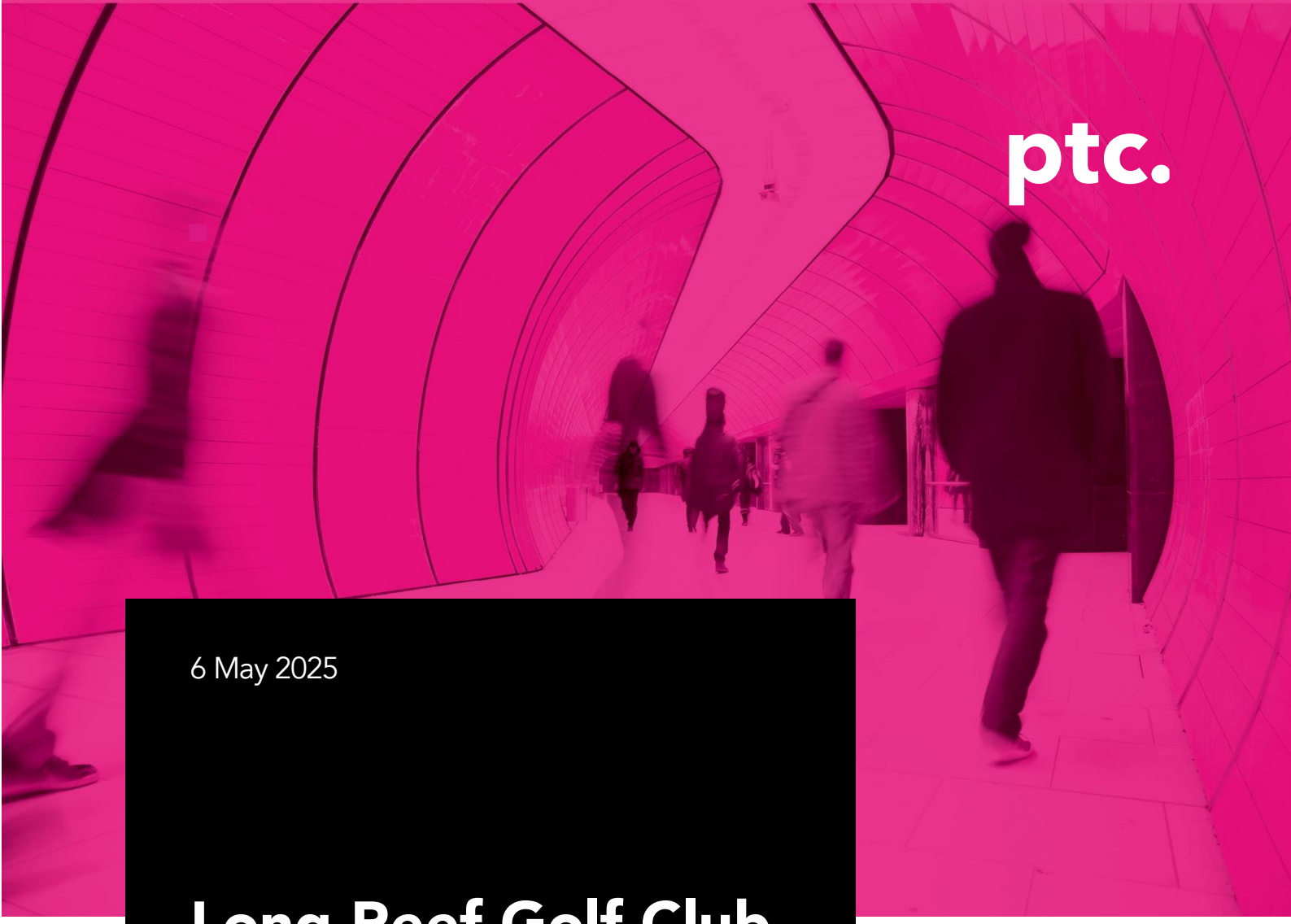

6 May 2025

Long Reef Golf Club - Clubhouse Master Plan

Transport Impact Assessment;

For: **Long Reef Golf Club**

Site Address: **Anzac Ave, Collaroy NSW 2097**

document control;

Issue:	Date	Issue details	Author	Reviewed
1	17/05/2024	WIP	SK/DK/AM	AM
2	28/06/2024	Draft	DK	AM
3	10/07/2024	Final	DK	AM
4	7/02/2025	Submission	DP	AM
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6	16/04/2025	Client approved	DP	AM
7	06/05/2025	DA Submission	DP	AM

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1. Introduction

1.1. Project Summary

ptc. has been engaged by the Long Reef Golf Club (LRGC) to prepare a Transport Impact Assessment (TIA) to accompany a Development Application (DA) to Northern Beaches Council for additions to the existing club house. This TIA has responded to, where possible, queries raised by Northern Beaches Council Development Advisory Services Team as part of the DA pre-lodgement process.

The proposed development includes the following scope of works:

- Alterations and additions to create a refurbished two (2) storey Club House
- The ground floor is proposed to provide the following areas:
    - new lobby entry space
    - three (3) Member & Community multi-use rooms
    - two (2) bar areas
    - members lounge with external terrace area
    - commercial kitchen
    - dining area
    - amenities
    - office spaces
    - storage rooms
    - keg room
    - kiosk
    - covered outdoor terrace dining area; and
    - garden seating area.
- The new first floor level will provide the following areas:
    - lobby and entry area
    - back of house space
    - Member & Community multi-use rooms
    - bar lounge
    - amenities
    - members lounge and terrace area; and
    - two (2) outdoor terrace areas
- Revised vehicular access from Anzac Avenue
- Shared pedestrian zone along existing access road for increased safety consisting of raised pavements and improved footpaths
- Tree removal and associated replanting
- Removal and reinstatement of solar panels on roof

Pursuant to the application process, this TIA report is required, including but not limited to:

- An assessment of the associated traffic activity
- Parking provision
- Car park design
- Vehicular access arrangement

The location of the subject site is outlined in **Figure 1**.

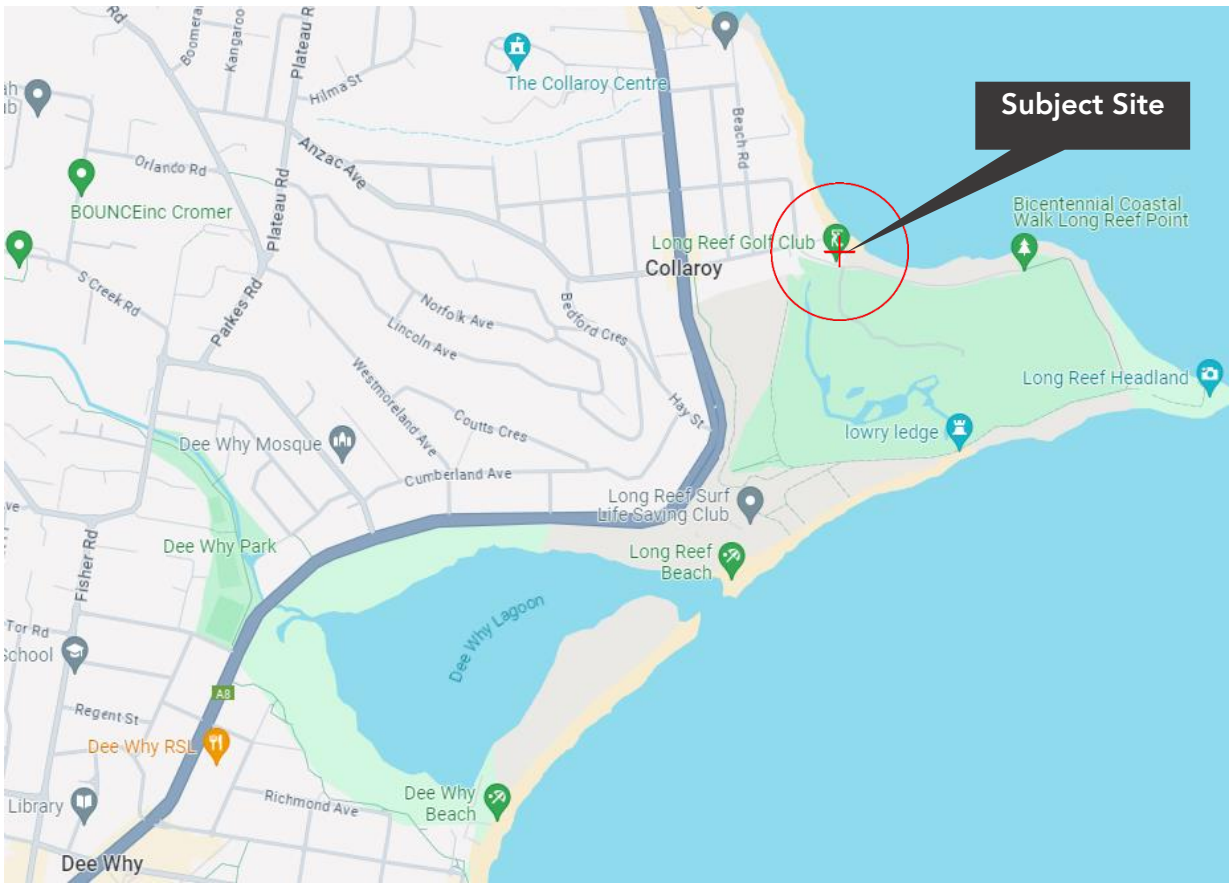


Figure 1 - Site Location (Source: Google Maps)

1.2. Purpose of this Report

This report presents the following considerations relating to the traffic and parking assessment of the development:

Section 2 - Background information, including a description of the site, current use, and a description of the proposed development.

Section 3 - A description of the road network serving the development site, the existing transportation options, and active transport facilities.

Section 4 - A description of the proposed parking provision.

Section 5 - Determination of the traffic activity associated with the development proposal, and the adequacy of the surrounding road network, including recommendations in relation to any required road upgrades.

Section 6 - Assessment of the proposed parking, access and circulation arrangements.

Section 7 - Summary & Conclusion.

2. Site Context

2.1. Site Location

The Site is positioned within the suburb of Collaroy, which forms part of the Northern Beaches Local Government Area (LGA). The Site is located at the eastern end of Anzac Avenue, Collaroy. The Site is located within Griffith Park which includes the Long Reef Golf Course (LRGC), Griffith Park Playing Field and amenities building, Collaroy Tennis Club, Long Reef Surf Lifesaving Club and associated facilities.

The Site is zoned RE1 Public Recreation and is subject to the provisions of Warringah Local Environmental Plan 2011. The Site is situated on the southern side of Anzac Avenue between Seaview Parade to the west and Fisherman's Beach to the east.

In its current state, the Site comprises the existing LRGC Club House which is a single storey rendered brick building with hipped tile roof and part flat metal roof. The Club House has been subject to various additions and extensions over the years and is no longer fit for purpose. There is an existing at grade parking area to the west of the existing building that will remain largely unchanged.

The Site adjoins Fisherman's Beach to the north and east, open reserve and Fisherman's Beach Boat Ramp to the east, an access road to car parking along the foreshore, Pro Shop and golf course to the south and south-west and low-density residential housing to the north-west.

The wider Site context is a combination of recreational and sporting facilities within Griffith Park, beach and intertidal areas, and low-density residential development.

The aerial view of the subject site is shown in **Figure 2**.

Figure 2 - Site Location Map (Source: Nearmap)

2.2. Surrounding Land Use

The property lies within RE1 Public Recreation zone, and the surrounds are predominantly RE1 (Public Recreation) and R2 (Low Density Residential). There are RE1 (Public Recreation), SP2 (Infrastructure), E1 (Local Centre) and R2 (Low Density Residential) zones within the vicinity of the site. The surrounding land use zones are presented in Figure 3.

Figure 3 - Surrounding Land Use (Source: NSW Planning Portal)

2.3. Development Proposal

The existing golf club is a single storey building, which currently accommodates a café, meeting rooms, lounge rooms and several terraces.

The proposal consists of a new upper storey events space with Members & Community Multi-use Rooms a new Entry Porte Cochere, and a clubhouse interior refurbishment.

An overview of the proposal, with plans prepared by i2C, is shown in Figure 4 and Figure 5.

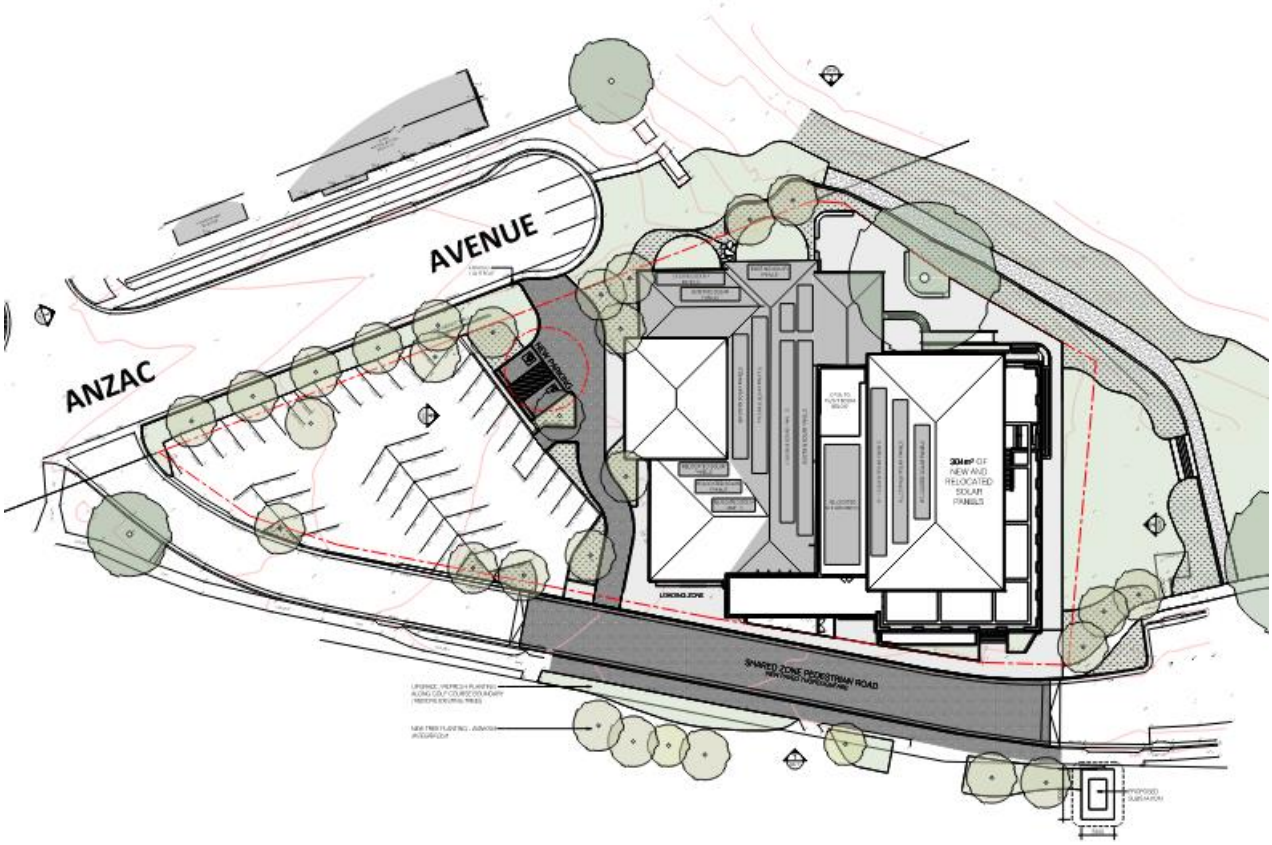


Figure 4 - Proposed Ground Floor (Overall Plan)

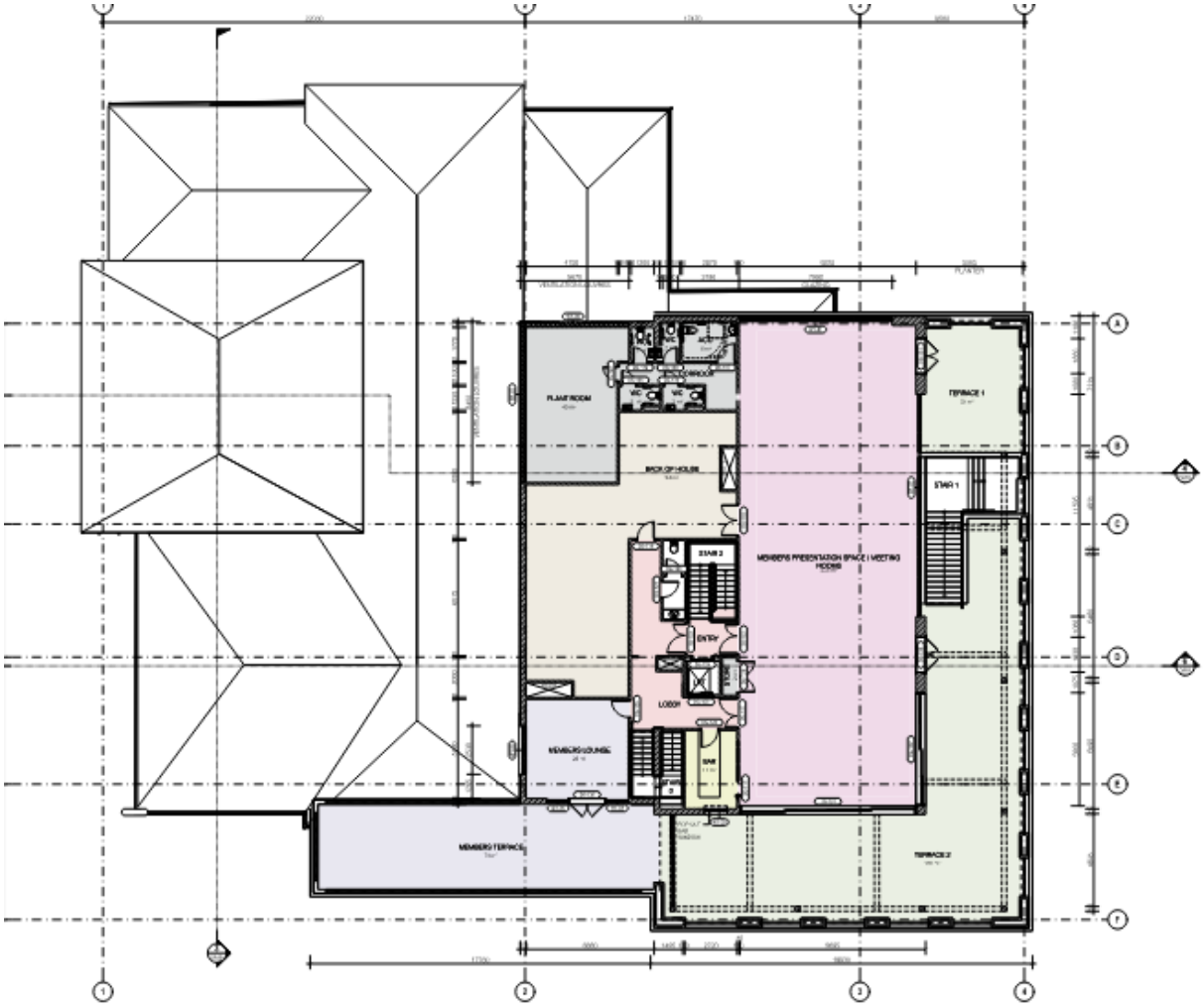


Figure 5 - Proposed First Floor (Overall Plan)

3. Transport Environment

3.1. Vehicular Transport

3.1.1. Road Hierarchy

The subject site is located in Northern Beaches Council Local Government Area (LGA) and is serviced by a combination of state and local roads comprising the Collaroy coast, as presented in Figure 6. The direct access to the site is provided by a local road connecting it to other state and local road networks.

Figure 6 - Road Hierarchy (Source: TFNSW State and Regional Roads)

The NSW administrative road hierarchy comprises the following road classifications, which align with the generic road hierarchy:

- State Roads: Freeways and Primary Arterials (TfNSW managed);
- Regional Roads: Secondary or sub-arterials (Council managed, partly funded by the State);
- Local Roads: Collector and local access roads (Council managed).

Pittwater Road	
Road Classification	State Road
Alignment	North-South
Number of Lanes	Generally three lanes in each direction (including 1 Bus Lane in each direction)
Carriageway Type	Divided
Carriageway Width	22-23m
Speed Limit	60km/hr
School Zone	No
Parking Controls	Restricted hour parking, timed Bus Lane and Bus Zones are provided on sections of kerbside lanes along with No Stopping zones
Forms Site Frontage	No

Figure 7 - Pittwater Road facing north towards Anzac Avenue

Anzac Avenue	
Road Classification	Local Road
Alignment	East-West
Number of Lanes	One lane in each direction
Carriageway Type	Undivided
Carriageway Width	12.8m
Speed Limit	50km/hr
School Zone	No
Parking Controls	Unrestricted on-street parking available on both sides of the road
Forms Site Frontage	No

Figure 8 - Anzac Avenue facing east towards Seaview Parade

Seaview Parade	
Road Classification	Local Road
Alignment	North-South
Number of Lanes	One lane in each direction
Carriageway Type	Undivided
Carriageway Width	8.5m-12.5m
Speed Limit	50km/hr
School Zone	No
Parking Controls	Unrestricted on-street parking available on both sides of the road
Forms Site Frontage	No

Figure 9 - Seaview Parade facing south towards Anzac Avenue

Unnamed (Access Road to Golf Club & Beach)	
Road Classification	Local Road
Alignment	Northwest-Southeast
Number of Lanes	One lane in each direction
Carriageway Type	Undivided
Carriageway Width	Variable, 5.5-9.1m
Speed Limit	10km/hr – Shared Zone
School Zone	No
Parking Controls	No parallel kerbside parking in Access Road, but provides access to Golf Club carpark and Fisherman Beach angled parking area
Forms Site Frontage	Yes

Figure 10 - Access Road to Golf Club (site) facing south towards Fishermans Beach

3.2. Public Transport

The locality has been assessed in relation to the available public transport options that may serve the various users of the subject development. This assessment considered the *NSW Planning Guidelines for Walking and Cycling (2004)*, which suggests that a distance of 400-800m is a walkable catchment and 1,500m is a suitable cycling catchment when the development is within proximity to public transport.

Figure 11 presents the catchment within 400m and 800m radius of the site and bus stops within those catchments.

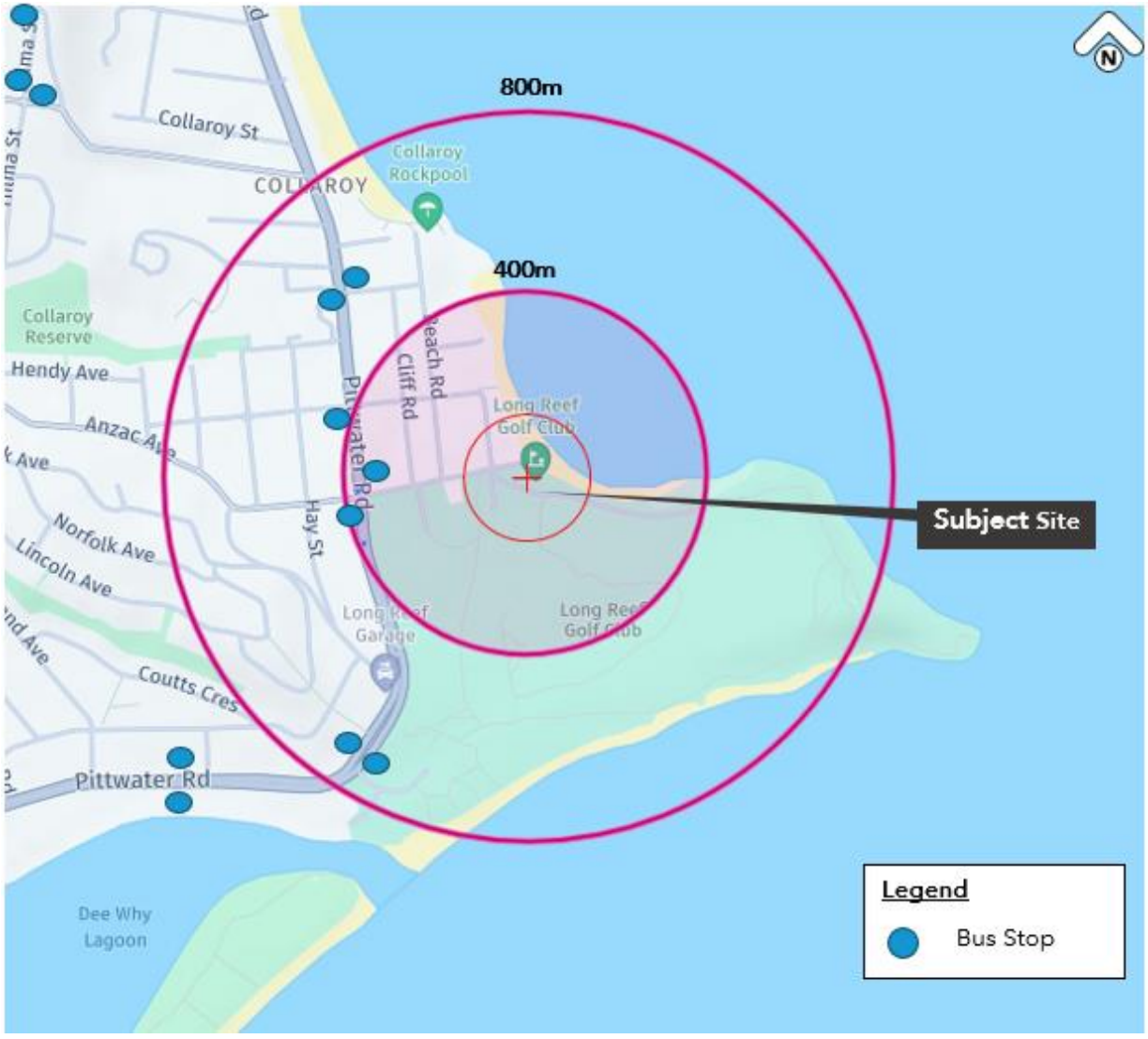


Figure 11 - 800m Walking Catchment surrounding the Subject Site

3.2.1. Bus

The site is well serviced by a large number of bus services within walking distance along Pittwater Road and Anzac Avenue. The available nearest bus stops and routes illustrated in Figure 12 and summarised in the Table 1 below.

Figure 12 - Surrounding Bus Routes (Source TfNSW)

Table 1 - Bus Service Summary

Route	Service	Timetable
181X	Narrabeen to City Wynyard (Express Service)	Every 20 – 30 minutes
190X	North Avalon to City Wynyard (Express Service)	Every 20 - 30 minutes
199	Palm Beach to Manly via Mona Vale & Dee Why	Every 10 – 20 minutes
B1 (B Line)	B-Line Mona Vale to City Wynyard	Every 20 – 30 minutes

Route	Service	Timetable
179	Wheeler Heights to Warringah Mall	Every 25– 30 minutes
180	Collaroy Plateau to Warringah Mall	Every 20 – 30 minutes
180X	Collaroy Plateau to City Wynyard (Express Service)	Every 10 – 20 minutes

An on-demand bus service (Keoride) currently operates from Narrabeen to northern suburbs up to Palm Beach. Although some bus routes (such as 181X, 199 in the above table) can provide connections between Narrabeen and the site, the Keoride service is not considered as an attractive option for Club-related users as it cannot provide direct route to the site (a transfer to other bus routes is required).

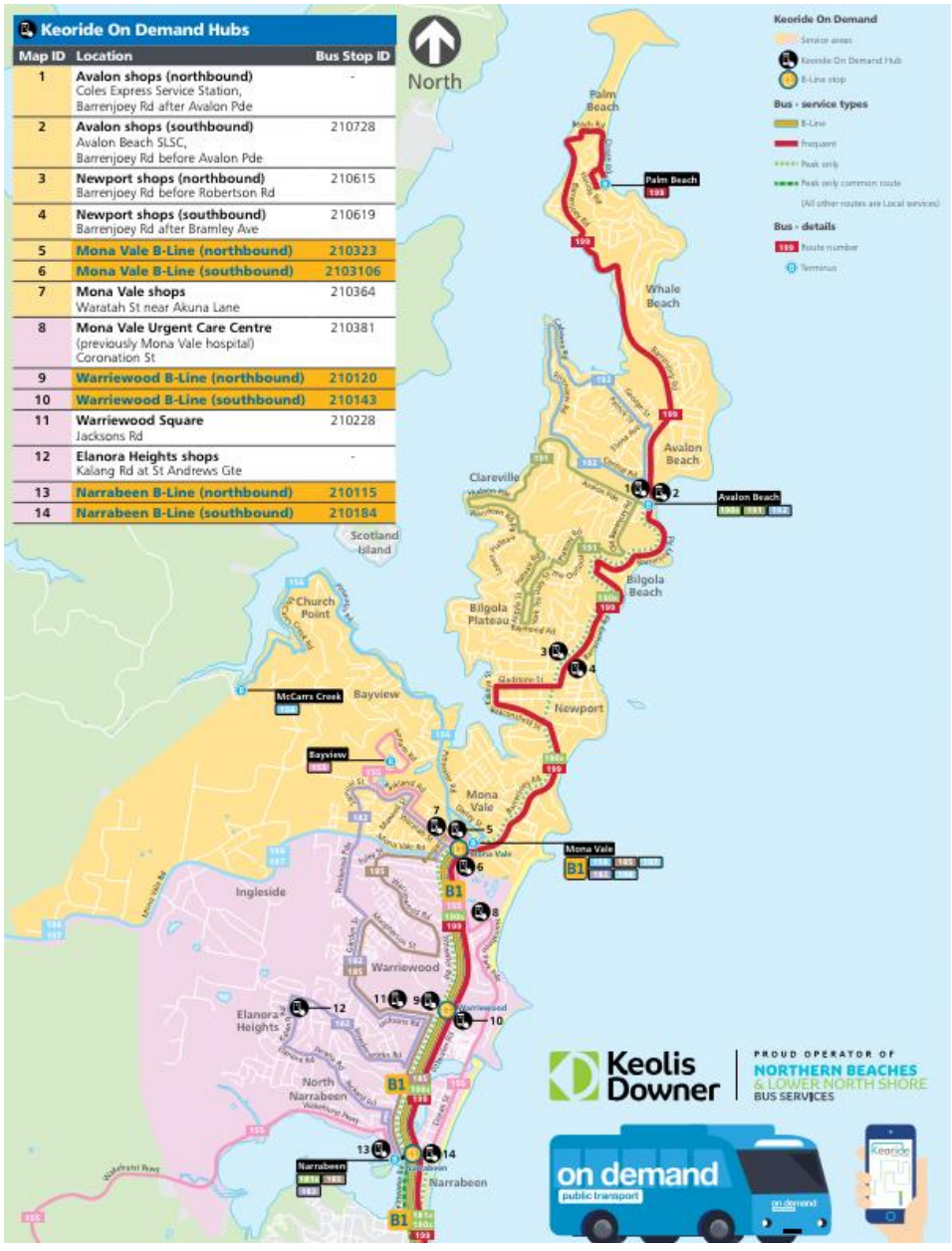


Figure 13 - Keoride On Demand Service Network Map

3.3. Active Transport

The existing walking and cycling infrastructure surrounding the site has been reviewed, with the focus on site frontage roads.

For walking, the surroundings roads are provided with footpaths on the Access Road, Anzac Avenue and Seaview Parade.

For cycling, currently there are no dedicated cycle lanes or shared paths provided in the immediate proximity to the site, therefore cyclists need to share the road with motorists. A map of the cycling infrastructure in the area is provided in Figure 14. The locality provides a generally friendly environment for cycling with the bike trails near Fisherman's Beach.

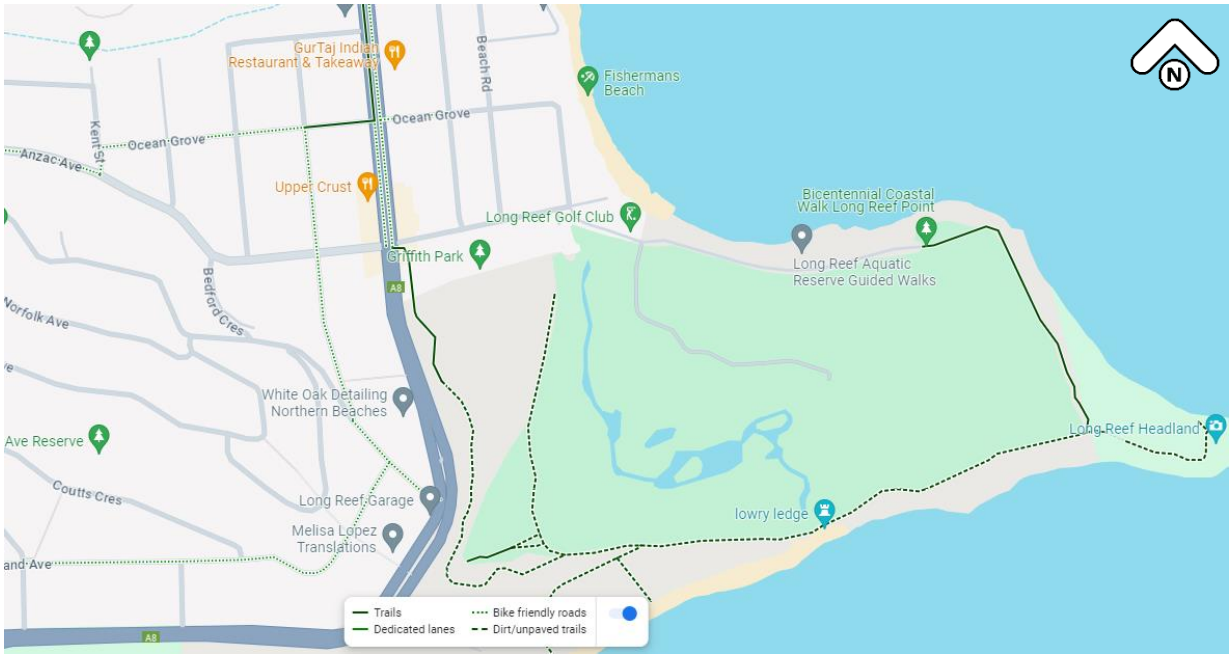


Figure 14: Surrounding cycling network (Map source: Google Maps)

Based on the above, the area in proximity to the site is considered adequate for walking and cycling.

The Northern Beaches Council Cycling Map has also been analysed to determine the existing and future cycling infrastructure.

From Figure 15, it is noted that there are designated shared paths along Pittwater Road and Ocean Grove connecting the site to the wider bicycle network.

Figure 15 - Existing Bicycle Network (Source: Northern Beaches Council Bike Plan)

4. Parking Assessment

4.1. Planning Policy

The proposal is subject to the parking provision rates stipulated in the following planning documents:

- Former Warringah Local Environmental Plan (Former Warringah LEP 2011)
- Former Warringah Development Control Plan (Former Warringah DCP 2011)

4.1.1. Statutory Requirements

According to the *Appendix 1 Car Parking Requirements* in the Former Warringah DCP 2011, the proposal falls under an Entertainment Facility or Community Facility land use. In both cases, the DCP control for parking provision does not stipulate any specific carparking requirements, but instead states the requirement being that '*Comparisons must be drawn with developments for a similar purpose.*'

Therefore, the current parking provision rate, based on the existing GFA and the existing Club car park capacity, is considered an appropriate method to calculate the future minimum parking provision for the proposal.

Additionally, we have conducted parking occupancy and travel mode surveys to understand the current and future parking supply and demand from the Club-related users.

4.2. Current & Future Car Parking Provision based on GFA

4.2.1. Required Minimum Parking Provision based on GFA

The key inputs for the parking provision rate (based on GFA) calculation are summarised below:

Table 2 – Key Inputs for Parking Provision Rate (based on GFA) Calculation

Item	Data	Data Source
Current GFA (Publicly Accessible Area)	563 sqm	i2c Architects
Current Capacity	Club car park - 43 spaces	ptc. site visit / Club's data sent on 21/03/2024
Proposed GFA (Publicly Accessible Area)	1,007 sqm	i2c Architects

Table 3 - Current & Future Parking Provision Calculations

Current GFA (Publicly Accessible Area)	Current Capacity	Current Parking Provision Rate	Proposed GFA (Publicly Accessible Area)	Proposed GFA (Publicly Accessible Area) Minimum Parking Provision
563 sqm	43 spaces	1 space per 13 sqm	1,007 sqm	77 spaces

4.2.2. The Club's Future Parking Capacity

A new driveway entry from Anzac Avenue will be provided by the Club with the completion of the refurbishment, which will have the following impacts on parking capacity:

- Reduction of 2 spaces from the existing club car park
- Addition of 2 new accessible parking spaces along the new driveway

Therefore, the net increase in the Club car park capacity will be 1 space, reaching a total of **43 spaces.**

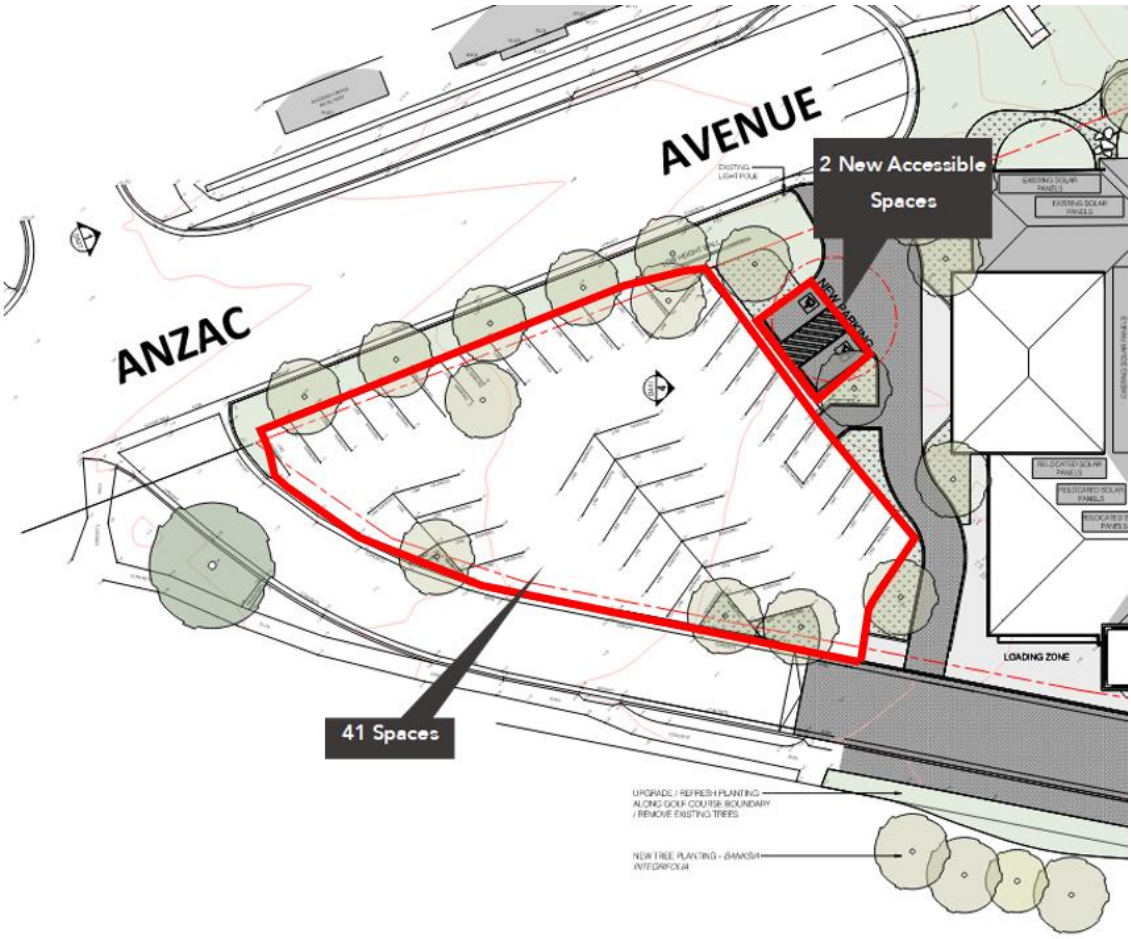


Figure 16 – The Future Club Car Park and the New Driveway

The Club has an approved overflow car park to increase parking supply for Club-related users and events. This overflow car park is located on the south side of the Fishermans Beach parking area within the golf course land (as shown in the map below).

Figure 17 - Location of Overflow Car Park

The Overflow car park is estimated to provide **23 additional parking spaces** (as shown in Figure 18).

Figure 18 – Overflow Car Park Plan

A Maintenance Facility area has been identified next to the Headland car park in Figure 19. The Club will allocate **a maximum of 25 staff** to park in this area and shuttle them to the Club during evening peak hours.

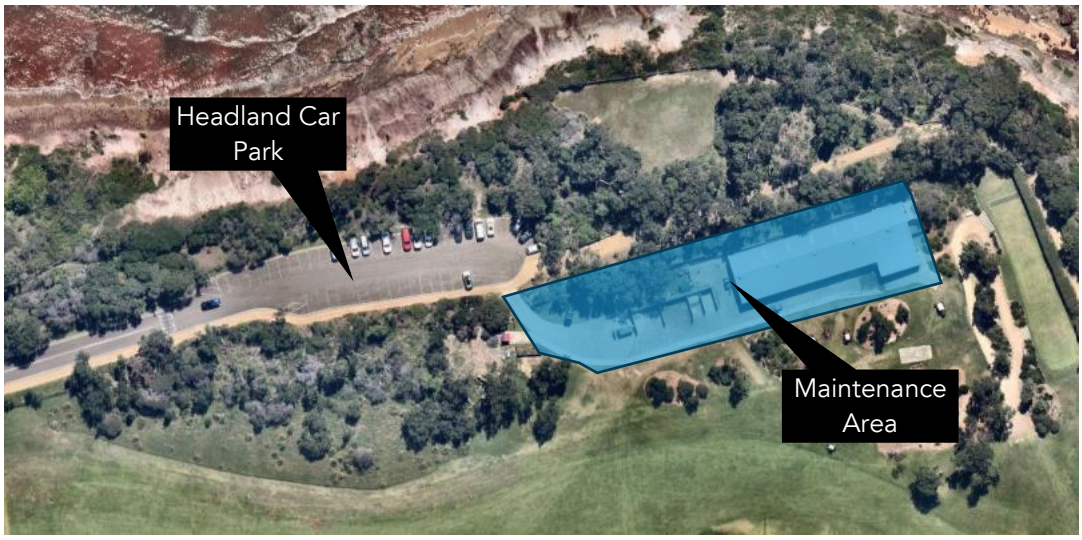


Figure 19 - Maintenance Area

Therefore, based on the above, the Club's future parking capacity will include the Club car park (43 spaces), Overflow car park (23 spaces) and Maintenance Area (25 spaces) during peak hours, providing a total of **91 spaces**.

4.2.3. Comparison of Minimum Parking Provision and The Club's Future Parking Capacity

Based on the above estimate, we have compared the minimum parking provisions derived from GFA with the estimated future parking capacity of the Club's parking facilities.

Table 4 - Minimum Parking Provision based on GFA vs. The Club's Future Parking Capacity

Current Capacity (The Existing Club car park)	Minimum Parking Provision (Proposed GFA)	The Club's Future Parking Capacity	Surplus / Shortfall
43	77	91	+14

Therefore, the Club's future parking capacity available for Club-related users (e.g. staff, members, visitors etc.) is considered to exceed the estimated minimum parking provision based on the proposed GFA for the refurbishment.

4.3. Parking Occupancy Surveys

4.3.1. Zone of Influence ("ZOI")

To understand parking availability for Club-related parkers (e.g. staff, visitors), parking surveys were conducted during daytime and evening peak hours on Wednesday (3rd April 2024) and Sunday (7th April 2024) for off-street and on-street spaces located within the nearby areas of the Club (Zone of Influence "ZOI").

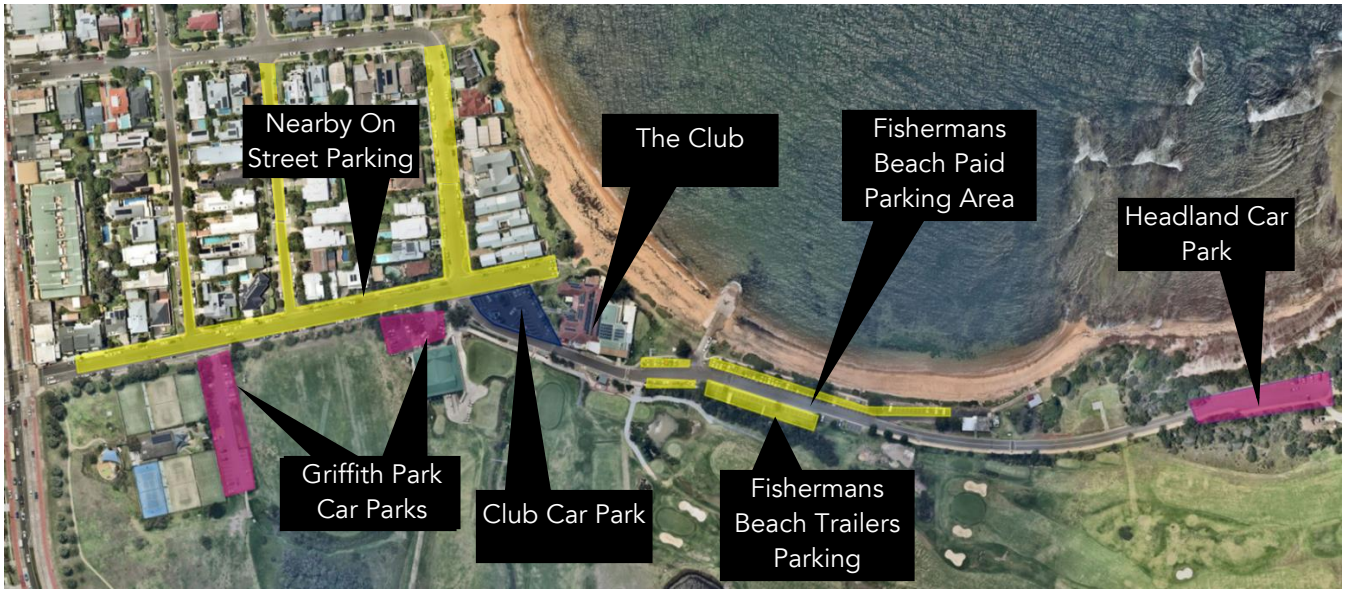


Figure 20 – On-Street & Off-Street Parking Spaces within Zone of Influence ("ZOI")

The site is located on the northern edge of the Long Reef Headland precinct.

Figure 21 - Long Reef Headland Precinct

A maximum of 354 spaces are available for public parking at the Long Reef Surf Club's car park. However, this car park is located approximately 1.2km away from the subject site (17min walk). Given this distance, we have excluded this car park from the ZOI as well as our analysis.

4.3.2. Current Parking Supply and Occupancy

The table below shows the existing supply and occupancy of on-street and off-street parking during daytime and evening peak hours within the ZOI.

Table 5 – Current Parking Supply and Occupancy

Location	Capacity	Wednesday				Sunday			
		11am	1pm	5pm	7pm	11am	1pm	5pm	7pm
Anzac Avenue	79	95%	72%	80%	73%	97%	97%	70%	25%
Beach Road	35	86%	80%	43%	43%	94%	94%	46%	29%
Cliff Road	19	68%	100%	58%	63%	95%	89%	89%	42%
Seaview Parade	31	94%	90%	52%	52%	97%	97%	81%	71%
Fishermans Beach Paid Parking	79	101%	99%	67%	34%	97%	99%	65%	10%
Subtotal – On Street	**243**	**93%**	**86%**	**65%**	**53%**	**97%**	**97%**	**67%**	**28%**
Headland Car Park	47	28%	21%	21%	26%	81%	79%	60%	4%
Griffth Park Car Parks	69	99%	48%	96%	72%	96%	94%	84%	9%
Subtotal – Off Street	**116**	**70%**	**37%**	**66%**	**53%**	**90%**	**88%**	**74%**	**7%**
Total excl. Club Car Park	**359**	**86%**	**70%**	**65%**	**53%**	**94%**	**94%**	**70%**	**21%**
Club Car Park	43	91%	86%	65%	19%	93%	98%	67%	5%
Total incl. Club Car Park	**402**	**86%**	**72%**	**65%**	**49%**	**94%**	**94%**	**69%**	**19%**

**Club car park capacity excludes loading zone*
** Nearby on-street / off-street parking includes Fishermans Beach Paid Parking Area, Griffth Park Car Parks and Other on-street spaces; excludes Fishermans Beach trailers spaces*
** Wednesday evening peak hour 5pm-6pm - applied 5:30-6:00pm data*

We identified 43 spaces in the existing Club Car Park and a total of 359 spaces within the ZOI that could be utilised by Club-related parkers.

The Club car park was nearly fully occupied during daytime and had some spaces available after 5pm.

On-street parking within the ZOI comprises unrestricted and 6P free parking along Anzac Avenue and in the residential area (Beach Road, Cliff Road and Seaview Parade).

12P paid parking (Peak $10/hr or $40/day; Off peak $8/hr or $35/day) is available for the public in the Fishermans Beach parking area. These free and paid parking spaces were well utilised with limited vacancies during peak hours.

The Headland car park is located on the top of a hill, approximate 500m east from the Club, and maybe inconvenient for some customers. This car park was underutilised on Wednesday but well utilised during Sunday daytime peak hours, indicating that some visitors for weekend events may use these spaces when more convenient spaces near the Club are utilised.

The Griffith Park car parks include 1 larger car park (49 spaces) next to the tennis courts and 2 smaller car parks (totalling 20 spaces) along Anzac Avenue. These car parks were full during Wednesday and

Sunday peak hours, utilised by different user groups such as visitors to Griffith Park/tennis courts, Club-related users, staff/customers of local businesses.

Additionally, we identified 21 spaces dedicated to cars with trailers on the south side of the Fishermans Beach parking area, which were consistently underutilised during both daytime or evening peak hours. However, we have discounted these spaces from our analysis as they are not available for Club-related parkers. (parking clearly signed as being exclusively for cars with trailers use)

Figure 22 – Low-utilised Car with Trailer Spaces in the Fishermans Beach Parking Area

4.3.3. Summary of Potential Parking Availability

Based on the above information, we recommend that the Club consider taking the following actions to increase parking availability at the Club's parking spaces to accommodate the additional parking demand during peak hours:

- Use the Overflow car park as an 'on-demand' parking facility for event parking.
- Allocate some parkers (e.g. staff, event parkers) to the Headland car park via clear parking guidance signage or transport facilities (e.g. buggy, shuttle).
- Allocate some staff to the Maintenance area near the Headland car park and shuttle them to the Club during evening peak hours.

The net capacity increase in the Club Car Park, as well as the parking capacities of the Overflow car park and the Maintenance area are summarised in Section 4.2.2.

The potential parking spaces available for Club-related users within the ZOI are shown in Table 6 below:

Table 6 - Summary of Potential Parking Availability (Vacant Spaces) within ZOI

Location	Capacity	Wednesday				Sunday			
		11 am	1pm	5pm	7pm	11 am	1pm	5pm	7pm
Existing Club Car Park	43	4	6	15	35	3	1	14	41
Headland Car Park	47	34	37	37	35	9	10	19	45
Nearby on-street / off-street parking	312	17	69	88	134	11	12	90	238
Net Increase in the Club Car Park	1	1	1	1	1	1	1	1	1
Overflow Car Park	23	23	23	23	23	23	23	23	23
Maintenance Area	25	N/A	N/A	25	25	N/A	N/A	25	25
Total	**451**	**79**	**136**	**189**	**253**	**47**	**47**	**172**	**373**

** Club Car Park excl. loading zone spaces*
** Nearby on-street / off-street parking includes Fishermans Beach Paid Parking Area, Griffth Park Car Parks and Other on-street spaces; excludes Fishermans Beach trailers spaces*
** Wednesday evening peak hour 5pm-6pm - applied 5:30-6:00pm data*

4.4. Travel Mode Surveys

We undertook online surveys of the Club staff and members/visitors to understand:

- How they travel to the Club
- If they travel by car:
    - How many people are in the vehicle
    - Where do they park
    - Why they do not use public transport
    - Would they be interested in car pooling/car sharing
    - Would they use shuttle bus if provided (members only)

The above data was used to construct our parking demand estimates.

During our surveys we obtained 45 responses from the Club's staff and 441 responses from the Club's members. We did not receive any responses from casual visitors to the Club.

Based on the golf course and clubhouse usage data provided by the Club, the usage on Friday follows a similar pattern to weekends.

Therefore, we have split the travel mode data into two categories: Weekday (Monday-Thursday) and Friday & Weekend.

4.4.1. Staff Travel Mode

The following table shows the key results from the online survey:

Table 7 - Staff Travel Mode Survey Key Results

Key Result	Weekday (Mon-Thu)	Friday & Weekend
% Car	92.3%	93.3%
% Drop off	8.6% of car users	12.2% of car users
% Parking location	% of car users: • 17.1% - Club car park • 11.4% - Off Street • 62.9% - On Street	% of car users: • 17.1% - Club car park • 9.8% - Off Street • 61% - On Street
Why travel by car	% of car users • Driving is more convenient 82.9% • Takes longer by public transport 42.9%	% of car users • Driving is more convenient 82.9% • Takes longer by public transport 43.9%
People per car	1	1

- 37.1% of staff with weekday shift and drive by themselves showed interest in car sharing/car-pooling.
- 34.1% of Friday & Weekend staff who drive by themselves expressed a desire to use car sharing/car-pooling.
- This indicates the potential to reduce parking demand in the future by encouraging car sharing/car-pooling if guaranteed parking spaces are provided.

4.4.2. Members Travel Mode

Members were asked "what is your main purpose for visiting the LRGC?" in the travel mode survey. Therefore, if their selected option(s) included "Golf" then they were categorised as "Golfers"; while if they selected other options e.g. conference, dining and any other purposes, they were categorised as "Bar & Event Visitors".

The following table shows the key results from the online survey of Golfers and Bar & Event Visitors:

Table 8 – Golfers Travel Mode Survey Key Results

Key Result	Weekday (Mon-Thu)	Friday & Weekend
% Car	89.6%	89.4%
% Drop off	0.7% of car users	0.8% of car users
% Parking location	% of car users: • 44.4% - Club car park • 11.1% - Off Street • 43.8% - On Street	% of car users: • 43.2% - Club car park • 10.2% - Off Street • 45.9% - On Street
Why travel by car	% of car users • Driving is more convenient 73.1% • Live too far to the LRGC 25.3%	% of car users • Driving is more convenient 72.6% • Live too far to the LRGC 24.1%
People per car	1.12	1.16

- 16.9% of Golfers who drive by themselves during weekdays and 20.4% during Friday & weekends expressed interest in car sharing / car pooling if guaranteed parking spaces were provided.

- 26.3% of weekday Golfers who drive to the Club and 29.3% during Friday & weekends showed interest in taking a shuttle bus if this services were provided.
- The intention of some Golfers to use car sharing/car pooling and taking the shuttle bus indicate the potential opportunities to reduce car dependency.

Table 9 – Bar & Event Visitors Travel Mode Survey Key Results

Key Result	Weekday (Mon-Thu)	Friday & Weekend
% Car	85.5%	83.6%
% Drop off	3.2% of car users	1.7% of car users
% Parking location	% of car users: • 51.6% - Club car park • 9.7% - Off Street • 35.5% - On Street	% of car users: • 51.7% - Club car park • 10.3% - Off Street • 36.2% - On Street
Why travel by car	% of car users • Driving is more convenient 79% • Live too far to the LRGC 29%	% of car users • Driving is more convenient 77.6% • Live too far to the LRGC 27.6%
People per car	1.19	1.24

- 17.6% (weekday) and 20% (Friday & weekend) of Bar & Event Visitors who drive by themselves showed their interest in car sharing / car pooling if guaranteed parking spaces were provided.
- 32.3% (weekday) and 34.5% (Friday & Weekend) of Bar & Event visitors who drive to the Club presented they would like to take shuttle bus if this service were provided.
- Similar to Golfers, these results indicate potential opportunities to reduce parking demand.

4.5. Current & Future Parking Demand

ptc.'s approach to estimating parking demand is outlined in Figure 23. We acknowledge that no two sites are identical; therefore, our general methodology is tailored to the requirements of each specific site.

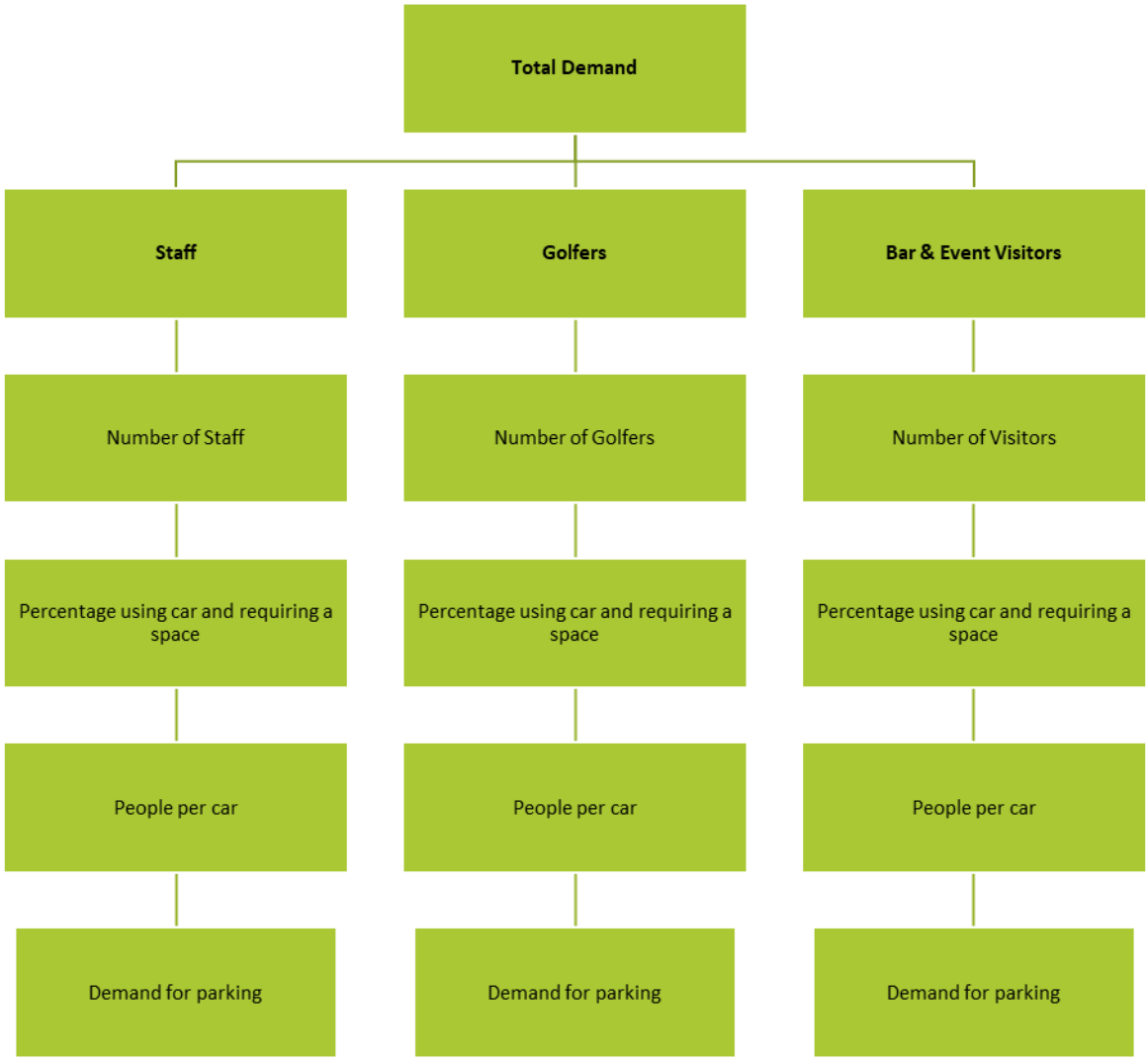


Figure 23 - Parking Demand Estimate Methodology Overview

The raw demand data is converted into detailed demand estimates, subdivided by the appropriate user and time categories etc. The results are then incorporated into individual spreadsheets representing the current and future situations.

4.5.1. Summary of Parking Demand Estimates

We have prepared the following two parking demand estimates:

Table 10 - Summary of Parking Demand Estimates

Demand Estimate	Overview of Content / Purpose	Appendix
Current	• Current situation based on current population, % using car and requiring parking spaces	Appendix 5
Future	• Future estimate, based on expected staff and service growth after the completion of the new refurbishment; • No travel mode change was applied	Appendix 6

4.5.2. Key Assumptions and Inputs

General assumptions applied in the preparation of the current base case demand estimates are summarised in Table 11 below:

Table 11 - Key Assumptions and Inputs - Current & Future Estimates

Key Assumption / Input	Data Source
Current & Future Staff Number	Club data
Weekday (Monday-Thursday) and Friday & Weekend Daytime Peak – 1pm	Club data
Weekday (Monday-Thursday) and Friday & Weekend Daytime Peak – 1pm	Club data
Current & Future Daytime / Evening peak hour split - Staff	Club data
Current Club Usage (no. of golfers & visitors)	Club data
% using car and requiring parking	Online staff and members survey
People per car	Online staff and members survey

The detailed Club's data is included in Appendix 3. Where hard data has not been provided to us, or is not available, we have adopted assumptions based on our experience of other comparable sites.

Appendix 4 summarises the current and future demand drivers and assumptions.

Below is a summary of our analysis, assumptions, and conclusions regarding current and future demand for parking from the Club-related users. The data has been used to build our demand models.

4.5.1. Calculation Methodology

We set out below the rationale for interpreting our demand estimates:

- Total cars during peak hours = people during peak hours x % using car and requiring a car space / people per car

We adopted "Golfers" as a worked example:

120 Golfers attending the Club during weekday (Mon-Thu) daytime peak x 89% driving and requiring a car space / 1.12 person per car = approx. 95 parking spaces required at weekday daytime peak.

4.5.2. Summary of Current and Future Peak Parking Demand

A summary of the estimated current and future peak parking demand is shown in Table 12 below. More details are included in Appendix 5 and Appendix 6.

Table 12 – Summary of Base Case Weekday Peak Parking Demand – Current Base Case

	Current	Future	Additional Demand
Weekday (Monday – Thursday) Daytime Peak			
Staff	23	26	3
Golfers	95	95	0
Bar & Event Visitors	106	122	16
Total Weekday Daytime Peak Demand	**224**	**243**	**19**
Weekday (Monday – Thursday) Evening Peak			
Staff	6	26	20
Golfers	32	32	0
Bar & Event Visitors	42	146	104
Total Weekday Evening Peak Demand	**79**	**203**	**124**
Friday & Weekends Daytime Peak			
Staff	25	28	**3**
Golfers	92	92	**0**
Bar & Event Visitors	80	91	**11**
Total Friday & Weekends Daytime Peak Demand	**197**	**211**	**14**
Friday & Weekends Evening Peak			
Staff	12	28	**16**
Golfers	31	31	**0**
Bar & Event Visitors	133	232	**99**
Total Friday & Weekends Daytime Peak Demand	**176**	**290**	**114**

We have compared the additional parking demand with the total vacant spaces within ZOI. Our analysis of future parking surplus / shortfall is summarised as follows:

Table 13 – Analysis of Parking Surplus / Shortfall of Additional Future Parking Demand

	Additional Demand	Vacant Spaces within ZOI*	Surplus / Shortfall
Weekday (Monday – Thursday) Daytime Peak	19	136	+117
Weekday (Monday – Thursday) Evening Peak	124	189	+65
Friday & Weekends Daytime Peak	14	47	+33
Friday & Weekends Evening Peak	114	172	+58

**Total Vacant Spaces within ZOI – include the Net increase in the Club car park, Overflow car park and maintenance area – refer to Section 4.3.3*

From the tables above, our key conclusions are summarised as follows:

- Table 12 illustrates that the increase in peak parking demand due to the proposal is estimated mainly during both weekday and weekend afterhours (by 157% and 65% respectively), with a slight parking demand increase during daytime peaks (by 8% and 7% respectively).
- Table 13 shows that the additional parking demand generated by the proposal can be accommodated by the vacant spaces within the ZOI, including the Club car park, Overflow car park, the maintenance area, and other available on-street & off-street parking spaces.

4.6. Accessible Car Parking

The Club currently provides 1 accessible space in the Club car park, which will be retained.

Neither the Former Warringah DCP 2011 nor Former Warringah LEP 2011 stipulates the requirement of accessible parking for the Entertainment facility development.

However, the development proposes two additional accessible parking spaces in line with comments received as part of pre-lodgement process.

4.7. Motorcycle Parking

Neither the Former Warringah DCP 2011 nor Former Warringah LEP 2011 stipulates the requirement of motorcycle parking for the Entertainment facility development.

Therefore, the development does not propose any motorcycle parking and is in line with the Former Warringah DCP 2011.

4.8. Bicycle Parking

Warringah DCP Part C3 (A) stipulates the bicycle parking requirement for Recreational Facility, which states "*Bicycle parking facilities must be provided for new buildings and for alterations or additions to existing buildings. In the case of alterations or additions to existing buildings bicycle parking facilities are required for the additional floor area only.*" The minimum bicycle parking requirement and provisions are shown in Table 14 as follows:

Table 14 - Bicycle parking requirement and provision

Land Use	Component	No of Staff / Rooms / GFA (m^2)	Staff/Visitors Parking Rate (min)	Parking Requirement (min)*	Proposed Parking Provision
Recreational	**Employees**	34 staff	Staff: 1 per 4 staff	9	
	Spectators	500 spectator places	Spectators: 1 per 1500 spectator places	1	
Recreational (Strategy A)	**GFA**	404m^2	Staff: 1 per 200m^2	3	
	Spectators		Spectators: 1 per 250 spectator places	1	
Recreational (Strategy B)	**GFA**	454m^2	Staff: 1 per 200m^2	3	
	Spectators		Spectators: 1 per 250 spectator places	1	
Total Staff Bicycle Spaces (Class 1 or Class 2 Secure Bike Lockers/Cages)				**3**	X
Total Visitor Bicycle Spaces (Class 3 Public Bicycle Racks)				**1**	X

** According to the DCP, the minimum number of bike parking spaces is to be rounded up to the nearest whole number if it is not a whole number*

As the DCP states, "*In the case of alterations or additions to existing buildings bicycle parking facilities are required for the additional floor area only*." Therefore, the proposed development requires to provide a total of 3 staff bicycle spaces and 1 visitor bicycle space (in total 4 bicycle spaces).

4.9. End of Trip Facilities

In addition to the bicycle parking spaces, the End of Trip Facilities (EOTF) which will be provided for staff use is summarised in Table 15. *Warringah DCP Part C3 (A)* stipulates the EOTF requirement for Recreational Facility which states "*End of trip facilities must be provided for new buildings and for alterations or additions to existing buildings. In the case of alterations or additions to existing buildings end of trip facilities are required for the additional floor area only*.". The minimum EOTF requirement and provisions are shown in Table 15 as follows:

Table 15 - Summary of Minimum Required and Proposed EOTF Provision

EOTF Type	Proposed Staff Bike Spaces	Minimum DCP Rate	Minimum EOTF Provision	Proposed EOTF Provision
Clothes Lockers	3 total staff bike spaces	• 1 clothes locker for every required bicycle parking space	3 clothes lockers	X
Shower & Change Cubicles		• 1 shower cubicle for up to 7 bike parking spaces;	1 shower cubicle	X

The proposal requires to provide 3 clothes lockers and 1 shower cubicle.

4.10. Service Vehicle Parking

Warringah DCP Part C2 stipulates the facilities for the loading and unloading of service, delivery and emergency vehicles are to be:

- appropriate to the size and nature of the development;
- screened from public view; and
- designed so that vehicles may enter and leave in a forward direction.

Neither the Former Warringah DCP 2011 nor Former Warringah LEP 2011 stipulates the requirement of number of service vehicle parking spaces for the Entertainment facility development.

It is noted that the existing development currently has multiple loading zone areas and one dedicated car parking space for the service vehicles.

Therefore, the proposal does not propose any additional service vehicle parking spaces and is in line with the Former Warringah DCP 2011.

5. Traffic Impact Assessment

The following sections present an assessment of the existing traffic activity and future traffic conditions for the proposed Hotel development.

5.1. Existing Traffic Conditions

In order to assess the existing traffic conditions in the vicinity of the development site, an analysis of the following key intersections has been undertaken:

- Intersection 1 - Pittwater Road / Anzac Avenue – signalised 4-arm intersection
- Intersection 2 - Anzac Avenue / Seaview Parade/ Access Road for Golf Club – unsignalised 4-arm intersection

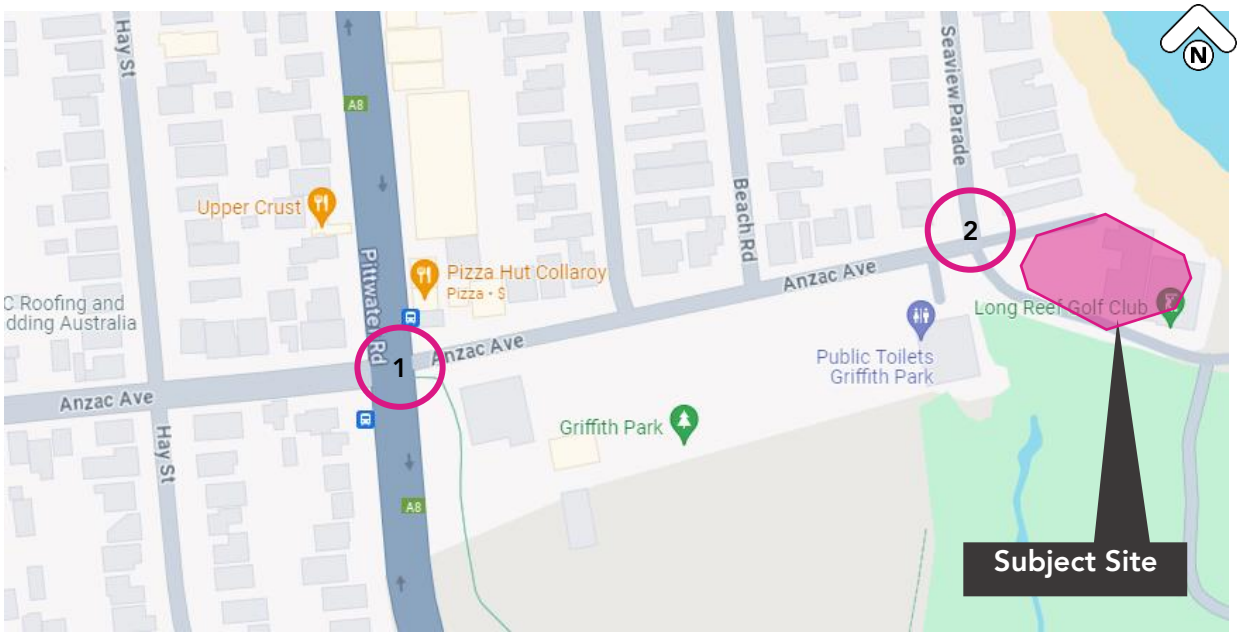


Figure 24 - Key Intersections

A weekday traffic count survey was undertaken on Wednesday 3rd of April 2024 between 10:00am – 2:00pm and 5:00pm – 9:00pm. The weekday network morning peak hour has been determined to be between 10:45am and 11:45am and the afternoon peak hour between 5:00pm and 6:00pm. SCATS data for these intersections were obtained and used for the analysis.

A weekend traffic count survey was undertaken on Saturday 6th of April 2024 between 10:00am – 2:00pm and 5:00pm – 9:00pm. The weekday network morning peak hour has been determined to be between 10:30am and 11:30am and the afternoon peak hour between 5:00pm and 6:00pm. SCATS data for these intersections were obtained and used for the analysis.

The existing traffic volumes for the AM and PM peak hours are presented in Figure 25 to 28 respectively.

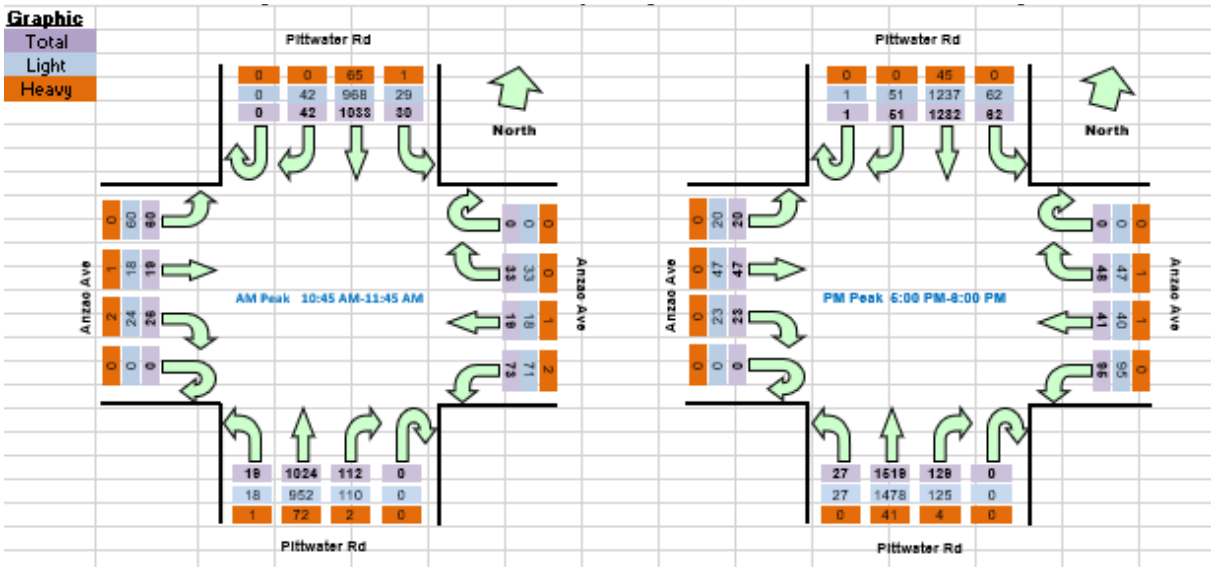


Figure 25 - Existing Peak Hour Traffic Volumes for Pittwater Road / Anzac Avenue Intersection - Weekday

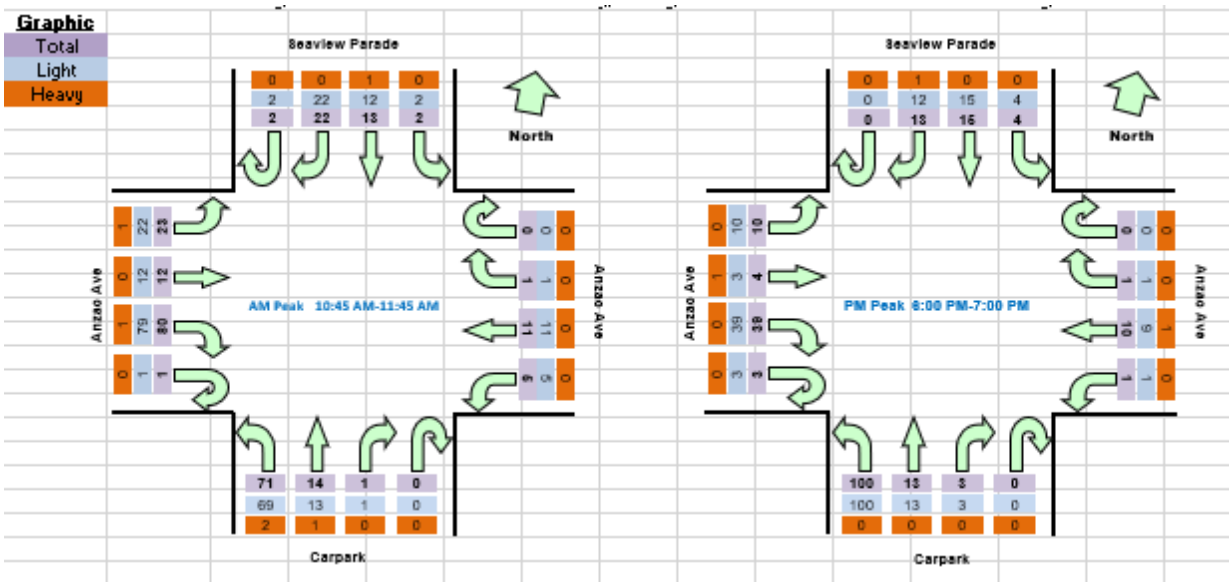


Figure 26 - Existing Peak Hour Traffic Volumes for Anzac Avenue / Seaview Parade Intersection – Weekend

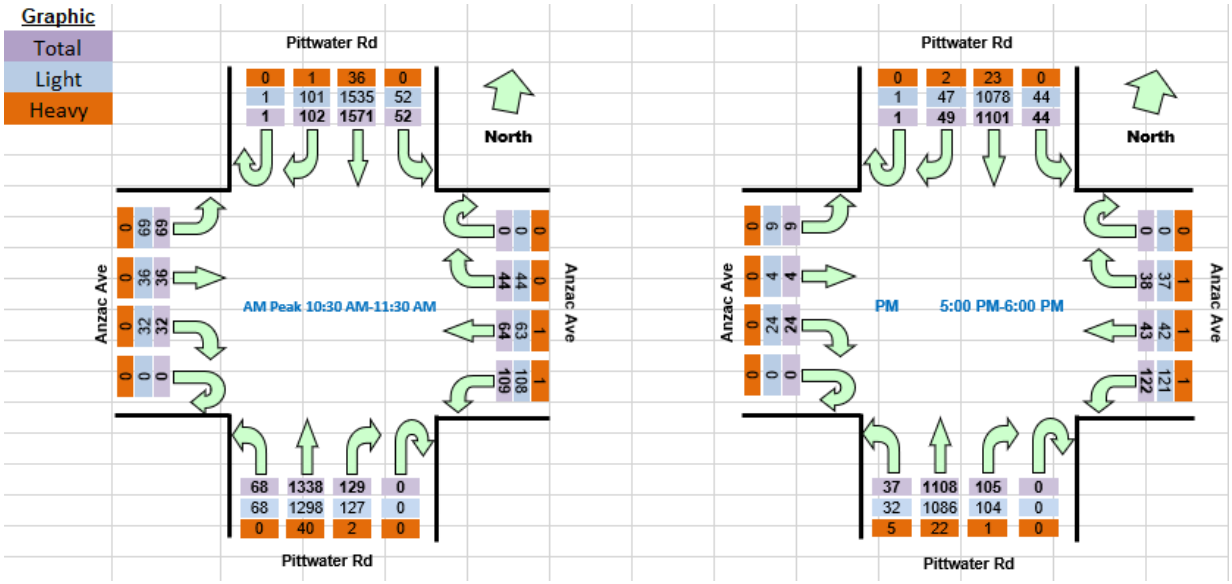


Figure 27 - Existing Peak Hour Traffic Volumes for Pittwater Road / Anzac Avenue Intersection - Weekend

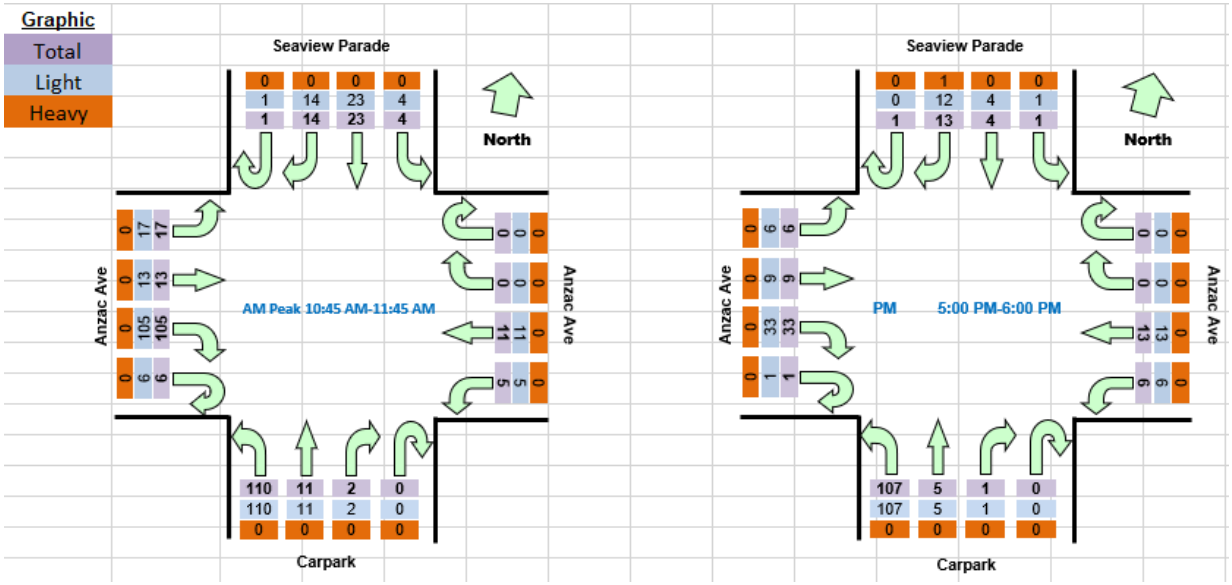


Figure 28 - Existing Peak Hour Traffic Volumes for Anzac Avenue / Seaview Parade Intersection – Weekend

5.2. Existing Traffic Generation

The existing golf club is a single storey building which currently has a café, meeting rooms, lounge rooms and several terraces. The existing site has a total GFA of 1,078m^2. Furthermore, the club provided its current usage data summary and detailed usage data which was used to work out the numbers of members/visitors and staff travelling to the club during peak hours. The usage data is shown in Appendix 3.

5.3. Proposed Traffic Generation

The proposal consists of a new upper storey events space with an outdoor terrace, a new Entry Porte Cochere, and a clubhouse interior refurbishment.

According to *RMS Guide to Traffic Generating Developments (2002)* (RMS Guide) and *RMS Technical Direction 2013/04a* (TDT) (which provides an update to the RMS Guide and presents the traffic generation rates for a number of land uses based on updated surveys), the proposed development comes under a Recreational Facility category which is site and type specific in its operation and traffic generation, often with seasonal variations in usage. There are no traffic generation rates provided for this type of development in the RMS Guide. The Guide instead states that analysis of proposed developments should be based on surveys of similar developments.

The parking demand model which required a detailed travel mode survey of the existing club, and a parking occupancy survey of surrounding streets has therefore been deemed most suitable to forecast the additional trips generated by the proposed development. The parking demand model is detailed in Section 4.5 of the report. The proposed traffic generation considers the current and future parking demand, the mode of travel and average number of occupants per car. This provides the additional vehicle trips that will be created by the proposed development and having a traffic impact on the surrounding road network. The additional trips created by the proposal during weekday and weekend AM/PM peak hours are shown in Table 16 below.

Table 16 - Calculation of additional trips from parking demand model summary

Time period	Current demand	Future demand	Additional trips
Total Weekday Daytime Peak Demand	224	243	19
Total Weekday Evening Peak Demand	79	203	124
Total Weekend Daytime Peak Demand	196	211	15
Total Weekend Evening Peak Demand	176	290	114

5.3.1. Trip Distribution

First principles assessment of the trips has been adopted for the proposal and 100% inbound and outbound trips are considered within a single hour, which is unlikely but presents a roust assessment.

It is estimated that additional trips generated will follow the same traffic distribution patterns as identified from the existing traffic surveys. As such it is estimated that 80% of vehicles travelling to/from the site will travel via Pittwater Road and 20% via minor roads.

This results in 80% of vehicles on average approaching the site by turning right from Anzac Avenue and 20% of vehicles travelling southbound on Seaview Parade (blue arrows). 85% of vehicles exiting the site will turn left into Anzac Avenue and 15% will travel northbound on Seaview Parade (orange arrows). This is illustrated in the Figure 29.

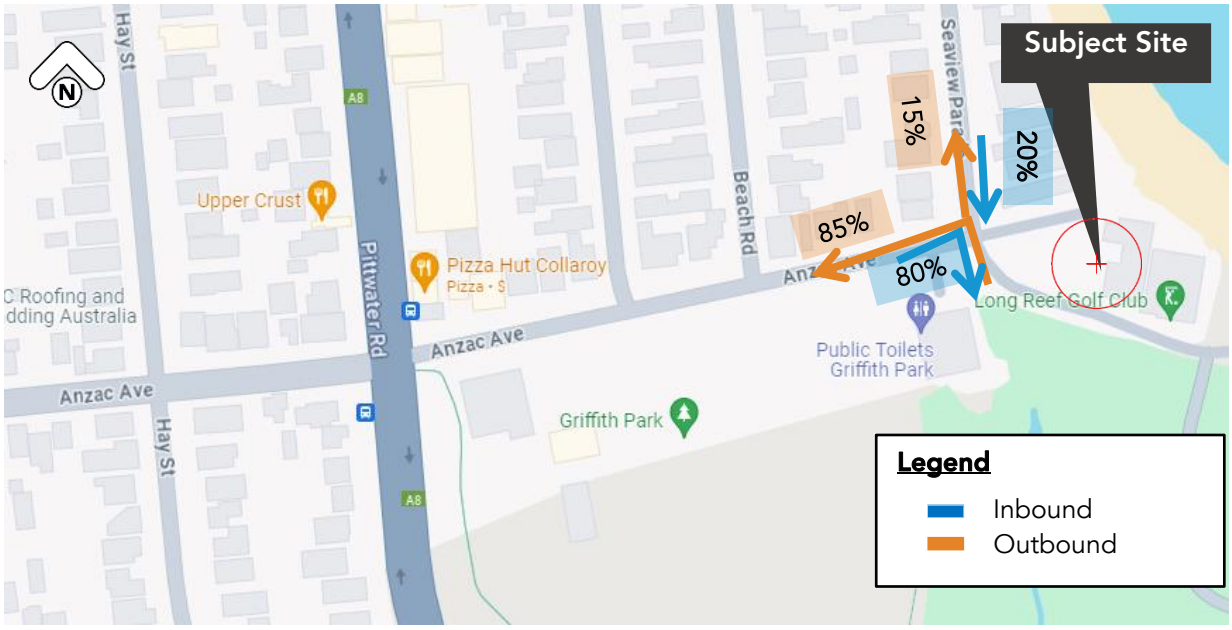


Figure 29 - Trip Distribution

The estimated development traffic volumes for the AM and PM peak hours for weekday and weekend are presented in Figure 30, Figure 31, Figure 32 and Figure 33 respectively.

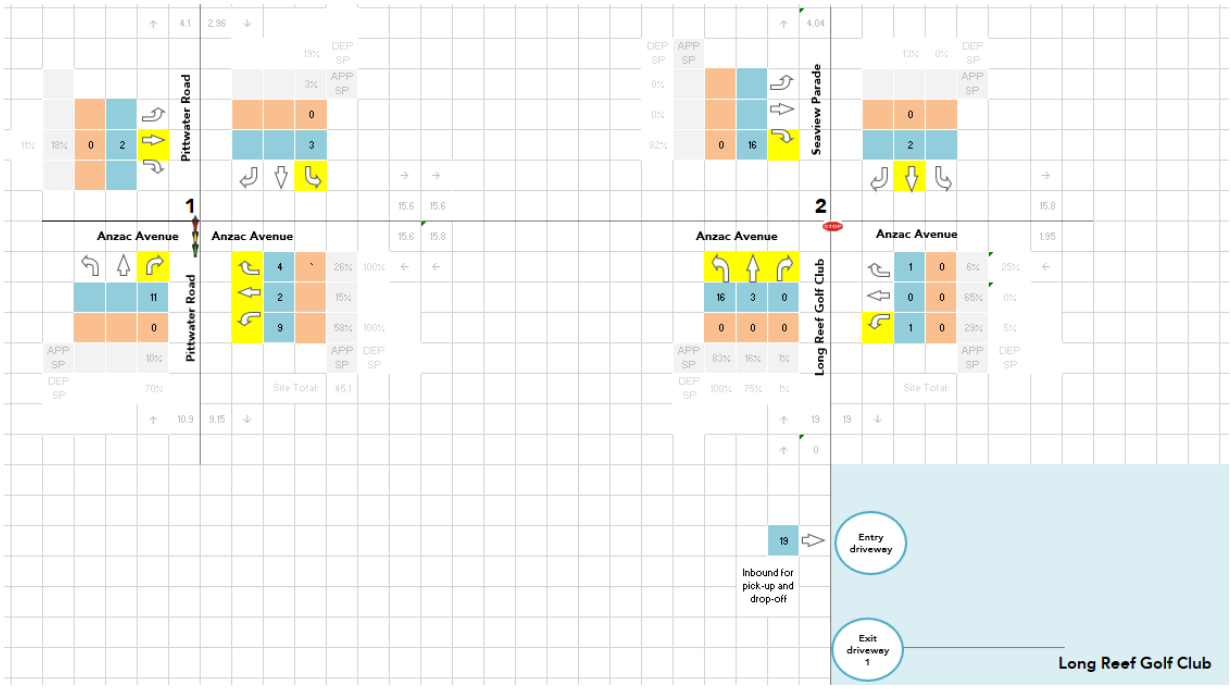


Figure 30 - Development AM Peak Traffic Volumes – Weekday

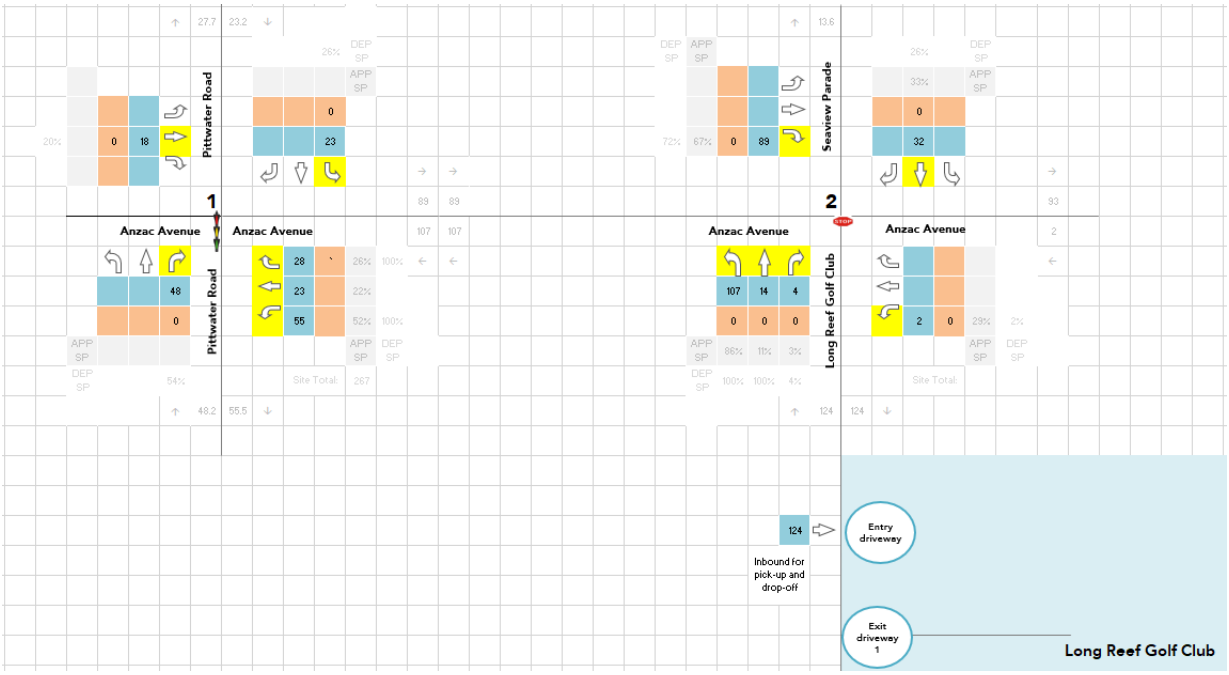


Figure 31 - Development PM Peak Traffic Volumes – Weekday

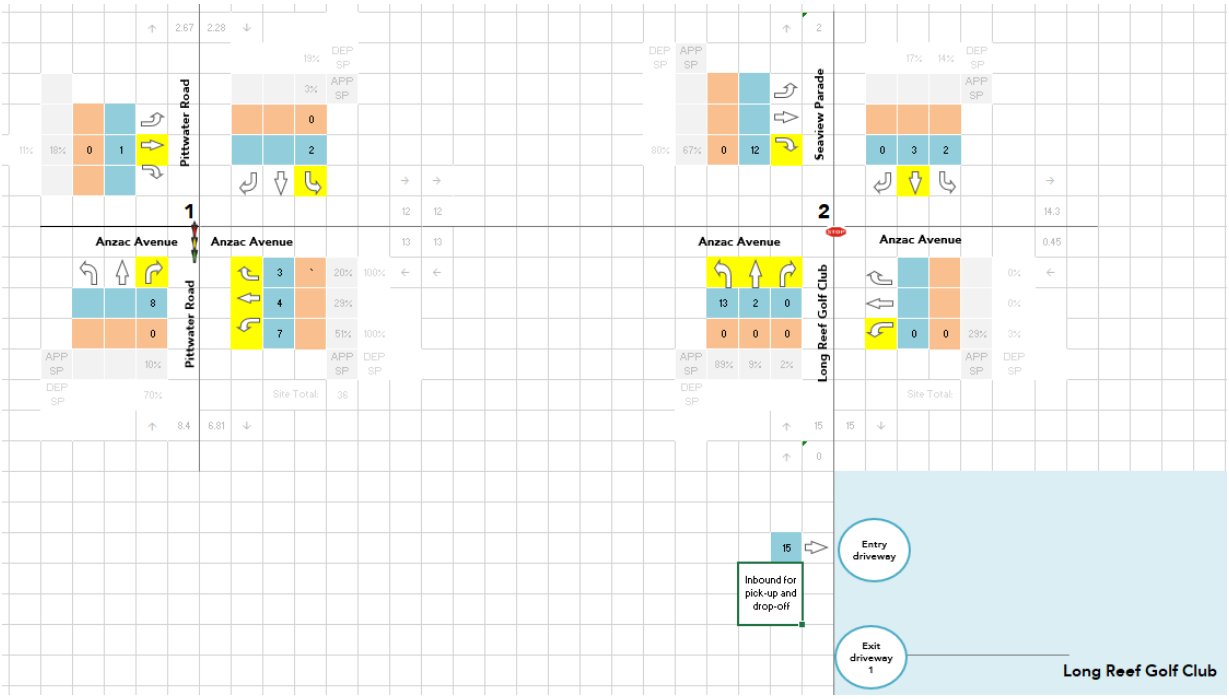


Figure 32 - Development AM Peak Traffic Volumes – Weekend

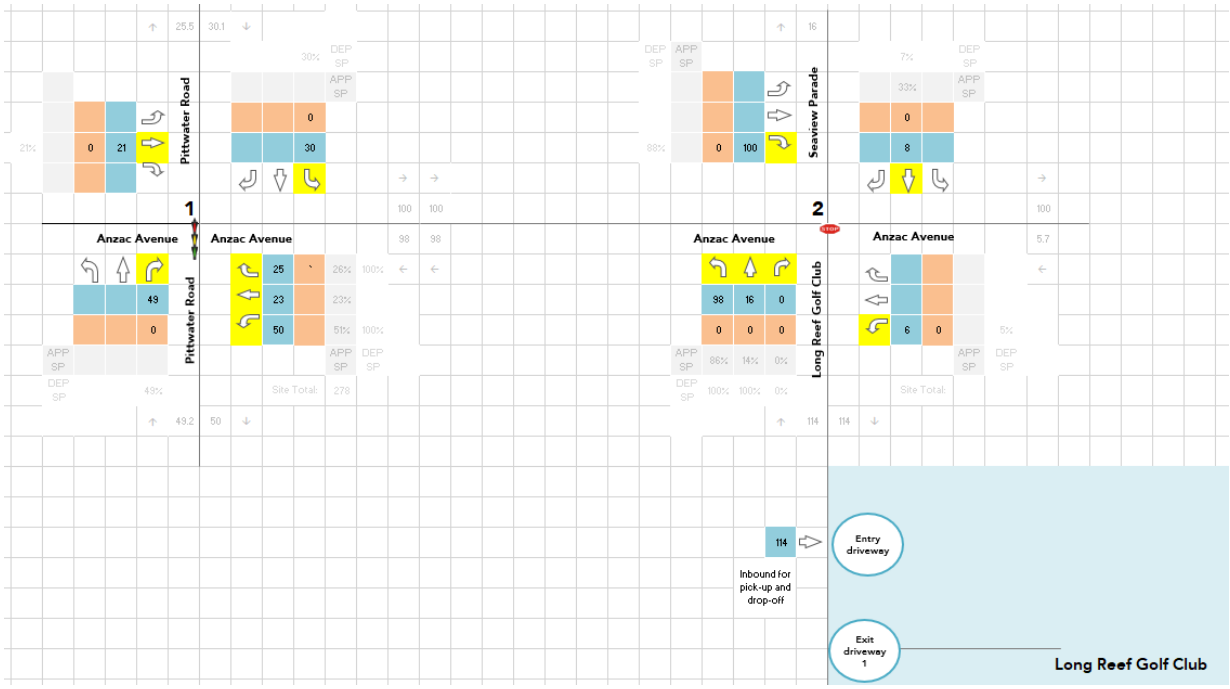


Figure 33 - Development PM Peak Traffic Volumes – Weekend

5.4. SIDRA Modelling

In order to confirm the current and future operation of the intersection, an assessment has been undertaken using the SIDRA modelling software, which presents a range of performance indicators (Level of Service, Average Delay, etc.).

Typically, there are four performance indicators used to summarise the performance of an intersection, being:

- Average Delay – The average delay encountered by all vehicles passing through the intersection. It is often important to review the average delay of each approach as a side road could have a long delay time, while the large free flowing major traffic will provide an overall low average delay.
- Degree of Saturation (DoS) – The total usage of the intersection expressed as a factor of 1 with 1 representing 100% use/saturation (e.g. 0.8=80% saturation).
- 95% Queue lengths (Q95) – is defined to be the queue length in metres that has only a 5-percent probability of being exceeded during the analysis time period. It transforms the average delay into measurable distance units.
- Level of Service (LoS) – This is a categorisation of average delay, intended for simple reference. TfNSW adopts the following bands:

Table 17 - Level of Service Criteria

Level of Service	Average Delay (secs/veh)	Traffic Signals, Roundabout	Give Way & Stop Signs
A	<14	Good operation	
B	15 to 28	Good with acceptable delays & spare capacity	Acceptable delays & spare capacity
C	29 to 42	Satisfactory	Satisfactory, but accident study required
D	43 to 56	Operating near capacity	Near capacity & accident study required
E	57 to 70	At capacity. At signals, incidents would cause excessive delays. Roundabouts require other control mode	At capacity, requires other control mode
F	>70	Extra capacity required	Extreme delay, major treatment required

5.4.1. Modelling Scenarios

The key intersections have been modelled as a network for the following scenarios:

- Existing Scenario – Wednesday and Saturday

  The existing scenario has been modelled with the existing traffic volumes as described in Section 5.1.

- Future Development – Wednesday and Saturday

  The future development scenario is modelled to simulate the post-development traffic conditions. This scenario includes the existing scenario plus the additional traffic volumes generated by the proposed development as described in Section 5.3.

The network layout is shown in Figure 34.

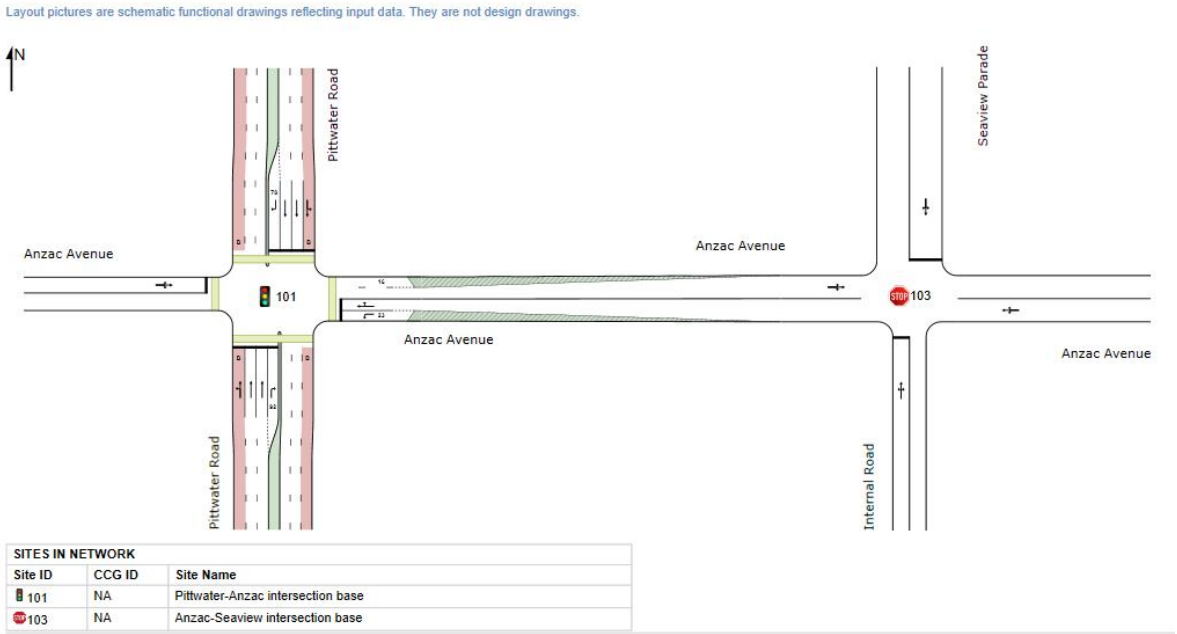


Figure 34 - Network Layout

5.4.2. Data Validation and Signal Coordination

Following receipt of the survey data, ptc. undertake a review of the supplied video footage to confirm the accuracy of the counted volumes.

5.4.3. SIDRA Results

Table 18 summarises the most relevant SIDRA results for existing and post-development scenarios with a comparison of the network operation. Full SIDRA results can be found in Appendix 7.

Table 18 - SIDRA Modelling Results for pre and post-development

Network	Time	Scenario	LoS	Average Delay (s)	Highest DoS (v/s)	Highest Q95 (m)
Wednesday	AM Peak	Existing network	B	17.9	0.711	42.3
		Future Development	B	18.2	0.780	42.4
	PM Peak	Existing network	B	18.8	0.855	69.8
		Future Development	C	28.7	1.166	84.2
Saturday	AM Peak	Existing network	C	25.3	1.147	76.7
		Future Development	C	28.1	1.217	76.9
	PM Peak	Existing network	B	19.3	0.749	47.5
		Future Development	C	26.2	1.096	58.6

From the above table, it is evident that the proposed development has no impact on the Level of Service of the network in the AM peak hours.

In the PM peak hours, the Level of Service changes from LoS B to LoS C which can be expected with the additional traffic with the events venue. However, the average delay is less than 29 seconds in both weekday and weekend PM peak which is between the LoS B and LoS C average delay bands adopted by TfNSW. Even if LoS C is considered as the worst-case scenario, with the traffic signals at Anzac Avenue/Pittwater Road is considered satisfactory which will carry more than 80% of the traffic.

Overall, the impact of the development traffic on the surrounding road network can be accommodated within the existing road network.

6. Conclusion

ptc. has been engaged by the Long Reef Golf Club ("LRGC") to prepare a Transport Impact Assessment (TIA) to accompany a Development Application (DA) to the Northern Beaches Council for the redevelopment of its existing club house.

The site is serviced by a combination of state and local roads, easily connecting it to other suburbs and local road networks. Therefore, driving cars is considered as the predominant travel mode for all user groups, which is supported by the results of travel mode surveys. Some interviewees from each user group expressed their interest in taking shuttle buses if these services were provided by the Club.

This traffic analysis assessment has found that the increased traffic generation impact associated with the proposed development on the surrounding road network can be easily accommodated within the existing road network.

The parking provision assessment demonstrates that the additional peak parking demand generated by the proposal is estimated mainly during both weekday and weekend afterhours, which could be accommodated by the vacant spaces within the ZOI, including the Club car park, Overflow car park, the maintenance area, and other available on-street & off-street parking spaces.

In conclusion, the proposal is supportable from a parking and traffic standpoint.

Appendix 1. Parking Survey Results

APPENDIX 1

LONG REEF GOLF CLUB
PARKING SURVEY RESULTS

Summary of Parking Occupancy Survey Results

Wednesday 03/04/2024

Occupied Spaces

Location	Capacity	10:00	10:30	11:00	11:30	12:00	12:30	13:00	13:30	17:00	17:30	18:00	18:30	19:00	19:30	20:00	20:30
Anzac Ave	79	72	75	75	74	68	64	57	58	61	63	60	63	58	32	27	27
Beach Rd	35	25	30	30	30	30	30	28	27	16	15	15	15	15	13	12	12
Cliff Rd	19	13	13	13	16	16	19	19	14	10	11	9	12	12	13	12	12
Seaview Pde	31	29	29	29	30	30	30	28	27	15	16	15	15	16	15	13	13
Fishermans Beach Paid Parking Area	79	66	75	80	80	73	79	78	66	46	53	50	40	27	13	9	2
Subtotal - On-Street	**243**	**205**	**222**	**227**	**230**	**217**	**222**	**210**	**192**	**148**	**158**	**149**	**145**	**128**	**86**	**73**	**66**
Headland Car Park	47	3	11	13	16	16	11	10	10	16	10	18	17	12	2	2	2
Griffith Park Car Parks	69	67	67	68	56	43	38	33	25	64	66	59	58	50	26	21	20
Subtotal - Off Street	**116**	**70**	**78**	**81**	**72**	**59**	**49**	**43**	**35**	**80**	**76**	**77**	**75**	**62**	**28**	**23**	**22**
Total excl. Club Car Park	**359**	**275**	**300**	**308**	**302**	**276**	**271**	**253**	**227**	**228**	**234**	**226**	**220**	**190**	**114**	**96**	**88**
Club Car Park	43	41	40	39	40	36	39	37	36	33	28	24	11	8	0	0	0
Total incl. Club Car Park	**402**	**316**	**340**	**347**	**342**	**312**	**310**	**290**	**263**	**261**	**262**	**250**	**231**	**198**	**114**	**96**	**88**

* Club Car Park excl. loading zone spaces and Fishermans Beach trailers spaces

Occupancy%

Location	Capacity	10:00	10:30	11:00	11:30	12:00	12:30	13:00	13:30	17:00	17:30	18:00	18:30	19:00	19:30	20:00	20:30
Anzac Ave	79	91%	95%	95%	94%	86%	81%	72%	73%	77%	80%	76%	80%	73%	41%	34%	34%
Beach Rd	35	71%	86%	86%	86%	86%	86%	80%	77%	46%	43%	43%	43%	43%	37%	34%	34%
Cliff Rd	19	68%	68%	68%	84%	84%	100%	100%	74%	53%	58%	47%	63%	63%	68%	63%	63%
Seaview Pde	31	94%	94%	94%	97%	97%	97%	90%	87%	48%	52%	48%	48%	52%	48%	42%	42%
Fishermans Beach Paid Parking Area	79	84%	95%	101%	101%	92%	100%	99%	84%	58%	67%	63%	51%	34%	16%	11%	3%
Subtotal - On-Street	**243**	**84%**	**91%**	**93%**	**95%**	**89%**	**91%**	**86%**	**79%**	**61%**	**65%**	**61%**	**60%**	**53%**	**35%**	**30%**	**27%**
Headland Car Park	47	6%	23%	28%	34%	34%	23%	21%	21%	34%	21%	38%	36%	26%	4%	4%	4%
Griffith Park Car Parks	69	97%	97%	99%	81%	62%	55%	48%	36%	93%	96%	86%	84%	72%	38%	30%	29%
Subtotal - Off Street	**116**	**60%**	**67%**	**70%**	**62%**	**51%**	**42%**	**37%**	**30%**	**69%**	**66%**	**66%**	**65%**	**53%**	**24%**	**20%**	**19%**
Total excl. Club Car Park	**359**	**77%**	**84%**	**86%**	**84%**	**77%**	**75%**	**70%**	**63%**	**64%**	**65%**	**63%**	**61%**	**53%**	**32%**	**27%**	**25%**
Club Car Park	43	95%	93%	91%	93%	84%	91%	86%	84%	77%	65%	56%	26%	19%	0%	0%	0%
Total excl. Club Car Park	**402**	**79%**	**85%**	**86%**	**85%**	**78%**	**77%**	**72%**	**65%**	**65%**	**65%**	**62%**	**57%**	**49%**	**28%**	**24%**	**22%**

* Club Car Park excl. loading zone spaces and Fishermans Beach trailers spaces

Daytime Peak Hour
Evening Peak Hour

APPENDIX 1

LONG REEF GOLF CLUB
PARKING SURVEY RESULTS

Sunday 07/04/2024

Occupied Spaces

Location	Capacity	10:00	10:30	11:00	11:30	12:00	12:30	13:00	13:30	17:00	17:30	18:00	18:30	19:00	19:30	20:00	20:30
Anzac Ave	79	78	74	77	77	79	78	77	68	55	53	37	23	20	21	18	21
Beach Rd	35	33	33	33	33	33	33	33	33	16	13	13	10	10	11	10	10
Cliff Rd	19	17	16	18	18	19	17	17	18	17	10	10	7	8	9	11	10
Seaview Pde	31	30	30	30	30	30	30	30	30	25	26	24	19	22	21	21	21
Fishermans Beach Paid Parking Area	79	75	76	77	64	79	78	78	79	51	46	20	10	8	3	5	4
Subtotal - On-Street	**243**	**233**	**229**	**235**	**222**	**240**	**236**	**235**	**228**	**164**	**148**	**104**	**69**	**68**	**65**	**65**	**66**
Headland Car Park	47	31	39	38	33	11	18	37	39	28	24	3	1	2	1	2	4
Griffith Park Car Parks	69	66	66	66	67	66	68	65	67	58	44	33	16	6	6	6	4
Subtotal - Off Street	**116**	**97**	**105**	**104**	**100**	**77**	**86**	**102**	**106**	**86**	**68**	**36**	**17**	**8**	**7**	**8**	**8**
Grand Total	**359**	**330**	**334**	**339**	**322**	**317**	**322**	**337**	**334**	**250**	**216**	**140**	**86**	**76**	**72**	**73**	**74**
Club Car Park	43	37	37	40	38	41	40	42	40	29	18	12	3	2	1	1	1
Grand Total	**402**	**367**	**371**	**379**	**360**	**358**	**362**	**379**	**374**	**279**	**234**	**152**	**89**	**78**	**73**	**74**	**75**

* Club Car Park excl. loading zone spaces and Fishermans Beach trailers spaces

Occupancy%

Location	Capacity	10:00	10:30	11:00	11:30	12:00	12:30	13:00	13:30	17:00	17:30	18:00	18:30	19:00	19:30	20:00	20:30
Anzac Ave	79	99%	94%	97%	97%	100%	99%	97%	86%	70%	67%	47%	29%	25%	27%	23%	27%
Beach Rd	35	94%	94%	94%	94%	94%	94%	94%	94%	46%	37%	37%	29%	29%	31%	29%	29%
Cliff Rd	19	89%	84%	95%	95%	100%	89%	89%	95%	89%	53%	53%	37%	42%	47%	58%	53%
Seaview Pde	31	97%	97%	97%	97%	97%	97%	97%	97%	81%	84%	77%	61%	71%	68%	68%	68%
Fishermans Beach Paid Parking Area	79	95%	96%	97%	81%	100%	99%	99%	100%	65%	58%	25%	13%	10%	4%	6%	5%
Subtotal - On-Street	**243**	**96%**	**94%**	**97%**	**91%**	**99%**	**97%**	**97%**	**94%**	**67%**	**61%**	**43%**	**28%**	**28%**	**27%**	**27%**	**27%**
Headland Car Park	47	66%	83%	81%	70%	23%	38%	79%	83%	60%	51%	6%	2%	4%	2%	4%	9%
Griffith Park Car Parks	69	96%	96%	96%	97%	96%	99%	94%	97%	84%	64%	48%	23%	9%	9%	9%	6%
Subtotal - Off Street	**116**	**84%**	**91%**	**90%**	**86%**	**66%**	**74%**	**88%**	**91%**	**74%**	**59%**	**31%**	**15%**	**7%**	**6%**	**7%**	**7%**
Grand Total	**359**	**92%**	**93%**	**94%**	**90%**	**88%**	**90%**	**94%**	**93%**	**70%**	**60%**	**39%**	**24%**	**21%**	**20%**	**20%**	**21%**
Club Car Park	43	86%	86%	93%	88%	95%	93%	98%	93%	67%	42%	28%	7%	5%	2%	2%	2%
Grand Total	**402**	**91%**	**92%**	**94%**	**90%**	**89%**	**90%**	**94%**	**93%**	**69%**	**58%**	**38%**	**22%**	**19%**	**18%**	**18%**	**19%**

* Club Car Park excl. loading zone spaces and Fishermans Beach trailers spaces

Daytime Peak Hour

Evening Peak Hour

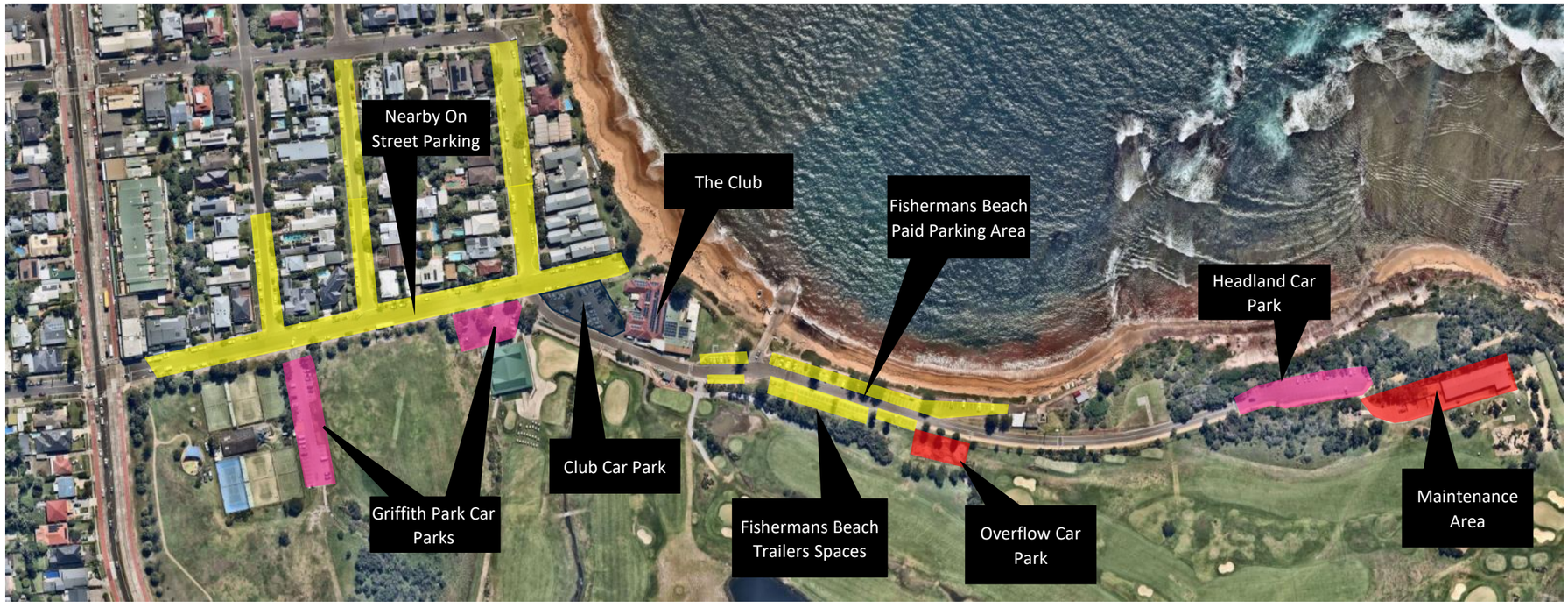
APPENDIX 1

LONG REEF GOLF CLUB
PARKING SURVEY RESULTS

Parking Availability (Vacant Spaces) - Peak Hours

		Wednesday				Sunday			
Location	Capacity	11:00	13:00	17:00	19:00	11:00	13:00	17:00	19:00
Existing Club Car Park	43	4	6	15	35	3	1	14	41
Headland Car Park	47	34	37	37	35	9	10	19	45
Nearby on-street / off-street parking	312	17	69	88	134	11	12	90	238
Net Increase in the Club Car Park	1	1	1	1	1	1	1	1	1
Overflow Car Park	23	23	23	23	23	23	23	23	23
Maintenance Area (Staff Only)	25	N/A	N/A	25	25	N/A	N/A	25	25
Total incl. Overflow Car Park	**451**	**79**	**136**	**189**	**253**	**47**	**47**	**172**	**373**

* Club Car Park excl. loading zone spaces and Fishermans Beach trailers spaces
* Nearby on-street / off-street parking includes Fishermans Beach Paid Parking Area, Griffth Park Car Parks and Other on-street spaces
* Wednesday evening peak hour 5pm-6pm - applied 5:30-6:00pm data



Appendix 2. Travel Mode Survey Results

This report is filtered
Only show: #1 Question "What days are you **usually** rostered to work at the LRGC? (Please tick all that apply)" is one of the following answers ("Monday","Tuesday","Wednesday","Thursday")

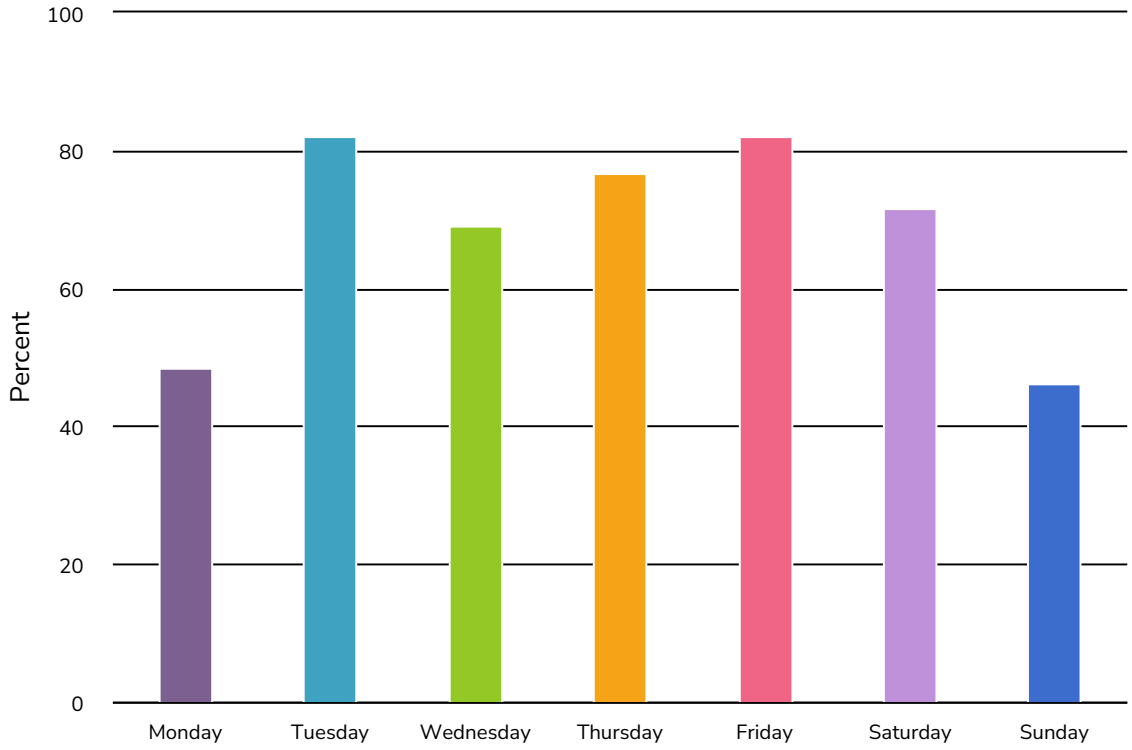
Report for Long Reef Golf Club Staff Travel Mode Survey - Weekday (Mon-Thu)

Response Counts

Completion Rate:	**100%**		
	Complete		39

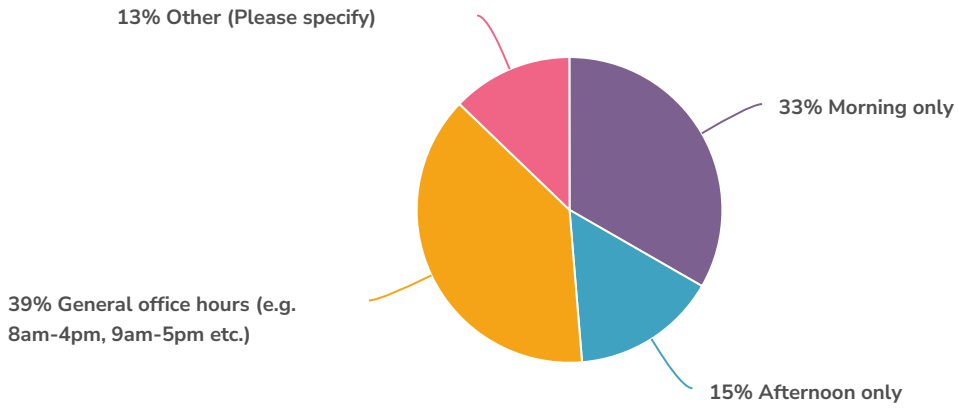
Totals: 39

1. What days are you usually rostered to work at the LRGC? (Please tick all that apply)



Value	Percent	Responses
Monday	48.7%	19
Tuesday	82.1%	32
Wednesday	69.2%	27
Thursday	76.9%	30
Friday	82.1%	32
Saturday	71.8%	28
Sunday	46.2%	18

2. What time of day is your usual rostered shift?

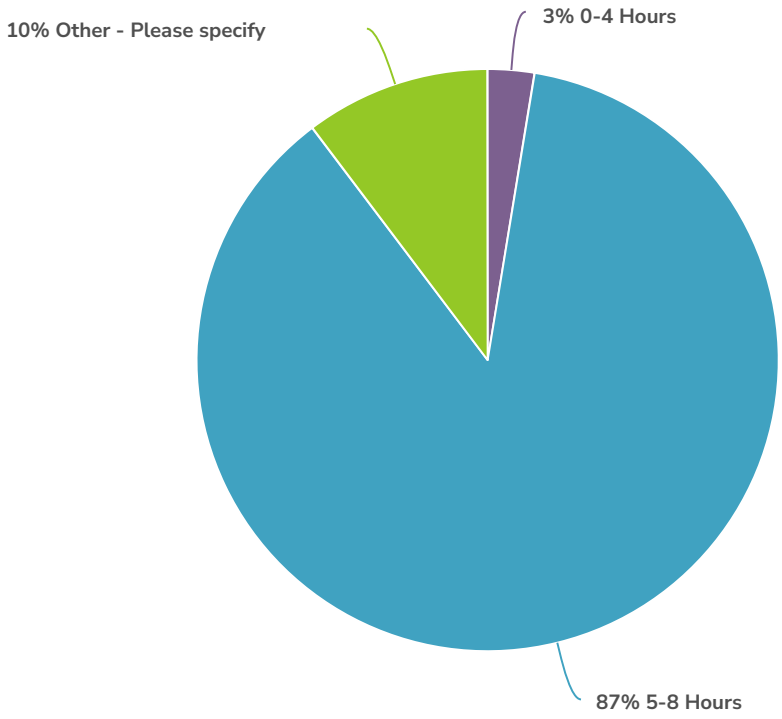


Value	Percent	Responses
Morning only	33.3%	13
Afternoon only	15.4%	6
General office hours (e.g. 8am-4pm, 9am-5pm etc.)	38.5%	15
Other (Please specify)	12.8%	5

Totals: 39

Other (Please specify)	Count
As required, morning, afternoon or evening!	1
Morning and Evening	1
Morning and afternoon	1
midday	1
mostly mornings, some evenings	1
Totals	5

3. What is the usual length of your rostered shift?

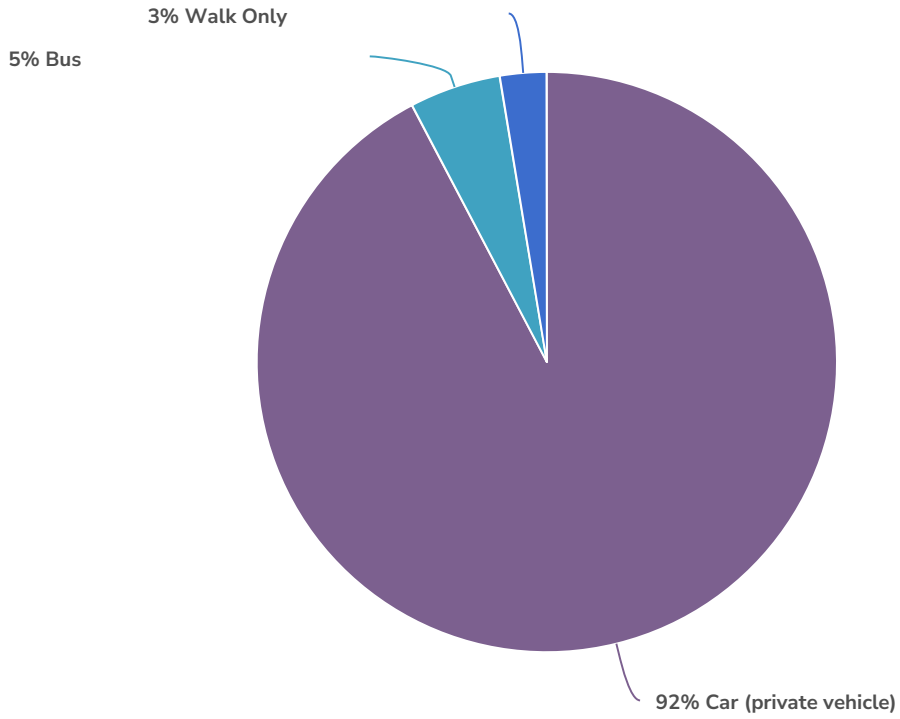


Value	Percent	Responses
0-4 Hours	2.6%	1
5-8 Hours	87.2%	34
Other - Please specify	10.3%	4

Totals: 39

Other - Please specify	Count
2-5	1
8 plus hours	1
8+	1
8-10	1
Totals	4

4. How do you normally travel to the LRGC?

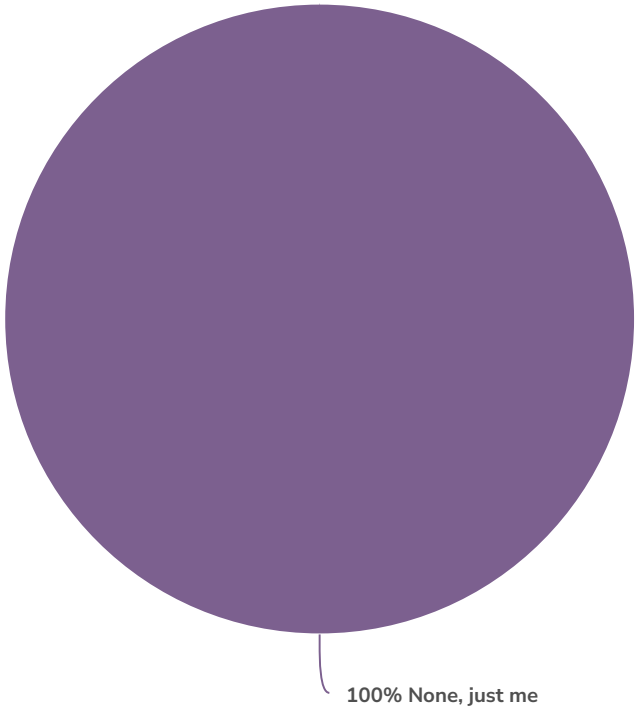


Value	Percent	Responses
Car (private vehicle)	92.3%	36
Bus	5.1%	2
Walk Only	2.6%	1

Totals: 39

Other (please specify)	Count
Totals	0

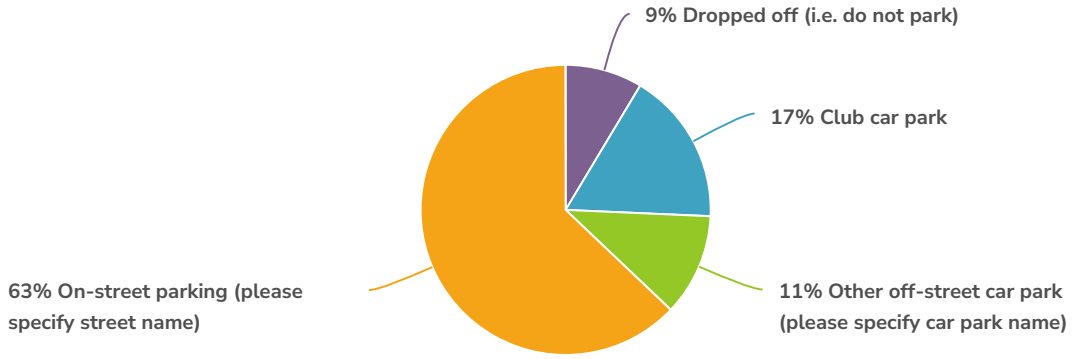
5. How many other club staff travel with you in the car?



Value	Percent	Responses
None, just me	100.0%	35

Totals: 35

6. If you travel to the LRGC by car, where do you normally park?



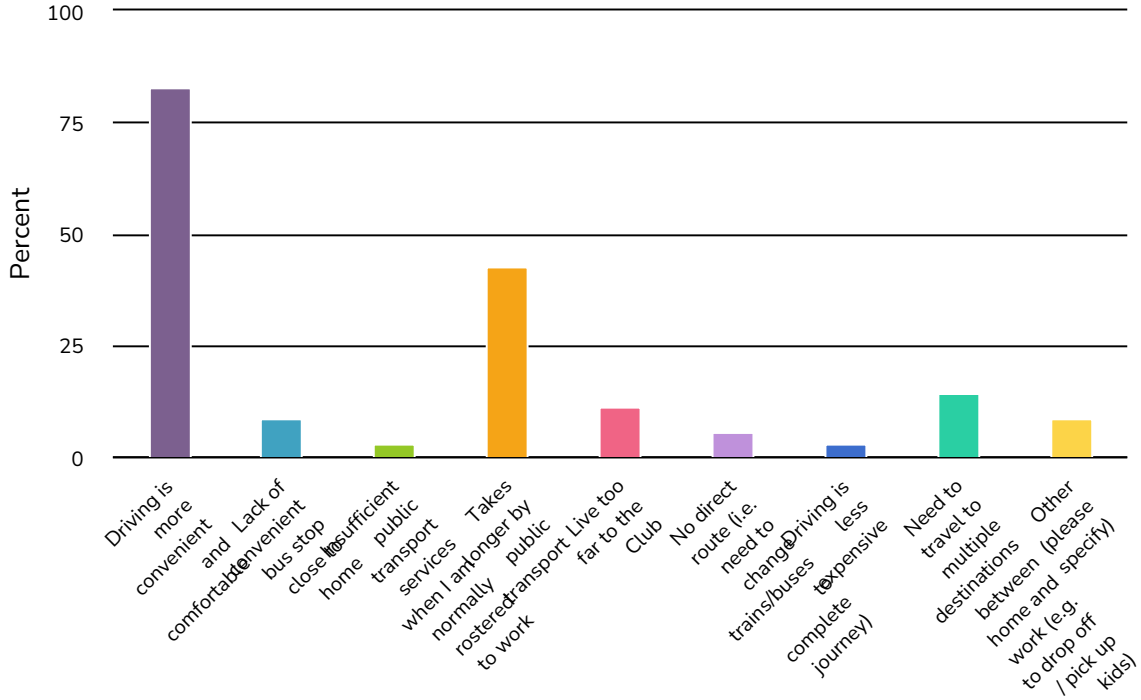
Value	Percent	Responses
Dropped off (i.e. do not park)	8.6%	3
Club car park	17.1%	6
Other off-street car park (please specify car park name)	11.4%	4
On-street parking (please specify street name)	62.9%	22

Totals: 35

Other off-street car park (please specify car park name)	Count
Headland	2
Green shed inside gate	1
Maintenance shed	1
Totals	4

On-street parking (please specify street name)	Count
Anzac Ave	3
Seaview	3
Anzac ave	2
Seaview Parade	2
Anzac / sea view parade	1
Anzac Avenue	1
Anzac or Seaview	1
Anzac pde	1
Fisherman beach car park.	1
Fisherman's Beach	1
Fisherman's Beach Parking	1
Fisherman's beach	1
Seaview parade / beach rd	1
beach	1
fishermans beach	1
fishermen's beach	1
Totals	22

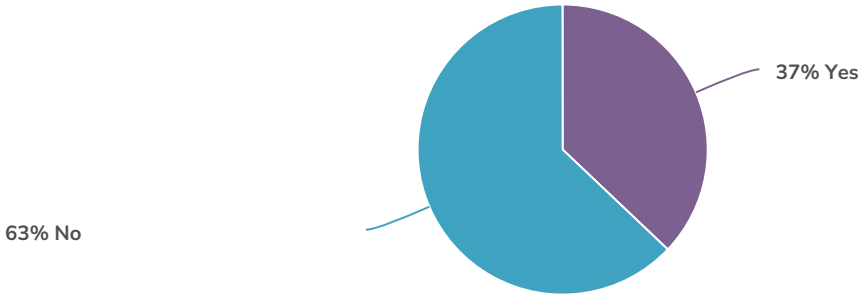
7. You have indicated you travel to work by car, for which reasons do you not use other modes (e.g. bus)? (Please tick up to 3 options that apply)



Value	Percent	Responses
Driving is more convenient and comfortable	82.9%	29
Lack of convenient bus stop close to home	8.6%	3
Insufficient public transport services when I am normally rostered to work	2.9%	1
Takes longer by public transport	42.9%	15
Live too far to the Club	11.4%	4
No direct route (i.e. need to change trains/buses to complete journey)	5.7%	2
Driving is less expensive	2.9%	1
Need to travel to multiple destinations between home and work (e.g. to drop off / pick up kids)	14.3%	5
Other (please specify)	8.6%	3

Other (please specify)	Count
I sometimes ride a bicycle	1
Need my car for work (bank trips, supply trips etc) I do have an allocated car space in the members car park	1
Totals	2

8. If a guaranteed parking space was provided to car sharers / poolers, would you be interested in car sharing / pooling?



Value	Percent	Responses
Yes	37.1%	13
No	62.9%	22

Totals: 35

9. What is the postcode of your place of residence?

ResponseID	Response
7	2106
8	2106
9	2087
10	2103
13	2099
14	2095
15	2106
16	2100
20	2103
21	2099
22	2077
23	2097
24	2093
25	2100
26	2100
27	2097
28	2099
30	2103
31	2085
32	2097
33	2096
35	2094
36	2099

ResponseID	Response
38	2100
40	2097
41	2093
43	2099
44	2085
45	2101
48	2104
49	2097
50	2102
51	2099
52	2099
55	2099
56	2089
57	2099
58	2099

This report is filtered
Only show: #1 Question "What days are you **usually** rostered to work at the LRGC? (Please tick all that apply)" is one of the following answers ("Friday","Saturday","Sunday")

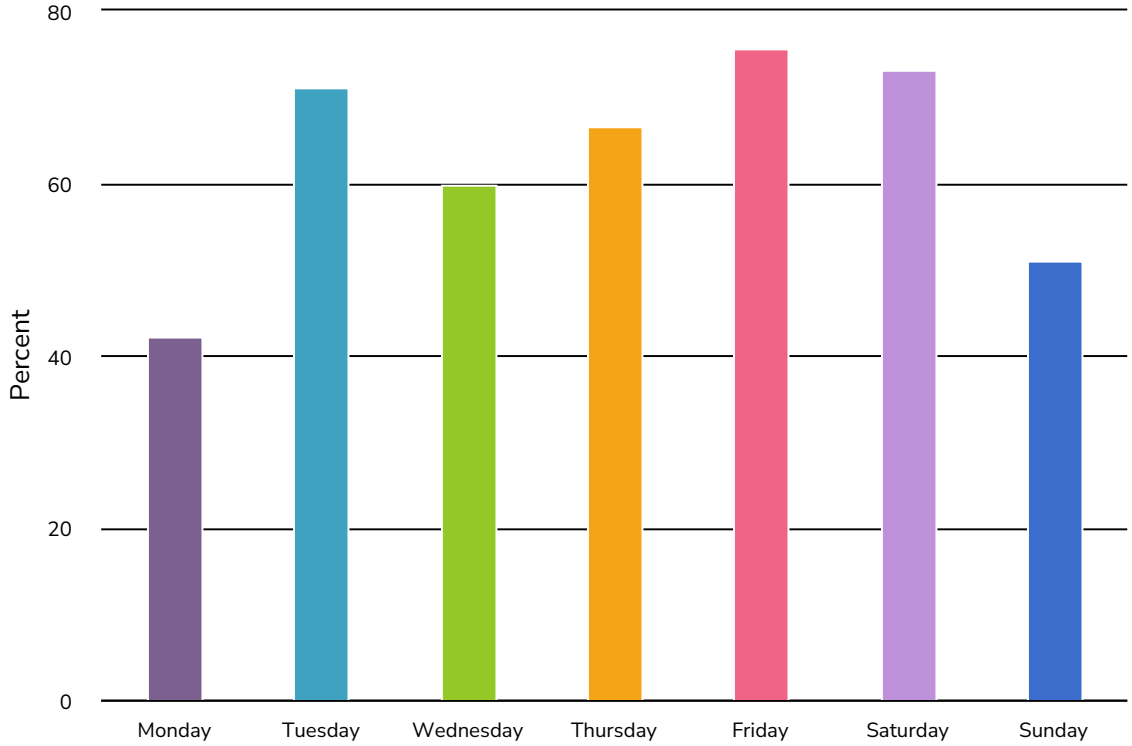
Report for Long Reef Golf Club Staff Travel Mode Survey - Friday & Weekends

Response Counts

Completion Rate:	**100%**		
	Complete		45

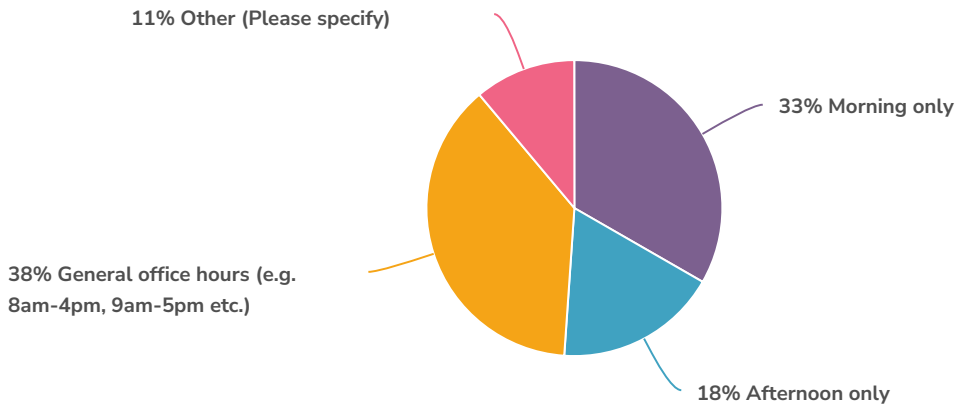
Totals: 45

1. What days are you usually rostered to work at the LRGC? (Please tick all that apply)



Value	Percent	Responses
Monday	42.2%	19
Tuesday	71.1%	32
Wednesday	60.0%	27
Thursday	66.7%	30
Friday	75.6%	34
Saturday	73.3%	33
Sunday	51.1%	23

2. What time of day is your usual rostered shift?

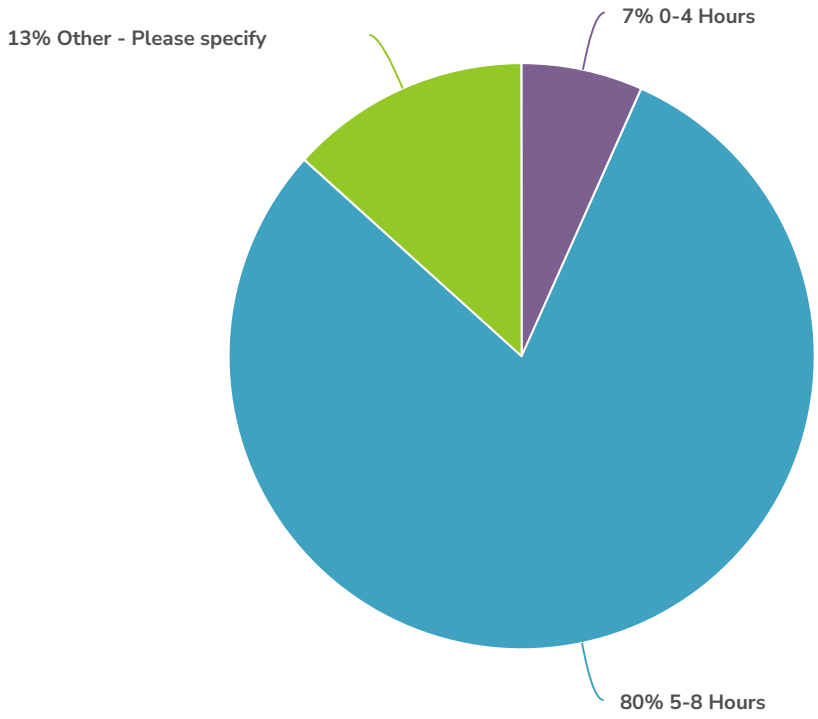


Value	Percent	Responses
Morning only	33.3%	15
Afternoon only	17.8%	8
General office hours (e.g. 8am-4pm, 9am-5pm etc.)	37.8%	17
Other (Please specify)	11.1%	5

Totals: 45

Other (Please specify)	Count
As required, morning, afternoon or evening!	1
Morning and Evening	1
Morning and afternoon	1
midday	1
mostly mornings, some evenings	1
Totals	5

3. What is the usual length of your rostered shift?

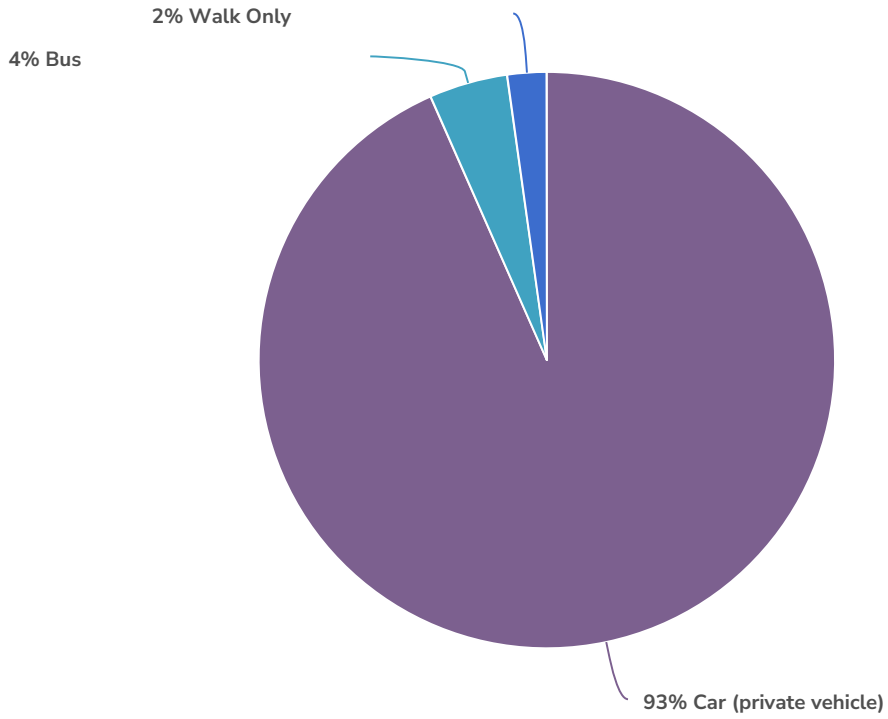


Value	Percent	Responses
0-4 Hours	6.7%	3
5-8 Hours	80.0%	36
Other - Please specify	13.3%	6

Totals: 45

Other - Please specify	Count
2-5	1
5	1
8 plus hours	1
8+	1
8-10	1
9 hours	1
Totals	6

4. How do you normally travel to the LRGC?

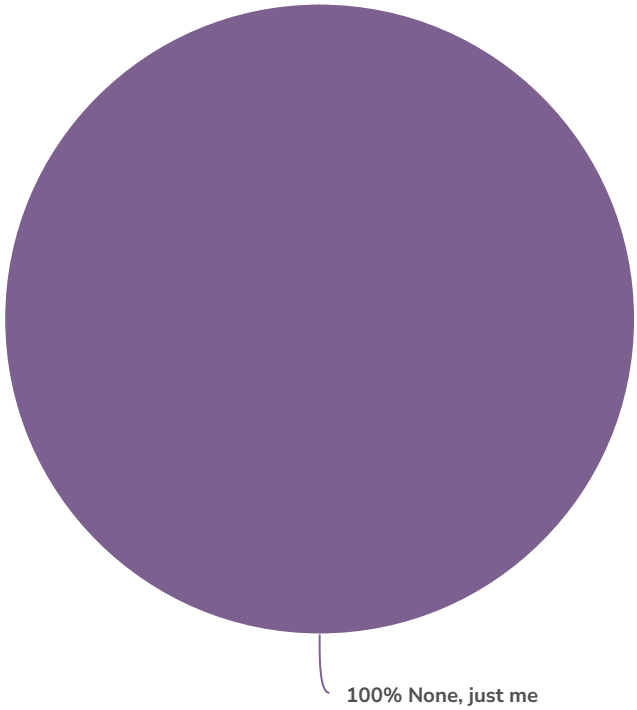


Value	Percent	Responses
Car (private vehicle)	93.3%	42
Bus	4.4%	2
Walk Only	2.2%	1

Totals: 45

Other (please specify)	Count
Totals	0

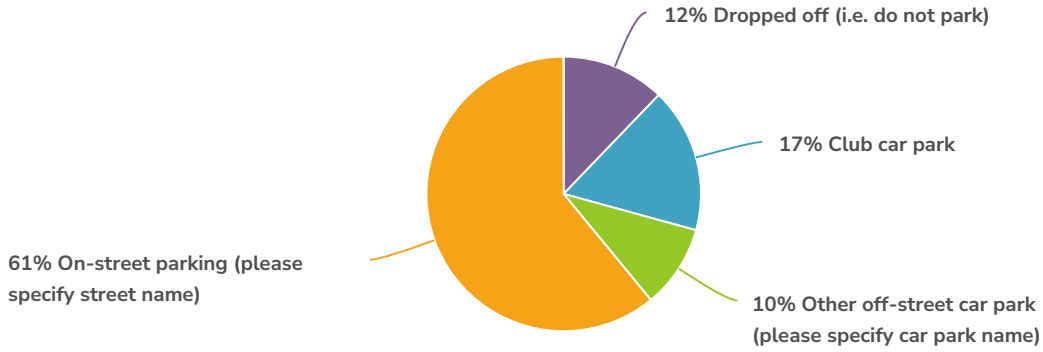
5. How many other club staff travel with you in the car?



Value	Percent	Responses
None, just me	100.0%	41

Totals: 41

6. If you travel to the LRGC by car, where do you normally park?



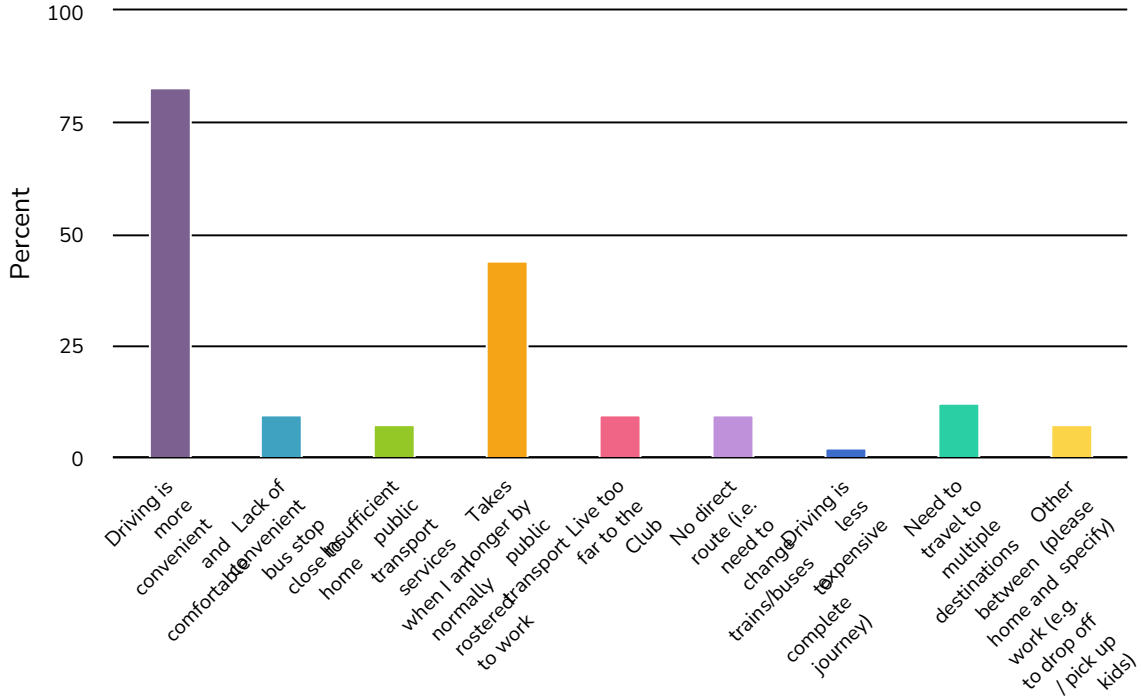
Value	Percent	Responses
Dropped off (i.e. do not park)	12.2%	5
Club car park	17.1%	7
Other off-street car park (please specify car park name)	9.8%	4
On-street parking (please specify street name)	61.0%	25

Totals: 41

Other off-street car park (please specify car park name)	Count
Headland	2
Green shed inside gate	1
Maintenance shed	1
Totals	4

On-street parking (please specify street name)	Count
Anzac Ave	3
Seaview	3
Anzac ave	2
Seaview Parade	2
Anzac / sea view parade	1
Anzac Avenue	1
Anzac or Seaview	1
Anzac pde	1
Big car park next to fisherman's boat ramp	1
Either at Seview Parade or Beach Road	1
Fisherman beach car park.	1
Fisherman's Beach	1
Fisherman's Beach Parking	1
Fisherman's beach	1
Seaview parade / beach rd	1
beach	1
fishermans beach	1
fishermans beach	1
fishermen's beach	1
Totals	25

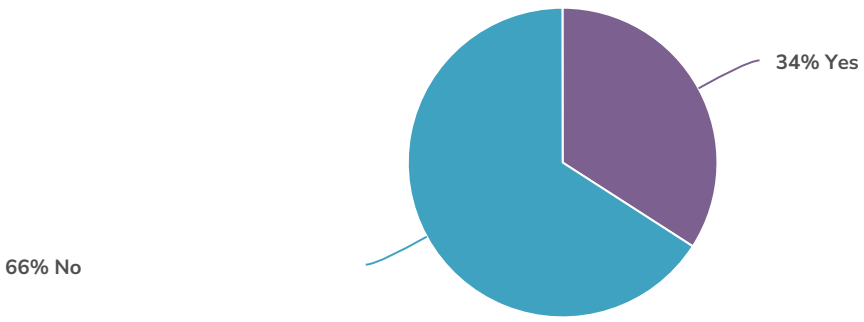
7. You have indicated you travel to work by car, for which reasons do you not use other modes (e.g. bus)? (Please tick up to 3 options that apply)



Value	Percent	Responses
Driving is more convenient and comfortable	82.9%	34
Lack of convenient bus stop close to home	9.8%	4
Insufficient public transport services when I am normally rostered to work	7.3%	3
Takes longer by public transport	43.9%	18
Live too far to the Club	9.8%	4
No direct route (i.e. need to change trains/buses to complete journey)	9.8%	4
Driving is less expensive	2.4%	1
Need to travel to multiple destinations between home and work (e.g. to drop off / pick up kids)	12.2%	5
Other (please specify)	7.3%	3

Other (please specify)	Count
I sometimes ride a bicycle	1
Need my car for work (bank trips, supply trips etc) I do have an allocated car space in the members car park	1
Totals	2

8. If a guaranteed parking space was provided to car sharers / poolers, would you be interested in car sharing / pooling?



Value	Percent	Responses
Yes	34.1%	14
No	65.9%	27

Totals: 41

9. What is the postcode of your place of residence?

ResponseID	Response
7	2106
8	2106
9	2087
10	2103
11	2097
12	2101
13	2099
14	2095
15	2106
16	2100
19	2099
20	2103
21	2099
22	2077
23	2097
24	2093
25	2100
26	2100
27	2097
28	2099
29	2086
30	2103
31	2085

ResponseID	Response
32	2097
33	2096
35	2094
36	2099
38	2100
40	2097
41	2093
43	2099
44	2085
45	2101
46	2107
48	2104
49	2097
50	2102
51	2099
52	2099
55	2099
56	2089
57	2099
58	2099
59	2101

This report is filtered
Only show: #2 Question "**In general,** what is your **main purpose** for visiting the LRGC? (Please tick all that apply)" is one of the following answers ("Golf") and #4 Question "What days do you **usually** attend the LRGC? (Please tick all that apply)" is one of the following answers ("Monday","Tuesday","Wednesday","Thursday")

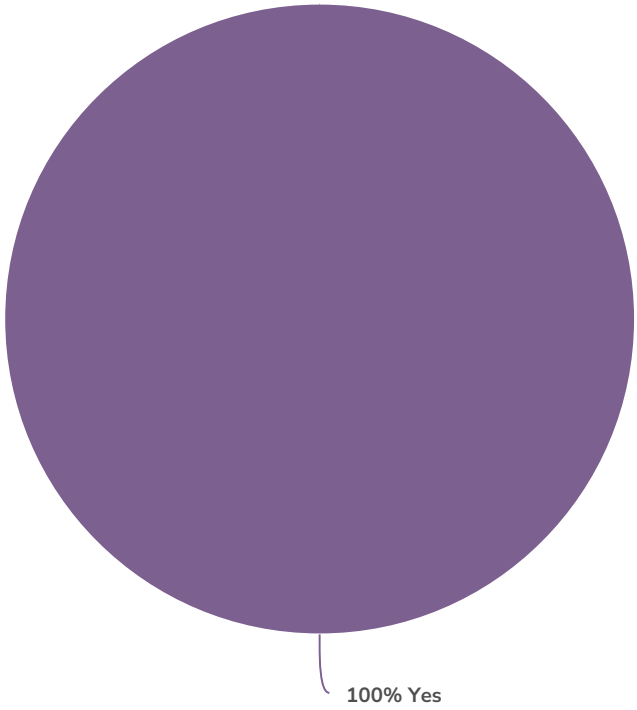
Report for Long Reef Golf Club Member&Visitor Online Travel Mode Survey - Golfers Weekday (Mon-Thu)

Response Counts

Completion Rate:	**100%**		
	Complete		375

Totals: 375

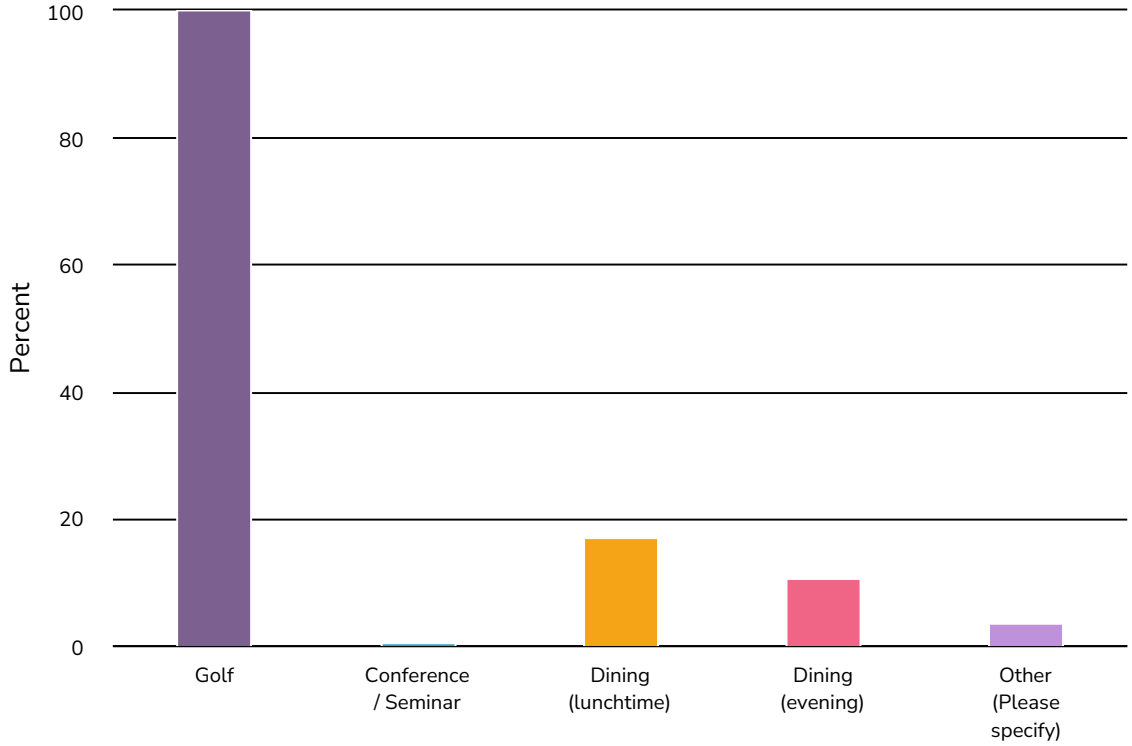
1. Are you a member of the LRGC?



Value	Percent	Responses
Yes	100.0%	375

Totals: 375

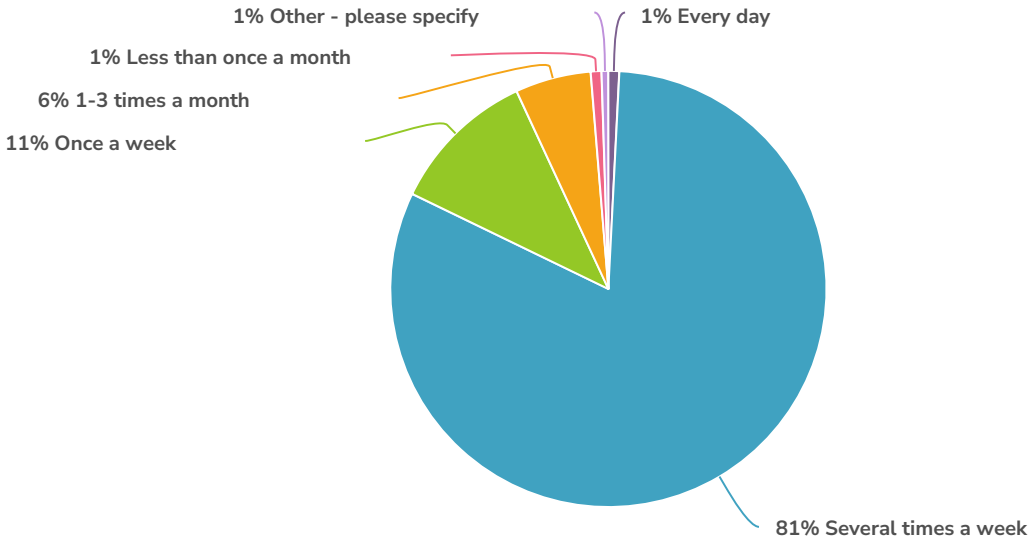
2. In general, what is your main purpose for visiting the LRGC? (Please tick all that apply)



Value	Percent	Responses
Golf	100.0%	375
Conference / Seminar	0.5%	2
Dining (lunchtime)	17.1%	64
Dining (evening)	10.7%	40
Other (Please specify)	3.7%	14

Other (Please specify)	Count
Meetings	2
Breakfast	1
Drinking	1
Function	1
Mid morning coffee	1
Morning Tea	1
Socialise/Drink	1
Socially	1
Volunteering.	1
coffee and light refreshments	1
drinks on balcony	1
social	1
staff	1
Totals	14

3. In general, how often do you attend the LRGC?

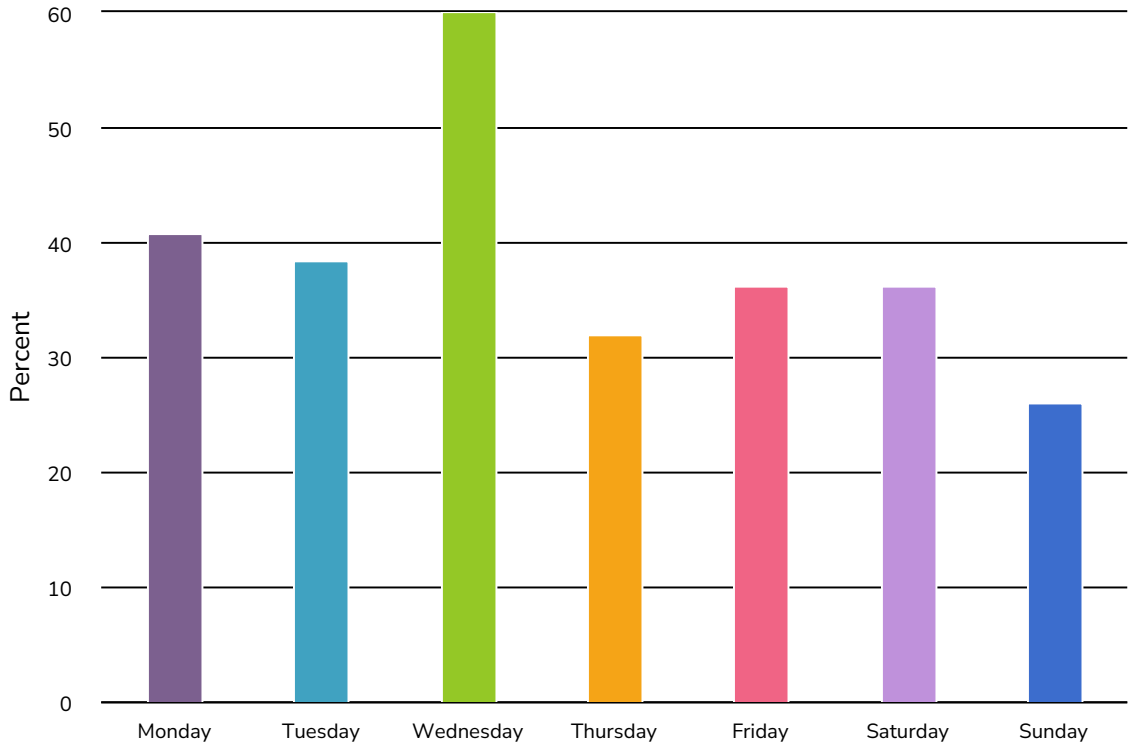


Value	Percent	Responses
Every day	0.8%	3
Several times a week	81.3%	305
Once a week	10.9%	41
1-3 times a month	5.6%	21
Less than once a month	0.8%	3
Other - please specify	0.5%	2

Totals: 375

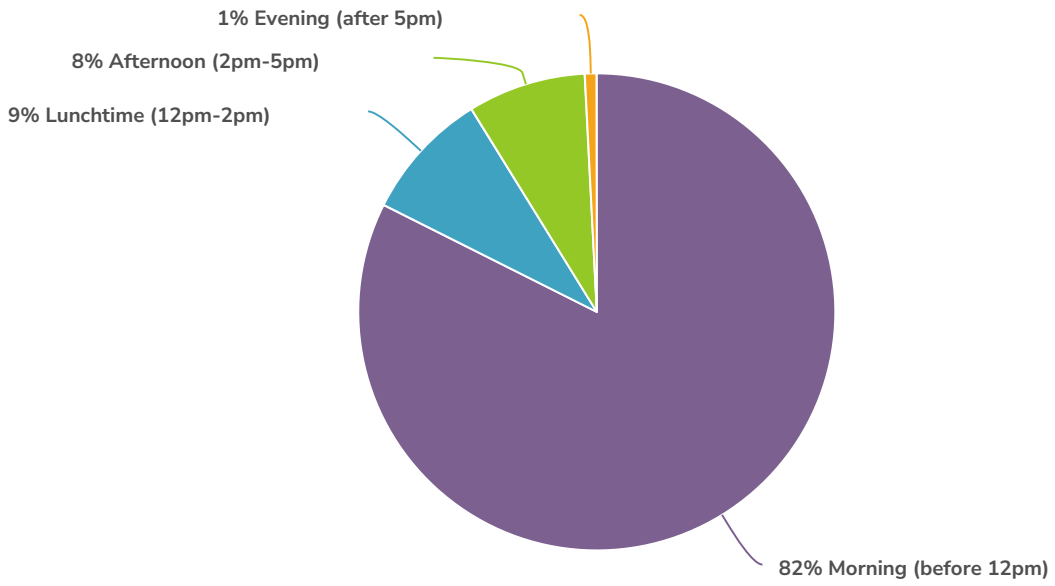
Other - please specify	Count
Totals	0

4. What days do you usually attend the LRGC? (Please tick all that apply)



Value	Percent	Responses
Monday	40.8%	153
Tuesday	38.4%	144
Wednesday	60.0%	225
Thursday	32.0%	120
Friday	36.3%	136
Saturday	36.3%	136
Sunday	26.1%	98

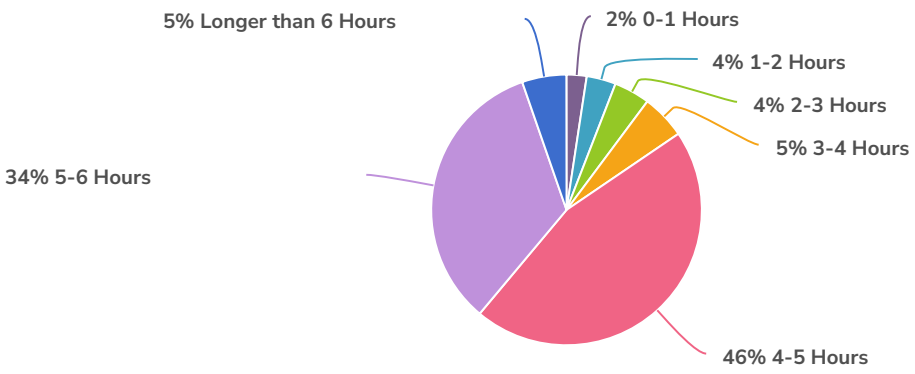
5. When do you normally visit the LRGC?



Value	Percent	Responses
Morning (before 12pm)	82.4%	309
Lunchtime (12pm-2pm)	8.8%	33
Afternoon (2pm-5pm)	8.0%	30
Evening (after 5pm)	0.8%	3

Totals: 375

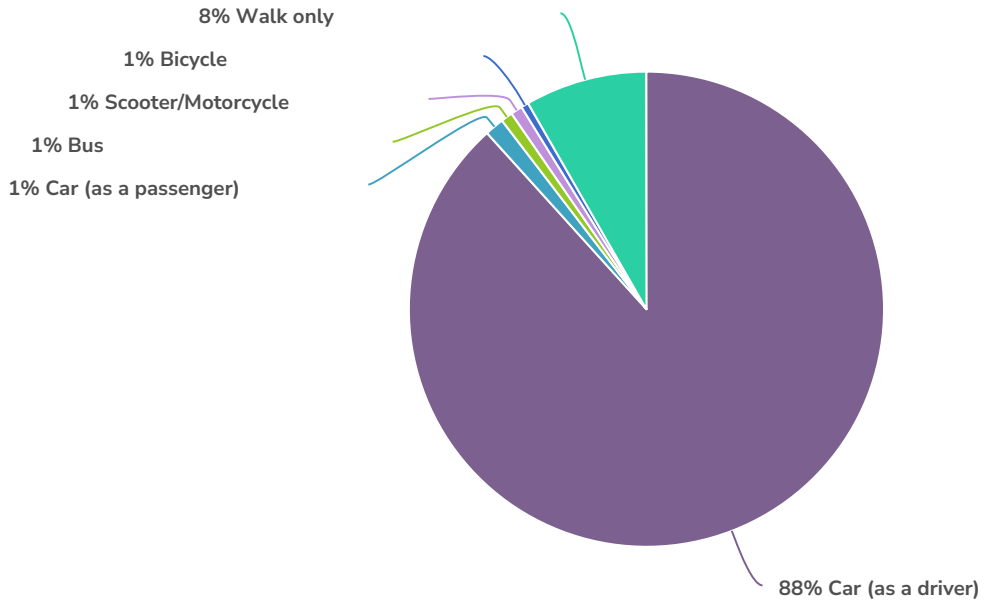
6. How long do you normally stay in the LRGC?



Value	Percent	Responses
0-1 Hours	2.4%	9
1-2 Hours	3.5%	13
2-3 Hours	4.3%	16
3-4 Hours	5.3%	20
4-5 Hours	45.6%	171
5-6 Hours	33.6%	126
Longer than 6 Hours	5.3%	20

Totals: 375

7. How do you normally travel to the LRGC?

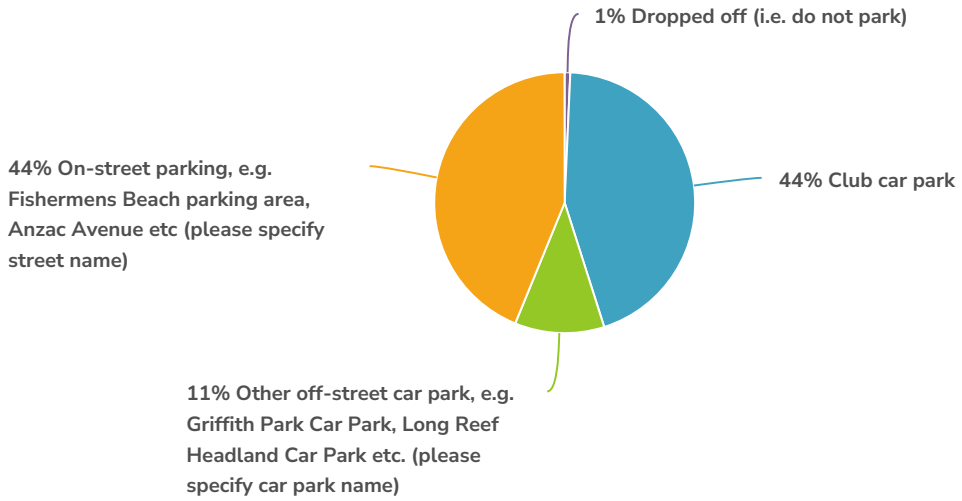


Value	Percent	Responses
Car (as a driver)	88.3%	331
Car (as a passenger)	1.3%	5
Bus	0.8%	3
Scooter/Motorcycle	0.8%	3
Bicycle	0.5%	2
Walk only	8.3%	31

Totals: 375

Other (please specify)	Count
Totals	0

8. [OLD VERSION] If you travel by car, where do you normally park?



Value	Percent	Responses
Dropped off (i.e. do not park)	0.7%	2
Club car park	44.4%	132
Other off-street car park, e.g. Griffith Park Car Park, Long Reef Headland Car Park etc. (please specify car park name)	11.1%	33
On-street parking, e.g. Fishermens Beach parking area, Anzac Avenue etc (please specify street name)	43.8%	130

Totals: 297

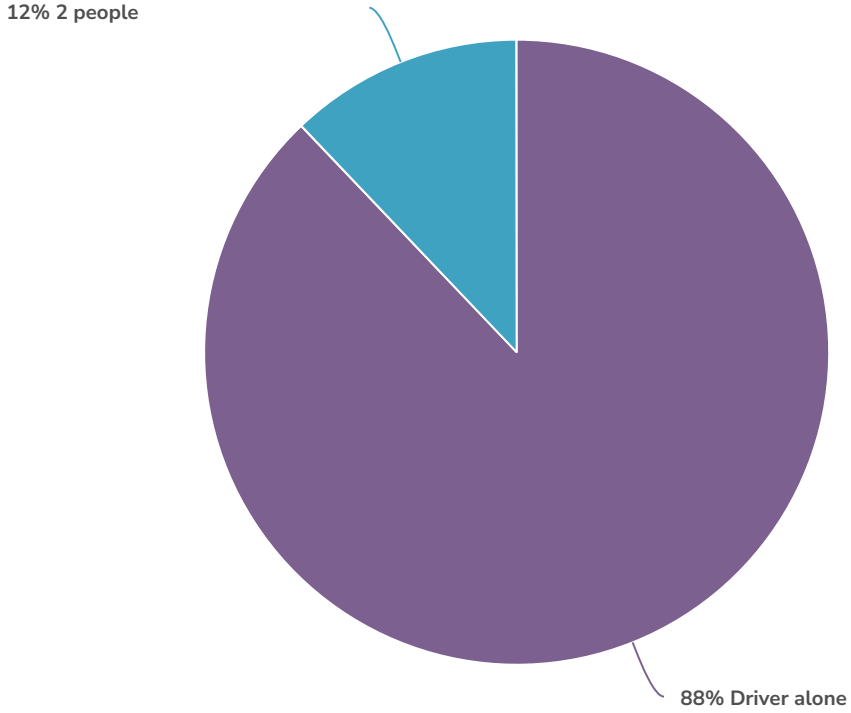
Other off-street car park, e.g. Griffith Park Car Park, Long Reef Headland Car Park etc. (please specify car park name)	Count
Long Reef Headland	2
Either the club car park or the car park outside the car park which I believe is council operated? I also sometimes park on the street (Anzac Avenue, Seaview Pde or Beach Road). Should be able to select multiple options for this question.	1
Griffin park	1
Griffith Park	1
Griffith Park Car Park	1
Griffith park	1
Griffiths Park	1
Headland car park	1
Long Reef Headland Car Park	1
Long Reef Headland Car park	1
Long Reef Headland carpark	1
Long Reef headland carpark	1
PRIVATE DRIVEWAY	1
Where I find a space	1
Wherever there's a parking spot	1
griffith car park	1
ny park i can find	1
on weeends by the tennis courts, weekdays by the proshop	1
the one near the toilets	1
wherever I can	1
Totals	21

On-street parking, e.g. Fishermens Beach parking area, Anzac Avenue etc (please specify street name)	Count
Anzac Avenue	14
Anzac Ave	13
Anzac ave	8
Anzac Avenue	7
Anzac	3
Anzac Av	3
Fisherman's Beach	3
Anzac avenue	2
Fishermans Beach	2
Seaview Parade	2
All	1
Any street off Anzac that has a spot	1
Anywhere I can get a spot	1
Anywhere available	1
Anywhere near or in the LRGC car park	1
Anza ave	1
Anzac Ave or Beach Rd	1
Anzac Ave or Seaview Pde most days if car park is full andit normally is, except for Monday.	1
Anzac Ave, Fisherman's Beach	1
Anzac Avenue or Club Carpark	1
Anzac Avenue, Long Reef Headland carpark	1
Anzac av	1
Totals	107

On-street parking, e.g. Fishermens Beach parking area, Anzac Avenue etc (please specify street name)	Count
Anzac avenue	1
Anzac, Fishermans, & club car park	1
AnzacAve & Seaview parade	1
As close as possible to the course	1
Beach Rd	1
Beach Road	1
Beach Road, Seaview Pd, Ocean Grove and sometimes Florence Ave.	1
Beach front if members car park is full	1
Cambel Parade	1
End of Anzac Ave in turning circle	1
Fisherman's Beach parking area and Anzac Avenue	1
Fisherman's Parking area or Anzac Avenue	1
Fisherman's beach	1
Fisherman's beach parking area	1
Fishermans Beach	1
Fishermans Beach	1
Fishermans Beach car park	1
Fishermans,Beach	1
Fishermen's Beach	1
Fishermens Beach	1
Fishermens Beach	1
I park anywhere I can find a space	1
Totals	107

On-street parking, e.g. Fishermens Beach parking area, Anzac Avenue etc (please specify street name)	Count
Non specific street just as close to the course as possible	1
Ocean Rd., Cliff Rd, Tennis parking	1
Seaview Pde, Ocean Grove, Beach Road & LRGC Carpark if very lucky	1
Street parking	1
Varies every time! Wherever is closest	1
Very hard to get a spot so park wherever	1
Where I can get a spot	1
Wherever I Can !!!	1
any local street where a spot is available	1
anywhere i can find	1
anzac ave	1
either	1
fishermans beach car park	1
ocean street	1
parking is limited so wherever there is a spot	1
wherever there is a space	1
Totals	107

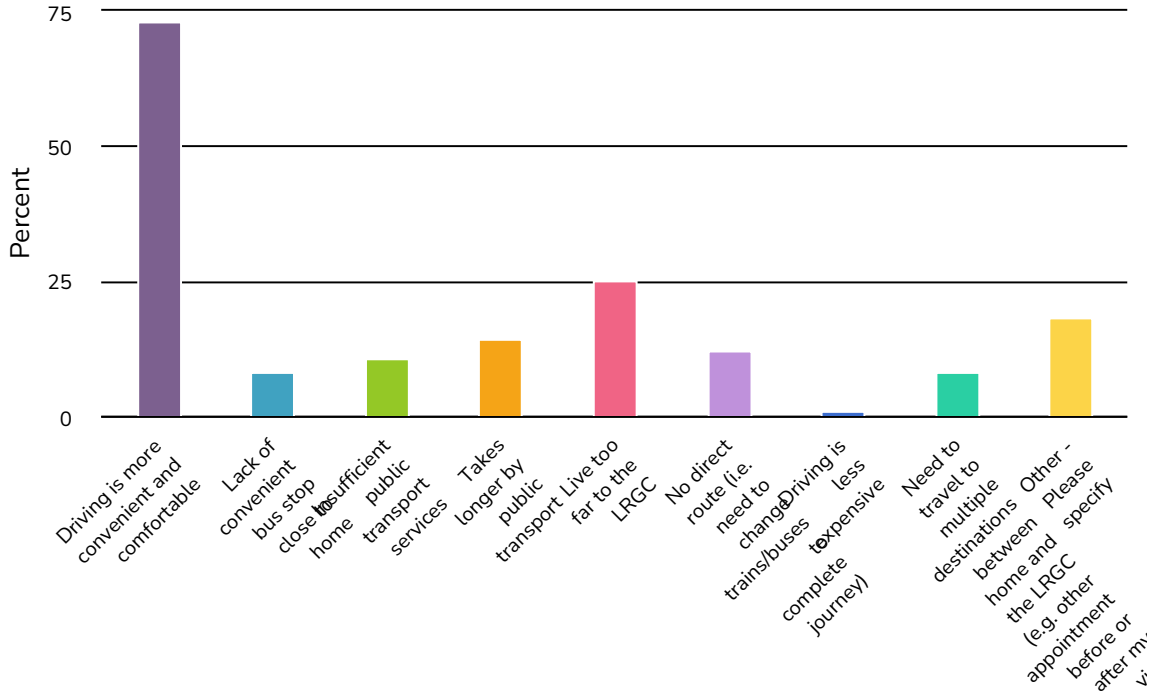
9. How many people are normally in the car including the driver?



Value	Percent	Responses
Driver alone	87.9%	261
2 people	12.1%	36

Totals: 297

10. You have indicated you normally travel to the LRGC by car, for which reasons do you not use other modes? (Please tick up to 3 options that apply)



Value	Percent	Responses
Driving is more convenient and comfortable	73.1%	217
Lack of convenient bus stop close to home	8.4%	25
Insufficient public transport services	10.8%	32
Takes longer by public transport	14.5%	43
Live too far to the LRGC	25.3%	75
No direct route (i.e. need to change trains/buses to complete journey)	12.1%	36
Driving is less expensive	1.0%	3
Need to travel to multiple destinations between home and the LRGC (e.g. other appointment before or after my visit)	8.4%	25
Other - Please specify	18.5%	55

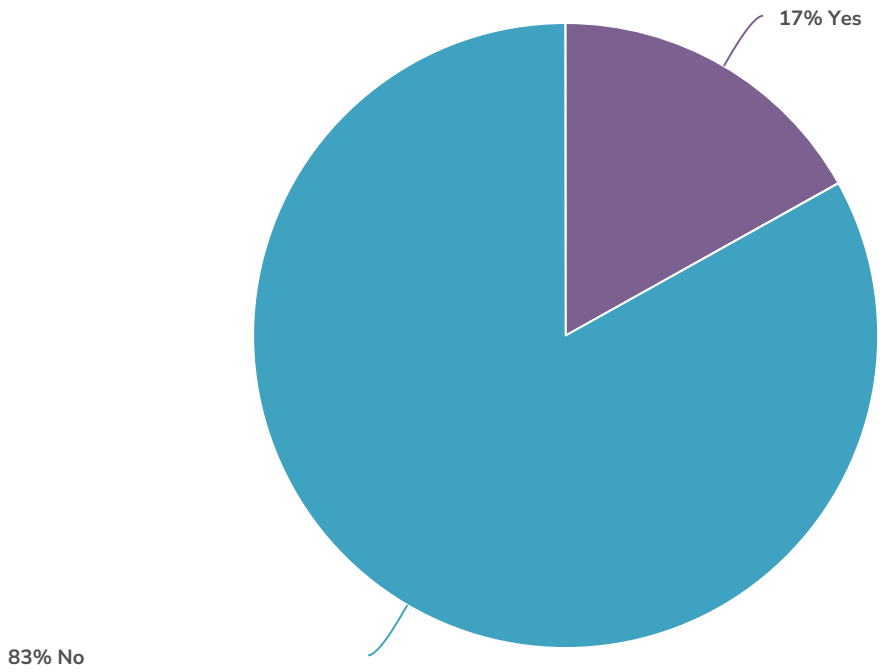
Other - Please specify	Count
To bring clubs and golf buggy	1
A lot of golf equipment	1
As i need to bring golf clubs and buggy, public transport is not an option. I have been waiting many years for a spot for storing my golf equipment at the pro shop	1
Bring golf clubs with me	1
Bringing gof clubs	1
Cannot take golf clubs and buggy on bus especially during peak hour periods	1
Carry clubs and cart in car so bus not viable nor is there a direct servic	1
Carry golf equipment	1
Totals	55

Other - Please specify	Count
Carry golf gear	1
Carrying golf bags and equipment not practical	1
Difficult to travel with golf equipment	1
Easier as have to transport clubs and buggy	1
Easier to transport golf clubs	1
Golf club Transportit is very difficult bto have golf clubs on public transport	1
Golf clubs and buggy need car	1
Golf clubs can't be transported by public unless u are Goliath, the visitors to the Headland plus the public often take up spaces in the carpark and surrounding streets well before tee times on any one golf day.	1
Golf clubs etc	1
Golf clubs to carry	1
Golf gear too cumbersome for public transport	1
Have bring golf bag and buggy as no on site facilities	1
Have golf clubs in car	1
Have to bring my golf clubs and buggy	1
Have to carry clubs, etc in car	1
I bring my golf clubs in my car	1
I carry my clubs with me in the car each visit... can't take them on public transport	1
I come to play golf all my gear is easiest to transport in car	1
I do not have Golf Club storage. If I did have storage for my Golf Bag , then I could use a Bus or my Motor Cycle.	1
I have my golfing equipment in my car	1
I live 12 minutes walk from LR golf club but it is easier to drive there instead of walking	1
Totals	55

Other - Please specify	Count
I live locally but to far to walk and no public transport is available	1
I need a car to carry golf clubs. If I'm visiting and wanting to drink I take the bus.	1
I need to drive to bring my golf clubs and buggy	1
I'd like to come by push bike, but there's no storage or locker available	1
I'm carrying golf equipment	1
If rain is forecast	1
Need to bring buggy and clubs	1
Need to bring golf clubs	1
Need to carry golf equipment which is next to impossible on public transport	1
Need to tote clubs & buggy	1
Need to transport clubs, who does that on a multiple bus trip	1
Need to transport golf clubs	1
Need to transport golf equipment	1
Never come any other way	1
No option was given but 30% i travel by bus	1
Not going to carry my golf bag and buggy on a bus, plus would need multiple buses. Not viable.	1
To carry clubs	1
We bring golf clubs and buggies with us	1
bag Club storage facilities & costs	1
can't take buggy on bus even if there was a bus	1
carrying golf clubs	1
carrying golf gear	1
golf clubs/cart in car	1
Totals	55

Other - Please specify	Count
got golf bag and two buggies - also live 30 min drive away	1
have clubs to far to walk	1
too hard to take clubs on bus	1
Totals	55

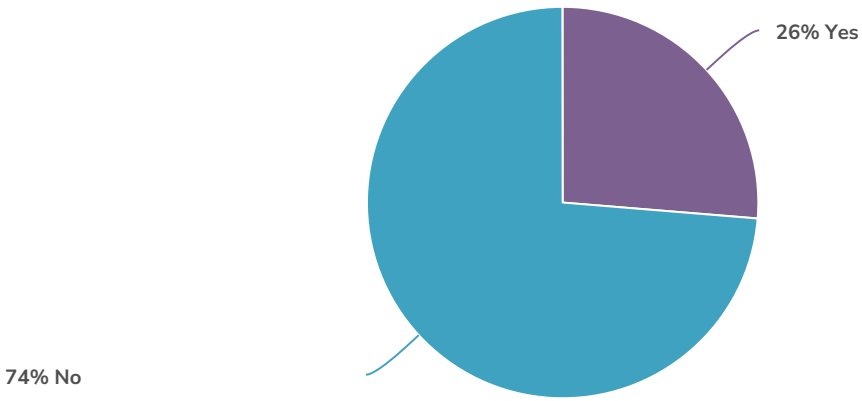
11. Would you be interested in car sharing / pooling if guaranteed parking spaces were provided to car sharers / poolers?



Value	Percent	Responses
Yes	16.9%	44
No	83.1%	217

Totals: 261

12. Would you be interested in taking the shuttle bus if this service were provided?



Value	Percent	Responses
Yes	26.3%	78
No	73.7%	219

Totals: 297

13. What is the postcode of your place of residence

ResponseID	Response
9	2097
10	2097
12	2087
14	2099
16	2088
17	2097
18	2086
19	2099
20	2097
22	2100
24	2088
25	2095
26	2095
27	2090
28	2097
30	2099
31	2101
32	2100
33	2097
35	2099
36	2099
37	2077
38	2096

ResponseID	Response
39	2104
40	2068
42	2101
43	2101
45	2096
46	2093
47	2099
48	2093
49	2097
51	2097
52	2111
53	2105
54	2096
56	2085
57	2095
59	2094
60	2094
61	2099
63	2085
64	2097
65	2099
66	2097
67	2062
69	2092

ResponseID	Response
70	2107
72	2067
73	2097
74	2099
75	2106
76	2097
79	2106
80	2099
81	2097
82	2094
84	2097
85	2103
86	2099
87	2065
88	2095
89	2099
90	2102
91	2034
92	2097
93	2065
94	2095
95	2093
96	2097
97	2088

ResponseID	Response
98	2106
100	2101
102	2096
103	2102
104	2099
105	2103
106	2075
107	2099
108	2101
109	2096
110	2096
112	2093
114	2105
115	2100
117	2065
119	2097
120	2099
121	2097
122	2101
124	2099
125	2100
126	2107
127	2100 Allambie Heights
128	2092

ResponseID	Response
130	2088
131	2062
133	2096
134	2099
135	2097
136	2097
137	2099
138	2093
139	2093
140	2097
141	2097
142	2096, CURL CURL
143	2088
144	2099
145	2097
146	2097
147	2096
148	2097
149	2101
150	2097
151	2088
152	2099
153	2101
154	2097

ResponseID	Response
155	2095
156	2097
157	2062
158	2095
159	2097
160	2101
161	2104
162	2097
163	2096
164	2093
166	2099
168	2097
170	2096
172	2099
173	2101
174	2106
175	2101
177	2100
178	2101
179	2094
181	2088
183	2097
184	2100
185	2097

ResponseID	Response
187	2096
188	2096
189	2107
190	2097
191	2099
192	2107
194	2101
195	2097
196	2099
197	2088
198	2094
199	2099
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201	2101
202	2062
203	2100
204	2103
205	2097
207	2101
208	2097
209	2097
211	2101
213	2101
215	2097

ResponseID	Response
216	2101
217	2087
218	2065
219	2097
220	2102
222	2101
224	2101
225	2094
227	2097
228	2775
229	2095
231	2101
233	2095
234	2101
236	2090
237	2102
238	2037
241	2101
242	2097
243	2060
244	2097
245	2101
246	2097
247	2107

ResponseID	Response
248	2101
249	2093
250	2097
251	2090
252	2101
253	2097
254	2097
258	2097
260	2099
262	2096
263	2075
264	2097
265	2096
266	2106
267	2102
268	2097
269	2096
270	2097
272	2097
273	2101
274	2096
275	2095
276	2103
277	2093

ResponseID	Response
278	2088
280	2092
281	2097
282	2094
283	2094
284	2101
286	2065
287	2097
288	2097
289	2096
290	2100
291	2090
292	2103
293	2097
294	2097
295	2099
296	2076
298	2100
300	2097
301	2097
302	2100
304	2095
305	2097
306	2095

ResponseID	Response
307	2097
308	2101
311	2086
312	2086
313	2086
314	2094
315	2099
317	2066
318	2099
319	2095
320	2087
321	2097
325	2097
326	2097
327	2097
330	2075
331	2099
332	2101
333	2102
334	2101
336	2097
337	2097
338	2093
339	2096

ResponseID	Response
340	2097
341	2097
342	2093
343	2093
344	2099
345	2097
346	2097
347	2097
348	2097
349	2096
350	2096
351	2097
352	2097
353	2097
354	2093
355	2097
356	2094
357	2106
360	2099
361	2099
362	2102
363	2023
366	2106
369	2097

ResponseID	Response
371	2087
372	2096
375	2097
378	2100
379	2096
381	2101
383	2093
384	2086
386	2100
387	2097
388	2106
389	2096
391	2099
392	2099
393	2086
394	2101
395	2101
396	2085
397	2097
399	2097
400	2088
401	2097
402	2104
404	2099

ResponseID	Response
406	2093
408	2099
409	2086
410	2094
411	2099
412	2097
413	2099
415	2097
417	2097
419	2100
420	2097
422	2099
423	2101
425	2099
426	2088
427	2097
428	2099
429	2097
430	2097
432	2103
433	2103
434	2093
435	2099
436	2102

ResponseID	Response
437	2097
439	2097
442	2095
443	2099
444	2097
446	2097
447	2099
450	2103
451	2085
452	2097
453	2102
454	2099
455	2097
456	2101
457	2097
459	2093
460	2095
461	2097
463	2099
465	2075
466	2099
468	2099
469	2101
471	2097

ResponseID	Response
472	2097
474	2099
476	2097
478	2101
479	2087
480	2101
481	2099
482	2106
484	2107
486	2094
487	2088
488	2099
490	2099

This report is filtered
Only show: #2 Question "**In general,** what is your **main purpose** for visiting the LRGC? (Please tick all that apply)" is one of the following answers ("Golf") and #4 Question "What days do you **usually** attend the LRGC? (Please tick all that apply)" is one of the following answers ("Friday","Saturday","Sunday")

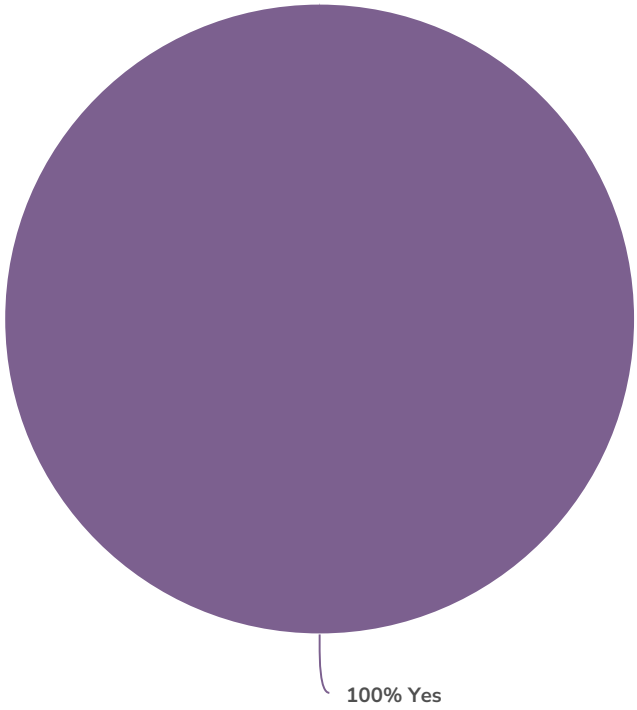
Report for Long Reef Golf Club Member&Visitor Online Travel Mode Survey - Golfers Friday & Weekends

Response Counts

Completion Rate:	**100%**		
	Complete		342

Totals: 342

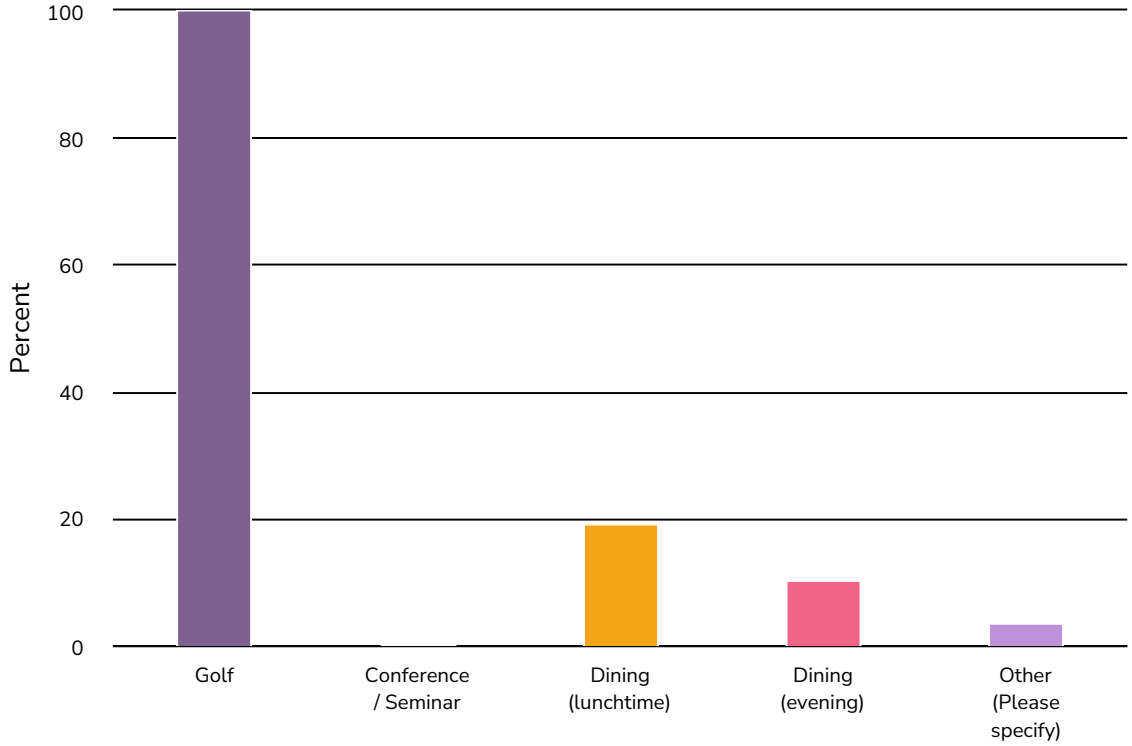
1. Are you a member of the LRGC?



Value	Percent	Responses
Yes	100.0%	342

Totals: 342

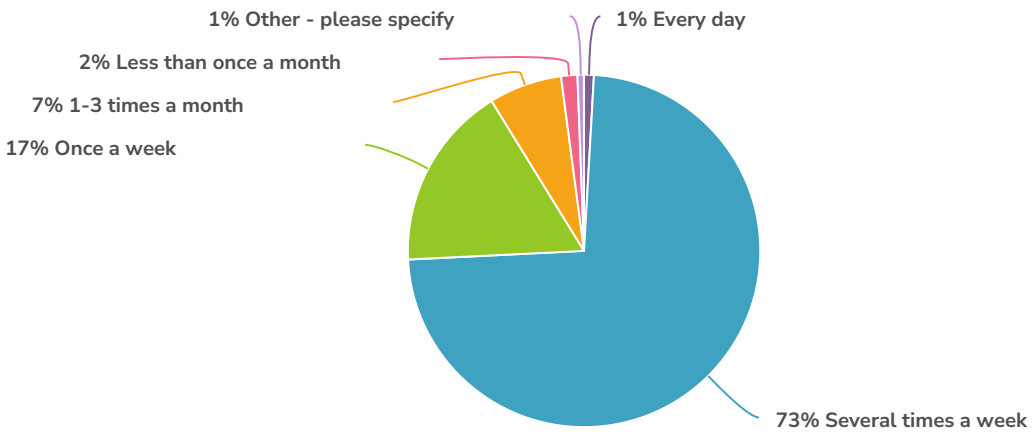
2. In general, what is your main purpose for visiting the LRGC? (Please tick all that apply)



Value	Percent	Responses
Golf	100.0%	342
Conference / Seminar	0.3%	1
Dining (lunchtime)	19.3%	66
Dining (evening)	10.5%	36
Other (Please specify)	3.8%	13

Other (Please specify)	Count
Meetings	2
Breakfast	1
Breakfast	1
Function	1
Mid morning coffee	1
Morning Tea	1
Socialise/Drink	1
Socially	1
Volunteering.	1
drinks on balcony	1
social	1
staff	1
Totals	13

3. In general, how often do you attend the LRGC?

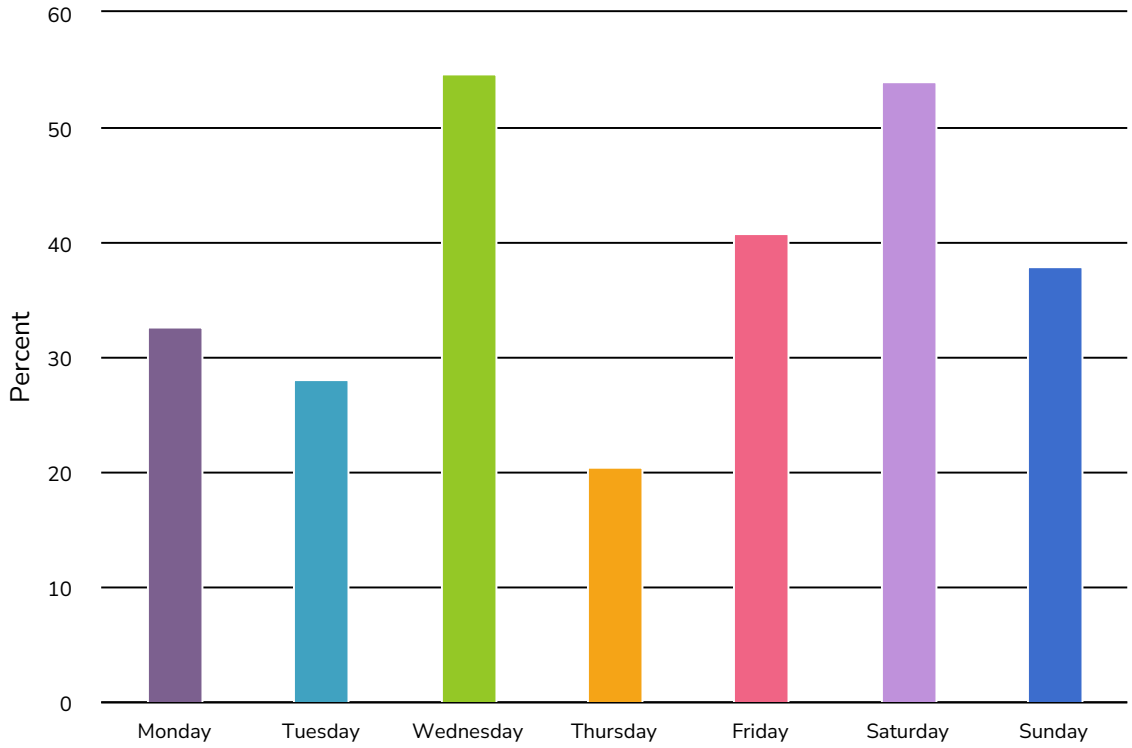


Value	Percent	Responses
Every day	0.9%	3
Several times a week	73.4%	251
Once a week	17.0%	58
1-3 times a month	6.7%	23
Less than once a month	1.5%	5
Other - please specify	0.6%	2

Totals: 342

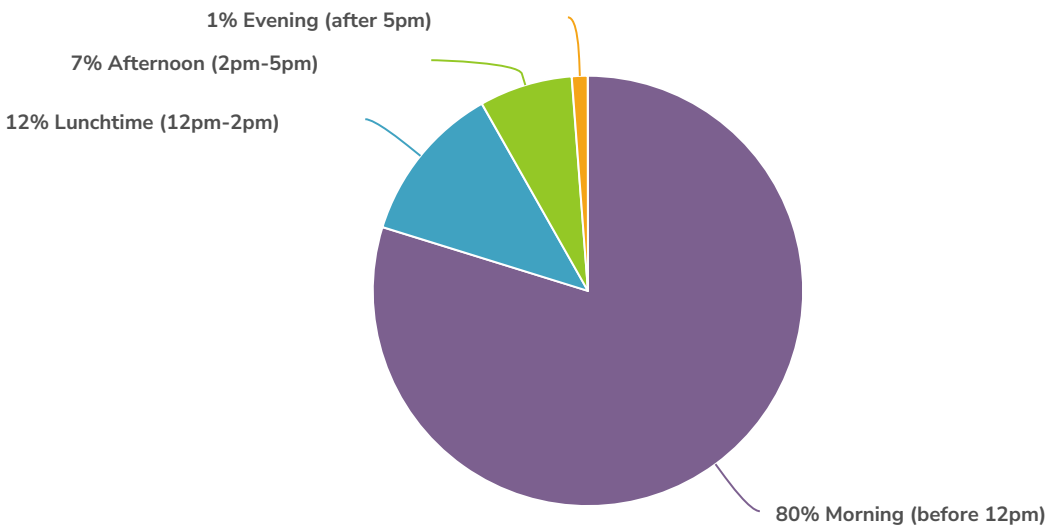
Other - please specify	Count
Totals	0

4. What days do you usually attend the LRGC? (Please tick all that apply)



Value	Percent	Responses
Monday	32.7%	112
Tuesday	28.1%	96
Wednesday	54.7%	187
Thursday	20.5%	70
Friday	40.9%	140
Saturday	54.1%	185
Sunday	38.0%	130

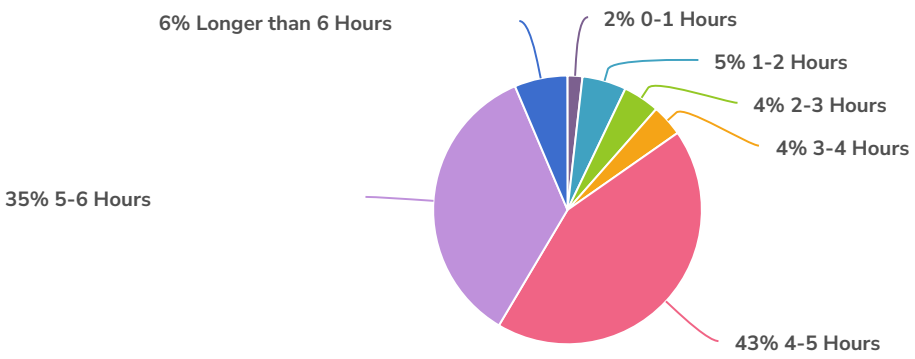
5. When do you normally visit the LRGC?



Value	Percent	Responses
Morning (before 12pm)	79.8%	273
Lunchtime (12pm-2pm)	12.0%	41
Afternoon (2pm-5pm)	7.0%	24
Evening (after 5pm)	1.2%	4

Totals: 342

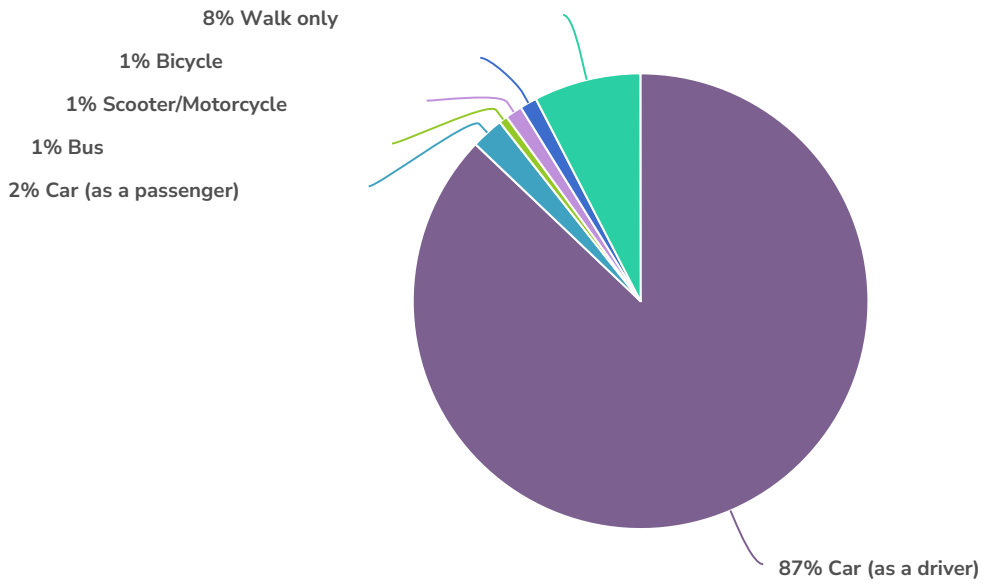
6. How long do you normally stay in the LRGC?



Value	Percent	Responses
0-1 Hours	1.8%	6
1-2 Hours	5.3%	18
2-3 Hours	4.4%	15
3-4 Hours	3.8%	13
4-5 Hours	43.3%	148
5-6 Hours	35.1%	120
Longer than 6 Hours	6.4%	22

Totals: 342

7. How do you normally travel to the LRGC?

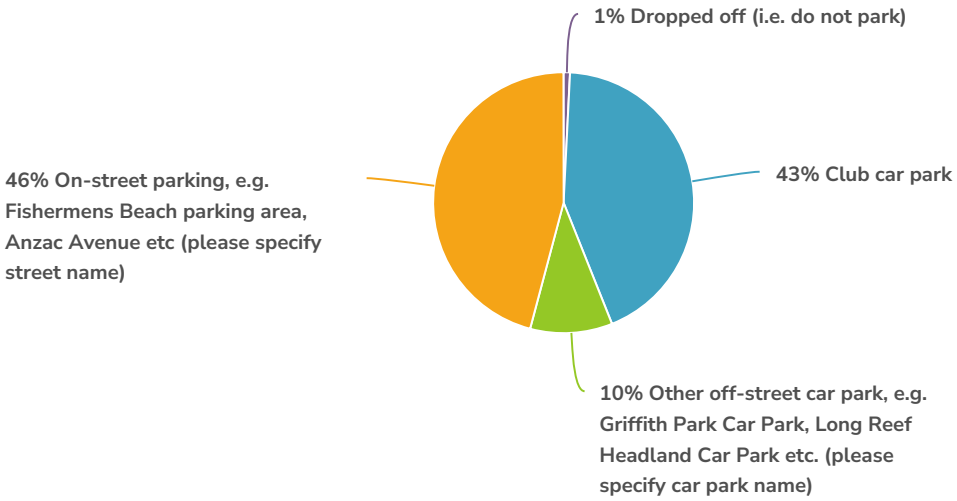


Value	Percent	Responses
Car (as a driver)	87.1%	298
Car (as a passenger)	2.3%	8
Bus	0.6%	2
Scooter/Motorcycle	1.2%	4
Bicycle	1.2%	4
Walk only	7.6%	26

Totals: 342

Other (please specify)	Count
Totals	0

8. [OLD VERSION] If you travel by car, where do you normally park?



Value	Percent	Responses
Dropped off (i.e. do not park)	0.8%	2
Club car park	43.2%	115
Other off-street car park, e.g. Griffith Park Car Park, Long Reef Headland Car Park etc. (please specify car park name)	10.2%	27
On-street parking, e.g. Fishermens Beach parking area, Anzac Avenue etc (please specify street name)	45.9%	122

Totals: 266

Other off-street car park, e.g. Griffith Park Car Park, Long Reef Headland Car Park etc. (please specify car park name)	Count
Griffith park	2
Either the club car park or the car park outside the car park which I believe is council operated? I also sometimes park on the street (Anzac Avenue, Seaview Pde or Beach Road). Should be able to select multiple options for this question.	1
Griffin park	1
Griffith Park Car Park	1
Long Reef Headland	1
Long Reef Headland Car Park	1
Long Reef Headland Car park	1
Long Reef headland carpark	1
Where I find a space	1
Wherever I can get a park as they are rare as hens teeth	1
Wherever there's a parking spot	1
griffith car park	1
ny park i can find	1
on weeends by the tennis courts, weekdays by the proshop	1
wherever I can	1
Totals	16

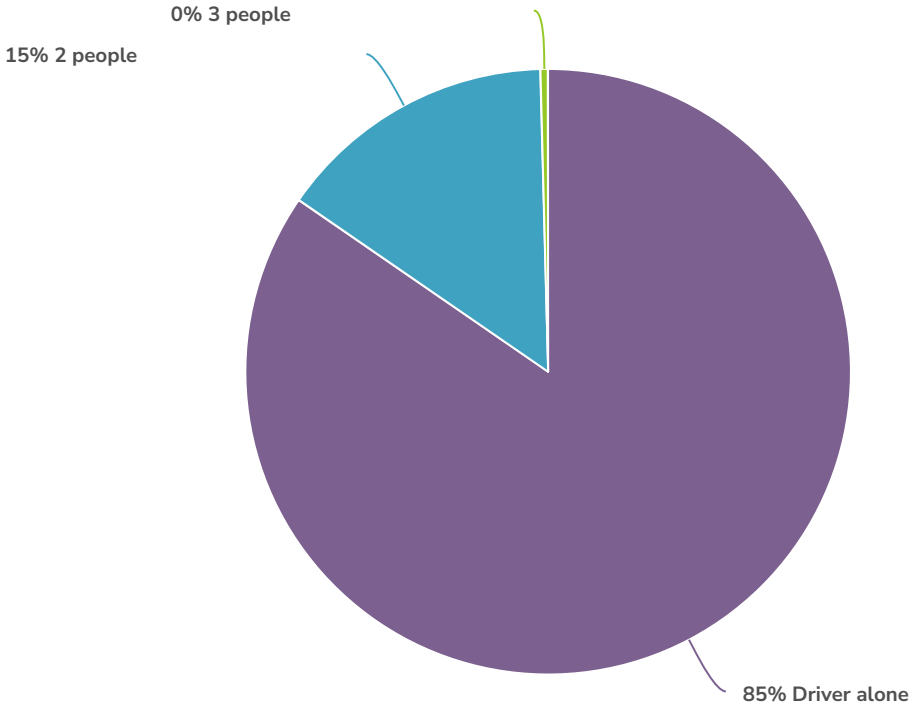
On-street parking, e.g. Fishermens Beach parking area, Anzac Avenue etc (please specify street name)	Count
Anzac Avenue	12
Anzac Ave	11
Anzac Avenue	8
Totals	99

On-street parking, e.g. Fishermens Beach parking area, Anzac Avenue etc (please specify street name)	Count
Anzac ave	8
Fishermans Beach	4
Anzac Av	3
Fisherman's Beach	3
Anzac	2
Seaview parade	2
Any street off Anzac that has a spot	1
Anywhere I can get a spot	1
Anywhere available	1
Anzac Ave or Beach Rd	1
Anzac Ave or Seaview Pde most days if car park is full andit normally is, except for Monday.	1
Anzac Ave, Fisherman's Beach	1
Anzac av	1
Anzac avenue	1
Anzac, Fishermans, & club car park	1
As close as possible to the course	1
Beach Rd	1
Beach Road, Seaview Pd, Ocean Grove and sometimes Florence Ave.	1
Beach front if members car park is full	1
Cambel Parade	1
Fisherman's Beach parking area and Anzac Avenue	1
Fisherman's Parking area or Anzac Avenue	1
Totals	99

On-street parking, e.g. Fishermens Beach parking area, Anzac Avenue etc (please specify street name)	Count
Fisherman's beach	1
Fisherman's beach parking area	1
Fishermans	1
Fishermans Beach	1
Fishermans Beach car park	1
Fishermans,Beach	1
Fishermen's Beach	1
Fishermens Beach	1
Fishermens Beach	1
Ocean Rd., Cliff Rd, Tennis parking	1
Ocean ave	1
Seaview Parade	1
Seaview Pde, Ocean Grove, Beach Road & LRGC Carpark if very lucky	1
Seaview pde or Beach road, wherever I can find a spot.	1
Street parking	1
Varies every time! Wherever is closest	1
Very hard to get a spot so park wherever	1
Where ever I can find a park	1
Wherever I Can !!!	1
Wherever there is space available	1
any available spot, often have to dri e around to find something	1
any local street where a spot is available	1
Totals	99

On-street parking, e.g. Fishermens Beach parking area, Anzac Avenue etc (please specify street name)	Count
anywhere i can find	1
anzac ave	1
either	1
fishermans beach car park	1
fishersmens beach	1
parking is limited so wherever there is a spot	1
wherever I can	1
wherever there is a space	1
Totals	99

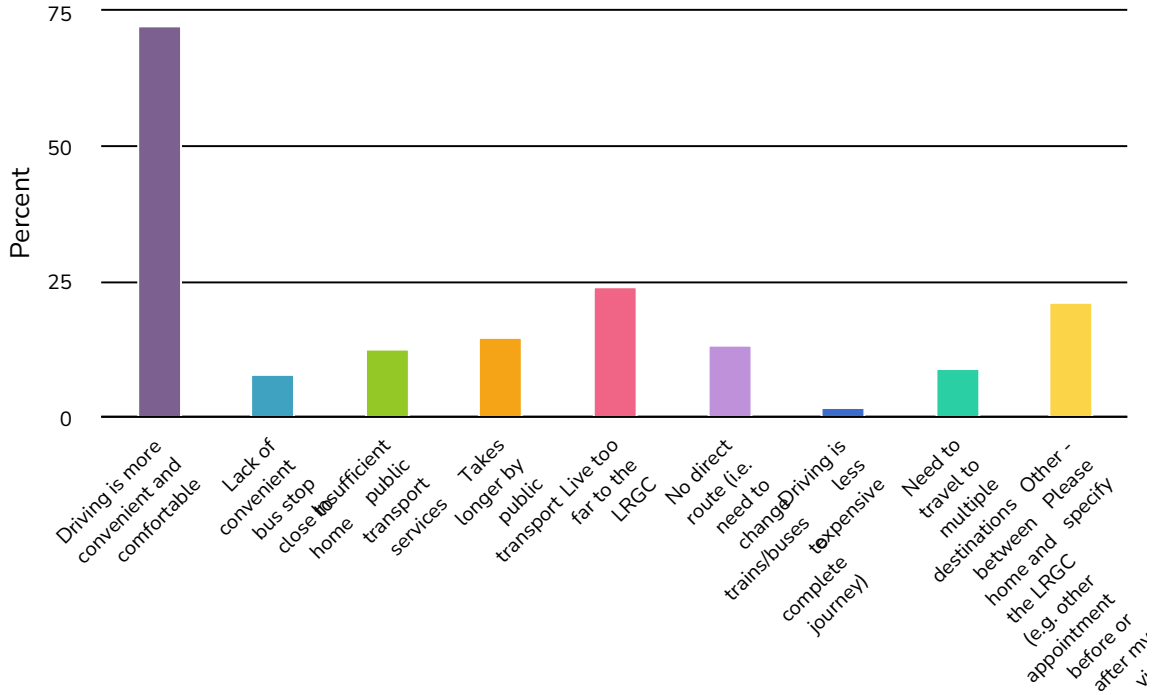
9. How many people are normally in the car including the driver?



Value	Percent	Responses
Driver alone	84.6%	225
2 people	15.0%	40
3 people	0.4%	1

Totals: 266

10. You have indicated you normally travel to the LRGC by car, for which reasons do you not use other modes? (Please tick up to 3 options that apply)



Value	Percent	Responses
Driving is more convenient and comfortable	72.6%	193
Lack of convenient bus stop close to home	7.9%	21
Insufficient public transport services	12.8%	34
Takes longer by public transport	14.7%	39
Live too far to the LRGC	24.1%	64
No direct route (i.e. need to change trains/buses to complete journey)	13.5%	36
Driving is less expensive	1.9%	5
Need to travel to multiple destinations between home and the LRGC (e.g. other appointment before or after my visit)	9.0%	24
Other - Please specify	21.1%	56

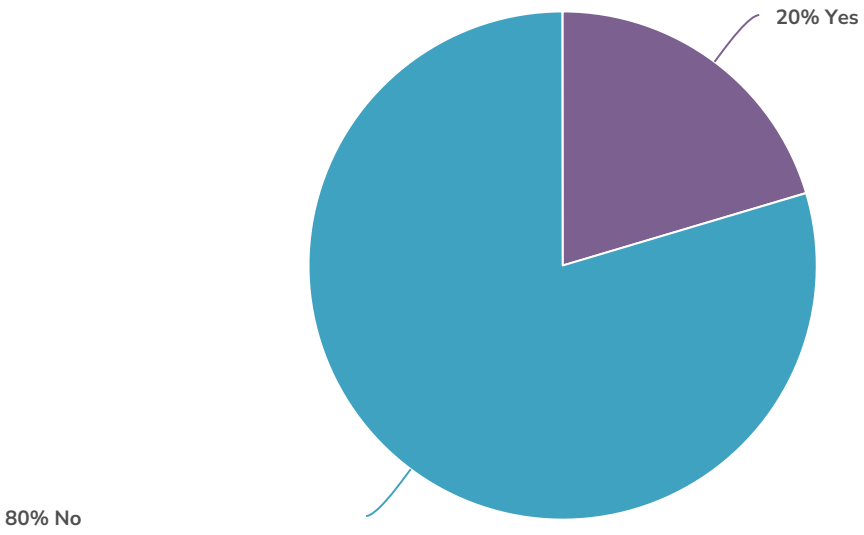
Other - Please specify	Count
Also have a Cart and Clubs to travel with. Frequently play away from LRGC so need to travel with these equipment	1
As i need to bring golf clubs and buggy, public transport is not an option. I have been waiting many years for a spot for storing my golf equipment at the pro shop	1
Bring golf clubs with me	1
Can't carry golf equipment via public transport	1
Can't store clubs, buggy & battery in club	1
Cannot take golf clubs and buggy on bus especially during peak hour periods	1
Car pooling	1
Carry golf equipment	1
Totals	56

Other - Please specify	Count
Carry golf gear	1
Carrying golf bags and equipment not practical	1
Carrying golf clubs and buggy - not possible to use any other mode of transport.	1
Easier as have to transport clubs and buggy	1
Easier to transport golf clubs	1
Golf club Transportit is very difficult bto have golf clubs on public transport	1
Golf clubs and buggy need car	1
Golf clubs etc	1
Golf clubs to carry	1
Have bring golf bag and buggy as no on site facilities	1
Have golf clubs	1
Have golf clubs in car	1
Have to bring my golf clubs and buggy	1
I bring my golf clubs in my car	1
I carry my clubs with me in the car each visit... can't take them on public transport	1
I come to play golf all my gear is easiest to transport in car	1
I do not have Golf Club storage. If I did have storage for my Golf Bag , then I could use a Bus or my Motor Cycle.	1
I have my golfing equipment in my car	1
I live locally but to far to walk and no public transport is available	1
I need a car to carry golf clubs. If I'm visiting and wanting to drink I take the bus.	1
I need to drive to bring my golf clubs and buggy	1
I'd like to come by push bike, but there's no storage or locker available	1
Totals	56

Other - Please specify	Count
I'm carrying golf equipment	1
If rain is forecast	1
Need to bring buggy and clubs	1
Need to bring golf clubs	1
Need to take golf clubs	1
Need to tote clubs & buggy	1
Need to transport Golf Clubs	1
Need to transport golf clubs	1
Need to transport golf equipment	1
Never come any other way	1
No option was given but 30% i travel by bus	1
Not going to carry my golf bag and buggy on a bus, plus would need multiple buses. Not viable.	1
Not taking clubs and pushcart on public transport	1
We bring golf clubs and buggies with us	1
bag Club storage facilities & costs	1
can't take buggy on bus even if there was a bus	1
cant take golf bag/buggy by any other means than car	1
carrying golf clubs. Timing usually not aligned	1
golf clubs/cart in car	1
got golf bag and two buggies - also live 30 min drive away	1
have clubs to far to walk	1
i need to bring my golf clubs with me	1
lack of public transport at the time I need to get to the golf course	1
Totals	56

Other - Please specify	Count
need to bring clubs from home	1
to hard carrying clubs on bus	1
too hard to take clubs on bus	1
Totals	56

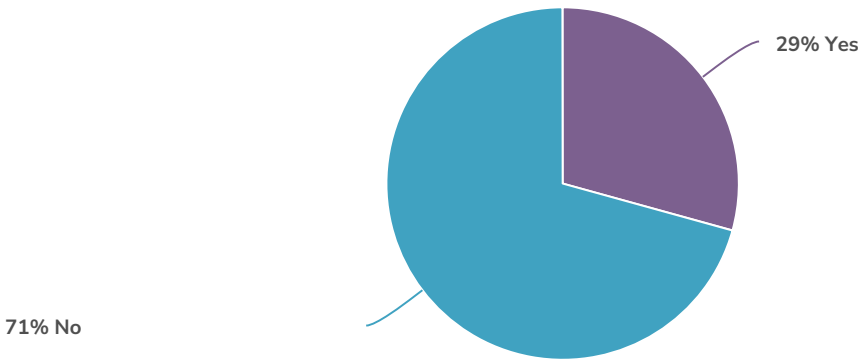
11. Would you be interested in car sharing / pooling if guaranteed parking spaces were provided to car sharers / poolers?



Value	Percent	Responses
Yes	20.4%	46
No	79.6%	179

Totals: 225

12. Would you be interested in taking the shuttle bus if this service were provided?



Value	Percent	Responses
Yes	29.3%	78
No	70.7%	188

Totals: 266

13. What is the postcode of your place of residence

ResponseID	Response
9	2097
10	2097
11	2101
12	2087
13	2095
14	2099
15	2102
17	2097
19	2099
20	2097
21	2097
22	2100
23	2069
25	2095
26	2095
28	2097
29	2101
30	2099
31	2101
32	2100
33	2097
34	2097
36	2099

ResponseID	Response
37	2077
38	2096
39	2104
40	2068
41	2090
43	2101
46	2093
49	2097
50	2099
53	2105
54	2096
56	2085
57	2095
60	2094
61	2099
62	2086
63	2085
64	2097
65	2099
66	2097
67	2062
68	2106
70	2107
71	2093

ResponseID	Response
73	2097
74	2099
75	2106
76	2097
78	2097
80	2099
81	2097
82	2094
84	2097
85	2103
86	2099
87	2065
88	2095
89	2099
90	2102
92	2097
94	2095
96	2097
97	2088
98	2106
99	2099
101	2102
102	2096
103	2102

ResponseID	Response
105	2103
106	2075
107	2099
108	2101
109	2096
111	2096
112	2093
113	2099
114	2105
115	2100
117	2065
118	2097
119	2097
120	2099
121	2097
123	2099
125	2100
129	2097
132	2086
133	2096
134	2099
135	2097
136	2097
137	2099

ResponseID	Response
139	2093
142	2096, CURL CURL
143	2088
144	2099
145	2097
146	2097
148	2097
150	2097
151	2088
152	2099
154	2097
157	2062
160	2101
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162	2097
163	2096
164	2093
165	2100
166	2099
167	2061
168	2097
169	2099
170	2096
172	2099

ResponseID	Response
173	2101
175	2101
176	2089
177	2100
178	2101
179	2094
180	2101
181	2088
184	2100
185	2097
187	2096
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192	2107
196	2099
198	2094
200	2099
202	2062
203	2100
204	2103
205	2097
207	2101
208	2097

ResponseID	Response
209	2097
210	2085
211	2101
212	2084
214	2099
215	2097
216	2101
217	2087
220	2102
222	2101
223	2099
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226	2074
227	2097
228	2775
229	2095
230	2097
231	2101
232	2097
234	2101
237	2102
239	2063
240	2101

ResponseID	Response
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243	2060
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245	2101
246	2097
248	2101
250	2097
251	2090
253	2097
254	2097
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259	2088
260	2099
262	2096
263	2075
264	2097
265	2096
266	2106
267	2102
268	2097
269	2096
270	2097

ResponseID	Response
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273	2101
274	2096
275	2095
277	2093
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289	2096
290	2100
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297	2097
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ResponseID	Response
305	2097
306	2095
308	2101
311	2086
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314	2094
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322	2096
324	2021
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326	2097
327	2097
331	2099
333	2102
334	2101
336	2097
337	2097
339	2096
342	2093

ResponseID	Response
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345	2097
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349	2096
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366	2106
367	2093
369	2097
371	2087
373	2061
375	2097
377	2096
378	2100
380	2097
381	2101

ResponseID	Response
382	2100
383	2093
384	2086
385	2100
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389	2096
391	2099
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393	2086
394	2101
395	2101
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409	2086
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413	2099
414	2099
415	2097
417	2097

ResponseID	Response
419	2100
420	2097
422	2099
425	2099
426	2088
427	2097
428	2099
430	2097
432	2103
434	2093
435	2099
436	2102
437	2097
438	2093
439	2097
441	2088
442	2095
443	2099
444	2097
445	2085
450	2103
451	2085
452	2097
453	2102

ResponseID	Response
454	2099
456	2101
459	2093
460	2095
461	2097
462	2097
463	2099
464	2096
465	2075
466	2099
467	2099
468	2099
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471	2097
473	2106
474	2099
475	2100
476	2097
477	2088
478	2101
480	2101
481	2099
483	2101
484	2107

ResponseID	Response
485	2094
487	2088
488	2099
489	2099
490	2099

This report is filtered
Only show: #2 Question "**In general,** what is your **main purpose** for visiting the LRGC? (Please tick all that apply)" is one of the following answers ("Conference / Seminar","Wedding","Dining (lunchtime)","Dining (evening)","Other (Please specify)") and #4 Question "What days do you **usually** attend the LRGC? (Please tick all that apply)" is one of the following answers ("Monday","Tuesday","Wednesday","Thursday")

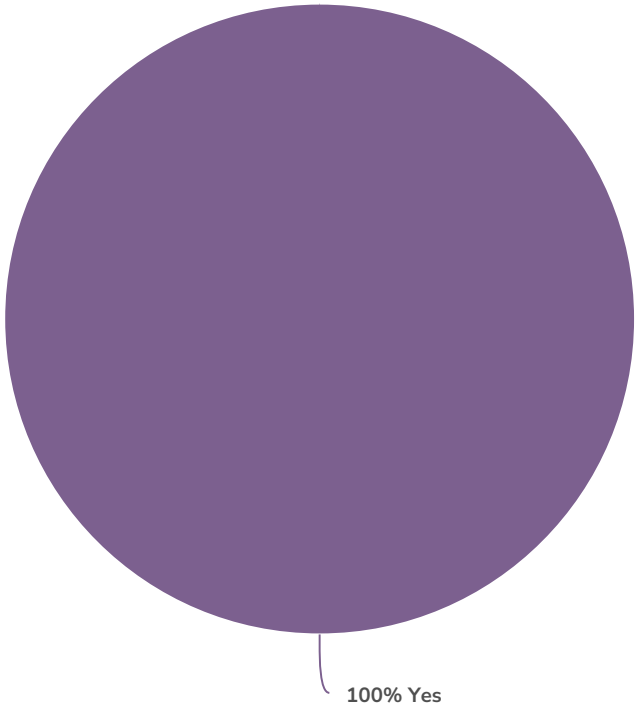
Report for Long Reef Golf Club Member&Visitor Online Travel Mode Survey - Bar & Event Visitors Weekday (Mon-Thu)

Response Counts

Completion Rate:	**100%**		
	Complete		90

Totals: 90

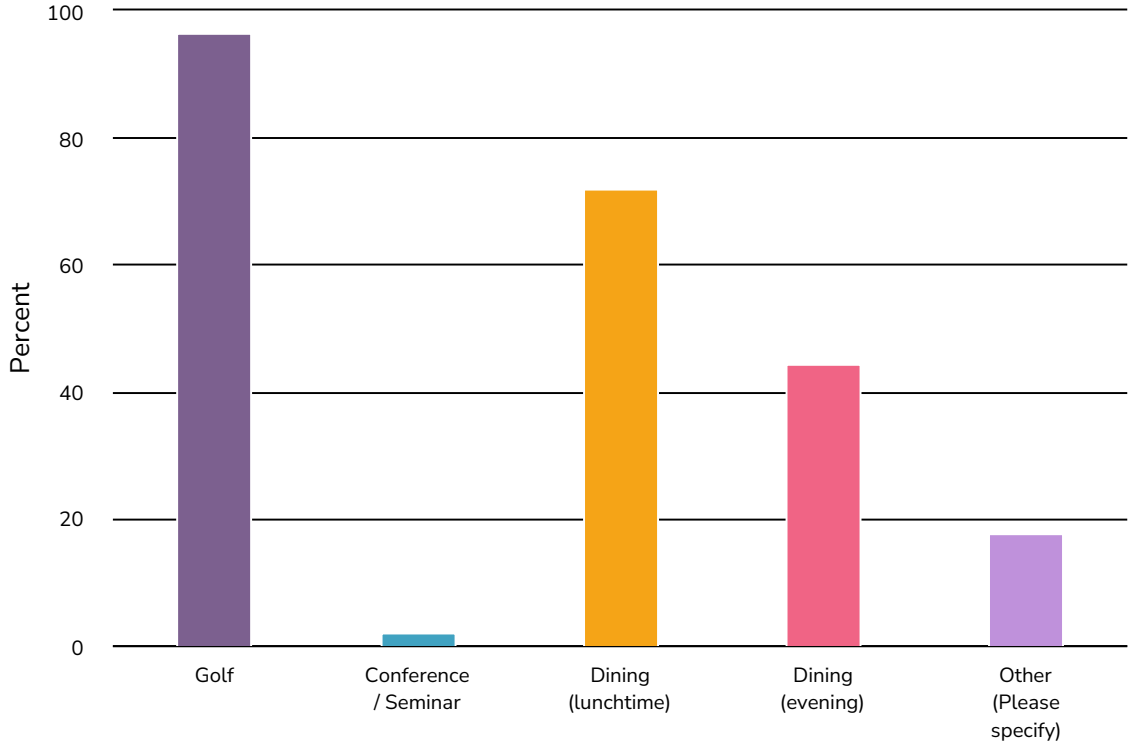
1. Are you a member of the LRGC?



Value	Percent	Responses
Yes	100.0%	90

Totals: 90

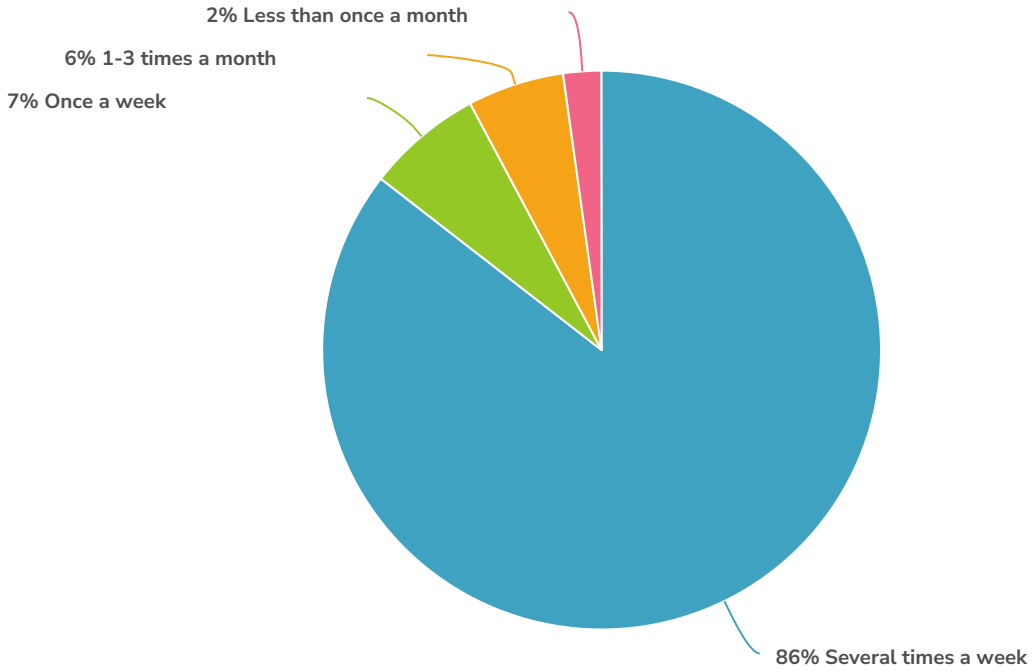
2. In general, what is your main purpose for visiting the LRGC? (Please tick all that apply)



Value	Percent	Responses
Golf	96.7%	87
Conference / Seminar	2.2%	2
Dining (lunchtime)	72.2%	65
Dining (evening)	44.4%	40
Other (Please specify)	17.8%	16

Other (Please specify)	Count
Meetings	2
Breakfast	1
Bridge	1
Drinking	1
Function	1
Mid morning coffee	1
Morning Tea	1
Socialise/Drink	1
Socially	1
Volunteering.	1
coffee and light refreshments	1
drinks on balcony	1
social	1
staff	1
walking	1
Totals	16

3. In general, how often do you attend the LRGC?

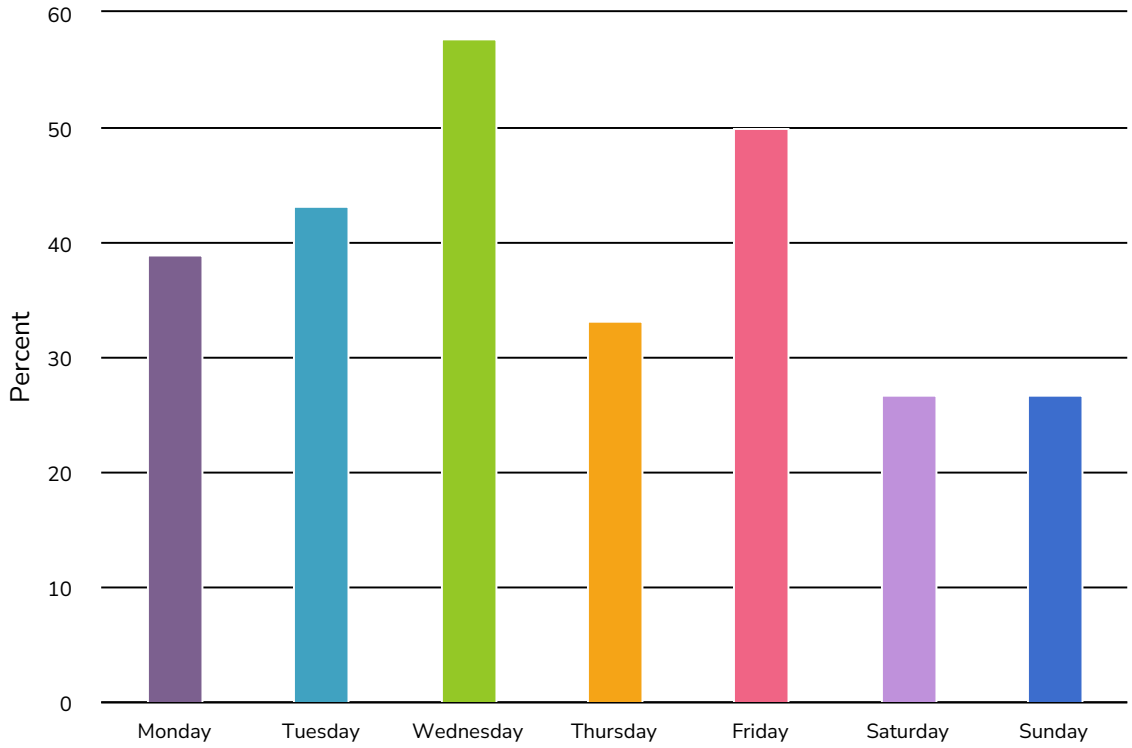


Value	Percent	Responses
Several times a week	85.6%	77
Once a week	6.7%	6
1-3 times a month	5.6%	5
Less than once a month	2.2%	2

Totals: 90

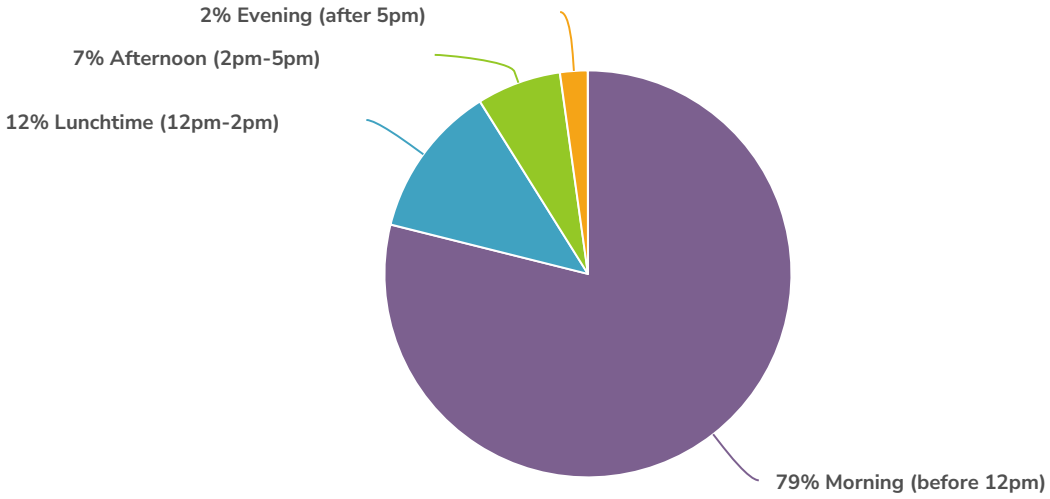
Other - please specify	Count
Totals	0

4. What days do you usually attend the LRGC? (Please tick all that apply)



Value	Percent	Responses
Monday	38.9%	35
Tuesday	43.3%	39
Wednesday	57.8%	52
Thursday	33.3%	30
Friday	50.0%	45
Saturday	26.7%	24
Sunday	26.7%	24

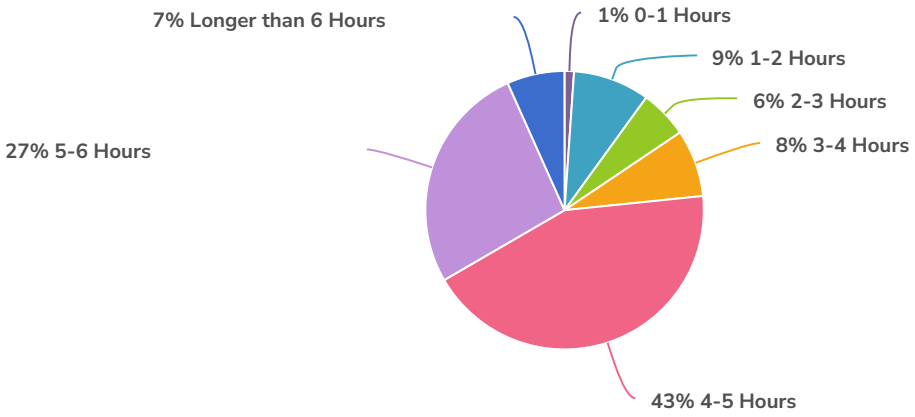
5. When do you normally visit the LRGC?



Value	Percent	Responses
Morning (before 12pm)	78.9%	71
Lunchtime (12pm-2pm)	12.2%	11
Afternoon (2pm-5pm)	6.7%	6
Evening (after 5pm)	2.2%	2

Totals: 90

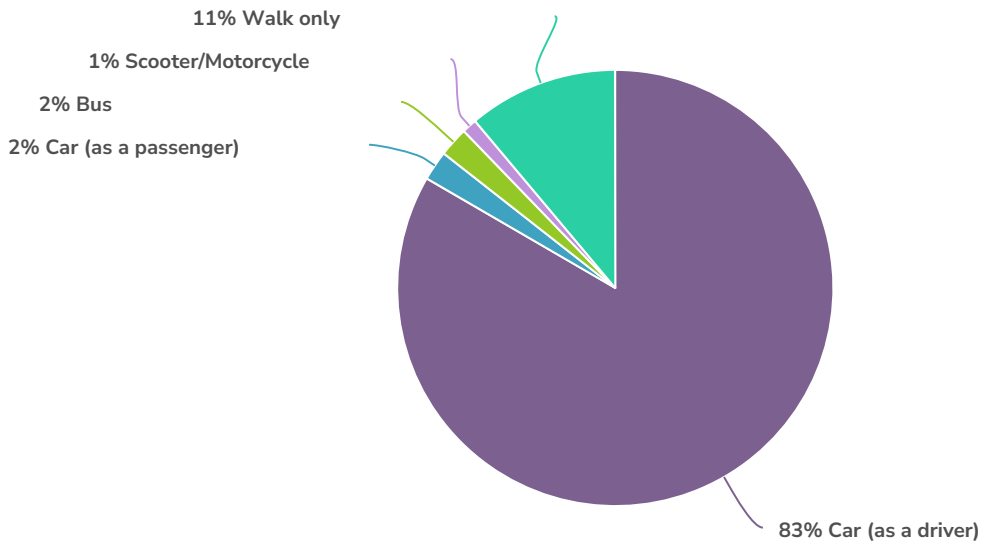
6. How long do you normally stay in the LRGC?



Value	Percent	Responses
0-1 Hours	1.1%	1
1-2 Hours	8.9%	8
2-3 Hours	5.6%	5
3-4 Hours	7.8%	7
4-5 Hours	43.3%	39
5-6 Hours	26.7%	24
Longer than 6 Hours	6.7%	6

Totals: 90

7. How do you normally travel to the LRGC?

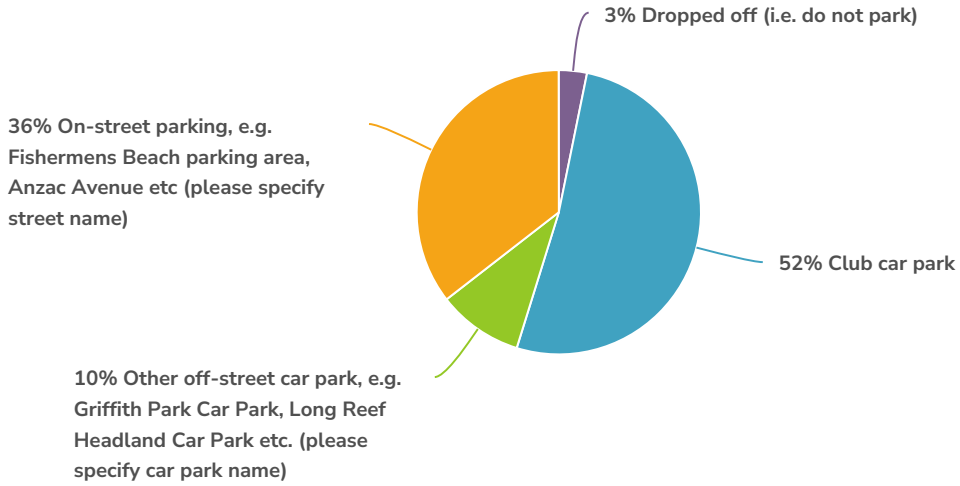


Value	Percent	Responses
Car (as a driver)	83.3%	75
Car (as a passenger)	2.2%	2
Bus	2.2%	2
Scooter/Motorcycle	1.1%	1
Walk only	11.1%	10

Totals: 90

Other (please specify)	Count
Totals	0

8. [OLD VERSION] If you travel by car, where do you normally park?



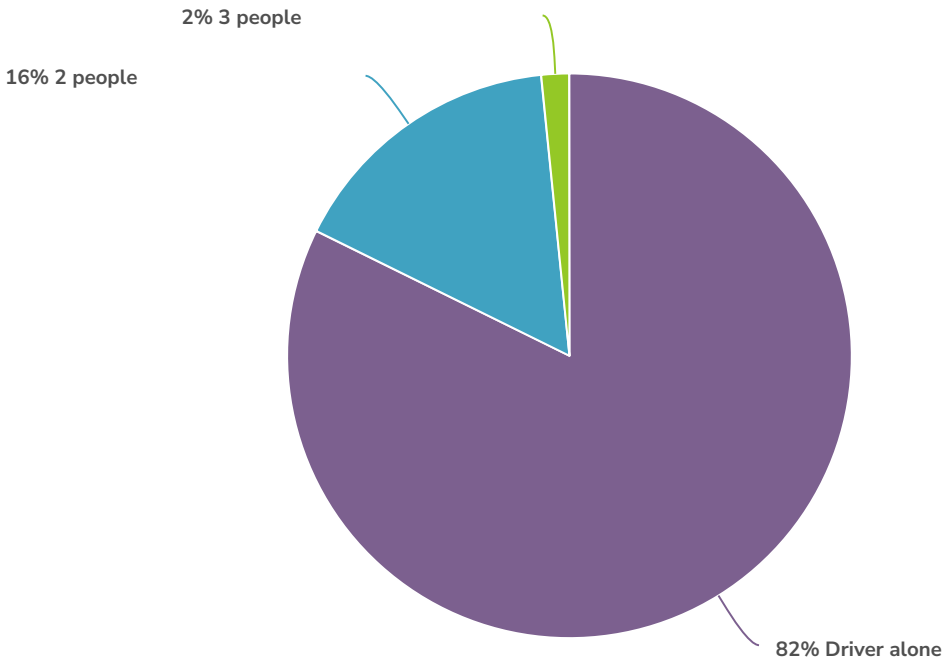
Value	Percent	Responses
Dropped off (i.e. do not park)	3.2%	2
Club car park	51.6%	32
Other off-street car park, e.g. Griffith Park Car Park, Long Reef Headland Car Park etc. (please specify car park name)	9.7%	6
On-street parking, e.g. Fishermens Beach parking area, Anzac Avenue etc (please specify street name)	35.5%	22

Totals: 62

Other off-street car park, e.g. Griffith Park Car Park, Long Reef Headland Car Park etc. (please specify car park name)	Count
Long Reef Headland carpark	1
Long Reef headland carpark	1
Wherever there's a parking spot	1
Totals	3

On-street parking, e.g. Fishermens Beach parking area, Anzac Avenue etc (please specify street name)	Count
Anzac Avenue	4
Anzac Ave	1
Anzac Avenue	1
Anzac, Fishermans, & club car park	1
AnzacAve & Seaview parade	1
Fisherman's Parking area or Anzac Avenue	1
Fisherman's beach parking area	1
Fishermans Beach rear to kerb	1
Fishermens Beach	1
Ocean Rd., Cliff Rd, Tennis parking	1
Wherever I Can !!!	1
either	1
ocean street	1
parking is limited so wherever there is a spot	1
Totals	17

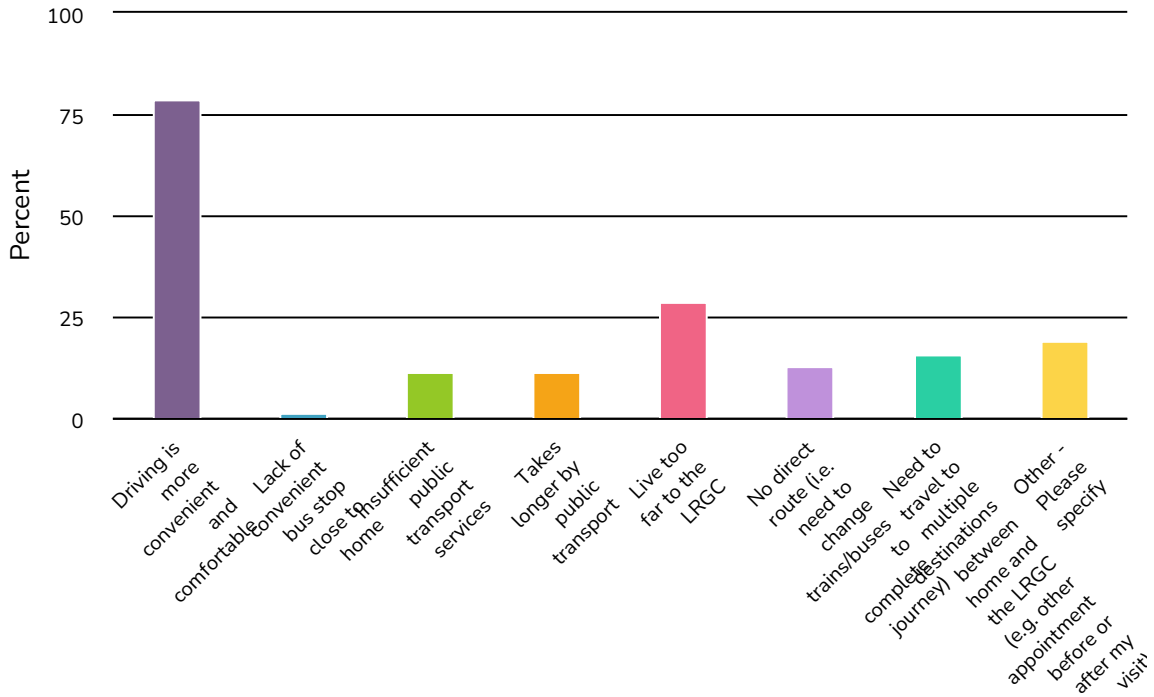
9. How many people are normally in the car including the driver?



Value	Percent	Responses
Driver alone	82.3%	51
2 people	16.1%	10
3 people	1.6%	1

Totals: 62

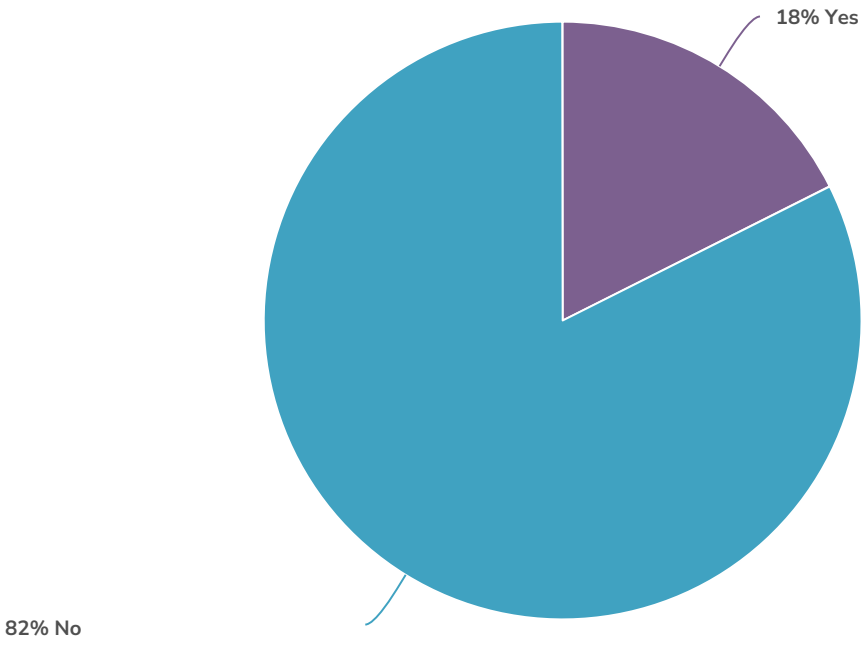
10. You have indicated you normally travel to the LRGC by car, for which reasons do you not use other modes? (Please tick up to 3 options that apply)



Value	Percent	Responses
Driving is more convenient and comfortable	79.0%	49
Lack of convenient bus stop close to home	1.6%	1
Insufficient public transport services	11.3%	7
Takes longer by public transport	11.3%	7
Live too far to the LRGC	29.0%	18
No direct route (i.e. need to change trains/buses to complete journey)	12.9%	8
Need to travel to multiple destinations between home and the LRGC (e.g. other appointment before or after my visit)	16.1%	10
Other - Please specify	19.4%	12

Other - Please specify	Count
Cannot take golf clubs and buggy on bus especially during peak hour periods	1
Easier as have to transport clubs and buggy	1
I do not have Golf Club storage. If I did have storage for my Golf Bag , then I could use a Bus or my Motor Cycle.	1
I'd like to come by push bike, but there's no storage or locker available	1
If rain is forecast	1
Need to bring buggy and clubs	1
Need to tote clubs & buggy	1
Need to transport clubs, who does that on a multiple bus trip	1
Need to transport golf equipment	1
Never come any other way	1
carrying golf clubs	1
carrying golf gear	1
Totals	12

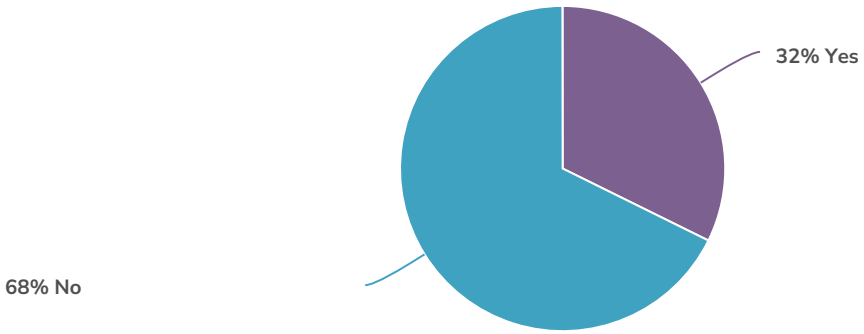
11. Would you be interested in car sharing / pooling if guaranteed parking spaces were provided to car sharers / poolers?



Value	Percent	Responses
Yes	17.6%	9
No	82.4%	42

Totals: 51

12. Would you be interested in taking the shuttle bus if this service were provided?



Value	Percent	Responses
Yes	32.3%	20
No	67.7%	42

Totals: 62

13. What is the postcode of your place of residence

ResponseID	Response
9	2097
12	2087
20	2097
31	2101
38	2096
44	2097
51	2097
53	2105
59	2094
63	2085
64	2097
74	2099
82	2094
84	2097
88	2095
105	2103
107	2099
138	2093
140	2097
146	2097
149	2101
152	2099
162	2097

ResponseID	Response
163	2096
166	2099
172	2099
184	2100
190	2097
196	2099
204	2103
207	2101
211	2101
215	2097
219	2097
227	2097
228	2775
233	2095
242	2097
252	2101
254	2097
263	2075
270	2097
275	2095
281	2097
288	2097
305	2097
312	2086

ResponseID	Response
318	2099
330	2075
331	2099
332	2101
334	2101
338	2093
340	2097
343	2093
345	2097
346	2097
351	2097
368	2099
371	2087
372	2096
375	2097
379	2096
381	2101
391	2099
401	2097
411	2099
418	2108
422	2099
423	2101
425	2099

ResponseID	Response
427	2097
430	2097
433	2103
435	2099
436	2102
450	2103
451	2085
452	2097
454	2099
456	2101
457	2097
460	2095
461	2097
468	2099
480	2101
481	2099
482	2106
488	2099

This report is filtered
Only show: #2 Question "**In general,** what is your **main purpose** for visiting the LRGC? (Please tick all that apply)" is one of the following answers ("Conference / Seminar","Wedding","Dining (lunchtime)","Dining (evening)","Other (Please specify)") and #4 Question "What days do you **usually** attend the LRGC? (Please tick all that apply)" is one of the following answers ("Friday","Saturday","Sunday")

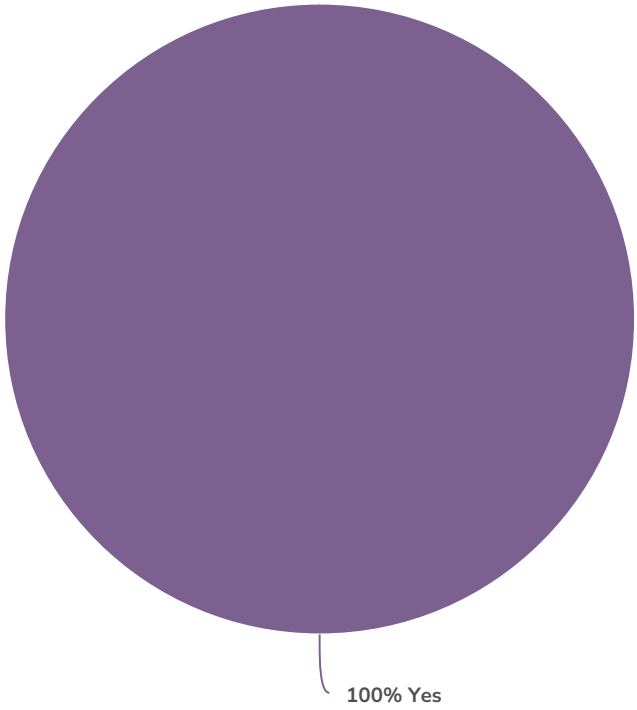
Report for Long Reef Golf Club Member&Visitor Online Travel Mode Survey - Bar & Event Visitors Friday & Weekends

Response Counts

Completion Rate:	**100%**	
	Complete	85

Totals: 85

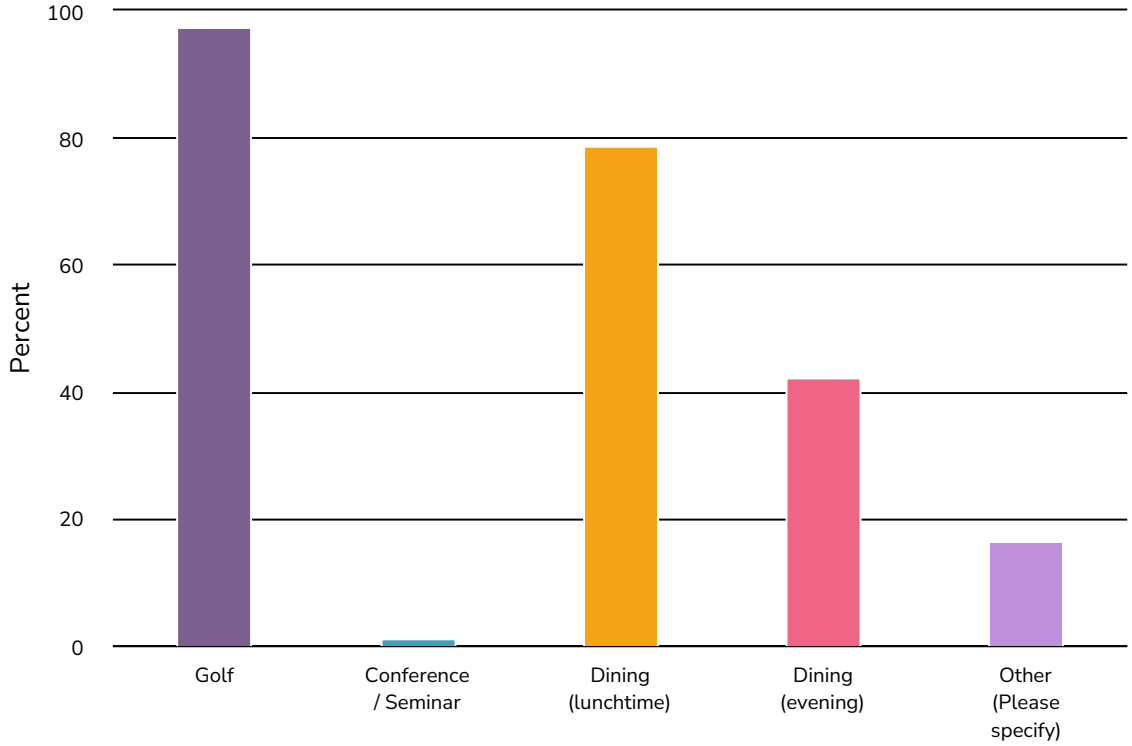
1. Are you a member of the LRGC?



Value	Percent	Responses
Yes	100.0%	85

Totals: 85

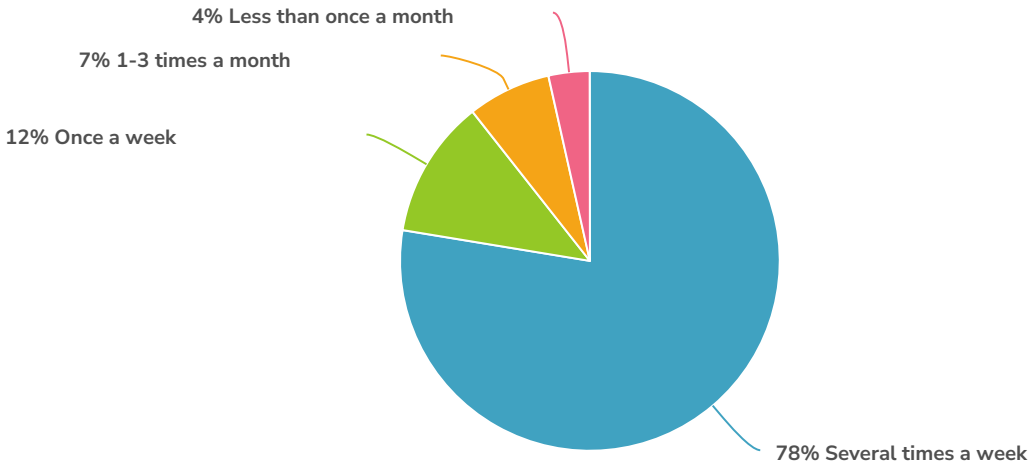
2. In general, what is your main purpose for visiting the LRGC? (Please tick all that apply)



Value	Percent	Responses
Golf	97.6%	83
Conference / Seminar	1.2%	1
Dining (lunchtime)	78.8%	67
Dining (evening)	42.4%	36
Other (Please specify)	16.5%	14

Other (Please specify)	Count
Meetings	2
Breakfast	1
Breakfast	1
Function	1
Mid morning coffee	1
Morning Tea	1
Socialise/Drink	1
Socially	1
Volunteering.	1
drinks on balcony	1
social	1
staff	1
walking	1
Totals	14

3. In general, how often do you attend the LRGC?

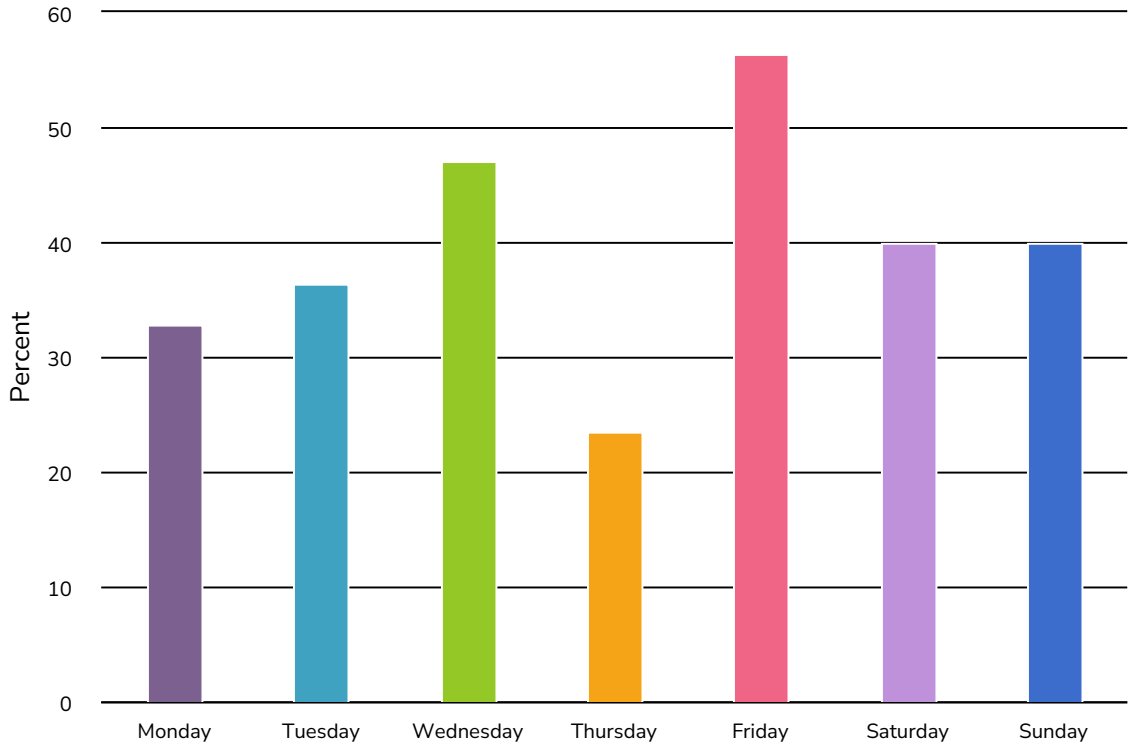


Value	Percent	Responses
Several times a week	77.6%	66
Once a week	11.8%	10
1-3 times a month	7.1%	6
Less than once a month	3.5%	3

Totals: 85

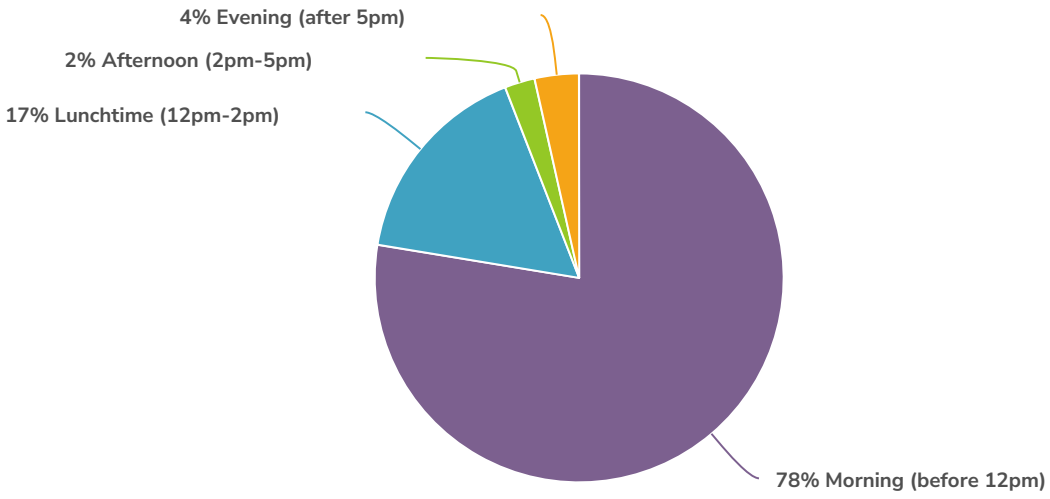
Other - please specify	Count
Totals	0

4. What days do you usually attend the LRGC? (Please tick all that apply)



Value	Percent	Responses
Monday	32.9%	28
Tuesday	36.5%	31
Wednesday	47.1%	40
Thursday	23.5%	20
Friday	56.5%	48
Saturday	40.0%	34
Sunday	40.0%	34

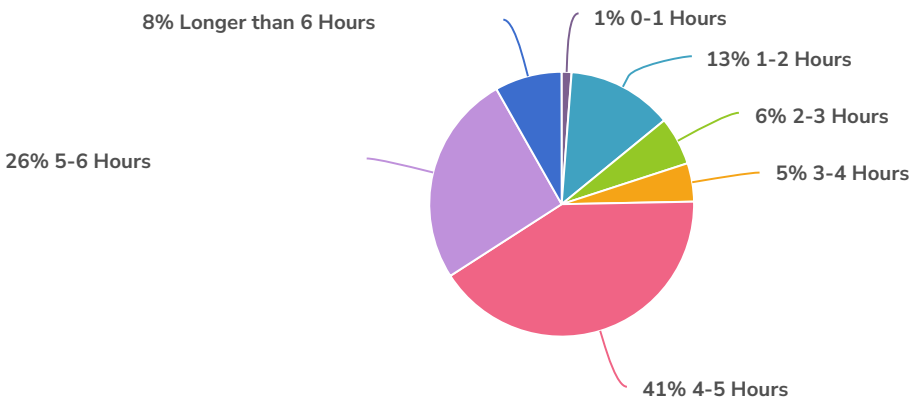
5. When do you normally visit the LRGC?



Value	Percent	Responses
Morning (before 12pm)	77.6%	66
Lunchtime (12pm-2pm)	16.5%	14
Afternoon (2pm-5pm)	2.4%	2
Evening (after 5pm)	3.5%	3

Totals: 85

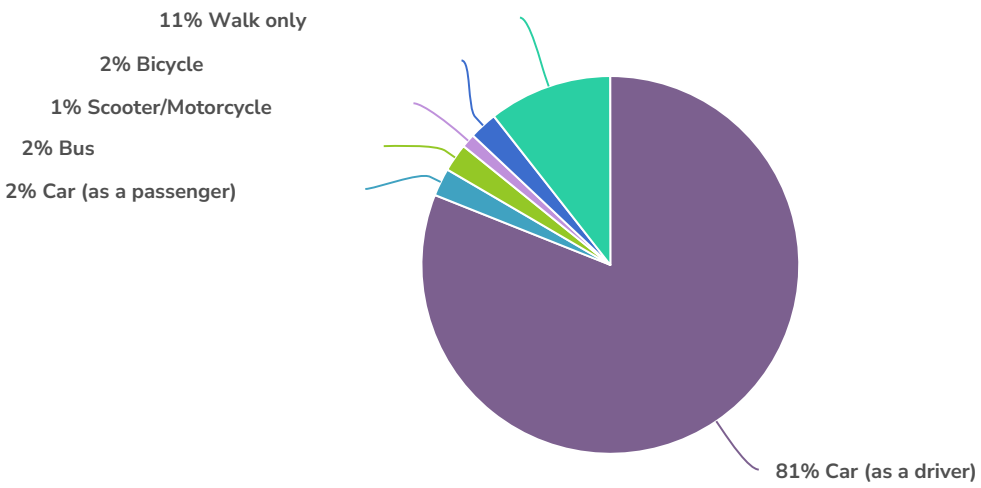
6. How long do you normally stay in the LRGC?



Value	Percent	Responses
0-1 Hours	1.2%	1
1-2 Hours	12.9%	11
2-3 Hours	5.9%	5
3-4 Hours	4.7%	4
4-5 Hours	41.2%	35
5-6 Hours	25.9%	22
Longer than 6 Hours	8.2%	7

Totals: 85

7. How do you normally travel to the LRGC?

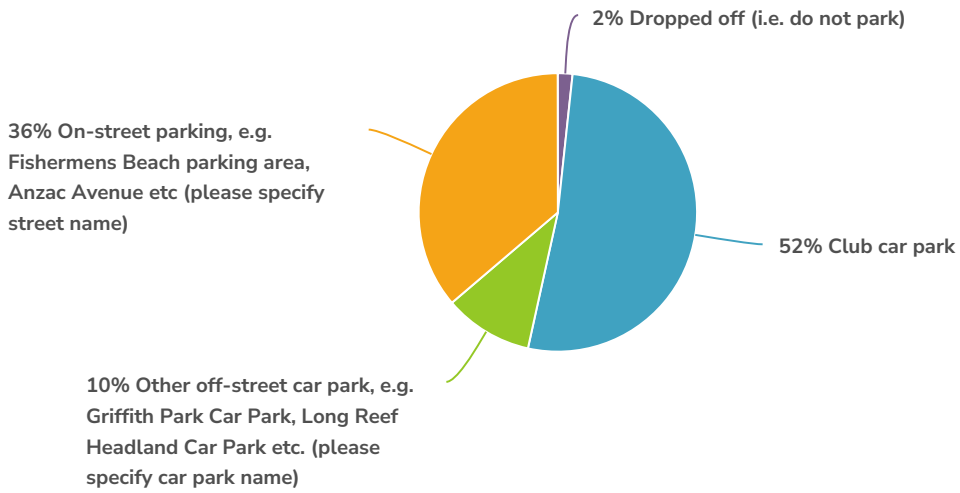


Value	Percent	Responses
Car (as a driver)	81.2%	69
Car (as a passenger)	2.4%	2
Bus	2.4%	2
Scooter/Motorcycle	1.2%	1
Bicycle	2.4%	2
Walk only	10.6%	9

Totals: 85

Other (please specify)	Count
Totals	0

8. [OLD VERSION] If you travel by car, where do you normally park?



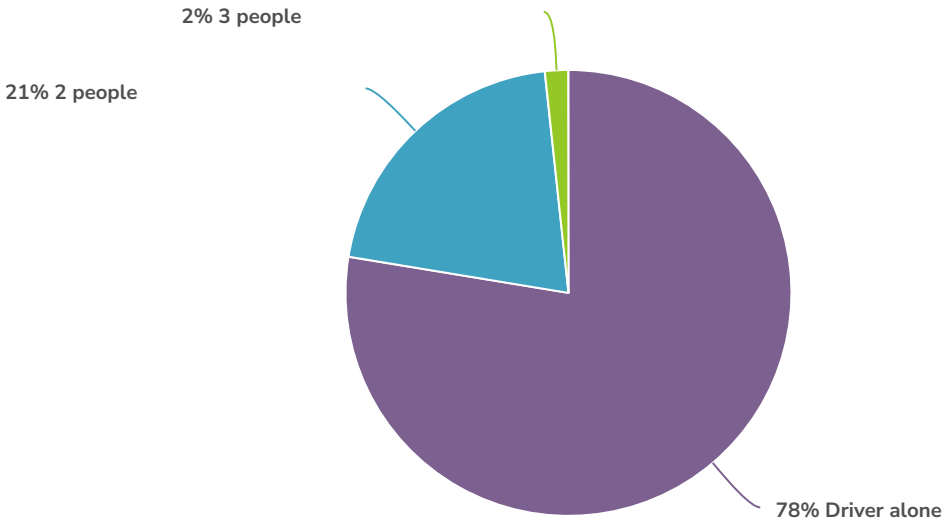
Value	Percent	Responses
Dropped off (i.e. do not park)	1.7%	1
Club car park	51.7%	30
Other off-street car park, e.g. Griffith Park Car Park, Long Reef Headland Car Park etc. (please specify car park name)	10.3%	6
On-street parking, e.g. Fishermens Beach parking area, Anzac Avenue etc (please specify street name)	36.2%	21

Totals: 58

Other off-street car park, e.g. Griffith Park Car Park, Long Reef Headland Car Park etc. (please specify car park name)	Count
Long Reef headland carpark	1
Wherever there's a parking spot	1
Totals	2

On-street parking, e.g. Fishermens Beach parking area, Anzac Avenue etc (please specify street name)	Count
Anzac Ave	3
Anzac Avenue	3
Anzac Avenue	1
Anzac, Fishermans, & club car park	1
Fisherman's Parking area or Anzac Avenue	1
Fisherman's beach parking area	1
Fishermans	1
Fishermans Beach	1
Fishermans Beach rear to kerb	1
Ocean Rd., Cliff Rd, Tennis parking	1
Wherever I Can !!!	1
either	1
parking is limited so wherever there is a spot	1
Totals	17

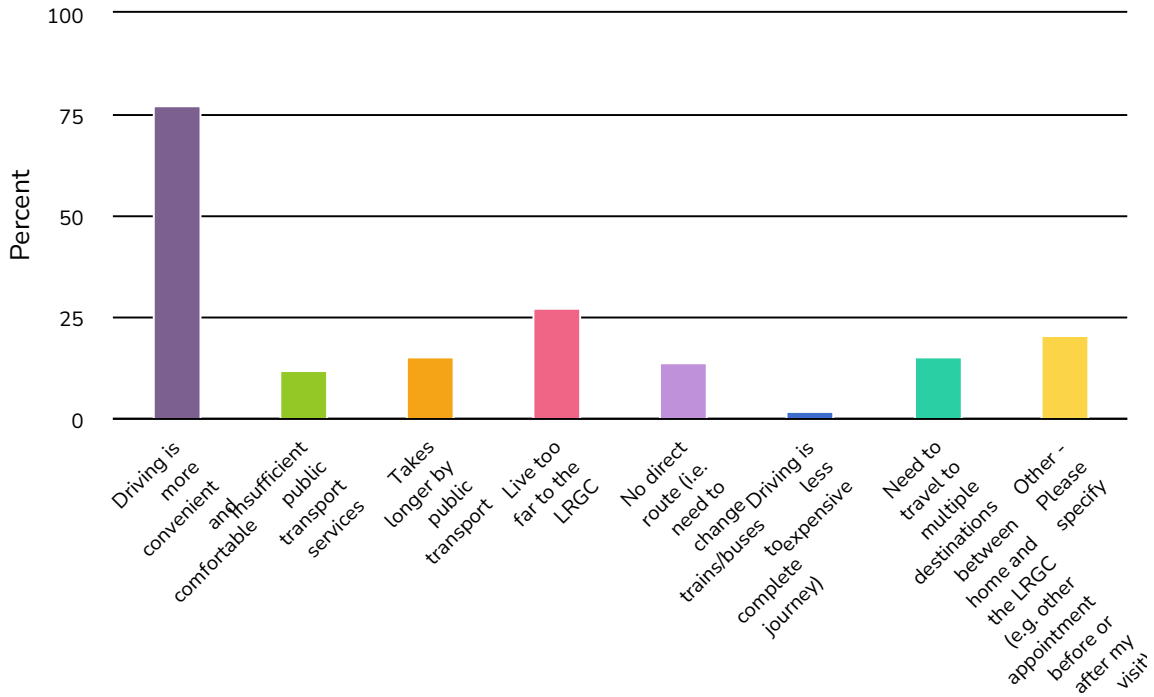
9. How many people are normally in the car including the driver?



Value	Percent	Responses
Driver alone	77.6%	45
2 people	20.7%	12
3 people	1.7%	1

Totals: 58

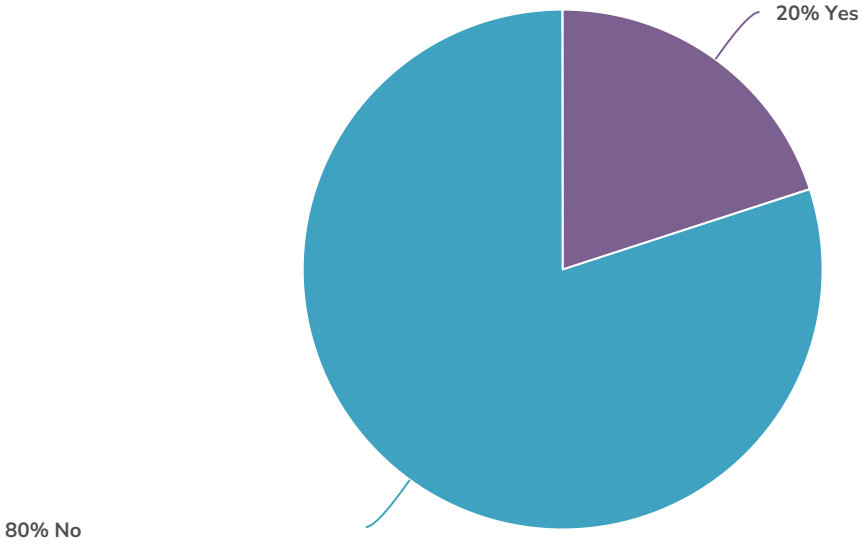
10. You have indicated you normally travel to the LRGC by car, for which reasons do you not use other modes? (Please tick up to 3 options that apply)



Value	Percent	Responses
Driving is more convenient and comfortable	77.6%	45
Insufficient public transport services	12.1%	7
Takes longer by public transport	15.5%	9
Live too far to the LRGC	27.6%	16
No direct route (i.e. need to change trains/buses to complete journey)	13.8%	8
Driving is less expensive	1.7%	1
Need to travel to multiple destinations between home and the LRGC (e.g. other appointment before or after my visit)	15.5%	9
Other - Please specify	20.7%	12

Other - Please specify	Count
Can't store clubs, buggy & battery in club	1
Cannot take golf clubs and buggy on bus especially during peak hour periods	1
Easier as have to transport clubs and buggy	1
I do not have Golf Club storage. If I did have storage for my Golf Bag , then I could use a Bus or my Motor Cycle.	1
I'd like to come by push bike, but there's no storage or locker available	1
If rain is forecast	1
Need to bring buggy and clubs	1
Need to tote clubs & buggy	1
Need to transport golf equipment	1
Never come any other way	1
cant take golf bag/buggy by any other means than car	1
need to bring clubs from home	1
Totals	12

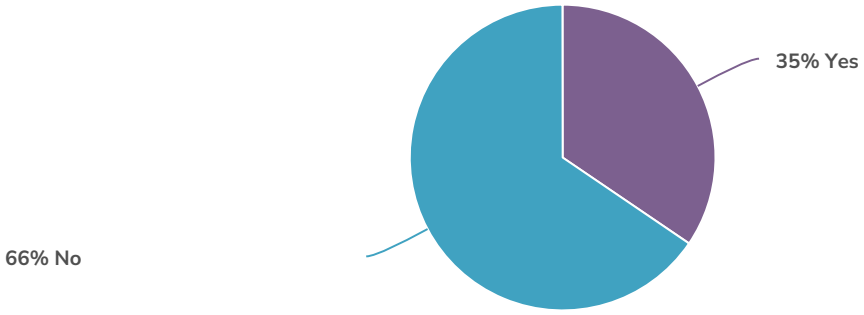
11. Would you be interested in car sharing / pooling if guaranteed parking spaces were provided to car sharers / poolers?



Value	Percent	Responses
Yes	20.0%	9
No	80.0%	36

Totals: 45

12. Would you be interested in taking the shuttle bus if this service were provided?



Value	Percent	Responses
Yes	34.5%	20
No	65.5%	38

Totals: 58

13. What is the postcode of your place of residence

ResponseID	Response
9	2097
11	2101
12	2087
20	2097
29	2101
31	2101
34	2097
38	2096
44	2097
53	2105
63	2085
64	2097
74	2099
78	2097
82	2094
84	2097
88	2095
105	2103
107	2099
111	2096
129	2097
146	2097
152	2099

ResponseID	Response
162	2097
163	2096
166	2099
172	2099
180	2101
184	2100
190	2097
196	2099
204	2103
207	2101
210	2085
211	2101
215	2097
226	2074
227	2097
228	2775
232	2097
242	2097
254	2097
259	2088
263	2075
270	2097
275	2095
281	2097

ResponseID	Response
288	2097
305	2097
312	2086
318	2099
331	2099
334	2101
343	2093
345	2097
346	2097
351	2097
364	2097
371	2087
375	2097
381	2101
391	2099
401	2097
411	2099
418	2108
422	2099
425	2099
427	2097
430	2097
435	2099
436	2102

ResponseID	Response
450	2103
451	2085
452	2097
454	2099
456	2101
460	2095
461	2097
467	2099
468	2099
480	2101
481	2099
485	2094
488	2099

Appendix 3. The Long Reef Golf Club Data

APPENDIX 3

LONG REEF GOLF CLUB
CLUB USAGE DATA

Club Peak Usage Hours

Facility: Golf Activity

Day/# People	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00
Monday	12	40	80	120	160	120	100	120	120	60	60	40	20	0	0	0	0	0
Tuesday	24	52	90	120	140	120	120	120	120	60	60	40	20	0	0	0	0	0
Wednesday	40	80	120	120	160	120	120	120	120	100	60	40	20	0	0	0	0	0
Thursday	24	52	90	120	140	120	120	120	120	60	60	40	20	0	0	0	0	0
Friday	0	0	120	120	120	120	120	110	110	110	110	50	20	0	0	0	0	0
Saturday	40	80	120	120	160	120	120	120	120	100	60	40	20	0	0	0	0	0
Sunday	40	80	120	120	160	120	120	120	120	100	60	40	20	0	0	0	0	0

Facility: Café & Bar

Day/# People	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00
Monday	0	0	0	20	30	50	60	80	80	40	30	20	20	10	0	0	0	0
Tuesday	0	0	0	20		50	60	80	80	40	30	20	20	10	0	0	0	0
Wednesday	0	0	0	20		60	100	120	100	80	80	60	40	10	0	0	0	0
Thursday	0	0	0	20	20	40	80	80	80	40	30	20	20	10	0	0	0	0
Friday	0	120	0	20	30	80	120	120	100	60	120	100	160	160	160	80	0	0
Saturday	0	0	30	50	60	80	120	120	100	60	120	100	30	20	10	0	0	0
Sunday	0	0	30	50	60	80	120	120	100	60	120	100	30	20	10	0	0	0

Facility: Wedding & Event Space

Day/# People	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00
Monday	0	0	0												0	0	0	0
Tuesday	0	0	0												0	0	0	0
Wednesday	0	0	0		32	32	32	32	32						0	0	0	0
Thursday	0	0	0					70	70	70	70	70	70	70	70	70	0	0
Friday	0	0	0					100	100	100	100	100	100	100	100	100	100	100
Saturday	0											100	100	100	100	100	100	100
Sunday												100	100	100	100	100	100	100

Low utilisation
Medium utilisation
High utilisation

* Please duplicate the above table for more facilities.

APPENDIX 3

LONG REEF GOLF CLUB
CLUB INFORMATION

	Current
No. of Staff on Weekdays	Clubhouse and Golf Shop = 34
% of Staff present on weekday daytime peak hours (10am-2pm)	Approx 80% of them here 10am-2pm
% of Staff present on weekday evening peak hours (5pm)	Approx 20% of them here after 5pm
No. of Staff on Weekends	Clubhouse and Golf Shop = 38
% of Staff present on weekend daytime peak hours (10am-2pm)	80%
% of Staff present on weekend evening peak hours (5pm)	40%
Total no. of members	5066
No. of Members/Visitors arriving on Weekdays	100-300 Members depending on day, 60-100 visitors
No. of Members/Visitors arriving on Weekends	300-350 Members, 100-150 visitors

Estimated additional staff required for the new refurbishment areas (Strategy A and B) by weekday & weekend

Minimal – 2 to 4 as kitchen and bar being in one space will reduce labour requirements. Evening trade will increase staff head to approximately 80% present after 5pm.

Estimated additional customers generated by the new refurbishment areas (Strategy A and B) by weekday & weekend

Through day time trade, minimal increases (10-15%). Evening increase significantly as currently not trading Café in the evening (estimated 100-150pax per evening Wednesday to Sunday).

Appendix 4. Current & Future Demand Drivers and Assumptions

APPENDIX 4

LONG REEF GOLF CLUB
PARKING DEMAND DRIVERS AND ASSUMPTIONS

Long Reef Golf Club		Current (2024)	Notes	CURRENT ASSUMPTIONS: % car and requiring a car space	Notes	People/ car	Notes	Future	Notes	FUTURE ASSUMPTIONS: % car and requiring a car space	Notes	People/ car	Notes
STAFF	**Weekdays (Mon-Thu)**	34	1					38	7				
	Daytime peak hour	27	3	84%	5,6	1.00	6	30	3	84%	12	1.00	12
	Evening peak hour	7	3	84%	5,6	1.00	6	30	8	84%	12	1.00	12
	Friday & Weekends	38	1,2					42	2,7				
	Daytime peak hour	30	3	82%	5,6	1.00	6	34	3	82%	12	1.00	12
	Evening peak hour	15	3	82%	5,6	1.00	6	34	8	82%	12	1.00	12
GOLFERS	**Weekdays (Mon-Thu)**												
	Daytime peak hour	120	4,13	89%	5,6	1.12	6	120	9	89%	12	1.12	12
	Evening peak hour	40	4,13	89%	5,6	1.12	6	40	9	89%	12	1.12	12
	Friday & Weekends												
	Daytime peak hour	120	2,4,13	89%	5,6	1.16	6	120	9	89%	12	1.16	12
	Evening peak hour	40	2,4,13	89%	5,6	1.16	6	40	9	89%	12	1.16	12
BAR & EVENT VISITORS	**Weekdays (Mon-Thu)**												
	Daytime peak hour	152	4,13	83%	5,6	1.19	6	175	10	83%	12	1.19	12
	Evening peak hour	60	4,13	83%	5,6	1.19	6	210	11	83%	12	1.19	12
	Friday & Weekends												
	Daytime peak hour	120	2,4,13	82%	5,6	1.24	6	138	10	82%	12	1.24	12
	Evening peak hour	200	2,4,13	82%	5,6	1.24	6	350	11	82%	12	1.24	12

NOTES

1	Current staff numbers as per the Club's data sent on 10/05/2024
2	Apply weekends' data for Friday as the usage on Friday follows a similar pattern to weekends as per the Club's usage data sent on 09/05/2024
3	Split of daytime and evening staff as per the Club's data - Weekday 80%/20%, Weekend 80%/40%
4	Golfers and Bar & Event Visitors numbers at peak hours (daytime 1pm and evening 5pm) as per the Club's data sent on 09/05/2024
5	% using cars and requiring a car space = % using cars x (1 - % drop off and do not park)
6	% using cars, % drop off and do not park and People per car as per ptc. Travel mode surveys
7	The Club estimate 2-4 additional staff will be required as per the data sent on 10/05/2024. ptc. applied 4 additional staff as a robust parking demand estimate
8	The Club estimate evening trade will increase staff head to approximately 80% present after 5pm as per the data sent on 10/05/2024
9	ptc. Assumption - assume the new refurbishment will not increase golfers attendance
10	The Club estimate daytime customers will increase by 10%-15% as per the data sent on 10/05/2024. ptc. applied a 15% increase in Bar & Event visitors as a robust parking demand estimate
11	The Club estimate evening customers will increase significantly by 100-150 perople per evening as per the data sent on 10/05/2024. ptc. applied a 150 increase in evening customrers as a robust parking demand estimate
12	ptc. Assumption - assume travel mode and people per car remain the same after the new refurbishment
13	Applied Wednesday and Sunday's usuage as per the data sent by the Club on 09/05/2024

Appendix 5. Current Estimate of Parking Demand

APPENDIX 5

LONG REEF GOLF CLUB
CURRENT ESTIMATE OF PARKING DEMAND

Notes	CURRENT SCENARIO	People	% car and requiring a car space	People per car	Peak spaces required
	WEEKDAYS (MON-THU)				
	WEEKDAY DAYTIME PEAK				
	Staff	27	*84%*	1.00	**23**
	Golfers	120	*89%*	1.12	**95**
	Bar & Event Visitors	152	*83%*	1.19	**106**
	Total Weekday Daytime Peak Demand				**224**
B	**Club Car Park Shortfall**				**-181**
	WEEKDAY EVENING PEAK				
	Staff	7	*84%*	1.00	**6**
	Golfers	40	*89%*	1.12	**32**
	Bar & Event Visitors	60	*83%*	1.19	**42**
	Total Weekday Evening Peak Demand				**79**
	Club Car Park Shortfall				**-36**
	FRIDAY & WEEKENDS				
	FRIDAY & WEEKEND DAYTIME PEAK				
	Staff	30	*82%*	1.00	**25**
	Golfers	120	*89%*	1.16	**92**
	Bar & Event Visitors	120	*82%*	1.24	**80**
	Total Weekday Daytime Peak Demand				**197**
	Club Car Park Shortfall				**-154**
	FRIDAY & WEEKEND EVENING PEAK				
	Staff	15	*82%*	1.00	**12**
	Golfers	40	*89%*	1.16	**31**
	Bar & Event Visitors	200	*82%*	1.24	**133**
	Total Weekday Evening Peak Demand				**176**
	Club Car Park Shortfall				**-133**

Notes

A As per the Club data and ptc. Survey - excl. loading zones

B Club car park shortfall = Club car park capacity - Peak demand

Appendix 6. Future Estimate of Parking Demand (No Travel Mode Change)

APPENDIX 6

LONG REEF GOLF CLUB
FUTURE ESTIMATE OF PARKING DEMAND

Notes	FUTURE SCENARIO	People	% car and requiring a car space	People per car	Peak spaces required
	WEEKDAYS (MON-THU)				
	WEEKDAY DAYTIME PEAK				
	Staff	30	*84%*	1.00	**26**
	Golfers	120	*89%*	1.12	**95**
	Bar & Event Visitors	175	*83%*	1.19	**122**
	Total Weekday Daytime Peak Demand				**243**
B	**Club Car Park Shortfall**				**-200**
	WEEKDAY EVENING PEAK				
	Staff	30	*84%*	1.00	**26**
	Golfers	40	*89%*	1.12	**32**
	Bar & Event Visitors	210	*83%*	1.19	**146**
	Total Weekday Evening Peak Demand				**203**
	Club Car Park Shortfall				**-160**
	FRIDAY & WEEKENDS				
	FRIDAY & WEEKEND DAYTIME PEAK				
	Staff	34	*82%*	1.00	**28**
	Golfers	120	*89%*	1.16	**92**
	Bar & Event Visitors	138	*82%*	1.24	**91**
	Total Weekday Daytime Peak Demand				**211**
	Club Car Park Shortfall				**-168**
	FRIDAY & WEEKEND EVENING PEAK				
	Staff	34	*82%*	1.00	**28**
	Golfers	40	*89%*	1.16	**31**
	Bar & Event Visitors	350	*82%*	1.24	**232**
	Total Weekday Evening Peak Demand				**290**
	Club Car Park Shortfall				**-247**

Notes

A As per the Club data and ptc. Survey - excl. loading zones

B Club car park shortfall = Club car park capacity - Peak demand

Appendix 7. Full SIDRA Result

MOVEMENT SUMMARY

Site: 101 [Pittwater-Anzac intersection base (Site Folder: 1A Existing - Wednesday AM)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

New Site
Site Category: (None)
Signals - EQUISAT (Fixed-Time/SCATS) Isolated Cycle Time = 77 seconds (Site User-Given Phase Times)

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
South: Pittwater Road															
1	L2	All MCs	19	0.0	19	0.0	0.419	20.2	LOS C	9.2	68.1	0.71	0.62	0.71	46.6
2	T1	All MCs	1078	7.0	1078	7.0	0.419	14.6	LOS B	9.2	68.1	0.71	0.61	0.71	48.3
3	R2	All MCs	118	1.8	118	1.8	*0.711	46.4	LOS D	4.8	33.9	1.00	0.87	1.18	29.7
Approach			1215	6.4	1215	6.4	0.711	17.8	LOS B	9.2	68.1	0.74	0.64	0.75	46.0
East: Anzac Avenue															
4	L2	All MCs	77	2.7	77	2.7	0.114	22.4	LOS C	1.9	13.5	0.68	0.72	0.68	39.4
5	T1	All MCs	20	5.3	20	5.3	0.172	26.7	LOS C	1.7	12.4	0.86	0.71	0.86	36.4
6	R2	All MCs	35	0.0	35	0.0	0.172	34.1	LOS C	1.7	12.4	0.86	0.71	0.86	35.4
Approach			132	2.4	132	2.4	0.172	26.1	LOS C	1.9	13.5	0.76	0.71	0.76	37.8
North: Pittwater Road															
7	L2	All MCs	32	3.3	32	3.3	0.426	20.5	LOS C	9.3	68.6	0.71	0.63	0.71	43.4
8	T1	All MCs	1087	6.3	1087	6.3	*0.426	14.7	LOS B	9.3	69.0	0.71	0.62	0.71	48.2
9	R2	All MCs	44	0.0	44	0.0	0.262	42.9	LOS D	1.6	11.5	0.97	0.73	0.97	34.4
Approach			1163	6.0	1163	6.0	0.426	15.9	LOS B	9.3	69.0	0.72	0.62	0.72	47.4
West: Anzac Avenue															
10	L2	All MCs	63	0.0	63	0.0	0.253	25.1	LOS C	3.4	24.1	0.83	0.74	0.83	39.4
11	T1	All MCs	20	5.3	20	5.3	*0.253	30.8	LOS C	3.4	24.1	0.83	0.74	0.83	37.3
12	R2	All MCs	27	7.7	27	7.7	0.253	38.4	LOS D	3.4	24.1	0.83	0.74	0.83	39.3
Approach			111	2.9	111	2.9	0.253	29.4	LOS C	3.4	24.1	0.83	0.74	0.83	39.0
All Vehicles			2620	5.9	2620	5.9	0.711	17.9	LOS B	9.3	69.0	0.73	0.64	0.74	45.9

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Options tab).
Vehicle movement LOS values are based on average delay per movement.
Intersection and Approach LOS values are based on average delay for all vehicle movements.
Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Green.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

* Critical Movement (Signal Timing)

Pedestrian Movement Performance

Mov ID	Crossing	Input Vol. ped/h	Dem. Flow ped/h	Aver. Delay sec	Level of Service	AVERAGE BACK OF QUEUE [Ped ped	Dist] m	Prop. Que	Eff. Stop Rate	Travel Time sec	Travel Dist. m	Aver. Speed m/sec
South: Pittwater Road												
P1	Full	10	11	32.7	LOS D	0.0	0.0	0.92	0.92	186.6	200.0	1.07
East: Anzac Avenue												

P2	Full	5	5	32.7	LOS D	0.0	0.0	0.92	0.92	186.6	200.0	1.07
North: Pittwater Road												
P3	Full	24	25	32.8	LOS D	0.1	0.1	0.92	0.92	186.6	200.0	1.07
West: Anzac Avenue												
P4	Full	7	7	32.7	LOS D	0.0	0.0	0.92	0.92	186.6	200.0	1.07
All Pedestrians		46	48	32.8	LOS D	0.1	0.1	0.92	0.92	186.6	200.0	1.07

Level of Service (LOS) Method: SIDRA Pedestrian LOS Method (Based on Average Delay)
Pedestrian movement LOS values are based on average delay per pedestrian movement.
Intersection LOS value for Pedestrians is based on average delay for all pedestrian movements.

MOVEMENT SUMMARY

Site: 103 [Anzac-Seaview intersection base (Site Folder: 1A Existing - Wednesday AM)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

New Site
Site Category: (None)
Stop (Two-Way)

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
South: Internal Road															
1	L2	All MCs	75	2.8	75	2.8	0.069	8.2	LOS A	0.3	2.0	0.07	0.95	0.07	48.7
2	T1	All MCs	15	7.1	15	7.1	0.069	8.9	LOS A	0.3	2.0	0.07	0.95	0.07	50.8
3	R2	All MCs	1	0.0	1	0.0	0.069	8.8	LOS A	0.3	2.0	0.07	0.95	0.07	51.1
Approach			91	3.5	91	3.5	0.069	8.3	LOS A	0.3	2.0	0.07	0.95	0.07	49.1
East: Anzac Avenue															
4	L2	All MCs	5	0.0	5	0.0	0.009	5.5	LOS A	0.0	0.1	0.02	0.21	0.02	55.7
5	T1	All MCs	12	0.0	12	0.0	0.009	0.0	LOS A	0.0	0.1	0.02	0.21	0.02	57.5
6	R2	All MCs	1	0.0	1	0.0	0.009	5.6	LOS A	0.0	0.1	0.02	0.21	0.02	56.0
Approach			18	0.0	18	0.0	0.009	2.0	NA	0.0	0.1	0.02	0.21	0.02	56.8
North: Seaview Parade															
7	L2	All MCs	2	0.0	2	0.0	0.047	8.1	LOS A	0.2	1.1	0.25	0.88	0.25	50.5
8	T1	All MCs	14	7.7	14	7.7	0.047	9.1	LOS A	0.2	1.1	0.25	0.88	0.25	50.2
9	R2	All MCs	25	0.0	25	0.0	0.047	9.9	LOS A	0.2	1.1	0.25	0.88	0.25	48.7
Approach			41	2.6	41	2.6	0.047	9.5	LOS A	0.2	1.1	0.25	0.88	0.25	49.4
West: Anzac Avenue															
10	L2	All MCs	24	4.3	24	4.3	0.070	5.6	LOS A	0.3	2.5	0.07	0.47	0.07	51.3
11	T1	All MCs	18	29.4	18	29.4	0.070	0.0	LOS A	0.3	2.5	0.07	0.47	0.07	54.1
12	R2	All MCs	85	1.2	85	1.2	0.070	5.6	LOS A	0.3	2.5	0.07	0.47	0.07	51.6
Approach			127	5.8	127	5.8	0.070	4.8	NA	0.3	2.5	0.07	0.47	0.07	51.9
All Vehicles			277	4.2	277	4.2	0.070	6.5	NA	0.3	2.5	0.09	0.67	0.09	50.8

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Options tab).
Vehicle movement LOS values are based on average delay per movement.
Minor Road Approach LOS values are based on average delay for all vehicle movements.
NA (TWSC): Level of Service is not defined for major road approaches or the intersection as a whole for Two-Way Sign Control (HCM LOS rule).
Two-Way Sign Control Capacity Model: SIDRA Standard.
Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

MOVEMENT SUMMARY

Site: 101 [Pittwater-Anzac intersection base (Site Folder: 1B Existing - Wednesday PM)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

New Site
Site Category: (None)
Signals - EQUISAT (Fixed-Time/SCATS) Isolated Cycle Time = 91 seconds (Site User-Given Phase Times)

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
South: Pittwater Road															
1	L2	All MCs	28	0.0	28	0.0	0.537	20.7	LOS C	15.9	113.9	0.71	0.64	0.71	46.3
2	T1	All MCs	1599	2.7	1599	2.7	* 0.537	15.2	LOS B	15.9	113.9	0.71	0.63	0.71	48.0
3	R2	All MCs	136	3.1	136	3.1	* 0.855	58.4	LOS E	6.9	49.3	1.00	0.98	1.39	26.4
Approach			1763	2.7	1763	2.7	0.855	18.6	LOS B	15.9	113.9	0.73	0.66	0.76	45.6
East: Anzac Avenue															
4	L2	All MCs	100	0.0	100	0.0	0.161	28.0	LOS C	3.1	21.7	0.73	0.74	0.73	36.6
5	T1	All MCs	43	2.4	43	2.4	* 0.319	34.5	LOS C	3.7	26.5	0.91	0.75	0.91	33.4
6	R2	All MCs	51	2.1	51	2.1	0.319	42.0	LOS D	3.7	26.5	0.91	0.75	0.91	32.5
Approach			194	1.1	194	1.1	0.319	33.1	LOS C	3.7	26.5	0.82	0.74	0.82	34.7
North: Pittwater Road															
7	L2	All MCs	65	0.0	65	0.0	0.470	20.2	LOS C	13.0	93.6	0.67	0.62	0.67	43.7
8	T1	All MCs	1349	3.5	1349	3.5	0.470	14.4	LOS B	13.1	94.3	0.67	0.60	0.67	48.4
9	R2	All MCs	55	0.0	55	0.0	0.335	50.0	LOS D	2.4	16.9	0.98	0.75	0.98	32.3
Approach			1469	3.2	1469	3.2	0.470	16.0	LOS B	13.1	94.3	0.69	0.61	0.69	47.3
West: Anzac Avenue															
10	L2	All MCs	21	0.0	21	0.0	0.274	29.2	LOS C	3.6	25.3	0.88	0.73	0.88	36.8
11	T1	All MCs	49	0.0	49	0.0	0.274	35.3	LOS D	3.6	25.3	0.88	0.73	0.88	34.5
12	R2	All MCs	24	0.0	24	0.0	0.274	43.6	LOS D	3.6	25.3	0.88	0.73	0.88	37.0
Approach			95	0.0	95	0.0	0.274	36.1	LOS D	3.6	25.3	0.88	0.73	0.88	35.7
All Vehicles			3521	2.8	3521	2.8	0.855	18.8	LOS B	15.9	113.9	0.72	0.65	0.74	45.4

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Options tab).
Vehicle movement LOS values are based on average delay per movement.
Intersection and Approach LOS values are based on average delay for all vehicle movements.
Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Green.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

* Critical Movement (Signal Timing)

Pedestrian Movement Performance

Mov ID	Crossing	Input Vol. ped/h	Dem. Flow ped/h	Aver. Delay sec	Level of Service	AVERAGE BACK OF QUEUE [Ped ped	Dist] m	Prop. Que	Eff. Stop Rate	Travel Time sec	Travel Dist. m	Aver. Speed m/sec
South: Pittwater Road												
P1	Full	29	31	39.7	LOS D	0.1	0.1	0.94	0.94	193.6	200.0	1.03
East: Anzac Avenue												

P2	Full	4	4	39.7	LOS D	0.0	0.0	0.93	0.93	193.6	200.0	1.03
North: Pittwater Road												
P3	Full	19	20	39.7	LOS D	0.0	0.0	0.93	0.93	193.6	200.0	1.03
West: Anzac Avenue												
P4	Full	3	3	39.7	LOS D	0.0	0.0	0.93	0.93	193.5	200.0	1.03
All Pedestrians		55	58	39.7	LOS D	0.1	0.1	0.93	0.93	193.6	200.0	1.03

Level of Service (LOS) Method: SIDRA Pedestrian LOS Method (Based on Average Delay)
Pedestrian movement LOS values are based on average delay per pedestrian movement.
Intersection LOS value for Pedestrians is based on average delay for all pedestrian movements.

MOVEMENT SUMMARY

Site: 103 [Anzac-Seaview intersection base (Site Folder: 1B Existing - Wednesday PM)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

New Site
Site Category: (None)
Stop (Two-Way)

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
South: Internal Road															
1	L2	All MCs	105	0.0	105	0.0	0.089	8.0	LOS A	0.4	2.6	0.06	0.95	0.06	49.1
2	T1	All MCs	14	0.0	14	0.0	0.089	8.3	LOS A	0.4	2.6	0.06	0.95	0.06	51.0
3	R2	All MCs	3	0.0	3	0.0	0.089	8.5	LOS A	0.4	2.6	0.06	0.95	0.06	51.2
Approach			122	0.0	122	0.0	0.089	8.1	LOS A	0.4	2.6	0.06	0.95	0.06	49.4
East: Anzac Avenue															
4	L2	All MCs	1	0.0	1	0.0	0.006	5.5	LOS A	0.0	0.1	0.02	0.10	0.02	56.6
5	T1	All MCs	11	10.0	11	10.0	0.006	0.0	LOS A	0.0	0.1	0.02	0.10	0.02	58.7
6	R2	All MCs	1	0.0	1	0.0	0.006	5.6	LOS A	0.0	0.1	0.02	0.10	0.02	56.9
Approach			13	8.3	13	8.3	0.006	0.9	NA	0.0	0.1	0.02	0.10	0.02	58.3
North: Seaview Parade															
7	L2	All MCs	4	0.0	4	0.0	0.034	8.0	LOS A	0.1	0.9	0.11	0.93	0.11	50.6
8	T1	All MCs	16	0.0	16	0.0	0.034	8.4	LOS A	0.1	0.9	0.11	0.93	0.11	50.6
9	R2	All MCs	14	7.7	14	7.7	0.034	10.1	LOS B	0.1	0.9	0.11	0.93	0.11	47.8
Approach			34	3.1	34	3.1	0.034	9.0	LOS A	0.1	0.9	0.11	0.93	0.11	49.6
West: Anzac Avenue															
10	L2	All MCs	11	0.0	11	0.0	0.032	5.6	LOS A	0.2	1.1	0.06	0.51	0.06	51.3
11	T1	All MCs	4	25.0	4	25.0	0.032	0.0	LOS A	0.2	1.1	0.06	0.51	0.06	53.8
12	R2	All MCs	44	0.0	44	0.0	0.032	5.6	LOS A	0.2	1.1	0.06	0.51	0.06	51.4
Approach			59	1.8	59	1.8	0.032	5.2	NA	0.2	1.1	0.06	0.51	0.06	51.6
All Vehicles			227	1.4	227	1.4	0.089	7.1	NA	0.4	2.6	0.06	0.79	0.06	50.4

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Options tab).
Vehicle movement LOS values are based on average delay per movement.
Minor Road Approach LOS values are based on average delay for all vehicle movements.
NA (TWSC): Level of Service is not defined for major road approaches or the intersection as a whole for Two-Way Sign Control (HCM LOS rule).
Two-Way Sign Control Capacity Model: SIDRA Standard.
Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

MOVEMENT SUMMARY

Site: 101 [Pittwater-Anzac intersection base - Sat AM (Site Folder: 1C Existing - Saturday AM)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

New Site
Site Category: (None)
Signals - EQUISAT (Fixed-Time/SCATS) Isolated Cycle Time = 108 seconds (Site User-Given Phase Times)

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
South: Pittwater Road															
1	L2	All MCs	72	0.0	72	0.0	0.443	18.9	LOS B	14.5	103.7	0.60	0.57	0.60	47.0
2	T1	All MCs	1408	3.0	1408	3.0	0.443	13.4	LOS B	14.5	103.7	0.60	0.55	0.60	49.0
3	R2	All MCs	136	1.6	136	1.6	* 1.147	205.8	LOS F	14.4	102.4	1.00	1.40	2.46	11.3
Approach			1616	2.7	1616	2.7	1.147	29.8	LOS C	14.5	103.7	0.64	0.62	0.76	39.9
East: Anzac Avenue															
4	L2	All MCs	115	0.9	115	0.9	0.207	35.4	LOS D	4.5	31.6	0.78	0.76	0.78	33.5
5	T1	All MCs	67	1.6	67	1.6	0.405	41.7	LOS D	5.5	38.5	0.93	0.76	0.93	30.8
6	R2	All MCs	46	0.0	46	0.0	0.405	52.2	LOS D	5.5	38.5	0.93	0.76	0.93	30.1
Approach			228	0.9	228	0.9	0.405	40.7	LOS D	5.5	38.5	0.86	0.76	0.86	31.9
North: Pittwater Road															
7	L2	All MCs	55	0.0	55	0.0	0.509	19.9	LOS B	17.5	124.6	0.64	0.59	0.64	44.1
8	T1	All MCs	1654	2.3	1654	2.3	* 0.509	14.1	LOS B	17.5	125.2	0.64	0.58	0.64	48.6
9	R2	All MCs	108	1.0	108	1.0	0.907	73.1	LOS E	6.7	47.4	1.00	1.01	1.51	26.8
Approach			1817	2.1	1817	2.1	0.907	17.8	LOS B	17.5	125.2	0.66	0.61	0.69	46.2
West: Anzac Avenue															
10	L2	All MCs	73	0.0	73	0.0	0.412	39.4	LOS D	6.7	47.1	0.92	0.78	0.92	33.7
11	T1	All MCs	38	0.0	38	0.0	* 0.412	45.8	LOS D	6.7	47.1	0.92	0.78	0.92	31.0
12	R2	All MCs	34	0.0	34	0.0	0.412	56.6	LOS E	6.7	47.1	0.92	0.78	0.92	33.8
Approach			144	0.0	144	0.0	0.412	45.1	LOS D	6.7	47.1	0.92	0.78	0.92	33.1
All Vehicles			3805	2.2	3805	2.2	1.147	25.3	LOS C	17.5	125.2	0.67	0.63	0.74	41.9

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Options tab).
Vehicle movement LOS values are based on average delay per movement.
Intersection and Approach LOS values are based on average delay for all vehicle movements.
Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Green.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

* Critical Movement (Signal Timing)

Pedestrian Movement Performance

Mov ID	Crossing	Input Vol. ped/h	Dem. Flow ped/h	Aver. Delay sec	Level of Service	AVERAGE BACK OF QUEUE [Ped ped	Dist] m	Prop. Que	Eff. Stop Rate	Travel Time sec	Travel Dist. m	Aver. Speed m/sec
South: Pittwater Road												
P1	Full	38	40	48.2	LOS E	0.1	0.1	0.95	0.95	202.1	200.0	0.99
East: Anzac Avenue												

P2	Full	29	31	48.2	LOS E	0.1	0.1	0.95	0.95	202.1	200.0	0.99
North: Pittwater Road												
P3	Full	69	73	48.3	LOS E	0.2	0.2	0.95	0.95	202.2	200.0	0.99
West: Anzac Avenue												
P4	Full	16	17	48.2	LOS E	0.0	0.0	0.95	0.95	202.0	200.0	0.99
All Pedestrians		152	160	48.3	LOS E	0.2	0.2	0.95	0.95	202.1	200.0	0.99

Level of Service (LOS) Method: SIDRA Pedestrian LOS Method (Based on Average Delay)
Pedestrian movement LOS values are based on average delay per pedestrian movement.
Intersection LOS value for Pedestrians is based on average delay for all pedestrian movements.

MOVEMENT SUMMARY

Site: 103 [Anzac-Seaview intersection base - Sat AM (Site Folder: 1C Existing - Saturday AM)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

New Site
Site Category: (None)
Stop (Two-Way)

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
South: Internal Road															
1	L2	All MCs	116	0.0	116	0.0	0.095	8.0	LOS A	0.4	2.8	0.06	0.95	0.06	49.1
2	T1	All MCs	12	0.0	12	0.0	0.095	8.6	LOS A	0.4	2.8	0.06	0.95	0.06	51.0
3	R2	All MCs	2	0.0	2	0.0	0.095	8.8	LOS A	0.4	2.8	0.06	0.95	0.06	51.2
Approach			129	0.0	129	0.0	0.095	8.1	LOS A	0.4	2.8	0.06	0.95	0.06	49.3
East: Anzac Avenue															
4	L2	All MCs	5	0.0	5	0.0	0.009	5.5	LOS A	0.0	0.1	0.02	0.21	0.02	55.7
5	T1	All MCs	12	0.0	12	0.0	0.009	0.0	LOS A	0.0	0.1	0.02	0.21	0.02	57.5
6	R2	All MCs	1	0.0	1	0.0	0.009	5.6	LOS A	0.0	0.1	0.02	0.21	0.02	56.0
Approach			18	0.0	18	0.0	0.009	2.0	NA	0.0	0.1	0.02	0.21	0.02	56.8
North: Seaview Parade															
7	L2	All MCs	4	0.0	4	0.0	0.047	8.1	LOS A	0.2	1.1	0.22	0.88	0.22	50.6
8	T1	All MCs	24	0.0	24	0.0	0.047	8.8	LOS A	0.2	1.1	0.22	0.88	0.22	50.6
9	R2	All MCs	16	0.0	16	0.0	0.047	10.2	LOS B	0.2	1.1	0.22	0.88	0.22	48.9
Approach			44	0.0	44	0.0	0.047	9.2	LOS A	0.2	1.1	0.22	0.88	0.22	50.0
West: Anzac Avenue															
10	L2	All MCs	24	4.3	24	4.3	0.070	5.6	LOS A	0.3	2.5	0.07	0.47	0.07	51.3
11	T1	All MCs	18	29.4	18	29.4	0.070	0.0	LOS A	0.3	2.5	0.07	0.47	0.07	54.1
12	R2	All MCs	85	1.2	85	1.2	0.070	5.6	LOS A	0.3	2.5	0.07	0.47	0.07	51.6
Approach			127	5.8	127	5.8	0.070	4.8	NA	0.3	2.5	0.07	0.47	0.07	51.9
All Vehicles			319	2.3	319	2.3	0.095	6.6	NA	0.4	2.8	0.09	0.71	0.09	50.8

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Options tab).
Vehicle movement LOS values are based on average delay per movement.
Minor Road Approach LOS values are based on average delay for all vehicle movements.
NA (TWSC): Level of Service is not defined for major road approaches or the intersection as a whole for Two-Way Sign Control (HCM LOS rule).
Two-Way Sign Control Capacity Model: SIDRA Standard.
Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

MOVEMENT SUMMARY

Site: 101 [Pittwater-Anzac intersection base - Sat PM (Site Folder: 1D Existing - Saturday PM)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

New Site
Site Category: (None)
Signals - EQUISAT (Fixed-Time/SCATS) Isolated Cycle Time = 87 seconds (Site User-Given Phase Times)

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
South: Pittwater Road															
1	L2	All MCs	34	0.0	34	0.0	0.421	20.6	LOS C	10.9	77.3	0.68	0.61	0.68	46.2
2	T1	All MCs	1166	2.0	1166	2.0	0.421	15.1	LOS B	10.9	77.3	0.68	0.60	0.68	48.0
3	R2	All MCs	111	1.0	111	1.0	* 0.749	52.9	LOS D	5.1	36.0	1.00	0.89	1.22	27.9
Approach			1311	1.8	1311	1.8	0.749	18.4	LOS B	10.9	77.3	0.71	0.63	0.73	45.7
East: Anzac Avenue															
4	L2	All MCs	128	0.8	128	0.8	0.192	25.7	LOS C	3.7	26.1	0.72	0.74	0.72	37.7
5	T1	All MCs	45	2.3	45	2.3	0.262	30.3	LOS C	3.1	22.3	0.88	0.72	0.88	35.0
6	R2	All MCs	40	2.6	40	2.6	0.262	39.6	LOS D	3.1	22.3	0.88	0.72	0.88	34.0
Approach			214	1.5	214	1.5	0.262	29.3	LOS C	3.7	26.1	0.78	0.74	0.78	36.4
North: Pittwater Road															
7	L2	All MCs	46	0.0	46	0.0	0.423	20.8	LOS C	10.8	77.0	0.68	0.62	0.68	43.4
8	T1	All MCs	1159	2.1	1159	2.1	* 0.423	15.1	LOS B	10.9	77.5	0.68	0.60	0.68	48.0
9	R2	All MCs	52	4.1	52	4.1	0.355	49.1	LOS D	2.2	16.0	0.98	0.74	0.98	32.5
Approach			1257	2.1	1257	2.1	0.423	16.7	LOS B	10.9	77.5	0.70	0.61	0.70	46.9
West: Anzac Avenue															
10	L2	All MCs	76	0.0	76	0.0	0.399	28.9	LOS C	6.1	42.4	0.89	0.77	0.89	37.4
11	T1	All MCs	52	0.0	52	0.0	* 0.399	34.8	LOS C	6.1	42.4	0.89	0.77	0.89	35.1
12	R2	All MCs	39	0.0	39	0.0	0.399	44.5	LOS D	6.1	42.4	0.89	0.77	0.89	37.5
Approach			166	0.0	166	0.0	0.399	34.4	LOS C	6.1	42.4	0.89	0.77	0.89	36.8
All Vehicles			2947	1.8	2947	1.8	0.749	19.3	LOS B	10.9	77.5	0.72	0.63	0.73	44.9

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Options tab).
Vehicle movement LOS values are based on average delay per movement.
Intersection and Approach LOS values are based on average delay for all vehicle movements.
Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Green.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

* Critical Movement (Signal Timing)

Pedestrian Movement Performance

Mov ID	Crossing	Input Vol. ped/h	Dem. Flow ped/h	Aver. Delay sec	Level of Service	AVERAGE BACK OF QUEUE [Ped ped	Dist] m	Prop. Que	Eff. Stop Rate	Travel Time sec	Travel Dist. m	Aver. Speed m/sec
South: Pittwater Road												
P1	Full	38	40	37.8	LOS D	0.1	0.1	0.93	0.93	191.6	200.0	1.04
East: Anzac Avenue												

P2	Full	12	13	37.7	LOS D	0.0	0.0	0.93	0.93	191.6	200.0	1.04
North: Pittwater Road												
P3	Full	112	118	37.9	LOS D	0.3	0.3	0.94	0.94	191.7	200.0	1.04
West: Anzac Avenue												
P4	Full	44	46	37.8	LOS D	0.1	0.1	0.93	0.93	191.6	200.0	1.04
All Pedestrians		206	217	37.8	LOS D	0.3	0.3	0.93	0.93	191.7	200.0	1.04

Level of Service (LOS) Method: SIDRA Pedestrian LOS Method (Based on Average Delay)
Pedestrian movement LOS values are based on average delay per pedestrian movement.
Intersection LOS value for Pedestrians is based on average delay for all pedestrian movements.

MOVEMENT SUMMARY

Site: 103 [Anzac-Seaview intersection base - Sat PM (Site Folder: 1D Existing - Saturday PM)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

New Site
Site Category: (None)
Stop (Two-Way)

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
South: Internal Road															
1	L2	All MCs	113	0.0	113	0.0	0.085	8.0	LOS A	0.4	2.5	0.07	0.95	0.07	49.1
2	T1	All MCs	5	0.0	5	0.0	0.085	8.3	LOS A	0.4	2.5	0.07	0.95	0.07	51.1
3	R2	All MCs	1	0.0	1	0.0	0.085	8.5	LOS A	0.4	2.5	0.07	0.95	0.07	51.2
Approach			119	0.0	119	0.0	0.085	8.1	LOS A	0.4	2.5	0.07	0.95	0.07	49.2
East: Anzac Avenue															
4	L2	All MCs	6	0.0	6	0.0	0.010	5.5	LOS A	0.0	0.1	0.01	0.21	0.01	55.8
5	T1	All MCs	14	0.0	14	0.0	0.010	0.0	LOS A	0.0	0.1	0.01	0.21	0.01	57.6
6	R2	All MCs	1	0.0	1	0.0	0.010	5.6	LOS A	0.0	0.1	0.01	0.21	0.01	56.1
Approach			21	0.0	21	0.0	0.010	1.9	NA	0.0	0.1	0.01	0.21	0.01	56.9
North: Seaview Parade															
7	L2	All MCs	1	0.0	1	0.0	0.021	8.0	LOS A	0.1	0.5	0.17	0.90	0.17	50.5
8	T1	All MCs	4	0.0	4	0.0	0.021	8.4	LOS A	0.1	0.5	0.17	0.90	0.17	50.5
9	R2	All MCs	14	7.7	14	7.7	0.021	10.0	LOS B	0.1	0.5	0.17	0.90	0.17	47.7
Approach			19	5.6	19	5.6	0.021	9.5	LOS A	0.1	0.5	0.17	0.90	0.17	48.6
West: Anzac Avenue															
10	L2	All MCs	9	0.0	9	0.0	0.027	5.6	LOS A	0.1	0.9	0.08	0.48	0.08	51.6
11	T1	All MCs	6	0.0	6	0.0	0.027	0.0	LOS A	0.1	0.9	0.08	0.48	0.08	54.2
12	R2	All MCs	35	0.0	35	0.0	0.027	5.6	LOS A	0.1	0.9	0.08	0.48	0.08	51.7
Approach			51	0.0	51	0.0	0.027	4.9	NA	0.1	0.9	0.08	0.48	0.08	52.0
All Vehicles			209	0.5	209	0.5	0.085	6.8	NA	0.4	2.5	0.07	0.76	0.07	50.5

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Options tab).
Vehicle movement LOS values are based on average delay per movement.
Minor Road Approach LOS values are based on average delay for all vehicle movements.
NA (TWSC): Level of Service is not defined for major road approaches or the intersection as a whole for Two-Way Sign Control (HCM LOS rule).
Two-Way Sign Control Capacity Model: SIDRA Standard.
Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

MOVEMENT SUMMARY

Site: 101 [Pittwater-Anzac intersection base - Future Wed AM (Site Folder: 2A Future - Wednesday AM)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

New Site
Site Category: (None)
Signals - EQUISAT (Fixed-Time/SCATS) Isolated Cycle Time = 77 seconds (Site User-Given Phase Times)

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
South: Pittwater Road															
1	L2	All MCs	19	0.0	19	0.0	0.419	20.2	LOS C	9.2	68.1	0.71	0.62	0.71	46.6
2	T1	All MCs	1078	7.0	1078	7.0	0.419	14.6	LOS B	9.2	68.1	0.71	0.61	0.71	48.3
3	R2	All MCs	129	1.6	129	1.6	* 0.780	48.0	LOS D	5.4	38.1	1.00	0.92	1.28	29.2
Approach			1226	6.4	1226	6.4	0.780	18.3	LOS B	9.2	68.1	0.74	0.65	0.77	45.7
East: Anzac Avenue															
4	L2	All MCs	86	2.4	86	2.4	0.128	22.5	LOS C	2.1	15.2	0.69	0.72	0.69	39.3
5	T1	All MCs	22	4.8	22	4.8	0.193	26.8	LOS C	2.0	13.9	0.86	0.71	0.86	36.3
6	R2	All MCs	39	0.0	39	0.0	0.193	34.2	LOS C	2.0	13.9	0.86	0.71	0.86	35.3
Approach			147	2.1	147	2.1	0.193	26.3	LOS C	2.1	15.2	0.76	0.72	0.76	37.7
North: Pittwater Road															
7	L2	All MCs	35	3.0	35	3.0	0.427	20.5	LOS C	9.4	68.8	0.71	0.63	0.71	43.4
8	T1	All MCs	1087	6.3	1087	6.3	* 0.427	14.7	LOS B	9.4	69.2	0.71	0.62	0.71	48.2
9	R2	All MCs	44	0.0	44	0.0	0.262	42.9	LOS D	1.6	11.5	0.97	0.73	0.97	34.4
Approach			1166	6.0	1166	6.0	0.427	16.0	LOS B	9.4	69.2	0.72	0.63	0.72	47.4
West: Anzac Avenue															
10	L2	All MCs	63	0.0	63	0.0	0.260	25.1	LOS C	3.4	24.6	0.83	0.74	0.83	39.4
11	T1	All MCs	22	4.8	22	4.8	* 0.260	30.8	LOS C	3.4	24.6	0.83	0.74	0.83	37.3
12	R2	All MCs	27	7.7	27	7.7	0.260	38.3	LOS D	3.4	24.6	0.83	0.74	0.83	39.3
Approach			113	2.8	113	2.8	0.260	29.4	LOS C	3.4	24.6	0.83	0.74	0.83	39.0
All Vehicles			2653	5.8	2653	5.8	0.780	18.2	LOS B	9.4	69.2	0.74	0.65	0.75	45.7

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Options tab).
Vehicle movement LOS values are based on average delay per movement.
Intersection and Approach LOS values are based on average delay for all vehicle movements.
Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Green.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

* Critical Movement (Signal Timing)

Pedestrian Movement Performance

Mov ID	Crossing	Input Vol. ped/h	Dem. Flow ped/h	Aver. Delay sec	Level of Service	AVERAGE BACK OF QUEUE [Ped ped	Dist] m	Prop. Que	Eff. Stop Rate	Travel Time sec	Travel Dist. m	Aver. Speed m/sec
South: Pittwater Road												
P1	Full	10	11	32.7	LOS D	0.0	0.0	0.92	0.92	186.6	200.0	1.07
East: Anzac Avenue												

P2	Full	5	5	32.7	LOS D	0.0	0.0	0.92	0.92	186.6	200.0	1.07
North: Pittwater Road												
P3	Full	24	25	32.8	LOS D	0.1	0.1	0.92	0.92	186.6	200.0	1.07
West: Anzac Avenue												
P4	Full	7	7	32.7	LOS D	0.0	0.0	0.92	0.92	186.6	200.0	1.07
All Pedestrians		46	48	32.8	LOS D	0.1	0.1	0.92	0.92	186.6	200.0	1.07

Level of Service (LOS) Method: SIDRA Pedestrian LOS Method (Based on Average Delay)
Pedestrian movement LOS values are based on average delay per pedestrian movement.
Intersection LOS value for Pedestrians is based on average delay for all pedestrian movements.

MOVEMENT SUMMARY

Site: 103 [Anzac-Seaview intersection base - Copy (Site Folder: 2A Future - Wednesday AM)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

New Site
Site Category: (None)
Stop (Two-Way)

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
South: Internal Road															
1	L2	All MCs	92	2.3	92	2.3	0.085	8.1	LOS A	0.3	2.5	0.07	0.95	0.07	48.8
2	T1	All MCs	18	5.9	18	5.9	0.085	8.9	LOS A	0.3	2.5	0.07	0.95	0.07	50.8
3	R2	All MCs	1	0.0	1	0.0	0.085	8.8	LOS A	0.3	2.5	0.07	0.95	0.07	51.1
Approach			111	2.9	111	2.9	0.085	8.3	LOS A	0.3	2.5	0.07	0.95	0.07	49.2
East: Anzac Avenue															
4	L2	All MCs	6	0.0	6	0.0	0.009	5.5	LOS A	0.0	0.1	0.02	0.23	0.02	55.5
5	T1	All MCs	12	0.0	12	0.0	0.009	0.0	LOS A	0.0	0.1	0.02	0.23	0.02	57.3
6	R2	All MCs	1	0.0	1	0.0	0.009	5.6	LOS A	0.0	0.1	0.02	0.23	0.02	55.9
Approach			19	0.0	19	0.0	0.009	2.2	NA	0.0	0.1	0.02	0.23	0.02	56.5
North: Seaview Parade															
7	L2	All MCs	2	0.0	2	0.0	0.050	8.1	LOS A	0.2	1.2	0.27	0.88	0.27	50.4
8	T1	All MCs	16	6.7	16	6.7	0.050	9.2	LOS A	0.2	1.2	0.27	0.88	0.27	50.1
9	R2	All MCs	25	0.0	25	0.0	0.050	10.2	LOS B	0.2	1.2	0.27	0.88	0.27	48.6
Approach			43	2.4	43	2.4	0.050	9.7	LOS A	0.2	1.2	0.27	0.88	0.27	49.4
West: Anzac Avenue															
10	L2	All MCs	24	4.3	24	4.3	0.079	5.6	LOS A	0.4	2.8	0.08	0.48	0.08	51.2
11	T1	All MCs	18	29.4	18	29.4	0.079	0.0	LOS A	0.4	2.8	0.08	0.48	0.08	54.0
12	R2	All MCs	102	1.0	102	1.0	0.079	5.6	LOS A	0.4	2.8	0.08	0.48	0.08	51.5
Approach			144	5.1	144	5.1	0.079	4.9	NA	0.4	2.8	0.08	0.48	0.08	51.8
All Vehicles			317	3.7	317	3.7	0.085	6.6	NA	0.4	2.8	0.10	0.68	0.10	50.7

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Options tab).
Vehicle movement LOS values are based on average delay per movement.
Minor Road Approach LOS values are based on average delay for all vehicle movements.
NA (TWSC): Level of Service is not defined for major road approaches or the intersection as a whole for Two-Way Sign Control (HCM LOS rule).
Two-Way Sign Control Capacity Model: SIDRA Standard.
Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

MOVEMENT SUMMARY

Site: 101 [Pittwater-Anzac intersection base - Future Wed PM (Site Folder: 2B Future - Wednesday PM)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

New Site
Site Category: (None)
Signals - EQUISAT (Fixed-Time/SCATS) Isolated Cycle Time = 91 seconds (Site User-Given Phase Times)

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
South: Pittwater Road															
1	L2	All MCs	28	0.0	28	0.0	0.537	20.7	LOS C	15.9	113.9	0.71	0.64	0.71	46.3
2	T1	All MCs	1599	2.7	1599	2.7	* 0.537	15.2	LOS B	15.9	113.9	0.71	0.63	0.71	48.0
3	R2	All MCs	186	2.3	186	2.3	* 1.166	212.1	LOS F	19.3	137.4	1.00	1.59	2.78	11.0
Approach			1814	2.6	1814	2.6	1.166	35.5	LOS D	19.3	137.4	0.74	0.73	0.92	37.5
East: Anzac Avenue															
4	L2	All MCs	158	0.0	158	0.0	0.550	42.0	LOS D	8.3	58.2	0.92	0.81	0.92	32.8
5	T1	All MCs	67	1.6	67	1.6	* 0.550	44.9	LOS D	8.3	58.2	0.91	0.77	0.91	33.6
6	R2	All MCs	80	1.3	80	1.3	0.550	53.7	LOS D	8.3	58.2	0.91	0.77	0.91	32.7
Approach			305	0.7	305	0.7	0.550	45.7	LOS D	8.3	58.2	0.92	0.79	0.92	30.2
North: Pittwater Road															
7	L2	All MCs	89	0.0	89	0.0	0.478	20.4	LOS C	13.3	95.5	0.68	0.64	0.68	43.5
8	T1	All MCs	1349	3.5	1349	3.5	0.478	14.5	LOS B	13.4	96.5	0.68	0.61	0.68	48.3
9	R2	All MCs	55	0.0	55	0.0	0.335	50.0	LOS D	2.4	16.9	0.98	0.75	0.98	32.3
Approach			1494	3.2	1494	3.2	0.478	16.2	LOS B	13.4	96.5	0.69	0.62	0.69	47.1
West: Anzac Avenue															
10	L2	All MCs	21	0.0	21	0.0	0.382	30.7	LOS C	4.6	32.2	0.93	0.76	0.93	35.7
11	T1	All MCs	68	0.0	68	0.0	0.382	37.5	LOS D	4.6	32.2	0.93	0.76	0.93	33.2
12	R2	All MCs	24	0.0	24	0.0	0.382	51.4	LOS D	4.6	32.2	0.93	0.76	0.93	35.9
Approach			114	0.0	114	0.0	0.382	39.2	LOS D	4.6	32.2	0.93	0.76	0.93	34.4
All Vehicles			3726	2.6	3726	2.6	1.166	28.7	LOS C	19.3	137.4	0.74	0.69	0.83	40.1

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Options tab).
Vehicle movement LOS values are based on average delay per movement.
Intersection and Approach LOS values are based on average delay for all vehicle movements.
Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Green.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

* Critical Movement (Signal Timing)

Pedestrian Movement Performance

Mov ID	Crossing	Input Vol. ped/h	Dem. Flow ped/h	Aver. Delay sec	Level of Service	AVERAGE BACK OF QUEUE [Ped ped	Dist] m	Prop. Que	Eff. Stop Rate	Travel Time sec	Travel Dist. m	Aver. Speed m/sec
South: Pittwater Road												
P1	Full	29	31	39.7	LOS D	0.1	0.1	0.94	0.94	193.6	200.0	1.03
East: Anzac Avenue												

P2	Full	4	4	39.7	LOS D	0.0	0.0	0.93	0.93	193.6	200.0	1.03
North: Pittwater Road												
P3	Full	19	20	39.7	LOS D	0.0	0.0	0.93	0.93	193.6	200.0	1.03
West: Anzac Avenue												
P4	Full	3	3	39.7	LOS D	0.0	0.0	0.93	0.93	193.5	200.0	1.03
All Pedestrians		55	58	39.7	LOS D	0.1	0.1	0.93	0.93	193.6	200.0	1.03

Level of Service (LOS) Method: SIDRA Pedestrian LOS Method (Based on Average Delay)
Pedestrian movement LOS values are based on average delay per pedestrian movement.
Intersection LOS value for Pedestrians is based on average delay for all pedestrian movements.

MOVEMENT SUMMARY

Site: 103 [Anzac-Seaview intersection base - Future Wed PM (Site Folder: 2B Future - Wednesday PM)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

New Site
Site Category: (None)
Stop (Two-Way)

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
South: Internal Road															
1	L2	All MCs	218	0.0	218	0.0	0.190	8.0	LOS A	0.9	6.0	0.07	0.94	0.07	49.1
2	T1	All MCs	28	0.0	28	0.0	0.190	8.7	LOS A	0.9	6.0	0.07	0.94	0.07	51.0
3	R2	All MCs	7	0.0	7	0.0	0.190	9.1	LOS A	0.9	6.0	0.07	0.94	0.07	51.2
Approach			254	0.0	254	0.0	0.190	8.1	LOS A	0.9	6.0	0.07	0.94	0.07	49.4
East: Anzac Avenue															
4	L2	All MCs	3	0.0	3	0.0	0.007	5.5	LOS A	0.0	0.1	0.01	0.17	0.01	56.0
5	T1	All MCs	11	10.0	11	10.0	0.007	0.0	LOS A	0.0	0.1	0.01	0.17	0.01	57.9
6	R2	All MCs	1	0.0	1	0.0	0.007	5.6	LOS A	0.0	0.1	0.01	0.17	0.01	56.3
Approach			15	7.1	15	7.1	0.007	1.6	NA	0.0	0.1	0.01	0.17	0.01	57.2
North: Seaview Parade															
7	L2	All MCs	4	0.0	4	0.0	0.075	8.0	LOS A	0.3	1.9	0.17	0.89	0.17	50.3
8	T1	All MCs	49	0.0	49	0.0	0.075	8.9	LOS A	0.3	1.9	0.17	0.89	0.17	50.3
9	R2	All MCs	14	7.7	14	7.7	0.075	12.2	LOS B	0.3	1.9	0.17	0.89	0.17	47.5
Approach			67	1.6	67	1.6	0.075	9.5	LOS A	0.3	1.9	0.17	0.89	0.17	49.8
West: Anzac Avenue															
10	L2	All MCs	11	0.0	11	0.0	0.085	5.6	LOS A	0.4	2.9	0.07	0.53	0.07	51.1
11	T1	All MCs	4	25.0	4	25.0	0.085	0.0	LOS A	0.4	2.9	0.07	0.53	0.07	53.6
12	R2	All MCs	138	0.0	138	0.0	0.085	5.6	LOS A	0.4	2.9	0.07	0.53	0.07	51.2
Approach			153	0.7	153	0.7	0.085	5.4	NA	0.4	2.9	0.07	0.53	0.07	51.3
All Vehicles			488	0.6	488	0.6	0.190	7.3	NA	0.9	6.0	0.08	0.78	0.08	50.2

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Options tab).
Vehicle movement LOS values are based on average delay per movement.
Minor Road Approach LOS values are based on average delay for all vehicle movements.
NA (TWSC): Level of Service is not defined for major road approaches or the intersection as a whole for Two-Way Sign Control (HCM LOS rule).
Two-Way Sign Control Capacity Model: SIDRA Standard.
Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

MOVEMENT SUMMARY

Site: 101 [Pittwater-Anzac intersection base - Sat AM - Future (Site Folder: 2C Future - Saturday AM)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

New Site
Site Category: (None)
Signals - EQUISAT (Fixed-Time/SCATS) Isolated Cycle Time = 108 seconds (Site User-Given Phase Times)

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
South: Pittwater Road															
1	L2	All MCs	72	0.0	72	0.0	0.443	18.9	LOS B	14.5	103.7	0.60	0.57	0.60	47.0
2	T1	All MCs	1408	3.0	1408	3.0	0.443	13.4	LOS B	14.5	103.7	0.60	0.55	0.60	49.0
3	R2	All MCs	144	1.5	144	1.5	* 1.217	266.6	LOS F	17.7	125.4	1.00	1.53	2.79	9.1
Approach			1624	2.7	1624	2.7	1.217	36.1	LOS D	17.7	125.4	0.64	0.64	0.80	37.3
East: Anzac Avenue															
4	L2	All MCs	122	0.9	122	0.9	0.253	36.7	LOS D	5.3	37.0	0.81	0.76	0.81	32.8
5	T1	All MCs	72	1.5	72	1.5	0.405	41.7	LOS D	5.5	38.5	0.93	0.76	0.93	31.0
6	R2	All MCs	49	0.0	49	0.0	0.405	52.2	LOS D	5.5	38.5	0.92	0.76	0.92	30.3
Approach			243	0.9	243	0.9	0.405	41.3	LOS D	5.5	38.5	0.87	0.76	0.87	31.7
North: Pittwater Road															
7	L2	All MCs	57	0.0	57	0.0	0.509	19.9	LOS B	17.5	124.8	0.64	0.60	0.64	44.1
8	T1	All MCs	1654	2.3	1654	2.3	* 0.509	14.2	LOS B	17.6	125.5	0.64	0.58	0.64	48.6
9	R2	All MCs	108	1.0	108	1.0	0.907	73.1	LOS E	6.7	47.4	1.00	1.01	1.51	26.8
Approach			1819	2.1	1819	2.1	0.907	17.8	LOS B	17.6	125.5	0.66	0.61	0.69	46.2
West: Anzac Avenue															
10	L2	All MCs	73	0.0	73	0.0	0.421	39.5	LOS D	6.8	47.6	0.92	0.78	0.92	33.7
11	T1	All MCs	39	0.0	39	0.0	* 0.421	45.9	LOS D	6.8	47.6	0.92	0.78	0.92	31.0
12	R2	All MCs	34	0.0	34	0.0	0.421	56.7	LOS E	6.8	47.6	0.92	0.78	0.92	33.8
Approach			145	0.0	145	0.0	0.421	45.2	LOS D	6.8	47.6	0.92	0.78	0.92	33.1
All Vehicles			3832	2.2	3832	2.2	1.217	28.1	LOS C	17.7	125.5	0.67	0.64	0.76	40.5

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Options tab).
Vehicle movement LOS values are based on average delay per movement.
Intersection and Approach LOS values are based on average delay for all vehicle movements.
Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Green.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

* Critical Movement (Signal Timing)

Pedestrian Movement Performance

Mov ID	Crossing	Input Vol. ped/h	Dem. Flow ped/h	Aver. Delay sec	Level of Service	AVERAGE BACK OF QUEUE [Ped ped	Dist] m	Prop. Que	Eff. Stop Rate	Travel Time sec	Travel Dist. m	Aver. Speed m/sec
South: Pittwater Road												
P1	Full	38	40	48.2	LOS E	0.1	0.1	0.95	0.95	202.1	200.0	0.99
East: Anzac Avenue												

P2	Full	29	31	48.2	LOS E	0.1	0.1	0.95	0.95	202.1	200.0	0.99
North: Pittwater Road												
P3	Full	69	73	48.3	LOS E	0.2	0.2	0.95	0.95	202.2	200.0	0.99
West: Anzac Avenue												
P4	Full	16	17	48.2	LOS E	0.0	0.0	0.95	0.95	202.0	200.0	0.99
All Pedestrians		152	160	48.3	LOS E	0.2	0.2	0.95	0.95	202.1	200.0	0.99

Level of Service (LOS) Method: SIDRA Pedestrian LOS Method (Based on Average Delay)
Pedestrian movement LOS values are based on average delay per pedestrian movement.
Intersection LOS value for Pedestrians is based on average delay for all pedestrian movements.

MOVEMENT SUMMARY

Site: 103 [Anzac-Seaview intersection base - Sat AM - Future (Site Folder: 2C Future - Saturday AM)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

New Site
Site Category: (None)
Stop (Two-Way)

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
South: Internal Road															
1	L2	All MCs	129	0.0	129	0.0	0.107	8.0	LOS A	0.4	3.1	0.06	0.95	0.06	49.1
2	T1	All MCs	14	0.0	14	0.0	0.107	8.6	LOS A	0.4	3.1	0.06	0.95	0.06	51.0
3	R2	All MCs	2	0.0	2	0.0	0.107	8.8	LOS A	0.4	3.1	0.06	0.95	0.06	51.2
Approach			145	0.0	145	0.0	0.107	8.1	LOS A	0.4	3.1	0.06	0.95	0.06	49.4
East: Anzac Avenue															
4	L2	All MCs	6	0.0	6	0.0	0.009	5.5	LOS A	0.0	0.1	0.02	0.23	0.02	55.5
5	T1	All MCs	12	0.0	12	0.0	0.009	0.0	LOS A	0.0	0.1	0.02	0.23	0.02	57.3
6	R2	All MCs	1	0.0	1	0.0	0.009	5.6	LOS A	0.0	0.1	0.02	0.23	0.02	55.9
Approach			19	0.0	19	0.0	0.009	2.2	NA	0.0	0.1	0.02	0.23	0.02	56.5
North: Seaview Parade															
7	L2	All MCs	4	0.0	4	0.0	0.051	8.1	LOS A	0.2	1.3	0.23	0.88	0.23	50.6
8	T1	All MCs	27	0.0	27	0.0	0.051	8.8	LOS A	0.2	1.3	0.23	0.88	0.23	50.5
9	R2	All MCs	16	0.0	16	0.0	0.051	10.4	LOS B	0.2	1.3	0.23	0.88	0.23	48.8
Approach			47	0.0	47	0.0	0.051	9.3	LOS A	0.2	1.3	0.23	0.88	0.23	50.0
West: Anzac Avenue															
10	L2	All MCs	24	4.3	24	4.3	0.077	5.6	LOS A	0.4	2.7	0.08	0.48	0.08	51.2
11	T1	All MCs	18	29.4	18	29.4	0.077	0.0	LOS A	0.4	2.7	0.08	0.48	0.08	54.0
12	R2	All MCs	98	1.1	98	1.1	0.077	5.6	LOS A	0.4	2.7	0.08	0.48	0.08	51.5
Approach			140	5.3	140	5.3	0.077	4.9	NA	0.4	2.7	0.08	0.48	0.08	51.8
All Vehicles			352	2.1	352	2.1	0.107	6.7	NA	0.4	3.1	0.09	0.71	0.09	50.7

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Options tab).
Vehicle movement LOS values are based on average delay per movement.
Minor Road Approach LOS values are based on average delay for all vehicle movements.
NA (TWSC): Level of Service is not defined for major road approaches or the intersection as a whole for Two-Way Sign Control (HCM LOS rule).
Two-Way Sign Control Capacity Model: SIDRA Standard.
Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

MOVEMENT SUMMARY

Site: 101 [Pittwater-Anzac intersection base - Sat PM - Future (Site Folder: 2D Future - Saturday PM)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

New Site
Site Category: (None)
Signals - EQUISAT (Fixed-Time/SCATS) Isolated Cycle Time = 87 seconds (Site User-Given Phase Times)

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
South: Pittwater Road															
1	L2	All MCs	34	0.0	34	0.0	0.421	20.6	LOS C	10.9	77.3	0.68	0.61	0.68	46.2
2	T1	All MCs	1166	2.0	1166	2.0	0.421	15.1	LOS B	10.9	77.3	0.68	0.60	0.68	48.0
3	R2	All MCs	162	0.6	162	0.6	* 1.096	151.2	LOS F	13.6	95.7	1.00	1.41	2.46	14.3
Approach			1362	1.8	1362	1.8	1.096	31.4	LOS C	13.6	95.7	0.72	0.70	0.89	39.1
East: Anzac Avenue															
4	L2	All MCs	181	0.6	181	0.6	0.490	36.9	LOS D	8.2	57.6	0.87	0.80	0.87	34.7
5	T1	All MCs	69	1.5	69	1.5	* 0.490	38.7	LOS D	8.2	57.6	0.86	0.74	0.86	36.0
6	R2	All MCs	66	1.6	66	1.6	0.490	45.6	LOS D	8.2	57.6	0.86	0.74	0.86	34.9
Approach			317	1.0	317	1.0	0.490	39.1	LOS D	8.2	57.6	0.87	0.77	0.87	32.4
North: Pittwater Road															
7	L2	All MCs	78	0.0	78	0.0	0.435	21.0	LOS C	11.2	79.4	0.69	0.64	0.69	43.1
8	T1	All MCs	1159	2.1	1159	2.1	* 0.435	15.2	LOS B	11.2	80.1	0.69	0.61	0.69	47.8
9	R2	All MCs	52	4.1	52	4.1	0.355	49.1	LOS D	2.2	16.0	0.98	0.74	0.98	32.5
Approach			1288	2.0	1288	2.0	0.435	16.9	LOS B	11.2	80.1	0.70	0.62	0.70	46.7
West: Anzac Avenue															
10	L2	All MCs	6	0.0	6	0.0	0.221	26.9	LOS C	2.2	15.3	0.90	0.72	0.90	36.3
11	T1	All MCs	26	0.0	26	0.0	0.221	31.9	LOS C	2.2	15.3	0.90	0.72	0.90	33.8
12	R2	All MCs	25	0.0	25	0.0	0.221	46.4	LOS D	2.2	15.3	0.90	0.72	0.90	36.4
Approach			58	0.0	58	0.0	0.221	37.7	LOS D	2.2	15.3	0.90	0.72	0.90	35.3
All Vehicles			3025	1.8	3025	1.8	1.096	26.2	LOS C	13.6	95.7	0.73	0.67	0.81	41.2

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Options tab).
Vehicle movement LOS values are based on average delay per movement.
Intersection and Approach LOS values are based on average delay for all vehicle movements.
Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Green.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

* Critical Movement (Signal Timing)

Pedestrian Movement Performance

Mov ID	Crossing	Input Vol. ped/h	Dem. Flow ped/h	Aver. Delay sec	Level of Service	AVERAGE BACK OF QUEUE [Ped ped	Dist] m	Prop. Que	Eff. Stop Rate	Travel Time sec	Travel Dist. m	Aver. Speed m/sec
South: Pittwater Road												
P1	Full	38	40	37.8	LOS D	0.1	0.1	0.93	0.93	191.6	200.0	1.04
East: Anzac Avenue												

P2	Full	12	13	37.7	LOS D	0.0	0.0	0.93	0.93	191.6	200.0	1.04
North: Pittwater Road												
P3	Full	112	118	37.9	LOS D	0.3	0.3	0.94	0.94	191.7	200.0	1.04
West: Anzac Avenue												
P4	Full	44	46	37.8	LOS D	0.1	0.1	0.93	0.93	191.6	200.0	1.04
All Pedestrians		206	217	37.8	LOS D	0.3	0.3	0.93	0.93	191.7	200.0	1.04

Level of Service (LOS) Method: SIDRA Pedestrian LOS Method (Based on Average Delay)
Pedestrian movement LOS values are based on average delay per pedestrian movement.
Intersection LOS value for Pedestrians is based on average delay for all pedestrian movements.

MOVEMENT SUMMARY

Site: 103 [Anzac-Seaview intersection base - Sat PM - Future (Site Folder: 2D Future - Saturday PM)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

New Site
Site Category: (None)
Stop (Two-Way)

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
South: Internal Road															
1	L2	All MCs	216	0.0	216	0.0	0.175	8.1	LOS A	0.8	5.5	0.08	0.94	0.08	49.1
2	T1	All MCs	22	0.0	22	0.0	0.175	8.8	LOS A	0.8	5.5	0.08	0.94	0.08	51.0
3	R2	All MCs	1	0.0	1	0.0	0.175	9.1	LOS A	0.8	5.5	0.08	0.94	0.08	51.2
Approach			239	0.0	239	0.0	0.175	8.1	LOS A	0.8	5.5	0.08	0.94	0.08	49.3
East: Anzac Avenue															
4	L2	All MCs	13	0.0	13	0.0	0.013	5.5	LOS A	0.0	0.1	0.01	0.29	0.01	55.1
5	T1	All MCs	14	0.0	14	0.0	0.013	0.0	LOS A	0.0	0.1	0.01	0.29	0.01	56.7
6	R2	All MCs	1	0.0	1	0.0	0.013	5.6	LOS A	0.0	0.1	0.01	0.29	0.01	55.4
Approach			27	0.0	27	0.0	0.013	2.8	NA	0.0	0.1	0.01	0.29	0.01	55.8
North: Seaview Parade															
7	L2	All MCs	1	0.0	1	0.0	0.035	8.0	LOS A	0.1	0.8	0.25	0.86	0.25	50.0
8	T1	All MCs	13	0.0	13	0.0	0.035	9.0	LOS A	0.1	0.8	0.25	0.86	0.25	50.0
9	R2	All MCs	14	0.0	14	0.0	0.035	11.3	LOS B	0.1	0.8	0.25	0.86	0.25	48.2
Approach			27	0.0	27	0.0	0.035	10.1	LOS B	0.1	0.8	0.25	0.86	0.25	49.2
West: Anzac Avenue															
10	L2	All MCs	9	0.0	9	0.0	0.087	5.6	LOS A	0.4	3.0	0.10	0.52	0.10	51.1
11	T1	All MCs	6	0.0	6	0.0	0.087	0.1	LOS A	0.4	3.0	0.10	0.52	0.10	53.6
12	R2	All MCs	140	0.0	140	0.0	0.087	5.6	LOS A	0.4	3.0	0.10	0.52	0.10	51.2
Approach			156	0.0	156	0.0	0.087	5.4	NA	0.4	3.0	0.10	0.52	0.10	51.3
All Vehicles			449	0.0	449	0.0	0.175	7.0	NA	0.8	5.5	0.09	0.75	0.09	50.4

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Options tab).
Vehicle movement LOS values are based on average delay per movement.
Minor Road Approach LOS values are based on average delay for all vehicle movements.
NA (TWSC): Level of Service is not defined for major road approaches or the intersection as a whole for Two-Way Sign Control (HCM LOS rule).
Two-Way Sign Control Capacity Model: SIDRA Standard.
Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.