

## **APPENDIX D: TRAFFIC AND PARKING ASSESSMENT**

6 December 2023

P2651 M&P RTBC Staged Development

Raymond Terrace Bowling Club  
C/- Monteath & Powys

**Attn: Clint Forrester**

Dear Clint,

**Proposed Modification and Expansion to Raymond Terrace Bowling Club, Raymond Terrace, NSW**

Further to your recent correspondence and our discussions we have completed our review of the documentation and plans provided for the proposed staged modification and expansion of the existing Raymond Terrace Bowling Club on Port Stephens Street, Swan Street and Jacaranda Avenue, Raymond Terrace.

We have completed our site work with consideration to the car parking and access options available for the site and have undertaken traffic surveys to provide the following assessment of traffic, parking and access to support the proposed development application to Port Stephens Council.

The following assessment has been prepared in accordance with the Guide to Traffic Generating Developments published by Transport for NSW with consideration to the relevant sections of the Port Stephen Development Control Plan 2021.

**Site Location & Context**

The subject site is located on the corner of Jacaranda Avenue and Port Stephens Street, with access to these street as well as Swan Street along the western frontage as shown in Figure 1.

The site is surrounded by commercial development (including a health centre and various medical facilities) as well as residential dwellings. To the northeast is the Raymond Terrace CBD with associated commercial and retail developments.



Figure 1 - Location of the subject site in the context of the local road network.

### Road Hierarchy

Located at the western end of the Raymond Terrace town centre the site is accessed via several local streets including Port Stephens Street, Glenelg Street, Jacaranda Avenue and Swan Street. The main road through Raymond Terrace is **Adelaide Street**, previously the Pacific Highway prior to the bypassing of Raymond Terrace by the Pacific Motorway. Adelaide Street provides a generally north south orientation connecting to the Pacific Motorway at both the southern and northern end of the town as well as to Seaham Road which provides a westbound connection across the Hunter River to Maitland and beyond.

**Glenelg Street** provides a collector road connecting with Adelaide Street at a four way signalised intersection. In the vicinity of the site, it connects with other local streets at a five-way roundabout allowing for the distribution of traffic across several routes.

**Port Stephens Street** has a generally north-south orientation providing a collector road on the western (river) side of the town centre. South of Glenelg Street it provides access to the subject site as well as a number of residential lots on the western side. At its south-western end it connects with Swan Street at a simple T-intersection with Swan Street

having priority. Along its south-eastern side there is angle parking whilst on the northern side parallel parking is permitted on a vegetated verge. Footpaths are provided along with kerb and guttering on the site frontage.

**Jacaranda Avenue** along the southern site frontage connects with the Glenelg Street / Port Stephens Street roundabout at an acute angle. In the vicinity of the site, Jacaranda Avenue allows for two way movements with parking along both side. Parking along the site frontage is 90 degree with Jacarandas planted within the road reserve impacting the parking provision.

Street lighting is available along the length of Jacaranda Avenue along with kerb and guttering and footpaths on both sides.

**Swan Street** is a wide local road on the western frontage of the site which includes an access to the carpark. There is limited street lighting or pedestrian facilities with no kerb and guttering.

All of the streets in the vicinity of the site have a speed limit of 50km/hr however as detailed below the extent of the 40km/hr speed zone is being extended to include Jacaranda Avenue.

Afternoon peak hour surveys were undertaken at the five-leg roundabout of Port Stephens Street, Glenelg Street and Jacaranda Avenue to determine existing traffic demands within the vicinity of the site and trip distribution on local roads. These were undertaken on Friday 2<sup>nd</sup> June in the afternoon peak to reflect typical demands in the area as well as future demands associated with the hotel, per the Guide to Traffic Generating Developments.

The peak hour was determined as being 4.10-5.10pm. Two way flows:

- Jacaranda Avenue 150 vehicles per hour: 132 vehicles per hour (vph) northbound / 18 vph southbound
- Port Stephens Street (site frontage) 62 vehicles per hour: 28 vph northbound/ 34 vph southbound

Dominant flows at roundabout:

- 183 vph left turn from Port Stephens Street to Glenelg Street (eastbound)
- 159 vph left turn Glenelg Street to Port Stephens Street (northbound)

Observations on site confirmed that the roundabout operates well with minimal delay. The low number of opposing movements enables vehicles to negotiate the intersection with any queue clearing quickly. There are some minor delays for vehicles exiting Jacaranda Avenue at the end of the working day associated with vehicles giving way to traffic exiting Glenelg Street. This queue is minimal and clears quickly.

A review of NSW Crash Data (Transport for NSW Road Safety) for the five years 2018-2022 indicates there have been two accidents within the vicinity of the site. One, a minor incident was at the intersection of Jacaranda Avenue and Swan Street whilst the other, a serious injury involving a pedestrian on the carriageway.

### Pedestrian & Cycling Facilities

There are footpaths in the vicinity of the site connecting with the Raymond Terrace town centre.

The existing High Pedestrian Activity Area (HPAA) with the associated 40 km/h speed zone in Raymond Terrace town centre is being extended including in the vicinity of the subject site.



Works involve improving deflection on roundabout approaches to slow vehicles down and extending the existing 40 km/h area to improve pedestrian and vehicle interaction.

The works will involve new signage and line marking to highlight the extended area of the HPAA with more detailed works being completed at the Glenelg Street and Port Stephens Street intersection, and the William Street and King Street intersection to introduce greater pedestrian facilities.

Upgrades are being undertaken (October 2023) to improve pedestrian and vehicle interaction in the following locations:

- Upgrading an existing pedestrian facility near the health centre on Jacaranda Avenue
- Line marking adjustments along Glenelg Street, to assist with vehicle movement and interaction with cyclists and pedestrians.

### Public Transport

Raymond Terrace has limited access to public transport being supported by bus services but not with heavy rail.

The majority of bus services operate along Glenelg Street to the east of the subject site as shown below in Figure 2.

The Club provides courtesy bus services to support guest and club members.

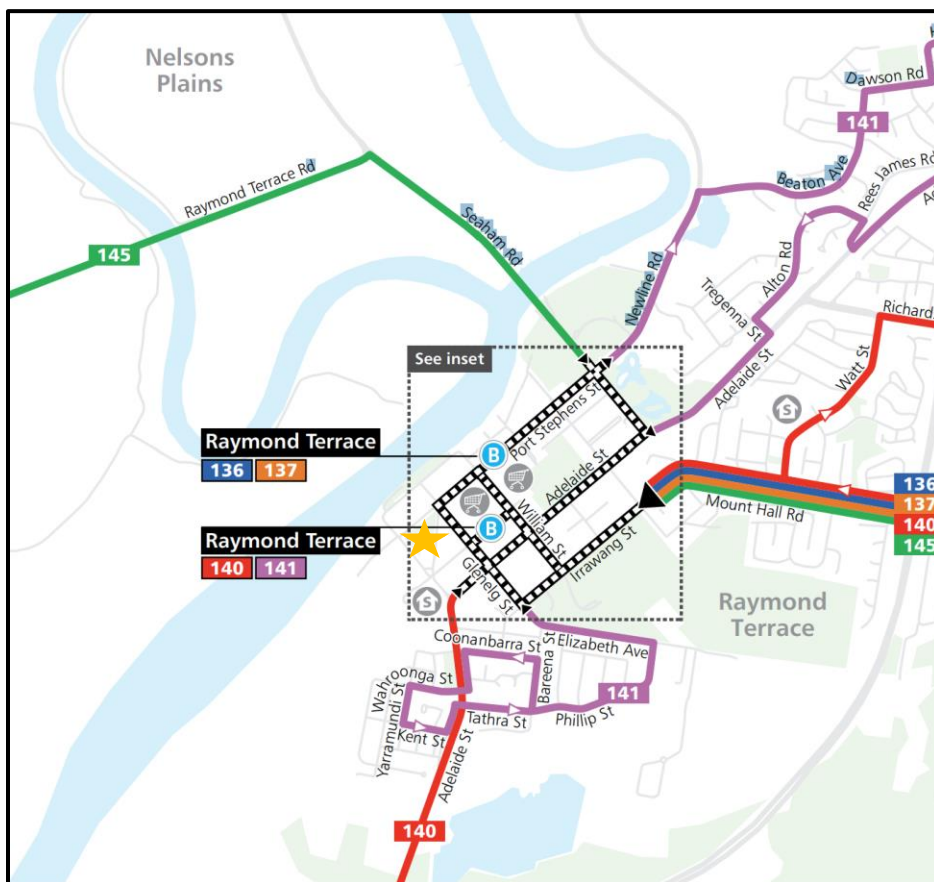


Figure 2 Bus services operating in vicinity of subject site (★)

### Parking

On-street car parking is available along the local roads surrounding the subject site with a mixture of parallel and angle parking.

Off street parking is provided within the subject site with a total of 77 parking spaces provided along with informal parking along the internal driveway (4 spaces).

There is a large off-street carpark associated with the health facility adjacent to the club.

Other commercial sites and residential lots provide on-site parking however daytime parking demands were noted on Jacaranda Avenue associated with surrounding businesses and the health service facility to the south of the site.

### Parking Demand

Parking beat surveys were on Friday 2<sup>nd</sup> June 2023 undertaken hourly between 4.30pm-8.30pm along with patron numbers within the club, to determine the current parking demands associated with the club.

Table 1 Parking Beat Survey

	Patrons	Western Carpark  32 spaces	Southern Carpark  45 spaces	Internal Driveway  4 spaces	Port Stephens Street 59 spaces	Jacaranda Avenue North 27 spaces	Total/ Vacant 167 spaces
4.30	58	23	31	1	14	17	86/81
5.30	117	26	19	2 buses	13	7	65/102
6.30	128	22	27	1	15	6	71/96
7.30	137 +children	19	29	3 + bus	10	6	67/100
8.30	81	16	25	3	6	4	54/113

Peak demands for parking occurred at 7.30pm, with 67 vehicles with the head count indicated 137 patrons + children.

Observations confirmed the use of the courtesy buses provided by the club and private drop off and taxi services as well as groups/families travelling together.

Higher patronage of an evening sees lower parking demands with use of courtesy bus and higher car occupancy rates.

Whilst Swan Street was not included in the surveys there was no parking noted along this site frontage during the survey period.

### Historical Parking Deficiency and Parking Utilisation

As describe above, the existing use of the site provides 77 formal and 4 informal (81) parking spaces.

Port Stephens DCP parking rate for a bowling green is 30 car spaces for first bowling green, then 15 for each additional bowling green. 1 bike space per 15 employees and 1 accessible parking space per 20 spaces.

Allowing for the three greens the club parking demand would be 60 parking spaces with the club facilities considered ancillary to the greens.

Parking on site meets this parking requirements for the bowling club. Four of the spaces are informal along the internal road off Jacaranda Avenue with 77 spaces formally available across the two main car parks.

Peak patronage at 6.30-7.30pm saw parking on site of 50-52 vehicles, with 29-31 vacancies. On street parking demands along Port Stephens Street and Jacaranda Avenue reflect patrons' preference to park within what is perceived a short walking distance close to the club entry and playing greens.

The total parking demand within the area surveyed during these peaks saw vacancies of 96-100 spaces. Parking along Swan Street was not included in the survey although there were no vehicles parked in this location.

### Proposal

The proposed development will be one (1) development application to be constructed/delivered in three (3) stages.

The proposal for the staged modification and expansion of the existing bowling club allows for alterations and additions to the Raymond Terrace Bowling Club and construction of a six-storey 50 room hotel including 5 serviced apartments, restaurant, bar, swimming pool, gym, function space and office spaces.

The stages include the following:

1. Alterations and Additions to Raymond Terrace Bowling Club - Including associated parking and the reshaping of the croquet lawn facing Port Stephens Street which includes additional parking for stage one (1) only;
2. Demolition of the existing shade over the Bowling Greens and the construction of a new Bowling Green roof to overhang the Raymond Terrace Bowling Club roof; and
3. Construction of the Hotel - Including associated parking and demolition.

A concept plan for the proposed development is provided within **Attachment A**.

### Review of Car Parking

#### Authority Parking Requirements

Port Stephens Development Control Plan 2021 provides the following parking guidelines:

Bowling Clubs -30 car spaces for first bowling green, then 15 for each additional bowling green.

For a hotel the parking rate is:

- 1 car space for each accommodation unit
- 1 car space per 2 employees
- 1 bike space per 20 accommodation units
- 1 accessible space per 20 parking spaces

There are no bike parking rates for bowling clubs however for a Registered Club the parking rate for bikes is 1 space per 25m<sup>2</sup> bar area plus 1 space per 100m<sup>2</sup> courtyard/ beer garden.

## Assessment of Parking

An additional floor area of 935m<sup>2</sup> is proposed as part of the modifications to the Club as shown in below. This calculation includes the alfresco dining however it is noted that this use is excluded from LEP GFA calculations.

Table 2 Proposed modifications to RTBC

	EXISTING CLUB	PRELIM ISSUE - 29/05/23	FINAL ISSUE - 10/10/23	GFA CHANGE (EXISTING TO PROPOSED 10/10/23)
DINING (FF)	183m <sup>2</sup>	309m <sup>2</sup>	323m <sup>2</sup>	+140m <sup>2</sup>
ALFRESCO DINING (FF)	-	228m <sup>2</sup>	239m <sup>2</sup>	+239m <sup>2</sup>
SERVERY (FF)	48m <sup>2</sup>	65m <sup>2</sup>	57m <sup>2</sup>	+9m <sup>2</sup>
LOUNGE (FF)	361m <sup>2</sup>	415m <sup>2</sup>	378m <sup>2</sup>	+17m <sup>2</sup>
TAB (FF)	84m <sup>2</sup>	90m <sup>2</sup>	102m <sup>2</sup>	+18m <sup>2</sup>
GAMING (FF)	178m <sup>2</sup>	226m <sup>2</sup>	210m <sup>2</sup>	+32m <sup>2</sup>
ALFRESCO GAMING (FF)	90m <sup>2</sup>	-	219m <sup>2</sup>	+129m <sup>2</sup>
PRE-FUNCTION (FF)	-	72m <sup>2</sup>	111m <sup>2</sup>	+111m <sup>2</sup>
SMOKING (FF)	22m <sup>2</sup>	19m <sup>2</sup>	22m <sup>2</sup>	-
FUNCTION A (FF)	176m <sup>2</sup>	273m <sup>2</sup>	280m <sup>2</sup>	+104m <sup>2</sup>
FUNCTION B (FF)	185m <sup>2</sup>	193m <sup>2</sup>	171m <sup>2</sup>	-14m <sup>2</sup>
PRIVATE DINING (FF)	-	35m <sup>2</sup>	39m <sup>2</sup>	+4m <sup>2</sup>
BOTTLESHOP (GF)	-	40m <sup>2</sup>	40m <sup>2</sup>	+40m <sup>2</sup>
BOARD/FUNCTION ROOM (GF)	90m <sup>2</sup>	158m <sup>2</sup>	138m <sup>2</sup>	+48m <sup>2</sup>
LOCKER ROOMS (FF)	-	77m <sup>2</sup>	58m <sup>2</sup>	+58m <sup>2</sup>
TOTAL ADDED GFA				935m <sup>2</sup>

A number of additional areas allows for ancillary uses (offices, servery etc). Changes to the function areas to provide a board room/meeting space on the ground floor and additional function space on the first floor will increase the space for functions however the ground level spaces are likely to operate in a manner ancillary to the club with meetings of directors, committee meetings, Club meetings e.g. Dart Club for meetings rather than a party or function.

The provision of alfresco gaming provides an alternate gaming space but would not generate additional traffic or parking demands but instead provides an alternate space for those wishing to gamble.

The first floor function spaces are most likely to appeal to larger groups, 21<sup>st</sup> etc of a weekend / evening. The functions rooms include an area described as "Pre-Function". Such an area will be used in conjunction with a function room e.g. canape prior to entering the function room or pre-lunch liaison prior to a business meeting or a preparation area prior to a wedding and so are also considered ancillary to the function spaces being used by the same group.

Changes to the dining areas include an alfresco dining area. The alfresco dining is not included in GFA calculations based on the LEP however a provision for parking has been included. Demands for this area are subject to weather and is most likely to appeal in fine, warmer weather rather than winter evenings or hot summer days and provides an alternate space for dining over sitting inside the club. On this basis a provision for parking on the basis of 50% usage has been allowed for.

There is also a bottle shop (40m<sup>2</sup>).

### Additional Parking Demands

Bottle shop – this relatively small area is most likely to appeal to patrons of the club purchasing alcohol as they leave and not be a significant generator of traffic or parking in its own right. Applying the shop parking rate of 1 space per 20m<sup>2</sup> would require 2 parking spaces.

It is therefore considered that it is the first-floor function space that is likely to generate additional parking demands.

The function spaces are most likely to appeal to larger groups of a weekend / evening when demands associated with the bowling greens are typically low. In this way this parking demand is complimentary to the club using the existing parking supply at times when often vacant. Such groups typically travel together or use uber/taxi services with higher car occupancy rates.



The DCP does not nominate a rate for function centres. As a comparison, the Cessnock DCP provides a rate of 1 space per 5 seats or the Port Stephens DCP provides a rate for a restaurant of 15 car spaces per 100m<sup>2</sup> floor area or 1 car space per 3 seats. Applying this restaurant rate to the additional function area floor space of 90m<sup>2</sup> (Function A +104m<sup>2</sup>+Function B -14m<sup>2</sup>) = 14 spaces.

Applying a 50% provision for the alfresco dining space to allow for the seasonal nature of this area (239m<sup>2</sup>) would see an increase in parking of 18 spaces (120m<sup>2</sup>/100x15).

As outlined above the balance of the modifications are considered either ancillary or complimentary to the existing club and associated parking supply with no additional parking required.

Allowing for the additional demand for 34 spaces (2+14+18) over the current requirement of 60 spaces would see a parking demand on site for 94 spaces.

Up to five parking spaces on Port Stephens Drive shall be removed to provide for an additional access.

### Hotel Development

The hotel development is proposed to provide 50 units however sees the removal of the third green (croquet lawn).

The Port Stephens DCP nominates rates of:

- 1 car space for each accommodation unit
- 1 car space per 2 employees
- 1 bike space per 20 accommodation units

This would see a parking requirement for 55 parking spaces for the hotel, assuming 10 employees across the site including staff for the restaurant and function space.

The restaurant and function space has been considered ancillary to the hotel on the basis that it would primarily provide a dining room for guests staying in the hotel as well as a space suitable for conferences with attendees again staying in the hotel. It is recognised that hotels do not typically see peak occupancy with the Guide to Traffic Generating Developments acknowledging use of 85 percent occupancy on the peak day of the week. Conferences and function uses therefore promote hotels and enable maximum occupancy to be reached when a conference or function is held. At other times (eg mid-week or during the day) the cross use of the facilities allows for shared use of the parking, including undersubscribed guest parking.

It is also recognised that the hotel would provide convenient accommodation for sports groups visiting the area. Opportunities to host regional sports events could see groups travelling together with high vehicle occupancy and lower parking demands. Opportunities for the club to host bowls tournaments would also see groups travelling in small buses or similar and being able to be accommodated on site, reducing overall parking demands and containing trips.

The 55 parking spaces determined, in addition to the Stage 1 requirement would see a total demand for 149 parking spaces less 15 spaces for the removal of one of the greens. The total parking requirement would therefore be 134 spaces across the site.

There are 173 parking spaces proposed, 39 spaces more than the DCP requirement.

The proposed provision of 173 spaces increases the existing supply by 92 spaces meeting the additional parking requirement associated with the Stage 1 and hotel development (34 and 55) with no concession for the removal of the third green. During periods of absolute peak demand (Christmas, New Years etc) there is capacity for additional parking

on street consistent with the existing situation. The removal of the five spaces on Port Stephens Street will have a minimal impact with the surveys demonstrating available parking on site.

Adequate bicycle parking (3 bikes) shall be provided on site as required by the DCP.

### Access

The existing access points will continue to provide for the site with vehicle access to the carparks provided from Port Stephens Street and Swan Street.

An additional entry driveway shall be provided on Port Stephens Street to the north of the existing driveway to provide an efficient entry to the main club access. This will allow for entry only with all exits via the existing driveway. Port Stephens Street in this location provides a straight and level alignment allowing suitable forward visibility for approaching vehicles.

Jacaranda Avenue shall provide an access for service vehicles including the courtesy buses as well as limited car parking (9 spaces) in a manner similar to the current arrangement. The width of this driveway is suitable for one way movement of the parked cars and for a single aisle for heavy vehicles being at least 4 metres wide. An on site management plan for the service vehicles and loading dock shall allow for the one way entry or exit of service vehicle as detailed below.

All vehicles will be able to enter and exit the site in a forward direction.

### Servicing Requirements

Servicing requirements for the site shall be similar to the existing situation and include deliveries of food and beverages and pick up of linen etc along with waste collection. Service vehicle movements are estimated to be up to six vehicles per day.

Waste collection for the club shall continue to be from Port Stephens Street.

A loading dock within the site shall be accessed off Jacaranda Avenue. This loading area has been designed to allow for the swept path of the design vehicle. The loading dock and the movement of service vehicles will be the subject of an on site management plan to provide for one vehicle only on site at a time and to allow for the one way movement of service vehicles along the service access to ensure trucks can enter and exit the site in a forward direction. This management plan may include restricting the parking along the service driveway during loading dock hours to be for staff only to avoid the potential for vehicle conflicts.

### Traffic Impacts

Applying the rate for Casual Accommodation per the Guide to Traffic Generating Developments (Daily vehicle trips = 3 per unit and Evening peak hour vehicle trips = 0.4 per unit) the hotel may generate 20 additional trips in the evening peak.

The additional area provided for function space and alfresco dining (109m<sup>2</sup> + 120m<sup>2</sup>) could see 5 trips per 100m<sup>2</sup> (restaurant) being 11 trips in the PM peak.

This could see an additional 31 trips inbound in the afternoon road peak (4.10-5.10pm). As a worst-case scenario all additional traffic has been deemed inbound in the PM peak.

There are a number of routes available for traffic approaching the subject site with traffic from the north or west (along Seaham Road) typically directed via Adelaide Street to Glenelg Street to then turn left into Port Stephens Street (by Apple Maps). For traffic with a destination to/from the south, traffic is typically directed via Adelaide Street and Swan Street to approach and via Swan Street, Sturgeon Street and Adelaide Street to depart.

Traffic may have an origin/destination equally split to/from the north and south.

Whilst the traffic demands will not be significant, from the surveys it can be seen that there is adequate spare capacity for these streets to accommodate this. Traffic approaching or departing the site is distributed across a number of routes depending upon origin/destination with 50% of traffic using the roundabout intersection of Glenelg Street and Port Stephens Street to travel north to connect with Adelaide Street or Seaham Road.

A review of the operation of the roundabout intersection of Glenelg Street and Port Stephens Street indicates that with a total of 609 vph through the roundabout in the PM peak, there is adequate capacity for these additional trips (16 vph) to approach along Glenelg Street to turn left into Port Stephens Street. These additional trips will have a minimal impact on the operation of the roundabout with no change to the overall delays and queues.

### **Construction Traffic**

The demands for construction traffic will be manageable across the local streets.

The majority of deliveries are anticipated to be managed on site. Any requirements for a construction work zone along the site frontage will be confirmed in conjunction with contractors once appointed.

Traffic demands will be within the capacity of the local streets with adequate parking available either onsite or along the Port Stephens Street or Swan Street frontages.

### **Conclusion**

The proposed modifications and expansion of the Raymond Terrace Bowling Club will allow for the ongoing viability of the club as well as improved community and sporting facilities in the area. The site provides parking in excess of the DCP requirement although it is noted that the streets along the site frontage provide popular parking alternatives for members and guests. The proposed upgrades provide additional parking on site in addition to the existing parking supply. The parking surveys completed for this project show that the current on-street parking demands are acceptable with plenty of spare spaces to accommodate any additional demands in this area.

The overall operation of the site will be similar to the existing arrangement with the function spaces being upgraded on the first floor along with upgraded dining space and alfresco dining for local residents, visitors and tourists. The overall impact of traffic associated with the upgrades will be minimal and within the capacity of the local streets.

Servicing shall be managed in a manner similar to the existing situation with deliveries and waste collection occurring on site with access via Jacaranda Avenue.

In conclusion, the proposed upgrade and expansion of this site to provide a refurbished club and a new hotel will have a minimal and acceptable impact over the existing use of the site. Therefore, the project should be approved on traffic, parking and access grounds.

Please do not hesitate to contact me on 4032 7979 should you have any queries.



Yours sincerely,



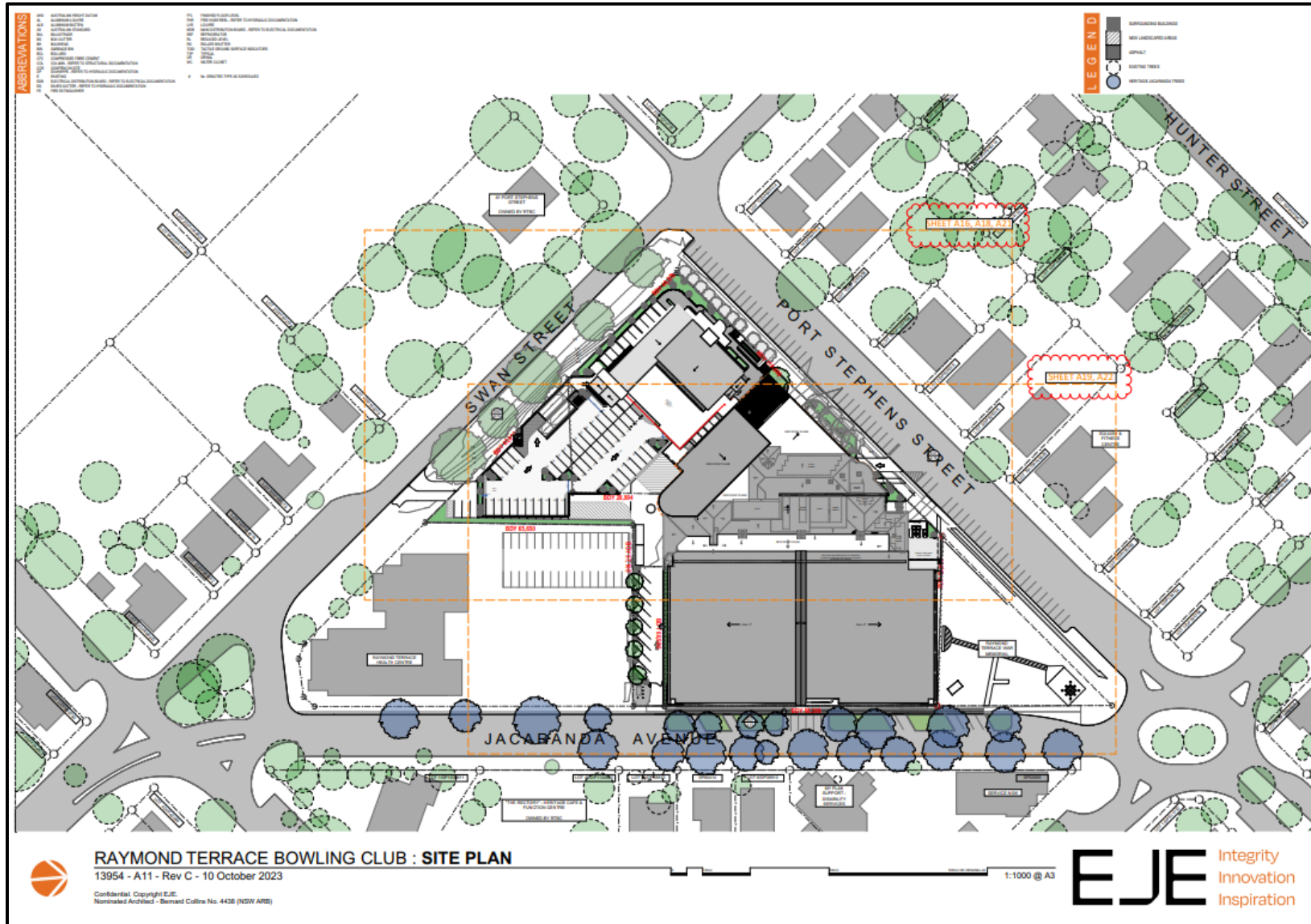
Cathy Thomas  
Director

Attachment A – Concept Plans

Attachment B – Site photos

Version	Date	Description	Prepared by	Reviewed for Issue
Ver01	13/11/2023	Draft	C. Thomas	S. Morgan 
Ver02	4/12/2023	Final	C. Thomas	S. Morgan 

Attachment A: Site Plan











Attachment B: Site photos



Photo 1 Jacaranda Avenue showing typical cross section with site to left



Photo 2 Port Stephens Street with site to right



Photo 3 Visibility to right from existing access to Jacaranda Avenue



Photo 4 Visibility to left from existing access to Jacaranda Avenue