



15 September 2026

Joe Evenwel
Pipemakers Australia Pty Ltd
C/- Therefor Group

Dear Joe,

186 Ingram Road, Acacia Ridge – Other Change Traffic Engineering Response

Benzie Engineering has been engaged to prepare a traffic engineering letter in support of a change application to the existing warehouse at 186 Ingram Road, Acacia Ridge.

There are several approvals for the site, with the most recent approval granted by Brisbane City Council (BCC) on the 31st August, 2015. BCC's application reference is A003906397, Version 1. Note: the approved plans make reference to A001610135 for car parking and on-site management.

This letter will primarily assess the proposed parking supply and increased traffic generation for the site. Consideration of the existing access and servicing arrangements will also be provided.

A copy of the proposed development plans is included as **Attachment 1**.

1. Existing Approval

A summary of the existing approval is provided below in **Table 1**.

The GFA noted in Table 1 is based on the plans included within the 2015 approval (A003906397). The approved plans are included as **Attachment 2**.

Table 1 Summary of Existing Approval

Design Aspect	Approved Arrangement
GFA	6,046m ²
Access	Lanseer Street (west) – 9m wide, Type B2 Landseer Street (east) – 18m wide, Type B2 Ingram Road (north) – 10m wide, Type B2 Ingram Road (south) – 9m wide, Type B2
Servicing	AV, MRV and RCV to all buildings

A review of the approvals has resulted in contradicting parking numbers being shown across the approved plans and within the approval conditions.

The approved plans of approval A003906397 (2015) refer to the 2006 approval conditions (A001610135) for car parking and on-site manoeuvring. Further, the number of on-site spaces varies from the approval due to external storage locations. A summary of the car parking is provided in **Table 2**.

Table 2 Summary of Car Parking

Car Parking	Date	Number
Approved Plans (A003906397)	2015	58 spaces
Approval Conditions (A001610135)	2006	64 spaces
On-Site Survey	2026	39 spaces

For this assessment, the parking supply will be based on survey data. Further information is provided in Section 3.

2. Proposal

The application relates to a new extrusion machine proposed within Warehouse 1. Minor extensions to Warehouse 1 are also proposed. These will largely facilitate office uses. Despite the increase in office GFA, the introduction of the new machinery will result in a reduction in on-site workers.

To accommodate additional parking, external storage at the north-east corner of the site will be removed.

The proposal is summarised below in **Table 3**.

Table 3 Summary of Existing Approval

Design Aspect	Approved Arrangement
GFA	7,548m ²
Parking	86 spaces including 1 PWD
Access	No change to current
Servicing	AV, MRV and RCV to all buildings and 25m B-double access on-site.

3. Car Parking Supply

The approval documentation conditions that 64 spaces (including 1 x PWD) be provided on-site.

In the time since the approval, the site operations have varied, with additional storage required on-site. A majority of this storage occurs within the parking and circulation aisles across the site, therefore decreasing the on-site parking supply.

To understand the current parking demands, a parking demand survey was undertaken. The results of this survey are detailed further in Section 3.1.

As the proposed use is an extension to an existing facility, the proposed parking supply considers both the approved parking rate and the results of the parking survey. The proposed parking supply is detailed in Section 3.3.

3.1. Approved Parking Rate

The approved GFA of 6,046m² and provision of 64 spaces equates to a parking supply rate of 1.06 spaces per 100m² GFA.

3.2. Parking Demand Survey

The site has been operational for many years. To determine the operational parking demands of the site, a parking demand survey was conducted.

The parking demand survey was undertaken by Austraffic on Thursday 20th August, 2026. The survey hours were 6am – 6pm. As part of the survey, the number of parking spaces was also confirmed at **39 spaces**. This is lower than the approval documentation.

The results of the survey are summarised in **Table 4**. Complete survey outputs are included as **Attachment 3**.

Table 4 Summary – Parking Demand Survey

Survey Day	Peak Demand	Peak Time	Spaces Remaining
Thursday	36 spaces	10:15am	3 spaces

Based on the results of the survey, the current car parking demand rate is 0.6 spaces per 100m² GFA.

3.3. Proposed Parking Supply

To estimate the future demands, the surveyed rate has been applied to the extension (~1,500m² GFA). This is considered a conservative assessment given that the number of staff on-site are reducing.

The parking requirement and supply is summarised in **Table 5**. Note that the assessment is limited to the extension only.

Table 5 Revised Estimated Parking Demands

Land Use	Yield (m ² GFA)	Parking Rate	Required	Proposed
Warehouse	1,522	0.6 spaces per 100m ² GFA	10 spaces	27 spaces
Total			10 spaces	27 spaces

Application of the survey rate to the future extension results in an estimated parking demand of 10 spaces.

Notably, applying the approved parking rate of 0.97 spaces per 100m² GFA equates to a parking supply requirement of 17 spaces.

The scheme proposes 27 spaces and therefore exceeds both the surveyed and approved parking supply requirements. As such, the proposed parking supply for the extension is considered suitable.

Based on the assessment in this letter, it is recommended that Conditions be updated as follows:

Parking on the site for a minimum 66 cars and for the loading and unloading of vehicles within the site (including 1 x PWD space).

Note: this condition allows for the existing 39 spaces plus 27 proposed as part of this change application.

4. Car Parking Layout

A review of the car parking layout has been undertaken. The review is limited to the new spaces located at the north-east corner of the site.

As this is a change application, the assessment of the car parking layout has been undertaken against the approval.

Table 6 Car Park Layout – Design Comparison

Design Aspect	Approved Provision	Revised Provision	Comments
Parking Bay Dimension	5.4m long x 2.6m wide	5.4m long x 2.6m wide	No change
Parking aisle width	5.8m (minimum)	6.5m (minimum)	Complies with approval
Parking envelope clearance	All spaces 0.3m clear of walls	All spaces 0.3m clear of walls	No change
Blind Aisle Extensions	1m aisle extension	1m aisle extension	Complies with approval

The design of the proposed parking area is in accordance with the approval. No changes are required to the approval conditions.

5. Service Vehicle Arrangements

Condition 12 (d) of A001610135 specifies that on-site manoeuvring be provided for an AV, RCV and MRV to each building.

In the time since the approval, the operational demands of the site have varied with a B-double now required to access the site. A swept path assessment (included in **Attachment 4**) shows that a 25m B-double can manoeuvre through the site, as required.

There is no change to the loading arrangements for Warehouse 2 and 3.

The extension to Warehouse 1 will still allow for AV access to the building. A typical swept showing AV access is included in **Attachment 4**.

It is recommended that the approval package be updated to reflect the 25m B-double access through the site.

6. Access Arrangements

No changes are proposed to the approved access arrangements. There are several crossovers to the site. Vehicles accessing the proposed parking at the north-east corner of the site will likely enter and exit via northern 10m wide crossover to Ingram Road.

The B-double enters the site via the 18m wide crossover to Landseer Street, continues through the site and exits via the southern 9m wide crossover to Ingram Road.

No changes are required to the approval package.

7. Traffic Impact Assessment

The expected generation of the site is shown in **Table 7**.

The generation rates are sourced from DTMR's Road Planning and Design Manual (RPDM) for a warehouse use. The assessment considers the extension only.

Table 7 Estimated Generation

Land Use	Yield	Rate	Estimated Generation
Warehouse	1,522m ² GFA	0.5 trips per 100m ² GFA	8vph (in + out)

Acceptable Solution A02 of the Road Hierarchy Overlay Code specifies that a detailed traffic impact assessment is required where a development meets any of the following criteria:

- is classified as a major development (i.e. generates more than 25vph)
- involves an access driveway to a major road
- involves an access driveway within 100m of a signalised intersection.

The proposed change is expected to result in an additional 8vph (in+out) during peaks. Access is to a minor road and not within 100m of a signalised access. As such, no additional assessment is required.



8. Conclusions

The proposed development scheme generally aligns with the current approval and existing on-site operations.

A parking demand survey has identified that the on-site demands are 0.6 spaces per 100m² GFA. Application of this rate to the proposal results in a parking supply requirement of 10 spaces. The proposal provides 27 additional spaces on-site, and therefore exceeds the expected demands.

The layout is generally consistent with the approved scheme.

No changes are proposed to the site access or service vehicle arrangements. A 25m B-double currently accesses the site. The proposal continues to allow for a B-double to continue through the site.

Based on this assessment Benzie Engineering see no traffic engineering reason why the request for an other change application to amend the existing approval cannot be granted. If you have any queries in relation to the information provided in this letter, contact Jadyn Benzie.

Jadyn Benzie
Director | RPEQ 24616
0438 761 267



Attachment 1 Proposed Plans



DEVELOPMENT SUMMARY REAL PROPERTY DESCRIPTION

186 INGRAM ROAD
ACACIA RIDGE, QLD 4110
LOT 1 ON SP 329940

SUMMARY OF AREAS BUILDING: EXISTING

INDUSTRIAL 1	3569m ²
OFFICE	197m ²
AMENITIES	76.5m ²

INDUSTRIAL 2	508m ²
TOTAL	508m ²

OFFICE	480m ²
TOTAL	1500m ²

EXTENSION 4	560m ²
TOTAL	560m ²

EXTENSION 5	928m ²
TOTAL	928m ²

TOTAL	36m ²
TOTAL GFA	7548.5m ²

SITE AREA	7548.5m ² (3.11ha)
SITE COVER	791m ² (3.32ha)
LANDSCAPED AREA	

EXISTING CAR PARKING SPACES	59
NEW CAR PARKING SPACES	27

SERVICE VEHICLE
ARTICULATED VEHICLE

MAXIMUM NUMBER OF STOREYS 2

B-DOUBLE 25M
AUSTROADS 2013 (AU)

Area 36 m²

EXISTING

(2 Levels)
460 m²



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PROJECT NUMBER	
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B1102A

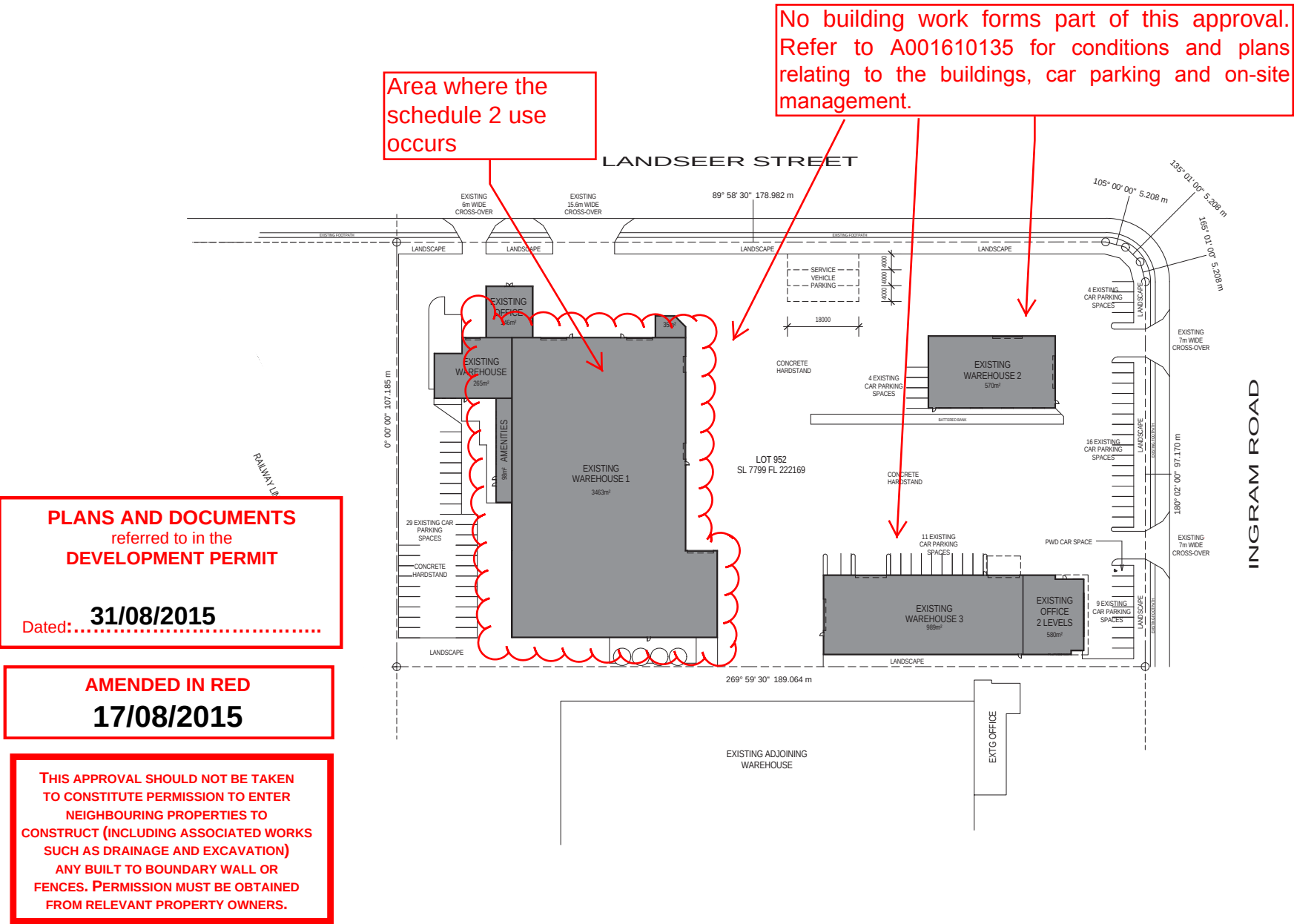
craft BUILDING COMPANY PTY LTD P.O. Box 113 ALBION Qld 4010 Australia P: (+617) 3859 2176 E: craft@craftbuilding.com.au ABN 99 113 697 866 BSA 1061436				PROJECT				PIPEMAKERS P/L AT 186 INGRAM RD. ACACIA RIDGE QLD. 4110			
REV		DATE		DESCRIPTION							
P1		27.8.26		PRELIMINARY ISSUE							
P2		28.8.26		PRELIMINARY ISSUE							
A		11.9.26		ISSUE FOR D.A. APPROVAL							
DRAWING TYPE								SITE PLAN			
SCALE AT A3				PROJECT NUMBER							
1:500				B1102							
DRAWN		CHK		REV		DRAWING NUMBER					
PD		CS		A		A.01					



Attachment 2 Approved Plan

186 INGRAM ROAD, ACACIA RIDGE

SITE PLAN



DEVELOPMENT SUMMARY
REAL PROPERTY DESCRIPTION

186 INGRAM ROAD
ACACIA RIDGE, QLD 4110
LOT 952 ON SL 7799 FL 222169
TOTAL SITE AREA 20,238m²

SUMMARY OF AREAS

BUILDING	
EXISTING	
WAREHOUSE 1	3729m ²
OFFICE	279m ²
TOTAL	4008m ²
WAREHOUSE 2	570m ²
TOTAL	570m ²
WAREHOUSE 3	989m ²
OFFICE	580m ²
TOTAL	1569m ²

NOT PART OF THIS APPROVAL

TOTAL	1569m ²
TOTAL GFA	6148m ²
SITE AREAS	
SITE COVER	684m ² (29.8%)
LANDSCAPE AREA	1663m ² (8.2%)
CARPARKING	
TOTAL EXISTING CARPARKING SPACES	73
SERVICE VEHICLE	
ARTICULATED VEHICLE	
STOREYS	
MAXIMUM NUMBER OF STOREYS	2

Received
27/06/2014
BCC DA



Attachment 3 Survey Data

Site No.: 1 Weather: Fine
Location: Parking Occupancy Existing Warehouse at 186 Ingram Road, Acacia Ridge
Day/Date: Thursday, 20 August 2026
AM Peak: Hour ending - 9:30 AM
PM Peak: Hour ending - 10:45 AM



Number of vehicles parked at 6:00am =																												32					
Number of parking bays =																												39 approx					
TIME (1/4 hr end)	Parking Occupancy at 186 Ingram Road																					Total						OCCUPANCY					
	Entry 1			Exit 1			Entry 2			Exit 2			Entry 3			Exit 3			Entry 4			Exit 4			Entry					Exit			
	Light Vehicles	Heavy Vehicles	Total	Light Vehicles	Heavy Vehicles	Total	Light Vehicles	Heavy Vehicles	Total	Light Vehicles	Heavy Vehicles	Total	Light Vehicles	Heavy Vehicles	Total	Light Vehicles	Heavy Vehicles	Total	Light Vehicles	Heavy Vehicles	Total	Light Vehicles	Heavy Vehicles	Total	Light Vehicles	Heavy Vehicles	Total	Light Vehicles	Heavy Vehicles	Total	Total (number of vehicles)	Total (%)	
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6:30 AM	0	0	0	2	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	2	23	59%		
6:45 AM	2	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	2	0	0	0	25	64%	
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	1	1	0	0	0	26	67%
7:15 AM	2	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	2	0	2	2	2	2	2	4	0	2	2	28	72%	
7:30 AM	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1	0	1	0	1	1	28	72%	
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	28	72%
8:00 AM	1	0	1	2	0	2	0	0	0	0	0	0	0	1	1	0	1	1	0	0	0	0	1	1	1	1	1	2	2	2	4	26	67%
8:15 AM	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	1	1	2	0	0	0	0	28	72%
8:30 AM	3	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	3	0	0	0	31	79%	
8:45 AM	2	0	2	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	2	0	2	1	1	2	31	79%	
9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	1	1	0	0	0	32	82%	
9:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	2	0	0	0	0	0	2	2	0	0	0	34	87%	
9:30 AM	2	0	2	1	0	1	0	0	0	0	0	0	0	0	0	2	2	1	1	2	0	0	0	3	1	4	1	2	3	35	90%		
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10:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	1	1	34	87%	
10:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	1	1	33	85%	
10:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	1	1	0	0	0	34	87%		
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Site No.: 1 Weather: Fine
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	Light Vehicles	Heavy Vehicles	Total	Light Vehicles	Heavy Vehicles	Total	Light Vehicles	Heavy Vehicles	Total	Light Vehicles	Heavy Vehicles	Total	Light Vehicles	Heavy Vehicles	Total	Light Vehicles	Heavy Vehicles	Total	Light Vehicles	Heavy Vehicles	Total	Light Vehicles	Heavy Vehicles	Total	Light Vehicles	Heavy Vehicles	Total	Light Vehicles	Heavy Vehicles	Total	Total (number of vehicles)	Total (%)
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11:15 AM	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	2	2	0	2	2	0	0	0	0	2	2	1	2	3	33	85%
11:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	33	85%
11:45 AM	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	32	82%
12:00 PM	1	0	1	1	0	1	0	0	0	0	0	0	0	0	0	1	1	0	1	1	0	0	0	1	1	2	1	1	2	32	82%	

Page 3 of 2

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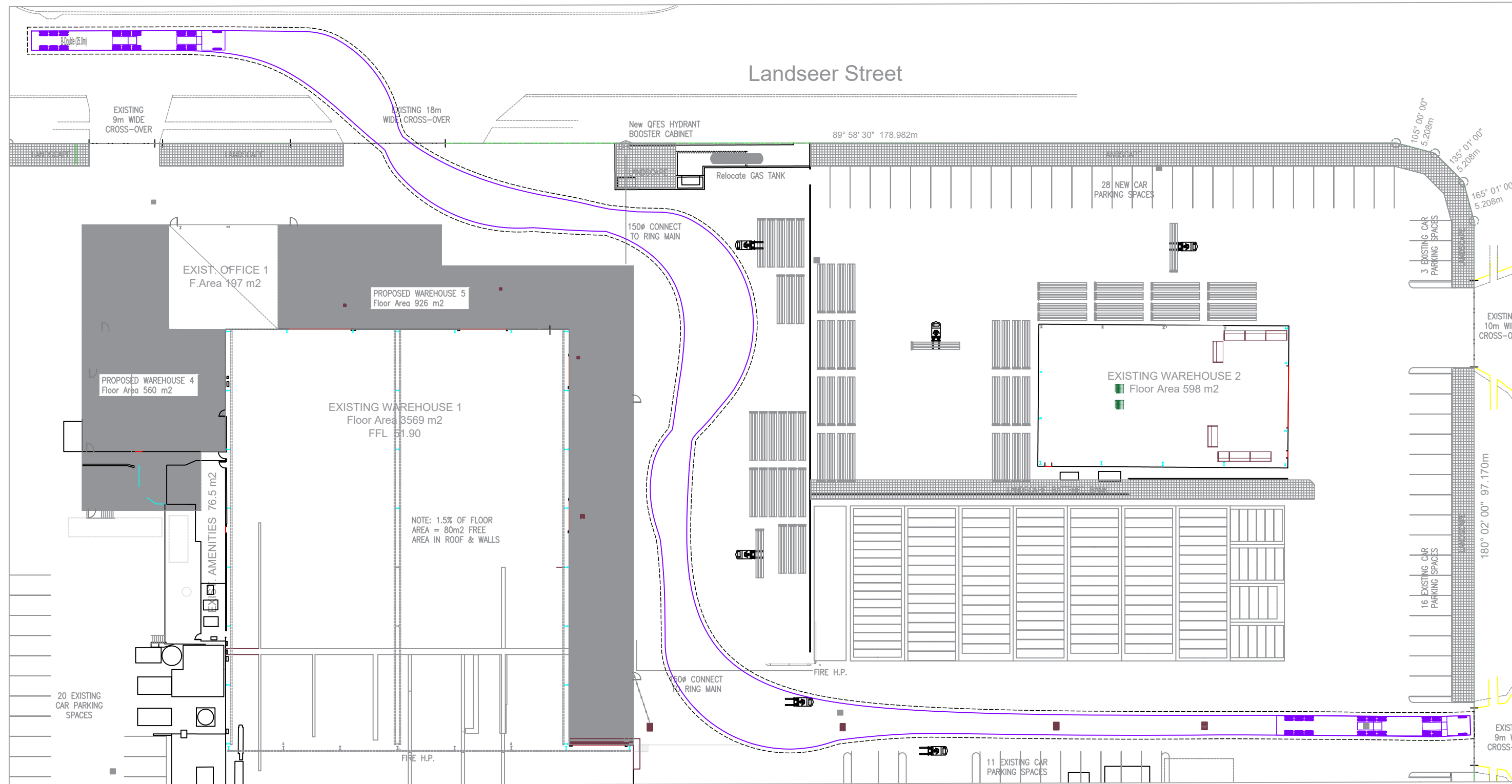
Site No.: 1 Weather: Fine
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	Entry 1			Exit 1			Entry 2			Exit 2			Entry 3			Exit 3			Entry 4			Exit 4			Entry		Exit					
	Light Vehicles	Heavy Vehicles	Total	Light Vehicles	Heavy Vehicles	Total	Light Vehicles	Heavy Vehicles	Total	Light Vehicles	Heavy Vehicles	Total	Light Vehicles	Heavy Vehicles	Total	Light Vehicles	Heavy Vehicles	Total	Light Vehicles	Heavy Vehicles	Total	Light Vehicles	Heavy Vehicles	Total	Light Vehicles	Heavy Vehicles	Total	Total (number of vehicles)	Total (%)			
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5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	16	41%		
5:30 PM	3	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	3	0	0	19	49%		
5:45 PM	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	20	51%		
6:00 PM	5	0	5	2	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5	0	5	2	0	2	23	59%		
12 hr Total	30	0	30	37	0	37	0	0	0	0	0	0	1	1	2	12	14	3	20	23	0	12	12	33	21	54	39	24	63	28	71%	Average
AM Peak	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	2	0	0	0	0	2	2	0	0	0	36	92%	Maximum	
PM Peak	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	1	1	2	16	41%	Minimum	



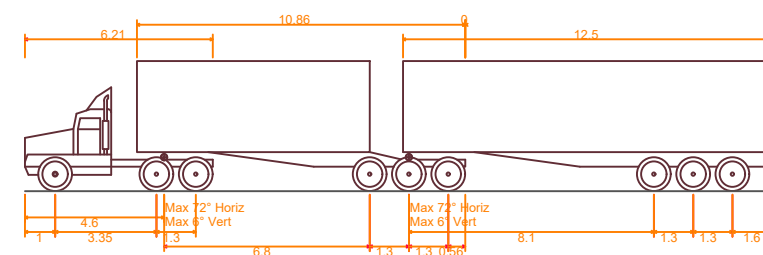
Attachment 4 Swept Paths



B-DOUBLE PATH

VEHICLE PROFILES

B-Double (25.0m)	
Overall Length	25.000m
Overall Width	2.500m
Overall Body Height	4.300m
Min Body Ground Clearance	0.540m
Track Width	2.500m
Lock-to-lock time	6.00s
Curb to Curb Turning Radius	15.000m
Design Speed Forward Min.	5.0kph
Clearance Envelope	0.500m



**DIRECTOR**

JADYN BENZIE
RPEQ 24616
APPROVED 8 Sep 2026

PROJECT NAME
186 INGRAM ROAD, ACACIA RIDGE

DRAWING TITLE
SWEPT PATH
B-DOUBLE ACCESS THROUGH SITE

REV.	DESCRIPTION	DRAWN	CHECKED	DATE
A	ORIGINAL ISSUE	JB	JB	09-09-26

CLIENT
PIPEMAKERS



PROJECT REF.
26BT_17

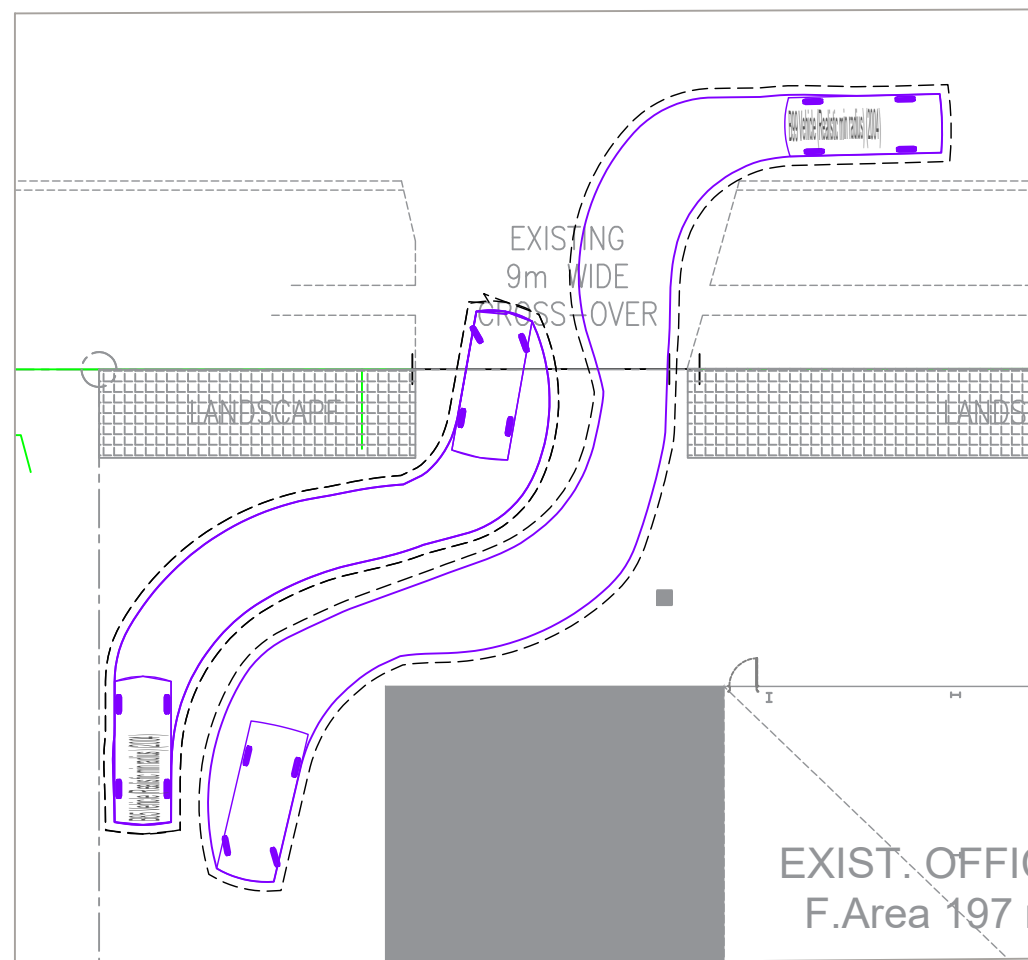
DATE
9 SEP 2026

ORIGINAL SIZE
A3

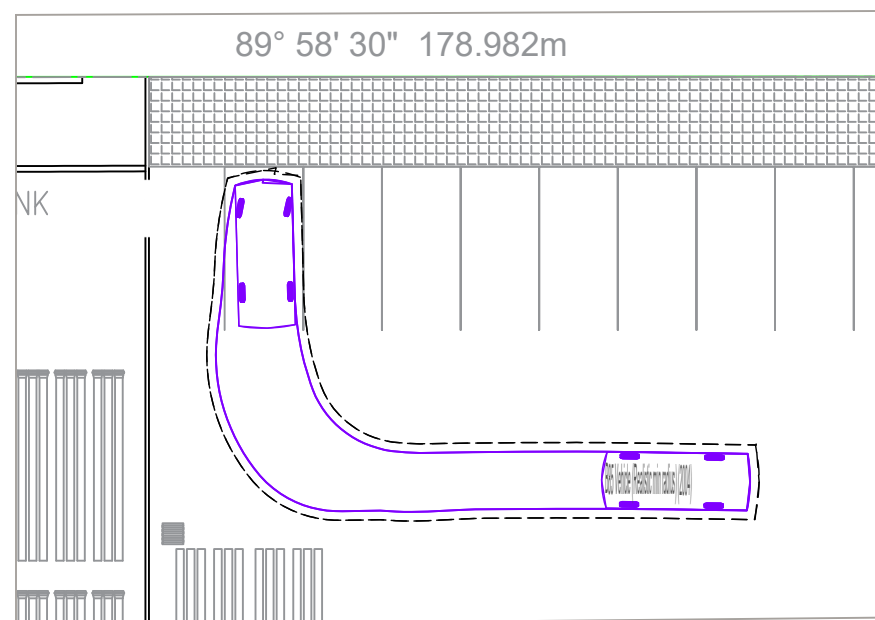
DRAWING NO.
26BT_17-01

REVISION
A

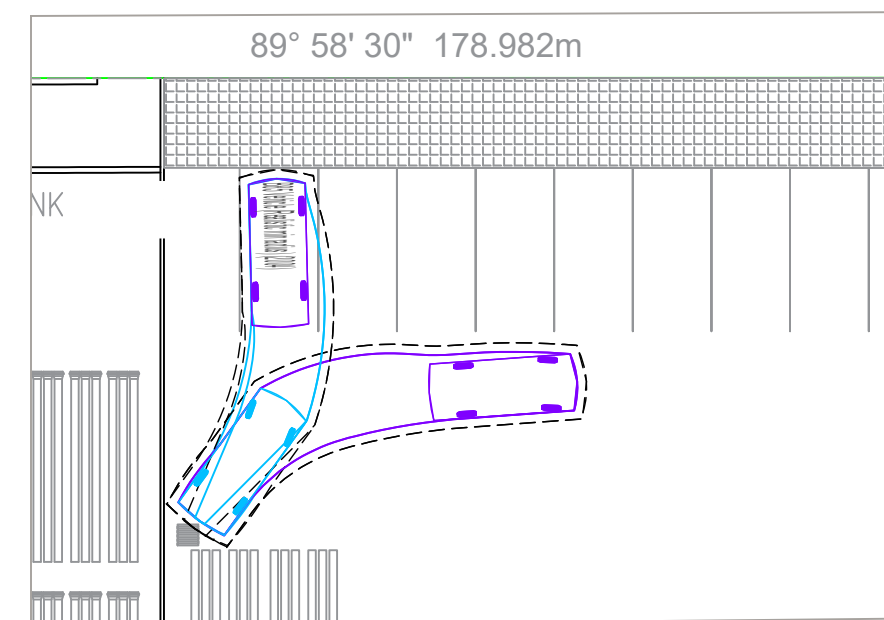
SHEET
1 OF 2



CIRCULATION - LANDSEER STREET (WESTERN ACCESS)

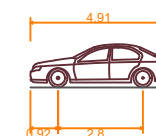


CAR PARK ENTRY - TYPICAL

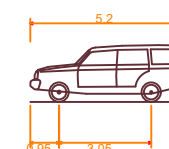


CAR PARK EXIT - TYPICAL

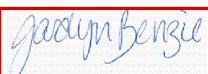
VEHICLE PROFILES



B85 Vehicle (Realistic min radius) (2004)
Overall Length 4.910m
Overall Width 1.870m
Overall Body Height 1.421m
Min Body Ground Clearance 0.159m
Track Width 1.770m
Lock-to-lock time 4.00s
Curb to Curb Turning Radius 5.750m
Design Speed Forward 5kph
Clearance Envelope 0.300m



B99 Vehicle (Realistic min radius) (2004)
Overall Length 5.200m
Overall Width 1.940m
Overall Body Height 1.878m
Min Body Ground Clearance 0.272m
Track Width 1.840m
Lock-to-lock time 4.00s
Curb to Curb Turning Radius 6.250m
Design Speed Forward 5kph
Clearance Envelope 0.300m

 DIRECTOR
JADYN BENZIE RPEQ 24616
APPROVED 8 Sep 2026



PROJECT NAME
186 INGRAM ROAD, ACACIA RIDGE
DRAWING TITLE
SWEPT PATH
TYPICAL PATHS AND CIRCULATION

Benzie Engineering Pty Ltd
ABN 96 697 233 266
P: +61 438 761 267
E: admin@benzieeng.com.au

REV.	DESCRIPTION	DRAWN	CHECKED	DATE
A	ORIGINAL ISSUE	JB	JB	09-09-26

CLIENT
PIPEMAKERS



SCALE
SCALE 1:250 AT A3
0 2.5 5 7.5 10

PROJECT REF.
26BT_17
DATE
9 SEP 2026
ORIGINAL SIZE
A3
DRAWING NO.
26BT_17-01
REVISION
A
SHEET
2 OF 2