

Lilyfield Skate Plaza - 70 Mary Street, Lilyfield

REF Traffic & Parking Impact Assessment Report

Prepared for: Inner West Council

February 2022

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TABLE OF CONTENTS

1. Introduction	4
2. Existing Development / Traffic & Parking Conditions.....	5
2.1 Site Location	5
2.2 Existing Conditions	5
2.3 Existing road network.....	7
2.4 Traffic volumes, Classification and Observed speeds	8
2.5 Intersection conditions	12
3.3 Car Parking.....	13
2.6 Public Transport	14
2.6.1 Light rail.....	14
2.6.2 Buses.....	15
2.6.3 Transit coverage of site catchment	17
3.5 Bicycle and Pedestrian facilities	18
2.7 Surveys of Sydney Skate Plaza	19
3. Background Report Review	22
3.1 Lilyfield Precinct Parking Study (Final Report Issue A, 19 February 2021)	22
4. The Proposed Development.....	24
4.1 General	24
4.2 Key elements of the proposal	24
5. Assessment of Potential Traffic Impacts.....	25
5.1 Traffic Generation Estimations.....	25
5.2 Trip and traffic generation estimates.....	25
5.3 Assignment of vehicular traffic	25
5.4 Assessment of foot traffic.....	27
5.5 Assessment of Parking	28
6. Construction Traffic Management Plan	30
6.1 General	30
6.2 Major construction activity types	30
6.3 Access routes	30

6.4	Access Hours	31
6.5	Maintain existing roads	31
6.6	Construction Site Access	31
7.	Conclusions and Recommendations.....	33
7.1	Conclusions	33
7.2	Recommendations.....	33
8.	Appendix A – Plans of Proposed Development.....	34
9.	Appendix B – Survey Data.....	35
9.1	Surveys of use of Sydney Park Skate Plaza.....	35
9.2	ATC data	36

List of Figures

Figure 1 - Site Location

Figure 2 – Development Site Proximity to Existing Bus Stops

Figure 3 – Location of ATC surveys around the proposed site

Figure 4 – Public transport coverage around the subject site

Figure 5 – Cycling Ashfield Map of Bicycle Routes

Figure 6 – Sydney Skate Plaza

Figure 7 – Location of ATC surveys

List of Tables

Table 1 – Daily traffic volumes at ATC sites, all vehicles per day and heavy vehicle proportion (%), combined directions

Table 2 – Weekday AM and PM peak traffic volumes at ATC sites, all vehicles per hour by direction and combined directions (AM max of 7am to 10am and PM max of 4pm to 7pm)

Table 3 – Saturday and Sunday peak traffic volumes at ATC sites, all vehicles per hour by direction and combined directions, and hour of peak

Table 4 – 85th percentile traffic speeds at ATC sites, all vehicles by direction by type of day

Table 5 – Indicative bus service levels by day and time period for rte 437

Table 6 – Indicative bus service levels by day and time period for rte 440

Table 7 – Indicative bus service levels by day and time period for rte 445

Table 8 – Skate Plazas in Sydney - Indicative duration of stay

Table 9 – Traffic volumes on roads around the proposed Skate Plaza during peak use, Saturday 12pm, vehicles per hour

Table 10 – Occupancy of the Sydney Park

Table 11 – Parking occupancy survey, Sydney Park

1. Introduction

Positive Traffic Pty Ltd was commissioned by SJB Planning, on behalf of Inner West Council, to undertake a Traffic and Parking Impact Assessment as part of a Review of Environmental Factors (REF) of the proposed Lilyfield Skate Plaza.

This report sets out the investigation and assessment undertaken by us as part of the REF.

It is structured as follows:

- Chapter 2 shows the site location and identifies the existing traffic situation in the immediate environs of the proposal and parking facilities;
- Chapter 3 provides a review of relevant background reports;
- Chapter 4 describes the proposal and details the likely traffic and parking demands generated by the proposal
- Chapter 5 assesses the impacts of the proposal
- Chapter 6 provides details of a draft Construction Traffic Management Plan (CTMP); and
- Chapter 7 presents conclusions and recommendations



2. Existing Development / Traffic & Parking Conditions

The following presents a summary of existing site and traffic conditions.

2.1 Site Location

The proposed Lilyfield Skate Plaza would be located at the site known as Leichhardt Park, 70 Mary Street, Lilyfield NSW 2040. This site forms part of Leichhardt Oval recreational area (Lot 6643 DP 1137663)¹. The location of the development site is shown in **Figure 1**.

Figure 1 - Site Location



Source: Google Maps

This site is located in Sydney's Inner West suburb of Lilyfield, along the southeastern shore of Iron Cove. For the purposes of this analysis, we have adopted names of convenience to two of the roads in the immediate environs of the proposal. These are:

- 'Link Road' – which connects the northern end of Frazer Street to Maliyawul Street, and runs along the southern extent of the subject site
- 'Car Park Link Road' – which connects the northern end of Frazer Street to Mary Street in the vicinity of the Leichhardt Aquatic centre. This road runs along the eastern site of the subject site.

2.2 Existing Conditions

The proposed site is set within an extensive area of open space, that is used for both passive and active recreation. The recreational facilities around the site include (refer to **Figure 2**)²:

¹ Source: SJB Planning

² Note that some of these facilities charge for access, may be restricted to members, may have limitations on facilities at certain hours to accommodate training sessions and competitions

- Leichhardt Aquatic Centre
- Leichhardt Park
- Leichhardt Park Playground
- Mary Street Park
- Leichhardt Oval, Leichhardt Ovals No 2 and No 3
- Hippo Park – a child's playground
- Exercise equipment immediately north of Hippo Park
- Jetties (2) along west side of Maliyawul Street, with formalised dinghy storage along the foreshore for some 55 dinghies to provide access to approximately 50 boats on swing moorings just off shore
- Peace Park
- Lilyfield Boat Ramp to the south
- Leichhardt Rowing Club – to the north.

Along the foreshore the area includes the long-established Bay Run footway/shared cycleway, which provides a continuous circuit around Iron Cove's foreshore, including crossing the northeast end of the cove via Iron Cove Bridge. This is shown below in [Figure 2](#).

Figure 2 – Development Site Proximity to Existing Bus Stops

2.3 Existing road network

It is usual to classify roads according to a road hierarchy in order to determine their functional role within the road network. Changes to traffic flows on the roads can then be assessed within the context of the road hierarchy. Roads are classified according to the role they fulfil and the volume of traffic they should appropriately carry. The RTA has set down the following guidelines for the functional classification of roads.

- Arterial Road – typically a main road carrying over 15,000 vehicles per day and fulfilling a role as a major inter-regional link (over 1,500 vehicles per hour)
- Sub-arterial Road – defined as secondary inter-regional links, typically carrying volumes between 5,000 and 20,000 vehicles per day (500 to 2,000 vehicles per hour)
- Collector Road – provides a link between local roads and regional roads, typically carrying between 2,000 and 10,000 vehicles per day (250 to 1,000 vehicles per hour). At volumes greater than 5,000 vehicles per day, residential amenity begins to decline noticeably.
- Local Road – provides access to individual allotments, carrying low volumes, typically less than 2,000 vehicles per day (250 vehicles per hour).

'Link Road' (the road connecting Frazer Street and Maliyawul Street) is a short two-way local road approximately 60m in length with a carriageway of 6.5m width. The street includes 90-degree car parking on both sides, outside the carriageway width.

'Car Park Link Road' is a two-way local road connecting Mary Street near Leichhardt Aquatic Centre and the intersection of Frazer Street and Link Road. This road is approximately 6.5m wide. There are no formal pedestrian facilities along this road.

Frazer Street is a one-way local road between Perry Street and Link Road (note it is closed at Lilyfield Road) and Link Road. It has parallel parking and footways along both sides.

Maliyawul Street is a two-way collector road with threshold treatment approximately 70m north of Lilyfield Road. It generally has 90-degree angle parking along its west side from here to its terminus some 450m north of Lilyfield Road.

Mary Street is a two-way local road, with on-street parking (restrictions apply – where these are signposted it is generally '*1 Hour during sports fixtures at Leichhardt Oval resident permits excepted*') and direct property access, providing a direct link into Leichhardt Park Car Park, with footways on both sides; it has 3 vertical deflection speed treatments between Perry Street and Church Street; 1 speed treatment between Church Street and Morton Street; and a further speed treatment north of Chapel Street approaching Mary Street Park

Morton Street is a two-way local road with parking on both sides (restrictions apply) and direct property access.

The roads in the area around the site are generally 50km/hr speed limit, with signposting located at:

- Lilyfield Road west of Hubert Street
- Mary Street between Lilyfield Road and
- Perry Street east of Campbell Avenue.

There are generally advisory speed signs at speed humps and thresholds in the area, such as along Mary Street between Perry Street and Leichhardt Oval.

2.4 Traffic volumes, Classification and Observed speeds

To gauge existing traffic demands in the vicinity of the proposed Skate Plaza, automatic traffic classifiers (ATC) were installed at the locations shown below in **Figure 3** and collected traffic volumes over a seven day period 24 hours a day.

Figure 3 – Location of ATC surveys around the proposed site



The following presents a summary of the recorded *daily* traffic volumes recorded at each of the ATC sites.

Table 1 – Daily traffic volumes at ATC sites, all vehicles per day and heavy vehicle proportion (%), combined directions

Site	Weekday Avg Veh/day	Saturday Veh/day	Sunday Veh/day
ATC 1 Car Park Link Road S car park egress	734 (2%)	1,245 (1.6%)	532 (0.4%)
ATC 2 Frazer Street north of Morton Street	108 (11%)	224 (11%)	105 (3.8%)
ATC 3 Maliyawul Street N Lilyfield Road	2,241 (4.7%)	3,692 (3.3%)	2,800 (5.1%)

Source: ATC surveys, refer to Appendix A for further information

The information presented above in **Table 1** confirms that roads surrounding the proposed Skate Plaza site have *low* daily traffic volumes and *low* proportions of heavy vehicles. All heavy vehicles detected by the ATCs were Heavy Rigid Vehicles (HRV) with no articulated vehicles recorded in the area over the course of the week of surveys. This is consistent with vehicles servicing the land use in the area, such as garbage trucks, park maintenance vehicles and delivery vehicles. The above daily traffic volumes indicate that Saturday is the busiest day of the week for traffic around the site.

Of note is that there are more vehicles travelling southbound when compared with northbound traffic on Car Park Link Road and Maliyawul Street. This is considered to be substantially due to the egress arrangement at Leichhardt Park Car Park, which signposts *all* departing vehicles to turn left onto Car Park Link Road, southbound. This leads vehicles to exit the area via Maliyawul Street at Lilyfield Road.

Whilst Frazer Street is designated as one way northbound; the ATC collected very low volumes of southbound traffic which could indicate vehicles reversing over the ATC tubes to park on-street, or vehicles travelling illegally in the wrong direction or a combination of the two.

Peak Period Volumes

Volumes during the weekday AM and PM peak periods are reported in **Table 2** below. For the AM peak period, these are the *maximum* volumes in an hour during the five weekdays between 7am and 10am, and for PM peak period the *maximum* volumes in an hour during the five week days between 4pm and 7pm.

Table 2 – Weekday AM and PM peak traffic volumes at ATC sites, all vehicles per hour by direction and combined directions (AM max of 7am to 10am and PM max of 4pm to 7pm)

Site	Weekdays					
	AM			PM		
	NB	SB	Comb	NB	SB	Comb
	Veh/hr	Veh/hr	Veh/hr	Veh/hr	Veh/hr	Veh/hr
ATC 1 Car Park Link Road S car park egress	18	48	57	26	87	113
ATC 2 Frazer Street north of Morton Street	15	1	15	10	7	13
ATC 3 Maliyawul Street N Lilyfield Road	99	78	177	123	161	278

Source: ATC data, refer to Appendix A. Note: the combined direction peak does not always equal the sum of the directional peaks as they do not necessarily coincide.

On weekend days, the *maximum* hourly volumes by direction and combined from data recorded for a Saturday and Sunday are reported below in **Table 3**, along with the hour in which they occur.

Table 3 – Saturday and Sunday peak traffic volumes at ATC sites, all vehicles per hour by direction and combined directions, and hour of peak

Site	Sat			Sun		
	NB	SB	Comb	NB	SB	Comb
	Veh/hr	Veh/hr	Veh/hr	Veh/hr	Veh/hr	Veh/hr
ATC 1 Car Park Link Road S car park egress	38 (Noon)	151 (10am)	182 (10am)	28 (10am)	49 (10am)	77 (10am)
ATC 2 Frazer Street north of Morton Street	23 (5pm)	6 (1pm)	26 (5pm)	10 (1pm)	1 (10am)	10 (1pm)
ATC 3 Maliyawul Street N Lilyfield Road	176 (5pm)	210 (Noon)	307 (Noon)	176 (10am)	156 (11am)	309 (10am)

Source: ATC data, refer to Appendix A. Note: the combined direction peak does not always equal the sum of the directional peaks as they do not necessarily coincide.

Recorded Traffic Speeds

The seven (7) day ATC surveys also recorded traffic speeds of all vehicles. The 85th percentile speeds by direction at each ATC location are summarised in **Table 4**.

Table 4 – 85th percentile traffic speeds at ATC sites, all vehicles by direction by type of day

Site	Weekdays		Saturday		Sunday	
	NB	SB	NB	SB	NB	SB
	Km/hr	Km/hr	km/hr	km/hr	km/hr	km/hr
ATC 1 Car Park Link Road S car park egress	40.3	39.5	36.6	34.6	40.5	38.5
ATC 2 Frazer Street north of Morton Street	28.3	na	24.6	na	26.2	na
ATC 3 Maliyawul Street N Lilyfield Road	28.1	25.6	27.4	25.2	26.4	24.3

Source: ATC survey data

It is noted that the recorded 85th percentile speeds in each location are all lower than the signposted speed limit of 50km/hr. They reflect the relatively low speed environment encountered by drivers within this local road network and limited site observations indicate drivers maintain low speeds. Further, friction on travel speed is likely to occur through turnover of parking spaces and vehicles have to either wait or manoeuvre around parking vehicles.

It is further noted that the nature of the roads immediately around the proposal exhibit low traffic speeds, with pedestrians and bicycles movements along with parking manoeuvres in combination. Consideration could be given to reducing the signposted speed limit from 50km/hr in the following locations to 40km/hr which would further improve the safety for cyclists and pedestrians:

- Link Road
- Northern end of Frazer Street
- Maliyawul Street
- Southern end of Car Park Link Road.

2.5 Intersection conditions

The following presents a summary of the intersection arrangements surrounding the proposed Skate Plaza site.

Maliyawul Street and Link Road – includes a priority-controlled T intersection with all movements permitted and all approaches generally level

Frazer Street and Link Road and Car Park Link Road – priority controlled three-way intersection; right turn from Link Road (west) to Frazer Street (south) is banned as Frazer Street is one-way northbound; through movement from car park link road (north) to Frazer Street (south) is banned, with a 'right turn only' sign in place. The use of line marking at this intersection would assist drivers to follow intended paths through the intersection.

Maliyawul Street and Lilyfield Road – Priority controlled three-way intersection (Maliyawul Street is signposted to give way); all movements permitted; all approaches are reasonably level. Due to the termination of Lilyfield Road (no longer provides vehicular traffic access across Hawthorne Canal³) and turning head treatment, some 40m west of Maliyawul Street), traffic volumes and speeds to the west of the intersection are low.

3.3 Car Parking

The following presents a summary of the on and off-street parking arrangements in the vicinity of the proposed Skate Plaza site.

On-Street Car Parking

Maliyawul Street

- Between Lilyfield Road and Link Road – 66 marked, 90-degree spaces with no time restrictions
- Between Link Road and northern end of Maliyawul Street 65 marked, 90-degree spaces of which 2 are accessible, with no time restrictions
- On the east side there are opportunities for parallel parking, with limited parking signs indicating parking is *not* permitted. However, in many places along the east side, parking on the east side would make it difficult for vehicles parking on the west side to access/egress parking spaces.

Link Road

- On the south side there are 13 spaces, including one accessible space that line marked and signposted; these are 90-degree rear to kerb with no time restriction
- On the north side there are approximately 12 spaces, although the amount of parking actually achieved would be variable; without line marking or restriction, with vehicles generally parking at 90-degrees front to road edge (no kerb).

Car Park Link Road

- Parking is banned on its eastern side, although some of the signs seem to be missing reinforcing this parking ban
- On the west side there is a slight widening at its southern end facilitating parallel parking by up to 4 cars (unrestricted); for the rest of the length of the west side there is no restriction on parking, although the carriageway would be narrowed by such parking and we saw no evidence of regular parking
- There are 9 spaces on the northside of Car Park Link Road close to the Aquatic Centre which are unrestricted 90-degree front to kerb.

³ The opening of City West Link Road some decades ago replaced the traffic function of Lilyfield Road, which transformed the traffic characteristics of the section of Lilyfield Road between Hawthorne Canal and Mary Street from a major arterial link carrying high volumes of regional traffic, including large heavy vehicles into the CBD and Harbour Crossings, into a downgraded bypassed traffic precinct, with no material volumes of through vehicular traffic.

Frazer Street

- North of Morton Street - on-street parking on east side only (west side banned); 1 hour restricted parking; 1 to 2 spaces.

Mary Street near Aquatic Centre

- In the vicinity of Leichhardt Park Car Park and the Aquatic Centre, Mary Street has some 17 spaces on the east side and 21 spaces on the westside; these spaces are unrestricted and marked as 90-degree rear to kerb.
- Also, further north along Mary Street, outside the Aquatic Centre are approximately 16 90-degree rear to kerb parking spaces, of which 7 are accessible

Off Street Car Park

Leichhardt Park Car Park and other parking in the vicinity of Leichhardt Aquatic Centre

The off street car park has an access from:

- Mary Street at the car park's southern extent and
- Car Park Link Road from the car park's northern edge

Egress is only available:

- to Car Park Link Road and this is signposted to be left turn only, making all exiting vehicles use Car Park Link Road/Link Road/Maliyawul Street and Lilyfield Road.

This car park has no restrictions and is formally laid out with marked bays and directional arrows in some aisles. There are 166 spaces of which 3 are accessible.

South of Link Road on east side of Maliyawul Street there is a function centre ('Le Montage'); this has off-street parking for approximately 85 cars (from aerial photos) which is gated and therefore reserved for their patrons.

2.6 Public Transport**2.6.1 Light rail**

Closest stop is Leichhardt North – with access via a footway to Charles Street overbridge of City West Link Road approx. 820 m, with need to cross Lilyfield Road only.

Hawthorne stop is further away (1.16km), but provides a level, direct, largely car free access, via Hawthorne Canal Shared Path and Canal Road which is marked as a 10km/hr shared zone in the relevant section.

Services at these two stations are provided by L1, which runs:

- South to Dulwich Hill
- North and east to Central Station

Indicative service levels on Hawthorne Station toward Dulwich Hill (at the station)⁴ are:

- Weekdays:
 - 8mins during the morning (6:56 to 9:20) and afternoon peaks (15:07 to 19:48)
 - 10 mins during the day (9:20 to 15:07)
 - 15 mins during the evening (from 19:48 to last service at 23:18)
- Saturday:
 - 15mins until 10:54
 - 10 mins until 19:26
 - 15 mins until last service at 23:41
- Sunday and public holidays:
 - 15 mins until 10:11
 - 10 mins until 19:21
 - 15 mins until last service at 23:31

Almost all services travel the entire route (between Central and Dulwich Hill at the station) and call at all stops.

2.6.2 Buses

The site is within Bus Contract Region 6 and the contracted operator is Transit Systems. Routes 437, 445 and 440 operate along Mary and Perry Streets, as a combined service corridor, with the closest bus stop pair to the subject site for all three routes being:

- eastbound is Perry St at Mary St (204047), with a walk of approximately 510m to the proposed Skate Plaza site via Mary Street and Morton Street
- westbound is Mary Street after Perry Street (204017), with a walk of approximately 570m from the Skate Plaza site via Lilyfield Road and Frazer Street (there is a non-vehicle connection at the southern end of Frazer Street), and there are signal controlled pedestrian crossing facilities at intersection of Lilyfield Road, Mary Street and James Street to facilitate access to the bus stop for pedestrians.

Rt 437 is Five Dock to City QVB via City West Link

Indicative service levels for this route are tabulated below. Note that for the purposes of this analysis inbound is towards the City.

⁴ Other direction is similar refer to <https://transportnsw.info/documents/timetables/93-L1-Dulwich-Hill-Line-20200620.pdf> valid from 20 June 2020 until replaced

Table 5 – Indicative bus service levels by day and time period for rte 437

Direction	M-F	M-F	M-F	M-F	Sat	Sat	Sat	Sun & Public Holiday	Sun & Public Holiday
	AM peak	During day	PM peak	Evening	Morning	Day	Evening	Day	Evening
Inbound	7 to 16 min	15 min	10 to 15 min	30 min	20 to 30 min	20 min	30 min	20 min	30 min
Outbound	20 min	15 min	12 min	30 min	30 min	20 min	30 min	20 min	30 min

Source: TfNSW, timetable creation date 12 May 21

Rt 440 is Bondi Junction to Rozelle

This service generally comprises trips from Darling St before Belmore Street to Bondi Junction, with some short workings either between Norton Street nr William Street or Leichhardt Public School, Norton Street and Haymarket or Railway Square. These short working trips are not useful for the site – so the service levels below use trips between Darling Street before Belmore Street and Bondi Junction.

Indicative service levels for this route are tabulated below. Note that for the purposes of this analysis inbound is towards the City.

Table 6 – Indicative bus service levels by day and time period for rte 440

Direction	M-F	M-F	M-F	M-F	Sat	Sat	Sat	Sun & Public Holiday	Sun & Public Holiday
	AM peak	During day	PM peak	Evening	Morning	Day	Evening	Day	Evening
Inbound	6 to 11 min	15 min	7 to 11 min	12 to 20 min	8 to 15 min	15 min	15 min	13 to 15 min	30 min
Outbound	7 to 17 min	9 to 15 min	10 min	10 to 18 min	22 to 28 min	15 min	15 min	15 to 17 min	30 min

Source: TfNSW, timetable creation date 12 May 21

Rt 445 is Campsie to Balmain via Leichhardt

Indicative service levels for this route are tabulated below. Note that for the purposes of this analysis inbound is towards Balmain.

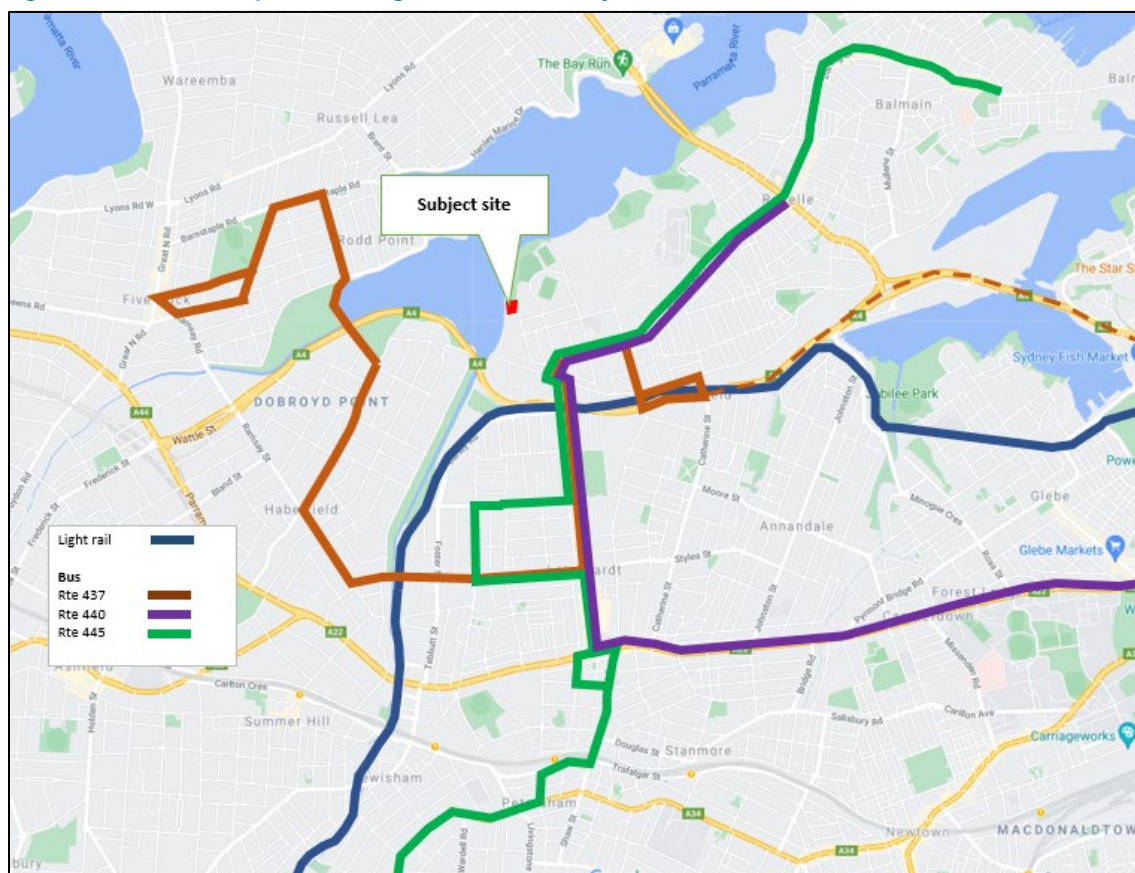
Table 7 – Indicative bus service levels by day and time period for rte 445

Direction	M-F AM peak	M-F During day	M-F PM peak	M-F Evening	Sat Morning	Sat Day	Sat Evening	Sun & Public Holiday Day	Sun & Public Holiday Evening
Inbound	10 to 19 min	15 min	15 min	15 to 30 min	15 to 30 min	15 min	30 min	25 to 35 min	30 min
Outbound	15 to 23 min	15 min	7 to 15 min	30 min	25 to 30 min	15 min	30 min	30 to 48 min	30 to 43 min

Source: TfNSW, timetable creation date 12 May 21

2.6.3 Transit coverage of site catchment

The coverage of the site's catchment by the light rail and these bus routes is shown on **Figure 4**.

Figure 4 – Public transport coverage around the subject site

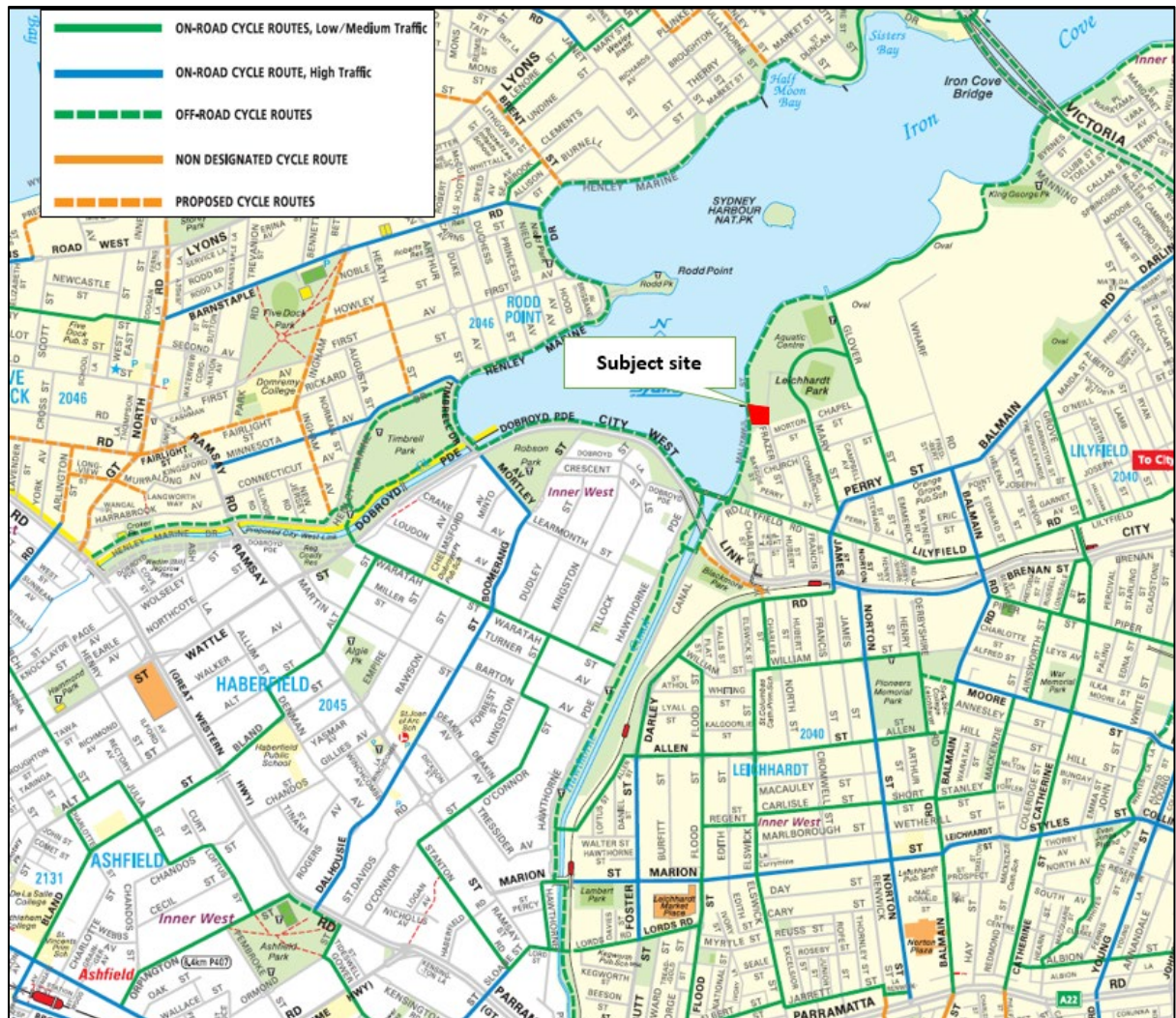
Source: sketched from light rail and bus service information from TfNSW

The actual light rail and bus routes themselves provide direct coverage of substantial parts of the site's catchment, as well as providing connections with useful corridors for site users from further afield to access the proposed facility. These include the Victoria Road and Parramatta Road bus corridors, and the rail system at Petersham, Dulwich Hill, Canterbury and Central.

3.5 Bicycle and Pedestrian facilities

The following figure is an extract from the 'Cycling Ashfield Map', produced by Inner West Council.

Figure 5 – Cycling Ashfield Map of Bicycle Routes



The Council has plans to complete the 'GreenWay'; this would connect the Cooks River shared path at Earlwood with the Iron Cove Bay Run at Haberfield. Currently the section from the Bay Run at Haberfield to Summer Hill is in place, and is shown on the above figure along Hawthorne Canal. By completing this connection to the Cooks River shared path, it would provide a significant regional, largely off-road, contiguous route between the subject site and Sydney Olympic Park and Sydney Airport (at Mascot).

Bicycle parking

The following bicycle parking facilities were observed in the general area around the subject site:

- South of Hippo Park (children's play area north of Leichhardt Oval No 3) there is a single stainless steel hoop style bicycle rack in the vicinity of the public toilets
- North of the exercise equipment area north of the children's playground there are three galvanised steel hoop style bicycle racks

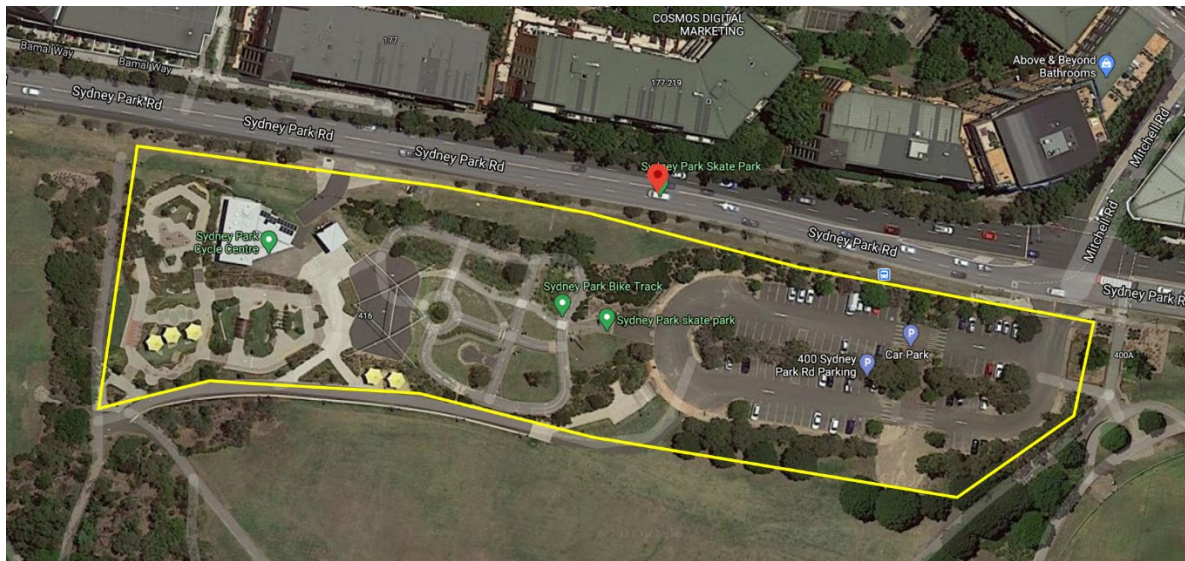
- Informal opportunities using hand rails along the foreshore Bay Run path (probably undesirable) and some of the fencing around Leichhardt Oval No 3 (treated pine logs)
- At Leichhardt Aquatic Centre, to the right of the entrance, there are three racks of 'coat hanger-style' bicycle parking that could accommodate up to 7 or 8 bicycles each and informal use of the columns around the nearby shelter.

2.7 Surveys of Sydney Skate Plaza

The proposed development is not listed in the RTA Guide to Traffic Generating Developments and thus in accordance with the recommendations of the guide, surveys of a similar facility were undertaken.

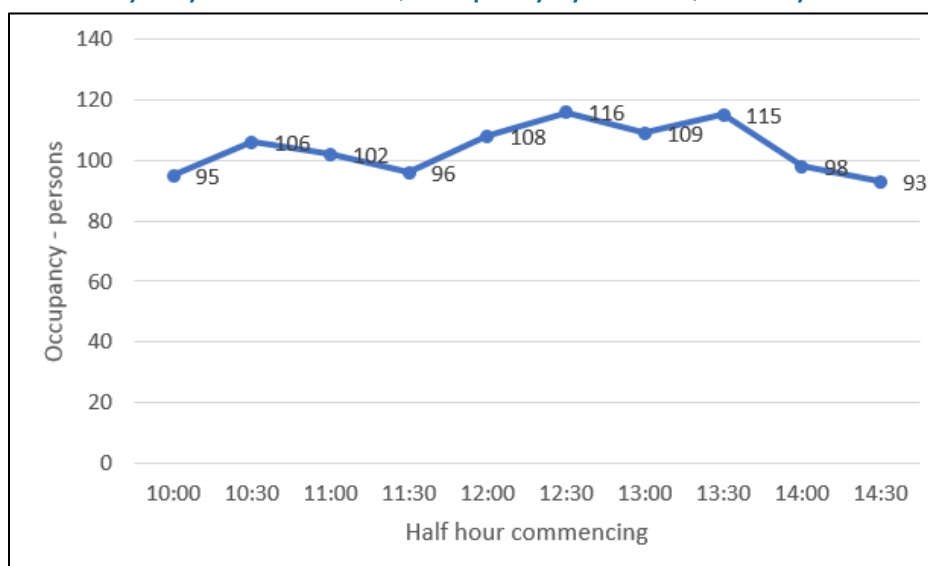
The similar site identified included the Sydney Park Skate Plaza, a facility developed by the City of Sydney and opened in December 2020. The location of the site along with the surrounding environs are shown below in **Figure 6**.

Figure 6 – Sydney Skate Plaza



Surveys of the Sydney Skate Plaza were undertaken every 30 minutes of both the patronage demands of the park and parking demands of the adjacent off street car parking area between the hours of 10:00am – 3:00pm on a Saturday. Copies of these surveys are provided in **Appendix B** of this report.

The surveys recorded the following profile of the number of people within the Skate Plaza by 30-minute period on a Saturday.

Chart 1 – Sydney Park Skate Plaza, occupancy by half hour, Saturday

Source: Matrix Traffic and Transport Data Pty Ltd

The peak recorded occupancy was **116 persons** in the half hour commencing 12:30pm. In addition to the surveys of the Sydney Skate Plaza, further information from Google was obtained for a range of Skate Plazas in Sydney, provided estimates of typical duration of stay at these facilities. These are in **Table 8** below.

Table 8 – Skate Plazas in Sydney - Indicative duration of stay

Location	Duration of stay - range	Central estimate	Comment
Five Dock Skate Plaza	15 to 60 mins	37 mins	Smaller, older style facility
Dulwich Hill Skate Plaza	20 to 90 mins	55 mins	Smaller, older style facility
South Eveleigh	15 to 90 mins	52 mins	
Sydenham Green	25 to 90 mins	57 mins	Large facility
Sydney Park Skate Plaza	45 to 120 mins	82 mins	Large, new facility
Pagewood (Mutch Park)	15 to 60 mins	37 mins	
Parramatta Skate Plaza, Hassall St	25 to 90 mins	62 mins	
Cookes Skate Plaza, Belfield	45 to 150 mins	102 mins	
Gladesville Skate Plaza	10 to 45 mins	27 mins	
Meadowbank	20 to 90 mins	55 mins	

Source: Google attraction data; central estimates rounded down to nearest minute

The above Skate Plazas include a range of facilities, from small parks with one or two jumps which appear to be older, to newer large facilities, such as Sydney Park Skate Plaza and Sydenham Green. These two parks (Sydney Park Skate Plaza and Sydenham Green) have characteristics that more closely match the proposed Skate Plaza at the subject site. Also, these parks are well utilised suggesting that the data underlying the estimates of duration of stay from Google may be relatively robust.

The above table indicates:

- There is a range of durations of stay for users of these facilities
- The duration of stay is typically between 50 minutes and 90 minutes
- Sydney Park Skate Plaza (the surveyed facility) has a central estimate of the duration of stay of **82 minutes**.

On site observations at Sydney Skate Plaza and Sydenham Green (on the corner of Railway Road and Henry Street) indicated:

- That use of the facilities is very much a social activity.
- A range of users are present – from beginners to 'experts', and when skating they do a range of activities, from following circuits around the park, to working repetitively on single movements on one piece of equipment (such as mastering a particular jump)
- Spectators are common
- Party sizes are relatively large (in keeping with it being a social activity)
- The facilities are a meeting point
- Age range is broad but skewed to younger people.

Based on the above information, it has been assumed that:

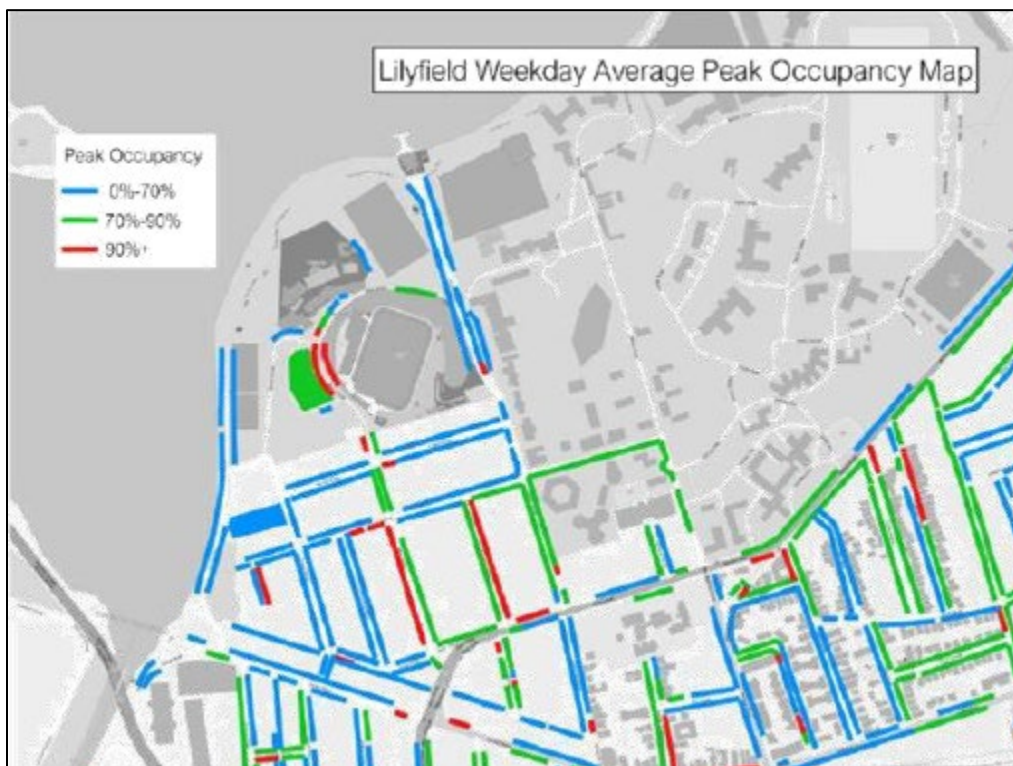
- Average duration of stay would be some **65 to 75 minutes**
- Average party size would be **2.5 people**
- Due to observed young age range of users, mode share would be **35% by car**.

3. Background Report Review

3.1 Lilyfield Precinct Parking Study (Final Report Issue A, 19 February 2021)

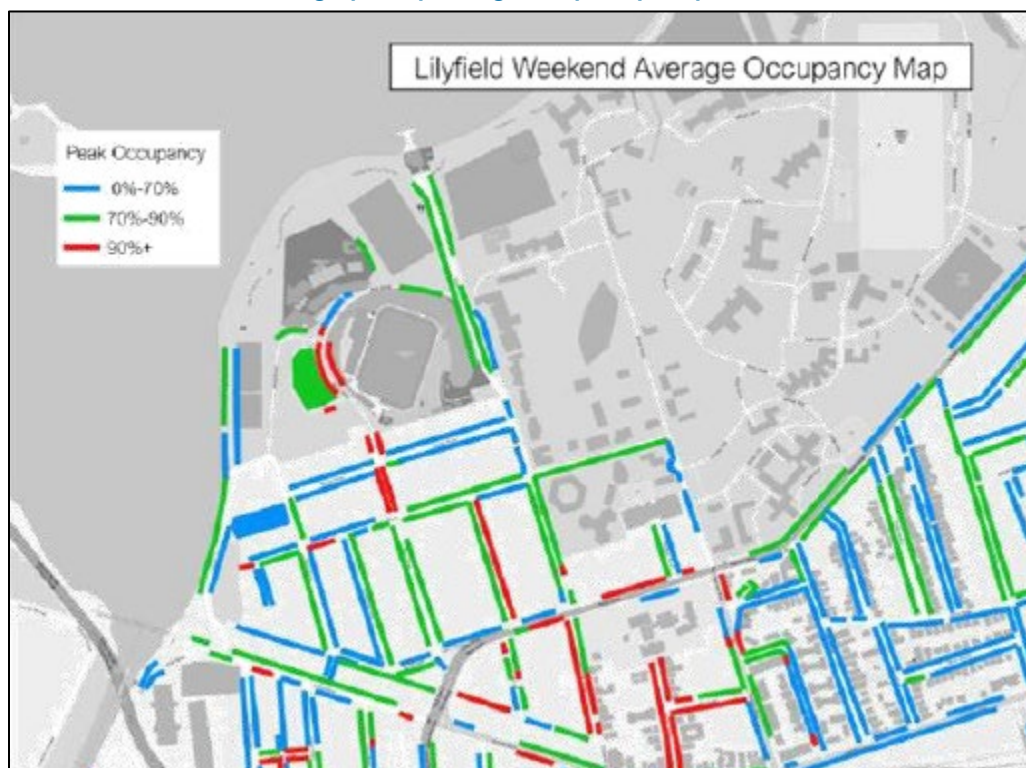
This study commissioned by Inner West Council investigated parking conditions within the broader Lilyfield area, and included field surveys of parking demand on Saturday 15 February and Wednesday 19 February 2020. These surveys covered *all* of Lilyfield including Maliyawul Street, Leichhardt Park Car Park, Mary Street, the northern end of Car Park Link Road and Le Montage Function Centre. The following extracts from that study provide an indication of the level of demand of the car parking in the vicinity of the proposal, with [Extract 1](#) summarising weekday demands and [Extract 2](#) summarising weekend demands.

Extract 1 – WEEKDAY average peak parking occupancy map



Source: Fig 2.10, pg 19, *Lilyfield Parking Study*, GTA, 19 February 2021

The above extract indicates that Maliyawul Street has substantial spare capacity during weekdays of at least 30%.

Extract 2 - WEEKEND average peak parking occupancy map

Source: Fig 2.12, pg 21, Lilyfield Parking Study, GTA, 19 February 2021

The above extract indicates that most of Maliyawul Street has spare parking capacity available during weekends of more than 10%, and that the section of Maliyawul Street adjacent to the proposed Skate Plaza has at least 30% available capacity.

Of note is that one of the recommendations (#6) of the Lilyfield Parking Study adopted by the Inner West Council's Local Traffic Committee (March 2021 meeting) that could affect the study area, is:

*'... prepare and implement a standardised Traffic Management Plan and Special Event Parking Scheme for large events at Leichhardt Oval event day traffic management plan for Leichhardt Oval.'*⁵

⁵ Extract from the minutes of Local Traffic Committee, Inner West Council, 15 March 2021

4. The Proposed Development

4.1 General

This chapter is based on information provided to us in the Leichhardt Skate Plaza Construction Drawings dated 24 February 2020, prepared by Landscape Architect Consultant ENLOCUS. The drawings are revision 01.

4.2 Key elements of the proposal

The Skate Plaza would occupy some 2600m² of existing land at the southern end of Leichhardt Oval No 3, located north of the Link Road and between Maliyawul Street and Car Park Link Road. The facility would include (refer to Site Plan, Drawing No 1821_CD 004 Rev 01):

- A number of skateboard elements including deep dish, small dishes, flat banks, rails, moguls, flat banks, hubba, quarter pipe
- Seating, shelters, drinking fountain (bubbler), bins, signage, lighting
- Paths, stairs, balustrades and hand rails, access ramp, drainage, retaining walls and landscaping
- Formalisation of 10 car parking spaces on the northern side of Link Road.
- The design capacity of the park is advised to be **50 persons** with up to **15 persons** at any one time utilising the Skate Plaza facilities at any one time with the remainder observing users of the Skate Plaza facilities.

The facility would be open to the public, according to the proposed signage:

'This facility is free for use by anyone, of all ages; including spectators and those not participating in skateboarding or riding.'

Plans of the proposed development can be found in [Appendix A](#) of this report.

5. Assessment of Potential Traffic Impacts

The following presents a first principles assessment of the potential traffic / parking generation of the new Lilyfield Skate Plaza having regard to the survey information gathered at the Sydney Skate Park.

5.1 Traffic Generation Estimations

Using the information presented above, the following presents an estimate of the existing potential traffic generation of the similar parks surveyed / observed:

Trip generation – peak

- Occupancy of 50 people
- Duration of stay 70 minutes
- Two-way person trips $50 * (60/70) = 42$ per hour each way

Parties

42 persons / 2.5 people per party = 18 parties

Mode share to car

35% of 18 parties = 7 vehicle trips

Traffic generation – peak hour

7 vehicle trips in and 7 vehicle trips out per hour

5.2 Trip and traffic generation estimates

The previous section developed estimates of peak traffic generation and parking demand of a similar scale / type of Skate Plaza based on surveys and site observations. These were:

- 7 vehicles in and 7 vehicles out during the hour from 12:30 to 1:30pm
- 7 vehicles parked in the hour from 12:30 to 1:30pm

In addition, there would be some **28 person** trips to and from the facility per peak hour via a combination of other modes, such as:

- Walking/skateboarding
- Cycling
- Bus and light rail.

5.3 Assignment of vehicular traffic

The main access route would be via Lilyfield Road and Maliyawul Street. This provides the most direct and legible route, with minimal turns and conflicts, without encountering speed humps. It also connects into the broader road network via the four-way, all movement, signal-controlled intersection of Lilyfield Road, James and Mary Street. As such, way finding signposting should indicate this as the access.

The local road network also provides supplementary access via:

- Frazer Street, Morton Street and Mary Street – due to the one-way (NB) control on Frazer Street this does not provide egress from the proposed Skate Plaza. Due to speed control devices on Mary Street, a number of turns required, narrow carriageways, with parking on both sides, this route would be relatively unattractive for users, when compared with Lilyfield Road and Maliyawul Street.
- Mary Street also provides access to the proposed Skate Plaza via its northern end near Leichhardt Aquatic Centre and the Car Park Link Road, past Leichhardt Aquatic Centre. This would be an access for local residents from the east of the site along the Balmain Road/Darling Street corridor; it would also serve visitors who might drop passengers at the pool and continue to the Skate Plaza.

The following table summarises the existing traffic volumes on each of Car Park Link Road, Frazer Street and Maliyawul Street from 12pm to 1pm on the Saturday of survey.

Table 9 – Traffic volumes on roads around the proposed Skate Plaza during peak use, Saturday 12pm, vehicles per hour

Site	Saturday		Comb Veh/hr
	NB Veh/hr	SB Veh/hr	
ATC 1 Car Park Link Road S car park egress	38	116	154
ATC 2 Frazer Street north of Morton Street	18	3	21
ATC 3 Maliyawul Street N Lilyfield Road	97	210	307

The following analysis assigns traffic generated by the proposed skatepark to the roads around the site under the following scenarios:

- **Scenario 1** - All vehicles generated by the proposal use Maliyawul Street for access and egress
- **Scenario 2** - Approximately 40% of vehicles generated by the proposal use Car Park Link Road for access and egress
- **Scenario 3**- Approximately a quarter of traffic generated by the proposal use Frazer Street

Scenario 1

The addition of all the generated vehicles (i.e., 7 vehicles per hour in each direction) to Maliyawul Street would result in:

- $97+7 = 104$ vph NB and
- $210+7 = 217$ vph SB

Thus, the net increase of traffic volumes on surrounding streets under this scenario would be minimal and would not impact on the function of the streets to accommodate traffic to a point of detriment.

Scenario 2

The addition approximately 40% of generated vehicles to Car Park Link Road would result in:

- $38+3 = 41$ vph NB and
- $116+3 = 119$ vph SB

Under this scenario, the net increase of traffic volumes on surrounding streets under this scenario would be minimal and would not impact on the function of the streets to accommodate traffic to a point of detriment.

Scenario 3

The addition of a small proportion (25%) of inbound trips to Frazer Street would result in:

- $18+2 = 20$ vph NB

As with Scenario 1 and 2, the distribution of peak hour generated trips of the proposal on the surrounding streets under this scenario would be minimal and would not impact on the function of the streets to accommodate traffic to a point of detriment.

Overall, the potential net peak hour traffic generation of the proposal would be minimal and would not impact markedly on the operating conditions of the surrounding intersections or the mid block capacity of streets immediately surrounding the subject site.

Thus, the traffic impacts of the proposed Skate Plaza are considered acceptable.

5.4 Assessment of foot traffic

In addition to vehicles generated by the proposal, the nature of the proposal is such that additional pedestrian generated traffic is expected through a combination of both new pedestrian trips and linked trips generated by users who may have visited other recreational areas surrounding the site.

For persons accessing the proposed facility by modes other than car, it has been estimated that there would be some **28 persons** in and out per hour during the peak on Saturdays. It is expected that they would arrive and depart using the various modes available in the area. This includes:

- Walking/skateboarding
- Cycling
- Bus and light rail.

As noted in Section 3 the site is supported by extensive off-road walk and cycle paths, as well as by three (3) bus routes and the light rail.

This following presents an assessment of the potential impacts by non-private vehicle modes on each mode available for travel to / from the new Skate Plaza.

Walking and skateboarding and cycling

The off-road and on-road pedestrian and cycling networks offer high amenity facilities, which link into the surrounding area, and have non-car links to connect over barriers, including:

- The old Lilyfield Road Bridge over Hawthorne Canal
- Charles Street over bridge of City West Link Road
- Sections of the Bay Run around the foreshore of Iron Cove.

These facilities have substantial capacity.

Light rail offers:

Four (4) trips in each direction from the stop closest to the site during the day on Saturday equates to a total of 8 vehicles per hour, with approximately 1,650 person spaces at standard loading⁶.

The existing light rail network is expected to more than cater for the small number of additional trips generated by the proposed Skate Plaza on a Saturday.

Bus offers:

As stated above the site is served by three (3) existing bus routes which offer the following services during peak operational periods of the Skate Plaza:

- Rt 437 3 trips an hour in each direction
- Rt 440 4 trips an hour in each direction
- Rt 445 4 trips an hour in each direction

A total of **22** buses per hour combined directions, with approximately 1,250 bus spaces of capacity⁷ provided is available to accommodate potential increases in patronage generated by the Skate Plaza. Whilst formal OPAL data is not available for review it is expected that the small increase in bus trips by patrons of the park would be accommodated satisfactorily on existing route services.

This range and capacity of non-car modes should be sufficient to support the trip generation by non-car modes of the proposed Skate Plaza.

5.5 Assessment of Parking

The following presents an assessment of the potential net increase in parking demands of the proposed Skate Plaza on the surrounding road network and its public parking availability.

⁶ Standard loading of 206 pax; crush loading 272 pax

⁷ Bus spaces are seats plus standing room – a range of vehicle capacities are used in Sydney, we have assumed some 45 seats and 15 standing per bus

Parking Demand - Peak - 7 vehicles

It should be noted that as there are a range of existing leisure activities in the vicinity of the proposed Skate Plaza, substantial scope exists for existing users of current facilities to also make use of the Skate Plaza as part of their existing visitation. This trip chaining aspect of trip generation has not been included in the trip generation estimates, but it would be likely to reduce the overall trip and traffic generation of the proposal.

Car parking

As stated above it is estimated the new Skate Plaza would generate a demand for some 7 spaces during the day on a Saturday.

Section 3 of this report notes that the local parking supply is:

- Car Park Link Road – southern end on the eastern side – 4 parallel spaces
- Link Road – southern side 13 spaces; northern side 12 spaces, of which the proposal removes 2 spaces as it formalises the existing arrangement by providing line marking⁸
- Maliyawul Street – west side north of Link Road 66 spaces and west side south of Link Road 65 spaces.

This provides a total of **158** car spaces located in the vicinity of the proposal. In addition, there is a limited supply of informal spaces on the eastern side of Maliyawul Street.

As noted in Section 3.1 above, a recent parking study undertaken for Inner West Council indicates that there is sufficient spare parking capacity in Maliyawul Street during peak demand periods for both weekdays and weekends.

Bicycle parking

The proposal does not include measures for bicycle parking.

The location of the proposal and its close relationship to the Bay Run shared path, and other long-distance shared paths, such as along Hawthorne Canal, as well as the younger age groups likely to use the proposal, indicates that bicycle will be a mode of access albeit a small proportion of trips given the facility would be used by both skateboarders and scooter riders who would mostly struggle carrying such equipment when riding their bike. In addition, our summary in Section 3 indicates there are four formal bicycle racks in the vicinity of the proposal.

It is recommended that two (2) bicycle racks, that would each accommodate up to 8 bicycles, are provided in the vicinity of the proposal, for the use of all park users. That is to accommodate up to 16 bicycles.

⁸ The existing capacity of 12 spaces is the likely existing capacity – however, on occasion, it does not achieve this due to uneven spaced parking

6. Construction Traffic Management Plan

6.1 General

The following provides a draft Construction Traffic Management Plan (CTMP) summary which has been based on a review of the construction drawings of the proposal only. It is expected for a development of this scale that a requirement of the successful contractor would be the development of their own CTMP report and construction schedule having regard to a greater understanding of the components of construction following completion of the Construction Certificate drawings. This would include the necessary plant, equipment and personnel.

As such this section sets out the principles of construction traffic management, including:

- Vehicle types
- Access routes
- Maintenance of specific traffic elements

The area around the construction site is trafficked by a wide range of road users, many of whom are considered vulnerable road users.

6.2 Major construction activity types

From a review of the construction drawings, the following major activities (stages) that are likely to occur are:

- Demolition of existing
- Excavation of existing material to get base levels
- Construct drainage pits and drainage lines and backfill
- Delivery and placement of specified bulk material
- Compaction of specified bulk materials to design levels and compaction specification
- Install services – e.g., electrical conduits
- Delivery of fabricated steel elements and reinforcing steel
- Formwork construction
- Placement of reinforcing steel mesh and bars, fitting concrete embedded skate board elements – pipe edges, shelter footings, balustrades, light post footings, bins etc
- Concrete pours
- Landscaping bulk materials delivery and placement
- Landscaping finishing planting/mulch

For activities requiring large volumes of materials to be removed / delivered to the site, it is considered likely that this will occur largely concurrently with the associated construction activity. For example, delivery of grade and sub-grade materials will occur as these are being placed to avoid congesting the site with stockpiles of materials.

6.3 Access routes

All access and egress by construction traffic should be via Lilyfield Road and Maliyawul Street, *only*.



6.4 Access Hours

Deliveries and major construction activities should not occur on **Saturdays or Sundays**. Traffic data indicate that the weekend days are substantially busier in this area, with Saturday traffic volumes approximately **two to three times higher** than weekday traffic volumes and at weekends there are more vulnerable road users in the area.

6.5 Maintain existing roads

The area in the vicinity of the construction site is trafficked by a range of different road users, many of whom are vulnerable road users, including pedestrians, cyclists and children. Traffic function around the site should be retained to facilitate safe and efficient use of the roads, parking, paths and other facilities by all road user groups.

Link Road – the trafficked area, approximately 6.5m wide and the south side 90-degree angle parking should be maintained in their current configuration and their traffic and parking function protected. The 90-degree angle parking on the north side should be fenced off and form part of the construction site, as this parking forms part of the construction works.

Car Park Link Road – this should be maintained in its current configuration and traffic function.

Maliyawul Street – the traffic function of this road should be maintained and parking along the western side should be retained.

6.6 Construction Site Access

Both the construction site and any compound should be accessed from Maliyawul Street, north of Link Road.

Deliveries should use no vehicle larger than a Heavy Rigid Vehicle – there is no scope to turn or manoeuvre articulated vehicles within the current road network and parking around the site. The size of rigid vehicle to be used for various activities needs to be supplied to Council, along with swept path analyses indicating it can safely and efficiently manoeuvre into, within and out of the site.

Loading and unloading activities occur within the construction site and should not occur on Maliyawul Street.

Parking of construction workers' vehicles would occur within the construction site and shall not occur on Maliyawul Street, or Link Road or Car Park Link Road.

No parking of construction vehicles should occur on any part of Frazer Street, Car Park Link Road, Link Road or Maliyawul Street. An exception may occur during a large concrete pour when the subsequent ready-mix truck might be staged for a short period by standing on Maliyawul Street, awaiting access to the site. This would only occur with active traffic management supervision and might occur further south along Maliyawul Street, in the vicinity of Peace Park, to avoid congesting the immediate area around the site.

Specialised equipment required as part of the construction activities, such as mobile cranes and concrete pumps, tree shredders, etc; should work within the construction site.

For concrete pours, the ready-mix trucks should reverse into the construction site from Maliyawul Street, under traffic management control. They would unload into the concrete pump, and then leave the site in the forward direction. Similar methods of traffic control would apply to heavy vehicles removing existing material from the site and deliveries of bulk materials to the site.

Where specific short duration activities cannot be accomplished from within the site, such as placement of light posts using cranes, or delivery of construction equipment, this might be permitted from Maliyawul Street subject to satisfactory arrangements being agreed beforehand with Council, and should conform to the following principles:

- Shortest reasonable window for the activity coinciding with a time of low traffic activity in the surrounding area
- Appropriate delineation of the area to be occupied on Maliyawul Street with barriers and or traffic cones
- Appropriate sign posting and traffic control.

The volume of traffic considered likely to be generated by the construction site, would not unduly impact general traffic capacity in the area, if Maliyawul Street and Lilyfield Road are used for access and egress. The small size of the construction site suggests that loading and unloading activities on site would act as a limiting factor in the potential to generate high rates of traffic. Given that vehicles are not to stand on Maliyawul Street, there is likely to be a need to manage delivery times as part of construction scheduling to avoid impacting the surrounding area.

There is an eastbound climb up Lilyfield Road on its approach to the James Street and Mary Street intersection; heavy vehicles used to support construction activities (especially removal of existing materials from the site) need to be in good condition and have sufficient power to weight ratios to negotiate this climb⁹.

⁹ This includes the ability of the heavy vehicles to start from a standing start on the hill on the approach to the signal-controlled intersection of Lilyfield Road and Mary Street and James Street. When Lilyfield Road was a major regional traffic route, laden heavy vehicles negotiated this climb successfully; it should be possible today with appropriately selected heavy vehicles in good condition.

7. Conclusions and Recommendations

7.1 Conclusions

The proposed site is within an area that contains a substantial range of leisure activities. The proposal would complement and add to this range of activities.

The proposed site is supported by an extensive on and off-road bicycle and pedestrian network, as well as public transport in the area, including light rail and 3 bus routes.

Currently the roads around the proposal are within a 50km/hr speed zone, albeit with signposts some distance from the area. The ATC data indicates general compliance with this speed limit and limited site observation indicates drivers maintain low speeds. However, the nature of the roads immediately around the proposal is low speed, with pedestrians and bicycles and parking manoeuvres.

The traffic generation of the proposal would be supported by the existing road network. The trip generation of the proposal would be supported by the existing network of footways, cycleways, shared paths and the light rail and bus services. However, there is currently a limited supply of formalised bicycle parking in the vicinity of the site.

The parking generated by the proposal would be supported by the existing on-street parking available on Maliyawul Street, Link Road and Car Park Link Road.

7.2 Recommendations

The proposal should include bicycle parking racks to permit bicycles to be locked in the vicinity of the proposal. This should be two racks that could accommodate 8 bicycles each.

Consideration be given to line marking at the intersection of Frazer Street, Car Park Link Road and Link Road to assist drivers to follow intended paths through the intersection (regardless of whether the proposal proceeded or not).

Consideration should be given to reducing the signposted speed limit from 50km/hr to benefit the mix of road users in the following locations, this is regardless of whether the proposal proceeded or not.

- Link Road
- Northern end of Frazer Street
- Maliyawul Street
- Southern end of Car Park Link Road.

Directional signposting to the proposal should indicate access as being via Lilyfield Road and Maliyawul Street.

The proposal is supported on traffic grounds.

8. 6Appendix A – Plans of Proposed Development



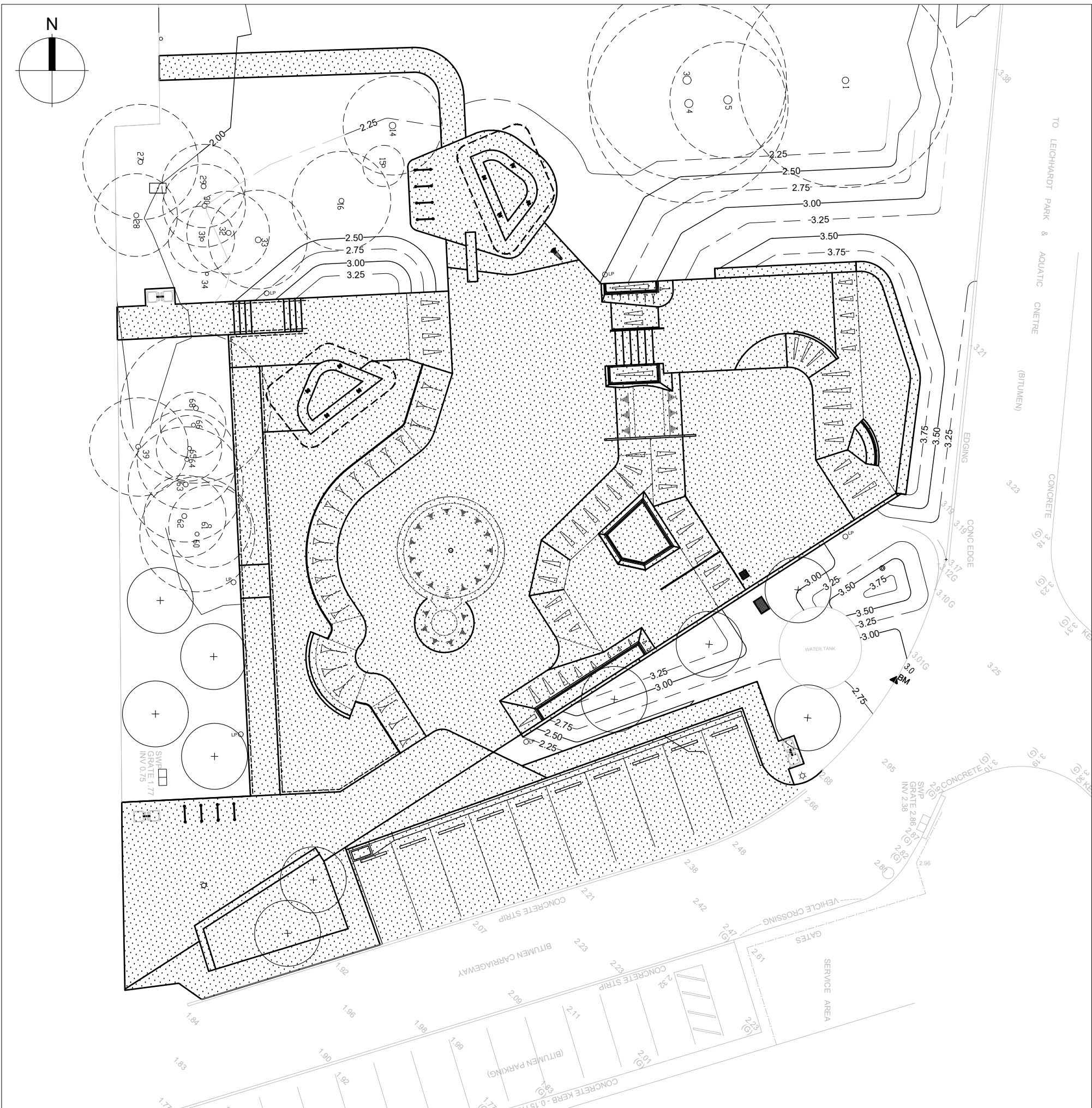
LEICHHARDT PARK SKATE PARK

CONSTRUCTION DRAWINGS //

// Maliyawul St, Lilyfield NSW 2040



LOCATION MAP



OVERALL PLAN - SCALE: 1:250

DRAWING LIST:			
Title Page & Drawing Index		DETAILS	
General Notes	1821_CD001	Engineering Details 01	1821_CD200
CONSTRUCTION PLANS		Engineering Details 02	1821_CD201
Existing Conditions Plan	1821_CD002	Engineering Details 03	1821_CD202
Demolition Plan	1821_CD003	Engineering Details 04	1821_CD203
Site Plan	1821_CD004	Engineering Details 05	1821_CD204
Surface Finishes Plan	1821_CD006-A	Drainage Details 01	1821_CD205
Surface Finishes Plan	1821_CD006-B	Carpark Details 01	1821_CD210
Levels Plan	1821_CD007-A	FABRICATION	
Levels Plan	1821_CD007-B	Steel Shelter Details 01	1821_CD300
Drainage Plan	1821_CD008	Steel Shelter Details 02	1821_CD301
Setout Plan	1821_CD009-A	Balustrade/Handrail Plan	1821_CD310
Setout Plan	1821_CD009-B	Balustrade Details 01	1821_CD311
Dimensions Plan	1821_CD010-A	Entrance Signage	1821_CD320
Dimensions Plan	1821_CD010-B	LANDSCAPE WORKS	
Steel Plan	1821_CD011	Planting Plan	1821_CD400
Concrete Joints Plan	1821_CD012-A	Planting Details	1821_CD401
Concrete Joints Plan	1821_CD012-B		
SECTIONS			
Section Key Plan	1821_CD100		
Sections 01	1821_CD101		
Sections 02	1821_CD102		
Retaining Wall Plan	1821_CD110		
Retaining Wall Sections	1821_CD111		

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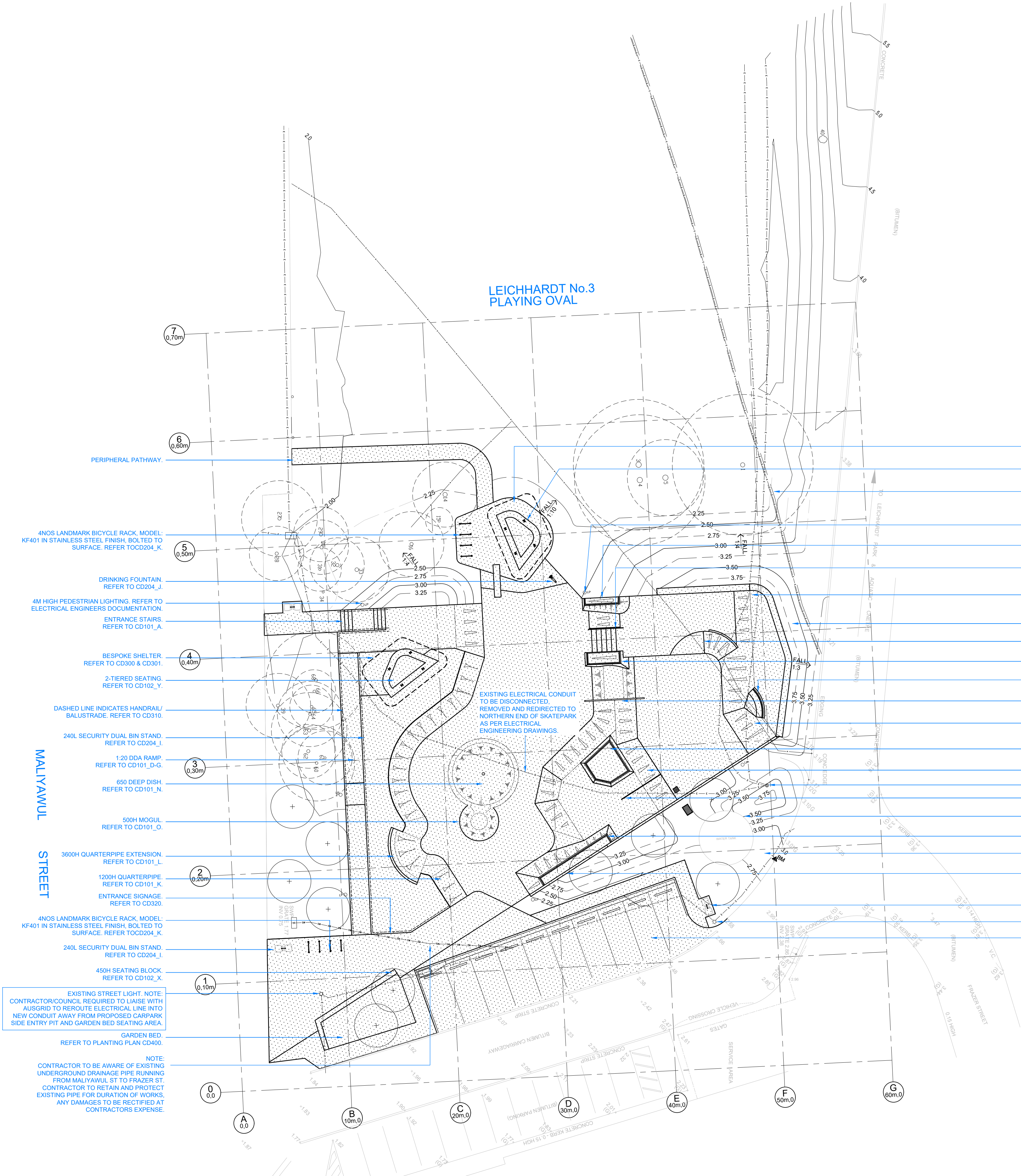
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DRAWING STATUS:

FOR COMMENT

REVISION STATUS:		
05	For Comment	18.01.22
04	For Construction	27.08.21
03	For Construction	04.08.21
02B	For Review	25.06.21
02A	For Review	24.06.21

LANDSCAPE ARCHITECT CONSULTANT:	
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STRUCTURAL ENGINEER MATRIX ENGINEERING GROUP P/L 24/37 Kellor Park Drive Kellor Park, Victoria 3042 Tel : +613 9331 7522 www.matrixgroup.net.au	LIGHTING & ELECTRICAL: WEBB AUSTRALIA GROUP Level 6, 128 Exhibition St Melbourne VIC 3000 Tel : +613 9652 0333 www.webbaustralia.com.au
NOTES / LEGEND:	



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 - CONTRACTOR TO RETAIN AND PROTECT ALL SERVICES OUTSIDE OF SCOPE OF WORKS. MAKE GOOD ANY DAMAGES OCCURRED DURING CONSTRUCTION.
 - CONTRACTOR IS TO VISUALLY INSPECT EACH EXISTING PIT AND SERVICES IN THE PROPOSED SCOPE TO ENSURE IT IS IN GOOD CONDITION PRIOR TO PROCEEDING WITH WORKS.

CONTRACTOR TO REMOVE ANY ORGANIC AND DELETERIOUS MATTER UNDER PROPOSED SLAB AREA TO A DEPTH OF NOT LESS THAN 600MM AND REPLACE WITH CONTROLLED FILL COMPACTED IN LAYERS OF 200MM TO 98% M.M.D.D. AS PER GEOTECHNICAL REPORT RECOMMENDATION.

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03	For Construction	04.08.21
02B	For Review	25.06.21
02A	For Review	24.06.21

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NOTES / LEGEND:

SITE NOTES:

01. CONTRACTOR TO VERIFY LOCATION; DEPTH/CLEARANCE AND ALIGNMENT OF ALL OVERHEAD AND UNDERGROUND SERVICES INDICATED ON CURRENT AND RELEVANT DIAL BEFORE YOU DIG ONE CALL SERVICES DRAWINGS CONTRACTOR TO REQUEST ADDITIONAL SERVICES RECORDS FROM COUNCIL, WHERE SERVICES ACCESS PITS, LIGHT POLES, METRE/VALVES ETC EXIST ON SITE CONTRACTOR TO ASSUME GENERAL ALIGNMENT OF UNDERGROUND PIPES, CONDUITS, CABLES ETC AND VERIFY ALIGNMENT AND MARK ON SITE PRIOR TO COMMENCEMENT OF WORKS.

02. LICENSED SURVEYOR TO BE USED TO LOCATE HEIGHT DATUM & SET OUT POINT AS SHOWN ON DRAWINGS PRIOR TO COMMENCEMENT OF WORKS. CONTRACTOR TO INFORM SUPERINTENDENT OF ANY DISCREPANCIES PRIOR TO COMMENCING WORKS.

03. 150MM (MINIMUM) SITE SCRAPE TO AREA OF SKATEPARK. EXCAVATED TOP SOIL TO BE CLEARED OF VEGETATIVE MATTER AND STOCKPOILED ON SITE FOR PLACEMENT ON EMBANKMENTS PRIOR TO LANDSCAPE TREATMENT.

SITE LEGEND:

PROPOSED SKATEPARK - FLAT BANK.
PROPOSED SKATEPARK - TRANSITION (QUARTER PIPE).
PROPOSED SKATEPARK - ROLL OVER.
PROPOSED LIGHT POLES, SHOWN INDICATIVE ONLY. REFER TO ELECTRICAL ENGINEERING DRAWINGS.
PROPOSED TREES. REFER TO PLANTING PLAN CD400.
PROTECT AND RETAIN ALL NOMINATED VEGETATION (TREES AND SHRUBS) FOR THE DURATION OF WORKS ON SITE. CONTRACTOR TO SUBMIT A WORKS METHOD STATEMENT FOR THE PROTECTION OF TREES AND ROOT ZONES MARKED ON SITE PLAN AS 'SIGNIFICANT'.
EXISTING SPOT LEVEL
EXISTING CONTOUR - MAJOR
EXISTING CONTOUR - MINOR
UNDERGROUND TELECOM
POWER LINE
STORMWATER LINE
GAS LINE
FENCE LINE
LOT BOUNDARY
PROPOSED SPOT LEVEL
PROPOSED CONTOUR - MAJOR
PROPOSED CONTOUR - MINOR
WATER MAIN
OVERHEAD POWER LINE
SEWER
TELECOM PIT
TELECOM/PARALLEL
ELECTRICAL PIT
POWER POLE
LIGHT POLE
STORMWATER MANHOLE

CLIENT NAME:

INNER WEST COUNCIL
7-15 Wetherill Street, Leichhardt
NSW 2040

PROJECT NAME:

LEICHHARDT PARK SKATE PARK
70 Mary Street,
Lilyfield NSW 2040

DRAWING TITLE:

SITE PLAN

SCALE: 1:200 DATE OF ISSUE: 18.01.2022
FORMAT / SIZE: A1 REFERENCE NO: 1821
DESIGN REVIEW: ND APPROVAL: JM

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1821_CD 004 05

NOTE: ALL PROPOSED ELECTRICAL WORKS UNDER 1-100 YEAR FLOOD BENCHMARKS TO BE APPROPRIATELY WATERPROOFED. ALL WORKS THAT ARE **EITHER:**

- A) 450MM ABOVE EXISTING SPOT LEVEL, OR
B) BELOW AHD 2.240 M

ARE ALL ELECTRICAL CONDUITS, CONDUIT CONNECTIONS, ELECTRICAL PIT (NEW AND EXISTING) CONNECTIONS, AND LOCKABLE SSO AT SW CORNER, AND ARE TO HAVE IP67 RATING (SUBMERGIBLE TO 1M FOR 30 MIN).

CONTRACTOR TO CROSS REFERENCE ALL PLANS TO ENSURE ALL INFORMATION MATCHES. DESIGNER (ENLOCUS PTY LTD) TO BE CONTACTED WITH ANY DISCREPANCIES OR REQUIRED CLARITY FOR APPROVAL IN WRITING PRIOR TO WORKS COMMENCING/CONTINUING.

- NOTE:
- CONTRACTOR TO VERIFY DEPTH/CLEARANCE AND ALIGNMENT OF ALL ABOVE AND UNDERGROUND SERVICES PRIOR TO COMMENCEMENT OF WORKS AND ADHERE TO ALL REQUIREMENTS FOR WORKS NEAR SERVICES AS PER EACH PROVIDER.
 - CONTRACTOR TO RETAIN AND PROTECT ALL SERVICES OUTSIDE OF SCOPE OF WORKS. MAKE GOOD ANY DAMAGES OCCURRED DURING CONSTRUCTION.
 - CONTRACTOR IS TO VISUALLY INSPECT EACH EXISTING PIT AND SERVICES IN THE PROPOSED SCOPE TO ENSURE IT IS IN GOOD CONDITION PRIOR TO PROCEEDING WITH WORKS.

CONTRACTOR TO REMOVE ANY ORGANIC AND DELETERIOUS MATTER UNDER PROPOSED SLAB AREA TO A DEPTH OF NOT LESS THAN 600MM AND REPLACE WITH CONTROLLED FILL COMPACTED IN LAYERS OF 200MM TO 98% M.M.D.D. AS PER GEOTECHNICAL REPORT RECOMMENDATION.

-WARNING -
CONTRACTOR TO VERIFY LOCATION; DEPTH/CLEARANCE AND ALIGNMENT OF OVERHEAD AND UNDERGROUND SERVICES. CONTRACTOR TO ACQUIRE CURRENT AND RELEVANT DIAL BEFORE YOU DIG ONE CALL SERVICES DRAWINGS AND ADHERE TO ALL REQUIREMENTS FOR WORKS NEAR SERVICES INCLUDING CLEARANCES, EASEMENTS AND INFORMING SERVICE AUTHORITIES PRIOR TO COMMENCEMENT OF WORKS. THE LOCATIONS OF UNDERGROUND SERVICES INDICATED IN THIS SET OF DRAWINGS ARE INDICATIVE ONLY. PIT LOCATIONS HAVE BEEN SURVEYED BY A LICENSED SURVEYOR.

- SITE DIMENSIONS -
CONTRACTOR TO SATISFY THEMSELVES OF SITE CONDITIONS, CHANGES IN LEVEL AND DIMENSIONS PRIOR TO FABRICATION OF SITE SPECIFIC ITEMS OR PRIOR TO ORDERING/PURCHASING MATERIALS. WHERE DISCREPANCIES EXIST BETWEEN DRAWINGS AND SITE CONDITIONS CONTRACTOR TO NOTIFY SUPERINTENDENT PRIOR TO COMMENCEMENT OF WORKS.

- COPYRIGHT AND INTELLECTUAL PROPERTY RIGHTS -
ENLOCUS RETAINS THE INTELLECTUAL PROPERTY RIGHT IN RELATION TO THE CONTRACT MATERIAL. THE DESIGN AS REPRESENTED BY THE DRAWING SET AND ALL DETAILS, INGENUITY AND INNOVATION REMAIN THE PROPERTY OF ENLOCUS. REFER TO CONTRACT FOR IRREVOCABLE LICENSE GRANTED TO THE CLIENT AND COPYRIGHT ARRANGEMENT. © ENLOCUS 2019

DRAWING STATUS:

FOR
COMMENT

REVISION STATUS:

05	For Comment	18.01.22
04	For Construction	27.08.21
03	For Construction	04.08.21
02B	For Review	25.06.21
02A	For Review	24.06.21

LANDSCAPE ARCHITECT CONSULTANT:

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NOTES / LEGEND:

SITE NOTES:

01. CONTRACTOR TO VERIFY LOCATION; DEPTH/CLEARANCE AND ALIGNMENT OF ALL OVERHEAD AND UNDERGROUND SERVICES INDICATED ON CURRENT AND RELEVANT DIAL BEFORE YOU DIG ONE CALL SERVICES DRAWINGS CONTRACTOR TO REQUEST ADDITIONAL SERVICES RECORDS FROM COUNCIL, WHERE SERVICES ACCESS PITS, LIGHT POLES, METRE/VALVES ETC EXIST ON SITE. CONTRACTOR TO ASSUME GENERAL ALIGNMENT OF UNDERGROUND PIPES, CONDUITS, CABLES ETC AND VERIFY ALIGNMENT AND MARK ON SITE PRIOR TO COMMENCEMENT OF WORKS.
02. LICENSED SURVEYOR TO BE USED TO LOCATE HEIGHT DATUM & SET OUT POINT AS SHOWN ON DRAWINGS PRIOR TO COMMENCEMENT OF WORKS. CONTRACTOR TO INFORM SUPERINTENDENT OF ANY DISCREPANCIES PRIOR TO COMMENCING WORKS.
03. 150MM (MINIMUM) SITE SCRAPE TO AREA OF SKATEPARK. EXCAVATED TOP SOIL TO BE CLEARED OF VEGETATIVE MATTER AND STOCKPOILED ON SITE FOR PLACEMENT ON EMBANKMENTS PRIOR TO LANDSCAPE TREATMENT.

SITE LEGEND:

	PROPOSED SKATEPARK - FLAT BANK.
	PROPOSED SKATEPARK - TRANSITION (QUARTER PIPE).
	PROPOSED SKATEPARK - ROLL OVER.
	PROPOSED LIGHT POLES, SHOWN INDICATIVE ONLY. REFER TO ELECTRICAL ENGINEERING DRAWINGS.
	PROPOSED TREES. REFER TO PLANTING PLAN CD400.
	PROTECT AND RETAIN ALL NOMINATED VEGETATION (TREES AND SHRUBS) FOR THE DURATION OF WORKS ON SITE. CONTRACTOR TO SUBMIT A WORKS METHOD STATEMENT FOR THE PROTECTION OF TREES AND ROOT ZONES MARKED ON SITE PLAN AS 'SIGNIFICANT'.
	EXISTING SPOT LEVEL
	EXISTING CONTOUR - MAJOR
	EXISTING CONTOUR - MINOR
	UNDERGROUND TELECOM
	POWER LINE
	STORMWATER LINE
	GAS LINE
	FENCE LINE
	LOT BOUNDARY
	PROPOSED SPOT LEVEL
	PROPOSED CONTOUR - MAJOR
	PROPOSED CONTOUR - MINOR
	WATER MAIN
	OVERHEAD POWER LINE
	SEWER
	TELECOM PIT
	TELECOM PILLAR
	ELECTRICAL PIT
	POWER POLE
	LIGHT POLE
	STORMWATER MANHOLE

CLIENT NAME:

INNER WEST COUNCIL
7-15 Wetherill Street, Leichhardt
NSW 2040

PROJECT NAME:

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MALIYAWUL STREET

NOTE: ALL ELECTRICAL CONDUIT CONNECTIONS IN EXISTING PIT/SERVICES TO BE WATERPROOF.

THIN DASHED BLUE LINE INDICATED PROPOSED ELECTRICAL WORKS. REFER TO WEBB AUSTRALIA'S DOCUMENTATION AND SPECIFICATION.

NOTE: ALL ELECTRICAL CONDUITS, CONDUIT CONNECTIONS AND EXISTING AND NEW PIT CONNECTIONS TO BE IP67 RATED.

LOCKABLE PROPOSED SSO TO BE IP67 RATED

EXISTING STREET LIGHT. NOTE: CONTRACTOR/COUNCIL REQUIRED TO LIAISE WITH AUSGRID TO REROUTE ELECTRICAL LINE INTO NEW CONDUIT AWAY FROM PROPOSED CARPARK SIDE ENTRY PIT AND GARDEN BED SEATING AREA. THICK DASHED BLUE LINE INDICATIVE OF POSSIBLE ROUTING. DRAWINGS HAVE WRITTEN APPROVAL FROM AUSGRID.

NOTE: CONTRACTOR TO BE AWARE OF EXISTING UNDERGROUND DRAINAGE PIPE RUNNING FROM MALIYAWUL ST TO FRAZER ST. CONTRACTOR TO RETAIN AND PROTECT EXISTING PIPE FOR DURATION OF WORKS. ANY DAMAGES TO BE RECTIFIED AT CONTRACTORS EXPENSE.

PLAYING OVAL

AUSGRID HIGH VOLTAGE (5KV - 22KV) ELECTRICAL LINE WITH 4500 (2250 EACH SIDE) EASEMENT. CONTRACTOR TO TAKE EXTREME CAUTION. NO EXCAVATING, HEAVY MACHINERY, ETC. IN EASEMENT. CONTRACTOR TO CONTACT AUTHORITY AND USE DBYD PRIOR TO WORKS COMMENCING.


EXISTING ELECTRICAL CONDUIT TO BE DISCONNECTED, REMOVED AND REDIRECTED VIA EASTERN END OF SKATEPARK AS PER ELECTRICAL ENGINEERING DRAWINGS

9. Appendix B – Survey Data

9.1 Surveys of use of Sydney Park Skate Plaza

The use of the existing Skate Plaza at Sydney Park was surveyed on Saturday 24 April 2021 between 10am and 3pm by an independent survey firm (Matrix Traffic and Transport Data). The occupancy of the Skate Plaza is indicated in Table 10 below.

Table 10 – Occupancy of the Sydney Park Skate Plaza



[30mins interval]

Sydney Park Skate Park	
Direction	Head Count
Time Period	Occupancy
10:00 to 10:30	95
10:30 to 11:00	106
11:00 to 11:30	102
11:30 to 12:00	96
12:00 to 12:30	108
12:30 to 13:00	116
13:00 to 13:30	109
13:30 to 14:00	115
14:00 to 14:30	98
14:30 to 15:00	93
Totals	1,038

Source: Matrix

In addition to the survey recording a head count of people in the Skate Plaza every 30 minutes, it also recorded the occupancy of the adjoining off street car park. This car park also serves:

- The adjoining Sydney Park Cycle Centre
- The Alan Davidson Oval
- Other activities in Sydney Park.

It is also noted that the car park has timed restrictions applying on weekdays (4P). Below in Table 11 are the results of this survey.

Table 11 – Parking occupancy survey, Sydney Park

Street Name	Side of Street	Between	Restriction	Applicable Hours	Supply	10:00	10:30	11:00	11:30	12:00	12:30	13:00	13:30	14:00	14:30
Sydney Park	-	-	4P		91	90	91	89	91	91	91	91	91	91	91
Skate Park			Disabled		5	3	4	4	4	5	4	4	4	4	4
Total					96	93	95	93	95	96	95	95	95	95	95
% Capacity						97%	99%	97%	99%	100%	99%	99%	99%	99%	99%

Source: Matrix

9.2 ATC data

Locations of ATC counts are shown on [Figure 7](#) below.

Figure 7 – Location of ATC surveys

- ATC1 - Car Park Link Road
- ATC2 – Frazer Street
- ATC3 – Malenyawul Street

ATC volumes by day, hour and direction overleaf.