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TRAFFIC AND PARKING IMPACTS REPORT
FOR A DEVELOPMENT APPLICATION
FOR A CHANGE OF USE FROM A WAREHOUSE TO A GYMNASIUM
AT UNIT 9, 4-8 INMAN ROAD, CROMER NSW 2099

Property address	Unit 9, 4-8 Inman Rd, Cromer NSW 2099 (also known as 100 South Creek Road, Cromer)
Client	Anytime Fitness Cromer Pty Ltd
Prepared by	O. Sannikov, MEngSc (Traffic Engineering), MIEAust, PEng, FAITPM
Date	08/11/23
Job No.	23056
Report No.	23056 Rep 02
Revision status	This report is a second revision of the report "23056 Rep 01" dated 08/08/23 provided to the Northern Beaches Council for the purpose of the pre-lodgement consultation. The additions and amendments reflect the following: • The matters raised and recommendations provided by the Council in Pre-lodgement Meeting (PLM) Notes (PLM2023/0093), dated 15/08/23. • Additional car parking allocation provided by the property manager for the entire site. • Revised plans and floor areas for the proposed facility.

Item	Report
Site location	• Refer to **Figure 1.**
Existing land use	• A warehouse ◦ Unit 9 within the approved Northern Beaches Business Park (the latter is currently under construction) ▪ Refer to **Figure 2**. ◦ A total of 1,170 m² of GFA, including 1,020 m² on the ground floor and a 150 m² mezzanine.
History of development proposals	• The original development consent (DA2019/1346) for the Northern Beaches Business Park at Lot 1 DP 1220196, 4-8 Inman Rd, Cromer was granted by the Sydney North Planning Panel (SNPP) on 17/08/2020. The original development plans comprised 11 warehouse units, 5 office tenancies and car parking with 231 car spaces. • Subsequently, a number of development and modification applications were submitted, as follows: ◦ DA2021/2608 – change of use of Warehouse 1 for the purpose of an indoor recreation facility (swim school) - approved ◦ DA2022/1807 - change of use of Warehouse 11 for the purpose of an indoor recreation facility (golf facility) - approved ◦ DA2023/0294 - change of use of Warehouses 7 and 8 for the purpose of an indoor recreation facility (trampoline facility) - approved ◦ DA2023/1142 - change of use of Warehouse 2 for the purpose of an indoor recreation facility (a padel tennis centre comprised of 4 courts) - under assessment
Proposed land use	• Recreation facility and indoor gymnasium (indoor recreation facility) ◦ A total of 1,141 m² of GFA, including a gymnasium of 1,000 m² on the ground floor and an office of 141 m² on the mezzanine level.
Parking provision	◦ A total of 12 car parking spaces are proposed ▪ Unit 9 has four (4) allocated car parking spaces along its frontage. ▪ It is proposed to create 4 additional spaces along the building frontage. • The approved roller/shutter door will not be required for the proposed gymnasium and will be permanently closed, a smaller entry door will be created instead. ▪ Refer to **Figure 3**. ▪ 4 spaces allocated in the basement car park ▪ 24/7 access to the shared pool of 62 spaces in the basement

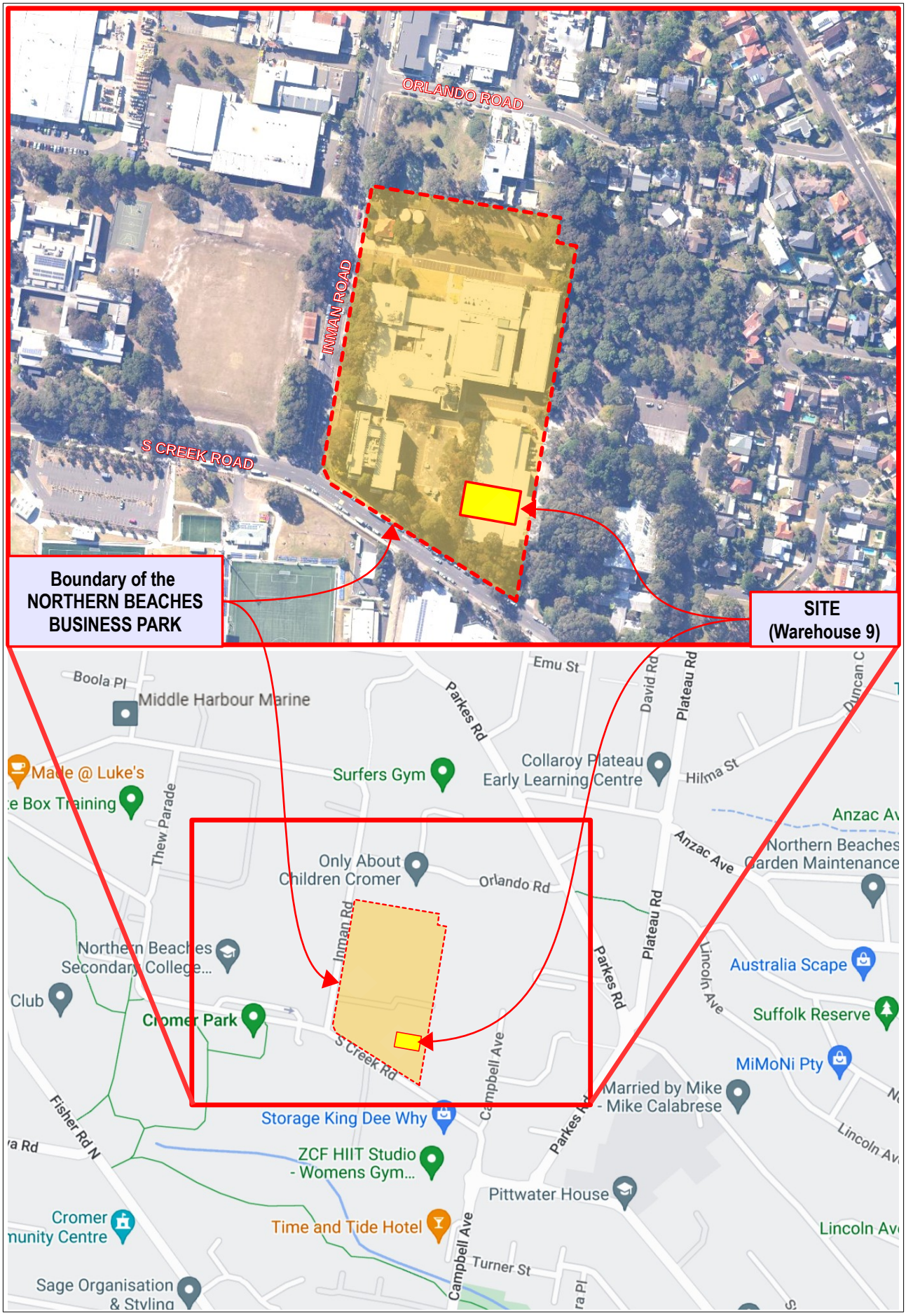


Figure 1. Site location.

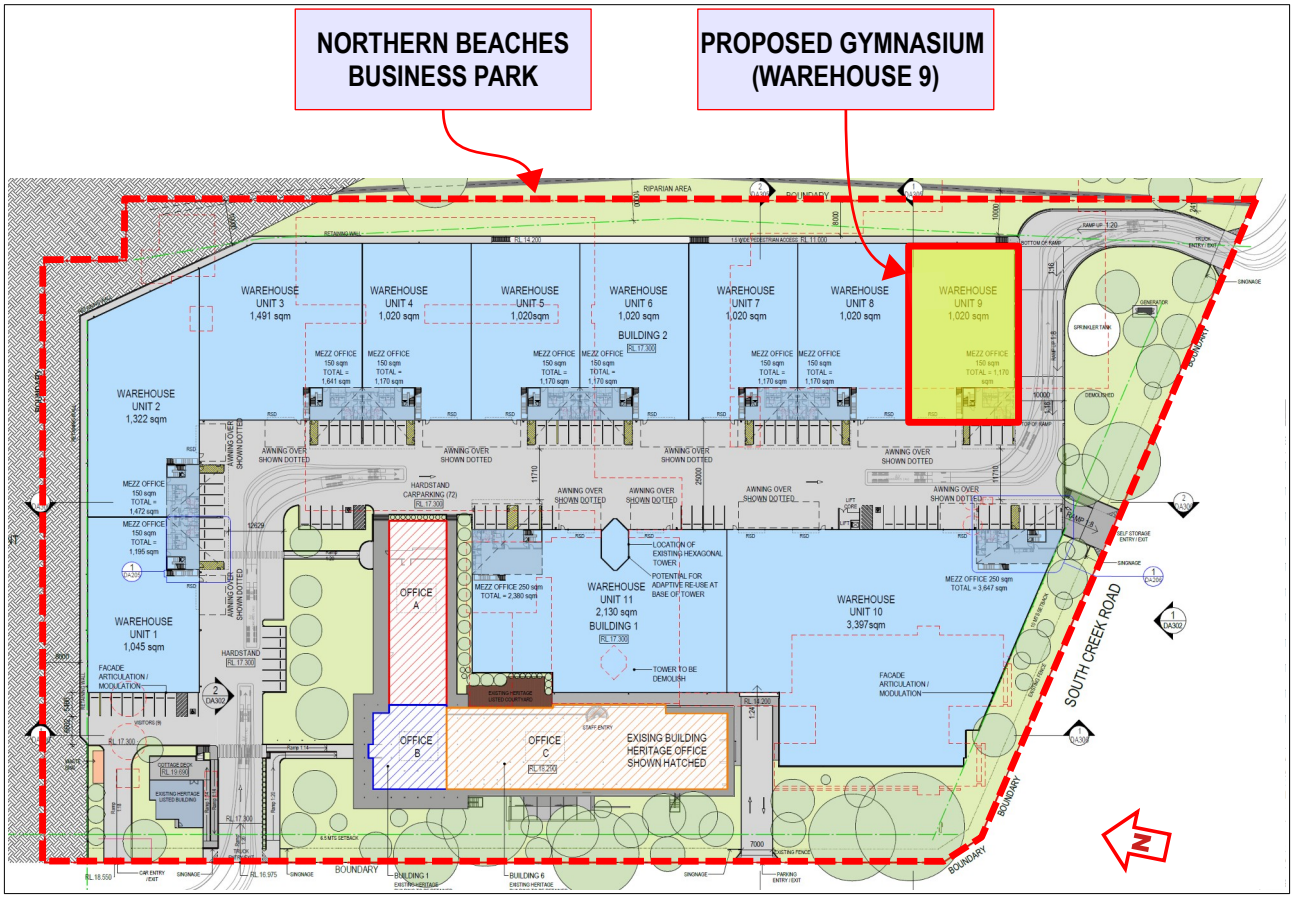


Figure 2. Proposed change of use.

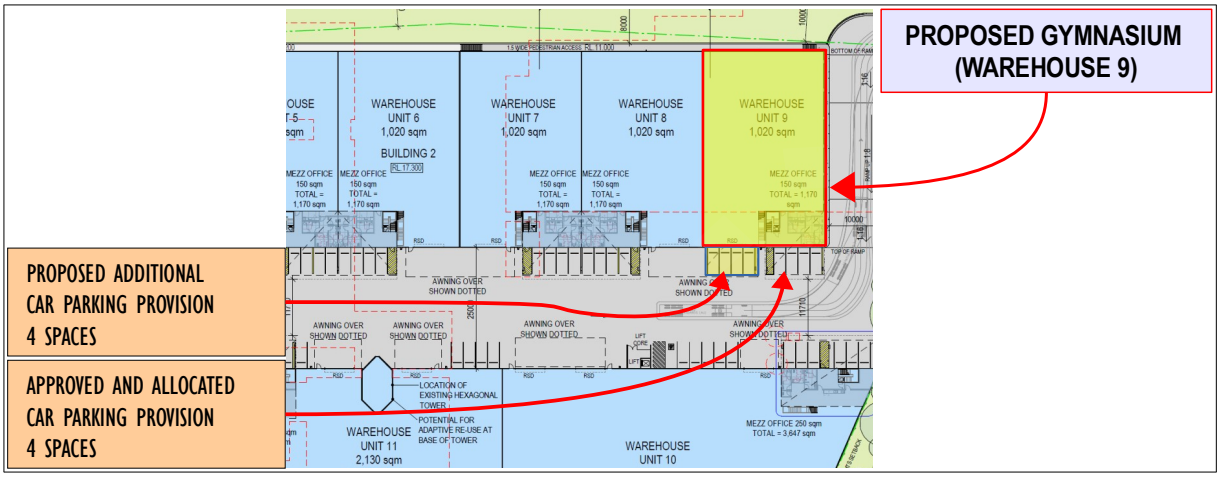


Figure 3. Proposed off-street car parking provision.

Item	Report
	Existing traffic and parking situation
Street characteristics	• Refer to **Figure 4.** • The key roads around the proposed development are described below. ◦ Inman Road ▪ Local road ▪ 2 travel lanes and parking opportunities on both sides of the road. ◦ Orlando Road ▪ Local road ▪ 2 travel lanes and parking opportunities on both sides of the road. ◦ South Creek Road ▪ Local road ▪ 2 travel lanes and parking opportunities on both sides of the road. ◦ Parkes Road ▪ Local road ▪ 2 travel lanes and parking opportunities on both sides of the road. ◦ Campbell Avenue ▪ Local road ▪ 2 travel lanes and parking opportunities on both sides of the road. ◦ Villers Place ▪ Local road ▪ 2 travel lanes and parking opportunities on both sides of the road. ◦ Other streets in the surrounding area are local/local collector roads. Street conditions are typical for a residential area, with low to moderate traffic volumes. ▪ General speed limit is 50 km/h on local streets around the site.
	Public Transport
Bus	• Refer to **Figure 5** and the **Appendix.** • There are two (2) bus stops within walking distance (approximately 380 m) from the site. Refer to **Figure 5.** ◦ Bus route 180 ▪ Warringah Mall to Collaroy Plateau • 9 services operate during the morning peak hours. • 4 services operate during the afternoon peak hours. ▪ Collaroy Plateau to Warringah Mall • 2 services operate during the morning peak hours. • 9 services operate during the afternoon peak hours. ◦ Bus route 180X ▪ City Wynyard to Collaroy Plateau (Express Service) • No services operate during the morning peak hours. • 12 services operate during the afternoon peak hours. ▪ Collaroy Plateau to City Wynyard (Express Service) • 14 services operate during the morning peak hours. • No services operate during the afternoon peak hours. ◦ The morning peak hours were considered to be between 06:30 and 09:30. and the afternoon peak hours were considered to be between 15:30 and 18:30.

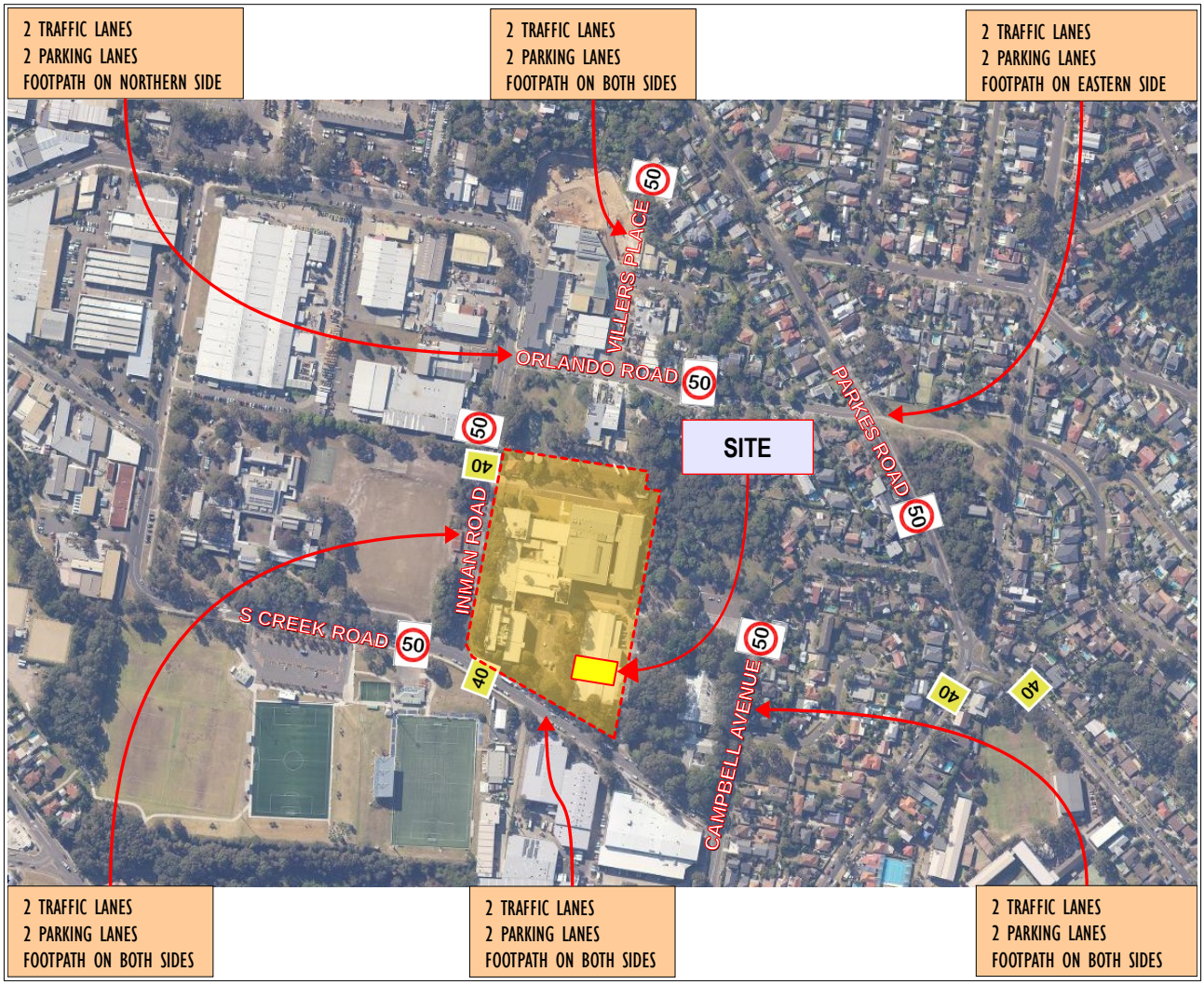


Figure 4. Street characteristics.

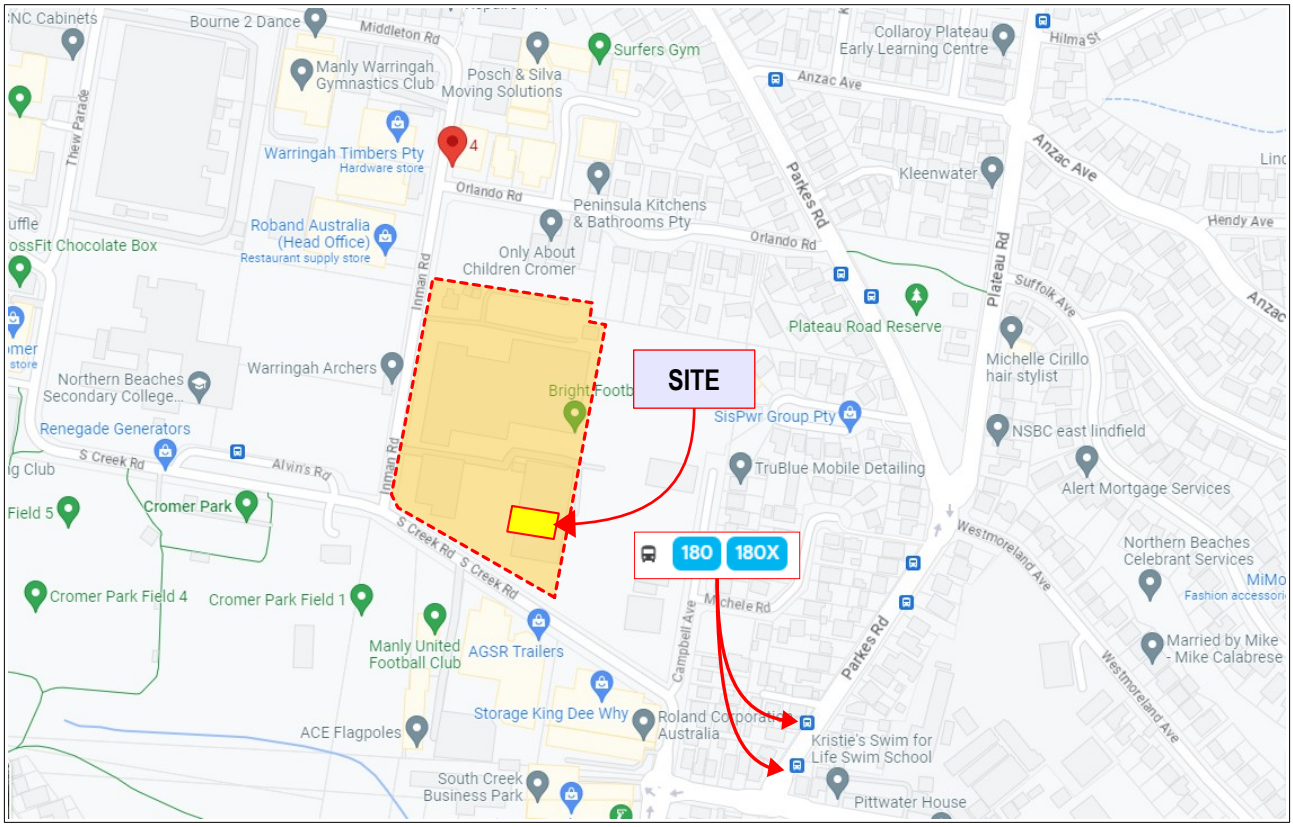


Figure 5. Public transport.

Item	Report
	Surveys and survey results
Parking survey	• A parking demand survey was conducted on Wednesday 26/07/2023 and Saturday 29/07/2023. ◦ The survey was conducted between 07:00 and 20:00 on Wednesday and 07:00 to 13:00 on Saturday. ◦ Refer to **Figure 6** for survey locations.
Survey results	• Refer to **Table 1**. • The development site (Northern Beaches Business Park) is currently under construction. This resulted in a greatly increased on-street parking demand generated by construction workers and construction trucks, compared with a typical situation without the construction going on. ◦ During the survey, the observers counted vehicles associated with the construction separately (e.g. utility vehicles and vans with tools and building equipment, vehicles observed to deliver and pickup construction workers and trucks). Such vehicles are included in a separate table and then excluded from the total number of observed vehicles. The tables with vacant parking spaces show the estimated numbers without the construction impact. ▪ It is noted that the estimated parking vacancy rates for Inman Road (without construction vehicles) are consistent with the results of parking surveys conducted by TEF Consulting for another project in January 2022, before the construction of the Northern Beaches Business Park. • Wednesday ◦ Areas 1a-3b (within 150 m walking distance) ◦ The peak occurred at 14:00. ◦ The survey results indicated that there would be at least 60 spaces vacant throughout the day (to a maximum of 87) in the survey area when the construction is completed. ◦ Areas 4-6 (within 150 to 250 m walking distance) ◦ The peak occurred at 16:00. ◦ The survey results indicated that there would be at least 36 spaces vacant throughout the day (to a maximum of 58) in the survey area when the construction is completed. • Saturday (refer to **Table 2**) ◦ Areas 1a-3b (within 150 m walking distance) ◦ The peak occurred between 11:00 and 12:00. ◦ The survey results indicated that there would be at least 65 spaces vacant throughout the day (to a maximum of 81) in the survey area when the construction is completed. ◦ Areas 4-6 (within 150 to 250 m walking distance) ◦ The peak occurred at 09:00. ◦ The survey results indicated that there would be at least 41 spaces vacant throughout the day (to a maximum of 57) in the survey area when the construction is completed. • The PLM Notes contain the following advice: *"It is noted that It is also not accepted that it is appropriate to remove construction worker parking from the parking data collected to reflect the existing situation. It is evident that this approach removes most of the observed parking from the data set which is not believed to be reflective of the pre-existing status."* • In this regard it is reiterated that the results of parking surveys conducted by TEF Consulting for another project in January 2022, before the construction of the Northern Beaches Business Park. Relevant pages from the 2022 report are contained in the **Appendix**.

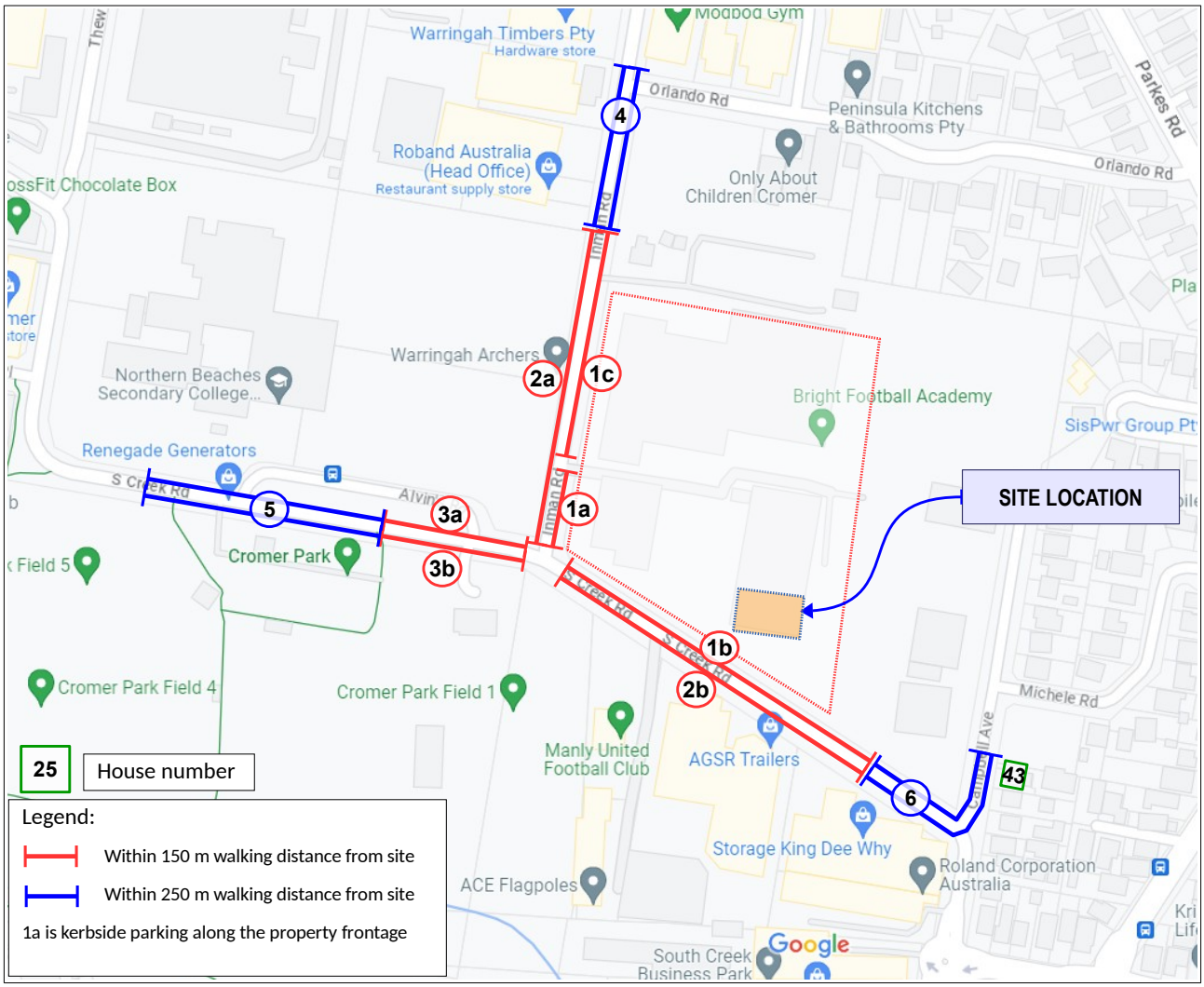


Figure 6. Parking survey locations.

Table 1. Parking survey results – Wednesday.

Number of parked cars																									
26 July 2023	Parking Location																								
Wednesday	Total number of vehicles parked													Vehicles associated with nearby construction											
Time	1a	1b	1c	2a	2b	3a	3b	4	5	6	1a-3b	4-6	Total	1a	1b	1c	2a	2b	3a	3b	4	5	6	1a-3b	4-6	Total
7:00	3	3	16	20	2		1	20	4	8	45	32	12	3	0	16	14	2		1	8	4	3	36	15	26
8:00	3	6	18	22	6		2	24	3	8	57	35	11	3	4	16	15	4		1	10	2	3	43	15	34
9:00	5	6	18	23	8		2	24	3	8	62	35	11	5	4	16	16	4		1	10	2	4	46	16	35
10:00	5	6	19	23	8		2	25	2	8	63	35	10	5	4	18	16	4		1	10	0	4	48	14	36
11:00	5	8	20	23	12		3	25	7	8	71	40	15	5	3	19	16	4		2	10	3	4	49	17	45
12:00	5	9	21	23	13		3	25	9	9	74	43	18	5	3	19	16	4		2	10	3	4	49	17	51
13:00	4	11	19	21	15		3	21	9	11	73	41	20	4	3	17	15	5		2	8	3	5	46	16	52
14:00	3	12	16	19	16		2	17	8	12	68	37	20	3	3	14	13	5		2	7	2	5	40	14	51
15:00	2	14	14	17	9		2	19	4	16	58	39	20	2	4	12	12	5		2	8	0	6	37	14	46
16:00	1	7	7	14	8		2	21	3	18	39	42	21	1	2	5	10	2		2	8	0	6	22	14	45
17:00	1	6	3	11	6		5	21	3	14	32	38	17	1	2	0	8	2		2	8	0	4	15	12	43
18:00	0	0	1	5	4		1	6	3	17	11	26	20	0	0	0	4	0		0	2	0	5	4	7	26
19:00	0	0	1	3	2		0	3	0	11	6	14	11	0	0	0	2	2		0	1	0	5	4	6	10
20:00	0	0	0	3	2		0	2	0	10	5	12	10	0	0	0	2	2		0	1	0	5	4	6	7
No of spaces	5	15	20	24	19		5	25	12	27	88	64	152	5	15	20	24	19		5	25	12	27	88	64	152

26 July 2023	Parking Location																								
Wednesday	Number of parked cars (excluding cars associated with construction)													Number of vacant spaces											
Time	1a	1b	1c	2a	2b	3a	3b	4	5	6	1a-3b	4-6	Total	1a	1b	1c	2a	2b	3a	3b	4	5	6	1a-3b	4-6	Total
7:00	0	3	0	6	0		0	12	0	5	9	17	**26**	5	12	20	18	19		5	13	12	22	79	47	**126**
8:00	0	2	2	7	2		1	14	1	5	14	20	**34**	5	13	18	17	17		4	11	11	22	74	44	**118**
9:00	0	2	2	7	4		1	14	1	4	16	19	**35**	5	13	18	17	15		4	11	11	23	72	45	**117**
10:00	0	2	1	7	4		1	15	2	4	15	21	**36**	5	13	19	17	15		4	10	10	23	73	43	**116**
11:00	0	5	1	7	8		1	15	4	4	22	23	**45**	5	10	19	17	11		4	10	8	23	66	41	**107**
12:00	0	6	2	7	9		1	15	6	5	25	26	**51**	5	9	18	17	10		4	10	6	22	63	38	**101**
13:00	0	8	2	6	10		1	13	6	6	27	25	**52**	5	7	18	18	9		4	12	6	21	61	39	**100**
14:00	0	9	2	6	11		0	10	6	7	28	23	**51**	5	6	18	18	8		5	15	6	20	60	41	**101**
15:00	0	10	2	5	4		0	11	4	10	21	25	**46**	5	5	18	19	15		5	14	8	17	67	39	**106**
16:00	0	5	2	4	6		0	13	3	12	17	28	**45**	5	10	18	20	13		5	12	9	15	71	36	**107**
17:00	0	4	3	3	4		3	13	3	10	17	26	**43**	5	11	17	21	15		2	12	9	17	71	38	**109**
18:00	0	0	1	1	4		1	4	3	12	7	19	**26**	5	15	19	23	15		4	21	9	15	81	45	**126**
19:00	0	0	1	1	0		0	2	0	6	2	8	**10**	5	15	19	23	19		5	23	12	21	86	56	**142**
20:00	0	0	0	1	0		0	1	0	5	1	6	**7**	5	15	20	23	19		5	24	12	22	87	58	**145**

Table 2. Parking survey results – Saturday.

Number of parked cars																									
29 July 2023	Parking Location																								
Saturday	Total number of vehicles parked													Vehicles associated with nearby construction											
Time	1a	1b	1c	2a	2b	3a	3b	4	5	6	1a-3b	4-6	Total	1a	1b	1c	2a	2b	3a	3b	4	5	6	1a-3b	4-6	Total
7:00	2	1	11	15	0		0	4	0	13	29	17	13	2	1	11	8	0		0	2	0	6	22	8	16
8:00	2	2	12	18	1		1	4	0	12	36	16	12	2	2	11	8	1		0	3	0	6	24	9	19
9:00	2	2	14	20	4		3	15	5	14	45	34	19	2	2	12	8	2		0	5	0	6	26	11	42
10:00	2	2	14	20	4		3	8	5	15	45	28	20	2	2	12	8	2		0	3	0	6	26	9	38
11:00	2	1	13	22	4		4	7	6	13	46	26	19	2	1	12	6	2		0	3	0	5	23	8	41
12:00	2	1	12	20	5		4	4	5	14	44	23	19	2	1	11	5	2		0	3	0	6	21	9	37
13:00	2	1	9	14	7		3	2	4	15	36	21	19	2	1	9	4	2		0	2	0	6	18	8	31
No of spaces	5	15	20	24	19		5	25	12	27	88	64	152	5	15	20	24	19	0	5	25	12	27	88	64	152

29 July 2023	Parking Location																								
Saturday	Number of parked cars (excluding cars associated with construction)													Number of vacant spaces											
Time	1a	1b	1c	2a	2b	3a	3b	4	5	6	1a-3b	4-6	Total	1a	1b	1c	2a	2b	3a	3b	4	5	6	1a-3b	4-6	Total
7:00	0	0	0	7	0		0	2	0	7	7	9	**16**	5	15	20	17	19		5	23	12	20	81	55	**136**
8:00	0	0	1	10	0		1	1	0	6	12	7	**19**	5	15	19	14	19		4	24	12	21	76	57	**133**
9:00	0	0	2	12	2		3	10	5	8	19	23	**42**	5	15	18	12	17		2	15	7	19	69	41	**110**
10:00	0	0	2	12	2		3	5	5	9	19	19	**38**	5	15	18	12	17		2	20	7	18	69	45	**114**
11:00	0	0	1	16	2		4	4	6	8	23	18	**41**	5	15	19	8	17		1	21	6	19	65	46	**111**
12:00	0	0	1	15	3		4	1	5	8	23	14	**37**	5	15	19	9	16		1	24	7	19	65	50	**115**
13:00	0	0	0	10	5		3	0	4	9	18	13	**31**	5	15	20	14	14		2	25	8	18	70	51	**121**

Item	Report
Surveys at similar facilities	
	• The proponent (Anytime Fitness) runs multiple similar gymnasium facilities in Sydney.
	• The proponent provided details of 10 facilities similar to the one proposed, in terms of size and operational characteristics. Of these, three facilities were nominated by TEF Consulting for detailed analysis based on their similarity in terms of locality and accessibility to public transport and road network. These facilities are: ◦ Anytime Fitness Manly (576 m² GFA) ◦ Anytime Fitness Mona Vale (726 m² GFA) ◦ Anytime Fitness Fairfield West (666 m² GFA)
Travel mode survey	• For the above facilities, the management of Anytime Fitness carried out questionnaire surveys of members, to determine their current travel modes. ◦ the survey was designed by TEF Consulting and included questions about the mode of travel, as well as the day and the time of arrival.
	• The surveys were conducted on the same days as the on-street car parking accumulation surveys described above.
	• The results of the surveys indicated that, on average, 64% of patrons drove cars to the gymnasium on Wednesday and 45% on Saturday. The lower per cent of drivers on Saturday is primarily due to the increased number of car passengers (i.e. greater car occupancy), as well as due to a greater proportion of active travel (walking and cycling).

Table 3. Travel modes of patrons.

Day	Walk	Bicycle	Motorbike	Bus	Car/parked nearby		Car/dropped off	Other
					Driver	Passenger		
Weekday	25%	1%	0%	1%	64%	9%	0%	0%
Saturday	28%	5%	1%	2%	45%	14%	4%	0%

Attendance patterns of patrons

The proponent also provided the member check-in data (number of visits) for each hour for all days in July 2023 (from 01/07/2023 to 31/07/2023). The attendance data was analysed with the following results.

- The weekday person accumulation at any one time was generally higher than that on Saturday.
- On weekdays, there is a peak in person accumulation early in the morning at about 05:00 to 06:00, followed by a drop until 13:00-14:00, when the number of people begins to grow again. The afternoon peak demand is higher than in the morning with the peak occurring at about 17:00-18:00.
  - Refer to the pattern graphs in the **Appendix**.
  - It was noted that at the Manly and Mona Vale facilities the person accumulation was substantially lower between the peaks, whereas at the Fairfield West gymnasium after a drop between 07:00 and 09:00 the visitations started increasing steadily until the peak at 17:00.
- The statistical analysis of the person accumulation showed the following results for the above three facilities.

Table 4. Person accumulation statistics.

	People			
Wednesday	**85th %-le**	**95th%-le**	**Maximum**	**Average**
Manly	16	20	22	11
Mona Vale	17	21	22	11
Fairfield West	20	23	23	11
	People			
Saturday	**85th %-le**	**95th%-le**	**Maximum**	**Average**
Manly	15	17	18	7
Mona Vale	13	15	16	7
Fairfield West	13	13	16	9

Note: 85th percentile and 95th percentile demand levels are standard levels of demand for design purposes in traffic engineering.

Item	Report

- It must be noted that for gymnasiums of a similar size all design levels of person accumulation are very consistent and indicate that the results of the analysis are sufficiently reliable as a basis for estimation of the person accumulation and parking demand at the proposed facility.
- The above person accumulation statistics were converted into the parking demand levels using the percentages of drivers from **Table 3**. The results are shown below.

Table 5. Estimated parking demand.

	Cars			
Wednesday	**85th %-le**	**95th%-le**	**Maximum**	**Average**
Manly	11	13	14	7
Mona Vale	11	14	14	7
Fairfield West	13	15	15	7
	Cars			
Saturday	**85th %-le**	**95th%-le**	**Maximum**	**Average**
Manly	7	8	8	3
Mona Vale	6	7	7	3
Fairfield West	6	6	7	4

Item	Report
Planning control document	• Northern Beaches Council ◦ Warringah Development Control Plan 2011 ▪ Part C: Siting Factors ▪ Appendix 1 Car Parking Requirements

Requirement	Compliance **Only requirements relevant to the present proposal are reported**
C2 Traffic, Access and Safety	
Vehicular Access	
1. Applicants shall demonstrate that the location of vehicular and pedestrian access meets the objectives	Complies, approved previously
2. Vehicle access is to be obtained from minor streets and lanes where available and practical.	Complies, approved previously
3. There will be no direct vehicle access to properties in the B7 zone from Mona Vale Road or Forest Way.	Not applicable
4. Vehicle crossing approvals on public roads are to be in accordance with Council's Vehicle Crossing Policy (Special Crossings) LAP-PL413 and Vehicle Access to Roadside Development LAP-PL 315.	Not applicable
5. Vehicle crossing construction and design is to be in accordance with Council's Minor works specification.	Complies, approved previously
On-site loading and unloading	Complies, approved previously
6. Facilities for the loading and unloading of service, delivery and emergency vehicles are to be: • appropriate to the size and nature of the development; • screened from public view; and • designed so that vehicles may enter and leave in a forward direction.	Complies, approved previously
C3 Parking Facilities	
1. The following design principles shall be met:	
• Carparking is to be provided partly or fully underground for apartment buildings and other large scale developments.	Complies, approved previously
2. Off street parking is to be provided within the property demonstrating that the following matters have been taken into account: • the land use; • the hours of operation; • the availability of public transport; • the availability of alternative car parking; and • the need for parking facilities for courier vehicles, delivery / service vehicles and bicycles.	Complies
3. Carparking, other than for individual dwellings, shall:	
• Avoid the use of mechanical car stacking spaces;	Complies, approved previously
• Not be readily apparent from public spaces;	Complies, approved previously

Item	Report

Requirement	Compliance
• Provide safe and convenient pedestrian and traffic movement	Complies, approved previously
• Include adequate provision for manoeuvring and convenient access to individual spaces;	Complies, approved previously
• Enable vehicles to enter and leave the site in a forward direction;	Complies, approved previously
• Incorporate unobstructed access to visitor parking spaces;	Complies, approved previously
• Minimum car parking dimensions are to be in accordance with AS/NZS 2890.1	Complies, approved previously
4. Carparking is to be provided in accordance with Appendix 1 which details the rate of car parking for various land uses. Where the carparking rate is not specified in Appendix 1 or the WLEP, carparking must be adequate for the development having regard to the objectives and requirements of this clause. The rates specified in the Roads and Traffic Authority's Guide to Traffic Generating Development should be used as a guide where relevant.	

Recreational and tourist facilities	
Use	**Requirement**
Gymnasium	4.5 spaces per 100 m2 GFA.

Office and Business	
Use	**Requirement**
Office premises	1 space per 40 m2 GFA.

Car Parking Required:

office	GFA	Rate		Required parking		rounded up	
	141	1	space per 40 sqm	3.5	spaces	4.0	spaces
gymnasium	GFA	Rate		Required parking		rounded up	
	1000	4.5	space per 100 sqm	45.0	spaces	45.0	spaces
			Total	**48.5**	**spaces**	**49.0**	**spaces**

Car Parking Proposed:

12 permanent existing spaces are proposed, resulting in a deficiency of 37 spaces.

This non-compliance is regarded as acceptable for the following reasons.

The staff and users of the proposed gymnasium will also have 24/7 access to the shared pool of 62 spaces in the basement (as per the a approval from One Commercial, the property managers for the entire site.

The DCP parking rate of 4.5 spaces per 100 m^2 GFA is based on the rate contained in the RMS (TfNSW) Guide to Traffic Generating Developments (GTGD).

It must be noted that the above parking rate was derived from the surveys and analysis

Item	Report	
	Requirement	**Compliance**
		conducted by RMS in 1993. There were significant changes since then in the gymnasiums' mode of operation, which prompted TfNSW to commission PeopleTrans to undertake a survey of gymnasiums across Sydney in 2014. The study noted a significant reduction in the car parking demand rate, to 2.8 spaces per 100 m^2 GFA on average. The study noted the following factors contributing to such a reduction. • a push towards 24-hour gymnasiums (noting that the gymnasiums in the 1993 study were mostly open only between 06:00-06:30 and 20:30-21:00 on weekdays and had very limited hours on weekends). If gymnasiums have longer opening hours then the same number of people spread across longer opening hours would result in lower peak person trip rates. • consolidation of the number of gymnasium operators. The consolidation of ownership also allows members of the chain to use a number of gymnasiums in addition to their 'home' • the type of equipment used in gymnasiums these days takes up more room than it did back in 1993, resulting in a reduced maximum capacity of gymnasiums in 2014. If the above rate of 2.8 spaces per 100 m^2 GFA is applied to the proposed gymnasium, it would result in a total requirement of 33 spaces instead of 53 spaces. It must be noted that the original RMS (1993) study included the following comment: "The survey results reveal that activity at gymnasiums varies significantly due to largely unpredictable factors such as promotional effort, season / day to day demand, trendiness, popularity of particular instructors, weather etc., and because most gymnasiums are not 'purpose built' there is a reduced correlation between floor area and actual utilisation demand." The authors of the 2014 study noted that the above comment is still relevant. It is important, therefore, to consider the person accumulation and travel mode data collected from similar sites run by the same operator. The analysis of such data was described earlier in this report and it is believed to present the best basis for the parking demand estimation for the current proposal. The results of the surveys at the three existing centres were applied to the present development proposal as follows. The car parking demand statistics for each gymnasium (contained in **Table 5**) were factored up by the ratio of the proposed GFA

(1,141 m²) divided by the respective gymnasium GFA. The results are contained in **Table 6** overleaf.

Table 6. Estimated car parking demand for existing gymnasiums, factored up to the proposed GFA.

	Car parking demand (factored by GFA ratio)			
	85th %-le	**95th%-le**	**Maximum**	**Average**
Manly	21	25	28	14
Mona Vale	17	22	22	11
Fairfield West	22	25	26	12
Average	20	24	25	12

The average parking demand in **Table 6** represents peak parking demand levels estimated for the proposed development. The peak parking demand occurs on a weekday afternoon.

Based on the peak parking demand levels contained in **Table 6** (for the weekday afternoon), parking demand levels for other critical time periods were calculated proportionally to the levels observed at the three surveyed gymnasiums (from the parking demand patterns included in the **Appendix**). The results are shown in **Table 7**.

Table 7. Estimated car parking demand for the proposed development for typical peak periods.

	Car parking demand (factored by GFA ratio)			
	85th %-le	**95th%-le**	**Maximum**	**Average**
Weekday AM	15	17	18	9
Weekday PM	20	24	25	12
Weekend AM	10	12	13	6
Weekend PM	7	8	8	4

It is submitted that the 95th percentile level of parking demand should be the design level, noting that the absolute maximum demand is a rare occurrence.

As noted on the first page of this report, several other warehouses on the Northern Beaches Business Park site were previously proposed and approved for a change of use. All of these developments involved increases in parking demand and relied in part on shared parking on the site as well as on on-street parking. The level of such reliance differs at different times and it is prudent for the current analysis to provide a summary of the proposed parking demand and supply for these proposals and the current proposal. Please refer to **Table 8** overleaf.

- The documentation for the proposal for Warehouse 2, available on the Council's website, does not contain detailed information with regard to the likely parking demand at different

peak periods. The only provided information is that the required parking provision is 12 spaces with 4 spaces provided. The proposal relies on shared parking on site, however, no confirmation that this development would be allowed to use on-site shared parking seems to have been provided in the SEE for that proposal.

- Only one peak period (Weekday PM) for this development has thus been included in **Table 8**.
- Reliance on shared on-site parking was excluded from **Table 8** for Warehouse 2 as it was not regarded as confirmed.
- It must be noted that the internal Traffic Engineer Referral Response for the Warehouse 2 proposal accepted the likely reliance on on-street parking, whereas no such dispensation was granted to the current proposal on PLM Notes.

Table 8. Car parking demand and supply for the approved and current proposals.

		Parking demand	Parking provision				Spare shared parking capacity
	Time period		Unit allocation	Shared	Total	Surplus/Deficit	
Warehouse 1	Weekday AM	28	35	0	35	-9	
Warehouse 7 & 8	Weekday AM	34	20	62	82	48	66
Warehouse 11	Weekday AM	13	21	10	31	18	
Warehouse 9 (95th %-le)	Weekday AM	17	12	0	12	-5	can fit in shared
Warehouse 1	Weekday PM	44	35	0	35	-9	
Warehouse 11	Weekday PM	15	21	10	31	16	72
Warehouse 7 & 8	Weekday PM	26	20	62	82	56	
Warehouse 2	Weekday PM	12	4	0	4	-8	
Warehouse 9 (95th %-le)	Weekday PM	24	12	0	12	-12	can fit in shared
Warehouse 1	Weekend AM	71	35	0	35	-36	
Warehouse 7 & 8	Weekend midday	44	20	62	82	38	52
Warehouse 11	Weekend midday	17	21	10	31	14	
Warehouse 9 (95th %-le)	Weekend AM	12	12	0	12	0	
Warehouse 1	Weekend PM	0	35	0	35	35	73
Warehouse 11	after 7 p.m.Mon to Sat	22	21	10	31	9	
Warehouse 7 & 8	Weekend PM	53	20	62	82	29	
Warehouse 9 (95th %-le)	Weekend PM	8	12	0	12	4	

It is evident from **Table 8** that the developments at Warehouses 7, 8 and 11 appear to be fully provided by on-site parking at all peak periods.

The proposed swim school at Warehouse 1 appears to rely on on-street parking during the peak periods on weekday mornings and afternoons, as well as on weekend mornings.

Item	Report	
	Requirement	**Compliance**
		The proposed padel tennis centre at Warehouse 2 will rely on on-street parking on weekday afternoons. The total on-street parking demand likely to be generated by Warehouses 1 and 2 after the change of use will be • weekday morning – 9 vehicles (with Warehouse 2 not known) • weekday afternoon – 17 vehicles • weekend morning – 36 vehicles (with Warehouse 2 not known) The proposed gymnasium at Warehouse 9 will have some extra parking demand above the allocated 12 parking spaces (for the peak periods on weekday mornings (before 07:00) and afternoons (at about 16:00-19:00). However, the available shared car park, even after the additional parking demand generated by Warehouses 7, 8 and 11, will have more than sufficient spare capacity (66 to 72 spaces) to accommodate the extra demand of 5 to 12 spaces). Even if the shared off-street parking wasn't available (in an unlikely worst case scenario), parking surveys on the street demonstrated that a minimum of 100 (to a maximum of 145) spaces during weekdays and a minimum of 110 (to a maximum of 136) spaces will be available within walking distance of 250 m from the proposed gymnasium. This level of spare parking capacity is more than sufficient to accommodate the proposed combined parking demand from Warehouses 1, 2 and 9.
	5. Adequate provision for staff, customer and courier parking, and parking and turning of vehicles with trailers must be provided if appropriate to the land use.	Complies
	6. For bulky goods premises adequate on-site parking spaces for service/delivery vehicles at a convenient location, separated from customer parking must be provided.	Not applicable
	7. Where appropriate, car parking which meets the needs of people with physical disabilities must be provided in accordance with the relevant Australian Standard.	Complies, approved previously
	8. For Forest Way Village car parking at ground level is to be provided for individual units.	Not applicable
	C3(A) Bicycle Parking and End of Trip Facilities	
	1. Bicycle parking facilities must be provided for new buildings and for alterations or additions to existing buildings. In the case of alterations or additions to existing buildings bicycle parking facilities are required for the additional floor area only.	No additional floor areas are proposed, however there is a change of use.
	2. Bicycle parking shall be designed and constructed in accordance with Australian Standard AS 2890.3 – Bicycle Parking Facilities.	The original DA for the Northern Beaches Business Park includes some 40 on-site bicycle parking spaces.
	3. Bicycle parking facilities shall be designed to	Complies, approved previously

Requirement	Compliance
be an integral part of the development and where visible from public places or streets, will complement the visual quality of the public domain	
4. Bicycle parking shall be provided in accordance with the generation rates in the following table and is determined by adding Column 1 and Column 2 requirements and rounding up.	

MINIMUM BICYCLE PARKING REQUIREMENTS	
Land Use	Column 1 High–Medium Security Level*
Recreation Facility (indoor, outdoor, or major)	1 per 4 employees PLUS 1 per 1500 spectator places

MINIMUM BICYCLE PARKING REQUIREMENTS	
Land Use	Column 2 High–Low Security Level**
Recreation Facility (indoor, outdoor, or major)	1 per 200m2 GFA 1 per 250 spectator places

Bicycle parking required	Bicycle parking proposed
There will be a maximum of 4 staff at any one time, requiring one (1) high-medium security bicycle space.	One (1) bicycle can be securely stored on premises, in the staff office.
1,141 m^2 GFA requires 8 bicycle spaces	The original DA for the Northern Beaches Business Park includes some 40 on-site bicycle parking spaces. These should be able to accommodate the required bicycle parking for visitors, noting that the peak periods of person accumulation are outside the peaks for industrial/warehouse uses.
5. End of trip facilities must be provided for new buildings and for alterations or additions to existing buildings. In the case of alterations or additions to existing buildings end of trip facilities are required for the additional floor area only. End of trip facilities are not required for schools, wholly residential buildings or residential components of mixed use buildings	No additional floor areas are proposed, however there is a change of use.
6. End of trip facilities shall be provided in accordance with the following: a) Bathroom/ change area(s) shall be provided and shall contain: • At least one toilet, wash basin, mirror, clothing hooks and power points (including shaving plugs). • A minimum of one shower cubicle per seven (7) required bicycle parking spaces. • Each shower cubicle shall include a private clothes changing area with a bench and a minimum of two (2) clothing hooks.	Two (2) shower cubicles are required. Four (4) cubicles with changing areas are proposed, with an additional separate change room. Complies and exceeds the DCP requirements.
b) Clothes Lockers shall be: • Provided at the rate of one clothes locker for every required bicycle parking space.	A sufficient number of lockers is provided for the gymnasium members, exceeding the requirements for cyclists.

Item	Report	
	Requirement	**Compliance**
	• Secure, ventilated and large enough to store cycling gear (such as panniers, shoes, towels and clothing).	

Item	Report
	Traffic impacts
Existing traffic	Traffic conditions have been reported in a traffic report which accompanied the original DA for the Northern Beaches Business Park (GTA 2020).
	The GTA assessment concluded that the intersection of South Creek Road/ Inman Road would operate at the Level of Service A (good operation and spare capacity) with the additional development traffic.
Traffic generation	• **Base traffic generation rates**
	◦ RMS (2002) Guide to Traffic Generating Developments provides the following trip generation rates for gymnasiums.

3.8.2 Gymnasiums.

Rates.

- Metropolitan Regional (CBD) Centres.

Daily Vehicle Trips = 20 trips per 100m^2 GFA
Evening Peak Hour Vehicle Trips = 3 trips per 100m^2 GFA

- Metropolitan Sub Regional Areas.

Daily Vehicle Trips = 45 trips per 100m^2 GFA
Evening Peak Hour Vehicle Trips = 9 trips per 100m^2 GFA.

◦ As discussed earlier in this report, the above rates are based on the 1993 survey data and are regarded as highly inflacted at least for the Metropolitan Sub Regional Areas. PeopleTrans (2014) report suggest that the current rate should be in the order of 4.3 trips per 100 m^2 GFA for the development in locations similar to the present proposal.

• **Traffic generated by the proposed development**

◦ Gymnasium

▪ Metropolitan Sub Regional Areas (as per the PeopleTrans report).

Evening Peak Hour Vehicle Trips = 4.3 trips per 100 m^2 GFA.

- 4.3 vehicle trips / 100 m^2 GFA

	GFA	**1141**
	afternoon peak hour	
trips per unit	0.043	
number of trips	**48.7**	
distribution	IN	OUT
%	50%	50%
number of trips	24.34	24.34
rounded	**24**	**24**

Traffic distribution	• Trip generation and attraction is assumed to be equal in all directions, with trip distribution taking into account the surrounding street network, connections and turn restrictions.
	◦ The resulting additional traffic volumes per turn at the nearest intersections will be very low, in the order of 5 to 6 veh/hr per movement. This is well within the hourly traffic fluctuations and the intersection spare capacity.
	◦ Refer to **Figure 7.**
Conclusion	• Additional traffic generation will have no detrimental impacts on the existing road network operation or road safety.

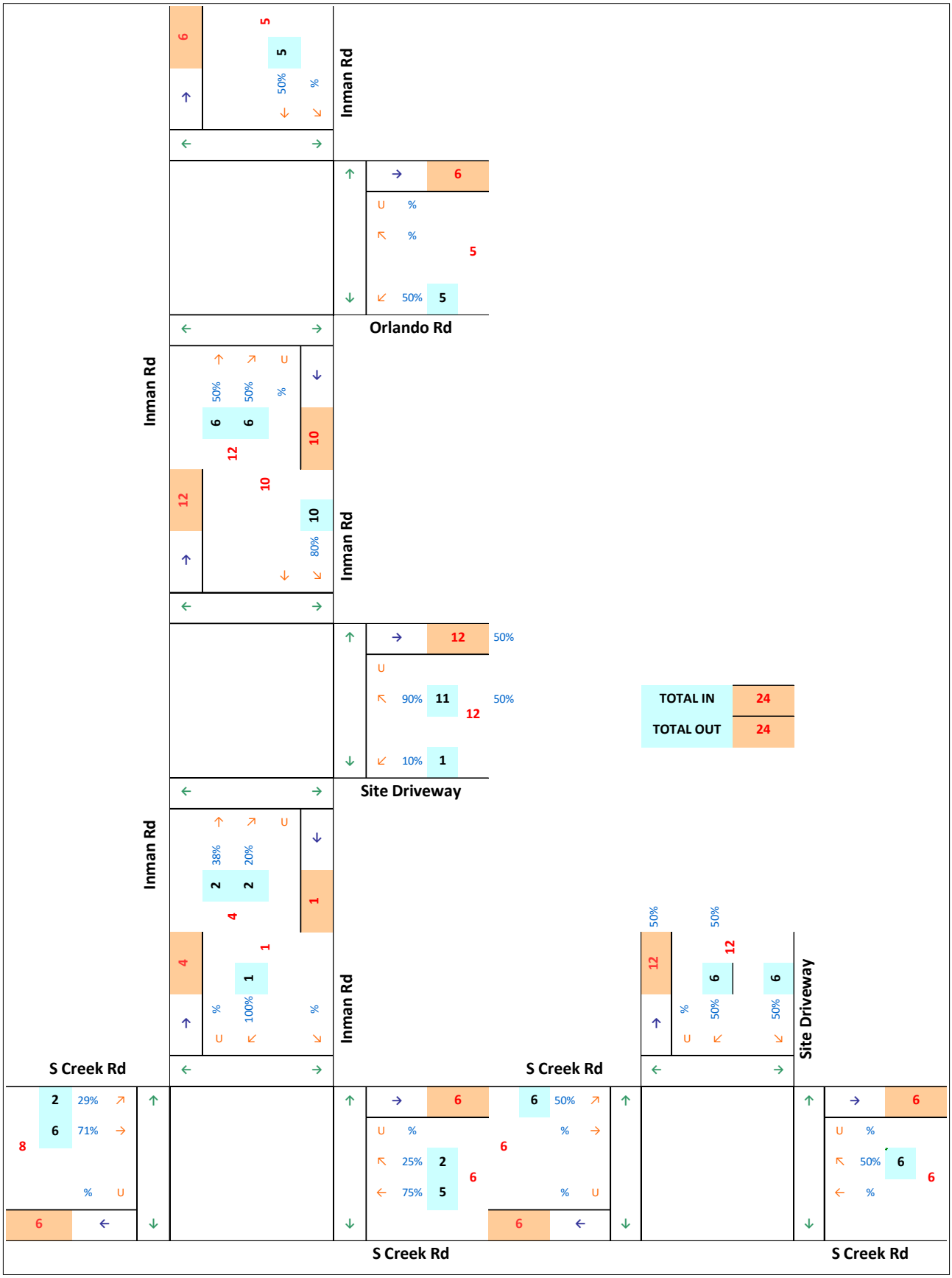
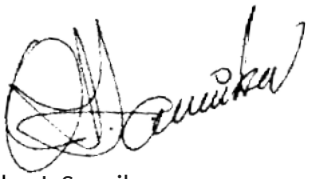


Figure 7. Additional traffic volumes (weekday afternoon/evening peak).

Conclusions	•	The proposed parking provision does not comply with the Council's DCP, providing 12 car parking spaces instead of 49 spaces.
	•	This is deemed acceptable on merit due to
		◦ Access to the shared parking pool on site, approved by the property management, where more than sufficient spare capacity will exist during the peak demand times of the proposed development
		◦ Much lesser realistically expected parking demand levels calculated based on the survey results at similar facilities.
		◦ High levels of vacant parking on the street within close walking distance from the site and
	•	Traffic impacts
		◦ The additional traffic from the proposed development will be minimal and will have no negative impacts on street network operation.
	•	The proposed development is supportable on traffic and parking grounds.



Oleg I. Sannikov
Director
MEngSc (Traffic Engineering)
MIEAust, PEng
FAITPM

References:

Warringah Development Control Plan 2011
Guide to Traffic Generating Developments RMS (2002)

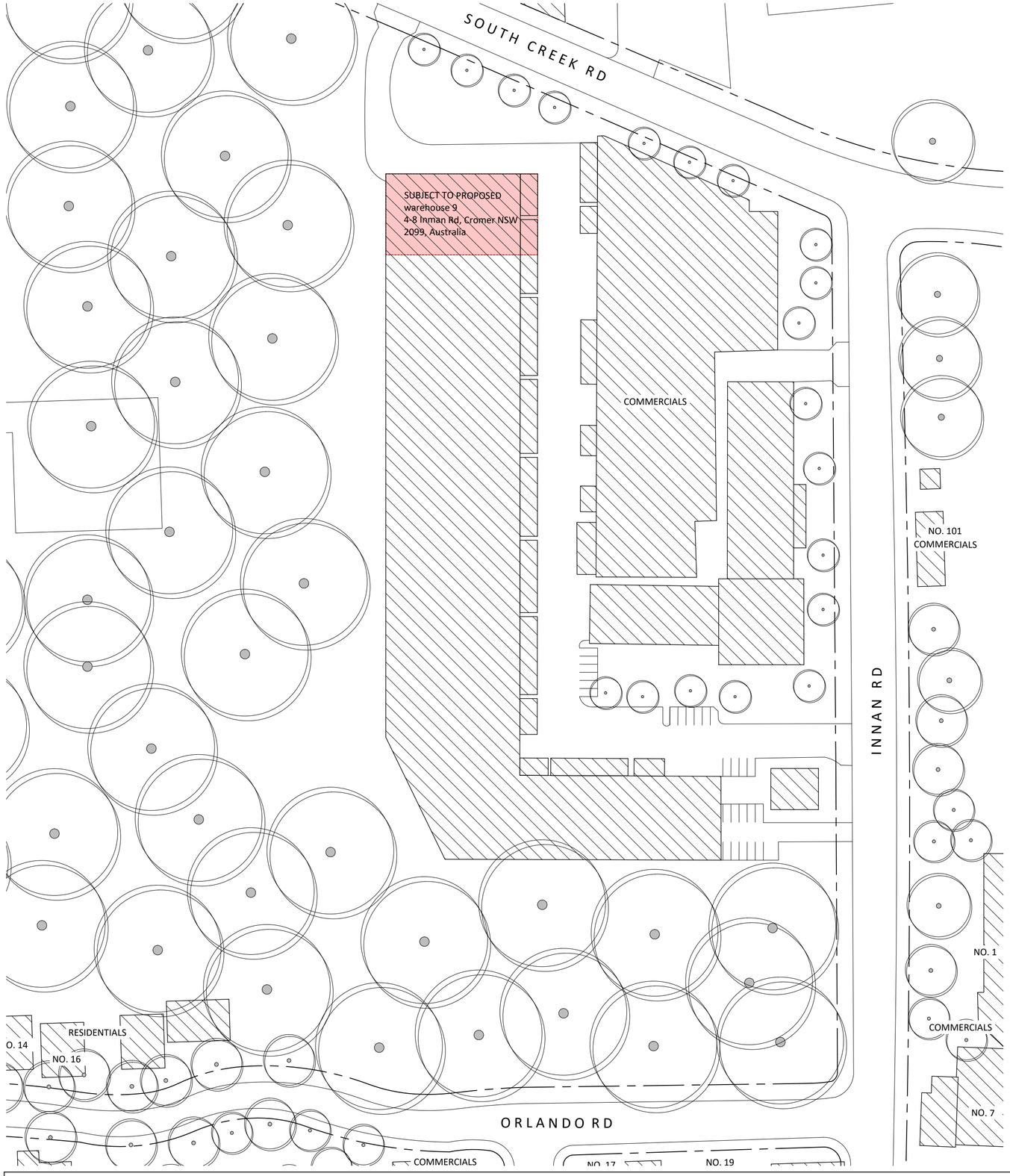
PeopleTrans Pty Ltd (2014) Trip Generation and Parking Demand Surveys of Gymnasiums. Data and Analysis Report.

AS/NZS 2890.1:2004: Parking Facilities – Off-street car parking

AS/NZS 2890.6:2009: Parking Facilities – Off-street parking for people with disabilities

Appendix

Plans of the proposed gymnasium
Public transport routes
2022 (per-construction) parking surveys
Parking demand patterns at similar gymnasiums



SITE PLAN
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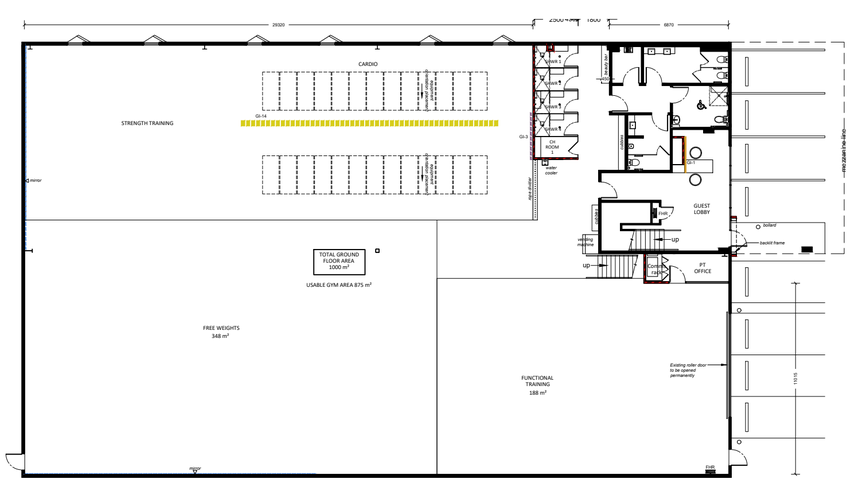

PROPOSED TENANCY PLAN - GROUND FLOOR
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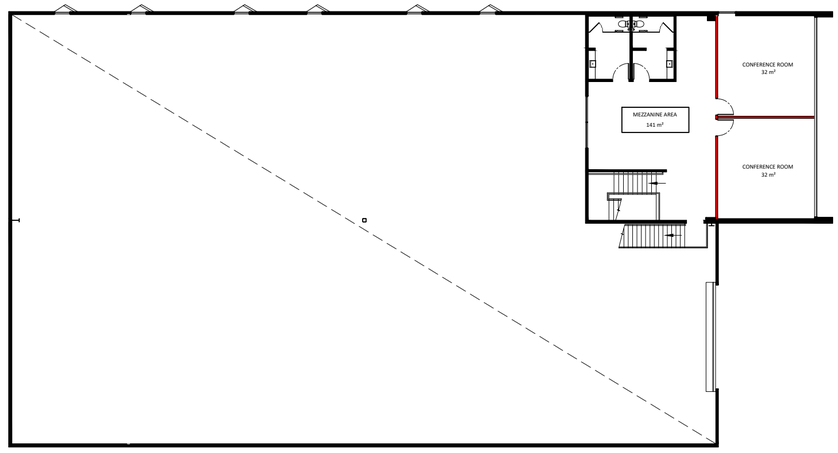
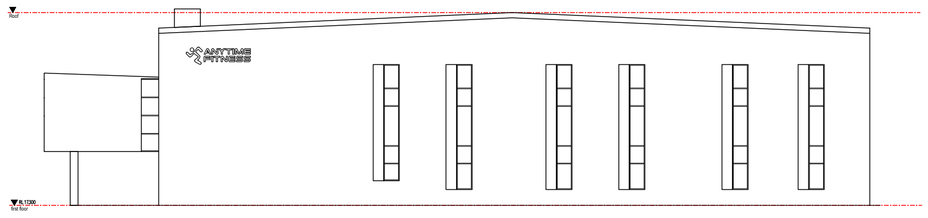
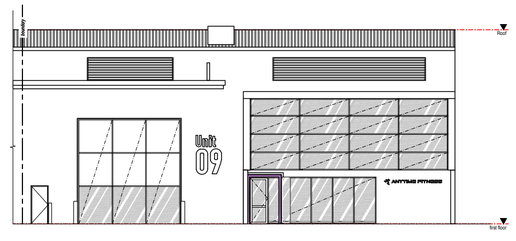


PROPOSED TENANCY PLAN - MEZZANINE FLOOR
SCALE: 1:250



PROPOSED EAST ELEVATION
SCALE: 1:250



PROPOSED SOUTH ELEVATION
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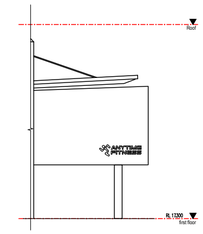

PROPOSED WEST ELEVATION
SCALE: 1:250

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NORTH

ISSUE	DATE	DESCRIPTION
A	03.11.2023	Issue for Development Approval
B	08.11.2023	Revise Issue to Council

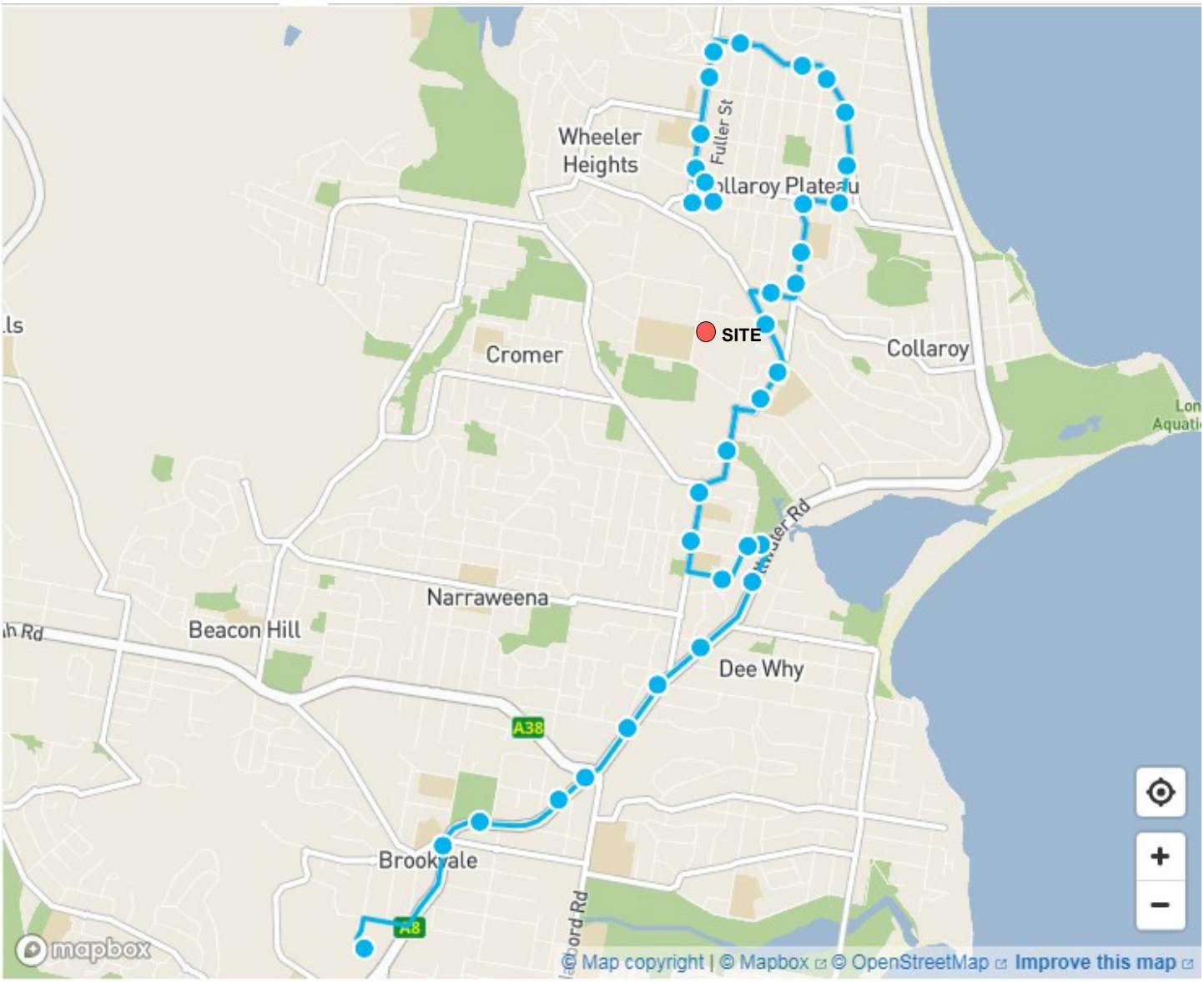
PROJECT:
AF Cromer NSW
Unit 9, 4-8 Inman Rd, Cromer NSW

CLIENT:
AF Cromer NSW
Unit 9, 4-8 Inman Rd, Cromer NSW

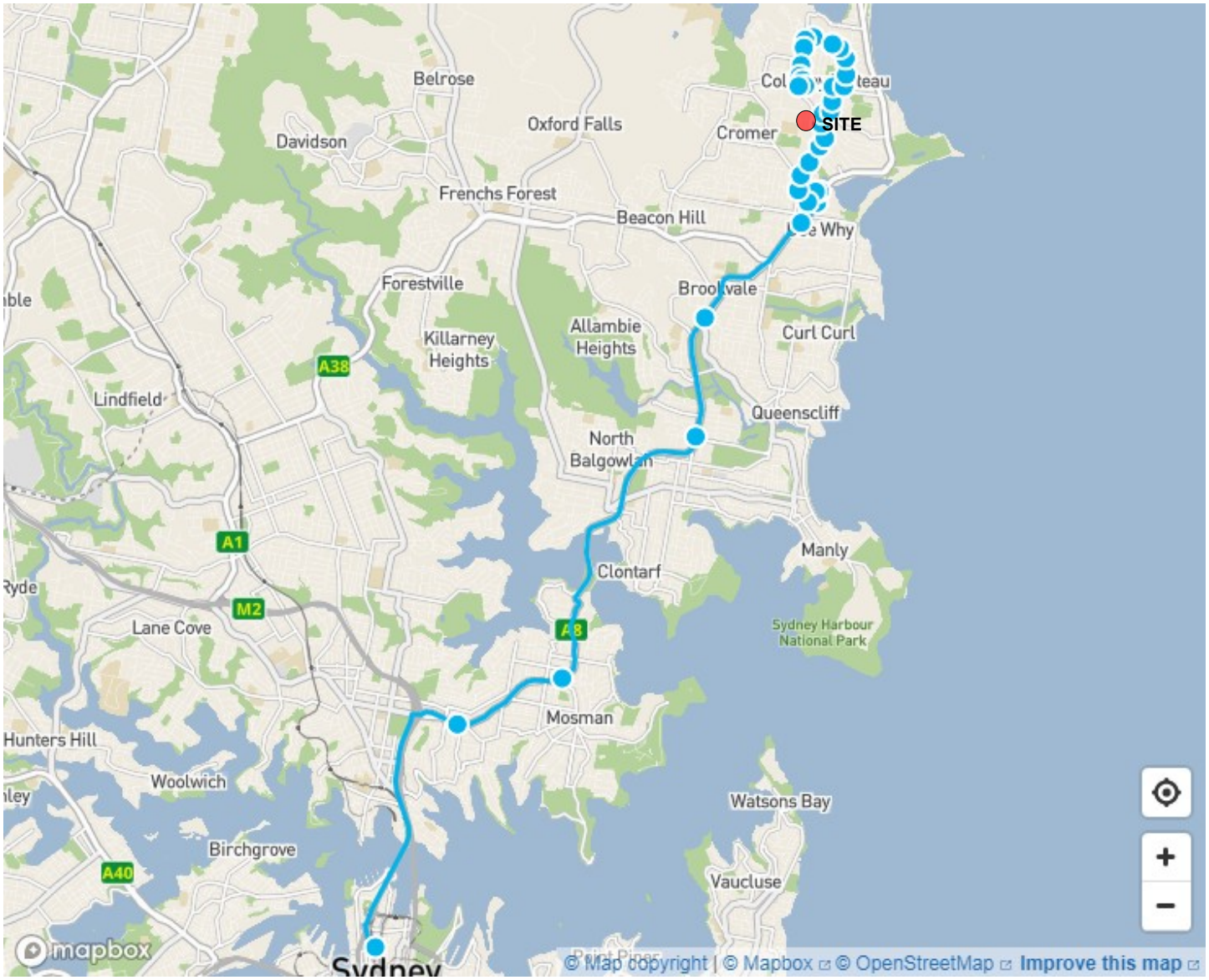
SHEET TITLE:
Notification Drawings

SCALE: as shown @A2
DRAWN: Furqon S
SHEET SIZE: A2
DWG NO: N01.01
REVISION: a

Bus Route 180



Bus Route 180X



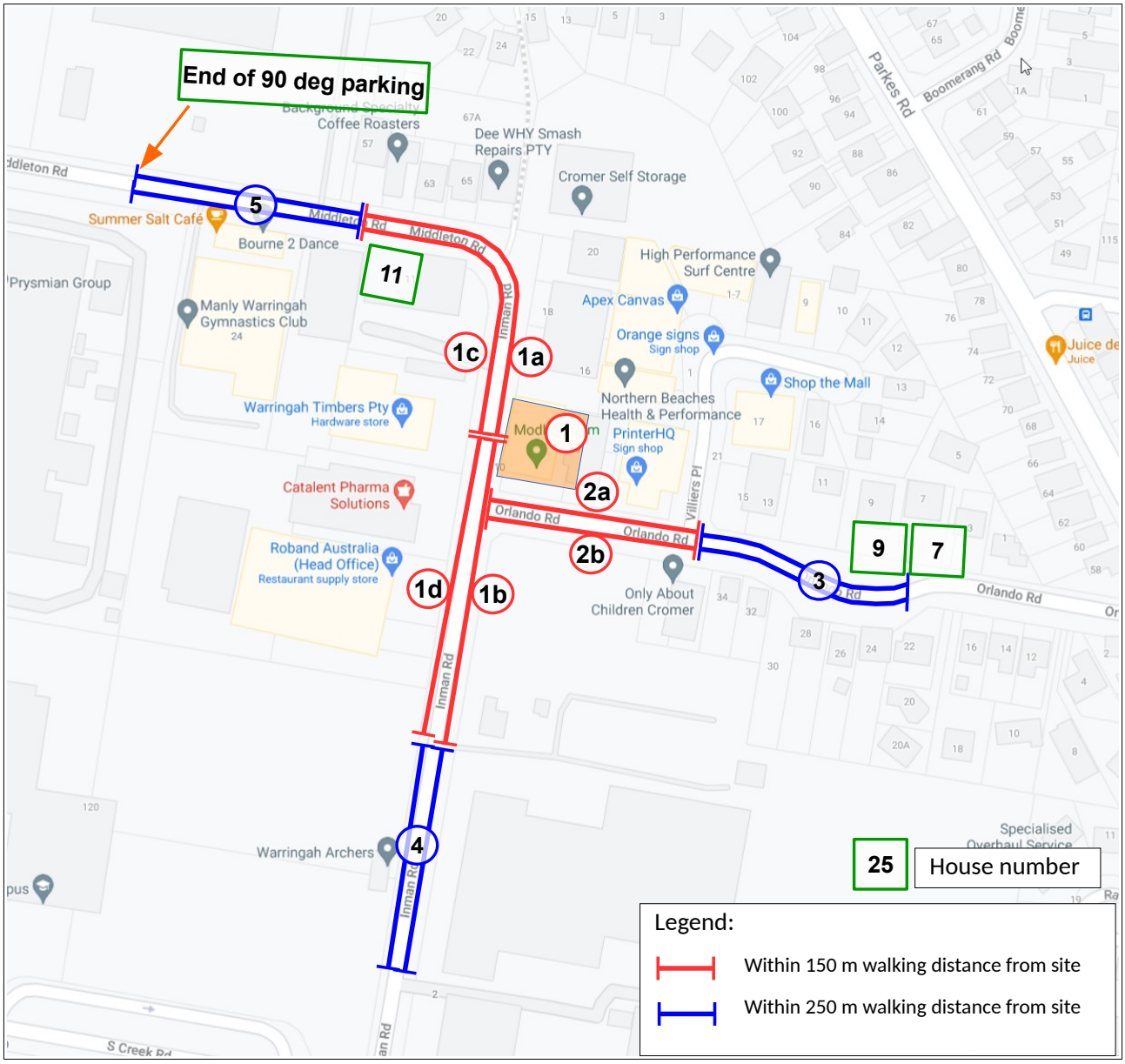


Figure 4. Parking survey locations.

2022 (pre-construction) parking surveys

Table 1. Parking survey results - Thursday.

13/1/2022	Number of parked cars												
Thursday	Parking Location												
Time	**1**	**1a**	**1b**	**1c**	**1d**	**2a**	**2b**	3	4	5	**1 to 2b**	**3 to 5**	**Total**
9:00	1	14	6	15	15	8	10	11	3	51	69	65	**133**
9:30	1	14	6	14	15	8	10	11	3	53	67	67	**134**
10:00	1	14	7	14	15	8	10	11	4	55	68	70	**138**
10:30	1	15	7	14	15	8	10	11	5	58	69	74	**143**
11:00	2	14	8	12	16	7	10	11	6	58	67	75	**142**
11:30	1	12	6	12	16	8	10	11	8	58	64	77	**141**
12:00	1	12	6	11	15	8	10	10	9	57	62	76	**138**
12:30	2	12	6	12	15	7	10	10	8	56	62	74	**136**
13:00	3	11	7	11	15	7	10	10	7	55	61	72	**133**
13:30	3	11	7	11	16	7	10	10	6	55	62	71	**133**
14:00	3	11	7	11	16	7	10	10	7	41	62	58	**120**
14:30	2	11	7	10	17	7	10	10	8	41	62	59	**121**
15:00	2	11	7	10	17	7	10	10	9	32	62	51	**113**
15:30	2	10	7	10	17	5	10	10	10	33	59	53	**112**
16:00	3	9	6	10	17	4	9	10	11	32	55	53	**108**
16:30	3	9	6	10	17	3	8	9	12	31	53	52	**105**
17:00	2	9	3	10	10	3	6	8	7	20	41	35	**76**
17:30	1	8	2	6	8	4	6	8	6	18	34	32	**66**
18:00	1	6	1	5	3	4	6	8	6	17	25	31	**56**
18:30	1	6	1	6	2	4	8	8	5	16	27	29	**56**
19:00	2	6	1	6	2	4	8	8	4	14	27	26	**53**
19:30	2	6	0	6	1	2	5	7	6	13	20	26	**46**
20:00	0	6	0	6	1	1	5	7	7	11	19	25	**44**
No of spaces	**3**	**15**	**18**	**16**	**18**	**8**	**11**	**15**	**38**	**69**	86	122	**208**

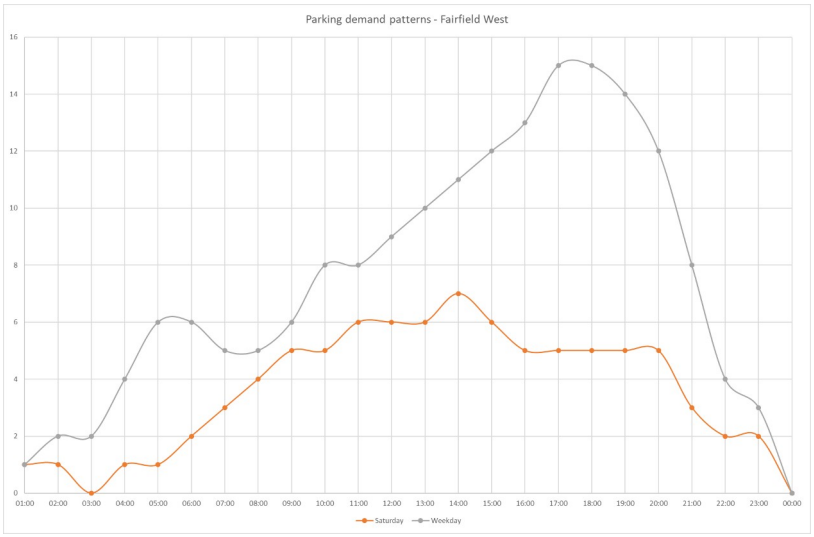
13/1/2022	Number of vacant parking spaces												
Thursday	Parking Location												
Time	**1**	**1a**	**1b**	**1c**	**1d**	**2a**	**2b**	**3**	**4**	**5**	**1 to 2b**	**3 to 5**	**Total**
9:00	2	1	12	1	3	0	1	4	35	18	20	57	**75**
9:30	2	1	12	2	3	0	1	4	35	16	19	55	**74**
10:00	2	1	11	2	3	0	1	4	34	14	18	52	**70**
10:30	2	0	11	2	3	0	1	4	33	11	17	48	**65**
11:00	1	1	10	4	2	1	1	4	32	11	19	47	**66**
11:30	2	3	12	4	2	0	1	4	30	11	22	45	**67**
12:00	2	3	12	5	3	0	1	5	29	12	24	46	**70**
12:30	1	3	12	4	3	1	1	5	30	13	24	48	**72**
13:00	0	4	11	5	3	1	1	5	31	14	25	50	**75**
13:30	0	4	11	5	2	1	1	5	32	14	24	51	**75**
14:00	0	4	11	5	2	1	1	5	31	28	24	64	**88**
14:30	1	4	11	6	1	1	1	5	30	28	24	63	**87**
15:00	1	4	11	6	1	1	1	5	29	37	24	71	**95**
15:30	1	5	11	6	1	3	1	5	28	36	27	69	**96**
16:00	0	6	12	6	1	4	2	5	27	37	31	69	**100**
16:30	0	6	12	6	1	5	3	6	26	38	33	70	**103**
17:00	1	6	15	6	8	5	5	7	31	49	45	87	**132**
17:30	2	7	16	10	10	4	5	7	32	51	52	90	**142**
18:00	2	9	17	11	15	4	5	7	32	52	61	91	**152**
18:30	2	9	17	10	16	4	3	7	33	53	59	93	**152**
19:00	1	9	17	10	16	4	3	7	34	55	59	96	**155**
19:30	1	9	18	10	17	6	6	8	32	56	66	96	**162**
20:00	3	9	18	10	17	7	6	8	31	58	67	97	**164**

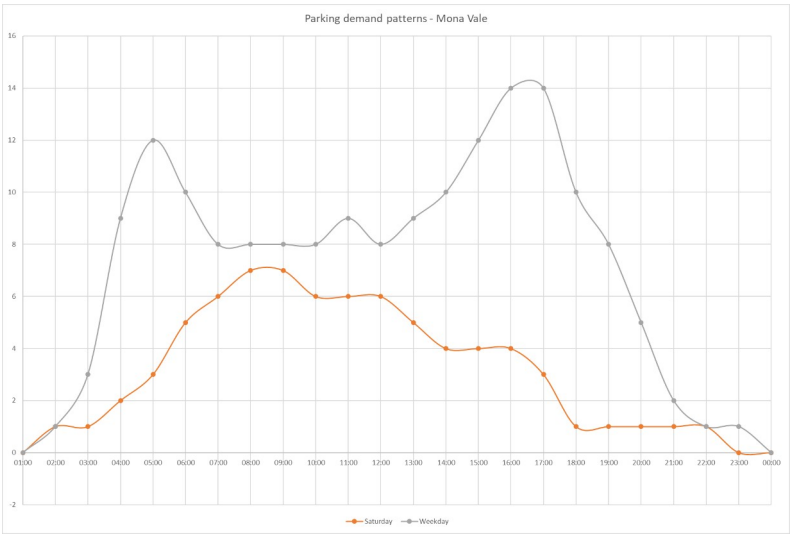
2022 (pre-construction) parking surveys

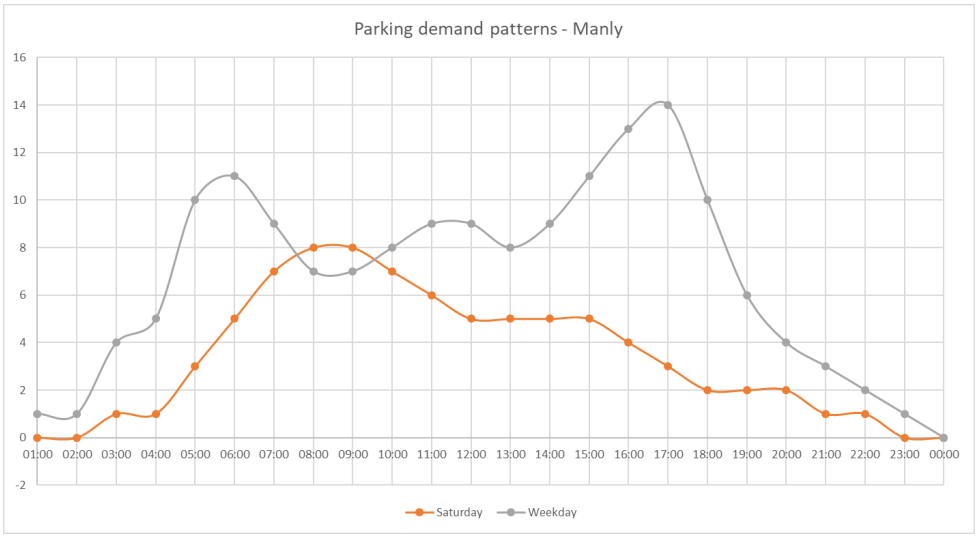
Table 2. Parking survey results – Saturday.

15/1/2022	Number of parked cars												
Saturday	Parking Location												
Time	**1**	**1a**	**1b**	**1c**	**1d**	**2a**	**2b**	3	4	5	**1 to 2b**	**3 to 5**	**Total**
8:00	2	8	2	5	2	3	7	7	8	15	29	30	**57**
9:00	2	8	2	5	2	4	6	9	10	16	29	35	**62**
9:30	2	8	2	5	2	4	6	8	10	15	27	33	**60**
10:00	3	8	2	7	2	5	6	8	10	15	30	33	**63**
10:30	2	8	3	8	3	5	6	7	10	14	33	31	**64**
11:00	2	8	3	8	3	5	6	7	10	14	33	31	**64**
11:30	2	7	3	7	3	3	6	6	7	13	29	26	**55**
12:00	2	7	1	6	2	2	5	6	7	13	23	26	**49**
12:30	2	7	0	6	1	2	5	6	7	13	21	26	**47**
13:00	0	6	0	6	1	2	5	6	6	12	20	24	**44**
13:30	0	5	0	6	0	2	4	6	6	12	17	24	**41**
14:00	0	5	0	6	0	1	4	7	6	11	16	24	**40**
14:30	1	6	0	6	0	1	4	7	6	11	17	24	**41**
No of spaces	**3**	**15**	**18**	**16**	**18**	**8**	**11**	**15**	**38**	**69**	86	122	**208**

15/1/2022	Number of vacant parking spaces												
Saturday	Parking Location												
Time	**1**	**1a**	**1b**	**1c**	**1d**	**2a**	**2b**	**3**	**4**	**5**	**1 to 2b**	**3 to 5**	**Total**
8:00	1	7	16	11	16	5	4	8	30	54	60	92	**151**
9:00	1	7	16	11	16	4	5	6	28	53	60	87	**146**
9:30	1	7	16	11	16	4	5	7	28	54	59	89	**148**
10:00	0	7	16	9	16	3	5	7	28	54	56	89	**145**
10:30	1	7	15	8	15	3	5	8	28	55	53	91	**144**
11:00	1	7	15	8	15	3	5	8	28	55	53	91	**144**
11:30	1	8	15	9	15	5	5	9	31	56	57	96	**153**
12:00	1	8	17	10	16	6	6	9	31	56	63	96	**159**
12:30	1	8	18	10	17	6	6	9	31	56	65	96	**161**
13:00	3	9	18	10	17	6	6	9	32	57	66	98	**164**
13:30	3	10	18	10	18	6	7	9	32	57	69	98	**167**
14:00	3	10	18	10	18	7	7	8	32	58	70	98	**168**
14:30	2	9	18	10	18	7	7	8	32	58	69	98	**167**


Parking demand patterns - Fairfield West
16
14
12
10
8
6
4
2
0
01:00 02:00 03:00 04:00 05:00 06:00 07:00 08:00 09:00 10:00 11:00 12:00 13:00 14:00 15:00 16:00 17:00 18:00 19:00 20:00 21:00 22:00 23:00 00:00
Saturday
Weekday


Parking demand patterns - Mona Vale
16
14
12
10
8
6
4
2
0
-2
01:00 02:00 03:00 04:00 05:00 06:00 07:00 08:00 09:00 10:00 11:00 12:00 13:00 14:00 15:00 16:00 17:00 18:00 19:00 20:00 21:00 22:00 23:00 00:00
Saturday
Weekday


Parking demand patterns - Manly
16
14
12
10
8
6
4
2
0
-2
01:00 02:00 03:00 04:00 05:00 06:00 07:00 08:00 09:00 10:00 11:00 12:00 13:00 14:00 15:00 16:00 17:00 18:00 19:00 20:00 21:00 22:00 23:00 00:00
Saturday
Weekday