Proposed Residential Units

28 Fisher Rd,
Dee Why

Traffic Impact Assessment

Prepared by

Northern Transport Planning and Engineering Pty Ltd

A.B.N. 79 056 088 629

203206

May 2022

TABLE OF CONTENTS

Contents

QUALITY ASSURANCE

This document has been prepared, checked and released in accordance with the Quality Control Standards established by NTPE Pty Ltd.

This document has been authorised by
Ron Brown BE, MEngSc

13th May 2022

1 INTRODUCTION

This report deals with an assessment of the Traffic Impact of a re-development of an existing Church and Community Hall at 28 Fisher St Dee Why.

The development will consist of the following components:

Site Area	13912m2
Area of Building	4910.81m2
Church and Conference Hall	240.3 m2
Café	27 m2
Boarding House Units	51 + 1 Manager (52 Total)
Car Parking	33 spaces including 12 disabled carparks

The intention for the residential portions of this development is to provide boarding house accommodation that may in part be managed by a Social Housing Provider. The residents may include NDIA capable residents as well as a range of sub-acute mental persons and crisis care accommodation for boarding house facilities, but otherwise we are simply requesting approval under standard boarding house provisions.

2 SURROUNDING ENVIRONMENT AND LAND USE

The site is located in the developed Commercial Centre of Dee Why with access to both Fisher Road and Francis Street.

The building fronting Fisher Road is currently being used by the New Life Chinese Christian Church. The Hall is also used by other community groups such as the Point break Drama and Acting School.

Commercial and Retail facilities are located either side of the site along Fisher St.

3 SITE LAYOUT

The Level 1 Floor layout with access off Francis St for the proposed development is detailed in Figure 3-1 below:

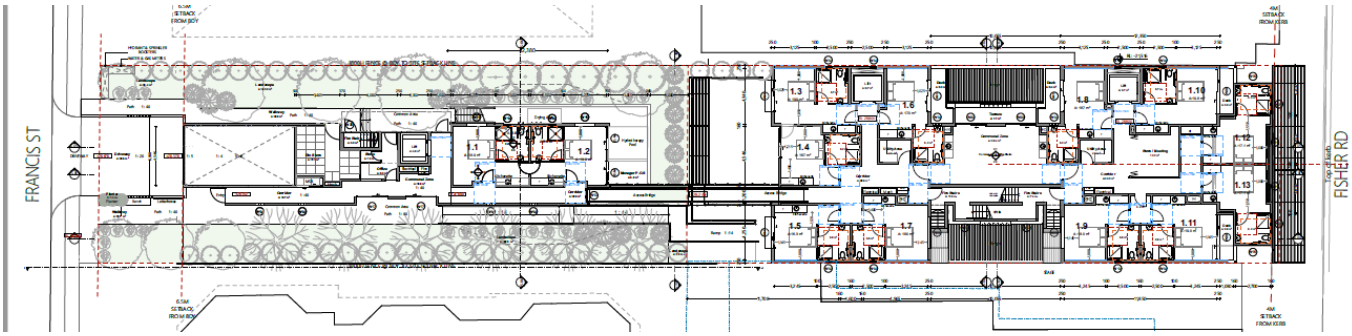

Figure 3-1: Level 1 Floor Plan – Access off Francis St (see DA Drawings for final details)

The Ground Floor layout with access off Fisher Rd for the proposed development is detailed in Figure 3-2 below:

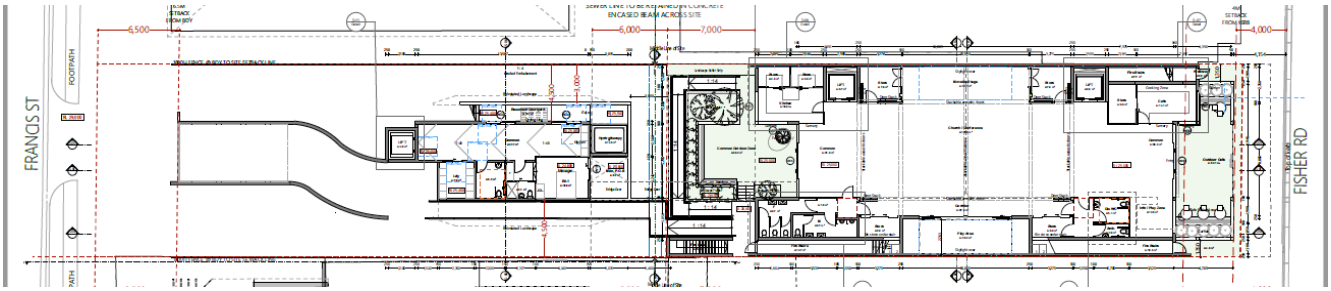

Figure 3-2: Ground Floor Plan – Access off Fisher Road (see DA Drawings for final details)

4 ACCESS AND PARKING LAYOUT

Vehicles will be able to access the site via a driveway off Francis St. This driveway is proposed to provide 1:20 slope within 6m of property line, a curved ramp with a slope of 1:4 will then provide access to ramps leading to Level B1 and Level B2 car park areas as shown in Figures 4-1 and 4-2 below:

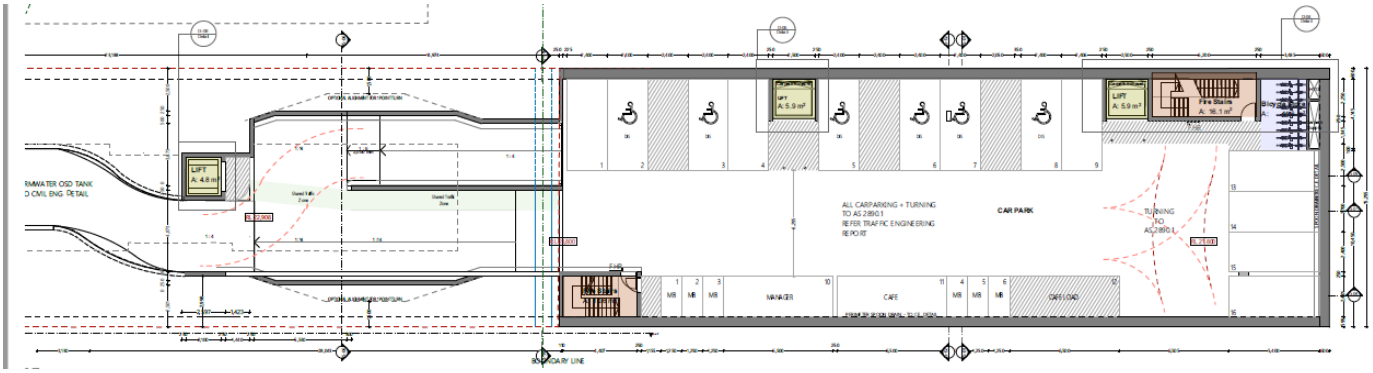

Figure 4-1: Upper Basement Car Park Level B1 (see DA Docs for final plans)

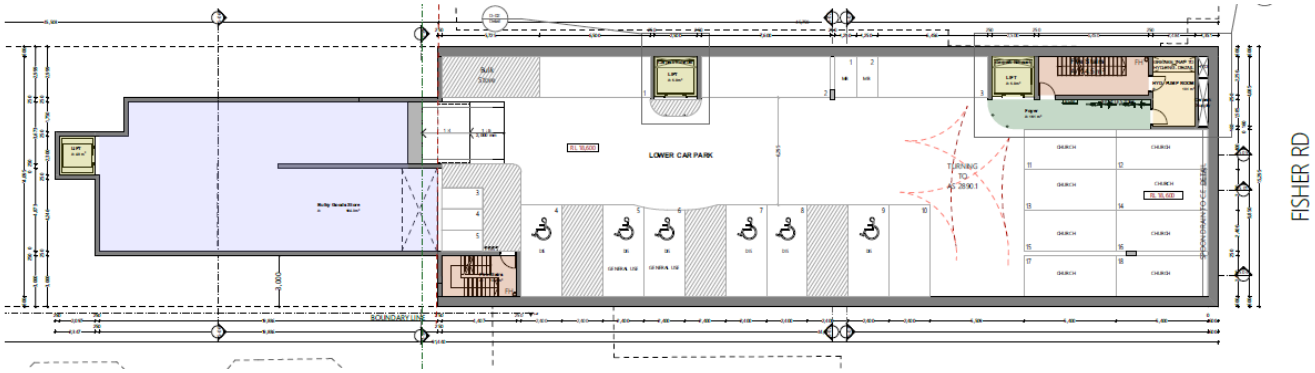

Figure 4-2: Lower Basement Car Park Level B2 (Note: Bay 10 has been removed)

Discussion

The parking spaces to be provided are detailed below in Table 4-1:

Table 4-1: Parking Spaces to be Provided

Level	Cars		Motorcycles	Bicycles
	Individual	Stacked		
B2	13	4	5	2
B1	16	0	6	9
Total	29	4	11	11

The Category 1 Driveway will be 6.1m wide incorporating combined in/out movements in accordance with Table 3.2 AS NZS 2890.1:2004.

The parking bays comply with User Class 1A (per Table 1.1 AS NZS 2890.1: 2004). The layout will provide minimum aisle widths of 5.5m and parking bays that are 2.5m wide and 5.4m long (per Figure 2.2 AS NZS 2890.1:2004).

A total of 11 motorcycles and 11 bicycle parking spaces will also be provided as shown in Figures 4-1 and Figure 4-2 above.

5 PARKING REQUIREMENT

a. Boarding House Units

The Boarding House Units are being developed under the State Environmental Planning Policy – (Housing 2021). The parking requirements for a development with a Social Housing Provider is set at 0.2 spaces per boarding room in an accessible location such as Dee Why plus at least one parking space for each person employed in connection with the Boarding House Units who is also a resident.

Based on these requirements to 51 Boarding House Units plus 1 for Manager will require:

51 Units 0.2 spaces per Unit 10.2 parking spaces plus 1 for live-in manager

Therefore, the parking requirement for the Boarding House Units will be **11.2 (say 12) parking spaces**.

b. Café

Northern Beaches Council's DCP sets out the following Parking Requirements:

Retail/Commercial Shops Dee Why Town Centre 4.2 spaces per 100 m2

Accordingly, the 27 m2 Café would require 1.13. It is considered that due to the proximity of the proposed Café to existing commercial activity the majority of patrons will arrive on foot from the nearby residential developments and adjacent Commercial / Retail developments. Therefore, it is expected that the Café will only require 2 **space** to accommodate the Manager/Operator of the Café plus a general / loading bay.

c. Church / Conference Centre

Observations pre-covid-19 of off-street parking activity in the existing parking area at the rear of the site are presented in Appendix A of this report.

These observations indicate that the car park at the rear is being used largely by nearby businesses. This arrangement will be terminated during construction and following completion of the development.

The observations suggest that the Church generates between 10 and 15 off-street parking spaces during activities held in the Church/Conference Hall area.

It is expected that the proposed Multi Purpose Conference Centre will also generate a need for **15 parking spaces**.

Accordingly, it is considered that the overall parking requirement for the site will be 29 **parking spaces.**

6 PARKING ALLOCATION

The 33 parking spaces to be provided on site will be allocated as detailed below in Table 6-1:

Table 6-1: Parking Allocation

	Individual	Accessible	Stacked
Boarding House	8	6	
Church	7	6	4
Cafe	2		
Total	17	12	4

As noted above it is proposed that a total of 33 parking spaces will be provided on the site which will meet Council's parking requirements for the site with a surplus of 4 parking spaces plus a cafe loading area.

7 GARBAGE COLLECTION

A Bin Store area will be established on the Ground Floor level as shown in Figure 7-1 below:

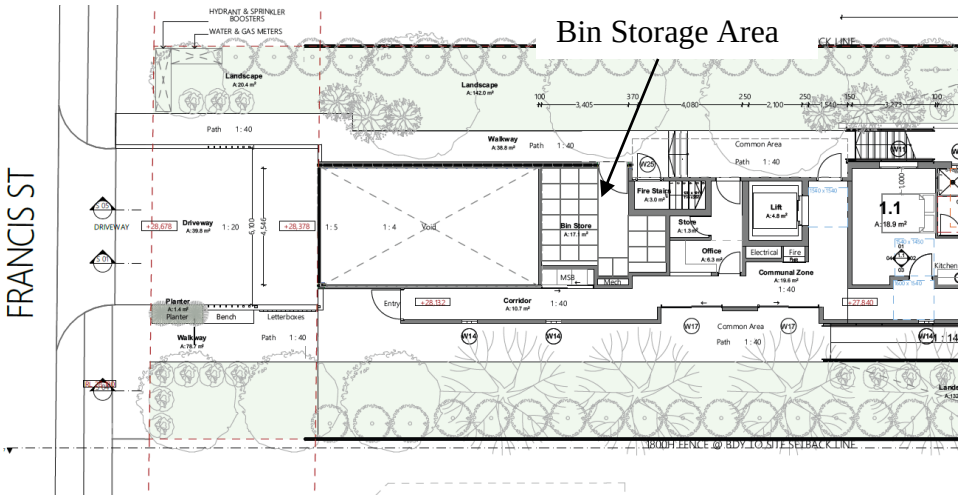

Figure 7-1: Bin Storage Area on Level 1 (see DA Docs for final plans)

A loading zone will be established on Francis St as shown in Figure 7-1 above. A private contractor will be engaged to wheel each bin out to a truck that will be able to park in the loading zone on Francis Street.

8 SIGHT DISTANCE

The sight distance available from the proposed driveway is 48m as illustrated in Figure 8-1 below:

Figure 8-1: Sight Distance Available from Proposed Access Driveway

The view of the driver leaving the driveway confirming that this is site distance as illustrated in Figure 8-2 below:

Figure 8-2: Drivers View to the north from Existing Driveway

The speed limit on Francis Street is 50kph. The sight distance requirement set out in Austroads Guide to Road Design Part 4A: Unsignalised and Signalised Intersections, is 48m for a Road Design Speed of 50kph and Reaction Time 1.5sec.

It is also noted that the 85th percentile speed of Southbound traffic on Francis Street 30m north of the proposed driveway is 40.32kph based on an Automatic Vehicle Count carried out by NTPE in October 2020.

Based on the 85th percentile speed the site distance requirement would be 34m. A full report on the Automatic vehicle survey is attached as Appendix B.

9 EXISTING TRAFFIC

NTPE carried out a survey of traffic flows at the access of the existing driveway off Francis St on the 20th October 2020. The results of this survey are presented in Figure 9-1 below:

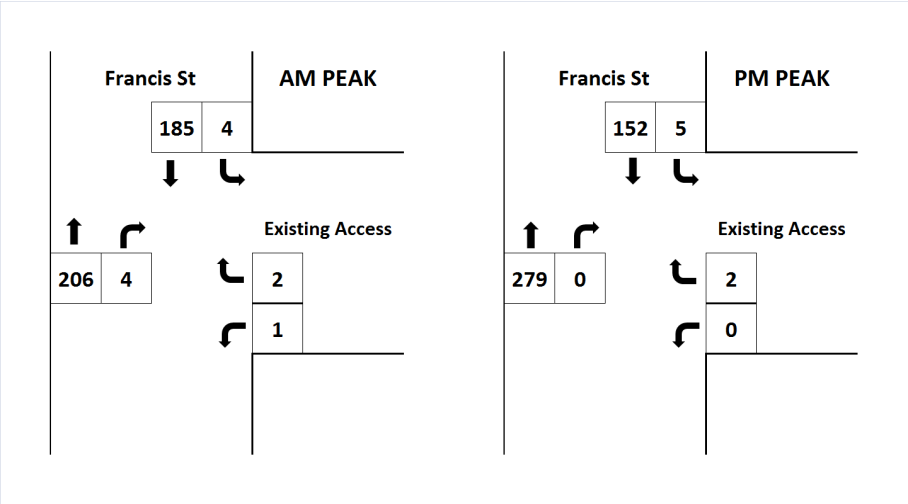

Figure 9-1: Existing Traffic Flows at Site Access off Francis St – 20th October 2020

10 PREDICTED TRAFFIC GENERATION

The proposed development is located adjacent to a major commercial area with easy access by foot to services and shops. Accordingly, it is expected that traffic generation from the proposed development will be low.

Transport for NSW Guidelines provide the following trip rates for High Density Residential development in the greater Sydney Area:

AM Peak Hour	0.19 trips per hour per unit
PM Peak Hour	0.15 trips per hour per unit

Accordingly, the number of trips generated by the Boarding House Units is expected to be 10 AM Peak Hour Trips and 8 PM Peak Hour Trips.

The Church component is expected to generate trips outside the normal peak hours. However, the office component of the Church can be treated as a Commercial Business with a Peak Hour trip generation rate of 2 trips per 100 m2. Accordingly, it is predicted the Church would generate up to 4.72 Peak Hour Trips.

The trip rate for the Café is estimated to be 12.3 trips per 100m2. Accordingly, it is predicted that the Café will generate up to 3.2 Peak Hour Trips. However, as noted earlier it is expected that a significant number of these trips will be walking trips.

Therefore, the total trip generation from the site is estimated to be 21.2 or 22 trips. However, given the proximity of the development to surrounding commercial/retail businesses it is expected that up to 25% of these trips will be walking trips leaving a trip generation of 16 trips which is only 5 more than the existing site development.

The predicted distribution of these trips is detailed in Figure 10-1 below:

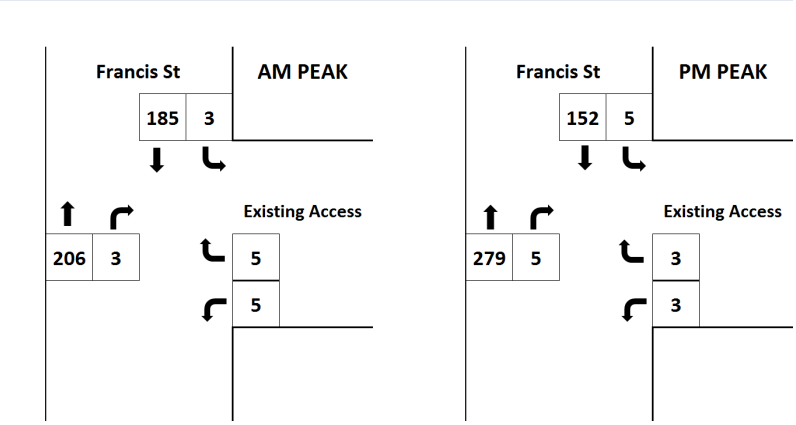

Figure 10-1: Predicted Peak Hour Vehicle movements

Discussion

As shown in Figure 10-1 the predicted traffic flows with the proposed development will only be marginally greater than the AM Peak Hour Trip Generation for the existing site activities.

11 TURNING PATHS LEVEL B1

Critical vehicle turning paths for the parking bays provided on Level B1 are presented in Figures 11-1 to 11-4 below:

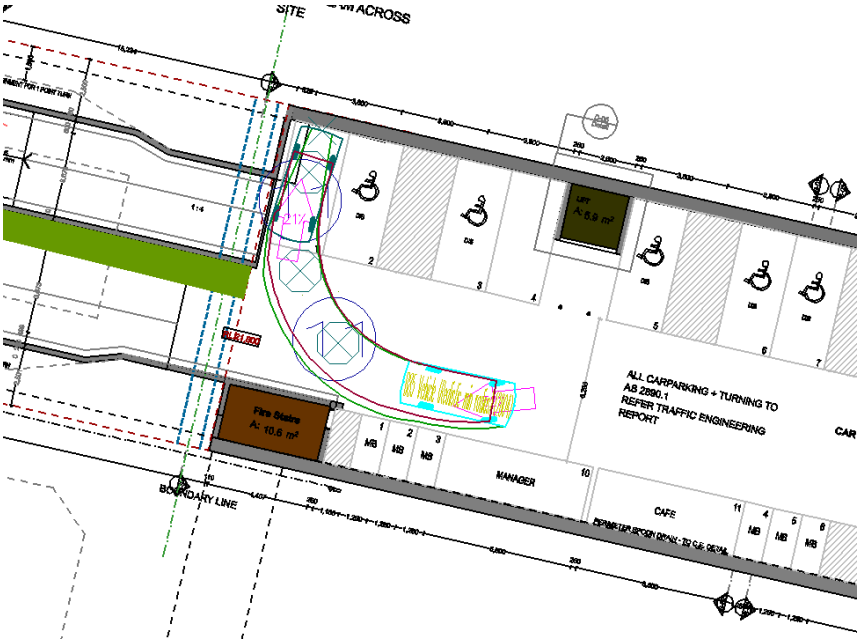

Figure 11-1: Reverse Into Parking Bay 1 Level B1

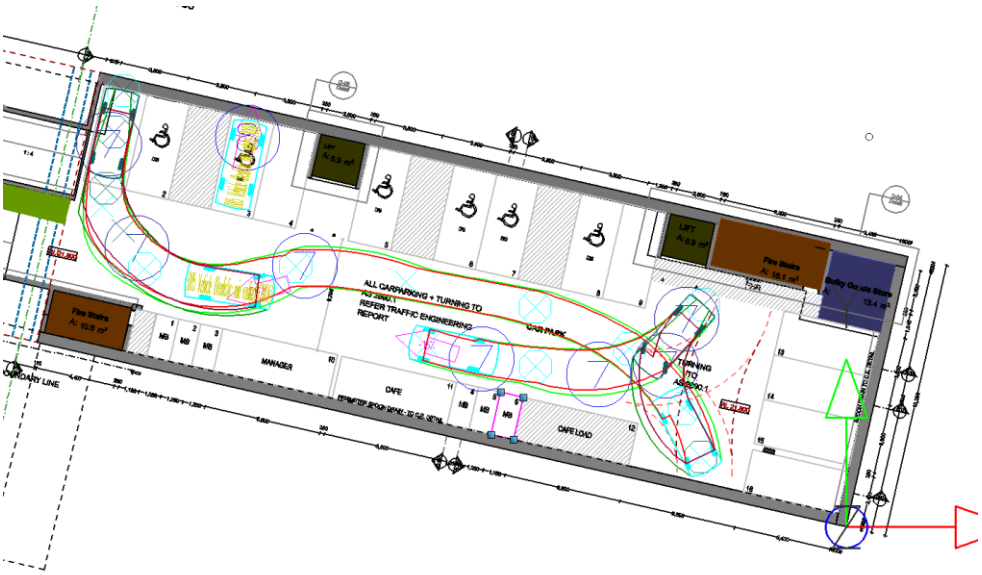

Figure 11-2: Forward Out Parking Bay 1 Level B1 then using Turning Bay to Exit

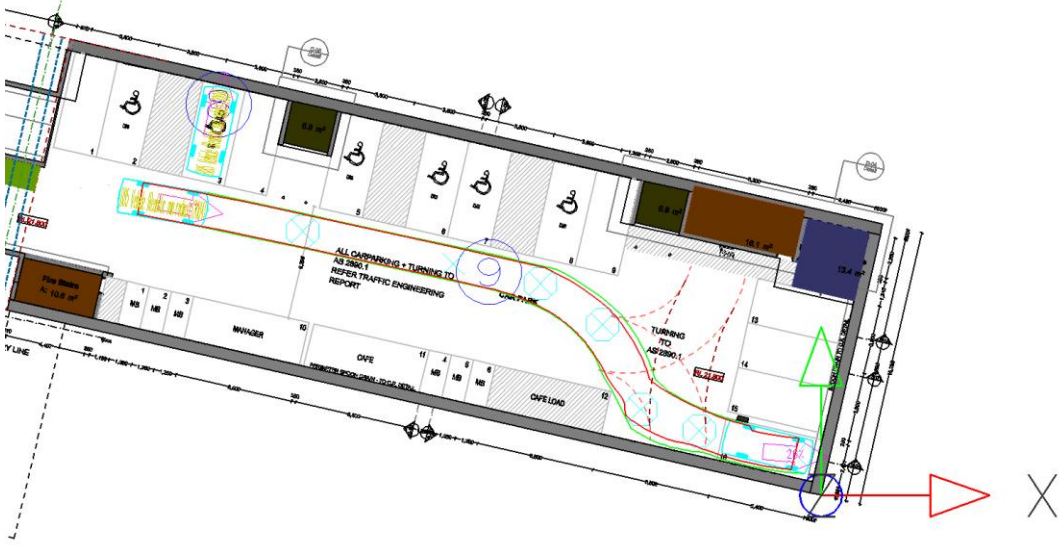

Figure 11-3: Forward Into Parking Bay 16 Level B1

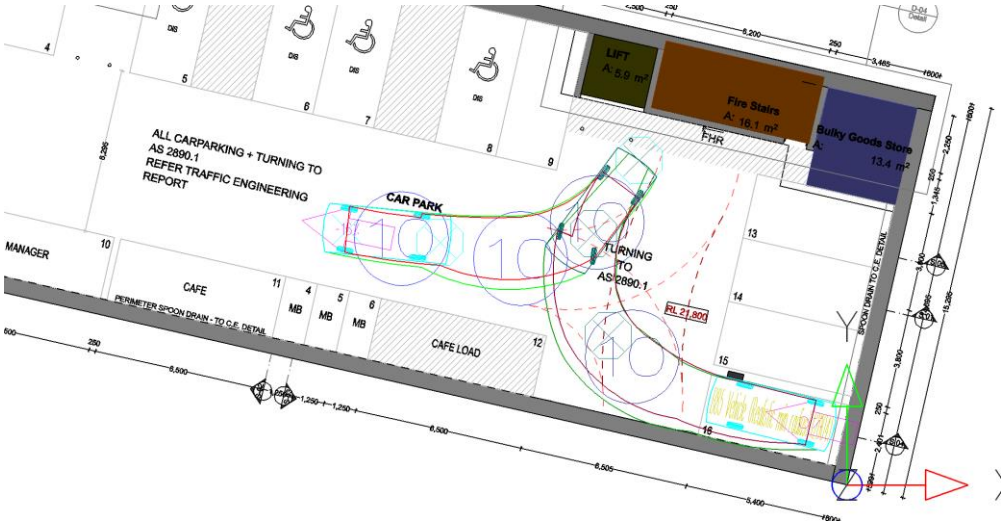

Figure 11-4: Reverse Out of Parking Bay 16 Level B1

Discussion:

It can be seen from this turning path assessment all the critical Parking Bays can be accessed.

12 TURNING PATHS LEVEL B2

Critical vehicle turning paths for the parking bays provided on Level B2 are presented in Figures 12-1 to 12-11 below:

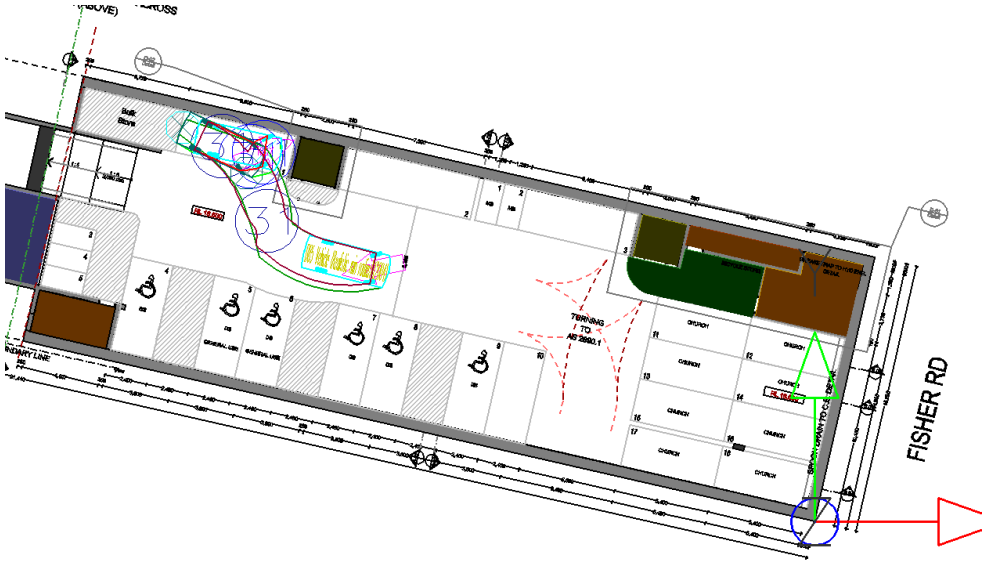

Figure 12-1: Reverse Into Parking Bay 1 Level B2 (Note: Bay 10 has been removed)

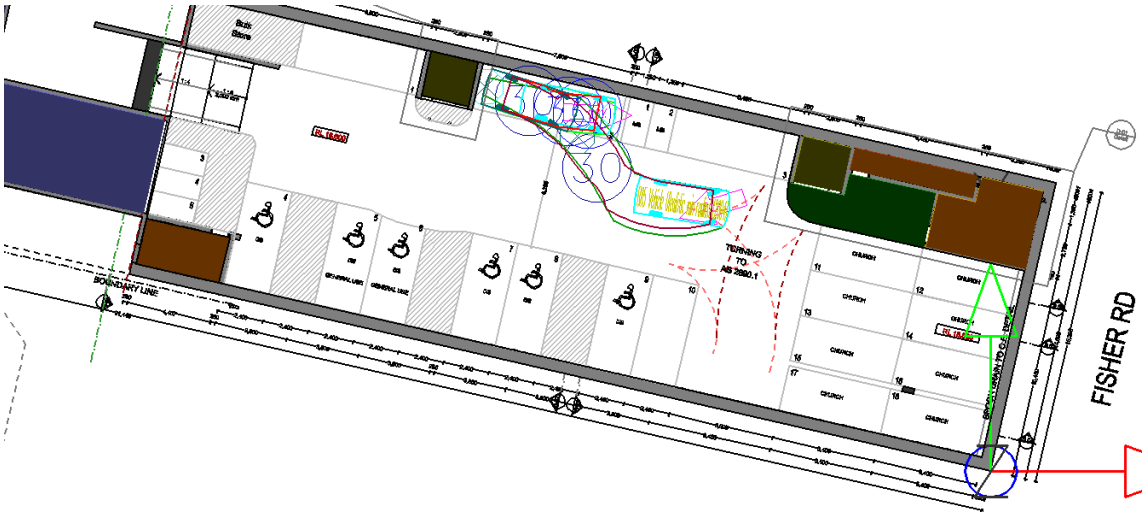

Figure 12-2: Reverse Into Parking Bay 2 Level B2 (Note: Bay 10 has been removed)

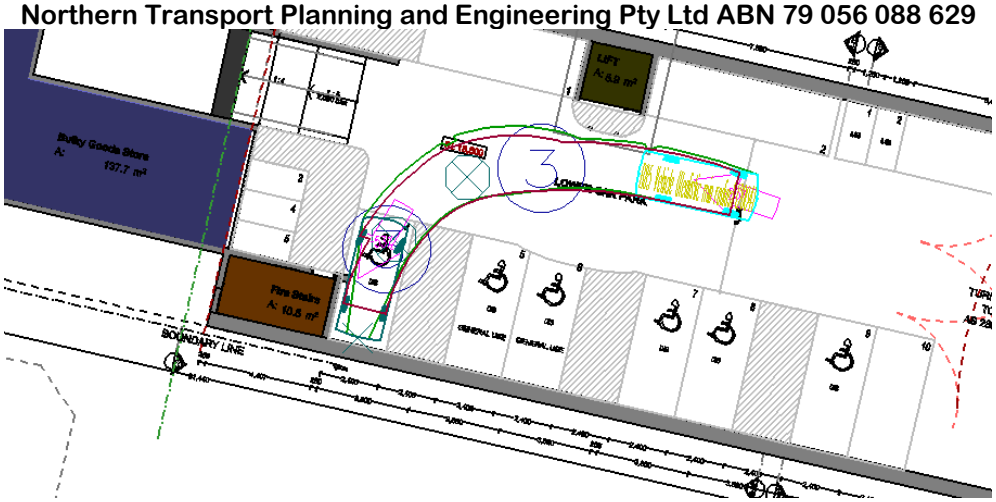

Figure 12-3: Reverse Into Parking Bay 4 Level B2 (Note: Bay 10 has been removed)

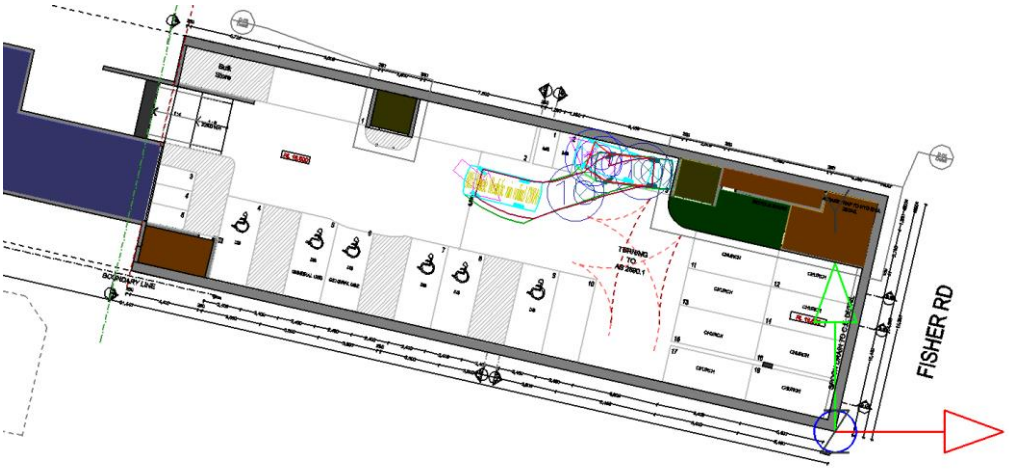

Figure 12-4: Reverse Into Parking Bay 3 Level B2 (Note: Bay 10 has been removed)

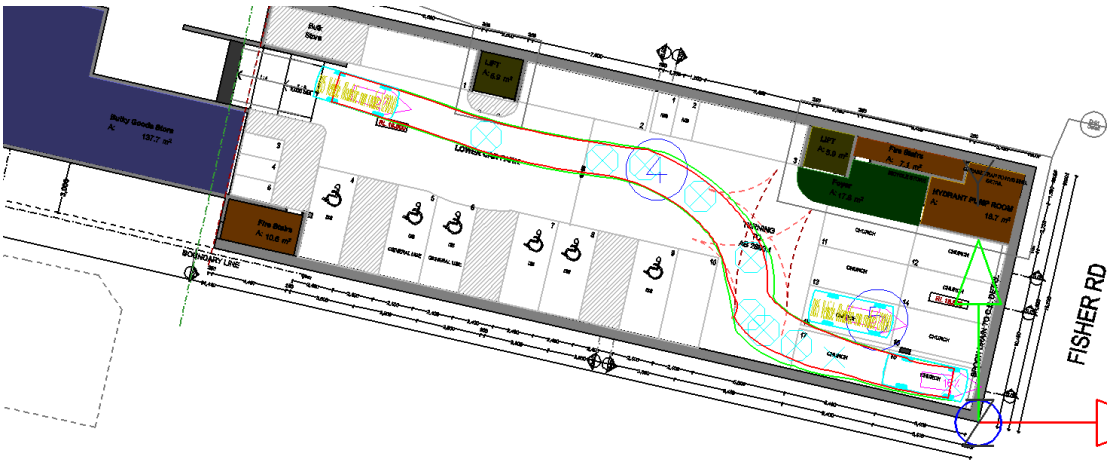

Figure 12-5: Forward Into Parking Bay 18 Level B2 (Note: Bay 10 has been removed)

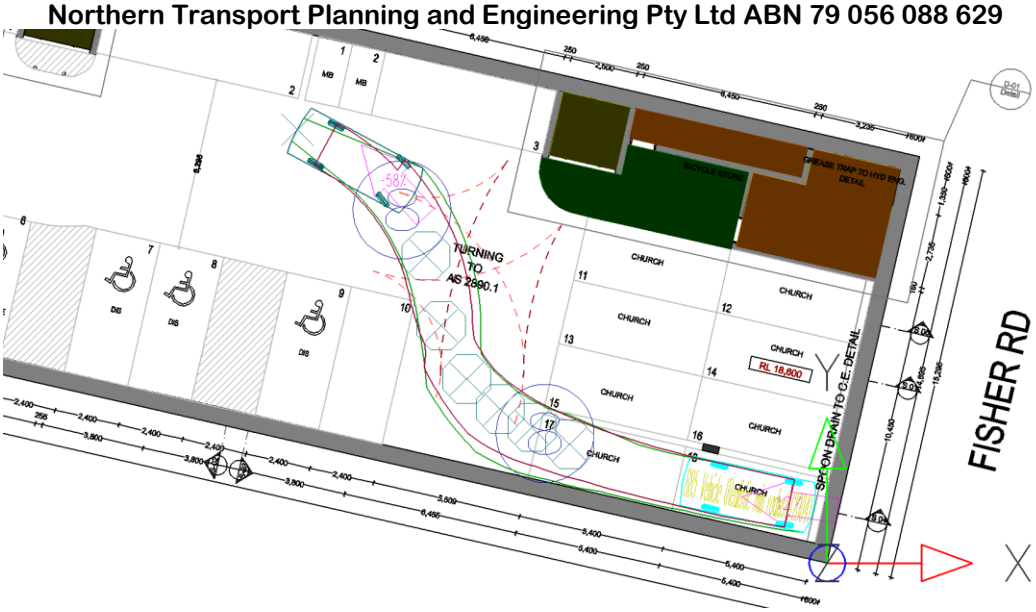

Figure 12-6: Reverse Out Parking Bay 18 Level B2 (Note: Bay 10 has been removed)

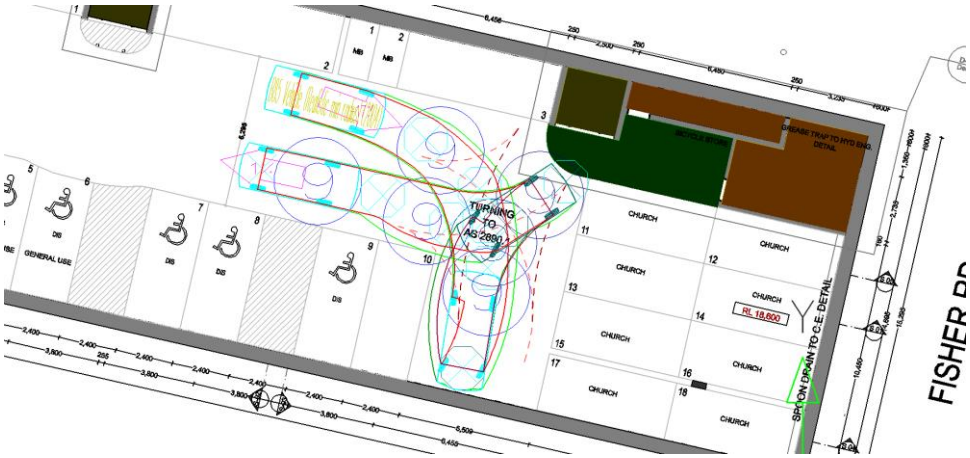

Figure 12-7: Vehicle Doing 3-Point Turn at Turning Bay (Note: Bay 10 has been removed)

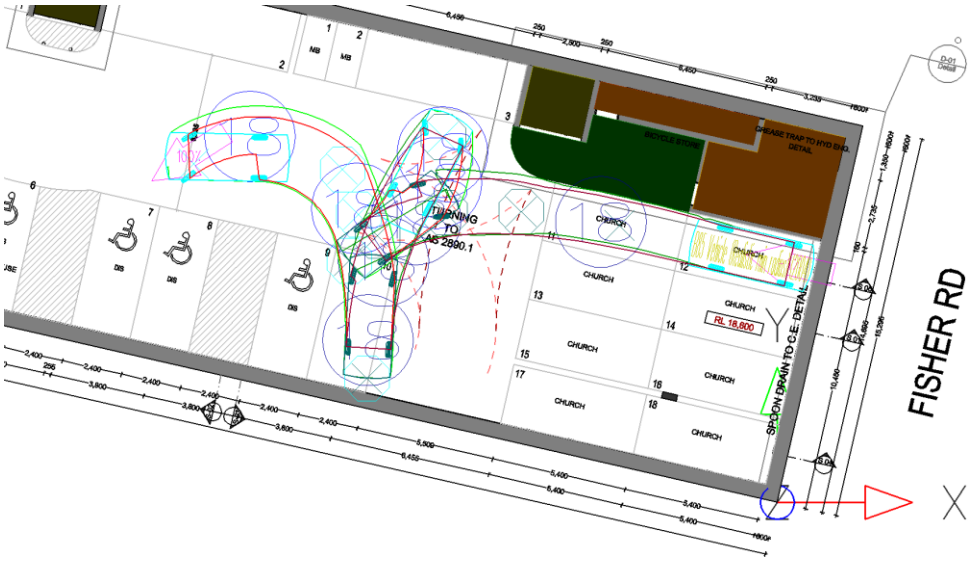

Figure 12-8:Reverse Out Parking Bay 12 Level B2 (Note: Bay 10 has been removed)

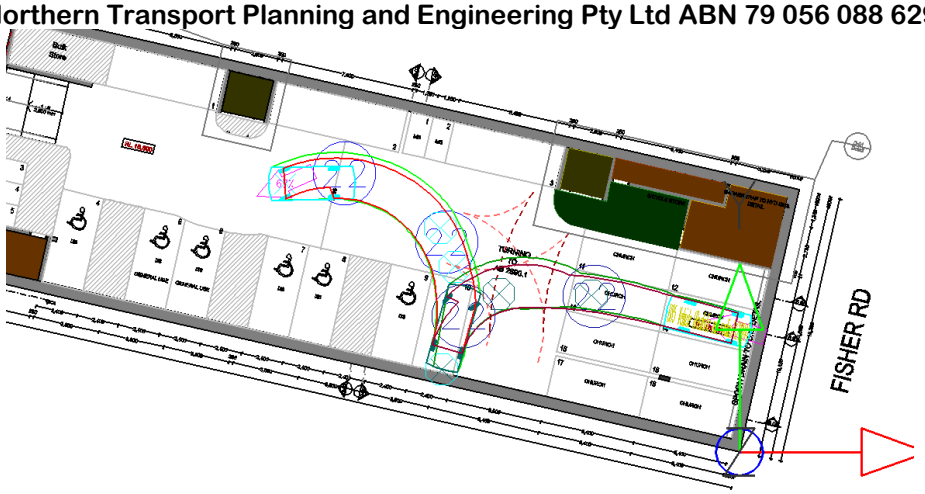

Figure 12-9: Reverse Out Parking Bay 14 Level B2 (Note: Bay 10 has been removed)

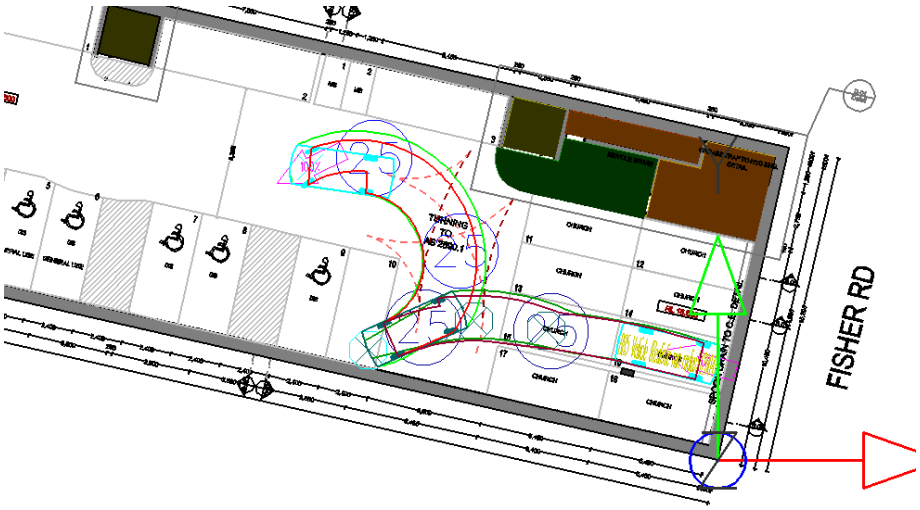

Figure 12-10:Reverse Out Parking Bay 16 Level B2 (Note: Bay 10 has been removed)

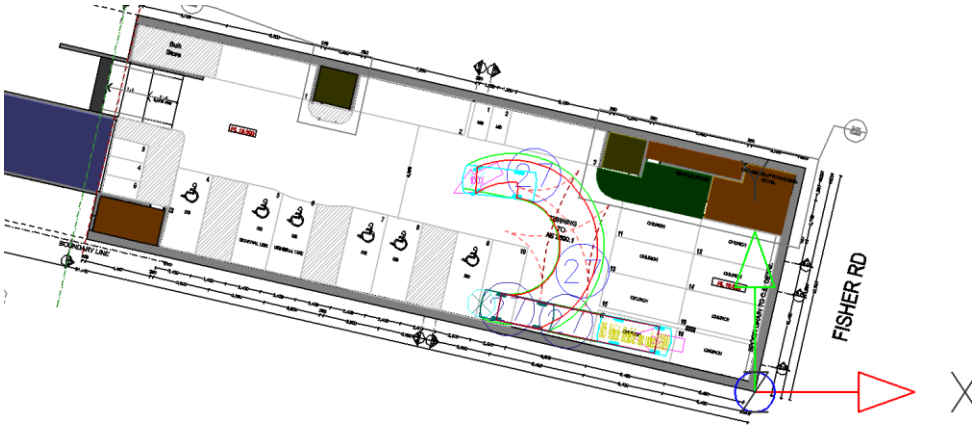

Figure 12-11: Reverse Out Parking Bay 17 Level B2 (Note: Bay 10 has been removed)

Discussion:

It can be seen from this turning path assessment all the critical Parking Bays can be accessed.

13 TURNING PATHS ON RAMPS – WITH 2.5M CLEARANCE TO BOUNDARY

Turning path assessment with 2.5m clearance has been carried out. Critical vehicle turning paths are presented in Figures 13-1 to 13-4 below:

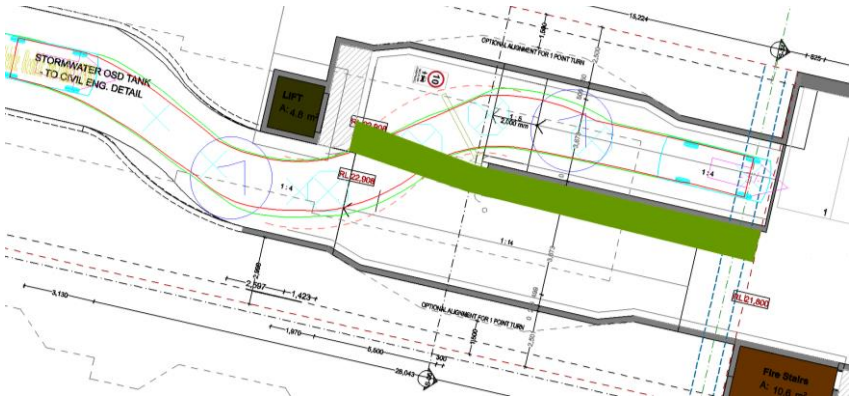

Figure 13-1: Vehicles Entering to Access Level B2

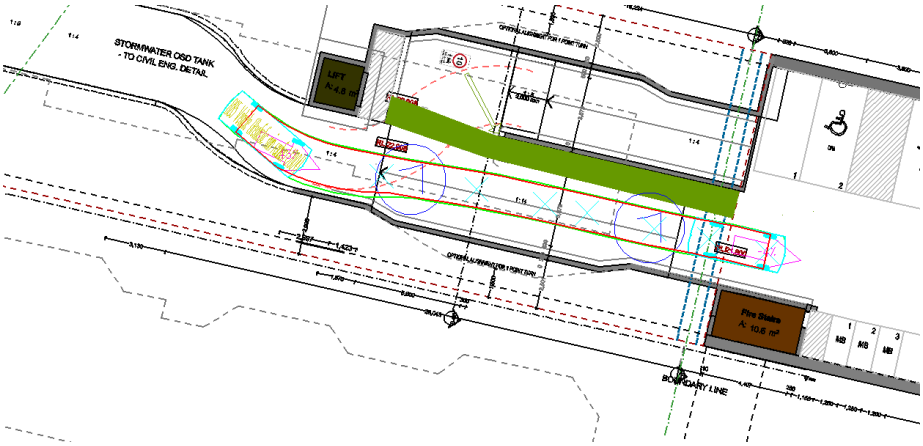

Figure 13-2: Vehicles Entering to Access Level B1

Figure 13-3: Vehicle Entering to Level B1 from Level B2 Doing 3-Point Turn at Ramp

Figure 13-4: Vehicle Entering to Level B2 from Level B1 Doing 3-Point Turn at Ramp

Discussion:

Vehicle conflicts on the ramps will be managed by having a signal control system installed to warn drivers entering or leaving the site that the ramps are in uses. Vehicle detectors will be used to identify when a vehicle is using the ramp. This will trigger a red light warning any vehicle approaching the ramp that it is occupied and that they need to wait until the ramp is clear of traffic.

This layout shows a widening of the ramps which will bring the building within 2.5 m of the boundary. This widening will allow vehicles to move between Level B1 and B2 by doing a 3 point turn as shown in Figures 13-3 and 13-4 above.

The pathway shown will provide for pedestrian and wheel chair access between the southern tower and the Level B1 parking area. This are will be signposted as a 10kph Shared Zone.

Mirrors will also be used where required to deal with blind spots between the ramps to Levels B1 and B2.

14 TURNING PATHS ON RAMPS – WITH 1.5M CLEARANCE TO BOUNDARY

An alternative turning path assessment has also been carried out with 1.5 m clearance to boundary are presented in Figures 14-1 to 14-2 below:

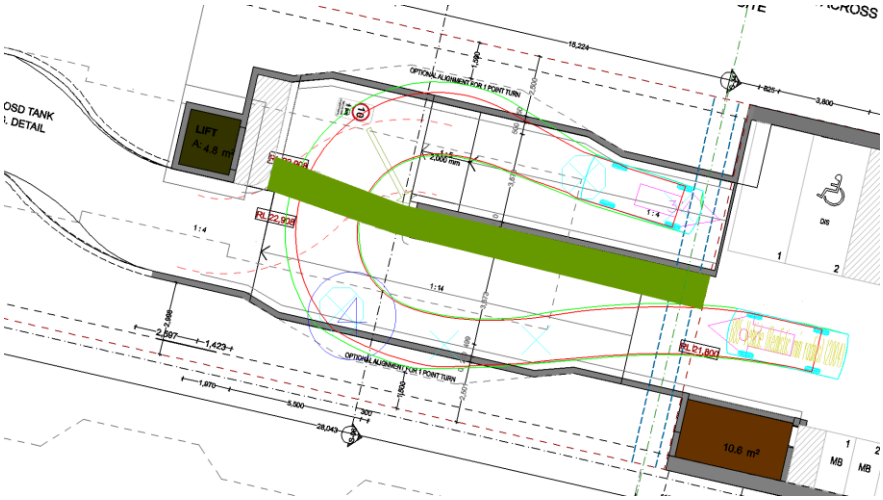

Figure 14-1: Vehicle Entering to Level B2 from Level B1

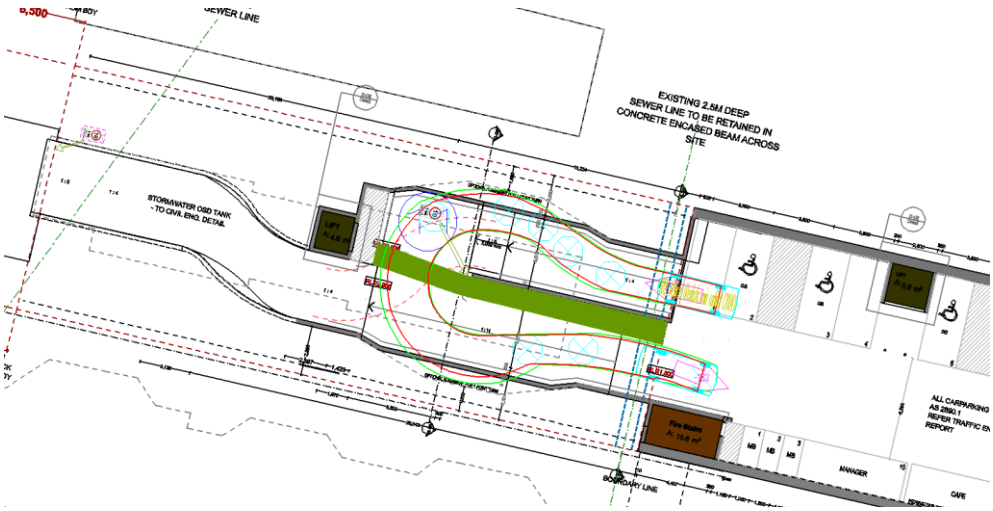

Figure 14-2: Vehicle Entering to Level B1 from Level B2

Discussion

The reduction in the clearance between the building and the boundary to 1.5m will allow the ramps to be widened in order to provide room for a vehicle to move between Level B1 and B2 via a U-turn.

Mirrors will also be used where required to remove blind spots between the ramps to Levels B1 and B2.

15 RECOMMENDATION

Based on this assessment of parking and access arrangements it is considered that the proposed development will meet the requirements specified by Council and the State Government for Affordable Rental Accommodation.

The development will exceed parking requirements by 4 spaces.

The parking layout conforms with AS / NZS 2890.1:2004 design requirements.

Adequate site distance is available from the proposed access driveway off Francis Street.

It is therefore recommended that the proposed development be approved.

Appendix A

Observed Parking Demand for Activities on Existing Site

Observations of Existing Parking Activity on Site

A summary of the parking activity observed for the existing 25 space car park at the rear of the property before the Covid -19 lockdowns is presented below:

1) Monday to Friday: 6am - 8am
Early Morning Prayer – Koreans – 3 Cars,
Music/Training/Workout Classes, Breakfasts for poor and special events - 10 Visitor Cars
(These were in the past and are periodic)

2) Monday to Friday: 8am - 4pm
Northern Beaches Engineers/Miscellaneous next door to church: 18 Cars maximum
(Note: Obviously we won't be doing this from when construction starts and built)

Community Connect: 2 Cars maximum
We were hoping Community Connect would be able to continue with us. This may not be possible in the short term if we can't secure more offices in the latest plans.

Staff: Russ Ixer, Shelagh Ryan, Greg Stigter, Admin/maintenance/NLBC Personnel (3 max):
6 Cars maximum.

3) Monday to Thursday: 4pm till late
Point Break Drama: 3 (Staff) Cars maximum
Night Time Church Meetings: 3 Staff Cars, 15 Visitor Cars (18 Cars maximum). Note: At night-time people can park on the Fisher Road.
Parent Drop Offs. (Question for Council: Can we have 'drop and go' areas on the street on Francis Street and Fisher Road? Plus, designated areas on Fisher Road for Emergencies and Wedding/Funeral Car?

4) Friday: 4pm till late, Saturday: Early Morning/Day/Night
Youth Group Meetings: Parent Drop Offs
Conferences/Dinners/Shows (10 times a year): 26 Cars maximum
Breakfasts (6 times a year): 26 Cars maximum

5) Sundays (note on Sundays that parking on surrounding streets is relatively easy. Plus folk from all services also walk and travel by bus)
a) Early Morning Korean Service: **7 - 8am** – 5 Cars maximum
b) NLBC: **9am - 12noon** - NLBC – 15 Cars maximum, we park in the street as well to leave room for New Life Chinese Church
c) New Life Chinese Church Service/Lunch: **9:30am – 1:30pm** - 10 Cars maximum. The
d) Yeong Seong Baptist Church (Korean) Service/Lunch: **12noon - 3:30pm** – 15 Cars maximum, by necessity they also park on the street and walk/bus
e) H3O Baptist Church – 20 Cars maximum

Appendix B

Automatic Count Report Data

Northern Transport Planning and Engineering Pty Ltd ABN 79 056 088 629

Weekly Vehicle Counts Northbound (Virtual Week)

VirtWeeklyVehicle-307
Site: 213206.0.1NS
Description: **!Francis St <50>**
Filter time: **14:32 - 14:32 20 October, 2020 => 14:26 - 14:26 27 October, 2020**
Scheme: Vehicle classification (AustRoads94)
Filter: Cls(1-13) Dir(N) Sp(0,160) Headway(>0) Span(0 - 100) Lane(0-16)

	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Averages 1 - 5	Averages 1 - 7
Hour									
0000-0100	9.0	6.0	9.0	3.0	22.0	15.0	11.0	9.8	10.7
0100-0200	8.0	4.0	2.0	5.0	5.0	14.0	6.0	4.8	6.3
0200-0300	5.0	2.0	2.0	2.0	1.0	3.0	6.0	2.4	3.0
0300-0400	2.0	1.0	1.0	1.0	4.0	3.0	4.0	1.8	2.3
0400-0500	7.0	6.0	8.0	10.0	7.0	7.0	6.0	7.6	7.3
0500-0600	33.0	35.0	43.0	35.0	36.0	21.0	14.0	36.4	31.0
0600-0700	90.0	77.0	80.0	101.0	96.0	39.0	26.0	88.8	72.7
0700-0800	134.0	125.0	137.0	142.0	129.0	67.0	36.0	133.4	110.0
0800-0900	**214.0**	**188.0**	**224.0**	**204.0**	191.0	124.0	62.0	**204.2**	172.4
0900-1000	198.0	170.0	170.0	159.0	164.0	203.0	116.0	172.2	168.6
1000-1100	186.0	174.0	189.0	168.0	187.0	240.0	150.0	180.8	184.9
1100-1200	189.0	180.0	196.0	177.0	**197.0**	**240.0**	**215.0**	187.8	**199.1**
1200-1300	196.0	175.0	220.0	206.0	227.0	**277.0**	**206.0**	204.8	215.3
1300-1400	216.0	177.0	216.0	196.0	200.0	243.0	188.0	201.0	205.1
1400-1500	220.0	96.0	210.0	203.0	215.0	211.0	160.0	173.3	176.4
1500-1600	224.0	220.0	256.0	243.0	278.0	199.0	159.0	244.2	225.6
1600-1700	274.0	279.0	283.0	**287.0**	264.0	182.0	141.0	277.4	244.3
1700-1800	**301.0**	**307.0**	**297.0**	281.0	**290.0**	174.0	136.0	**295.2**	**255.1**
1800-1900	167.0	230.0	239.0	261.0	184.0	135.0	94.0	216.2	187.1
1900-2000	100.0	142.0	164.0	148.0	141.0	79.0	58.0	139.0	118.9
2000-2100	65.0	92.0	83.0	108.0	94.0	74.0	41.0	88.4	79.6
2100-2200	26.0	41.0	47.0	114.0	72.0	41.0	42.0	60.0	54.7
2200-2300	18.0	15.0	26.0	76.0	42.0	39.0	37.0	35.4	36.1
2300-2400	8.0	10.0	18.0	36.0	19.0	16.0	9.0	18.2	16.6
Totals									
0700-1900	2519.0	2321.0	2637.0	2527.0	2526.0	2295.0	1663.0	2490.5	2343.9
0600-2200	2800.0	2673.0	3011.0	2998.0	2929.0	2528.0	1830.0	2866.7	2669.8
0600-0000	2826.0	2698.0	3055.0	3110.0	2990.0	2583.0	1876.0	2920.3	2722.5
0000-0000	2890.0	2752.0	3120.0	3166.0	3065.0	2646.0	1923.0	2983.1	2783.1
AM Peak	0800	0800	0800	0800	1100	1100	1100		
	214.0	188.0	224.0	204.0	197.0	240.0	215.0		
PM Peak	1700	1700	1700	1600	1700	1200	1200		
	301.0	307.0	297.0	287.0	290.0	277.0	206.0		

*** - No data.**

Northern Transport Planning and Engineering Pty Ltd ABN 79 056 088 629

Weekly Vehicle Counts Southbound (Virtual Week)

VirtWeeklyVehicle-308
Site: 213206.0.1NS
Description: **!Francis St <50>**
Filter time: **14:32 - 14:32 20 October, 2020 => 14:26 - 14:26 27 October, 2020**
Scheme: Vehicle classification (AustRoads94)
Filter: Cls(1-13) Dir(S) Sp(0,160) Headway(>0) Span(0 - 100) Lane(0-16)

	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Averages 1 - 5	Averages 1 - 7
Hour									
0000-0100	4.0	5.0	1.0	4.0	11.0	21.0	7.0	5.0	7.6
0100-0200	7.0	4.0	3.0	4.0	2.0	18.0	10.0	4.0	6.9
0200-0300	0.0	5.0	4.0	1.0	6.0	3.0	8.0	3.2	3.9
0300-0400	4.0	3.0	1.0	2.0	3.0	5.0	4.0	2.6	3.1
0400-0500	3.0	6.0	6.0	5.0	3.0	5.0	3.0	4.6	4.4
0500-0600	20.0	20.0	30.0	32.0	29.0	13.0	11.0	26.2	22.1
0600-0700	46.0	60.0	50.0	56.0	58.0	25.0	15.0	54.0	44.3
0700-0800	100.0	95.0	89.0	97.0	80.0	64.0	33.0	92.2	79.7
0800-0900	161.0	136.0	**186.0**	**159.0**	**158.0**	122.0	79.0	160.0	143.0
0900-1000	**179.0**	**168.0**	166.0	156.0	139.0	128.0	103.0	**161.6**	**148.4**
1000-1100	131.0	129.0	131.0	123.0	154.0	192.0	138.0	133.6	142.6
1100-1200	146.0	139.0	150.0	124.0	134.0	**196.0**	**139.0**	138.6	146.9
1200-1300	127.0	126.0	127.0	146.0	145.0	**180.0**	**144.0**	134.2	142.1
1300-1400	142.0	105.0	127.0	124.0	148.0	149.0	114.0	129.2	129.9
1400-1500	108.0	58.5	140.0	151.0	126.0	149.0	125.0	107.0	114.5
1500-1600	153.0	**175.0**	179.0	154.0	**197.0**	109.0	132.0	**171.6**	**157.0**
1600-1700	**171.0**	164.0	**180.0**	158.0	165.0	109.0	107.0	167.6	150.6
1700-1800	170.0	169.0	160.0	**195.0**	152.0	118.0	112.0	169.2	153.7
1800-1900	124.0	138.0	139.0	184.0	152.0	129.0	88.0	147.4	136.3
1900-2000	81.0	107.0	109.0	116.0	148.0	90.0	79.0	112.2	104.3
2000-2100	54.0	81.0	90.0	76.0	89.0	77.0	64.0	78.0	75.9
2100-2200	47.0	50.0	58.0	96.0	72.0	79.0	51.0	64.6	64.7
2200-2300	21.0	30.0	38.0	40.0	48.0	47.0	46.0	35.4	38.6
2300-2400	11.0	18.0	18.0	30.0	23.0	29.0	19.0	20.0	21.1
Totals									
0700-1900	1712.0	1602.5	1774.0	1771.0	1750.0	1645.0	1314.0	1712.2	1644.6
0600-2200	1940.0	1900.5	2081.0	2115.0	2117.0	1916.0	1523.0	2021.0	1933.8
0600-0000	1972.0	1948.5	2137.0	2185.0	2188.0	1992.0	1588.0	2076.4	1993.5
0000-0000	2010.0	1991.5	2182.0	2233.0	2242.0	2057.0	1631.0	2122.0	2041.5
AM Peak	0900	0900	0800	0800	0800	1100	1100		
	179.0	168.0	186.0	159.0	158.0	196.0	139.0		
PM Peak	1600	1500	1600	1700	1500	1200	1200		
	171.0	175.0	180.0	195.0	197.0	180.0	144.0		

*** - No data.**

Speed Statistics by Hour NorthBound

SpeedStatHour-315
Site: 213206.0.1NS
Description: **!Francis St <50>**
Filter time: **14:32 - 14:32 20 October, 2020 => 14:26 - 14:26 27 October, 2020**
Scheme: Vehicle classification (AustRoads94)
Filter: Cls(1-13) Dir(N) Sp(0,160) Headway(>4) Span(0 - 100) Lane(0-16)

Vehicles = 15974
Posted speed limit = 50 km/h, Exceeding = 324 (2.028%), Mean Exceeding = 52.94 km/h
Maximum = 91.4 km/h, **Minimum** = 5.1 km/h, **Mean** = 37.2 km/h
85% Speed = 43.74 km/h, **95% Speed** = 47.52 km/h, **Median** = 37.62 km/h
20 km/h Pace = 28 - 48, **Number in Pace** = 13888 (86.94%)
Variance = 46.59, **Standard Deviation** = 6.83 km/h

Hour Bins (Partial days)

Time	Bin	Min	Max	Mean	Median	85%	95%	>PSL 50 km/h
0000	73 0.457%	8.6	53.0	36.1	36.9	43.7	48.7	3 4.110%
0100	43 0.269%	18.2	56.0	34.2	33.7	43.9	46.8	1 2.326%
0200	21 0.131%	13.3	52.8	36.0	36.7	48.4	52.5	1 4.762%
0300	16 0.100%	12.7	49.5	35.3	36.3	45.6	49.5	0 0.000%
0400	51 0.319%	17.8	50.1	36.3	36.7	43.6	47.7	1 1.961%
0500	211 1.321%	9.9	57.6	37.2	38.0	44.8	48.9	6 2.844%
0600	473 2.961%	13.7	54.8	37.2	37.8	44.5	49.0	16 3.383%
0700	673 4.213%	15.2	60.8	38.7	39.1	44.6	48.3	15 2.229%
0800	976 6.110%	13.9	57.5	37.5	38.0	43.9	47.3	20 2.049%
0900	974 6.097%	6.8	59.9	37.6	38.1	43.9	47.3	21 2.156%
1000	1065 6.667%	12.7	57.5	37.5	38.0	43.8	47.2	17 1.596%
1100	1114 6.974%	10.4	61.4	37.1	37.3	43.2	47.5	30 2.693%
1200	1192 7.462%	14.4	56.6	37.5	38.0	44.3	48.1	28 2.349%
1300	1148 7.187%	6.3	66.0	37.2	37.6	44.3	47.7	31 2.700%
1400	1131 7.080%	13.6	91.4	37.4	38.0	43.0	46.7	17 1.503%
1500	1208 7.562%	13.8	61.3	37.2	37.6	43.6	47.0	18 1.490%
1600	1307 8.182%	8.9	60.1	37.8	38.2	44.5	47.9	27 2.066%
1700	1334 8.351%	11.4	63.4	37.4	37.8	44.1	47.7	23 1.724%
1800	1046 6.548%	6.5	62.5	36.5	36.9	43.2	47.5	19 1.816%
1900	720 4.507%	6.9	57.1	35.7	36.0	42.7	47.0	11 1.528%
2000	499 3.124%	12.2	56.6	34.9	35.3	41.9	45.7	9 1.804%
2100	348 2.179%	5.1	56.5	35.7	36.4	42.5	47.1	4 1.149%
2200	240 1.502%	18.8	54.0	36.8	36.9	43.2	47.1	3 1.250%
2300	111 0.695%	13.2	65.4	35.9	36.4	42.7	47.3	3 2.703%
----	**15974 100.0%**	**5.1**	**91.4**	**37.2**	**37.6**	**43.7**	**47.5**	**324 2.028%**

Speed Statistics by Hour Southbound

SpeedStatHour-316
Site: 213206.0.1NS
Description: **!Francis St <50>**
Filter time: **14:32 - 14:32 20 October, 2020 => 14:26 - 14:26 27 October, 2020**
Scheme: Vehicle classification (AustRoads94)
Filter: Cls(1-13) Dir(S) Sp(0,160) Headway(>0) Span(0 - 100) Lane(0-16)

Vehicles = 14405
Posted speed limit = 50 km/h, Exceeding = 88 (0.611%), Mean Exceeding = 53.21 km/h
Maximum = 64.2 km/h, **Minimum** = 0.4 km/h, **Mean** = 34.4 km/h
85% Speed = 40.32 km/h, **95% Speed** = 43.74 km/h, **Median** = 35.10 km/h
20 km/h Pace = 25 - 45, **Number in Pace** = 12795 (88.82%)
Variance = 42.71, **Standard Deviation** = 6.54 km/h

Hour Bins (Partial days)

Time	Bin	Min	Max	Mean	Median	85%	95%	>PSL 50 km/h
0000	53 0.368%	21.7	52.3	37.7	37.4	44.4	47.4	1 1.887%
0100	48 0.333%	13.4	49.2	35.9	36.7	42.1	46.7	0 0.000%
0200	27 0.187%	22.8	57.0	35.9	35.5	41.8	53.9	1 3.704%
0300	22 0.153%	21.3	52.6	35.8	37.1	44.8	51.6	1 4.545%
0400	31 0.215%	21.5	43.0	34.3	34.2	40.4	42.2	0 0.000%
0500	155 1.076%	16.8	51.9	36.5	38.0	43.3	46.7	2 1.290%
0600	310 2.152%	13.9	50.6	36.3	36.9	42.4	45.4	2 0.645%
0700	558 3.874%	11.2	50.1	35.7	36.5	41.4	44.8	2 0.358%
0800	1001 6.949%	3.9	57.1	35.2	35.8	40.5	43.4	5 0.500%
0900	1039 7.213%	3.0	50.8	34.2	34.9	40.7	43.2	2 0.192%
1000	998 6.928%	10.2	60.7	34.3	34.9	40.1	43.6	4 0.401%
1100	1028 7.136%	7.6	57.3	34.0	34.7	40.1	43.7	4 0.389%
1200	995 6.907%	4.8	54.1	34.1	34.7	40.3	43.9	7 0.704%
1300	909 6.310%	2.4	64.2	34.3	34.9	40.3	44.0	4 0.440%
1400	916 6.359%	10.4	57.6	34.6	35.1	39.8	42.7	3 0.328%
1500	1099 7.629%	5.3	55.2	34.1	34.6	39.4	42.7	6 0.546%
1600	1054 7.317%	4.1	54.1	34.9	35.3	40.7	43.8	6 0.569%
1700	1076 7.470%	0.4	57.7	34.6	35.3	40.7	44.1	9 0.836%
1800	954 6.623%	6.1	58.4	33.3	34.0	39.2	42.4	3 0.314%
1900	730 5.068%	2.1	58.0	33.8	34.7	40.5	44.1	10 1.370%
2000	531 3.686%	9.1	60.5	33.9	34.9	40.3	43.6	2 0.377%
2100	453 3.145%	5.1	56.6	34.3	34.7	40.7	44.5	5 1.104%
2200	270 1.874%	3.9	63.7	34.7	35.4	41.5	45.3	6 2.222%
2300	148 1.027%	18.6	53.2	35.9	36.0	41.7	47.0	3 2.027%
----	**14405 100.0%**	**0.4**	**64.2**	**34.4**	**35.1**	**40.3**	**43.7**	**88 0.611%**