Our Ref: 23399

7 December 2023

Nemco Design Pty Ltd
Level 2, Suite 5, 402-410 Chapel Toad
Bankstown NSW 2200

Attention: Abraham Nemra

Dear Abraham,

RE: 150 & 158 ELDRIDGE ROAD, CONDELL PARK
TRAFFIC RESPONSE TO RFI

As requested, please find herein The Transport Planning Partnership (TTPP)'s traffic and parking assessment for the above proposed development.

Background

A Development Application (DA-1292/2022) has been submitted to City of Canterbury Bankstown Council (Council) for renovation of an existing warehouse at 150-160 Eldridge Road and use of 158 Elridge Road as a car storage facility.

Specifically, the proposal seeks approval to renovate the existing warehouse and introduce new parking spaces and a portable hoist at 150 Eldridge Road. The 158 Eldridge Road site is proposed to be used as a car storage facility, with access to be provided from the 150 Eldridge Road site via a bridge ramp.

On 2nd March 2023, Council issued a letter requesting further information and assessment to be undertaken. TTPP has responded to the traffic and parking related comments as below.

Council's Comments

Development Engineer
The proposed bridge over stormwater culvert shall be designed in accordance with AS2890.1 having regard to the provision of required roadway width to service the development. The applicant shall provide the following documents prepared by qualified traffic consultant in supporting the proposal:

1) Largest vehicle type to be used in the change of use parking facility within No 158 Eldridge Rd and new parking spaces on 150-160 Eldridge Rd.
2) A swept path analysis demonstrating the subject vehicle's manoeuvrability in and out of each new car parking space whilst others are all occupied on No 150-160 Eldridge Rd and to enter and exit the both sites 158 & 150-160 Eldridge Rd in a forward direction complying to AS890.1 shall be provided.

The proposal of building a new bridge ramp to access No 158 Eldridge Rd over Council's easement for drainage 5.0 m wide which contains stormwater culvert of (1200x2740x2740) shall be referred to City Asset team by Development Engineering team for further assessment.

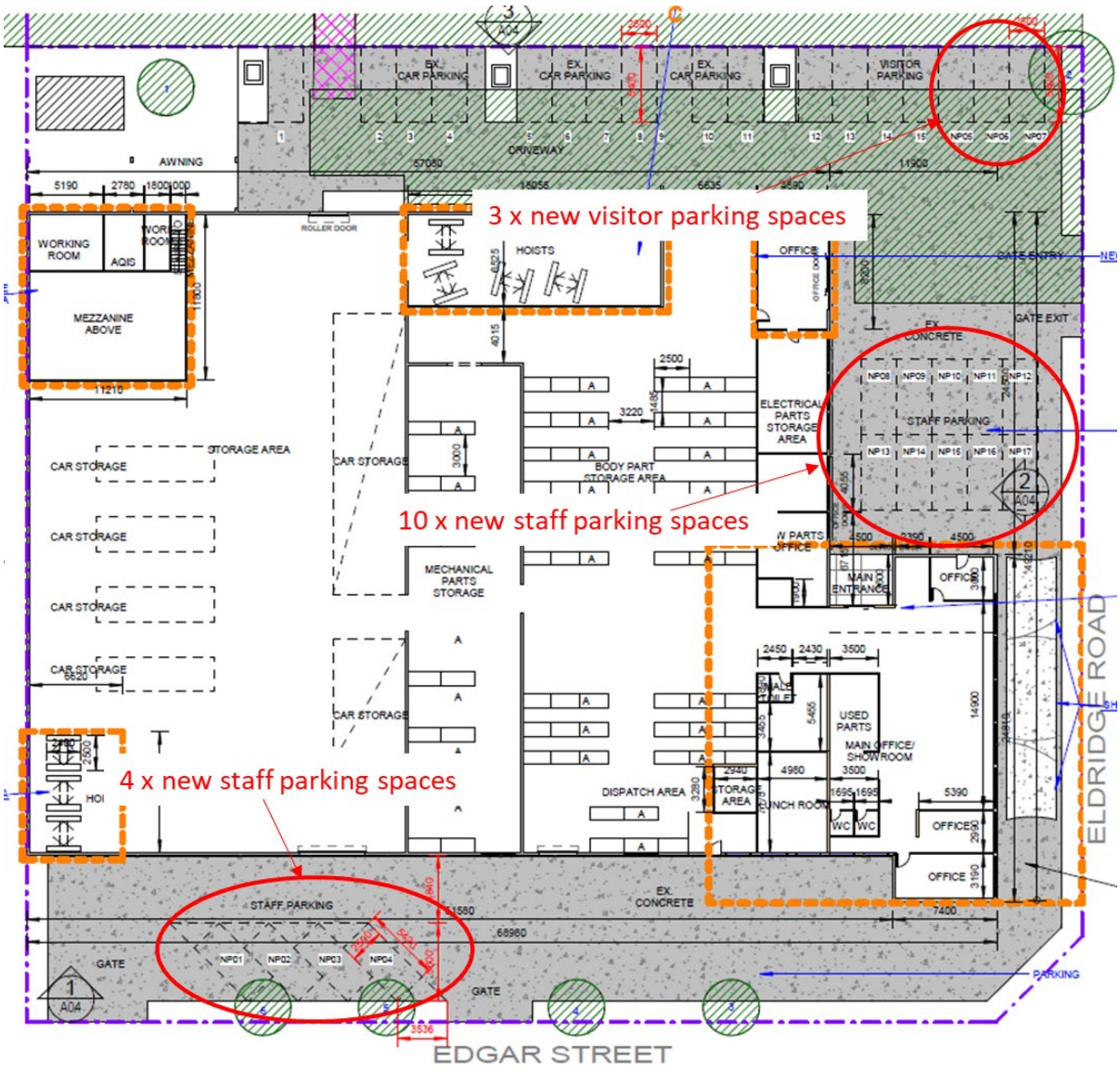
TTPP's Responses

(1) Largest Vehicle Type to be Used

The redevelopment of the subject site will introduce 17 new car parking spaces within the 150-160 Eldridge Road site, to be located along the eastern and northern site boundaries. These car spaces will be used for staff parking (14 car spaces) and visitor parking (3 car spaces), with the tandem car spaces to be allocated for staff parking only. The new car parking spaces are shown in Figure 1. The largest vehicle type to be accommodated on the new parking spaces would be typical passenger vehicles. No heavy vehicles will park at the new car parking spaces.

The largest vehicle expected to be stored at the car storage facility will be a B99 vehicle. It is expected that a 4-tonne forklift (2.5m long and 1.3m wide) will be used to transport vehicles in the car storage facility.

Figure 1: Proposed Site Layout – 150 Eldridge Road



(2) Car Park Layout and Swept Path Analysis

All staff parking spaces have been designed in accordance with Class 1A of 2890.1:2004. Ten (10) 90-degree staff car spaces are provided with a minimum width of 2.5m and length of 5.4m, with an aisle width greater than 5.8m. Four (4) 45-degree staff car spaces are provided with a minimum width of 2.5m and length of 5.4m, with an aisle width of 4.8m. The proposed 45-degree parking spaces allow vehicle to enter in a forward direction and the aisle servicing those spaces is designed to be one-way aisle.

All 90-degree visitor parking spaces have been designed in accordance with Class 2 of AS2890.1:2004. These car spaces will be provided with a minimum width of 2.5m and length of 5.4m, with an aisle width greater than 5.8m.

The proposed car park layout and design of the new car parking spaces allow vehicles to enter and exit the site in a forward direction.

According to AS2890.1:2004, the minimum aisle width and parking space width are determined based on the manoeuvre of B85 vehicle. Therefore, swept path analysis has been undertaken demonstrating a typical B85 passenger vehicle entering and exiting the new car parking spaces whilst adjacent spaces are all occupied. The swept paths are provided in Attachment Two.

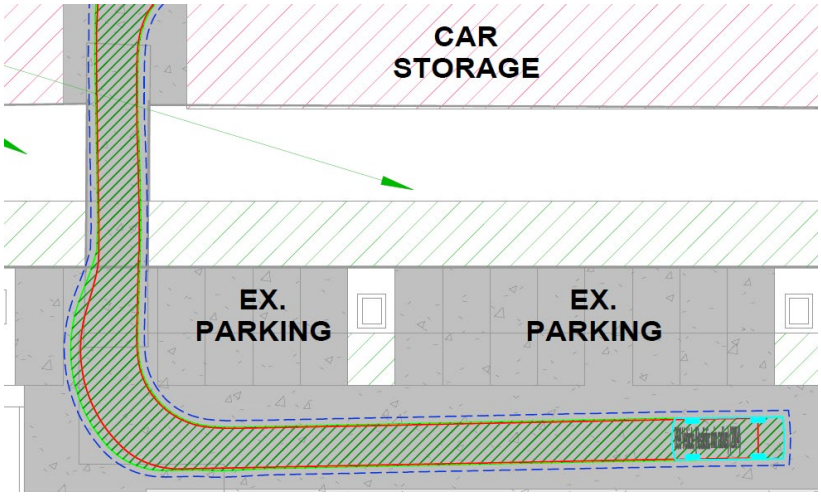
New Bridge Ramp Access

The largest vehicle expected to be stored at the car storage facility at 158 Eldridge Road is a B99 vehicle. It is noted that no visitor or staff vehicles will be allowed to pass the bridge ramp as all visitor and staff parking will be restricted to the 150 Eldridge Road site.

The proposed bridge ramp has a roadway width of approximately 3m wide, which complies with AS2890.1 for a one-way roadway. However, AS2890.1 requires a further 300mm clearance to be provided to the boundary where an obstruction such as a wall or kerb is higher than 150mm. The 300mm clearance is not shown on the architectural plans.

However, it should be noted that the bridge ramp is only to provide access between 150 Eldridge Road and 158 Eldridge Road to allow cars to be transported to the car storage facility at 158 Eldridge Road. Staff and visitor vehicles will not be allowed to travel through the bridge. Nonetheless, it is expected that the transportation of vehicles across the bridge will be minimal, with approximately two vehicles a day.

Notwithstanding this, a swept path analysis has been undertaken showing that a B99 vehicle is able to travel through the bridge ramp with 300mm clearance on either side of the vehicle body to be accommodated within the boundaries of the bridge, as shown below. Therefore, the proposed bridge roadway width is considered acceptable and would satisfy its proposed use.



It is expected that a 4-tonne forklift will be used to transport vehicles within the car storage facility. Swept path analysis has been undertaken demonstrating a forklift traveling through the bridge ramp.

The swept paths are provided in Attachment Two. Both the forklifts and B99 vehicles can enter and exit the 158 Eldridge Road site in a forward direction.

Summary and Conclusion

The proposed redevelopment of the subject site includes the renovation of the existing warehouse and internal works including 17 new car spaces at 150 Eldridge Road site, as well as repurposing the 158 Eldridge Road site into a car storage facility.

The proposed new car parking spaces at 150 Eldridge Road site have been designed in accordance with AS2890.1:2004 with swept path analysis provided for each space, showing vehicles would be able to enter and exit each car space.

The largest vehicle type that will be stored at the car storage facility is a B99 vehicle. The two sites will be connected via a new 3m-wide bridge ramp, which can accommodate transportation of vehicles up to B99 vehicles in and out of the car storage facility.

We trust the above is to your satisfaction. Should you have any queries regarding the above or require further information, please do not hesitate to contact the undersigned on 8437 7800.

Yours sincerely,

Ken Hollyoak
Director

Encl. Attachment One – Architectural Plans
Attachment Two – Swept Path Analysis

Attachment One

Architectural Plans

CAR STORAGE

CAR STORAGE

CAR STORAGE

EXISTING FENCE TO REMAIN

EXISTING CONCRETE

PROPOSED CHANGE OF USE INTO CAR STORAGE FACILITY (NO 158)

EXISTING CONCRETE

CAR STORAGE

NEW BRIDGE RAMP ACCESS INTO NO 158 ELDRIDGE ROAD

EXISTING FENCE TO REMAIN

3
A04

1

EX. CAR PARKING

EX. CAR PARKING

EX. CAR PARKING

EX. CAR PARKING

2

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17

DRIVEWAY

AWNING

57080

5190 2780 1800 1000

18055 6635 4890

ROLLER DOOR

EMERGENCY EXIT DOOR

ROLLER DOOR

B

C

WORKING ROOM

AQIS

WORK ROOM

STAIRS TO MEZZANINE

HOISTS

6525

OFFICE

OFFICE DOOR

GATE ENTRY

MEZZANINE ABOVE

1 PROPOSED FLOOR PLAN - 158 ELDRIDGE ROAD

1 : 200

REV	DATE	DESCRIPTION	BY
A	15.12.2022	ISSUED FOR DA	DK

NEMCO DESIGN PTY LTD

STRUCTURAL ENGINEERING & ARCHITECTURAL DESIGN

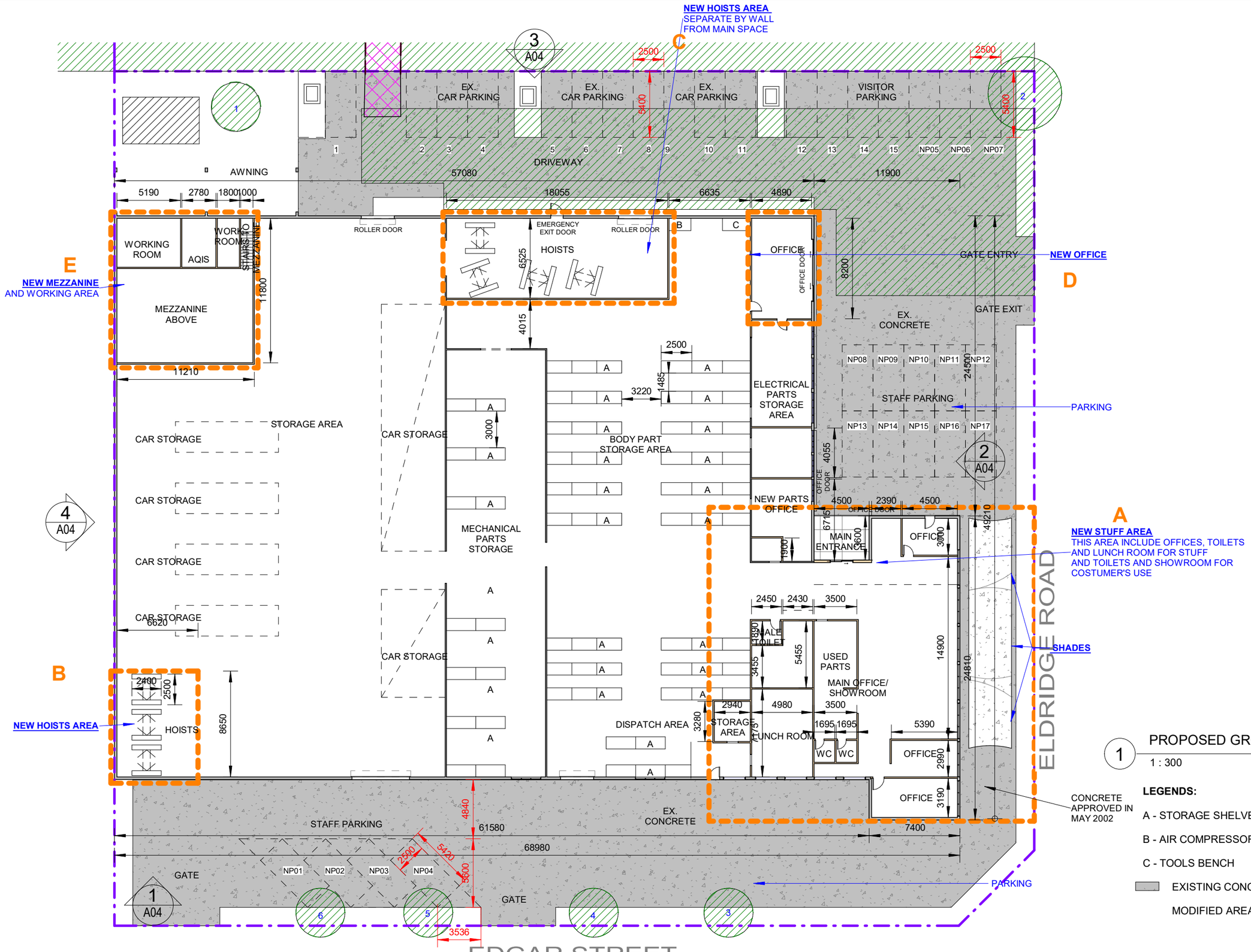
ADDRESS:
SUITE 4, LEVEL 1,
402-410 CHAPEL RD, BANKSTOWN, NSW 2200
P: 9709 5556 M: 0422 606 228
E: abraham@nemcodesign.com.au

PROPOSED ALTERATIONS & ADDITIONS TO EXISTING FACTORY FOR MECHANICAL WORKSHOP, CHANGE OF USE INTO CAR STORAGE
150 - 158 ELDRIDGE ROAD, CONDELL PARK
LOT 31 & 33, DP 564483

PROPOSED FLOOR PLAN - 158 ELDRIDGE ROAD

JOB NUMBER:	DWG NUMBER:	ISSUE:	ORIGINAL SIZE:
22574	A03.05	IT	A3
DESIGNED BY: A.N.	DATE: 07.12.2022		
DRAWN BY: A.N.	SCALE: AS SHOWN		

15/12/2022 1:25:28 PM



1 PROPOSED GROUND FLOOR PLAN

1 : 300

LEGENDS:

A - STORAGE SHELVES

B - AIR COMPRESSOR

C - TOOLS BENCH

EXISTING CONCRETE

MODIFIED AREAS

REV	DATE	DESCRIPTION	BY
A	15.12.2022	ISSUED FOR DA	DK

NEMCO DESIGN PTY LTD
STRUCTURAL ENGINEERING & ARCHITECTURAL DESIGN

ADDRESS:
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150 - 158 ELDRIDGE ROAD, CONDELL PARK
LOT 31 & 33, DP 564483

PROPOSED FLOOR PLAN DIAGRAM

JOB NUMBER:	DWG NUMBER:	ORIGINAL SIZE:
22574	A03.01	A3
DESIGNED BY: A.N.	DATE: 07.12.2022	
DRAWN BY: A.N.	SCALE: AS SHOWN	

6/12/2023 9:51:12 AM

Attachment Two

Swept Path Analysis

VEHICLE ENTERING

VEHICLE EXITING

CAR STORAGE

CAR STORAGE

PROPOSED CHANGE OF USE INTO CAR STORAGE FACILITY (NO 158)

CAR STORAGE

EX. PARKING

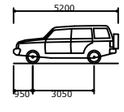
EX. PARKING

EX. PARKING

EX. PARKING

KEY:

	Forward	Reverse
Wheel path		
Body envelope		
300mm clearance		



B99 Vehicle (Realistic min radius) (2004)

Overall Length	5200mm
Overall Width	1940mm
Overall Body Height	1878mm
Min Body Ground Clearance	272mm
Track Width	1840mm
Lock-to-lock time	4.00s
Curb to Curb Turning Radius	6250mm

REV.	DESCRIPTION	DRAWN	CHECK	APP'D	DATE
A	ISSUE FOR DISCUSSION	SC	PC	KH	24/11/23
B	ISSUE FOR DISCUSSION	SC	PC	KH	05/12/23
C	ISSUE FOR DISCUSSION	SC	PC	KH	06/12/23

ttpp transport planning

PROJECT

150 & 158 ELDRIDGE ROAD, CONDELL PARK

TITLE

SWEPT PATH ANALYSIS - BRIDGE RAMP
AS2890.1 5.2m B99 VEHICLE

DWG No. 23399CAD003 FIGURE 1

DATE STAMP 06 DECEMBER 2023

PROJECT No.	SCALE	REV.
23399	1:250 @A3	C

Date: 6 December 2023

Filename: 23399CAD003-231206-SWEPT PATH AND CAR PARK REVIEW.dwg

VEHICLE ENTERING

VEHICLE EXITING

CAR STORAGE

CAR STORAGE

PROPOSED CHANGE OF USE INTO CAR STORAGE FACILITY (NO 158)

CAR STORAGE

EX. PARKING

EX. PARKING

EX. PARKING

EX. PARKING

KEY:

	Forward	Reverse
Wheel path		
Body envelope		
300mm clearance		

Fork Lift Truck 4T	
Overall Length	2.500m
Overall Width	1.300m
Overall Body Height	1.935m
Min Body Ground Clearance	0.170m
Track Width	1.100m
Lock-to-lock time	4.00s
Curb to Curb Turning Radius	2.500m

REV.	DESCRIPTION	DRAWN	CHECK	APP'D	DATE
A	ISSUE FOR DISCUSSION	SC	PC	KH	24/11/23
B	ISSUE FOR DISCUSSION	SC	PC	KH	05/12/23
C	ISSUE FOR DISCUSSION	SC	PC	KH	06/12/23

ttpp transport planning

PROJECT

150 & 158 ELDRIDGE ROAD, CONDELL PARK

TITLE

SWEPT PATH ANALYSIS - BRIDGE RAMP
2.5m CUSTOM FORKLIFT

DWG No. 23399CAD003 FIGURE 2

DATE STAMP 06 DECEMBER 2023

PROJECT No. 23399

SCALE 1:250 @A3

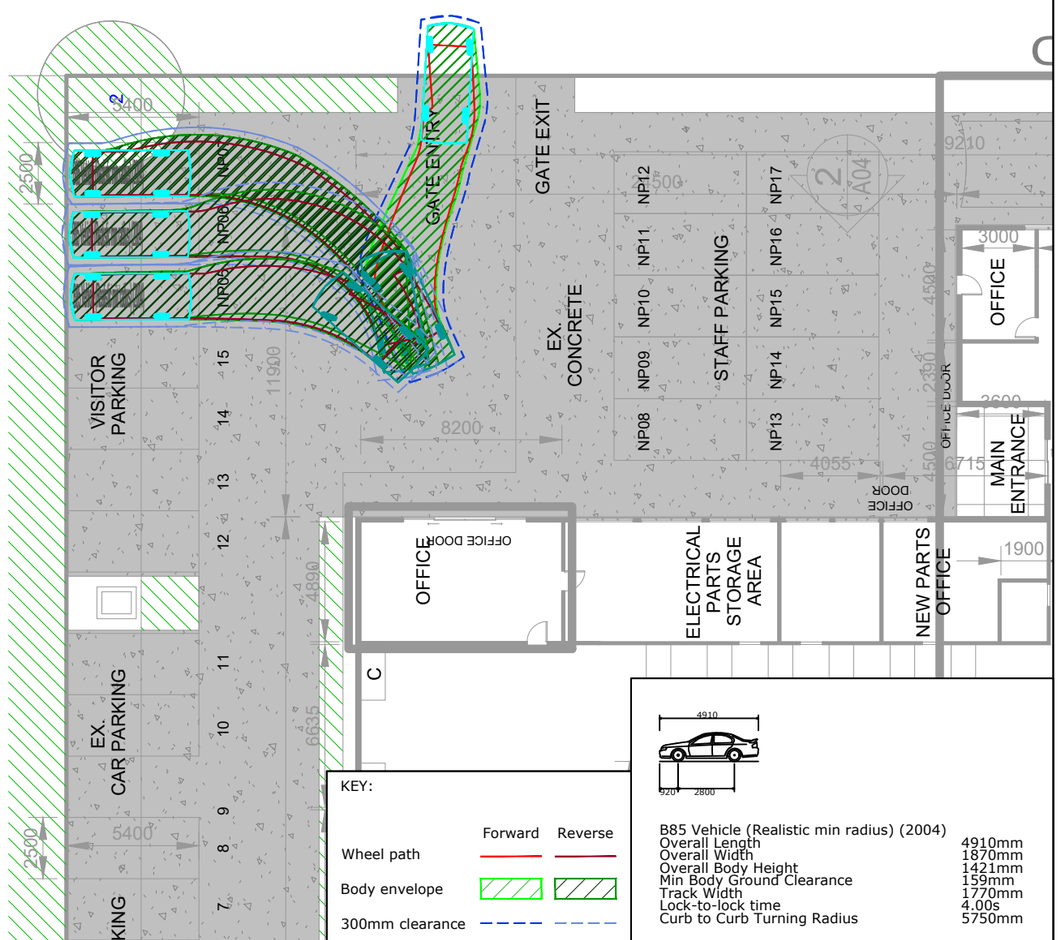
REV. C

Date: 6 December 2023

Filename: 23399CAD003-231206-SWEPT PATH AND CAR PARK REVIEW.dwg

VEHICLE ENTERING

VEHICLE EXITING



KEY:

	Forward	Reverse
Wheel path		
Body envelope		
300mm clearance		

B85 Vehicle (Realistic min radius) (2004)

Overall Length	4910mm
Overall Width	1870mm
Overall Body Height	1421mm
Min Body Ground Clearance	159mm
Track Width	1770mm
Lock-to-lock time	4.00s
Curb to Curb Turning Radius	5750mm

REV.	DESCRIPTION	DRAWN	CHECK	APP'D	DATE
A	ISSUE FOR DISCUSSION	SC	PC	KH	24/11/23
B	ISSUE FOR DISCUSSION	SC	PC	KH	05/12/23
C	ISSUE FOR DISCUSSION	SC	PC	KH	06/12/23

ttpp transport planning

PROJECT: 150 & 158 ELDRIDGE ROAD, CONDELL PARK

TITLE: SWEPT PATH ANALYSIS - CAR PARKING SPACES
AS2890.1 4.91m B85 VEHICLE

DWG No. 23399CAD003
FIGURE 3

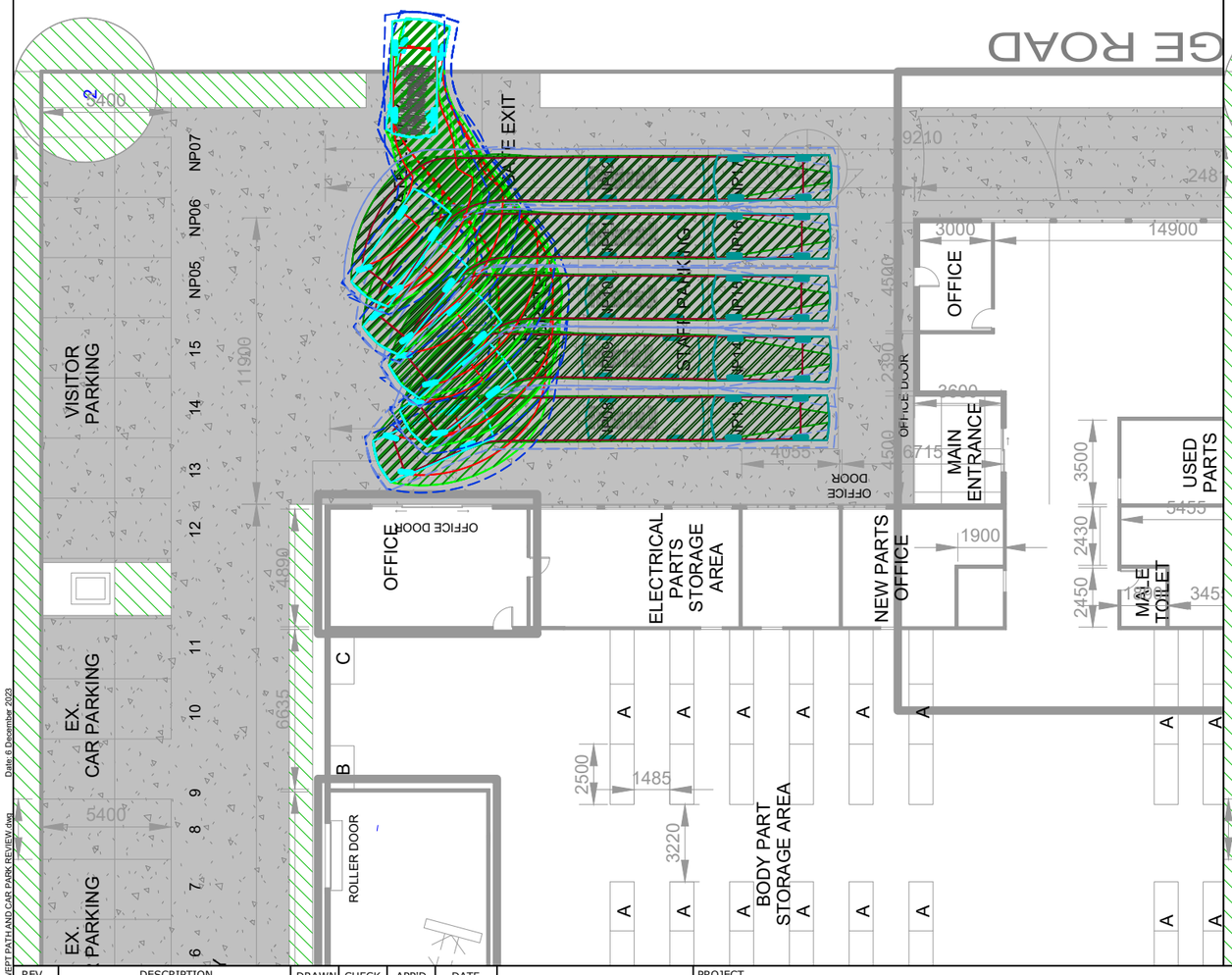
DATE STAMP: 06 DECEMBER 2023

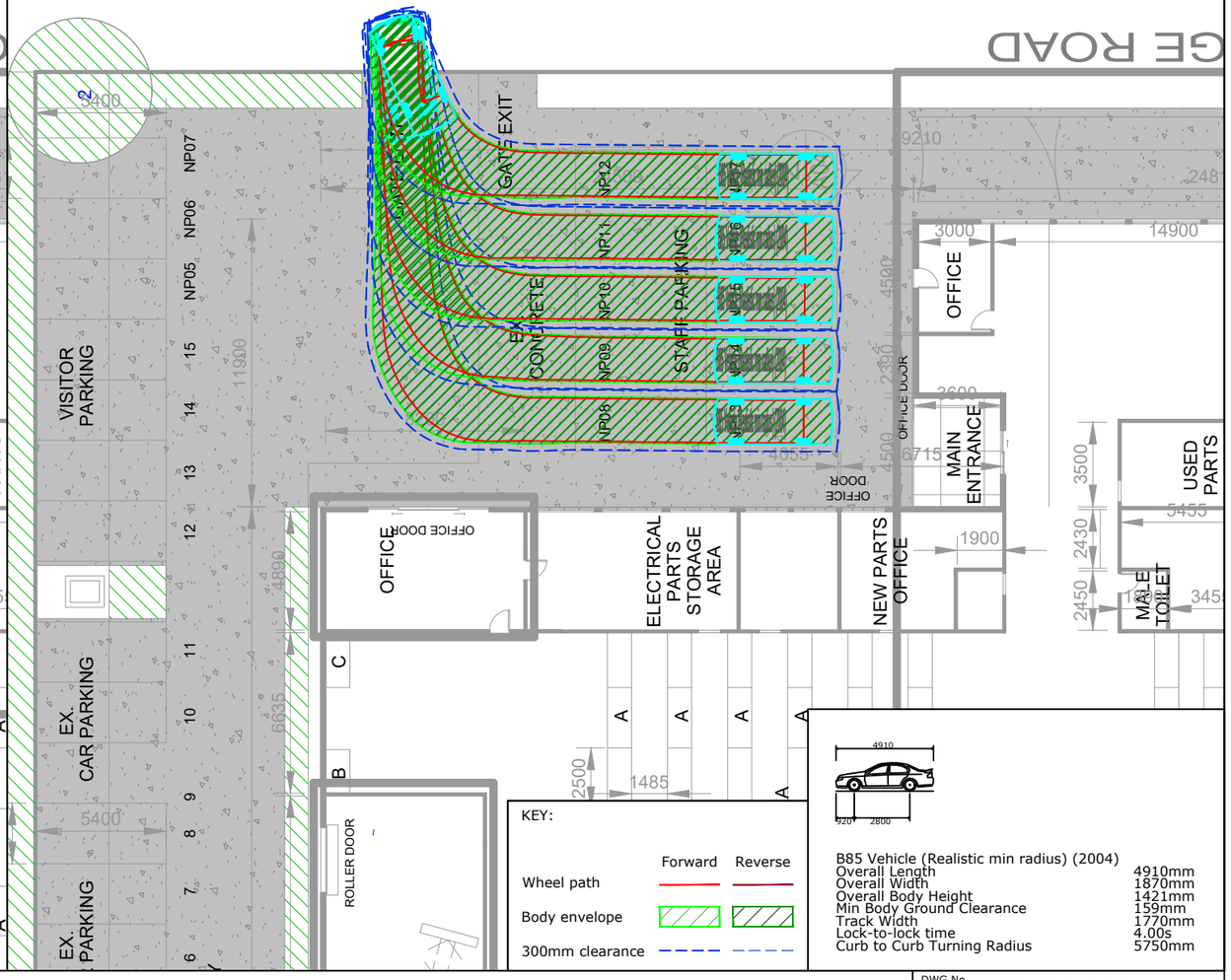
PROJECT No.	SCALE	REV.
23399	1:250 @A3	C

Filename: 23399CAD003-231206-SWEPT PATH AND CAR PARK REVIEW.dwg Date: 6 December 2023

VEHICLE ENTERING

VEHICLE EXITING





KEY:

	Forward	Reverse
Wheel path		
Body envelope		
300mm clearance		

B85 Vehicle (Realistic min radius) (2004)

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Track Width	1770mm
Lock-to-lock time	4.00s
Curb to Curb Turning Radius	5750mm

REV.	DESCRIPTION	DRAWN	CHECK	APP'D	DATE
A	ISSUE FOR DISCUSSION	SC	PC	KH	24/11/23
B	ISSUE FOR DISCUSSION	SC	PC	KH	05/12/23
C	ISSUE FOR DISCUSSION	SC	PC	KH	06/12/23

ttpp transport planning

PROJECT

150 & 158 ELDRIDGE ROAD, CONDELL PARK

TITLE

SWEPT PATH ANALYSIS - CAR PARKING SPACES
AS2890.1 4.91m B85 VEHICLE

DWG No. 23399CAD003
FIGURE 4

DATE STAMP 06 DECEMBER 2023

PROJECT No.	SCALE	REV.
23399	1:250 @A3	C

Date: 6 December 2023

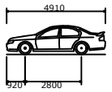
Filename: 23399CAD003-231206-SWEPT PATH AND CAR PARK REVIEW.dwg

VEHICLE ENTERING

VEHICLE EXITING

KEY:

	Forward	Reverse
Wheel path		
Body envelope		
300mm clearance		



B85 Vehicle (Realistic min radius) (2004)

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Overall Body Height	1421mm
Min Body Ground Clearance	159mm
Track Width	1770mm
Lock-to-lock time	4.00s
Curb to Curb Turning Radius	5750mm

REV.	DESCRIPTION	DRAWN	CHECK	APP'D	DATE
A	ISSUE FOR DISCUSSION	SC	PC	KH	24/11/23
B	ISSUE FOR DISCUSSION	SC	PC	KH	05/12/23
C	ISSUE FOR DISCUSSION	SC	PC	KH	06/12/23

ttpp transport planning

PROJECT

150 & 158 ELDRIDGE ROAD, CONDELL PARK

TITLE

SWEPT PATH ANALYSIS - CAR PARKING SPACES
AS2890.1 4.91m B85 VEHICLE

DWG No. 23399CAD003
FIGURE 5

DATE STAMP 06 DECEMBER 2023

PROJECT No.	SCALE	REV.
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Filename: 23399CAD003-231208-SWEPT PATH AND CAR PARK REVIEW.dwg Date: 6 December 2023