18 May 2026

DSDIP SARA
North and Central West Office
PO Box 5666
TOWNSVILLE QLD 4810

USC Reference: USC131
Council reference: MCU2026/0003
SARA reference: 2603-51385 SRA

Attention: Jackie Larrarte – Senior Planning Officer

INFORMATION REQUEST RESPONSE
3-9 NORMAN DUNGAVELL DRIVE, QUEENTON

The following correspondence provides a response to the SARA Information Request dated 9 April 2026. The correspondence has extracted each part of SARA's request and provides a subsequent response below with attached correspondence.

The project team have undertaken a detailed review of the Information Request letter to deliver an amended development outcome, that is considered and seeks to address each item raised by SARA.

SARA Information Request

Item 1 – Stormwater Management Plan (SMP)

The SMP prepared by STP Consultants, dated 18 February 2026 and revision A has not provided sufficient information to demonstrate the proposed development will not result in adverse impacts to the state-controlled road and railway corridor.

Response requested:

Provide an updated SMP which demonstrates the following:

- *The post-development stormwater discharge rates for all storm events up to and including the 1% Annual Exceedance Probability (AEP) event are equal to or less than pre-development discharge rates, in accordance with current requirements.*
- *All external catchments traversing or discharging through the site are appropriately managed through adequate stormwater infrastructure provisions. This is to be supported by detailed hydrologic and hydraulic calculations, confirming that the proposed development will not result in adverse downstream impacts to adjoining rail and road corridors.*
- *Any change to stormwater discharge patterns towards the road corridor and rail corridor must be appropriately mitigated to ensure a no-worsening outcome is achieved, including consideration of flow rates, velocities, and discharge locations.*

- *Further detail regarding infrastructure requirements between the site boundary and the road corridor, demonstrating that sufficient frontage width has been allowed to accommodate stormwater drainage infrastructure in addition to other required elements, such as safety barriers and other civil works.*

Response

A response to SARA's Information Request and amended Site Based Stormwater Management Plan prepared by STP Consultants is included in **Attachment 1**, which updates the hydrologic and hydraulic modelling and demonstrates no worsening of discharge rates, flow patterns or downstream impacts. The revised report also confirms adequate management of external catchments and provides the required frontage detail for drainage infrastructure.

Item 2 – Traffic Impact Assessment (TIA)

The following deficiencies have been identified within the TIA prepared by Modus, dated 18 February 2026 and version A:

- *Whilst the TIA has considered Safe Intersection Sight Distance (SISD) at the exit driveway, it has only considered SISD for cars. Given the nature of the development and fronting road, both of which contain/generate reasonable proportions of heavy vehicles, SISD for trucks should be considered in accordance with the Austroads Guide to Road Design Part 4A: Unsignalised and Signalised Intersections (AGRD4A).*
- *The conflict point for assessment of SISD should be based on the design vehicle swept paths, rather than an arbitrary point in front of a vehicle propped to exit the site. Consideration of the swept paths within the SISD assessment would shift the conflict point much further west than has been assessed, particularly for an A-triple turning right out of the site.*
- *The development proposes a Basic Right (BAR) turning treatment on the eastern approach to the entry driveway crossover. Whilst this would be a reasonable treatment for a straight road alignment in a similar speed environment, given the horizontal geometry of Norman Dungavell Drive on the eastern approach, the BAR treatment would be on the inside of a horizontal curve with constrained sight distance to the rear of a vehicle propped in the westbound through lane to turn right into the subject site. The preferred right turn treatment in this instance would be a Channelised Right (short) (CHRS)) treatment, whereby the right turning vehicle props in a protected right turning lane, which is clear of the through lane.*
- *Provision of a BAR would be reliant on acceptable SISD to the rear of a propped vehicle as required by Section 3.2.2 and Figure 3.3 of AGRD4A. As per drawing SK03, SISD for the BAR will be difficult as the SISD travels through third party land and also vegetation/fencing hence, the provision of a CHR(S) requires consideration.*

<u>Response requested:</u>

Provide an updated TIA which includes the following information:

- *A revised access sight distance assessment considering SISD requirements for trucks as per the Austroads Guide to Road Design Part 4A: Unsignalised and Signalised Intersections (AGRD4A) and revised conflict points based on submitted swept path assessments (i.e. particularly for the right turn out of the site to the west).*
- *Confirm that SISD (for trucks) can be provided to the rear of a propped vehicle (car) using the proposed Basic Right (BAR) turning treatment as required by Section 3.2.2 and Figure 3.3 of AGRD4A. If SISD cannot be provided, a Channelised Right (short) (CHRS)) treatment should be provided.*

- *A safety assessment as required by Section 9.3 of the TMR Guide to Traffic Impact Assessment (GTIA).*
- *Confirm whether any existing drainage infrastructure is required to be modified and/or relocated, and whether any road safety mitigations (barriers etc) are required.*
- *A plan showing the recommended (Basic Left (BAL)) turning treatment at the proposed entry driveway and details of the proposed signage and linemarking required to restrict entry or exit movements at each driveway crossover.*
- *Updated conceptual plans in consideration of the above items.*

Response

A Traffic Engineering Letter prepared by Modus is provided in **Attachment 2**, which addresses the SISD requirements for trucks, revised conflict points, turning treatments and safety assessment. The amended information provides updated access plans reflecting the recommended treatments.

Conclusion

We trust that the information provided above, along with the attached supporting documentation, sufficiently addresses the items raised in the SARA Information Request, to enable SARA to make a decision on the development.

Yours sincerely,

URBAN SPACE CONSULTING

Attachments:

1. Site Based Stormwater Management Plan
2. Traffic Engineering Letter

ATTACHMENT 1

PARTNERS
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STRUCTURAL
CIVIL
MECHANICAL
ELECTRICAL
HYDRAULIC
FIRE
SEISMIC
SECTION J
ENGINEERS

STP CONSULTANTS

28 April 2026
Ref: STP25-2356

Department of State Development - Infrastructure and Planning
South East Queensland (South) Office
PO Box 3290
Southport BC, QLD 4215

Attention: Jackie Larrarte

Dear Madam,

RESPONSE TO SARA ADVICE NOTICE – 3-9 NORMAN DUNGAVELL DRIVE, CHARTERS TOWERS QUEENSLAND
SARA Reference: 2603-51385 SRA

We acknowledge receipt of the Sara Advice Notice, dated 9 April 2025 and provide the following additional information to clarify the matters raised: -

Stormwater Management

Pre- and post-development Impervious areas

> The post-development stormwater discharge rates for all storm events up to and including the 1% Annual Exceedance Probability (AEP) event are equal to or less than pre-development discharge rates, in accordance with current requirements.

- The subject land is currently zoned *Industry*.
- The Queensland Urban Design Manual (QUDM) assigns a fraction impervious of 0.9 for land zoned *Commercial and Industrial*.
- The proposed works are considered acceptable development and are allowed to be undertaken in accordance with the Charters Towers Regional Town Plan.
- The development only requires an MCU due to being located between a state-controlled road and a railway corridor.
- The flood study, in accordance with the Charters Towers Regional Council, utilises the *Industry* zoning fraction impervious of the subject land in the modelling, as it does for the adjacent neighbouring allotments.
- It is appropriate to determine the change in the subject site's peak discharge from pre-development to post-development, based on the assigned fraction impervious for the land zoning in accordance with Queensland Urban Design Manual (QUDM). Clause 5.5.5 of QUDM confirms the development should be designed such that the peak site discharge from the site does not increase above that which would be expected from the development based on an urban density or percentage impervious surface area.

- As there is no change in zoning, there is no change increase in the allowable site discharge as the proposed works remain under the 90% fraction of impervious allowable for the site.

- There is also no change to the coefficient of runoff for the for pre- and post-development due to no change of zoning. The site contains a maximum allowable C value of 0.87 for 90% fraction of impervious. The post-development contains a C value of 0.792 for the 64% fraction of impervious on the proposed works.

- Therefore, because of the above, all post-developments rainfall events up to and including the 1% AEP are less than the pre-development allowable discharges for the site.

External Catchments Traversing the Site

All external catchments traversing or discharging through the site are appropriately managed through adequate stormwater infrastructure provisions. This is to be supported by detailed hydrologic and hydraulic calculations, confirming that the proposed development will not result in adverse downstream impacts to adjoining rail and road corridors.

- All external catchments are appropriately managed through adequate stormwater provisions on the site. Detailed hydrologic calculations are provided in the Site Based Stormwater Management Plan.

Any change to stormwater discharge patterns towards the road corridor and rail corridor must be appropriately mitigated to ensure a no-worsening outcome is achieved, including consideration of flow rates, velocities, and discharge locations.

- There are no changes to the stormwater patterns towards the road corridor and rail corridor.
- There is a no-worsening outcome to flow rates, velocities, and discharge locations.

Further detail regarding infrastructure requirements between the site boundary and the road corridor, demonstrating that sufficient frontage width has been allowed to accommodate stormwater drainage infrastructure in addition to other required elements, such as safety barriers and other civil works.

- Details for the swale inside the site are provided in the Site Based Stormwater Management Report. It demonstrates sufficient capacity to accommodate stormwater runoff from the road corridor.

The additional information provided above and in the revised Stie Based Stormwater Management Report demonstrate that the proposed development will not result in any adverse downstream impacts to the adjoining state-controlled road and railway corridors.

Should you require any further information in respect to this matter please do not hesitate to contact Manuel Flores by email manuel@stpconsultants.com.au or phone 0423 586 052.

Yours faithfully,
STP Consultants

PAUL PETERSEN MTech, MIEAust, RPEQ 13231

Senior Civil Engineer
P. 0432 285 867 **E.** paulpl@stpconsultants.com.au

Encl. SBSMP 25-2356 Rev B – 3-9 Norman Dungavell Drive, Queenton

Cc Mr Will Cruze, Urban Space Consulting

STRUCTURAL
CIVIL
ELECTRICAL
MECHANICAL
HYDRAULIC
FIRE
VERTICAL TRANSPORT
SEISMIC

STP CONSULTANTS

New Warehouse & Hardstand

3 – 9 NORMAN DUNGAVELL DRIVE, QUEENTON QLD 4820

SITE BASED STORMWATER MANAGEMENT PLAN

URBAN SPACE CONSULTING

STP25-2356

DOCUMENT STATUS

Rev.	Issue	Author	Approved for Issue		
			Approved by	Signature	Date
A	For Approval	Manuel Flores	Paul Petersen RPEQ 13231		18 February 2026
B	Amended Catchment and Stormwater plans	Manuel Flores	Paul Petersen RPEQ 13231		28 April 2026

TABLE OF CONTENTS

1. Introduction

Urban Space Consulting has engaged STP Consultants to prepare a Site Based Stormwater Management Plan. This plan is intended to provide essential information to support the development of a New Warehouse along with a Hardstand, and Car Parking. The primary objective of this report is to comprehensively address the stormwater infrastructure needs necessary to effectively manage all-site runoff resulting from the proposed development.

Careful consideration of stormwater management is paramount as additional impervious surface inevitably alters the natural hydrological dynamics of the site, which potentially leading to increase runoff volumes and altered drainage patterns. Therefore, the key components of this report include:

1. Site assessment: An evaluation of the site's topography, hydrology, land use, and existing stormwater infrastructure.
2. Risk Analysis: An assessment of potential risk associated with stormwater runoff, including flooding, and water quality.
3. Proposed solutions: recommendations for stormwater management strategies including both green and grey infrastructure measures.

In summary, this report serves as a vital component of the overall project planning process, providing essential guidance for the design and implementation of stormwater infrastructure to effectively manage runoff from the proposed works. It underscores the importance of proactive stormwater management in mitigating potential risk and ensuring the successful and sustainable development of the site.

1.1 Limitations

This report provides a desktop stormwater and hydrology investigation from the information obtained from the following sources.

- Architectural plans prepared by Drawing Works.
- Survey Plan prepared by GJCM Surveys.
- LiDAR data obtained from Department of Natural Resources and Mines (via ELVIS – Elevation Foundation Spatial Data).
- Charters Towers Regional Council Zone Maps.
- Charters Towers Regional Council Flood Hazard Overlay.
- Charters Towers Regional Council Planning Scheme.
- Rainfall and Meteorological Data by the Australia Bureau of Meteorology.
- Before You Dig Australia.
- Queensland Globe.
- Google Maps and Street View.

2. Site Characteristics

The site is situated at 3 – 9 Norman Dungavell Drive, Queenton, and encompasses a single lot specifically identified as Lot 1 on RP901157, with a total land area of 1.53 ha (hereafter described as “the site”). The site falls within the Industry zone under the authority of the Charters Towers Regional Council (CTRC) local government area.

The site is positioned north west of Norman Dungavell Drive and south east of the Mt Isa Train line. At present, the site is partly occupied with multiple structures like large water tanks, shipping containers, and irrigation products. The site contains minimum vegetation around the perimeter with the single trees spread throughout. The site's immediate surroundings are residential dwellings to the south on Millchester Road and north past the train track, the old WWII American Fuel tanks for Planes on the opposite side of Norman Dungavell Drive, and large medium dense vegetation land to the east.

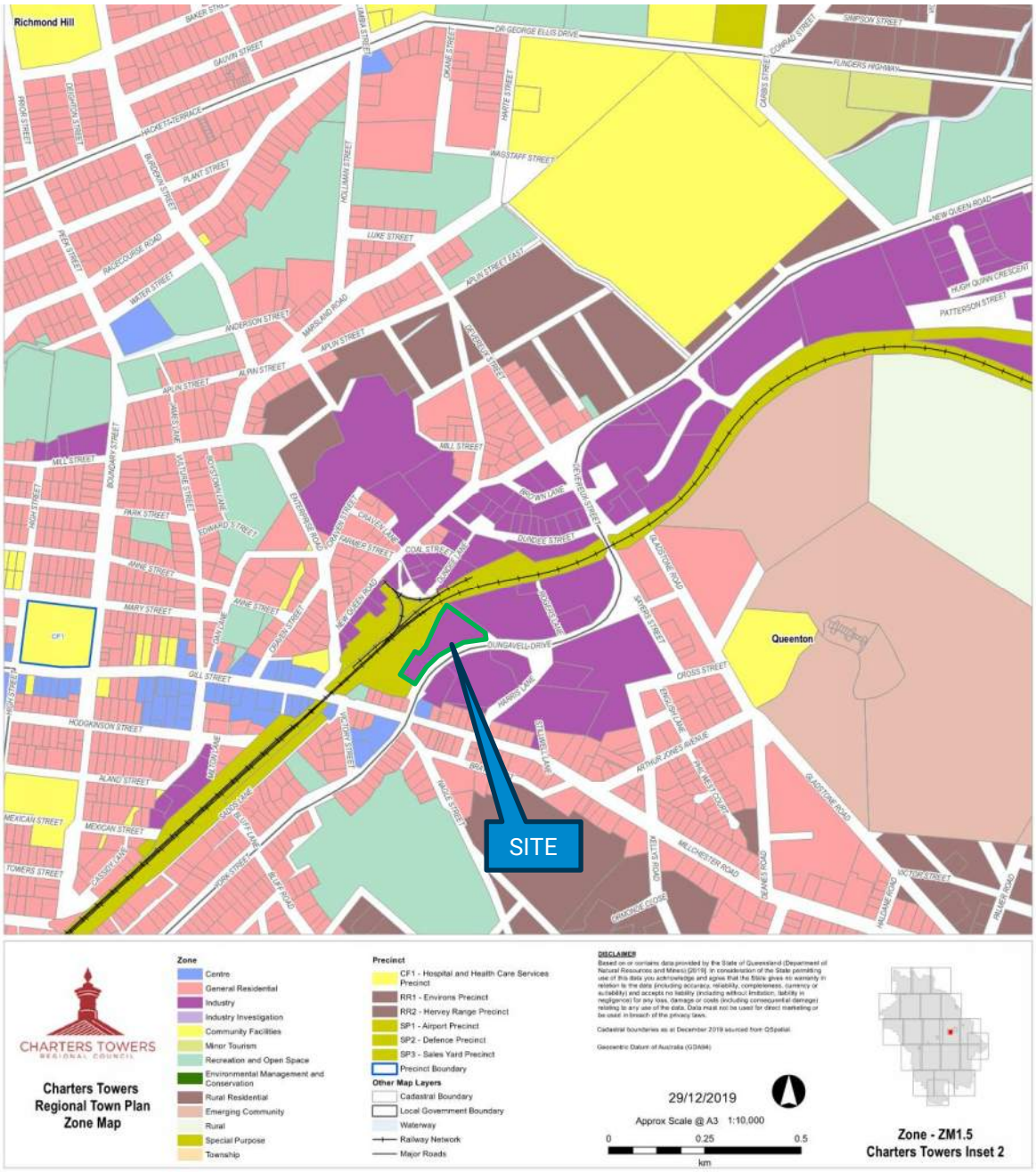

Figure 2.1 - Zoning Map Overlay Extract (CTRC Maps)

2.1 Easements and Resumptions

There are currently no easements register over the lot.

Figure 2.2 - Cadastral Boundaries and Easements (Qld Globe)

2.2 Site Topography

The site contains existing surface levels which vary with elevation from RL 308.0m AHD (Australian Height Datum) on the southern corner, at the property boundary next to Norman Dungavell Drive, to RL302.450m AHD on the north east boundary. Presently, the site exhibits a south to north slope with an approximate gradient 4.1% (1:24).

Figure 2.3 - Site Survey (GJCM Survey)

2.3 Flood Study

The site is not affected by the 1% AEP (Annual Exceedance Probability) flood overlay.

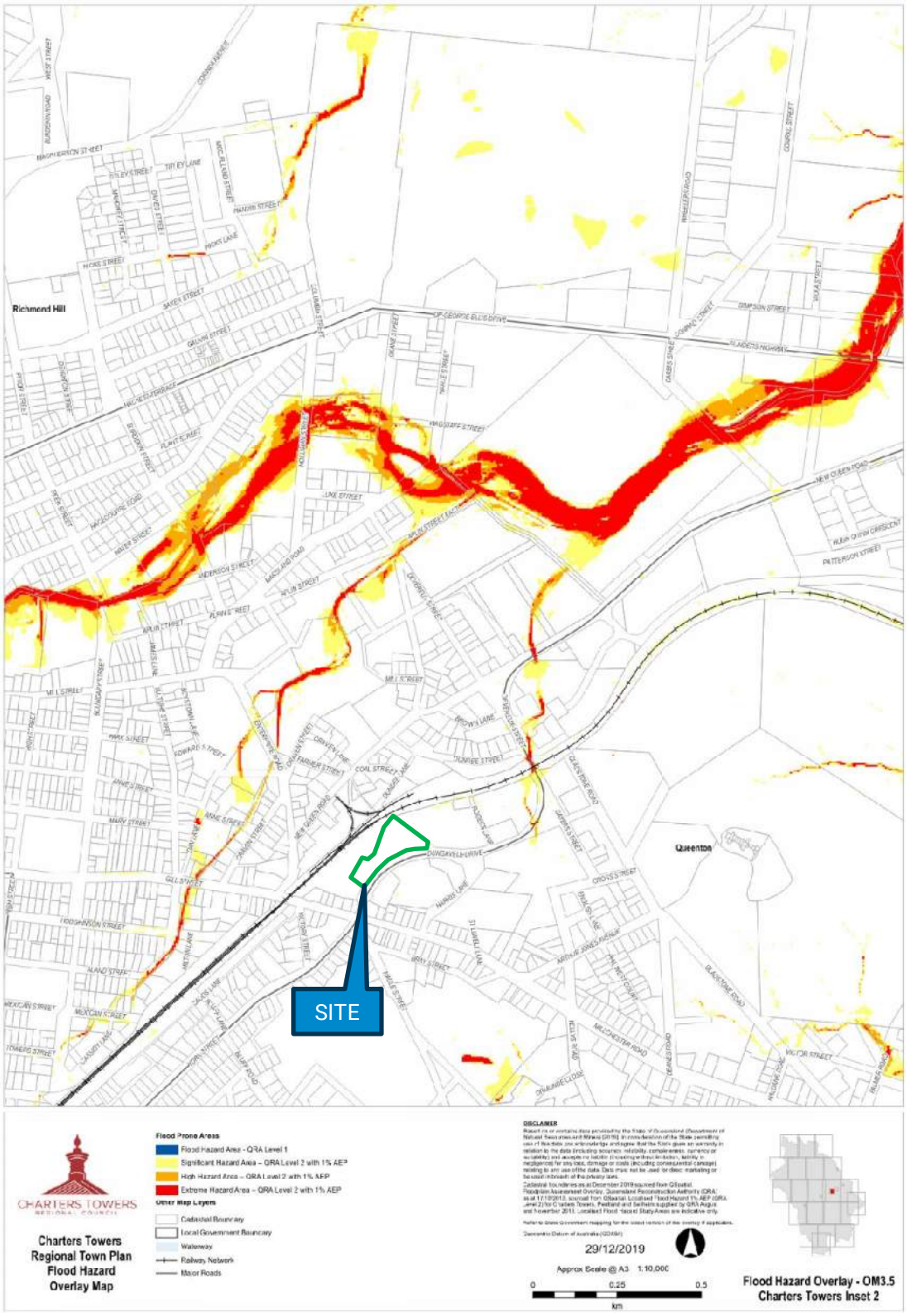

Figure 2.4 - 1% Flood Hazard Overlay (CTRC Maps)

3. Proposed Development

3.1 Site Plan

The proposed development consist of removing the existing shipping containers and demountable structures, constructing a new warehouse and hardstand pavement, along with gardens beds and carparking.

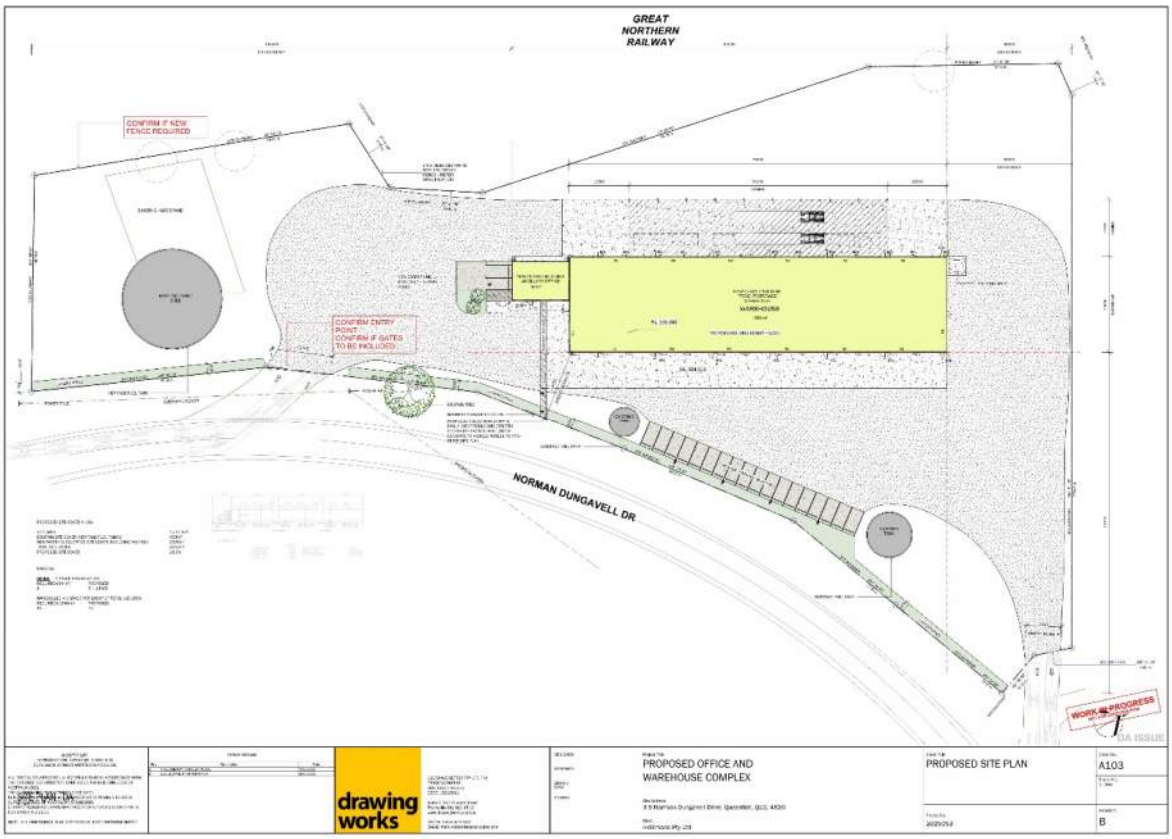

Figure 3.1 - Site Plan (Drawing Works)

3.2 Site Earthworks & Finished Floor Levels

As the site is not affected by the 1% AEP rainfall event, finished floor levels should be rational and take the site slope into account. The below is a guide on minimum building levels in non-flood affected areas.

- 300mm above the top of the kerb
- 300mm above the crown of the adjacent road
- 225mm above the finished ground level

Taking the above into account, the proposed floor level of RL305.00m AHD will work if a ramp is provided at the entrance access to achieve two things. The first is to achieve lower grades for DDA compliance from the carpark. The second is to ensure the levels outside the building are below the FFL and provide some tolerance for stormwater build up.

The site majority drains from south-west to north-east and it is intended to decrease the existing gradient directing runoff towards the north-east boundary. To achieve the above, retaining walls will be required for this development, up to a height of 2m across the northern, eastern, and western boundary. These retaining walls will be offset between 1m to 2m from the boundaries, to allow for the external catchment diversion, landscape requirements, and guard rail construction.

The site exit will require a secondary ramp to tie into the existing levels at the boundary. Ramps and levels are to be further investigated during the detail design.

3.3 Site Stormwater Drainage

A schematic stormwater drainage plan is illustrated in Figure 3.2. The intent of the plan is to ensure the site catchment is captured through the underground stormwater network and discharged to the adjacent property on lot 46. All roofwater is be captured by pits and directed to the underground stormwater network. No treatment chamber is required as explained in section 5 – Stormwater Quality.

As the proposed works will lift the site significantly higher than adjacent property. It's recommended to either install a catch drain with a weir on the north-east boundary or rock dissipation pads at the pipe outlets. The intent is to ensure site runoff returns to sheet flow across the boundary instead of the stormwater pipes discharging concentrated flows and scouring the adjacent surface. Returning the site runoff to sheet flow will eliminate any erosion and scouring from stormwater discharge.

The rock pad option is not ideal as these pads required a certain length to achieve the appropriate energy dissipation which in turn will reduce the pavement for the trucks to perform their turning manoeuvres. The recommended option is to construct the catch drain with a weir.

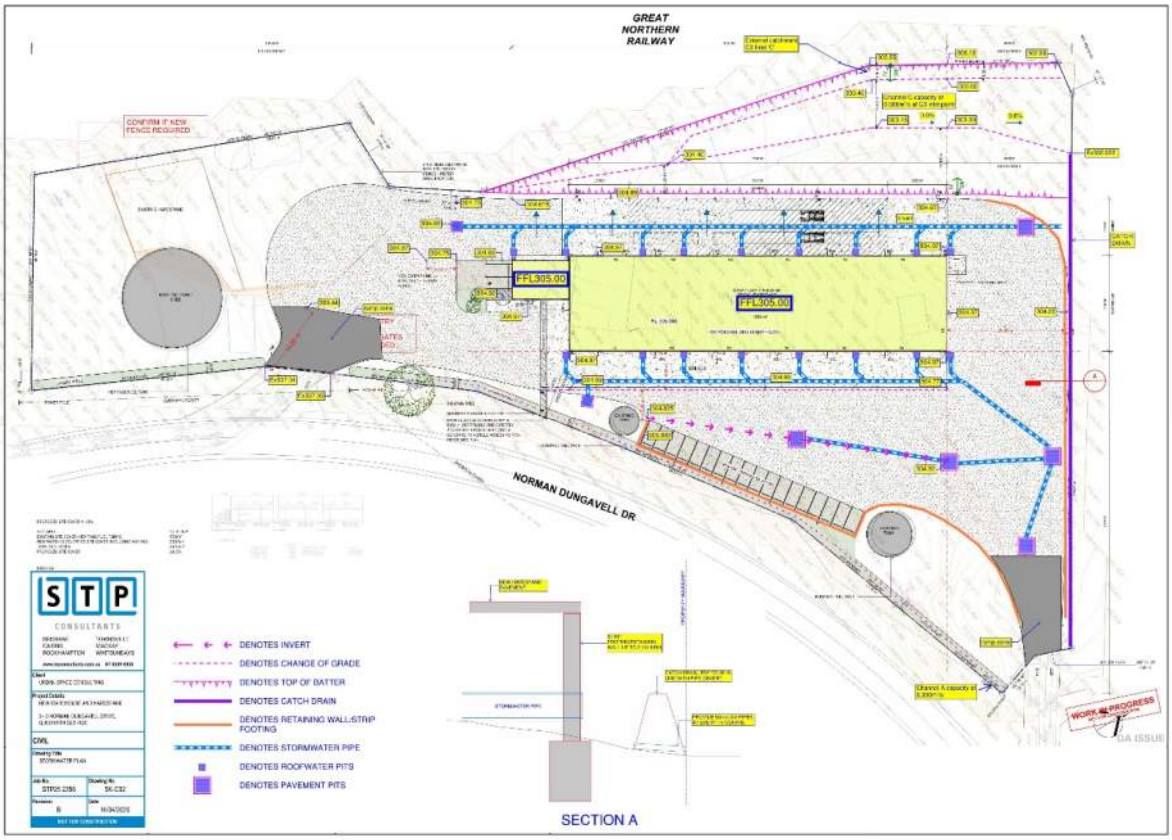

Figure 3.2 - Concept Stormwater Plan (STP)

4. Stormwater Quantity

4.1 Existing Stormwater Infrastructure

Currently, the site discharges runoff via overland towards the north-east into the adjacent vegetated property, Lot 46. There is no existing council underground drainage except for local culverts under the road or under the driveway, as illustrated in Figure 4.1 and Figure 4.2. There is a small table drain on the road reserve that discharges into multiple areas. The southern section which involves from the road intersection up to the entry driveway of the site discharges across Norman Dungavell Drive. The table drain between the two driveways on the site frontage appears to discharge into a culvert under the driveway and into the adjacent property, Lot 46. Both can be seen in Figures 4.1 and 4.2.

To maintain the existing catchments, it is proposed to retain the existing discharge points from the site and the road reserve. Any site discharge into the road reserve will eventually travel back into the adjacent property through the road culvert. Therefore, the Legal Point of Discharge (LPOD) for the site would the adjacent property Lot 46.

Figure 4.1 - Site Entry Driveway - Culvert Under the Road (Google Maps)

Figure 4.2 - Site Exit - Culvert Under the Driveway and Discharging Into the Adjacent Lot (Google Maps)

4.2 External Catchments

The site caters for 3 external catchments which are shown in Figure 4.3. These catchment either traverse the whole site or only a portion towards the lower end of the site. The catchments must be accepted, and the stormwater design needs to incorporate the additional runoff.

Catchment C1 is directly from the eastern side of the site. The catchment is mainly from the road verge of Norman Dungavell Drive, between the two existing driveways of the site.

Catchment C2 is mainly runoff from the adjacent access road on the southern side, with a contributing portion of the residential properties.

Catchment 03 is largely contributed by the land area to the west, between the rail line and the site.

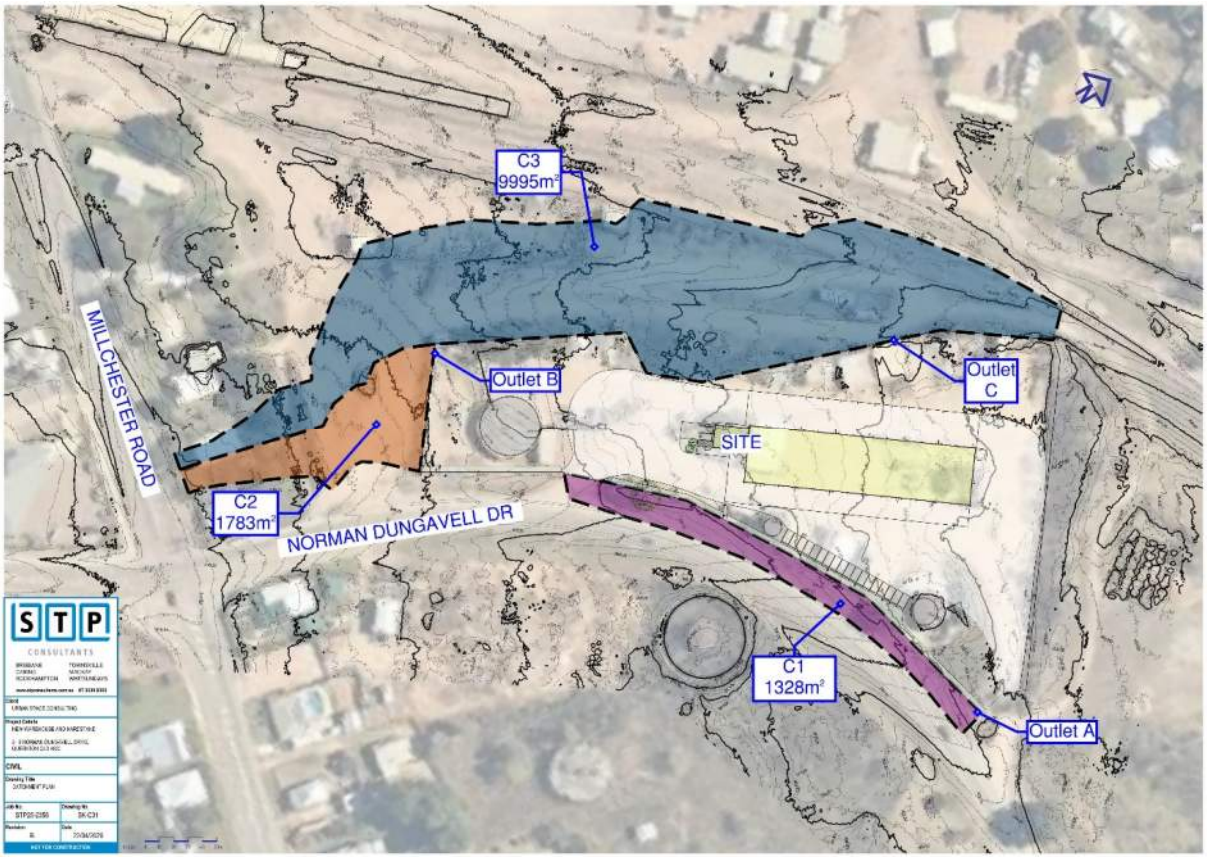

Figure 4.3 - External Catchments (STP)

The site has sufficient capacity to accommodate the external catchments through the proposed development.

Catchment C1 will be captured by a swale at the road frontage inside the site. Catchment runoff has been calculated with 80% fraction of impervious and allowed to cater for half the road width. To be conservative, a time of concentration of 10minutes has been adopted. Runoff calculations for all events is illustrated in Table 4.1.

Discharge at Outlet A for 1% AEP event is 0.077m^3/s. The swale provides a capacity of 0.090m^3/s, which has sufficient capacity to cater for all events including the 1% AEP event.

The swale parameters and capacity are illustrated in Table 4.2.

CATCHMENT C1							
Area (m^2)	(ha)	Impervious Area (%)		C_{10}	Time of Concentration (min)		
1328	0.133	80		0.83	10		
C_1	C_2	C_5	C_{10}	C_{20}	C_{50}	C_{100}	
0.664	0.7055	0.7885	0.83	0.8715	0.9545	0.996	
I_1	I_2	I_5	I_{10}	I_{20}	I_{50}	I_{100}	
79.5	101	127	146	166	192	210	
Q_1	Q_2	Q_5	Q_{10}	Q_{20}	Q_{50}	Q_{100}	
0.019	0.026	0.037	0.045	0.053	0.068	0.077	m^3/s

Table 4.1 – Catchment C1 Discharge for all events up to and Including ARI 100-yr

Grassed Swale		
Base Width of Drain(m)	0.300	
Grade of drain invert - 1 on ?	50	0.02
Batter 1 of Drain - 1 on ?	5	
Batter 2 of Drain - 1 on ?	5	
Mannings coefficient (n)	0.035	
Depth of Drain (m)	0.130	
Cross Sectional Area	0.124	m2
Top Width	1.600	m
Wetted perimeter (P) m	1.626	m
Hydraulic Radius (R)	0.076	m
Velocity (V)	0.725	m/s
VR	0.055	m2/s
Volume (Q)	0.090	m3/s
Safety factor: V x d	0.094	

Table 4.2 - Catchment C1 Grassed Swale Parameters

Catchment C2 largely contains runoff from residential areas and as such, a 65% fraction of impervious in accordance with Charters Towers Regional Council Planning Scheme, with a time of concentration of 10 minutes have been adopted. Runoff calculations are illustrated below.

CATCHMENT C2							
Area (m^2)	(ha)	Impervious Area (%)		C_{10}	Time of Concentration (min)		
1783	0.178	65		0.795	10		
C_1	C_2	C_5	C_{10}	C_{20}	C_{50}	C_{100}	
0.636	0.67575	0.75525	0.795	0.83475	0.91425	0.954	
I_1	I_2	I_5	I_{10}	I_{20}	I_{50}	I_{100}	
79.5	101	127	146	166	192	210	
Q_1	Q_2	Q_5	Q_{10}	Q_{20}	Q_{50}	Q_{100}	
0.025	0.034	0.048	0.057	0.069	0.087	0.099	m^3/s

Table 4.3 - Catchment C2 Discharge for all events up to and Including ARI 100-yr

There are no proposed works to the western side of the site, and as such there will be no changes to how the catchment runoff traverses the site, refer Appendix B – Site Plan.

Catchment C3 contains the largest runoff with a discharge of 0.476m^3/s during the 1% AEP event. The runoff calculations are illustrated in Table 4.4. To be conservative, a 40% fraction of impervious has been considered into the calculations for any future works or expansions of the rail line. As the catchment largely diverts around the site and only enters at the bottom section of the site, a shallow swale is proposed to be constructed to accept and direct catchment C3 stormwater runoff to the existing point of discharge on the northern boundary. The channel at 'Outlet C' contains a capacity of 0.586m^3/s which is more than sufficient to cater for all rainfall events of the external catchment.

The cannel parameters are shown in Table 4.5.

CATCHMENT C3							
Area (m^2)	(ha)	Impervious Area (%)		C_{10}	Time of Concentration (min)		
9995	1.000	40		0.68	10		
C_1	C_2	C_5	C_{10}	C_{20}	C_{50}	C_{100}	
0.544	0.578	0.646	0.68	0.714	0.782	0.816	
I_1	I_2	I_5	I_{10}	I_{20}	I_{50}	I_{100}	
79.5	101	127	146	166	192	210	mm/hr
Q_1	Q_2	Q_5	Q_{10}	Q_{20}	Q_{50}	Q_{100}	
0.120	0.162	0.228	0.276	0.329	0.417	0.476	m^3/s

Table 4.4 - Catchment C3 Discharge for all events up to and Including ARI 100-yr

Grassed Channel		
Base Width of Drain(m)	10.000	
Grade of drain invert - 1 on ?	125	0.008
Batter 1 of Drain - 1 on ?	20	
Batter 2 of Drain - 1 on ?	12	
Mannings coefficient (n)	0.035	
Depth of Drain (m)	0.100	
Cross Sectional Area	1.160	m2
Top Width	13.200	m
Wetted perimeter (P) m	13.207	m
Hydraulic Radius (R)	0.088	m
Velocity (V)	0.505	m/s
VR	0.044	m2/s
Volume (Q)	0.586	m3/s
Safety factor: V x d	0.050	

Table 4.5 - Catchment C3 Grassed Channel Parameters

4.3 Stormwater Runoff & Detention

In Section 4.4.3 – Stormwater Network of the Charters Towers Regional Council Planning Scheme, it prescribes that stormwater quantity needs to comply with the standards of QUDM (Queensland Urban Drainage Manual). QUDM prescribes the design Annual Exceedance Probability (AEP) for both Major and Minor systems. The Major drainage system is to be designed for the 1% AEP while the Minor system in to be in accordance with Table 4.1.

Development category [1]		ARI (yrs)	AEP
Central business and commercial		10	10%
Industrial		2	39%
Urban residential high density – greater than 20 dwelling units/ha		10	10%
Urban residential low density – 6 to 20 dwelling units/ha		2	39%
Rural residential – 2 to 5 dwelling units/ha		2	39%
Open space – parks, etc.		1	63%
Major road	Kerb and channel flow	10 [2]	10%
	Cross drainage (culverts)	50 [3]	2%
Minor road	Kerb and channel flow	[4]	[4]
	Cross drainage (culverts)	10 [3]	10%

Table 4.6 - Recommended Design for Minor Systems (QUDM)

Stormwater Detention requires to be designed in accordance with the principles of QUDM. Detention storage must be installed if any of the following conditions are met.

- Insufficient capacity in the downstream drainage system to provide a no worsening situation.
- Limit any increase in discharge rate for all storm events up to and including the define flood event.
- The site must not discharge more than the discharge calculated for the pre-development flows.

In this case, pre-development and post-development runoff calculations will be based on the current permissible fraction of Impervious for the zone, and time of concentration will be based on overland flow calculations for the as per QUDM 4.6.6 & 4.6.7.

The site is currently zoned as Industrial under the CTRC Planning Scheme with a permissible fraction of impervious of 0.9 in accordance with QUDM 4.5. The proposed works contains a fraction of impervious of 0.64%, as shown in Figure 4.2, which is under the allowable limit for the zone and therefore no on-site detention is required.

Development category	Fraction impervious (f_i)
Central business district	1.00
Commercial, local business, neighbouring facilities, service industry, general industry, home industry	0.90
Significant paved areas e.g. roads and car parks	0.90
Urban residential – high density	0.70 to 0.90
Urban residential – low density (including roads)	0.45 to 0.85
Urban residential – low density (excluding roads)	0.40 to 0.75
Rural residential	0.10 to 0.20
Open space and parks etc.	0.00

Table 4.7 - Allowable Fraction of Impervious (QUDM)

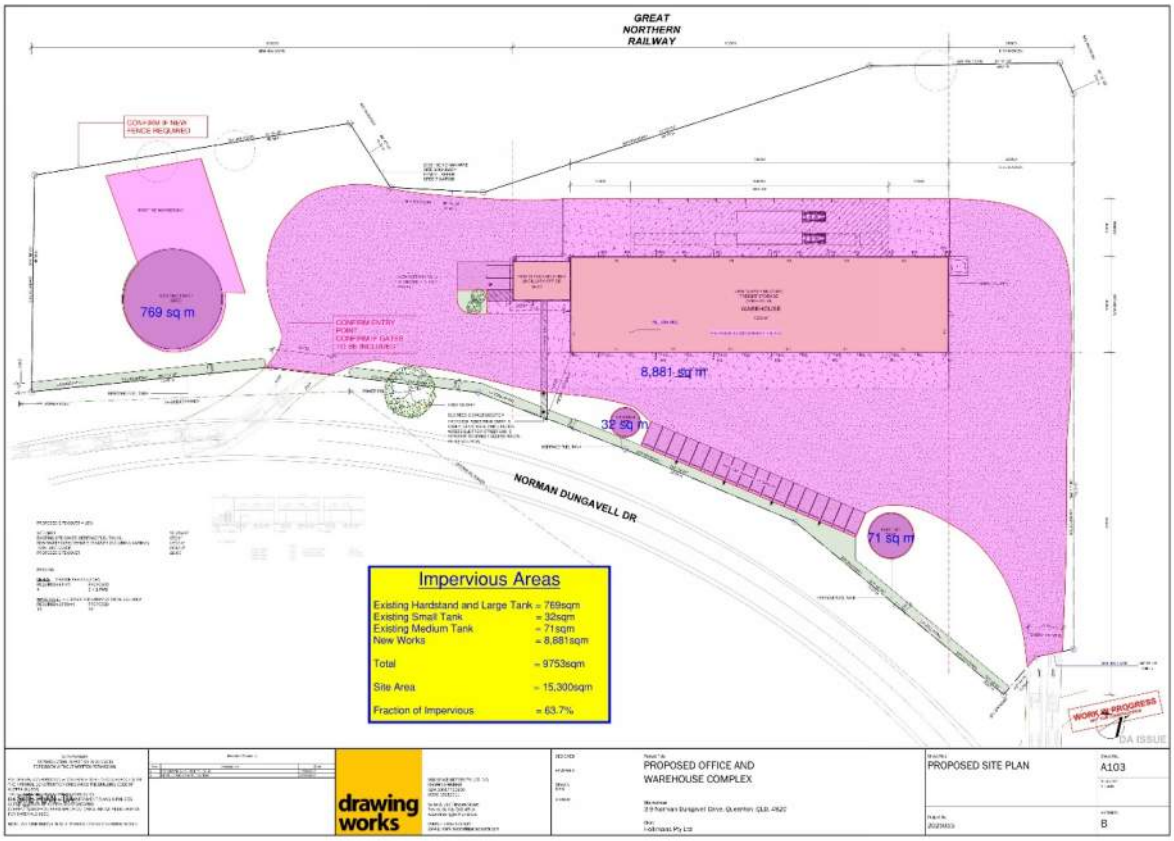

Figure 4.4 - Proposed impervious Area (STP)

5. Stormwater Quality

In accordance with the State Planning Policy (SPP), the development does not meet the threshold criteria and therefore no stormwater quality treatment is required.

Table B: Post construction phase – stormwater management design objectives

Application:

(1) A material change of use for an urban purpose that involves premises 2500 metres[2] or greater in size and:

(a) will result in six or more dwellings; or

(b) an impervious area greater than 25 per cent of the net developable area.

(2) Reconfiguring a lot for urban purposes that involves premises 2500 metres[2] or greater in size and will result in six or more lots.

Climatic region	Design objectives				
	Reductions in mean annual load from unmitigated development (%)				
	Total suspended solids (TSS)	Total phosphorus (TP)	Total nitrogen (TN)	Gross pollutants >5mm	Waterway stability management
South East Queensland	80	60	45	90	Limit the peak 1-year ARI event discharge within the receiving waterway to the pre-development peak 1-year ARI discharge
Central Queensland (south)	85	60	45	90	
Central Queensland (north)	75	60	40[15]	90	
Cape York[14], wet tropics and dry tropics	80	60[16]	40	90	
Western Queensland[14]	85	60	45	90	

Notes:

- Mapping of climatic regions is available on the State Planning Policy Interactive Mapping System.
- In lieu of modelling, the default bio-retention treatment area to comply with load reduction targets for all Queensland regions in 1.5 per cent of the contributing catchment area.
- Water stability objective applies if development drains to an unlined waterway within or downstream of the site where a risk of increased erosion exists due to changes in hydrology. Local government may also require application of the waterway stability objective where there are planned future rehabilitation works to return a lined channel to a natural channel design.
- The SPP Water quality guidance material provides advice on the measures that demonstrate compliance with table B.

[14] Note: Applies to population centres greater than 25,000 persons.
[15] Note: Mackay Regional Council has adopted a 35 per cent reduction for TN.
[16] Note: Townsville City Council has adopted a 65 per cent reduction for TP.

Figure 5.1 – Assessment Benchmarks for Stormwater Quality (SPP)

6. Conclusion

As demonstrated, the development can be constructed as proposed.

- Site not affected by the 1% AEP design storm.
- The building floor levels to be set at RL405.00m AHD.
- Retaining walls are required for the development with a maximum height of 2.0m.
- A catch drain with a weir is recommended to return concentrated flows back into sheet flow across the adjacent site and to avoid erosion at the discharge points.
- The external catchment from the adjacent lot is accommodated in the design.
- Minor Design Event is the 39% AEP.
- Major Design Event is the 1% AEP.
- No on-site Detention is required.
- As the existing site gradient falls towards the adjacent property and the road reserve drains into the same property, it is proposed to retain the LPOD as the adjacent property on the north-east.
- No Quality treatment is required under the State Planning Policy.

Appendix A: Survey Plan

LEGEND :

REFERENCE DRAWINGS :

NOTES :

1. PROPERTY BOUNDARIES ARE INDICATIVE ONLY AND NOT BEEN IDENTIFIED

GENERAL KEY PLAN

DETAIL KEY PLAN

CONTROL POINT TABLE - MGA2020 ZONE55 (AHD Derived)

Pt #	Northing	Easting	Elevation	Descriptor
101	7779862.927	423977.864	306.851	SPIKEINBITUMEN
102	7779929.763	423968.443	304.439	SPIKE
103	7779897.209	424025.282	305.065	SSBOLTINCONCRETE
104	7779959.632	424113.346	302.509	SPIKE
105	7779927.018	424090.686	303.785	SSBOLTINCONCRETE
151	7779815.833	423940.632	307.951	GINAIL
152	7779840.948	423916.181	307.387	GINAIL
153	7779894.971	423941.800	305.710	GINAIL
154	7779937.347	424019.878	304.169	GINAIL
155	7780005.282	424022.630	303.199	GINAIL
156	7779977.442	424079.172	302.658	GINAIL
1008	7779897.195	423941.582		Land parcel
1030	7779897.195	423941.582		Land parcel
PM20675	7779749.726	423776.405	308.770	PM20675
STN100	7779938.787	424115.786	302.935	SPIKE

Rev	Date	Description	Signature
1	22-07-25	ISSUED FOR INFORMATION	

Approved / Not Approved — Client's Comment : — Date / Name / Sign

GJCM SURVEYS

GJCM ENTERPRISES PTY LTD
TRADING AS GJCM SURVEYS
2 SORREL COURT
BUSHLAND BEACH QLD 4818
M 0 445 377 070
ABN 70 560 449 702

HOLLIMANS TRANSPORT YARD

TOPOGRAPHICAL SURVEY
LOT 1 RP901157

	Name	Date	Signature
Drawn	G. LITTLE	22/7/2025	
Engineer			
Checked	D.S	22/7/2025	
Approved			

Size	Drawing No.	Rev.
A 3	P604-TOPO-001	1

SCALE: 1 : 1,000 — PLOT FILE: P604-TOPO-001-1

JOB REF: P604 — FILE REF: 250721 RP901157 Topo.PRO

COMPLETION OF THE QUALITY RECORD IS EVIDENCE THAT THE DESIGN AND DRAWING HAVE BEEN VERIFIED AND CONFORMING WITH REQUIREMENTS OF THE QUALITY PLAN. WHERE THE QUALITY RECORD IS INCOMPLETE ALL INFORMATION ON THIS DRAWING IS INTENDED FOR PRELIMINARY PURPOSES ONLY AS IT IS UNCHECKED.

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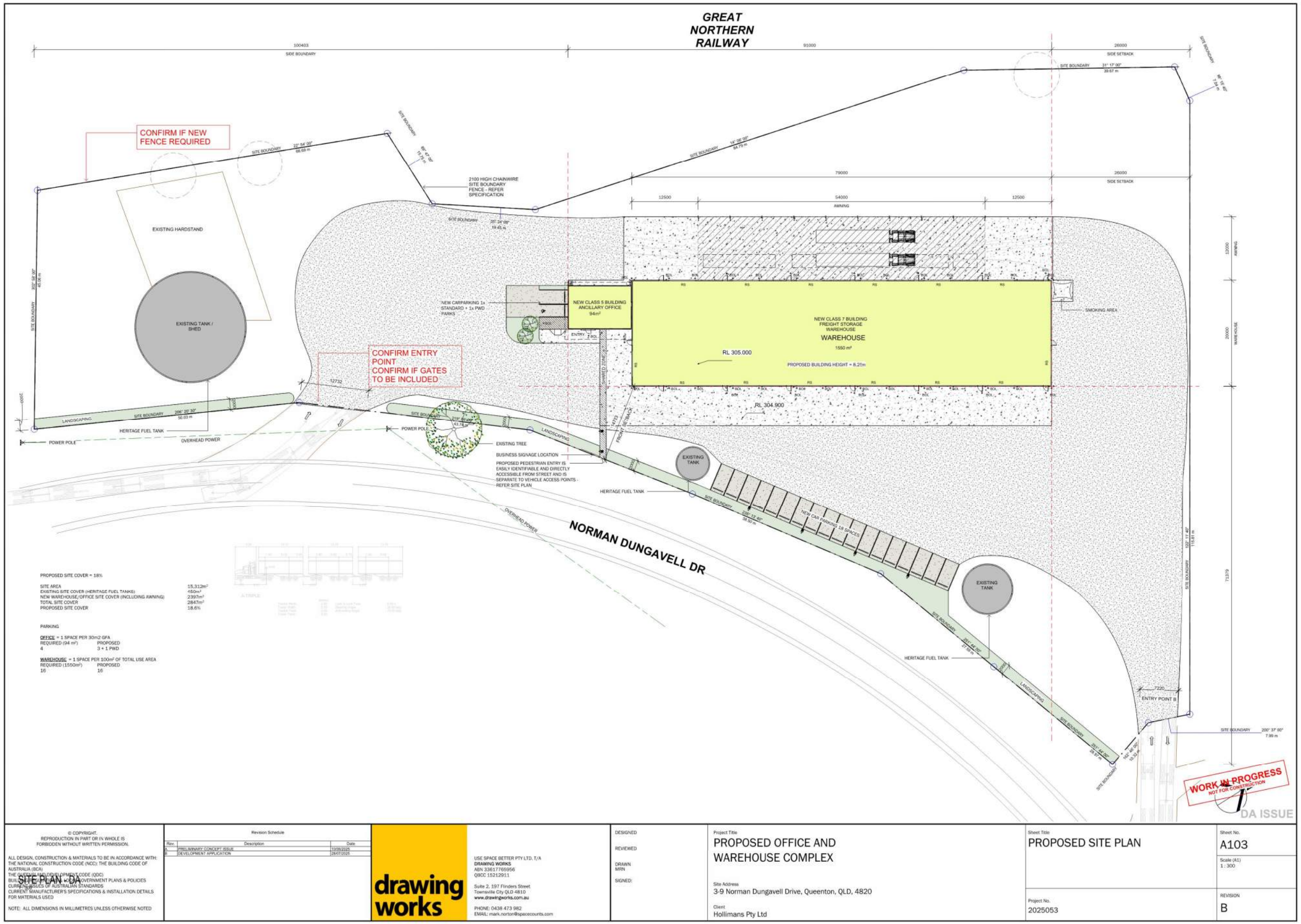
Appendix B: Site Plan



PROPOSED SITE COVER = 18%

SITE AREA	15,312m²
EXISTING SITE COVER (HERITAGE FUEL TANKS)	453m²
NEW WAREHOUSE/OFFICE SITE COVER (INCLUDING AWNING)	2397m²
TOTAL SITE COVER	2847m²
PROPOSED SITE COVER	18.6%

PARKING

OFFICE = 1 SPACE PER 30m2 GFA

REQUIRED (94 m²)	PROPOSED
4	3 + 1 PWD

WAREHOUSE = 1 SPACE PER 100m² OF TOTAL USE AREA

REQUIRED (1550m²)	PROPOSED
16	18

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THE QUEENSLAND DEVELOPMENT CODE (QDC)
BUILDING REGULATIONS & LOCAL GOVERNMENT PLANS & POLICIES
CURRENT ISSUES OF AUSTRALIAN STANDARDS
CURRENT MANUFACTURER'S SPECIFICATIONS & INSTALLATION DETAILS FOR MATERIALS USED

NOTE: ALL DIMENSIONS IN MILLIMETRES UNLESS OTHERWISE NOTED

Revision Schedule

Rev.	Description	Date
A	PRELIMINARY CONCEPT ISSUE	10/06/2025
B	DEVELOPMENT APPLICATION	28/07/2025

drawing works
USE SPACE BETTER PTY LTD, T/A
DRAWING WORKS
ABN 33617765956
QBCC 15212911
Suite 2, 197 Flinders Street
Townsville City QLD 4810
www.drawingworks.com.au
PHONE: 0438 473 982
EMAIL: mark.norton@spacecounts.com

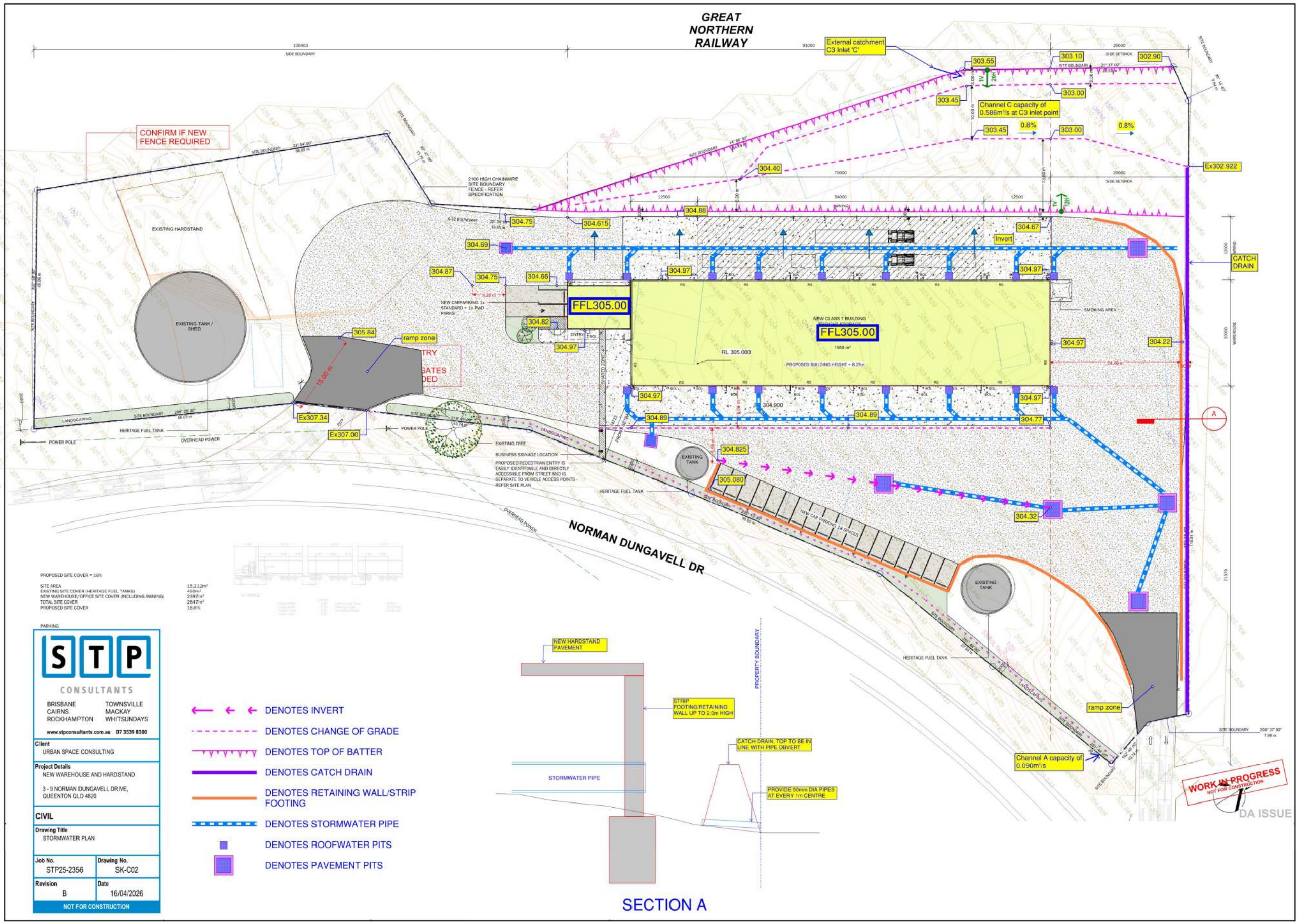
DESIGNED
REVIEWED
DRAWN MRN
SIGNED:

Project Title: PROPOSED OFFICE AND WAREHOUSE COMPLEX
Site Address: 3-9 Norman Dungavell Drive, Queenton, QLD, 4820
Client: Hollimans Pty Ltd

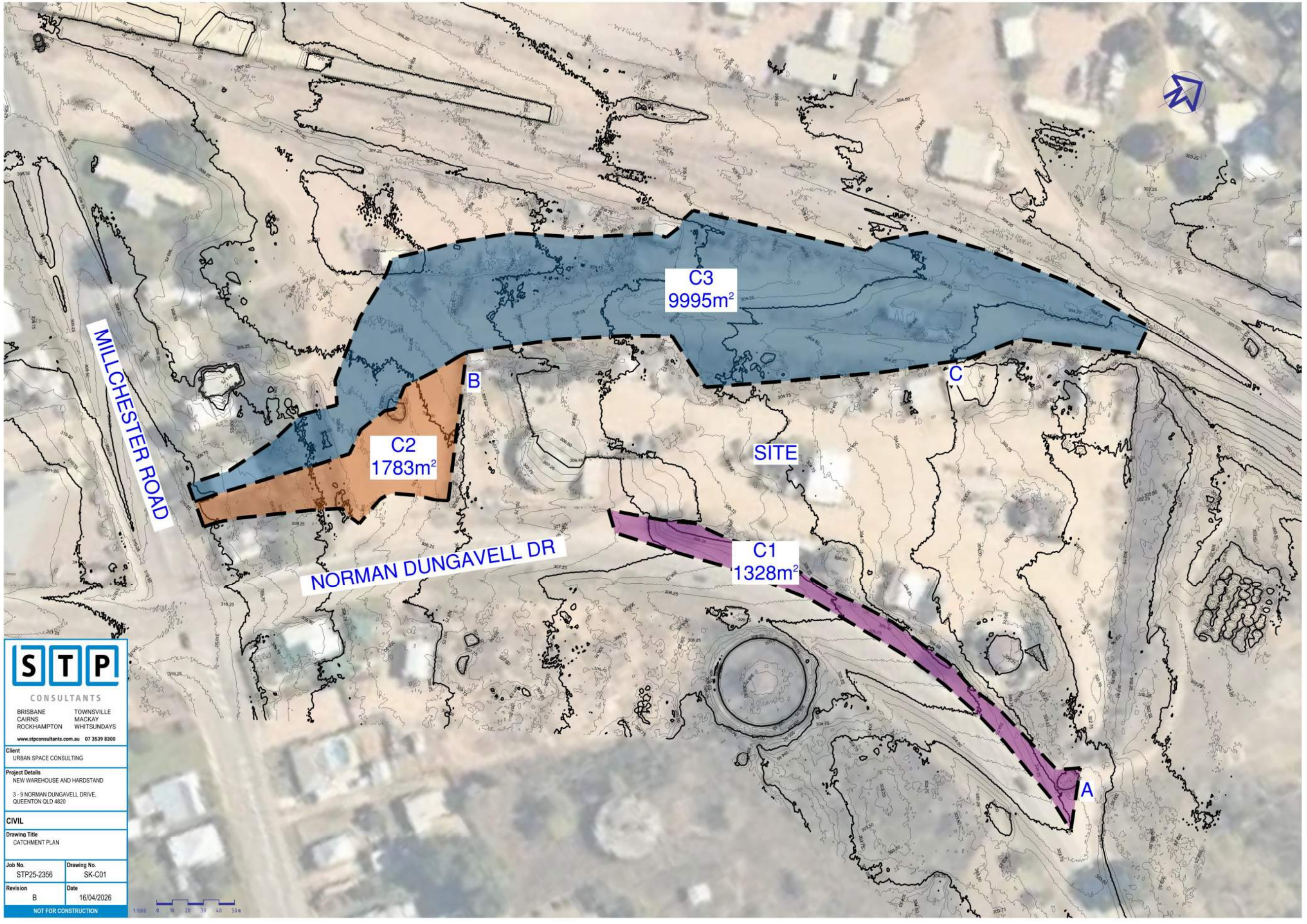
Sheet Title: PROPOSED SITE PLAN
Sheet No.: A103
Scale (A1): 1 : 300
Project No.: 2025053
REVISION: B

SITE PLAN - DA

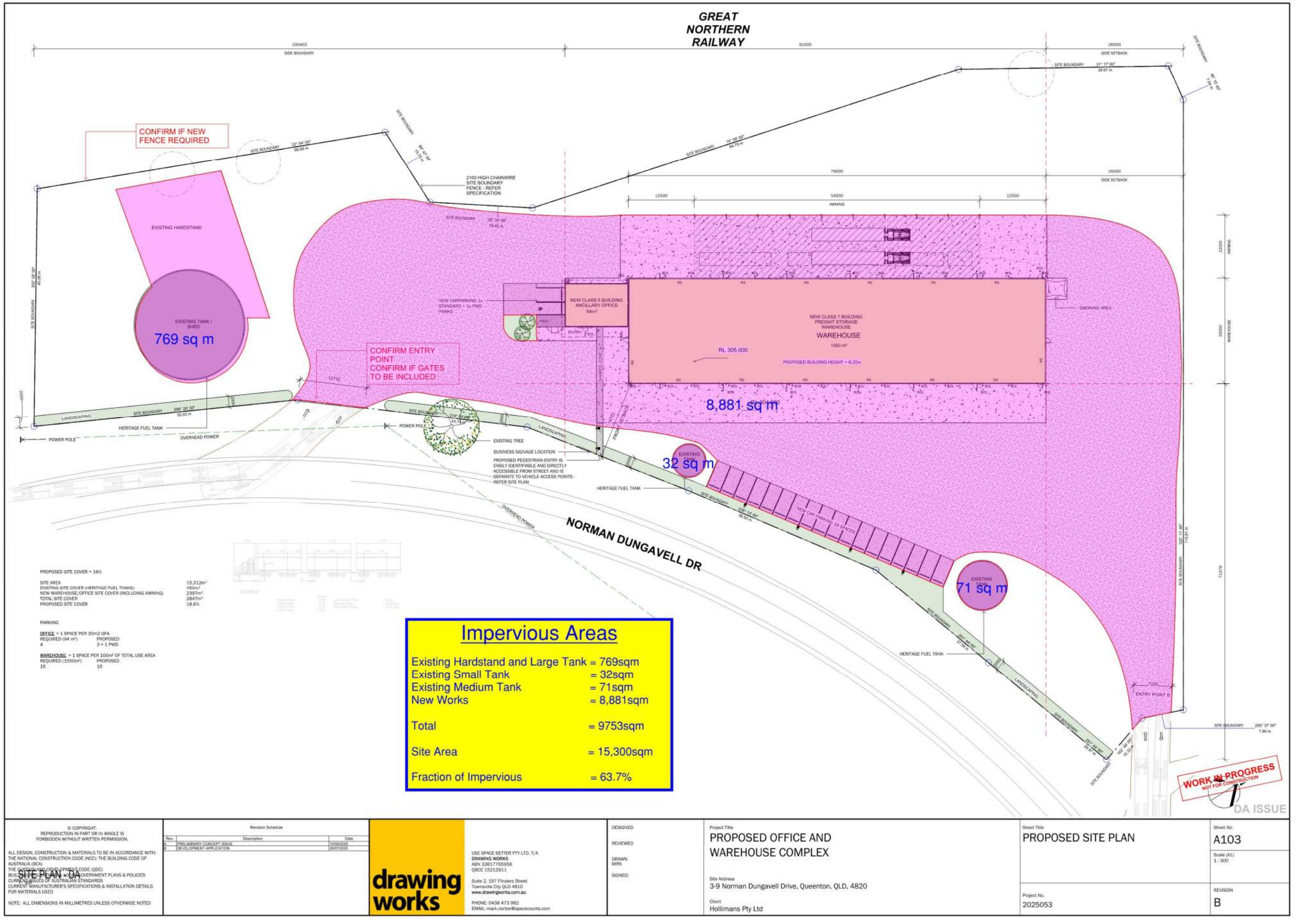
Appendix C: Concept Stormwater Plan


GREAT NORTHERN RAILWAY
NORMAN DUNGAVELL DR
External catchment C3 Inlet 'C'
Channel C capacity of 0.586m³/s at C3 inlet point
CONFIRM IF NEW FENCE REQUIRED
2100 HIGH CHAINWIRE SITE BOUNDARY FENCE - REFER SPECIFICATION
EXISTING HARDSTAND
EXISTING TANK / SHED
NEW CARPARKING 1x STANDARD + 1x PWD PARKS
FFL305.00
NEW CLASS 7 BUILDING
1550 m²
RL 305.000
PROPOSED BUILDING HEIGHT = 8.25m
SMOKING AREA
CATCH DRAIN
ramp zone
Ex307.34
Ex307.00
Ex302.922
HERITAGE FUEL TANK
POWER POLE
OVERHEAD POWER
EXISTING TREE
BUSINESS SIGNAGE LOCATION
PROPOSED PEDESTRIAN ENTRY IS EASILY IDENTIFIABLE AND DIRECTLY ACCESSIBLE FROM STREET AND IS SEPARATE TO VEHICLE ACCESS POINTS - REFER SITE PLAN
NEW CAR PARKING 16 SPACES
Channel A capacity of 0.090m³/s
WORK IN PROGRESS NOT FOR CONSTRUCTION
DA ISSUE
PROPOSED SITE COVER = 18%
SITE AREA 15,312m²
EXISTING SITE COVER (HERITAGE FUEL TANKS) 460m²
NEW WAREHOUSE/OFFICE SITE COVER (INCLUDING AWNING) 2397m²
TOTAL SITE COVER 2847m²
PROPOSED SITE COVER 18.6%
PARKING
DENOTES INVERT
DENOTES CHANGE OF GRADE
DENOTES TOP OF BATTER
DENOTES CATCH DRAIN
DENOTES RETAINING WALL/STRIP FOOTING
DENOTES STORMWATER PIPE
DENOTES ROOFWATER PITS
DENOTES PAVEMENT PITS
NEW HARDSTAND PAVEMENT
STRIP FOOTING/RETAINING WALL UP TO 2.0m HIGH
PROPERTY BOUNDARY
CATCH DRAIN, TOP TO BE IN LINE WITH PIPE OBVERT
STORMWATER PIPE
PROVIDE 50mm DIA PIPES AT EVERY 1m CENTRE
SECTION A
STP CONSULTANTS
BRISBANE TOWNSVILLE
CAIRNS MACKAY
ROCKHAMPTON WHITSUNDAYS
www.stpconsultants.com.au 07 3539 8300
Client URBAN SPACE CONSULTING
Project Details NEW WAREHOUSE AND HARDSTAND
3 - 9 NORMAN DUNGAVELL DRIVE, QUEENTON QLD 4820
CIVIL
Drawing Title STORMWATER PLAN
Job No. STP25-2356
Drawing No. SK-C02
Revision B
Date 16/04/2026
NOT FOR CONSTRUCTION

Appendix D: External Catchment Plan


C3
9995m²
C2
1783m²
C1
1328m²
MILLCHESTER ROAD
NORMAN DUNGAVELL DR
SITE
A
B
C
STP
CONSULTANTS
BRISBANE
CAIRNS
ROCKHAMPTON
TOWNSVILLE
MACKAY
WHITSUNDAYS
www.stpconsultants.com.au 07 3539 8300
Client
URBAN SPACE CONSULTING
Project Details
NEW WAREHOUSE AND HARDSTAND
3 - 9 NORMAN DUNGAVELL DRIVE, QUEENTON QLD 4820
CIVIL
Drawing Title
CATCHMENT PLAN
Job No.
STP25-2356
Drawing No.
SK-C01
Revision
B
Date
16/04/2026
NOT FOR CONSTRUCTION
1:1000
0 10 20 30 40 50 m

Appendix E: New Works Impervious Area



PROPOSED SITE COVER = 18%

SITE AREA	15,312m²
EXISTING SITE COVER (HERITAGE FUEL TANKS)	160m²
NEW WAREHOUSE/OFFICE SITE COVER (INCLUDING AWNING)	2397m²
TOTAL SITE COVER	2847m²
PROPOSED SITE COVER	18.6%

PARKING

OFFICE = 1 SPACE PER 30m2 GFA

REQUIRED (94 m²)	PROPOSED
4	3 + 1 PWD

WAREHOUSE = 1 SPACE PER 100m² OF TOTAL USE AREA

REQUIRED (1550m²)	PROPOSED
16	16

Impervious Areas

Existing Hardstand and Large Tank	= 769sqm
Existing Small Tank	= 32sqm
Existing Medium Tank	= 71sqm
New Works	= 8,881sqm
Total	= 9753sqm
Site Area	= 15,300sqm
Fraction of Impervious	= 63.7%

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THE QUEENSLAND DEVELOPMENT CODE (QDC)
BUILDING REGULATIONS, LOCAL GOVERNMENT PLANS & POLICIES
CURRENT SERIES OF AUSTRALIAN STANDARDS
CURRENT MANUFACTURER'S SPECIFICATIONS & INSTALLATION DETAILS FOR MATERIALS USED

NOTE: ALL DIMENSIONS IN MILLIMETRES UNLESS OTHERWISE NOTED

Revision Schedule

Rev.	Description	Date
A	PRELIMINARY CONCEPT ISSUE	15/06/2025
B	DEVELOPMENT APPLICATION	28/07/2025

SITE PLAN - DA

drawing works

USE SPACE BETTER PTY LTD, T/A
DRAWING WORKS
ABN 33617765956
QBCC 15212911

Suite 2, 197 Flinders Street
Townsville City QLD 4810
www.drawingworks.com.au

PHONE: 0438 473 982
EMAIL: mark.norton@spacecounts.com

DESIGNED
REVIEWED
DRAWN MRN
SIGNED:

Project Title: PROPOSED OFFICE AND WAREHOUSE COMPLEX
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Sheet No.: A103
Scale (A1): 1 : 300
Project No.: 2025053
REVISION: B

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E. brian@stpconsultants.com.au

STP
CONSULTANTS

ATTACHMENT 2

Traffic Engineering Letter

To	Hollimans Pty Ltd	Date	18 May 2026
Prepared by	Bradley Fuller, Modus Senior Traffic Engineer	Approved by	Harj Singh, Modus Executive Director (RPEQ 22364)
Location	3-9 Norman Dungavell Drive, Queenton		
Subject	Proposed Development - Traffic Engineering Letter		
Status	Final	Attachments	**Appendix A:** SARA Information Request **Appendix B**: Revised Traffic Plans

Introduction

Overview

Modus has been commissioned by Hollimans Pty Ltd to provide traffic and transport advice in relation to the proposed development located at 3-9 Norman Dungavell Drive, Queenton.

Following the submission of the Development Application, SARA issued an Information Request outlining the request for additional information regarding the proposed development.

A copy of the Information Request is provided at **Appendix A**.

This Traffic Engineering Letter has been produced by Modus to respond to the relevant traffic / transport related Information Request items in support of the proposed development.

For ease of interpretation, the relevant items have been reproduced within this Traffic Engineering Letter with Modus' response provided directly thereafter.

Information Request Item 2

SARA Commentary

Provide an updated TIA which includes the following information:

• A revised access sight distance assessment considering SISD requirements for trucks as per the Austroads Guide to Road Design Part 4A: Unsignalised and Signalised Intersections (AGRD4A) and revised conflict points based on submitted swept path assessments (i.e. particularly for the right turn out of the site to the west).

• Confirm that SISD (for trucks) can be provided to the rear of a propped vehicle (car) using the proposed Basic Right (BAR) turning treatment as required by Section 3.2.2 and Figure 3.3 of AGRD4A. If SISD cannot be provided, a Channelised Right (short) (CHRS)) treatment should be provided.

• A safety assessment as required by Section 9.3 of the TMR Guide to Traffic Impact Assessment (GTIA).

• Confirm whether any existing drainage infrastructure is required to be modified and/or relocated, and whether any road safety mitigations (barriers etc) are required.

• A plan showing the recommended (Basic Left (BAL)) turning treatment at the proposed entry driveway and details of the proposed signage and linemarking required to restrict entry or exit movements at each driveway crossover.

• Updated conceptual plans in consideration of the above items

Modus Response

Modus' response is outlined in the subsequent report sections

TRUCK SAFE INTERSECTION SIGHT DISTANCE (SISD)

Modus has undertaken a revised SISD assessment for trucks on the following basis:

- Design speed of 60 km/hr for trucks, on the basis that trucks travel at lower speeds than cars as per the Austroads GTRD (refer to Figure 1 below),
- Coefficient of deceleration of 0.24.

Figure 1 Austroads GTRD Part 3 Commentary For Truck Speed

The lower operating speed for trucks shown in Table 3.5 is an average condition that reflects the fact that truck speeds vary more than car speeds due to grades, poorer acceleration, etc. Figure 3.11 shows truck performance curves for a 19 m semi-trailer on various grades.

Table 3.5: Car/truck speed relationship

Car speed (km/h)	40	50	60	70	80	90	100	110
Truck speed (km/h)	34	43	52	60	70	80	90	100

On this basis, the minimum SISD for trucks is 135.8m as per the Austroads GTRD series.

The revised SISD assessment, demonstrated on the revised Traffic Plans provided at **Appendix B**, demonstrates the minimum SISD of 135.8m is achieved for vehicles exiting the site. It is noted that the SISD assessment has been taken from the location in which an A-Triple will store when seeking to undertake a right-out movement.

CHR(s) AND BAL TURN WARRANT ASSSESSMENT

However, it is noted that the minimum SISD cannot be achieved for a vehicle travelling westbound to observe an A-Triple seeking to turn right into the site.

On this basis, it is recommended that a CHR(s) turn treatment is implemented as demonstrated on the Traffic Plans provided at **Appendix B.**

Furthermore, the Traffic Plans provided at **Appendix B** demonstrate the provision of a BAL turn treatment.

SAFETY ASSESSMENT

To understand whether there are any underlying safety concerns along the external road network, Modus has reviewed historic TMR crash data over the previous five (5) year period along the external road network. This crash review confirms that zero (0) crashes have been reported near the development site within the previous five (5) year period.

Additionally, the client has advised that the development will require servicing by an A-Triple on an occasional basis (i.e at most one vehicle trip per day).

Furthermore, the demonstration of sufficient SISD provisions indicates no confirms regarding sight distance.

Moreover, the proposed development will only generate up to eight (8) private vehicles per hour, corresponding to one (1) new vehicle on the external road network every 7 minutes and 30 seconds.

The existing site use also caters for A Triple movements and hence the proposed servicing arrangements are consistent with the existing servicing arrangements.

As such, Modus is of the professional opinion that the proposed development does not result in any new risks nor intensification of the likelihood or consequence of any existing risks.

Summary

Therefore, Modus is of the opinion that the proposed development is acceptable from a traffic engineering perspective and there are no outstanding concerns from a traffic engineering perspective.

Should there be any issue with the above, please contact the undersigned.

Yours sincerely,

MODUS TRANSPORT AND TRAFFIC ENGINEERING

Harj Singh
Executive Director (RPEQ 22364)

APPENDIX A

SARA Information Request

DELIVERING FOR QUEENSLAND | Queensland Government

Department of
State Development,
Infrastructure and Planning

SARA reference: 2603-51385 SRA
Applicant reference: MCU2026/0003
Council reference: USC131

9 April 2026

Hollimans Pty Ltd
c/- Urban Space Consulting
urbanspaceconsulting@outlook.com

Attention: Mr William Kruze

Dear Mr Kruze

SARA information request – 3-9 Norman Dungavell Drive, Queenton

(Notice issued under section 12 of the Development Assessment Rules)

SARA has undertaken a preliminary review of the material provided in support of the above referenced application which was deemed properly referred on 23 March 2026.

From this review, SARA has identified a range of matters relating to State Codes 1 and 2 that it wishes to draw to your attention.

1. Stormwater management Plan (SMP)

The SMP prepared by STP Consultants, dated 18 February 2026 and revision A has not provided sufficient information to demonstrate the proposed development will not result in adverse impacts to the state-controlled road and railway corridor.

Response requested:

Provide an updated SMP which demonstrates the following:

- The post-development stormwater discharge rates for all storm events up to and including the 1% Annual Exceedance Probability (AEP) event are equal to or less than pre-development discharge rates, in accordance with current requirements.
- All external catchments traversing or discharging through the site are appropriately managed through adequate stormwater infrastructure provisions. This is to be supported by detailed hydrologic and hydraulic calculations, confirming that the proposed development will not result in adverse downstream impacts to adjoining rail and road corridors.
- Any change to stormwater discharge patterns towards the road corridor and rail corridor must be appropriately mitigated to ensure a no-worsening outcome is achieved, including consideration of flow rates, velocities, and discharge locations.
- Further detail regarding infrastructure requirements between the site boundary and the road corridor, demonstrating that sufficient frontage width has been allowed to accommodate stormwater drainage infrastructure in addition to other required elements, such as safety barriers and other civil works.

2. Traffic Impact Assessment (TIA)

The following deficiencies have been identified within the TIA prepared by Modus, dated 18 February 2026 and version A:

- Whilst the TIA has considered Safe Intersection Sight Distance (SISD) at the exit driveway, it has only considered SISD for cars. Given the nature of the development and fronting road, both of which contain/generate reasonable proportions of heavy vehicles, SISD for trucks should be considered in accordance with the Austroads Guide to Road Design Part 4A: Unsignalised and Signalised Intersections (AGRD4A).
- The conflict point for assessment of SISD should be based on the design vehicle swept paths, rather than an arbitrary point in front of a vehicle propped to exit the site. Consideration of the swept paths within the SISD assessment would shift the conflict point much further west than has been assessed, particularly for an A-triple turning right out of the site.
- The development proposes a Basic Right (BAR) turning treatment on the eastern approach to the entry driveway crossover. Whilst this would be a reasonable treatment for a straight road alignment in a similar speed environment, given the horizontal geometry of Norman Dungavell Drive on the eastern approach, the BAR treatment would be on the inside of a horizontal curve with constrained sight distance to the rear of a vehicle propped in the westbound through lane to turn right into the subject site. The preferred right turn treatment in this instance would be a Channelised Right (short) (CHRS)) treatment, whereby the right turning vehicle props in a protected right turning lane, which is clear of the through lane.
- Provision of a BAR would be reliant on acceptable SISD to the rear of a propped vehicle as required by Section 3.2.2 and Figure 3.3 of AGRD4A. As per drawing SK03, SISD for the BAR will be difficult as the SISD travels through third party land and also vegetation/fencing hence, the provision of a CHR(S) requires consideration.

Response requested:

Provide an updated TIA which includes the following information:

- A revised access sight distance assessment considering SISD requirements for trucks as per the Austroads Guide to Road Design Part 4A: Unsignalised and Signalised Intersections (AGRD4A) and revised conflict points based on submitted swept path assessments (i.e. particularly for the right turn out of the site to the west).
- Confirm that SISD (for trucks) can be provided to the rear of a propped vehicle (car) using the proposed Basic Right (BAR) turning treatment as required by Section 3.2.2 and Figure 3.3 of AGRD4A. If SISD cannot be provided, a Channelised Right (short) (CHRS)) treatment should be provided.
- A safety assessment as required by Section 9.3 of the TMR Guide to Traffic Impact Assessment (GTIA).
- Confirm whether any existing drainage infrastructure is required to be modified and/or relocated, and whether any road safety mitigations (barriers etc) are required.
- A plan showing the recommended (Basic Left (BAL)) turning treatment at the proposed entry driveway and details of the proposed signage and linemarking required to restrict entry or exit movements at each driveway crossover.
- Updated conceptual plans in consideration of the above items.

How to Respond

In accordance with section 13 of the Development Assessment Rules (DA Rules), you have three months to respond to this Information Request. The due date of a response to SARA is **9 July 2026.**

You can choose to respond to all, some, or none of the matters raised in this notice.

If you decide not to respond to the matters raised, SARA will finalise its assessment on the material provided to date in support of the application.

It would be appreciated if you would provide your response to SARA using the 'manage documents' function in MyDAS2.

If you require further information or have any questions about the above, please contact Jackie Larrarte, Senior Planning Officer on 5644 3201 or via email SEQSouthPlanning@dsdip.qld.gov.au who will be pleased to assist.

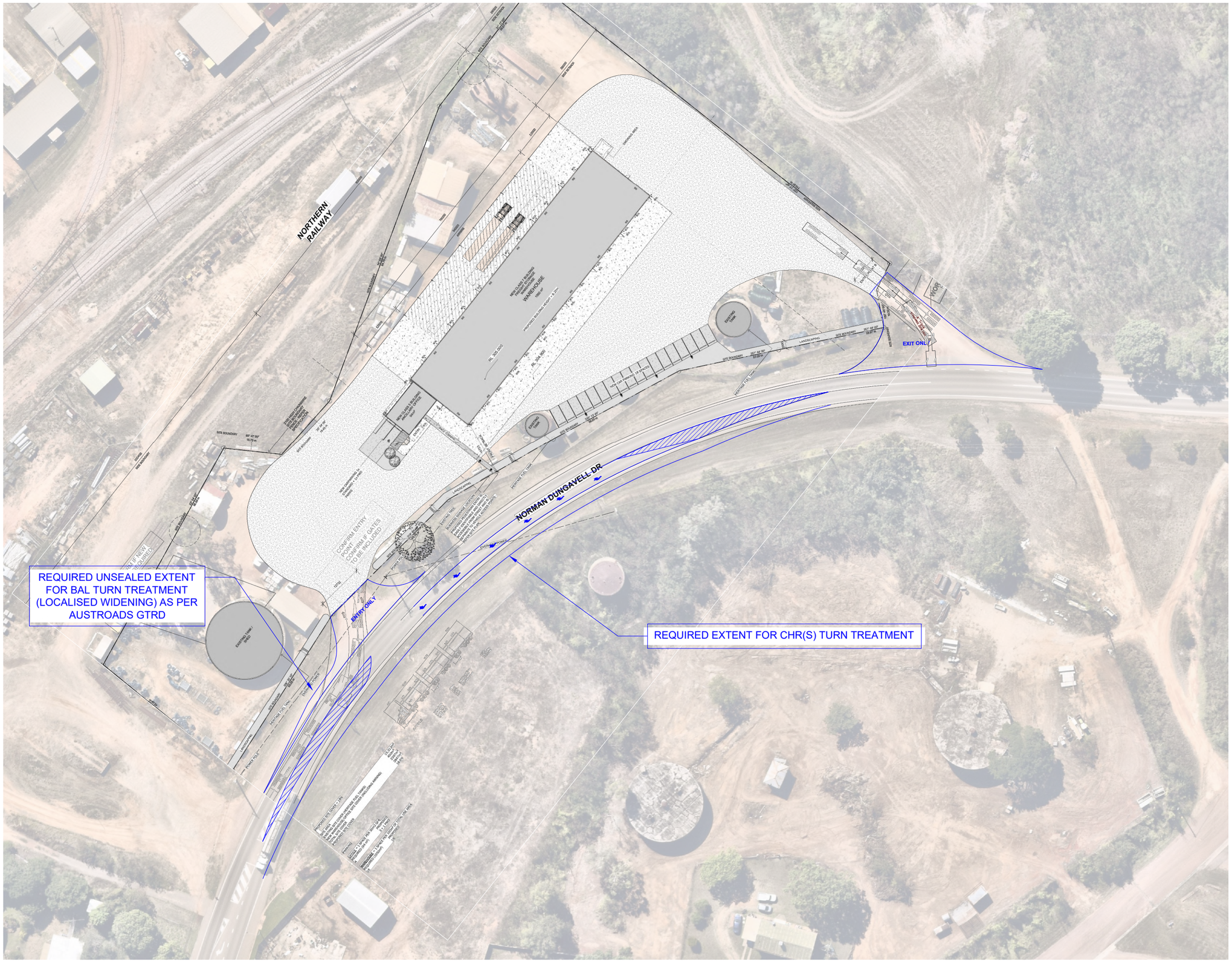
Yours sincerely

Fletcher Smith
Principal Planning Officer, Planning Services (SEQ South)

cc Charters Towers Regional Council, development@charterstowers.qld.gov.au

APPENDIX B

Revised Traffic Plans



N

0 10 20 30 40 50m

10 8 6 4 2

SCALE 1:1000

PROJECT

3 - 9 NORMAN DUNGAVELL DRIVE

CLIENT

HOLLIMANS PTY LTD

DRAWING TITLE

MODUS TRAFFIC CONCEPT PLAN (CLEAN)

DRAWING NUMBER

MOD25169QLD - SK01

DATE	REVISION
14 05 2026	A

REV	DRAWN BY	APPROVED	DATE	AMENDMENT DETAILS

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2.ALL DIMENSIONS ARE PROVIDED IN METERS UNLESS NOTED OTHERWISE.

Harj Singh
Director
RPEQ 22364

MODUS
Transport and Traffic Engineering

ABN 49 668 863 269
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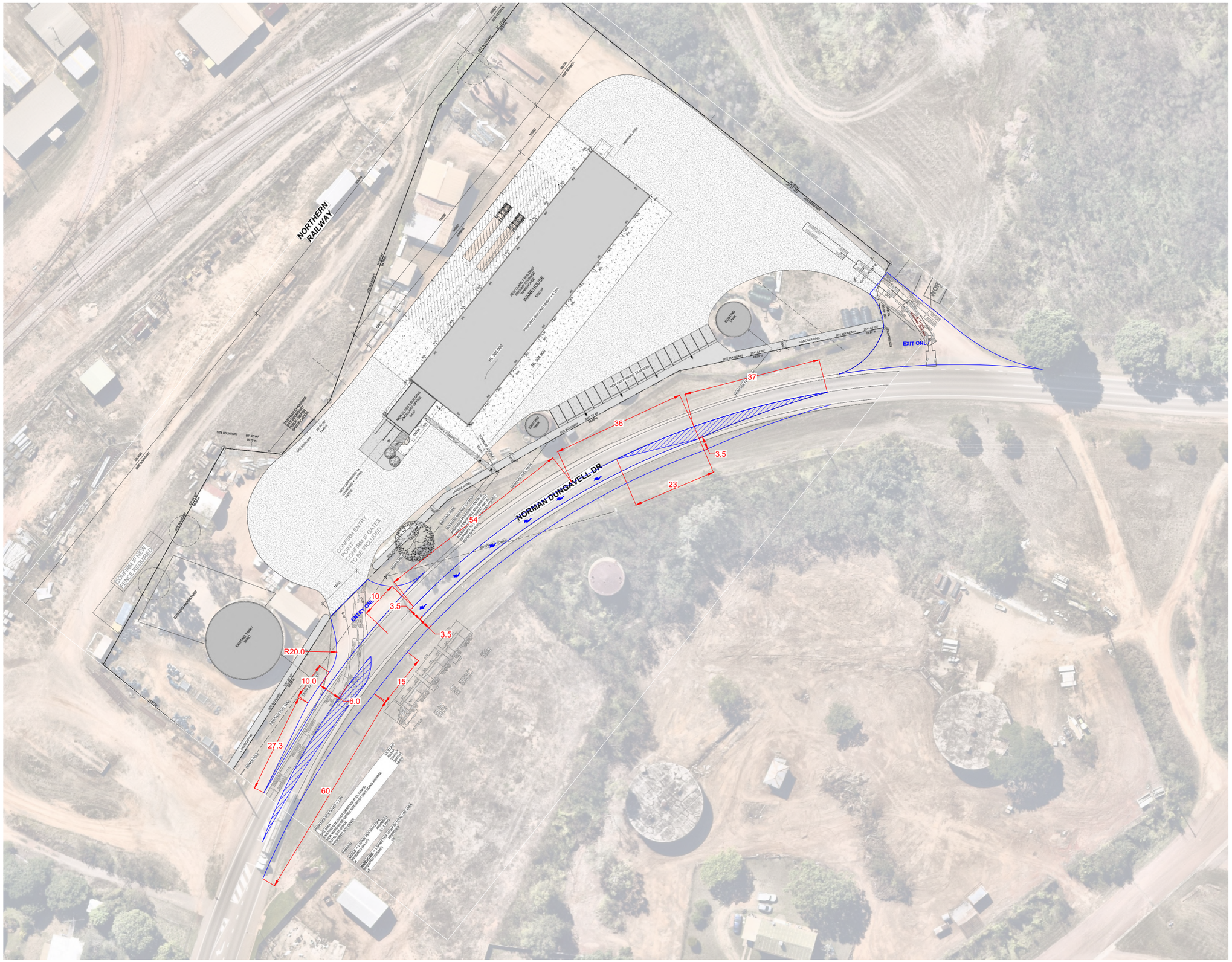

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SCALE 1:1000

PROJECT

3 - 9 NORMAN DUNGAVELL DRIVE

CLIENT

HOLLIMANS PTY LTD

DRAWING TITLE

MODUS TRAFFIC CONCEPT PLAN (DIMNS)

DRAWING NUMBER

MOD25169QLD - SK02

DATE	REVISION
14 05 2026	A

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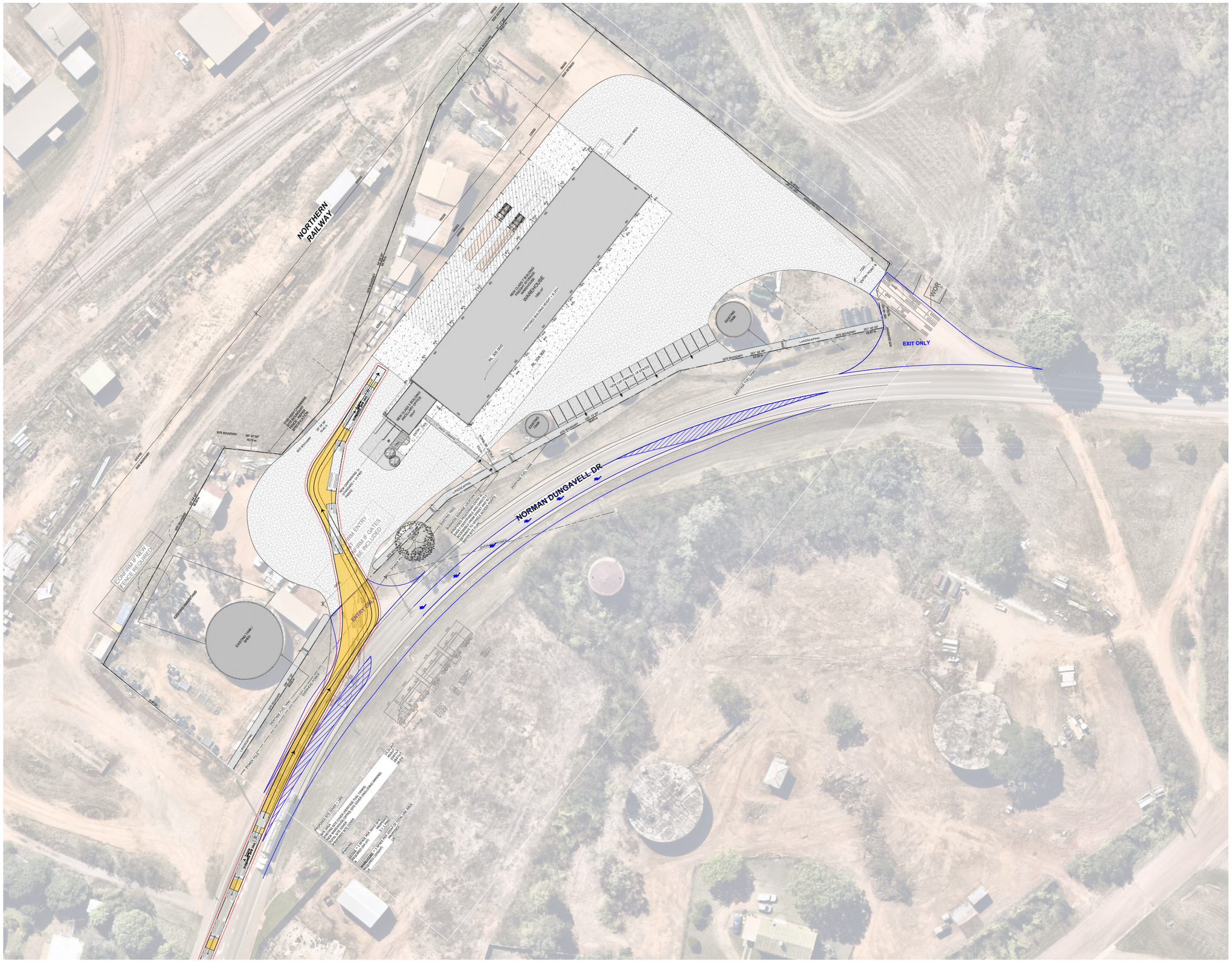
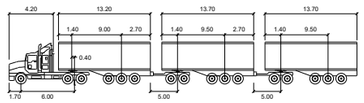


VEHICLE USED IN SIMULATION



A Triple

	meters		
Tractor Width	: 2.50	Lock to Lock Time	: 6.0
Trailer Width	: 2.50	Steering Angle	: 25.6
Tractor Track	: 2.50	Articulating Angle	: 70.0
Trailer Track	: 2.50		

SWEPT PATH LEGEND

- VEHICLE BODY
- FRONT TIRES
- VEHICLE PATH
- VEHICLE CLEARANCE (300mm)
- VEHICLE CLEARANCE (600mm)
- VEHICLE
- 5KM/H DESIGN SPEED

N

0 10 20 30 40 50m

10 8 6 4 2

SCALE 1:1000

PROJECT

3 - 9 NORMAN DUNGAVELL DRIVE

CLIENT

HOLLIMANS PTY LTD

DRAWING TITLE

A TRIPLE ACCESS SWEPT PATH ASSESSMENT

DRAWING NUMBER

MOD25169QLD - SK03

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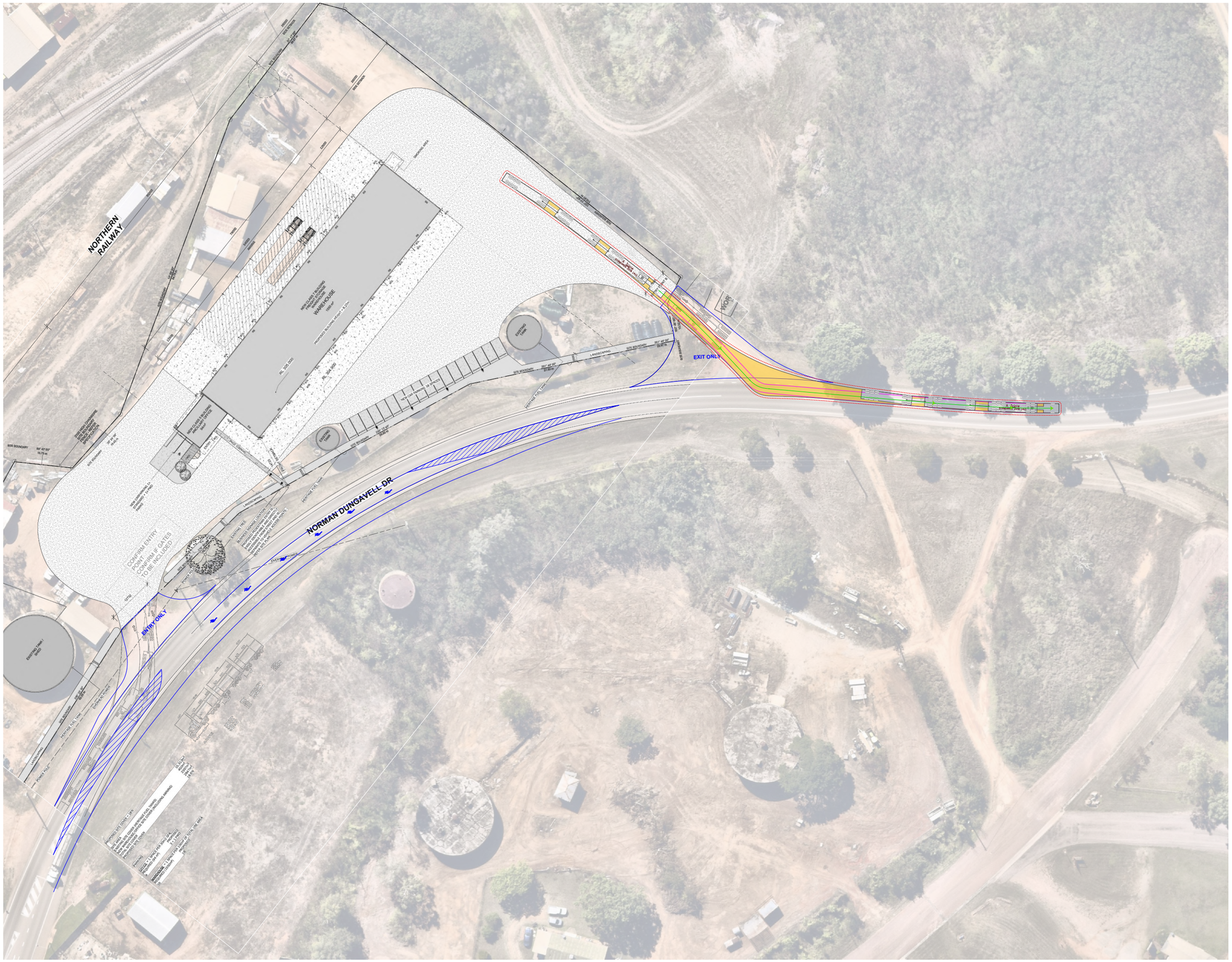

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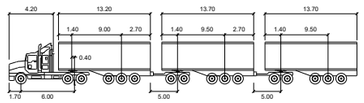

A Triple

	meters		
Tractor Width	: 2.50	Lock to Lock Time	: 6.0
Trailer Width	: 2.50	Steering Angle	: 25.6
Tractor Track	: 2.50	Articulating Angle	: 70.0
Trailer Track	: 2.50		

SWEPT PATH LEGEND

- VEHICLE BODY
- FRONT TIRES
- VEHICLE PATH
- VEHICLE CLEARANCE (300mm)
- VEHICLE CLEARANCE (600mm)
- VEHICLE
- 5KM/H DESIGN SPEED

N

0 10 20 30 40 50m

10 8 6 4 2

SCALE 1:1000

PROJECT

3 - 9 NORMAN DUNGAVELL DRIVE

CLIENT

HOLLIMANS PTY LTD

DRAWING TITLE

A TRIPLE ACCESS SWEPT PATH ASSESSMENT

DRAWING NUMBER

MOD25169QLD - SK04

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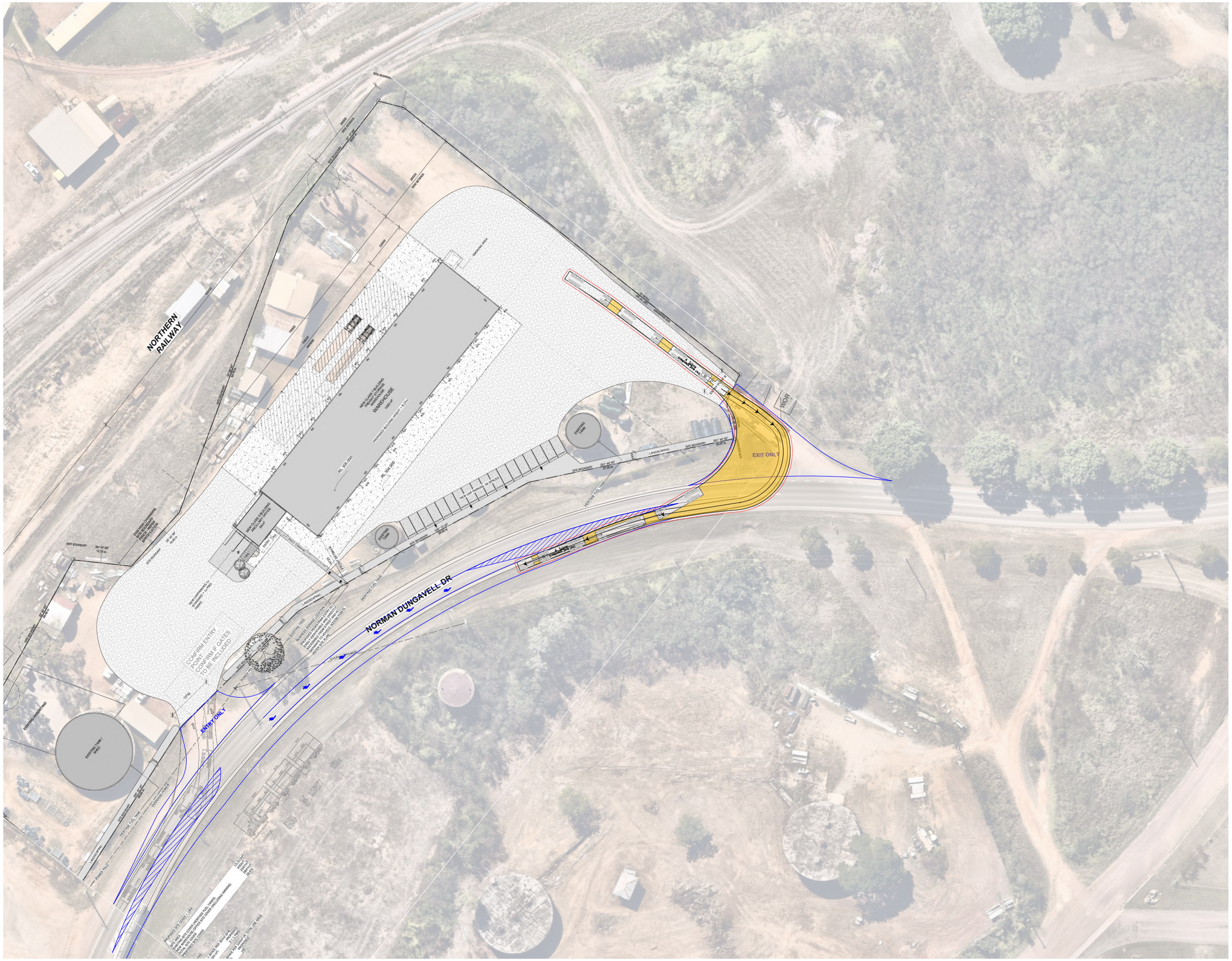

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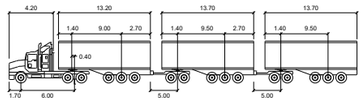

A Triple

	meters		
Tractor Width	: 2.50	Lock to Lock Time	: 6.0
Trailer Width	: 2.50	Steering Angle	: 25.6
Tractor Track	: 2.50	Articulating Angle	: 70.0
Trailer Track	: 2.50		

SWEPT PATH LEGEND

- VEHICLE BODY
- FRONT TIRES
- VEHICLE PATH
- VEHICLE CLEARANCE (300mm)
- VEHICLE CLEARANCE (600mm)
- VEHICLE
- 5KM/H DESIGN SPEED

N

0 10 20 30 40 50m

10 8 6 4 2

SCALE 1:1000

PROJECT

3 - 9 NORMAN DUNGAVELL DRIVE

CLIENT

HOLLIMANS PTY LTD

DRAWING TITLE

A TRIPLE EGRESS SWEPT PATH ASSESSMENT

DRAWING NUMBER

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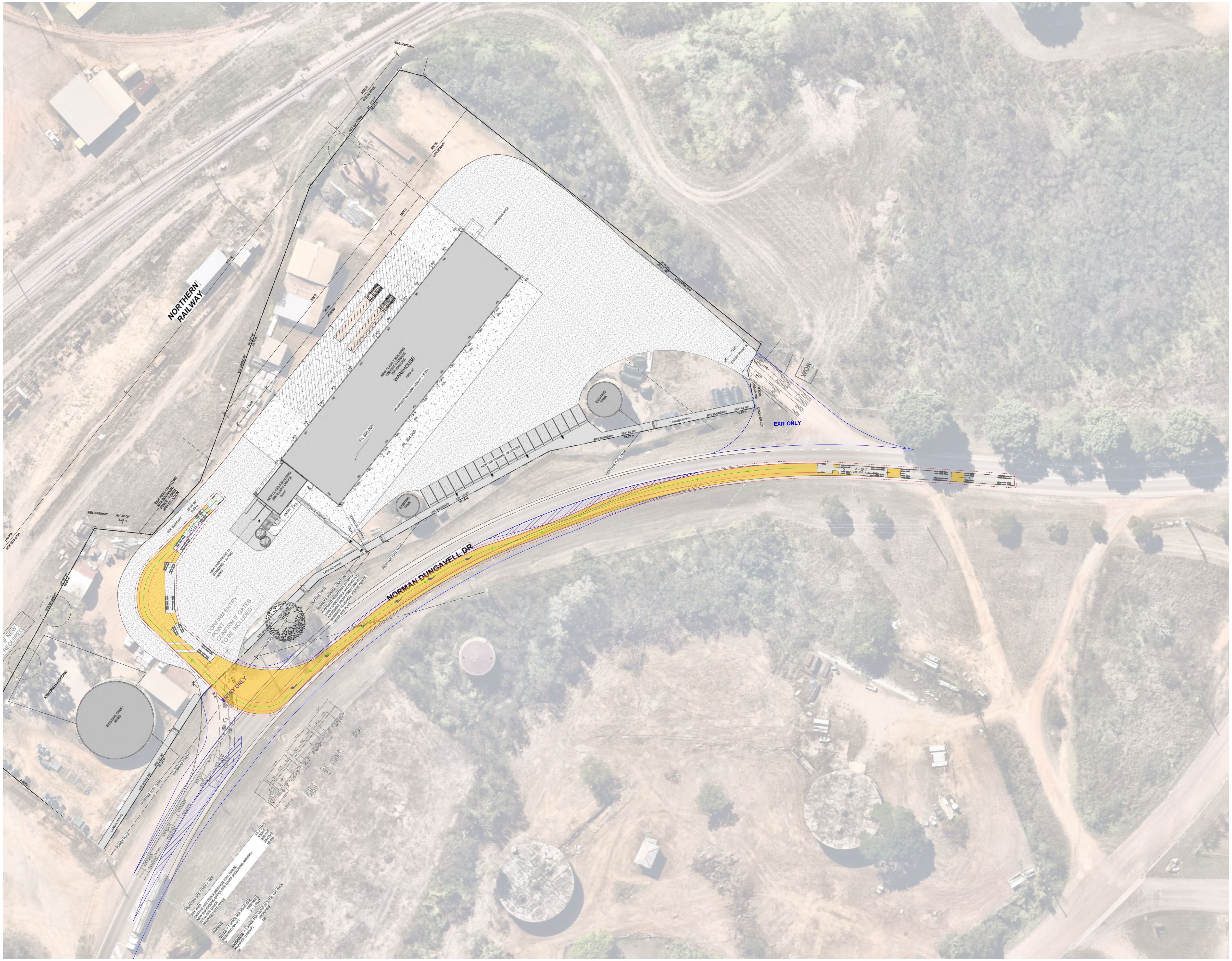

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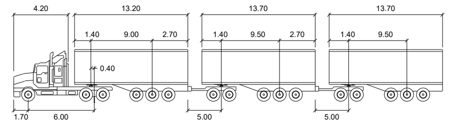
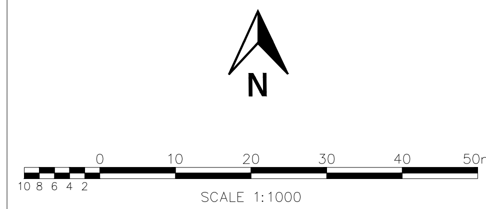


	meters		
Tractor Width	: 2.50	Lock to Lock Time	: 6.0
Trailer Width	: 2.50	Steering Angle	: 25.6
Tractor Track	: 2.50	Articulating Angle	: 70.0
Trailer Track	: 2.50		

SWEPT PATH LEGEND

- VEHICLE BODY
- FRONT TIRES
- VEHICLE PATH
- VEHICLE CLEARANCE (300mm)
- VEHICLE CLEARANCE (600mm)
- VEHICLE
- 5KM/H DESIGN SPEED



PROJECT

3 - 9 NORMAN DUNGAVELL DRIVE

CLIENT

HOLLIMANS PTY LTD

DRAWING TITLE

A TRIPLE INGRESS SWEPT PATH ASSESSMENT

DRAWING NUMBER

MOD25169QLD - SK06

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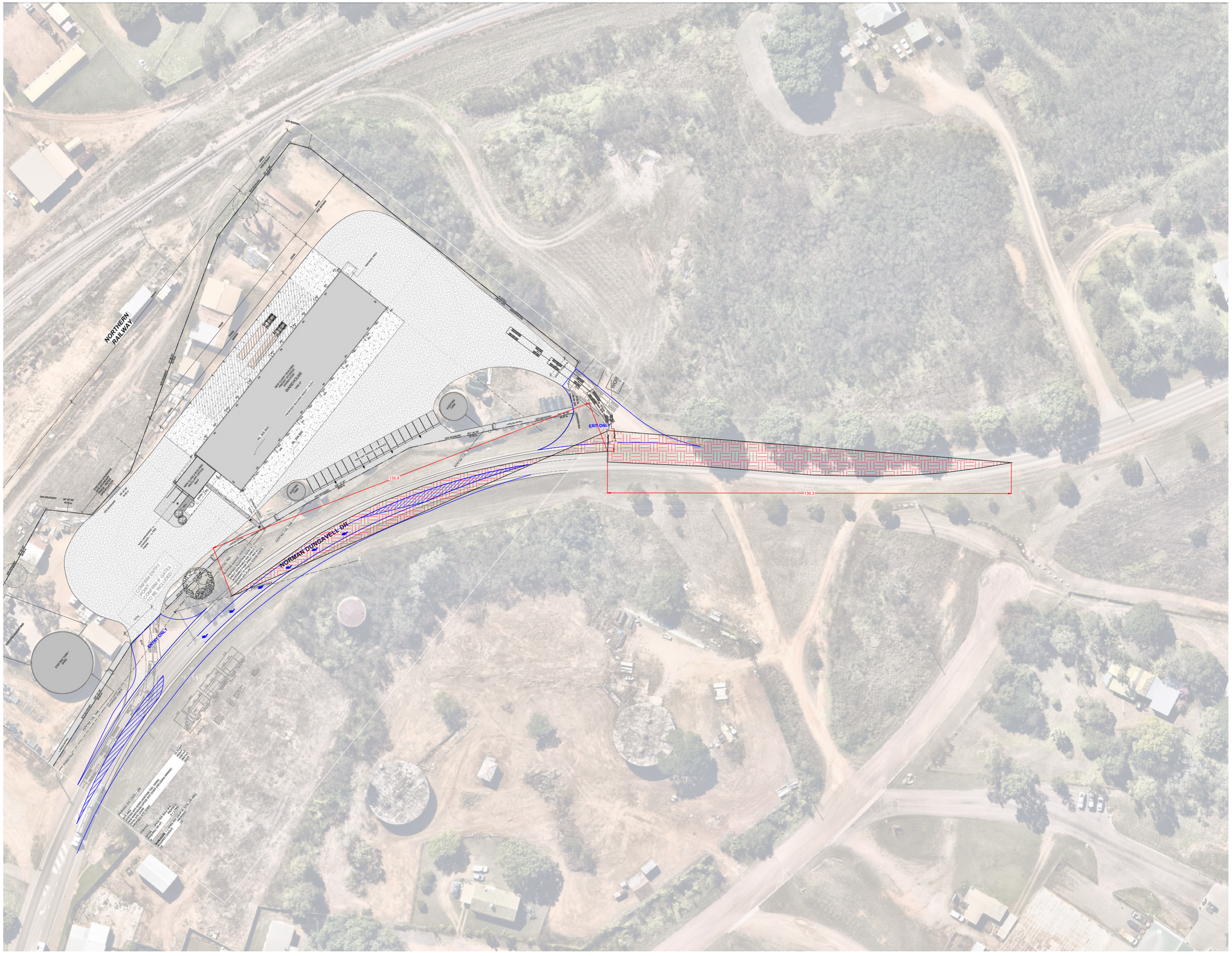

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PROJECT

3 - 9 NORMAN DUNGAVELL DRIVE

CLIENT

HOLLIMANS PTY LTD

DRAWING TITLE

SAFE INTERSECTION SIGHT DISTANCE REVIEW FOR TRUCKS

DRAWING NUMBER

MOD25169QLD - SK08

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