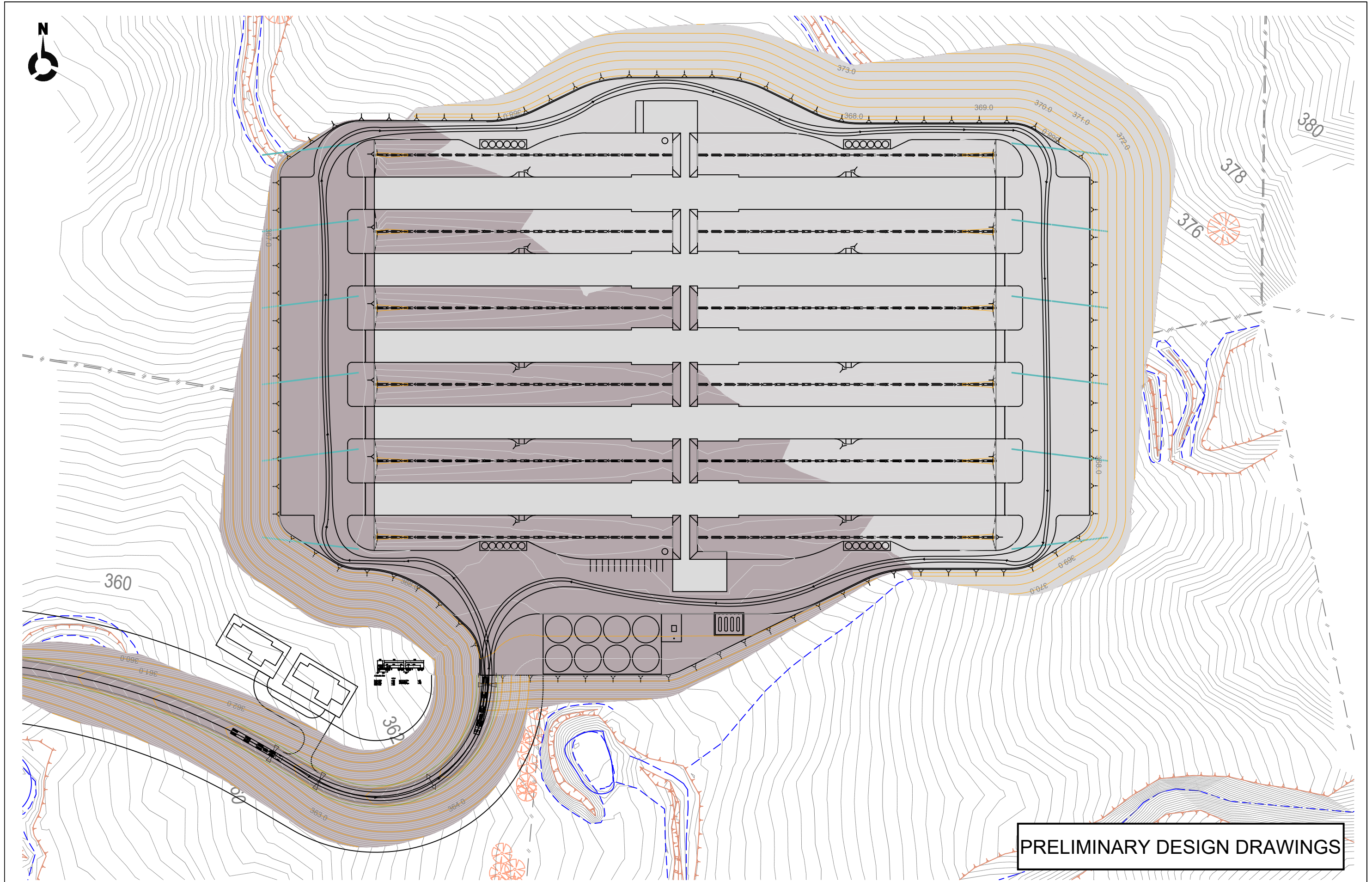
0 15 30 45m
SCALE 1:750(A1)

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CHECKED BY
APPROVED BY
PROJECT NO.

R.P
H.R
H.R
1228

DRAWING NO.
REVISION

SK06
2



REVISION	DESCRIPTION	BY	DATE
1	ORIGINAL ISSUE	R.P	20.07.2021
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DRAWING TITLE
FARM 4 SWEEP PATH

CLIENT
BAIADA

PROJECT
GRENFELL FARMS

LOCATION
1130 GOOLOOGONG ROAD, GRENFELL, NSW

DRAWING DATE
AUGUST 2021

ORIGINAL SIZE: **A1** SCALE A3: **1:1500**

SCALE

SCALE 1:750(A1)

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R.P

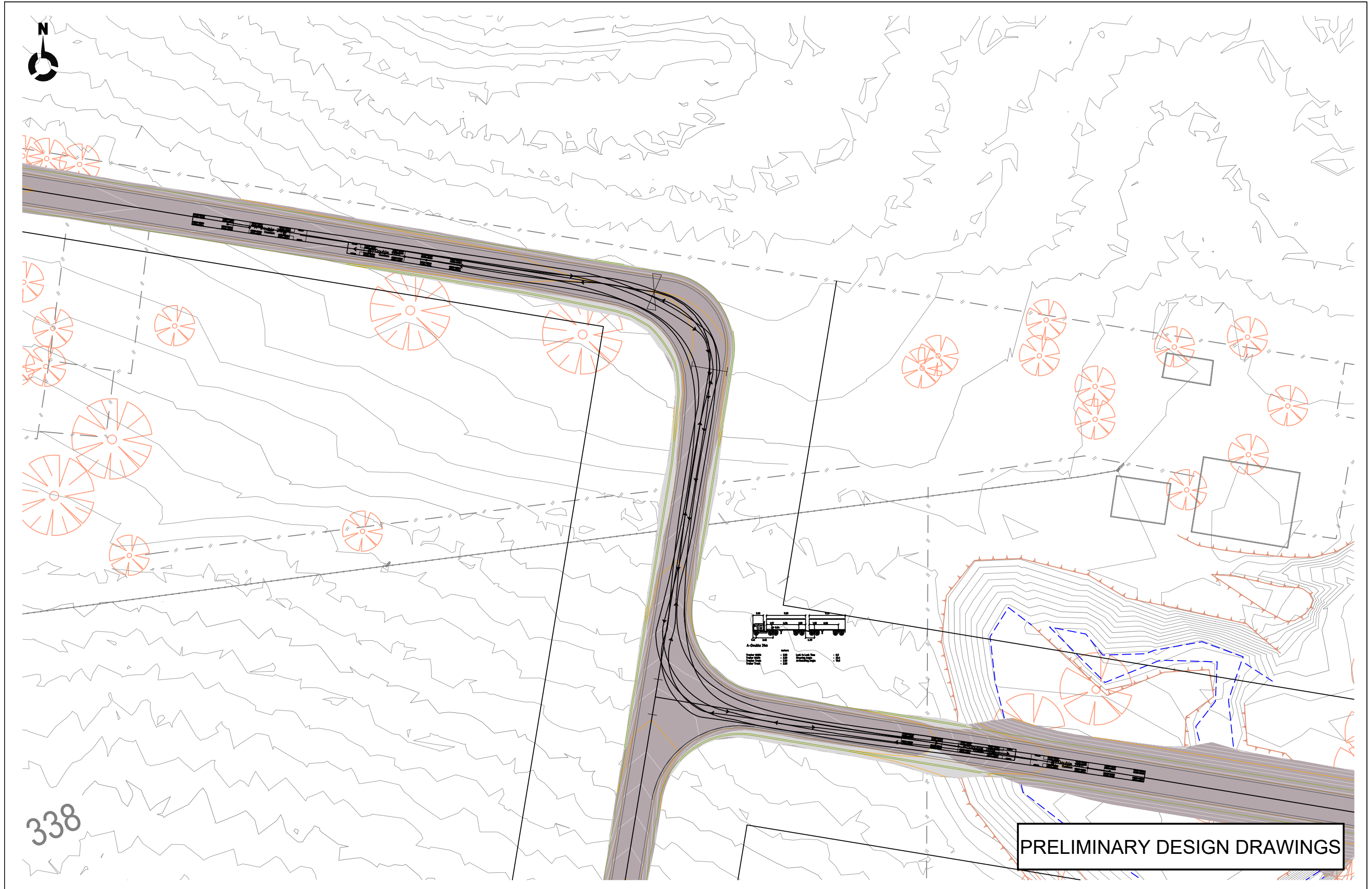
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REVISION
2



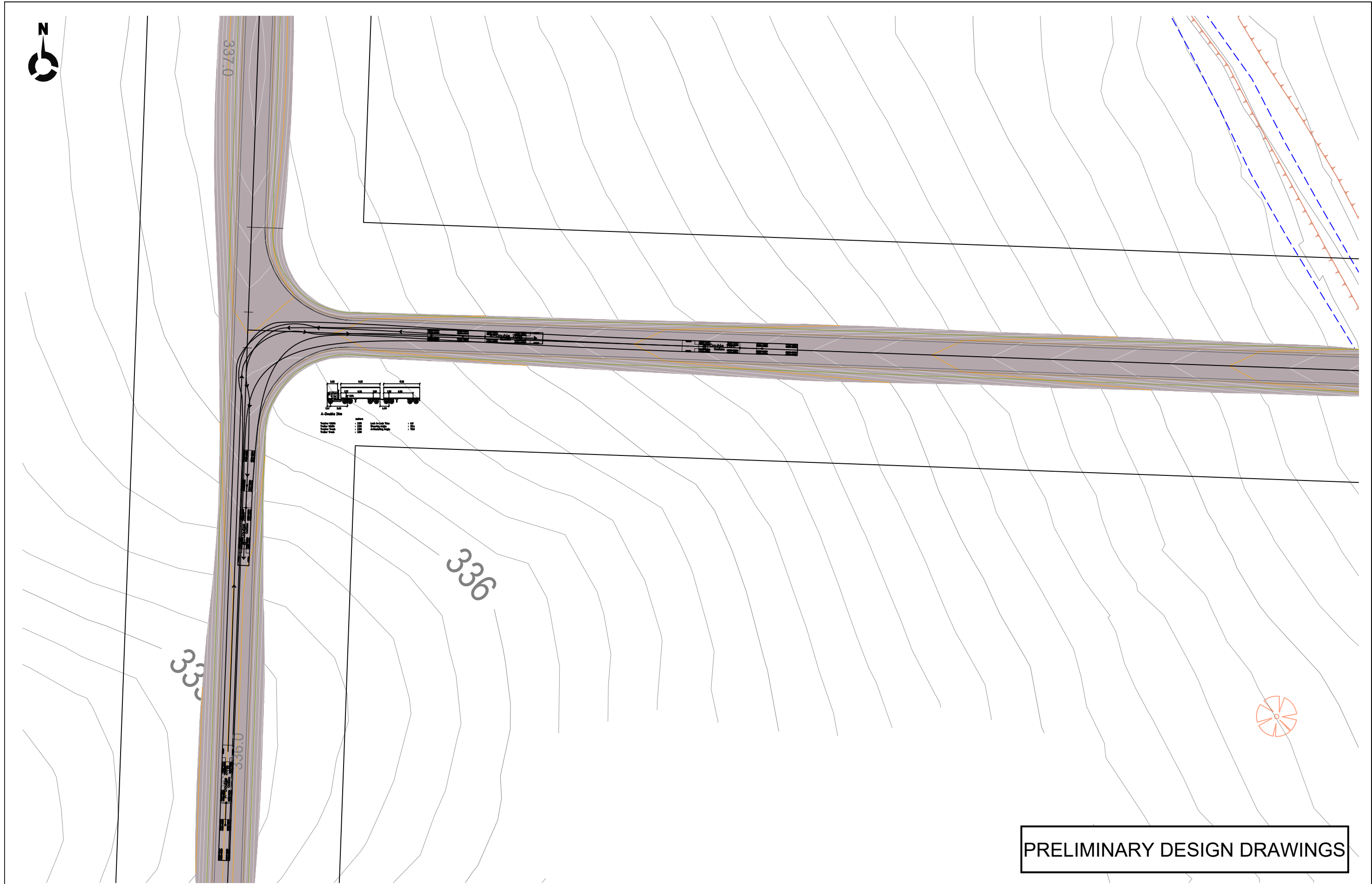
REVISION	DESCRIPTION	BY	DATE
1	ORIGINAL ISSUE	R.P	20.07.2021
2	UPDATED A-DOUBLE DIMENSIONS	R.P	12.08.2021



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DRAWING TITLE	FARMS 2-4 ACCESS SWEEP PATH			DRAWING DATE	AUGUST 2021		DRAWN BY	R.P	
CLIENT	BAIADA			ORIGINAL SIZE	A1	SCALE A3:	1:800	CHECKED BY	H.R
PROJECT	GRENFELL FARMS			SCALE					APPROVED BY
LOCATION	1130 GOOLOOGONG ROAD, GRENFELL, NSW			SCALE 1:400 (A1)				PROJECT NO.	1228
					DRAWING NO.	SK09		REVISION	2



REVISION	DESCRIPTION	BY	DATE
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DRAWING TITLE
FARMS 2-3 ACCESS SWEEP PATH

CLIENT
BAIADA

PROJECT
GRENFELL FARMS

LOCATION
1130 GOOLOOGONG ROAD, GRENFELL, NSW

DRAWING DATE
AUGUST 2021

ORIGINAL SIZE: A1 SCALE A3: 1:800
SCALE

SCALE 1:400 (A1)

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PROJECT NO.
1228

DRAWING NO.
SK10

REVISION
2