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Structural, Civil and Traffic Engineering

Structural and Civil Engineering

Project Design and Management
Forensic Engineering and Structural Inspections
Research and Development Facilitators

Traffic Engineering

Traffic Management Studies and Traffic Impact Assessment
Expert Witness Representation
Road Safety Audits

Traffic Impact Assessment
Temporary Car Park – Margate Shopping Centre

Prepared for
Kalis Property Pty Ltd

Date
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Prepared by
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	Name	Signature	Date
Authorised by:	**Joanne Fisher**		**7th August 2025**

1. Introduction

1.1 Client Details

This document has been prepared for the following:

Client Name:	Kalis Group
Address:	GPO Box 404 HOBART, TAS 7000
Client Contacts:	Emmanuel Kalis, Alexia Kalis, Theo Muir Wilson, Corey Bygraves.

1.2 Project Details

The report is undertaken for the site at 1680 Channel Highway, Margate. Kalis Group is proposing a temporary car park to meet the parking requirements of the Stage 1 Building A and B plus the proposed dental practice which replaces a former hairdresser and pharmacy as shown in **Appendix A**.

The temporary car park makes provision for 98 car parking spaces plus 5 accessible bays (near the new dental practice), plus 4 motorcycle bays, in line with the requirements of the Kingborough Interim Planning Scheme 2015.

1.3 Previously Approved Development

The previously approved development (2013) comprised of the following land uses:

- New retail floor area – assumed supermarket (2500m^2)
- New specialty retail floor area (1396m^2)
- Truck loading docks
- Commercial / office development (1140m^2)
- 231 at-grade car parking spaces (including 8 disabled bays). However

1.4 Current Proposal

The proposed land uses include:

FRONTAGE - CHANNEL HIGHWAY

• Tenancy 1	–	Take away shop	– 107m^2
• Tenancy 2	–	Indian Restaurant	– 98m^2
• Tenancy 3, 4 & 6	–	Pharmacy, Lotto, Tobacconist	– 255m^2
• Tenancy 5	–	Pathology (3 medical practitioner)	– 88m^2
• Tenancy 7 & 8	–	Post office	– 138m^2
• Tenancy 9	–	Subway	– 94m^2
• Tenancy 10	–	Vacant	– 96m^2
• Tenancy 11	–	Vacant	– 96m^2
• Tenancy 12 & 13	–	St. Vincent De Paul	– 184m^2

• Tenancy 14	–	Vacant	– 65m^2
• Tenancy 15	–	Vacant	– 66m^2
• Tenancy 16	–	Chocolate Shop	– 87m^2
• **Dentist**		7 medical practitioners	- 377m^2
Upper floor building A	–	Medical Centre (20 Medical practitioners)	596m^2
Upper floor building B	–	Office	596m^2

The following table compares previously approved and newly proposed floor areas and uses. The changes and new parking requirements are outlined in the report.

1.5 Development Application

The Kalis Group has recently constructed 91 spaces at the rear of Stage 1 and Stage 2 of the Channel Highway, including 4 accessible bays.

The subject development application is for a temporary car park which makes provision for an additional 98 car parking spaces (on the land which will potentially form the supermarket car park, plus 5 accessible bays in the permanent car parking located at the rear of the dental practice and servicing area for Building A and B . A copy of the plans can be found at Appendix A of this report associated with the following tenancies.

- Take away - The Chocolate Shop. - 87m^2
- The Dental Practice – 7 medical practitioners
- Take away – Indian - 98m^2
- Take away – Subway – 94m^2

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2. Scope of Consultancy

The scope of consultancy involves the following:

- Obtain background information and plans.
- Undertake site visit.
- Obtain plans
- Determine background trip generation rates associated with all the development which will be dependent on its use
- Assess access provision for the site, including by trucks to service the site.
- Assess appropriate access provisions and options for the anticipated demand
- Run Autotrack.
- Check car parking requirements and layout of parking in line with the Kingsborough Interim Planning Scheme, 2015.
- Document findings and findings in a report and on plans.

3. Existing Situation

3.1 Site Details

The proposed development is located at 1680 Channel Highway, Margate, on a state road under the control of the Department of State Growth. Currently, no dedicated vehicular access to the site from the Channel Highway exists. The site can be accessed from Pin Oak Place, which has a direct connection to the Channel Highway in the form of a roundabout.

Figure 1: Location of the approximate area of the proposed development in the context of the surrounding street network. (Source: LIST maps).

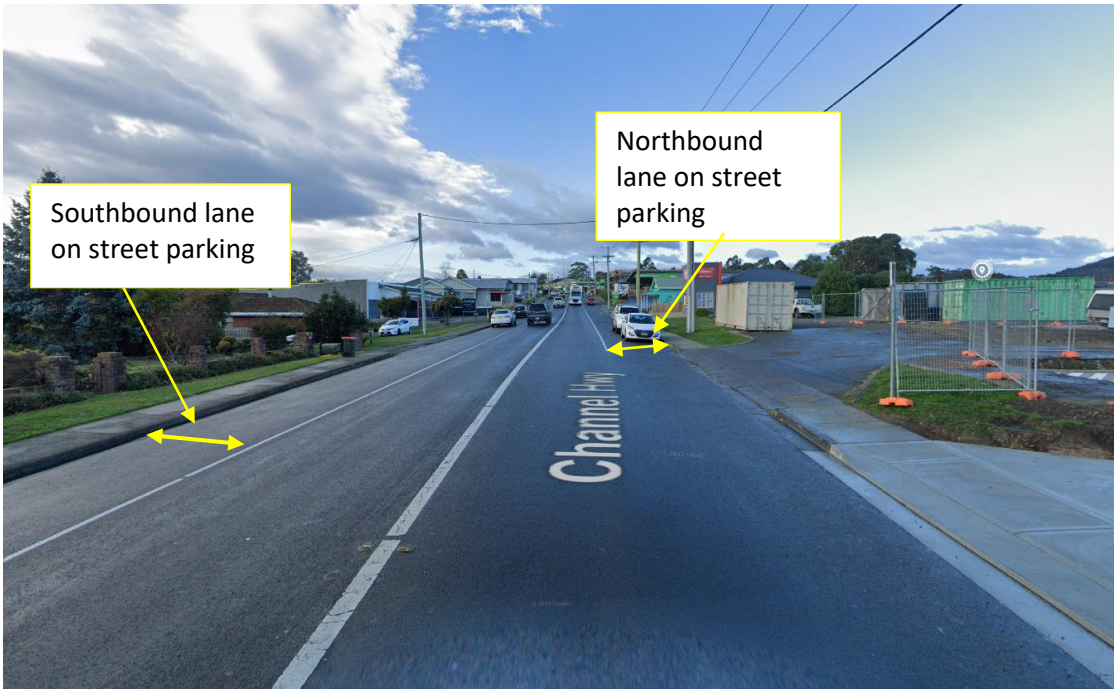

Figure 2: The existing Channel Highway cross section which includes 2 x parking lanes and 2 x through lanes (Source: Google Maps).

It should be noted that two buildings, under a previous DA and containing various specialty shops, have been constructed at the southeastern corner of the site. These buildings are supported by a dedicated off-street carpark, which is accessible via Pin Oak Place. The dedicated existing carpark accommodates 91 standard car bays, 4 accessible parking bays, 4 motorcycle parking bays, and 2 bicycle parking racks, each accommodating up to 4 bicycles. These features can be seen in the figures below:

Figure 3: Off-Street Car park attached to the two Specialty Buildings A and B with frontage onto the Channel Highway and the development car park at the rear. (Source: Howarth Fisher & Associates).

3.2 Road Width

3.2.1 Channel Highway

Channel Highway, Margate, has a typical road cross-section width of 12 metres. This comprises 2 x 3.5-metre travelling lane widths and the balance consisting of the parking bays. The figure below shows the typical road cross-section.

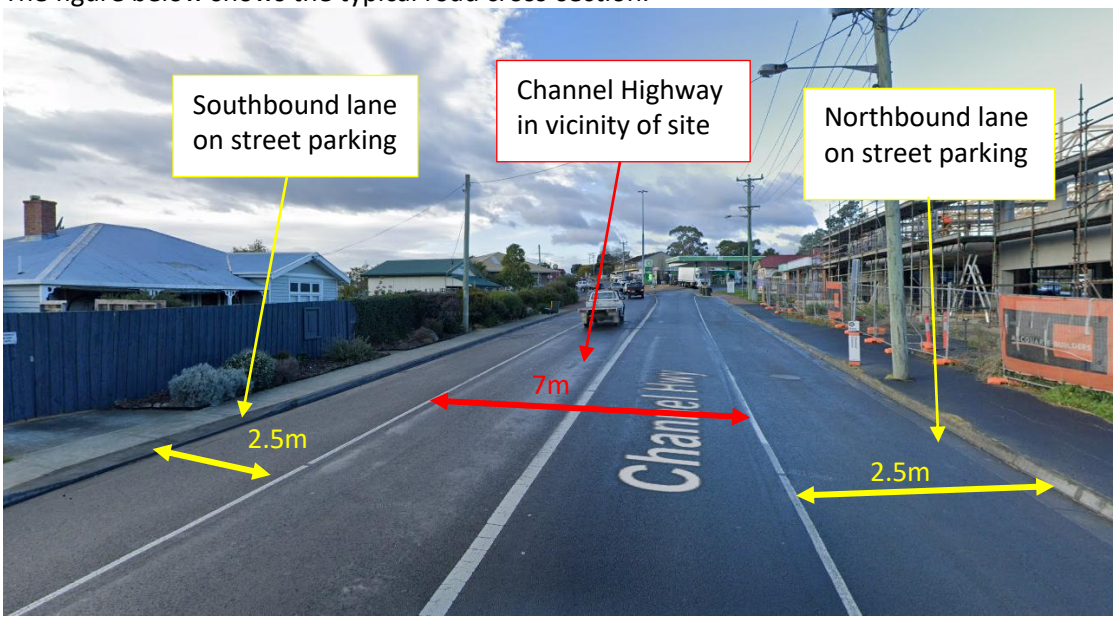

Figure 4: The road width of the Channel Highway is 7-metres in the vicinity of the site. The road width measured between kerb faces is 12 metres and includes a parking lane in each direction (Source: Google Maps).

3.2.2 Pin Oak Place

Pin Oak Place, Margate, has a typical road cross section of 8 metres measured in the vicinity of the site. There is a turning head at the end of the road, which has a diameter of 16.75 metres measured between kerb faces. There are also eight on-street parking spaces, subject to a 2-hour time restriction along Pin Oak Place. The photograph overleaf shows the street and turning head widths with the eight on-street parking bays in the background.

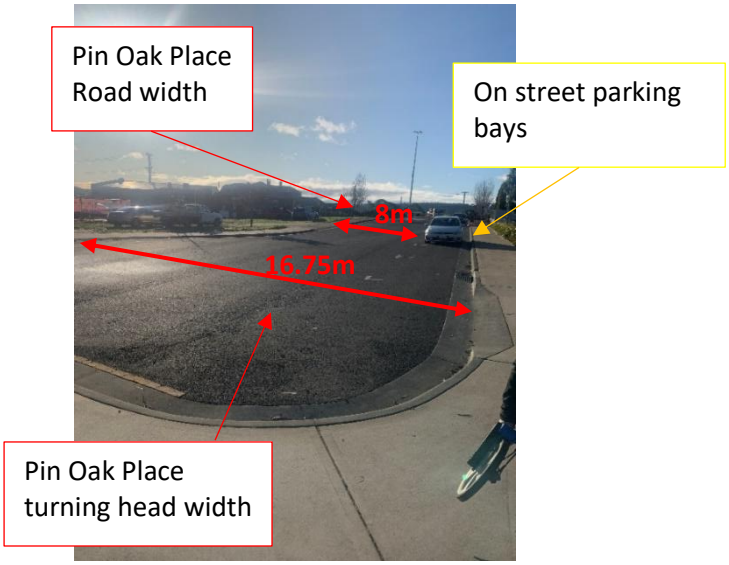

Figure 5: The road width of Pin Oak Place is 8 metres, with a 16.75-metre diameter turning head measured in the vicinity of the site.

3.3 Traffic Volumes

Based on standard traffic engineering principles, peak hour traffic volumes typically represent 10% of Annual Average Daily Traffic (AADT) flows. Therefore, based on Howarth Fisher survey data of 1351 vehicles counted in the morning peak hour survey (between 7am and 8am.), there would be an anticipated traffic volume of 13,510 vehicles per day. Surveys were undertaken on 23/07/2024 (which reflects typical flows, given the survey was undertaken during the school term).

Based on NSW, RTA Guide to Traffic Generating Developments 2002, the peak period associated with a shopping centre is the Thursday and Friday 4.30pm – 5.30pm and therefore Howarth Fisher has focused on the worst case scenario. Many of the land uses existing and proposed would not be open between 7.45am – 8.45am, some of the take aways, the Indian restaurant, the Chocolate shop, the dentist, and many of the retail tenancies which typically open between 9am and 10am. 7.45am – 8.45am. is not a peak shopping time for the uses subject to this development.

3.4 Speed Limits

The speed limit along Channel Highway, in the vicinity of the development site is 50 km/hr, the default urban speed limit.

Figure 6: Speed limit of 50km/hr along the Channel Highway in the vicinity of the development site.

3.5 Accident History

In line with standard traffic engineering practice, the accident history for the past 5 years has been obtained from the Department of State Growth (DSG). Figure 6, below shows the locations of accidents along the Channel Highway through Margate over the last 5 years. Only accidents along the project frontage will be assessed, so not all accidents shown in the figure are documented below. There have been 19 accidents along the development in the vicinity of the site over the past 5 years. The severity of the accidents is as follows: 15 accidents have been classified as property damage only, 1 has been classified as minor, 1 has been classified as serious, and 2 have been classified as first aid. Table 1 overleaf contains additional information on all 19 relevant accidents.

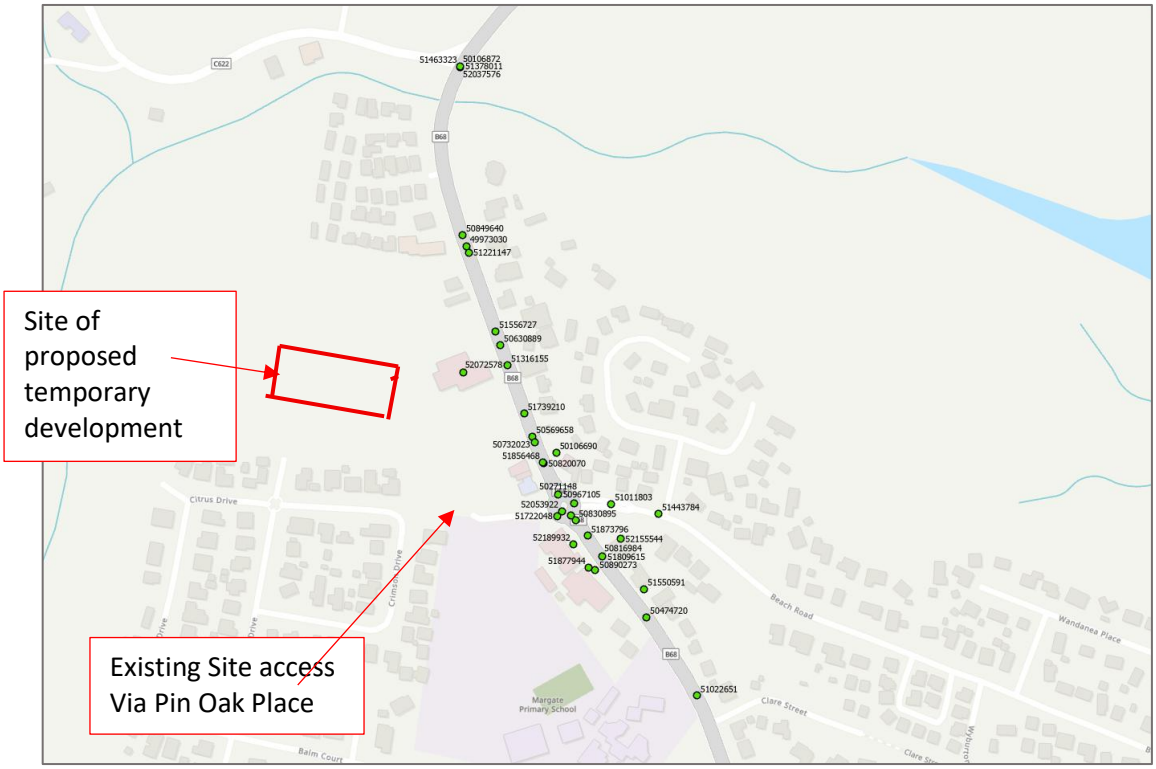

Figure 7: Locations of accidents along the Channel Highway in the vicinity of the site (Source: Department of State Growth).

ID ON FIGURE	VCRN	TYPE	DESCRIPTION	DATE	TIME	SEVERITY	LOCATION
50569658	20000686	LV; LV	142 - Leaving parking	05-02-2020	08:40	Property Damage Only	Channel Hwy
50625280	20002127	LV; LV	130 - Vehicles in same lane/ rear end	22-04-2020	12:50	Property Damage Only	Roundabout
50630889	20002194	LV; LV	130 - Vehicles in same lane/ rear end	27-04-2020	15:25	Property Damage Only	Channel Hwy
50732023	20003667	LV; LV	130 - Vehicles in same lane/ rear end	29-07-2020	16:34	Property Damage Only	Channel Hwy
50820070	20004454	LV; HV	169 - Other on path	10-09-2020	15:00	Property Damage Only	Channel Hwy
50849640	20005326	LV; LV	147 - Emerging from driveway or lane	15-09-2020	14:45	Property Damage Only	Channel Hwy
50830895	20004762	LV; LV	194 - Parked car run away	17-09-2020	16:00	Property Damage Only	Channel Hwy
50967105	21000752	LV; LV; LV	130 - Vehicles in same lane/ rear end	05-02-2021	14:40	Minor	Roundabout
51022651	21002116	PE; LV	100 - Near side	02-04-2021	20:28	First Aid	Channel Hwy
51221147	21004001	LV; LV	130 - Vehicles in same lane/ rear end	23-06-2021	18:11	Property Damage Only	Channel Hwy
51316155	21004678	LV; LV	132 - Vehicles in same lane/ right rear	19-07-2021	16:40	Property Damage Only	Channel Hwy
51556727	22000617	LV; LV; LV	130 - Vehicles in same lane/ rear end	07-02-2022	07:30	First Aid	Channel Hwy
51739210	22004499	LV	171 - Left off carriageway into object or parked vehicle	25-06-2022	15:58	Property Damage Only	Channel Hwy
51722048	22003930	LV	181 - Off right bend into object/parked vehicle	10-07-2022	17:40	Serious	Roundabout
51856468	22007555	LV; LV	142 - Leaving parking	28-12-2022	15:08	Property Damage Only	Channel Hwy
52053922	23004022	LV; LV	-	04-07-2023	07:30	Property Damage Only	Roundabout
52206375	23007170	LV; LV	-	02-12-2023	10:30	Property Damage Only	Roundabout
52602786	24007648	LV; LV	-	12 -12-2024	16:30	Property Damage Only	Channel Hwy
52494019	24005037	LV; LV	-	11-08-2024	12:58	Property Damage Only	Channel Hwy

Table 1: Accidents relevant to the development from the surrounding road network in the past 5 years (Source: Department of State Growth). (LV stands for light vehicle, PE stands for pedestrian).

3.6 Proposed Development

The elements of the previous application and the proposed application are outlined below:

3.6.1 Previously approved D/A

- Supermarket (2500m^2)
- Specialty Shops (1396m^2)
- Truck loading docks
- Commercial Offices (1140m^2)
- 231 at-grade car parks
  (Access via the roundabout forming the intersection of Beach Road / Channel Highway / Northern and Southern Leg of the Channel Highway)

3.6.2 Detailed List of Specialty Shops / Commercial

The Kalis Group has advised of the following detailed list of tenancies

Current buildings A & B

Tenancy 1	–	Take away shop	– 107m^2
Tenancy 2	–	Indian Restaurant	– 98m^2
Tenancy 3, 4 & 6	–	Pharmacy, Lotto, Tabacco Shop	– 255m^2
Tenancy 5	–	Pathology	– 88m^2
Tenancy 7 & 8	–	Post office	– 138m^2
Tenancy 9	–	Subway	– 94m^2
Tenancy 10	–	Vacant	– 96m^2
Tenancy 11	–	Vacant	– 96m^2
Tenancy 12 & 13	–	St. Vincent De Paul	– 184m^2
Tenancy 14	–	Vacant	– 65m^2
Tenancy 15	–	Vacant	– 66m^2
Tenancy 16	–	Chocolate Shop	– 87m^2
Total floor area	-		1374m^2

Upper floor building A	– Medical Centre – 15 consulting rooms (20 medical practitioners)	596m^2
Upper floor building B	– Office	596m^2

Dental Practitioners – 7 medical practitioners.

The main difference between the original application and the proposed application is the conversion of 596m^2 from an office to a medical centre, a pathology lab the extended supermarket, and the inclusion of takeaway café / food uses. In addition, there is a new dental surgery with 7 dental practitioners.

4. Assessment of Parking

4.1 Existing Situation – Off street Parking

There is a dedicated off street car park attached to the back of the two specialty buildings shown as A and B in the plans. This carpark has a capacity of 91 car bays, with 4 additional accessible parking spaces. Some of these features are shown in photographs below:

Figure 8: Off street Car Park attached to the two specialty buildings (Source: Howarth Fisher & Associates).

There are four motorcycle bays located on the site in the stage 1 car park as shown overleaf.

Figure 9: Showing the 4 motorcycle bays (Source: Howarth Fisher and Associates).

Figure 10: Off street Car Park accommodating 2 x bike racks with a total capacity of holding 8 bicycles (Source: Howarth Fisher & Associates).

4.1.1 On street parking

Figure 11: Eight On street parking along Pin Oak Place (Source: Howarth Fisher and Associates).

Figure 12: On street parking along the Channel Highway frontage with a bus stop located within the on-street parking strip. There is 55.5 metres (approximately 9 spaces) of on street parking along the Channel Highway frontage - (Source: Howarth Fisher and Associates).

4.2 Previously Approved Development

The approved development on the Margate site required 231 spaces to be provided, as outlined in the supplementary proof of evidence, Michael Ball obo E Kalis v Kingborough Council, undertaken by Howarth Fisher and Associates. This can be found at Appendix B of this report.

The Kingborough Council, through the tribunal agreed to providing 81% of the overall parking requirements at the original application stage.

This parking allocation was associated with the following uses:

- Supermarket – 2500m^2
- Commercial office upper level – 1140m^2
- Specialty Shops (non-food) – 1400m^2

The parking requirements associated with the previously approved development are outlined below:

Calculation Based on the Table of the Report using KPA 2000, 4th amendment			
USES	AREA (m^2)	Parking Required	Parking Provided
16 x Retail	1140	84	68
Commercial	1140	26	21
Supermarket / major retail	2500	175	142
TOTAL	4780m^2	285 spaces	231 spaces

Table 2: Parking Allocations associated with the various land uses. Source: Kingborough City Council

As outlined in the correspondence sent through from the Council, the parking provision is 81% of the parking required. A proportional reduction of the parking required has been made to all the uses to calculate the number of parking spaces allocated to each of the land uses. However, although this consistent approach has not been assumed for stage 2, figures based on 81% requirement have been included for purposes of comparison.

4.3 Additional Parking Requirement - New Development

It is now acknowledged that some of the specialty shops in the proposed development are now going to be takeaway shops such as an Indian Restaurant, Subway, Chocolate shop and dental practitioners (7 medical staff). Revised calculations of the parking requirements associated with these uses are shown in the table 3 in the following pages. These land uses will rely on the temporary car park for parking.

4.3.1 Stage 1 – Parking Requirement

A series of plans have been developed to maximise parking opportunities on the site. The stage 1 car park has now been completed and shows that there are 91 car parking spaces with 4 accessible parking spaces set out on the site. There are also 4 motorcycle parking bays and and 2 bicycle racks, with each of them accommodating up to 4 bicycles present on site (total 8 bicycle racks). A copy of the as constructed plans can be found in Appendix A of this report.

4.3.2 Parking demand associated with the Dental Practice, Subway, Indian Restaurant, Chocolate Shop.

The following table outlines the additional requirement based on the additional floor areas and revised nonretail uses which were not considered in the original masterplan and are not associated with the stage 2 supermarket.

Land Use	**Parking Requirements based on KIPS**		**Total**
Old Hairdresser / Pharmacy Building			
Dental Practice **7 Healthcare Individuals**	5 spaces for each person providing health services		35 spaces
Tenancy Buildings A & B		**Original DA**	**Total Requirement**
Subway **94 m2**	15 for each 100m2 of floor area	4.2 spaces	10 spaces
Indian Restaurant **87 m2**	15 for each 100m2 of floor area	4 spaces	9 spaces
Chocolate Shop **96 m2**	15 for each 100m2 of floor area	4.6 spaces	10 spaces
Tenancy 10	15 for each 100m2 of floor area	Vacant assumed to be in line with the Original DA	
Tenancy 11	15 for each 100m2 of floor area	Vacant assumed to be in line with the Original DA	
Tenancy 14	15 for each 100m2 of floor area	Vacant assumed to be in line with the Original DA	
Tenancy 15	15 for each 100m2 of floor area	Vacant assumed to be in line with the Original DA	
Total Assumed Requirement			64 spaces

Table 3: Parking Requirements Margate Shopping Centre.

4.3.3 Proposed Parking Supply

A total provision of 98 spaces and 5 accessible bays will be provided on the site, this will provide an extra supply and will fully cover the parking supply for the Subway, Indian Restaurant, Chocolate Shop and the Dentist. There is no further proposal to provide additional take away shops and it is assumed that the four remaining tenancies will be office / retail uses as per the original application.

4.3.4 Accessible Bays

In addition, 5 accessible bays will be provided. These are located at the rear of the dental practice and near to the service bays and will be permanently located there (Notably this is not a temporary Car Park).

4.3.5 Motorcycle Bays

In line with the requirements of the Kingborough Interim Planning Scheme 4 additional motorcycle parking spaces have been provided as shown in the plans in Appendix A.

4.3.6 Kingborough Interim Planning Scheme, 2015, Requirements

The Kingborough Interim Planning Scheme, 2015, includes the following provision in relation to parking.

E6.6 Use Standards

E6.6.1 Number of Car Parking Spaces

Objective:	
To ensure that: (a) there is enough car parking to meet the reasonable needs of all users of a use or development, taking into account the level of parking available on or outside of the land and the access afforded by other modes of transport. (b) a use or development does not detract from the amenity of users or the locality by: (i) preventing regular parking overspill; (ii) minimising the impact of car parking on heritage and local character.	
Acceptable Solutions	Performance Criteria
A1 The number of on-site car parking spaces must be: (a) no less than the number specified in Table E6.1; except if: (i) the site is subject to a parking plan for the area adopted by Council, in which case parking provision (spaces or cash-in-lieu) must be in accordance with that plan;	**P1** The number of on-site car parking spaces must be sufficient to meet the reasonable needs of users, having regard to all of the following: (a) car parking demand; (b) the availability of on-street and public car parking in the locality; (c) the availability and frequency of public transport within a 400m walking distance of the site; (d) the availability and likely use of other modes of transport; (e) the availability and suitability of alternative arrangements for car parking provision; (f) any reduction in car parking demand due to the sharing of car parking spaces by multiple uses, either because of variation of car parking demand over time or because of efficiencies gained from the consolidation of shared car parking spaces; (g) any car parking deficiency or surplus associated with the existing use of the land;

	(h) any credit which should be allowed for a car parking demand deemed to have been provided in association with a use which existed before the change of parking requirement, except in the case of substantial redevelopment of a site; (i) the appropriateness of a financial contribution in lieu of parking towards the cost of parking facilities or other transport facilities, where such facilities exist or are planned in the vicinity; (j) any verified prior payment of a financial contribution in lieu of parking for the land; (k) any relevant parking plan for the area adopted by Council; (l) the impact on the historic cultural heritage significance of the site if subject to the Local Heritage Code; (m) whether the provision of the parking would result in the loss, directly or indirectly, of one or more significant trees listed in the Significant Trees Schedule.

Table 4: Number of Car Parking Spaces Requirements. (Source: Kingborough Interim Planning Scheme, 2015)

Table 5 below contains the information for parking space rates under the Kingborough Interim Planning Scheme, 2015. The sections overleaf will break down the parking requirements for each stage of the shopping centres opening.

4.3.7 Parking Supply

Provision has been made for a total of 98 parking spaces in a temporary car park which is the subject of this application associated with the:

- Chocolate shop,
- Dental Surgery,
- Subway and
- Indian Restaurant

In addition, there will also be 5 accessible parking spaces which will be permanent spaces located at the rear of the rear of the dental surgery / hair salon. These are marked on the plans located at Appendix A of this report. There will be a surplus of parking spaces provided.

4.4 Reducing the Demand for Travel

The site is located on a direct bus route linking the Channel area to Kingston and Hobart and therefore staff and visitors to the development have alternative means of transport to the

site. In addition, the site is in proximity to a local residential catchment, allowing users of the development access to the site by foot, scooter and bicycle. A local residential catchment is potentially going to be developed on the western side of the proposed development which again will provide a local centre for residents who are not going to be dependent on long distance car-based trips to access the stage 1 services.

The proposed development will allow the residents of Margate and the surrounding area to shop in a convenient accessible location. This proposed development will reduce the demand for travel to the major nearest supermarkets and retail centres of Kingston and Hobart. The development should lead to a reduction in demand for long distance travel along the Channel Highway for these types of trips. The provision of convenient and local centres is in accordance with the principles of sustainable development and will have positive environmental impacts.

The provision of local mixed-use developments in growing residential catchments, reducing the length of trips and provides users with alternative options for shopping, restaurants medical, pathology, dental and other retail and commercial uses.

The development of local mixed-use development, in the vicinity of the residential areas, is in line with sustainable transport practices and will ensure that the residents of Margate and those located south and north of Margate have a viable alternative option in regard to the specialty shops such as dental, medical, office and pathology services as well as a range of retail and take away developments.

A key policy objective is the integration of land use and transport planning through the creation of local centres thereby reducing the need to travel, especially by car, and this has been central to the best practice planning guidance. One of the means to achieving this objective has been through improving the choice of travel, via different modes of travel, by reducing trip lengths through land use planning decisions, and by limiting the use of the car through a range of demand management methods. People can easily walk, cycle and scooter reducing the demand on the Channel Highway especially northbound towards Kingston and Hobart.

From the evidence, there is a need for integration at the institutional level to achieve certain policy goals in terms of reducing emissions and reducing the demand for long distance travel. Providing local centres is fundamental to achieving integrated transport planning goals and in this case, reducing emissions and reducing congestion along the channel highway, Margate.

4.5 Dimensions and Manoeuvring

In line with the requirements of the Kingborough Interim Planning Scheme, 2015, the requirement for parking bay dimensions is given overleaf.

E6.7.5 Layout of Parking Areas

Objective:	
To ensure that parking areas for cars (including assessable parking spaces), motorcycles and bicycles are located, designed and constructed to enable safe, easy and efficient use.	
Acceptable Solutions	Performance Criteria
A1 The layout of car parking spaces, access aisles, circulation roadways and ramps must be designed and constructed to comply with section 2 "Design of Parking Modules, Circulation Roadways and Ramps" of AS/NZS 2890.1:2004 Parking Facilities Part 1: Off-street car parking and must have sufficient headroom to comply with clause 5.3 "Headroom" of the same Standard.	**P1** The layout of car parking spaces, access aisles, circulation roadways and ramps must be safe and must ensure ease of access, egress and manoeuvring on-site.

The dimensions of the parking bays within the site have been designed in accordance with the requirements of Woolworths which are essentially in line with the requirements of the Kingborough Interim Planning Scheme (5500mm long bays x 2600mm wide bays and 6500 aisles). These bay and aisle dimensions exceed the requirements of the AS2890.1: Off street parking 2004 and therefore the same as for the user class 3A parking bays which requires 2.6m wide bays, which are 5.4 metres long and 6.6m wide aisle.

This is essentially in line with the acceptable solution given the proposed cross section.

4.6 Bicycle Parking Requirements

4.6.1 Proposed Additional Bicycle Parking Development

The following bicycle parking provision would be needed (associated with the proposed additional new development on the site).

Land Use	*Bicycle Parking Rates*	*Bicycle Parking Spaces*	*Total Requirement (To the whole Number)*
Dental Practice 7 practitioners	***1 for each 8 practitioners Class 1 or 2***	***1 for each 4 practitioners Class 3***	*1 class 1 or 2 and 2 Class 3 spaces*
Shop Additional Take Away Floor Area 277m²	***1 for each 100m² of floor area available to the public Class 1 or 2***	***1 for each 50m² floor area Class 3***	*3 Class 1 or 2 and 6 Class 3 spaces*
TOTAL			***4 class 1 or 2 8 class 3***

Table 5: Bicycle Parking Bay Requirements Source: – Kingborough Interim Planning Scheme, 2015

The bicycle parking provision associated with the additional floor area associated with the newly proposed development exceeds the requirement of the Kingborough Interim Planning Scheme, 2015.

The classification for the bicycle parking is outlined overleaf:

Classification of Bicycle Parking Facilities

Class	Security Level	Description
1	High	Fully enclosed individual lockers
2	Medium	Locked compounds with communal access using duplicate keys
3	Low	Facilities to which the bicycle frame and wheels can be locked

Table 6: Classification of Bicycle Parking Facilities - Source: Kingborough Interim Planning Scheme, 2015.

There is a requirement for 4 fully enclosed individual lockers bicycle racks and 8 bike racks to which the bicycle frame and wheels can be locked to be provided on site.

No provision has been provided for the individual lockers (except those provided by council, bicycles racks will be provided, however, they will not be provided until the Stage 2 of this development).

The required number of bicycle racks have been provided in accordance with Kingborough Interim Planning Scheme 2015.

4.7 Accessible Parking

4.7.1 Stage 1

In line with the Kingborough Interim Planning Scheme, 2015 requirements the accessible parking bays have been provided in the vicinity of the supermarket and specialty shops in accordance with the NCC (BCA). There is a different requirement for number of accessible bays depending on the different class of the Building Use. The following table depicts different class use for different building types and calculates the total requirement for accessible parking bays.

Land Use	Parking Spaces Allotted	Parking Rates	Total Requirement
Retail Use Class 6 (Takeaway & Retail)	*30*	*1 for every 50 car parking bays for class 6 buildings*	1 accessible bay
Medical Use Class 9a (Dental Practice)	*35*	*1 accessible space for every 50 carparking spaces or part thereof*	1 accessible bay
TOTAL			**2 accessible spaces**

Table 7: Accessible Parking Requirements. (Source: Kingborough Interim Planning Scheme, 2015, National Construction Code).

There is a total of 5 accessible bays being provided on site behind the dentist. This is more than sufficient to fulfill the requirements of the Kingborough Interim Planning Scheme 2015's acceptable solution.

4.8 Motorcycle Parking

In line with the requirements of the Kingborough Interim Planning Scheme, 2015, the following additional motorcycle parking spaces are required:

E6.6.3 Number of Motorcycle Parking Spaces

Objective:	
To ensure enough motorcycle parking is provided to meet the needs of likely users of a use or development.	
Acceptable Solutions	Performance Criteria
A1 The number of on-site motorcycle parking spaces provided must be at a rate of 1 space to each 20 car parking spaces after the first 19 car parking spaces except if bulky goods sales, (rounded to the nearest whole number). Where an existing use or development is extended or intensified, the additional number of motorcycle parking spaces provided must be calculated on the amount of extension or intensification, provided the existing number of motorcycle parking spaces is not reduced.	**P1** The number of on-site motorcycle parking spaces must be sufficient to meet the needs of likely users having regard to all of the following, as appropriate: (a) motorcycle parking demand; (b) the availability of on-street and public motorcycle parking in the locality; (c) the availability and likely use of other modes of transport; (d) the availability and suitability of alternative arrangements for motorcycle parking provision.

Table 8: Motorcycle Parking Bay Requirements. (Source: Kingborough Interim Planning Scheme, 2015).

Given we are providing 98 new spaces there is requirement for 4 motorcycle bays. These have been provided in the new temporary car park.

4.9 Surface Treatment

The following section of the Kingborough Interim Planning Scheme, 2015, outlines the requirement regarding pavement sealing.

E6.7.6 Surface Treatment of Parking Areas

Objective:	
To ensure that parking spaces and vehicle circulation roadways do not detract from the amenity of users, adjoining occupiers or the environment by preventing dust, mud and sediment transport.	
Acceptable Solutions	Performance Criteria
A1 Parking spaces and vehicle circulation roadways must be in accordance with all of the following; (a) paved or treated with a durable all-weather pavement where within 75m of a property boundary or a sealed roadway; (b) drained to an approved stormwater system, unless the road from which access is provided to the property is unsealed.	**P1** Parking spaces and vehicle circulation roadways must not unreasonably detract from the amenity of users, adjoining occupiers or the quality of the environment through dust or mud generation or sediment transport, having regard to all of the following: (a) the suitability of the surface treatment; (b) the characteristics of the use or development; (c) measures to mitigate mud or dust generation or sediment transport.

Table 9: Surface Treatment of Parking Areas Requirements – (Source: Kingborough Interim Planning Scheme 2015).

The car parking areas will be fully sealed and drained appropriately and will be in line with the acceptable solution.

4.10 Siting of Parking Area

E6.7.12 Siting of Car Parking

Objective:	
To ensure that the streetscape, amenity and character of urban areas is not adversely affected by siting of vehicle parking and access facilities.	
Acceptable Solutions	Performance Criteria
A1 Parking spaces and vehicle turning areas, including garages or covered parking areas in the Inner Residential Zone, Urban Mixed Use Zone, Village Zone, Local Business Zone and General Business Zone must be located behind the building line of buildings located or proposed on	**P1** Parking spaces and vehicle turning areas, including garages or covered parking areas in the Inner Residential Zone, Urban Mixed Use Zone, Village Zone, Local Business Zone and General Business Zone may be located in front of the building line where topographical or other site constraints dictate that this is the only practical
in front of the building line of a shopping centre.	solution because of one or more of the following: (a) there is a lack of space behind the building line to enable compliance with A1; (b) it is not reasonably possible to provide vehicular access to the side or rear of the property; (c) the gradient between the front and the rear of existing or proposed buildings is more than 1 in 5; (d) the length of access or shared access required to service the car parking would constitute more than 75% of the depth of the relevant lot; (e) the access driveway cannot be located at least 2.5 m from a habitable room window of a building defined as a residential building in the Building Code of Australia;

	(f) the provision of the parking behind the building line would result in the loss of landscaped open space and gardens essential to the values or character of a Heritage Place or Precinct listed in the Heritage Code in this planning scheme; (g) the provision of the parking behind the building line would result in the loss directly or indirectly of one or more significant trees listed in the Significant Trees Code in this planning scheme, and only if designed and located to satisfy all of the following: (i) does not visually dominate the site; (ii) maintains streetscape character and amenity; (iii) does not result in a poor quality of visual or audio amenity for the occupants of immediately adjoining properties, having regard to the nature of the zone in which the site is located and its preferred uses; (iv) allows passive surveillance of the street.

Table 10: Siting of Car Parking Area Requirements - (Source: Kingborough Interim Planning Scheme 2015).

The parking is in line with the acceptable solution given it is located behind the building line.

4.11 Lighting of Car Parking

In line with the provisions of the Kingborough Interim Planning Scheme, 2015, the following lighting requirements are required.

E6.7.7 Lighting of Parking Areas

Objective:	
To ensure parking and vehicle circulation roadways and pedestrian paths used outside daylight hours are provided with lighting to a standard which: (a) enables easy and efficient use; (b) promotes the safety of users; (c) minimises opportunities for crime or anti-social behaviour; and (d) prevents unreasonable light overspill impacts.	
Acceptable Solutions	Performance Criteria
A1 Parking and vehicle circulation roadways and pedestrian paths serving 5 or more car parking spaces, used outside daylight hours, must be provided with lighting in accordance with clause 3.1 "Basis of Design" and clause 3.6 "Car Parks" in AS/NZS 1158.3.1:2005 Lighting for roads and public spaces Part 3.1: Pedestrian area (Category P) lighting.	**P1** Parking and vehicle circulation roadways and pedestrian paths used outside daylight hours must be provided with lighting to a standard which satisfies all of the following: (a) enables easy and efficient use of the area; (b) minimises potential for conflicts involving pedestrians, cyclists and vehicles; (c) reduces opportunities for crime or anti-social behaviour by supporting passive surveillance and clear sight lines and treating the risk from concealment or entrapment points; (d) prevents unreasonable impact on the amenity of adjoining users through light overspill; (e) is appropriate to the hours of operation of the use.

Table 11: Lighting of Parking Areas Requirements - Source: Kingborough Interim Planning Scheme, 2015.

The car park will be lit in accordance with AS/NZS:1158.3.1:2005 as outlined in the Kingborough Interim Planning Scheme, 2015, given that the supermarket and some other land uses will be typically open in the evening. The lighting design will be designed by others.

4.12 Design of Motorcycle Parking Bays

The Kingborough Interim Planning Scheme, 2015, has the following requirement for the design of motorcycle parking areas:

E6.7.9 Design of Motorcycle Parking Areas

Objective:	
To ensure that motorcycle parking areas are located, designed and constructed to enable safe, easy and efficient use.	
Acceptable Solutions	Performance Criteria
A1 The design of motorcycle parking areas must comply with all of the following: (a) be located, designed and constructed to comply with section 2.4.7 "Provision for Motorcycles" of AS/NZS 2890.1:2004 Parking Facilities Part 1: Off-street car parking; (b) be located within 30 m of the main entrance to the building.	**P1** The design of motorcycle parking areas must provide safe, obvious and easy access for motorcyclists having regard to all of the following: (a) providing clear sightlines from the building or the public road to provide adequate passive surveillance of the parking facility and the route from the parking facility to the building; (b) avoiding creation of concealment points to minimise the risk.

Table 12: Design of Motorcycle Parking Areas Requirements - Source: Kingborough Interim Planning Scheme, 2015

Motorcycle parking areas have been designed in accordance with the requirements of the Kingborough Interim Planning Scheme. There are 4 spaces provided.

The motorcycle parking requirement is in line with the acceptable solution.

5. Assessment of Trip Generation

5.1 Trip Rates

Given this was a greenfield site there were no existing trips to this site.

5.2 Trip Generation Rates - Original Development Application

The following trip generation rates were calculated based on the original development application. The floor areas which were approved are as follows:

- Supermarket 2500m^2
- Specialty shops 1396m^2
- Commercial offices 1140m^2

It was agreed that there would be 194 trips as per the previous application. Refer the previous traffic impact assessment.

5.3 Proposed Additional Trip Generation Rates

The additional components of the extended land uses comprise the following:

- Dental Practice – 7 medical staff (377m^2)
- Take aways / food uses – 277m^2

5.3.1 Calculated Trips and Revised Total Trips - NSW, RMS, TDT 2013 /04a

The revised trip generation rates, associated with the proposed development are outlined below. In line with the standard traffic engineering practice, an assessment of trip generation has been made against the current NSW, Transport, Roads and Maritime Services, Guide to Traffic Generating Developments, which is a nationally recognised reference document used to determine typical trip generation rates. The updated NSW, Transport Roads and Maritime Services, Guide to Traffic Generating Developments, TDT 2013/04a, provides guidance on trip generation of shopping centres. The anticipated trip generation based on the given land uses are tabulated below.

The worst-case weekday scenario of Friday has been used in the calculation (when there is a corresponding high evening peak traffic volume on the Channel Highway).

5.3.2 Shopping Centres

Trip generation rates for shopping centres are typically based on Gross Leasable Floor Area (GLFA), as defined in the NSW RTA Guide to Traffic Generating Developments (2002). GLFA refers to the area available for tenant occupancy, excluding stairs, lifts, plant rooms and common public spaces. This provides a more accurate reflection of trip-generating activity compared to Gross Floor Area (GFA).
As a general benchmark, a rate of 12.5 vehicle trips per 100 m² GLFA is applied during the weekday evening peak hour (assumed Friday evening peak hour) for small to medium-scale centres.

GLFA is approximately 75% of Gross Floor Area (GFA)

Trip Rate = 12.5 trips/100m^2

12.5 V(P)A Friday – GLFA – 75% (vehicles per 100m^2 GLFA).

(Area of the Dental Practice + Area of takeaways) x 0.75 = (Gross Leasable Floor Area GLFA)

Total Floor Area = (377 m^2 + 277m^2) = 654

GLFA = 654 x 0.75 = 490.5m^2

Total Trip Rates

12.5% x 490.5 = 61 trips during the evening peak hour

The four tenancies are likely to generate 61 trips during the evening peak hour. The four tenancies would be accommodated at the roundabout forming the intersection of Beach Road, Pin Oak Place, given the previous approval included the trip generation for the supermarket.

A further discount has been applied to account for the occurrence of linked and multipurpose trips, which reduce overall trip generation rates. A linked trip is one taken as a secondary activity—for example, visiting the shopping centre on the way home from work. A multipurpose trip involves visiting multiple destinations in a single journey, such as seeing a dentist and collecting mail from the post office before returning home.

The likelihood of such trips depends on the surrounding road network and land use mix. In this case, the site is located on an arterial road with high traffic volumes, increasing the likelihood of linked or multipurpose visits. As per the NSW RTA Guide to Traffic Generating Developments (2002), a 25% reduction is typically applied for shopping centres with a GLFA under 10,000 m² to reflect this trip behaviour. The table below applies this 25% discount to the peak hour trip estimate

Land Use	**Peak hour generation rates Friday worst case**	**TOTAL**
V(P)A	**12.5 x 4.9= 61.25**	
Multipurpose and linked trip discount	25% discount for shopping centres less than 10,000 GLFA associated with linked and multipurpose trips.	61 x 0.75 = 46 (45.75) trips
TOTAL		**46 Trips**

Table 13: Trip Generation Rates – NSW, RMS, TDT 2013 / 04a – Shopping Centres

5.3.3 Kingborough Interim Planning Scheme, 2015

The Channel Highway is defined as a category 3 road under the definitions of the State Road Hierarchy; it is therefore a major road. Given that the increased trip generation exceeds the acceptable solution, the trip generation has been assessed against the requirements of the performance criteria:

Vehicular traffic to and from a site must minimise any adverse effects on the safety of a junction, vehicle crossing or level crossing or safety or efficiency of the road or rail network, having regard to

a) *Any increase in traffic caused by the use;*

Based on the NSW, RMS, TDT 2013/04a there will be an additional 46 trips per hour associated with the proposed development.

The proposed development will allow local people to shop and use other services (such as medical, dentists, pathology, take away) in a convenient accessible location. This proposed development will reduce the demand for travel to the nearest retail and commercial and service centres of Kingston and Hobart. The development should lead to a reduction in demand for long distance travel along the Channel Highway. The provision of convenient and local centres is in accordance with the principles of sustainable development and will have positive environmental impacts, reduce length of trips and vehicle emissions and provide people with an option to walk, cycle and or scooter to shops and services from the large and growing residential catchment in and around Margate.

b) *The nature of the traffic generated by the use;*

The traffic associated with the four tenancies subject to use by the development will be predominantly local light vehicle movements. There is a local residential catchment of anticipated users of the proposed shopping Centre. There will be limited servicing associated with the development site which will all use the servicing facility in the vicinity of the dental practice at the rear of the Channel Highway.

c) *The nature of the road;*

The Channel Highway, Margate is a category 3 road and therefore is defined as a major road under the definitions of the planning scheme. The road provides a major through traffic movement linking the Channel area with Kingston and Hobart and the north, however, in the vicinity of the centre of Margate it also does provide an access function, given the linear commercial and shopping development which already exists and has frontage along the Channel Highway, Margate.

Pin Oak Place which provides access to the site, is a local access road and will provide access to the off street car park serving the temporary car park.

d) *The speed limit of the road;*

The Channel Highway is subject to a 50km/hr speed limit within the vicinity of the proposed site. Pin Oak Place will also be subject to the urban default speed limit of 50km/hr.

The car park will be subject to the urban default speed limit.

e) Any alternative access to the road;

There access from Pin Oak Drive is the sole access to the site.

f) The need for the use;

The Margate Shopping Centre will provide local shopping facilities for the people residing in Margate and will reduce the demand for longer distance trips on the Channel Highway for dental, take away, and other shops and services. As a minimum there is a 16-minute round trip of 14.2 kilometres between the centres of Margate and Kingston and a 13-minute one way bus trip (26 minutes travel as a round trip via bus, plus waiting time) to access similar shops and services.

g) *Any traffic impact assessment*
This report constitutes a Traffic Impact Assessment

h) Any advice received from the rail or road authority.
There has been a previous approval to use the light vehicle access associated with stage 1 of the development associated with the previous development application.

5.4 Proposed Trip Generation

The revised trip generation rates, associated with the proposed development are outlined below. In line with the standard traffic engineering practice, an assessment of trip generation has been made against the NSW, Transport Roads, and Maritime Services Guide to Traffic Generating Developments, which is a nationally recognised reference document used to determine typical trip generation rates. The updated NSW, Transport Roads and Maritime Services, Guide to Traffic Generating Developments, TDT 2013/04a, provides guidance on trip generation of mixed land use facility. The anticipated trip generation based on the given land uses are tabulated below.

As stated in the NSW, RTA, Guide to Traffic Generating Developments, 2002:

'Gross leasable floor area is preferred to gross floor area for this land use category, because it refers most specifically to the factor that generates / attracts trips. The term gross leasable floor area means the sum of the areas at each floor of a building. In this instance, the area of each floor is taken to be the area within the internal faces of the walls, excluding stairs, amenities, lifts, corridors and other public areas, but excluding all stock storage areas. As a guide, about 75% of the gross floor area is deemed gross leasable floor area. However, this percentage can vary substantially between developments.'

5.5 Linked and Multi-Purpose Trips Discounts

The development is situated in an area where there are likely to be a significant number of linked and multipurpose trips. As outlined in the RTA Guide to Traffic Generating Developments,

The incidence of linked and multi-purpose trips can reduce overall trip generation rates. A linked trip is a side track from another trip, for example, a person calling in the centre on the way home from work. A multi-purpose trip is where more than one shop or facility is visited. (A discount of 25% is recommended for centres with less than 10,000 m^2 GLFA). The site, by concentrating shops and services, will act as a 'one stop mixed use development' centre providing possibly supermarket, specialty shops and service providers. By concentrating these outlets, it should contain and minimise trip generation. Arguably, based on the location and proximity of the site to a significant number of employers, schools, and a local and expanding residential catchment the number of linked and multi-purpose trips may be higher in which case the number of new trips would reduce further.

The Margate Shopping Centre site is in proximity to a large residential catchment as well as several major employers such as schools, leisure facilities and services. By locating Margate Shopping Centre in an existing local centre, it will encourage a further mix of land uses. Developments such as the Margate Shopping Centre can help to reduce the need to travel and reduce the length of car journeys, (by reducing the physical separation of key land uses,) and enable people to make more sustainable transport choices.

The Margate Shopping Centre development will help to reduce the need to travel, reduce the length of journeys and make it safer and easier for people to access jobs, shopping, leisure facilities and service by public transport, walking and cycling.

Focussing major generators of transport in town centres is following the principles of sustainability, and realising the objectives stipulated in the Kingborough Interim Planning Scheme, this will minimise the extent of long-distance commuting for services and required by the local population in and around Margate.

The Margate Shopping Centre development comprises shopping, leisure and services and offers a realistic choice of access by public transport, walking and cycling. In small town areas, like Margate it is preferable to locate most development in local service centres to act as a focal point for and provide opportunities to utilise more sustainable transport modes.

The site has provided good pedestrian areas linked to a good network of footpaths. It is located in a shopping zone with a reduced posted speed limit which provides for safe pedestrian crossing opportunities and access.

Low speed limits have been proposed through the car park to maintain pedestrian safety and amenity. Furthermore, pedestrian crossing facilities have been proposed through the car park. There are also dedicated pedestrian links through the site to the Channel Highway.

6. Assessment of Access

6.1 Existing Situation Access

6.1.1 Roundabout Access

A roundabout forming the intersection of Channel Highway / Beach Road / Pin Oak Place and BP service station, forms the main access into the site via Pin Oak Place. The roundabout is shown in the photograph below:

Figure 13: Roundabout on Channel Highway, providing access to the site via Pin Oak Place

6.1.2 Pin Oak Place

There is one crossovers, into the original approved site off Pin Oak Drive.

Figure 14: Access and egress to the site via Pin Oak Place for light vehicles and service vehicles

6.2 Planning Scheme - Access Widths Requirement

The development has been assessed in accordance with clause E6.7.2 of the Kingborough Interim Planning Scheme, 2015, outlined below:

E6.7.2 Design of Vehicular Accesses

Objective:	
To ensure safe and efficient access for all users, including drivers, passengers, pedestrians and cyclists by locating, designing and constructing vehicle access points safely relative to the road network.	
Acceptable Solutions	Performance Criteria
A1 Design of vehicle access points must comply with all of the following: (a) in the case of non-commercial vehicle access; the location, sight distance, width and gradient of an access must be designed and constructed to comply with section 3 – "Access Facilities to Off-street Parking Areas and Queuing Areas" of AS/NZS 2890.1:2004 Parking Facilities Part 1: Off-street car parking; (b) in the case of commercial vehicle access; the location, sight distance, geometry and gradient of an access must be designed and constructed to comply with all access driveway provisions in section 3 "Access Driveways and Circulation Roadways" of AS2890.2 - 2002 Parking facilities Part 2: Off-street commercial vehicle facilities.	**P1** Design of vehicle access points must be safe, efficient and convenient, having regard to all of the following: (a) avoidance of conflicts between users including vehicles, cyclists and pedestrians; (b) avoidance of unreasonable interference with the flow of traffic on adjoining roads; (c) suitability for the type and volume of traffic likely to be generated by the use or development; (d) ease of accessibility and recognition for users.

Table 14: Access Requirements – Source: Kingborough Interim Planning Scheme, 2015.

The car park has been designed to comply with the requirements of AS/NZS 2890.1: 2004 Parking in terms of widths, the sight distance is constrained by the geometric design of the road network but is nonetheless maximised given the location of the roundabout on the Channel Highway. There is no issue with gradients at the proposed access locations.

Given the constraints of the site the car park layout cannot fully meet the design requirements of AS2890.1:2004 and AS2890.2:2002, therefore, the performance criteria have been addressed below:

Design of vehicle access points must be safe, efficient, and convenient, having regard to all the following:

a) *Avoidance of conflicts between users, including vehicles, cyclists and pedestrians.*

The light and heavy vehicle access has been segregated to provide a safer environment for pedestrians, cyclists and vehicles. There are dedicated footpaths throughout the car park which can be used providing segregation within the car park.

b) *Avoidance of unreasonable interference with the flow of traffic on adjoining roads.*

A new access will be via a newly constructed access off Pin Oak Place to provide a segregated service vehicle access. Pin Oak Place is a low volume road, and the new access way has no existing flows along its length.

The roundabout forming the access of Pin Oak Place, Beach Road and the northern and southern legs of the Channel Highway all provide high level intersection treatments.

c) *Suitability for the type and volume of traffic likely to be generated by the use or development.*

Autotrack has been used to check the access design and has informed decisions based on the maximum vehicle size utilising the access and development. These Autotrack paths are shown on the plans at Appendix A of this report.

d) *Ease of accessibility and recognition for users.*

Signage advising road users of the proposed development and road line marking in accordance with the Australian Standards, will be used to designate the accesses in line with standard practice.

6.3 Planning Scheme - Vehicle Accesses Requirement

The Kingborough Interim Planning Scheme – 2015 outlines the following clause in relation to the access provision.

E6.7.1 Number of Vehicular Accesses

Objective:	
To ensure that: (a) safe and efficient access is provided to all road network users, including, but not limited to: drivers, passengers, pedestrians, and cyclists, by minimising: (i) the number of vehicle access points; and (ii) loss of on-street car parking spaces; (b) vehicle access points do not unreasonably detract from the amenity of adjoining land uses; (c) vehicle access points do not have a dominating impact on local streetscape and character.	
Acceptable Solutions	Performance Criteria
A1 The number of vehicle access points provided for each road frontage must be no more than 1 or the existing number of vehicle access points, whichever is the greater.	**P1** The number of vehicle access points for each road frontage must be minimised, having regard to all of the following: (a) access points must be positioned to minimise the loss of on-street parking and provide, where possible, whole car parking spaces between access points; (b) whether the additional access points can be provided without compromising any of the following: (i) pedestrian safety, amenity and convenience; (ii) traffic safety; (iii) residential amenity on adjoining land; (iv) streetscape; (v) cultural heritage values if the site is subject to the Local Historic Heritage Code; (vi) the enjoyment of any 'al fresco' dining or other outdoor activity in the vicinity.

Table 15: Number of Vehicle Access Requirements – Kingborough Interim Planning Scheme, 2015

The new car park can be accessed from Pin Oak Place, which is a low volume road, and thus can be used by light vehicles and service vehicles to access the developments.

An assessment against the performance criteria has therefore been undertaken:

The number of accesses for each frontage must be minimised, having regard to:

a) Any loss of on street parking: and

There will be no loss of on street parking resulting from the provision of the crossover on Pin Oak Place, given there is no on street parking located on the side of Pin Oak Place where the accesses will be sited.

b) Whether the additional access points can be provided without compromising:

i) Pedestrian safety, amenity and convenience:

A dedicated pedestrian connection will be provided between the Channel Highway and the proposed development site as shown in Appendix A of this report. Pedestrian access to the site is provided by means of a new footpath and forecourt linking the Channel Highway tenancies to the various specialty shops and the dental practice. The access provision has been segregated within the car park between some aisles and there are a few dedicated pedestrian crossing opportunities provided.

ii) Traffic safety;

The access arrangement will accommodate a single entry point to the site, supporting the movement of Medium Rigid Vehicles (MRVs) or Small Rigid Vehicles (SRVs) only as well as B99 vehicles. These vehicles will use the designated access from Pin Oak Place, which connects to a low-volume road. This change reflects the current operational needs and continues to support traffic safety by limiting heavy vehicle movements and reducing potential conflicts between service vehicles and other site users.

iii) Residential amenity on adjoining land; and

This is not applicable in this instance. The temporary car park adjoins commercial land.

iv) Streetscape.

The implementation of the access will have minimal impact on streetscape.

v) Cultural heritage values if the site is subject to the local historical heritage code.

Not applicable

vi) The enjoyment of any al fresco dining or any other outdoor activity in the vicinity.

Not applicable

6.4 Planning Scheme – On Site Turning Requirement

The Kingborough Interim Planning Scheme, 2015, makes the following provisions with regards on site turning.

E6.7.4 On-Site Turning

Objective:	
To ensure safe, efficient and convenient access for all users, including drivers, passengers, pedestrians and cyclists, by generally requiring vehicles to enter and exit in a forward direction.	
Acceptable Solutions	Performance Criteria
A1 On-site turning must be provided to enable vehicles to exit a site in a forward direction, except where the access complies with any of the following: (a) it serves no more than two dwelling units;	**P1** On-site turning may not be required if access is safe, efficient and convenient, having regard to all of the following: (a) avoidance of conflicts between users including vehicles, cyclists, dwelling occupants and pedestrians; (b) avoidance of unreasonable interference with the flow of traffic on adjoining roads; (c) suitability for the type and volume of traffic likely to be generated by the use or development; (d) ease of accessibility and recognition for users; (e) suitability of the location of the access point and the traffic volumes on the road.

Table 16: On Site Turning Requirements – Kingborough Interim Planning Scheme, 2015

The development is in line with the acceptable solution given all vehicles can enter and exit the site in a forward direction.

6.5 Access to a Road

The Kingborough Interim Planning Scheme, 2015, makes the following provision regarding access to a road.

E6.7.14 Access to a Road

Objective:	
To ensure that access to the road network is provided appropriately.	
Acceptable Solutions	Performance Criteria
A1 Access to a road must be in accordance with the requirements of the road authority.	**P1** No Performance Criteria.

Table 17: Access to a Road – Kingborough Interim Planning Scheme, 2015

Access to Pin Oak Place is provided by a single crossover designed in accordance with Australian Standards. The current arrangement includes the use of a roundabout, as only Medium Rigid Vehicles (MRVs) or Small Rigid Vehicles (SRVs) are anticipated to service the service site. The single access point into the car park was approved at the original appeal.

6.5.1 Roundabout

The use of the roundabout was agreed upon during the initial appeal process and site servicing will be limited to Medium Rigid Vehicles (MRVs) or Small Rigid Vehicles (SRVs), which will utilise the single approved access point via Pin Oak Place.

7. Assessment of Sight Distance

7.1 Sight Distance Measurements

7.1.1 Pin Oak Place access

The sight distance at the intersection of Pin Oak Place and the development access have been assessed as follows;

Figure 15: Sight distance at the Pin Oak Place access was measured to be 61.7 metres to the east.

Figure 16: Sight distance at the Pin Oak Place access was measured to be 34.9 metres to the west at the end of the turning head.

7.2 Kingborough Interim Planning Scheme, 2015 Requirements

7.2.1 Sight Distance Requirements

All accesses have been assessed in relation to the sight distance requirements of the Kingborough Interim Planning Scheme, 2015 as outlined below:

Where:

(a) Vehicle speed is the actual or recorded speed of traffic passing along the road and is the speed at or below which 85% of passing vehicles travel.

(b) For Safe Intersection Sight Distance:

(i) All sight lines (driver to object vehicle) are to be between points 1.2m above the road and access surface at the respective vehicle positions with a clearance to any sight obstruction of 0.5m to the side and below, and 2.0m above all sight lines;

(ii) These sight line requirements are to be maintained over the full sight triangle for vehicles at any point between positions 1, 2 and 3 in Figure E5.1 and the access junction;

(iii) A driver at position 1 must have sight lines to see cars at any point between the access and positions 3 and 2 in Figure E5.1;

(iv) A driver at any point between position 3 and the access must have sight lines to see a car at position 4 in Figure E5.1;

(v) A driver at position 4 must have sight lines to see a car at any point between position 2 and the access in Figure E5.1; and

(vi) The distance of a driver from the conflict point in Figure E5.1 (X), is a minimum of. 7m for category 1 roads and category 2 roads, and 5m for all other roads.

Figure E5.1 Sight Lines for Accesses and Junctions

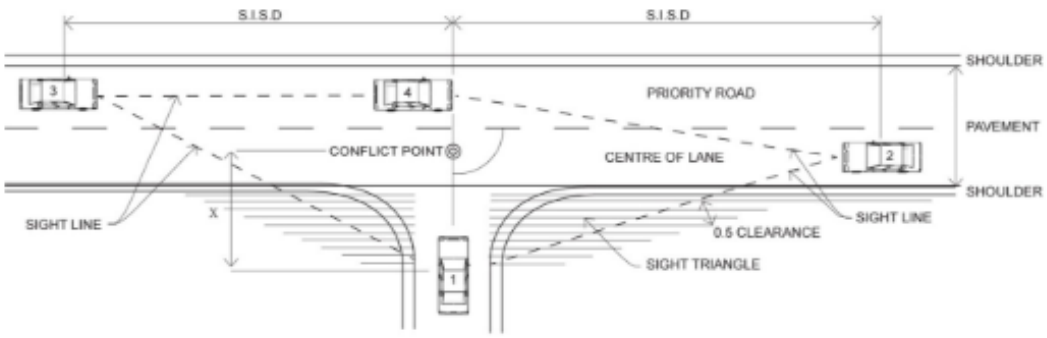

Figure 17: Sight distance requirements - Kingborough Interim Planning Scheme, 2015.

E5.6.4 Sight distance at accesses, junctions and level crossings

Objective:	
To ensure that accesses, junctions and level crossings provide sufficient sight distance between vehicles and between vehicles and trains to enable safe movement of traffic.	
Acceptable Solutions	Performance Criteria
A1 Sight distances at: (a) an access or junction must comply with the Safe Intersection Sight Distance shown in Table E5.1; and (b) rail level crossings must comply with AS1742.7 Manual of uniform traffic control devices - Railway crossings, Standards Association of Australia.	**P1** The design, layout and location of an access, junction or rail level crossing must provide adequate sight distances to ensure the safe movement of vehicles, having regard to: (a) the nature and frequency of the traffic generated by the use; (b) the frequency of use of the road or rail network; (c) any alternative access; (d) the need for the access, junction or level crossing; (e) any traffic impact assessment; (f) any measures to improve or maintain sight distance; and (g) any written advice received from the road or rail authority.

Table E5.1 Safe intersection sight distance

Vehicle Speed	Safe Intersection Sight Distance in metres, for speed limit of:	
km/h	60 km/h or less	Greater than 60 km/h
50	80	90
60	105	115

Table 18: Sight distance at access (Source: Kingborough Interim Planning Scheme, 2015).

The sight distances at the Pin Oak Place access are only limited due to the road configuration and the proximity of the site to the Channel Highway roundabout. Notwithstanding that the intent of the planning scheme has been met, given the road length is not 80metres, the performance criteria has been addressed.

Therefore, the following performance criteria of clause E5.6.4 has been assessed for the Pin Oak Place access:

a) *The nature and frequency of the traffic generated by the use;*

The major traffic movement will be by light vehicles entering and egressing the Margate shopping centre. Vehicles will be entering or exiting the shopping centre from the roundabout which forms the intersection of Beach Road / Channel Highway and Pin Oak Place. The site will be serviced by a maximum Medium Rigid Vehicle typically related to a refuse collection vehicle using the servicing area at the rear of Buildings B and the dental surgery as shown in the Autotrack in Appendix A.

b) *the frequency of use of the road or rail network;*

Based on trip generation calculation for the four tenancies, which are subject to this application, it is assumed that there will be in the order of 46 trips during the evening peak hour in and out of the access.

c) *Any alternative access;*

There is no alternative access to the site. The development will be serviced via a single access point from Pin Oak Place, which has been designed in accordance with Australian Standards. The access will accommodate MRVs, SRVs and Light Vehicles only

d) *The need for the access, junction or level crossing;*

The need for the access remains justified given the approved specialty shop and the dental practice development, the increased trip generation, and the existing car parking demand. The single access point enables safe and functional entry and exit to the site, including servicing by MRVs/SRVs and It continues to meet operational requirements while maintaining safety and efficiency for all vehicle types expected on-site.

e) *Any traffic impact assessment;*

This report constitutes a traffic impact assessment.

f) *Any measures to improve or maintain sight distance; and*

This is the maximum sight distance that can be obtained given the road configuration.

g) *Any written advice received from the road or rail authority.*

There has been a previous approval to use the light vehicle access associated with stage 1 of the development associated with the previous development application.

8. Service Vehicles

8.1 Planning Scheme – Kingborough, 2015

In line with the provision of the Kingborough Interim Planning Scheme, 2015, the Autotrack paths have been undertaken by Howarth Fisher and Associates and can be found at **Appendix A** of this report.

Service vehicle access has been assessed for various design vehicles assumed to be utilised for the proposed land uses.

The following vehicle paths have been assessed and checked.

- 8.8m (MRV) to the rear loading dock near to the building A and B on the Channel Highway.
- Light Vehicle (B99) into the main car park and accessing into the other sections of the site.

Autotrack has been used to demonstrate the swept paths for the various vehicle types throughout the car park and within the site.

Given the site constraints it is not possible to provide loading bays that are in accordance with AS2890.2- 2018, the loading bay designs are therefore assessed under the performance criteria and provide functional and effective service provision.

19.3.4 Commercial Vehicle Movements

Objective:	
To ensure that commercial vehicle movements not have unreasonable impact on residential amenity on land within a residential zone.	
Acceptable Solutions	Performance Criteria
A1 Commercial vehicle movements, (including loading and unloading and garbage removal), to or from a site within 50 m of a residential zone must be within the hours of: (a) 7.00 am to 5.00 pm Mondays to Fridays inclusive; (b) 9.00 am to 12 noon Saturdays; (c) Nil Sundays and Public Holidays.	**P1** Commercial vehicle movements, (including loading and unloading and garbage removal), to or from a site within 50 m of a residential zone must not result in unreasonable adverse impact upon residential amenity having regard to all of the following: (a) the time and duration of commercial vehicle movements; (b) the number and frequency of commercial vehicle movements; (c) the size of commercial vehicles involved; (d) the ability of the site to accommodate commercial vehicle turning movements, including the amount of reversing (including associated warning noise); (e) noise reducing structures between vehicle movement areas and dwellings; (f) the level of traffic on the road; (g) the potential for conflicts with other traffic.

Table 19: Commercial Vehicle Movements Requirements – Source: Kingborough Interim Planning Scheme, 2015.

Given the development's commercial vehicle zone is not located within 50metres of a residential zone the conditions for loading will be in line with the acceptable solution.

8.2 Facilities for Commercial Vehicles

Based on the Kingborough Interim Planning Scheme, 2015, in relation to facilities for commercial vehicles:

E6.7.13 Facilities for Commercial Vehicles

Objective:	
To ensure that facilities for commercial vehicles are provided on site, as appropriate.	
Acceptable Solutions	Performance Criteria
A1 Commercial vehicle facilities for loading, unloading or manoeuvring must be provided on-site in accordance with Australian Standard for Off-street Parking, Part 2 : Commercial. Vehicle Facilities AS 2890.2:2002, unless: (a) the delivery of all inward bound goods is by a single person from a vehicle parked in a dedicated loading zone within 50 m of the site; (b) the use is not primarily dependent on outward delivery of goods from the site.	**P1** Commercial vehicle arrangements for loading, unloading or manoeuvring must not compromise the safety and convenience of vehicular traffic, cyclists, pedestrians and other road users.

Table 20: Facilities for Commercial Vehicle Requirements – Source: Kingborough Interim Planning Scheme, 2015.

Loading bays must have an area and dimensions suitable for the use, having regard to:

Each loading dock has been designed to accommodate the largest vehicle which is assumed to use it and are largely in line with the acceptable solution.

The land uses are predominantly retail, with a mix of specialty shops and commercial tenancies. These uses are expected to generate service vehicle trips primarily by Medium Rigid Vehicles (MRVs) and Small Rigid Vehicles (SRVs), in line with the scale and operational needs of the development as a maximum.

It is anticipated that there will be approximately 4–6 MRV/SRV movements per day to service the various tenancies. The smaller commercial operators located near the Channel Highway frontage are likely to generate an additional 1–2 service vehicle trips per day. Refuse collection is expected to occur up to twice weekly, typically serviced by an 8.8m MRV via the Channel Highway frontage.

9. Sustainable Transport

9.1 Buses

The site is well served by high frequency public transport. The closest bus stop is located on the frontage road of the proposed development site. The following link provides timetable information for the 412 (Margate to Hobart), 413 (Snug to Hobart), 415 (Woodbridge to Hobart), 416 (Middleton to Hobart), 417 (Gordon to Hobart) and the express bus service X13 from Snug to Hobart.

Figure 18: Bus stop located on Channel Highway for bus service towards Hobart. Building frontage is directly behind this stop.

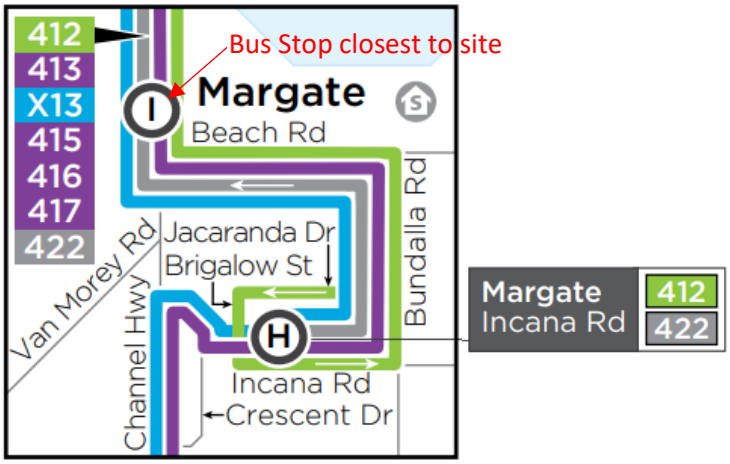

Figure 19: Map showing bus network around the proposed development – Metro Tasmania

The Metro bus service schedule is summarised below and can also be viewed via the following link: DSG_tt_411_web_20220925.pdf (metrotas.com.au)

- The 412 Metro bus service between Margate and Hobart includes 40-minute services between 7:30am and 9:00pm, Monday through Friday. The bus service reduces to an hourly bus service on Saturdays and Sundays. The Saturday bus service operates between 6:13pm and 9:40pm, whilst the Sunday service includes two bus services at 6:50pm and 8:00pm.
- The 413 Metro bus service between Snug and Hobart includes a service every 2.5 hours between 7:00am and 5:15pm, Monday through Friday. With a reduced schedule to every 4 hours between 10:15am and 14:15pm on Saturday and Sunday.
- The 415 Metro bus service between Woodbridge and Hobart includes 2 services per day on weekdays. These bus services are scheduled at 9:47am and 3:35pm. There are two bus services on the weekends which are scheduled for 8:40am and 5:15pm/1:16pm for Saturday and Sunday respectively.
- The 416 Metro bus service between Middleton and Hobart includes 1 trip per day which leaves Middleton at 6:25am on all weekdays excluding Wednesday.
- The 417 Metro bus service between Gordon and Hobart includes 1 trip per day which leaves Gordon at 7:28am on all weekdays excluding Wednesday.
- The X13 Metro bus service between Snug and Hobart includes 2 services per weekday which are scheduled at 6:40am and 7:15am. This service operates as an express service between Snug and Hobart which bypasses Kingston town.

	Bus Services		
Period	Weekdays	Saturday	Sunday
6am – 7am	3	-	-
7am – 8am	10	-	-
8am – 9am	4	1	-
9am – 10am	4	1	1
10am – 11am	2	3	1
11am – 12pm	2	1	1
12pm – 1pm	3	3	1
1pm – 2pm	2	1	1
2pm – 3pm	5	3	1
3pm – 4pm	6	1	1
4pm – 5pm	6	3	1
5pm – 6pm	5	2	-
6pm – 7pm	5	2	2
7pm – 8pm	2	3	2
8pm – 9pm	2	2	-

Table 21: Bus services travelling through Margate throughout the day.

9.2 Bicycles/Electric Bicycles/Electric Scooters

The Channel Highway includes a cross-section width of 7-metres plus parking lanes. Channel Highway is subject to the default urban speed limit of 50 km/hr which assists in providing a safe bicycle/car share environment which visitors to the site could potentially benefit.

A secure bicycle parking facility has been integrated into the design as shown below. It is a council owned facility. In addition, bicycle racks have been provided within the car park.

Figure 20: Secure bicycle parking facility on Pin Oak Place (this is owned by Kingborough Council and located on Pin Oak Pl).

9.3 Design of Bicycle Parking Facilities

The bicycle parking facilities have been designed in accordance with clause E6.7.10 of the Kingborough Interim Planning Scheme, 2015, as outlined below:

E6.7.10 Design of Bicycle Parking Facilities

Objective:	
To encourage cycling as a healthy and environmentally friendly mode of transport for commuter, shopping and recreational trips by providing secure, accessible and convenient bicycle parking spaces.	
Acceptable Solutions	Performance Criteria
A1 The design of bicycle parking facilities must comply with all the following; (a) be provided in accordance with the requirements of Table E6.2; (b) be located within 30 m of the main entrance to the building.	**P1** The design of bicycle parking facilities must provide safe, obvious and easy access for cyclists, having regard to all of the following: (a) minimising the distance from the street to the bicycle parking area; (c) providing clear sightlines from the building or the public road to provide adequate passive surveillance of the parking facility and the route from the parking facility to the building; (d) avoiding creation of concealment points to minimise the risk.
A2 The design of bicycle parking spaces must be to the class specified in table 1.1 of AS2890.3-1993 Parking facilities Part 3: Bicycle parking facilities in compliance with section 2 "Design of Parking Facilities" and clauses 3.1 "Security" and 3.3 "Ease of Use" of the same Standard. [R1]	**P2** The design of bicycle parking spaces must be sufficient to conveniently, efficiently and safely serve users without conflicting with vehicular or pedestrian movements or the safety of building occupants.

E6.7.10.R1 Austroads – Cycling Aspects of Austroads Guides 2011 is also a useful reference for the design of bicycle storage facilities.

Table 22: Bicycle Parking Facilities Requirements – Source: Kingborough Interim Planning Scheme, 2015.

Parking facilities will be provided in accordance with the acceptable solution and some of the bike parking will be located within 30 metres of the main entrance to the building. The secure staff parking and the number of bicycle parking bays provided is in line with the acceptable solution.

The design of bicycle parking spaces will be class specified in table 1.1 of AS2890.3 – 1993.

9.4 Bicycle End of Trip Facilities

E6.7.11 Bicycle End of Trip Facilities

Objective:	
To ensure that cyclists are provided with adequate end of trip facilities.	
Acceptable Solutions	Performance Criteria
A1 For all new buildings where the use requires the provision of more than 5 bicycle parking spaces for employees under Table E6.2, 1 shower and change room facility must be provided, plus 1 additional shower for each 10 additional employee bicycle spaces thereafter.	**P1** End of trip facilities must be provided at an adequate level to cater for the reasonable needs of employees having regard to all of the following: (a) the location of the proposed use and the distance a cyclist would need to travel to reach the site; (b) the users of the site and their likely desire to travel by bicycle; (c) whether there are other facilities on the site that could be used by cyclists; (d) opportunity for sharing bicycle facilities by multiple users.

Table 23: Bicycle End of Trip Facilities Requirements – Source: Kingborough Interim Planning Scheme, 2015.

The performance criteria for the end of trip facilities have been addressed below:

a) The location of the proposed use and the distance a cyclist would need to travel to reach the site;

The location supports a high propensity for active travel, particularly for short trips originating from the surrounding residential catchments.

b) The users of the site and their likely desire to travel by bicycle;

Given the site's proximity to residential areas, it is likely that both customers and employees may choose to cycle to the centre. The ease of access further supports the potential for active transport uptake.

c) Whether there are other facilities on the site that could be used by cyclists;

Toilet and change room facilities are provided within the building to accommodate the needs of active transport users. The Stage 2 proposal includes end-of-trip infrastructure such as showers; however, these facilities have not yet been constructed.

d) Opportunity for sharing bicycle facilities by multiple users;

It is anticipated that bicycle racks and associated active transport amenities will be shared by multiple users. These facilities are expected to be publicly accessible and readily available to both staff and visitors.

9.5 Pedestrian Linkages

There is a strong network of pedestrian footpaths in the vicinity of the development site. Footpaths within the vicinity of the site on the Channel Highway include a cross-section width of 2-metres which provides a safe access to the town centre for visitors to the site.

There are pedestrian refuges across the Channel Highway along the development frontage which can be utilised by users of the development.

The Margate Shopping Centre is located within the Margate town centre near the town's existing retail and commercial uses. The Margate Shopping Centre is also located within proximity of a large residential catchment. The site is therefore conveniently located within walking distance of the existing uses.

The site has provided good pedestrian areas which are linked to a good network of footpaths. It is located in a shopping zone with a reduced posted speed limit (50km/hr) which provides for safe pedestrian crossing opportunities and access.

Low speed limits have been proposed through the car park to maintain pedestrian safety and amenity. Furthermore, pedestrian crossing facilities have been proposed through the car park, an outdoor pedestrian area has been provided. There are also dedicated pedestrian links through the site to the Channel Highway.

The roundabout forming the main access to the site will further act as a traffic control measure, reducing vehicle speeds in the vicinity of the access as well as acting to improve pedestrian safety.
Also of note:

- Pedestrian footpaths are proposed throughout the site. A level pedestrian access from the footpath to the rear retail space has been provided.
- Pedestrian refuges on the Channel Highway are in the vicinity of the site.
- At grade pedestrian access and crossings have been provided through the car park and around the site.
- Wide footpaths have been provided along the Channel Highway; there is approximately 10 metres from the face of kerb to the building line in some areas.
- An open pedestrian thoroughfare provides a useful and segregated pedestrian link from the Channel Highway to the bulk of the shopping centre facility.
- A level concourse has been provided around all retail and commercial buildings.
- Disabled parking spaces are provided in the vicinity of the pedestrian crossing facilities to the site.

10. Conclusion and Recommendations

The proposed development has been assessed in relation to the following:

Car Parking Layout

98 temporary car parking spaces have been provided plus 5 accessible bays (which are located in the permanent car park, near building A and B.

All parking bays have been designed in accordance with Woolworths' specifications, which have the same overall cross section width as the AS2890.1:2004 standards. This includes parking bays that range up to 2.6m x 5.5m with 6.5m aisles, supporting safe and efficient manoeuvrability.

Trip Generation

The proposed development is expected to generate a total of 46 vehicle trips during the evening peak hour, based on the application of recognised trip generation rates and a 25% discount for linked and multipurpose trips. The assessment has considered the characteristics of the development, including land use types, floor area, and proximity to surrounding residential catchments.

Trip generation has been evaluated against the relevant standards in the NSW, RMS, TDT 2013/04a, and the Kingborough Interim Planning Scheme, 2015. The results demonstrate that the anticipated traffic volumes are acceptable for the scale and nature of the development and are not expected to result in any adverse impacts on the local road network.

Access

The access arrangements proposed for the development have been assessed against the relevant provisions of the Kingborough Interim Planning Scheme, 2015. The single approved access point via Pin Oak Place has been designed in accordance with Australian Standards and provides safe and efficient entry for both light and service vehicles, including MRVs and SRVs.

The access configuration supports clear vehicle movements, minimises conflict with pedestrians, and ensures compliance with the planning scheme's requirements for access widths, turning movements, and site servicing. Pedestrian safety and vehicle flow within the site have been considered through dedicated pathways and segregation of service access.

The development is considered appropriate in the context of the existing road network and has been supported by swept path analysis and relevant design standards. The access provisions continue to satisfy operational and safety needs without adversely impacting the local road network or surrounding land uses.

Sight Distance

The sight distances at the Pin Oak Place access have been reviewed in accordance with the requirements of the Kingborough Interim Planning Scheme, 2015. While the available sight

distances are below the preferred minimum of 80 metres, the assessment has demonstrated that the performance criteria under Clause E5.6.4 have been adequately addressed.

The proposed access arrangement is considered appropriate given the nature and frequency of expected traffic, the lack of alternative access, and the supporting Autotrack modelling which confirms safe and functional vehicle manoeuvrability. The single access point continues to meet operational and safety requirements for all intended vehicle types accessing the site.

Service Vehicles

The access of different service vehicles has been evaluated to ensure that access is possible for all required vehicles. Autotrack modelling has been performed to ensure that vehicle movement throughout the development site is achievable. The expected vehicles utilising the site have been listed below.

- 8.8 MRV to the specialty shops and commercial uses
- 6.4m SRV to the specialty shops / commercial services in the vicinity of the Channel Highway frontage road.

Autotrack has been used to model the swept paths of these vehicles into the site.

Autotrack paths are shown and can be found in **Appendix A** of this report. The service vehicles can enter and exit the site in a forward direction.

Sustainable Transport

Buses/Coaches

The closest existing bus stop is located on the Channel Highway along the immediate frontage road of the development site.

Bicycle

Channel Highway is subject to the default urban speed limit of 50 km/hr in the vicinity of the development site. The low speed and wide lane widths assists in providing a safe bicycle/car share environment of which some of the visitors to the site could potentially benefit.

Bicycle have been included in the design of the shopping centre car park and there some limited amenities within the buildings for staff to change.

Pedestrians

There is a strong pedestrian network in the surrounding vicinity of the Margate Shopping Centre site, including but not limited to:

- Pedestrian footpaths are proposed throughout the site. A level pedestrian access from the footpath to the rear retail space has been provided from the Channel Highway.
- Pedestrian refuges on the Channel Highway are in the vicinity of the site.
- At grade pedestrian access and crossings have been provided through the car park and around the site.

- Wide footpaths have been provided along the Channel Highway; there is approximately 10 metres from the face of kerb to the building line in some areas.
- An open pedestrian thoroughfare provides a useful and segregated pedestrian link from the Channel Highway to the bulk of the shopping centre facility.
- A level concourse has been provided around all retail and commercial buildings.
- Disabled parking spaces are provided in the vicinity of the pedestrian crossing facilities to the site.

Appendix A

DEVELOPMENT PLANS WITH AUTOTRACK PATH ANALYSIS

Appendix B

ORIGINAL PLANS APPROVED IN 2013 AND REPORT

Howarth Fisher & Associates Pty Ltd
www.howarthfisher.com

TEMPORARY CARPARK
1680 CHANNEL HIGHWAY MARGATE
DA TRAFFIC DESIGN

TRAFFIC DRAWINGS

DRAWING No.	DRAWING NAME	REVISION No.
C1	COVER PAGE	1
C2	ACCESSIBLE PARKING	1
P1	GENERAL ARRANGEMENT	1
P2	B99 TURNPATHS PART 1 OF 2	1
P3	B99 TURNPATHS PART 2 OF 2	1
P4	MRV TURNPATHS	1

Traffic
Civil
Structural
Industrial
Engineering

ISSUED FOR REVIEW
PRINT DATE: Aug 07, 2025 - 12:21pm

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	ISSUE	BY	APPROVED	DATE
1	PRELIMINARY	HR	JF	04.08.25

HOWARTH FISHER & ASSOCIATES
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TEMPORARY CARPARK
1680 CHANNEL HIGHWAY MARGATE
DA TRAFFIC DESIGN

COVER PAGE

APPROVED BY:- DATE: 04/08/2025

SCALES	NTS
DRAWN	HR
DESIGN	JF

ISSUE: 1

PROJECT NO. 25J781 | DOCUMENT IDENTIFICATION -D- | DRAWING NO. C1

0 50 100 150 200 300 on original A1

SPACE IDENTIFICATION

EACH DEDICATED SPACE SHALL BE IDENTIFIED BY MEANS OF A WHITE SYMBOL OF ACCESS IN ACCORDANCE WITH AS 1428.1 BETWEEN 800 MM AND 1000 MM HIGH PLACED ON A BLUE RECTANGLE WITH NO SIDE MORE THAN 1200 MM, PLACED AS A PAVEMENT MARKING IN THE CENTRE OF THE SPACE BETWEEN 500 MM AND 600 MM FROM ITS ENTRY POINT AS ILLUSTRATED

SPACE DELINEATION

PAVEMENT MARKINGS SPECIFIED IN ITEMS (A) AND (B) OF THIS CLAUSE SHALL BE YELLOW AND SHALL HAVE A SLIP RESISTANT SURFACE. RAISED PAVEMENT MARKERS SHALL NOT BE USED FOR SPACE DELINEATION.

PAVEMENT MARKINGS SHALL BE PROVIDED AS FOLLOWS:

1. LINEMARKING

1.1. DEDICATED PARKING SPACES SHALL BE OUTLINED WITH UNBROKEN LINES 80 TO 100 MM WIDE ON ALL SIDES EXCEPTING ANY SIDE DELINEATED BY A KERB, BARRIER OR WALL.

2. SHARED AREAS SHALL BE MARKED AS FOLLOWS:

2.1. WALKWAYS WITHIN OR PARTLY WITHIN A SHARED AREA SHALL BE MARKED WITH UNBROKEN LONGITUDINAL LINES ON BOTH SIDES OF THE WALKWAY EXCEPTING ANY SIDE DELINEATED BY A KERB, BARRIER OR WALL.

2.2. OTHER VACANT NON-TRAFFICKED AREAS, WHICH MAY BE INTENTIONALLY OR UNINTENTIONALLY OBSTRUCTED (E.G. BY UNINTENDED PARKING), SHALL BE OUTLINED WITH UNBROKEN LINES 80 TO 100 MM WIDE ON ALL SIDES EXCEPTING ANY SIDE DELINEATED BY A KERB, BARRIER OR WALL, AND MARKED WITH DIAGONAL STRIPES 150 TO 200 MM WIDE WITH SPACES 200 MM TO 300 MM BETWEEN STRIPES. THE STRIPES SHALL BE AT AN ANGLE OF 45 ±10 DEGREES TO THE SIDE OF THE SPACE.

2.3. NO SHARED AREA MARKINGS SHALL BE PLACED IN TRAFFICKED AREAS.

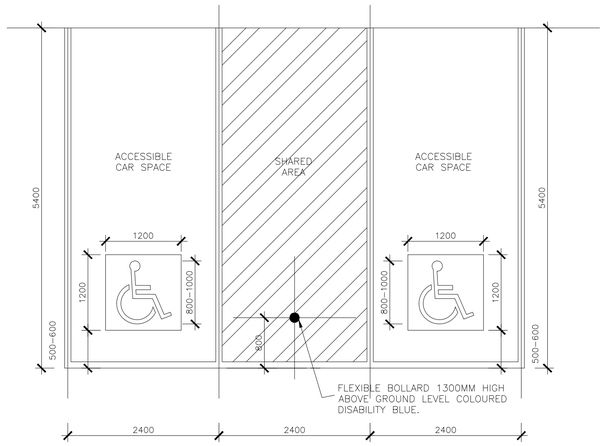
2.4. ALL LINEMARKING MUST BE NON SLIP

3. BOLLARDS:

3.1. MINIMUM HEIGHT 1300MM

3.2. RECOMMENDED COLOUR BLUE TO CONTRAST AGAINST YELLOW LINE MARKING

3.3. RECOMMEND FLEXIBLE BOLLARDS TO REDUCE MOTOR VEHICLE DAMAGE



DOUBLE ACCESSIBLE CAR PARKING SPACES
IN ACCORDANCE WITH AS2890.6

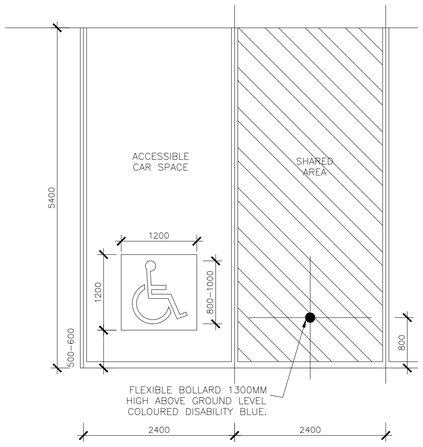
LINE MARKINGS CODE

CODE (to be circled)	LINE TYPE	LINE MARKINGS	PAINT (P) (m)	GAP (G) (m)	WIDTH (W) (mm)	APART (A) (mm)
B1	BARRIER (One Way)		3	9	100	100
B2	BARRIER (Two Way)		ALL		100	100
B3	BARRIER (Two Way–Access)		ALL		100	
B4	BARRIER (Two Way–Access)		ALL		200	
C	CONTINUITY		1	3	200	
CC	CONTINUITY (Continuous)		ALL		200	
E	EDGE		ALL		100	
E2	AUDIBLE EDGE		ALL		150	
EI	EDGE Intermittent		1	3	100	
HL	HOLDING		0.6	0.6	300	
JC	JUNCTION Continuity		0.6	0.6	200	
L	LANE (Multi lane carriageway)		3	9	100	
L1	LANE (Traffic Signals)		3	6	100	
L3	LANE (Roundabouts)		9	3	100	
LC	LANE (Continuous)		ALL		100	
NS	YELLOW (No Stopping)		ALL**		100	
S	SEPARATION (2 Lane road)		3	9	100	
S2	SEPARATION (Refuge Lane)		3	3	100	Varies
S3	SEPARATION (Round corners)		9	3	100	
SL	STOP		ALL		300	
T	TURN WITH R.R.P.M.		0.6	0.6	100	
W	PEDESTRIAN (Traffic Signals)		1	0.5	100	2000min.

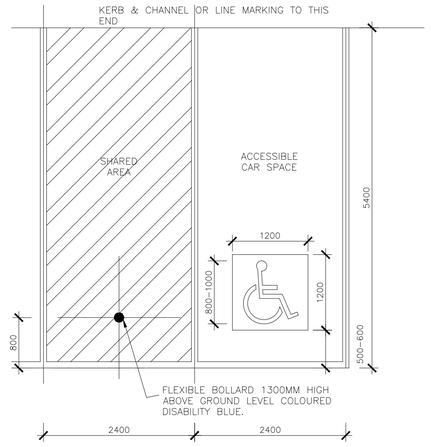
EXAMPLE

ALL ROAD MARKINGS ARE WHITE EXCEPT FOR NS WHICH IS YELLOW.

** PAINT YELLOW



LEFT HAND ACCESSIBLE CAR PARKING SPACES
IN ACCORDANCE WITH AS2890.6



RIGHT HAND ACCESSIBLE CAR PARKING SPACES
IN ACCORDANCE WITH AS2890.6

PRELIMINARY - NOT FOR CONSTRUCTION

	ISSUE	BY	APPROVED	DATE
1	PRELIMINARY	HR	JF	04.08.25

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TEMPORARY CARPARK

1680 CHANNEL HIGHWAY MARGATE
DA TRAFFIC DESIGN

ACCESSIBLE PARKING

APPROVED BY:- DATE: 04/08/2025

SCALES	1:100	ISSUE: 1
DRAWN	HR	
DESIGN	JF	

PROJECT NO. 25J781 | DOCUMENT IDENTIFICATION -D- | DRAWING NO. C2

A1

DO NOT SCALE OFF DRAWINGS

EX. BUILDING
MARGATE TAVERN

EX. BUILDING
THE BOTTLE-O

STAGE 1
BUILDING A
850m²

STAGE 1
BUILDING B
850m²

STAGE 1
CARPARK

SUPERMARKET AND RETAIL

EX. BUILDING
HAIR SALON
1712

EX. BUILDING
1714

EX. HOUSE 1
36

EX. HOUSE 2
34

EX. HOUSE 3
32

EX. HOUSE 4
30

EX. HOUSE 5
28

PRELIMINARY - NOT FOR CONSTRUCTION

	ISSUE	BY	APPROVED	DATE
1	PRELIMINARY	HR	JF	04.08.25

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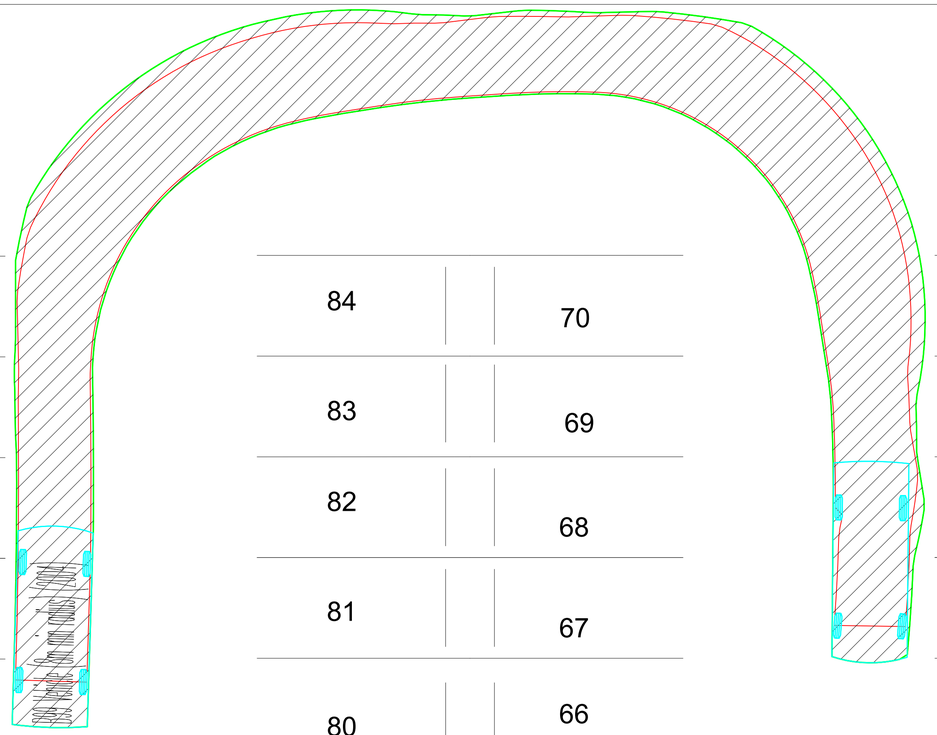
TEMPORARY CARPARK

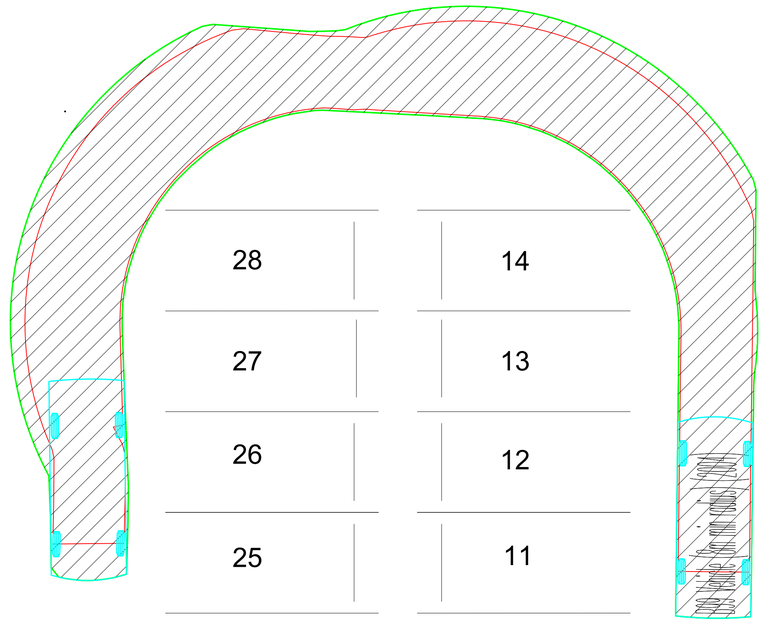
1680 CHANNEL HIGHWAY MARGATE
DA TRAFFIC DESIGN

GENERAL ARRANGEMENT

APPROVED BY:-	DATE: 04/08/2025
SCALES NTS	ISSUE: 1
DRAWN HR	
DESIGN JF	
PROJECT NO. 25J781	DOCUMENT IDENTIFICATION -D-
DRAWING NO. P1	

A1





4					
3					
2					
1					
98	84	70	56	42	28	14
97	83	69	55	41	27	13
96	82	68	54	40	26	12
95	81	67	53	39	25	11
94	80	66	52	38	24	10
93	79	65	51	37	23	9
92	78	64	50	36	22	8
91	77	63	49	35	21	7
90	76	62	48	34	20	6
89	75	61	47	33	19	5
88	74	60	46	32	18	4
87	73	59	45	31	17	3

PRELIMINARY - NOT FOR CONSTRUCTION

ISSUE		BY	APPROVED	DATE
1	PRELIMINARY	HR	JF	04.08.25

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TEMPORARY CARPARK

1680 CHANNEL HIGHWAY MARGATE

DA TRAFFIC DESIGN

B99 TURNPATHS PART 1 OF 2

APPROVED BY:- DATE: 04/08/2025

SCALES	1:100	ISSUE:	1
DRAWN	HR		
DESIGN	JF		

PROJECT NO. 25J781 | DOCUMENT IDENTIFICATION -D- | DRAWING NO. P2

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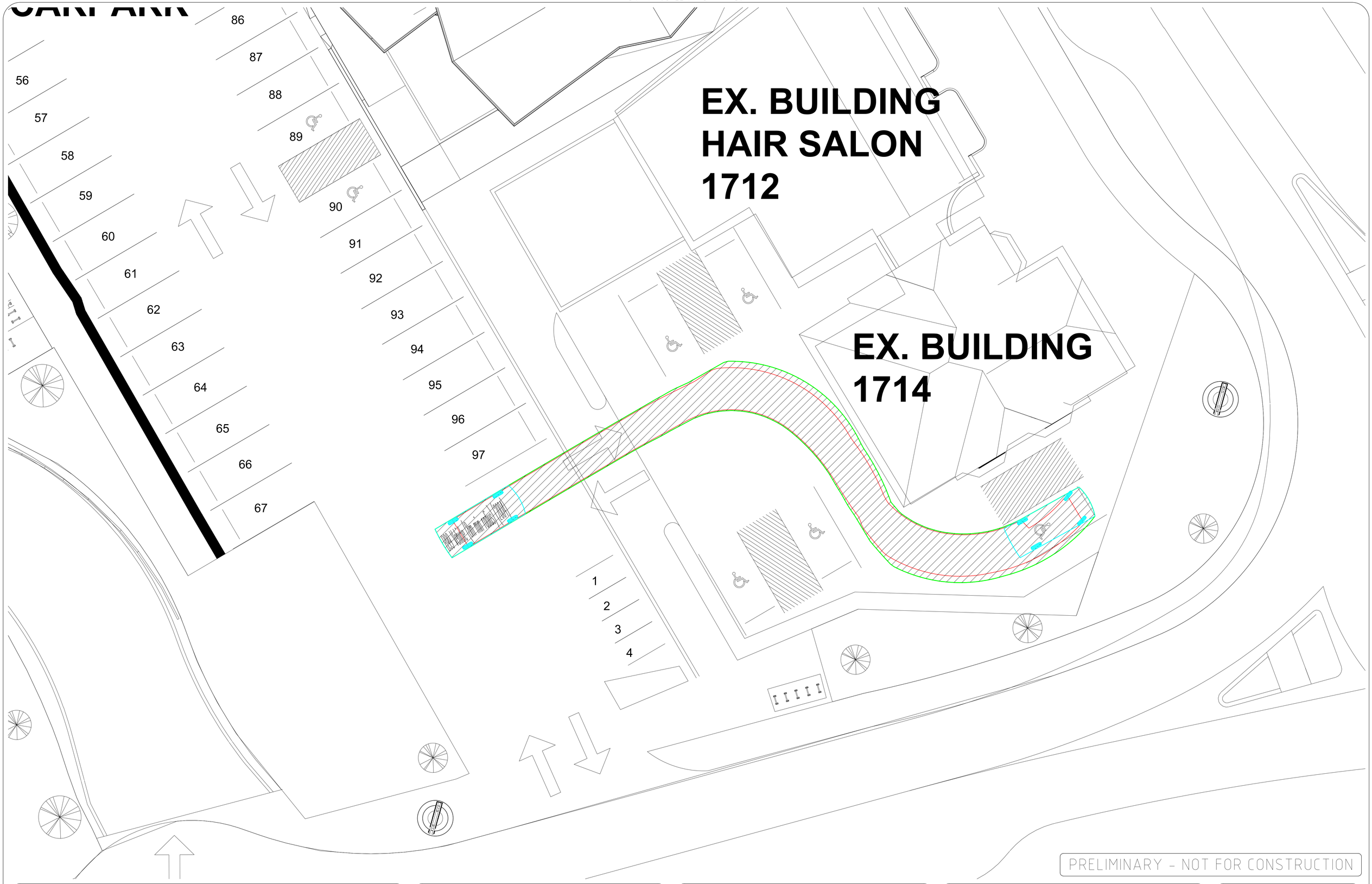

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	ISSUE	BY	APPROVED	DATE
1	PRELIMINARY	HR	JF	04.08.25

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TEMPORARY CARPARK

1680 CHANNEL HIGHWAY MARGATE

DA TRAFFIC DESIGN

B99 TURNPATHS PART 2 OF 2

APPROVED BY:-	DATE: 04/08/2025
SCALES 1:200	ISSUE: 1
DRAWN HR	
DESIGN JF	

PROJECT NO. 25J781 | DOCUMENT IDENTIFICATION -D- | DRAWING NO. P3

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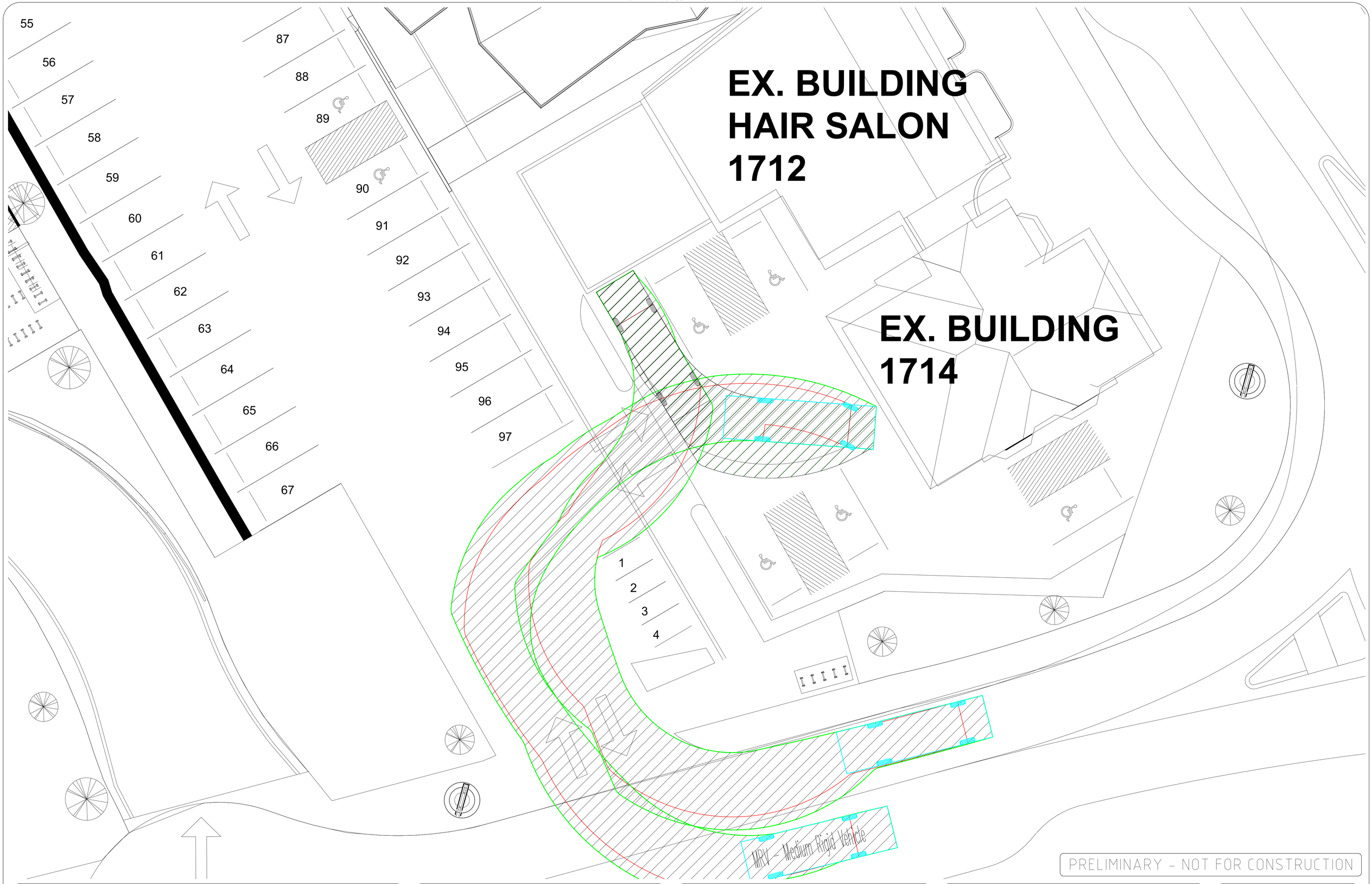

	ISSUE	BY	APPROVED	DATE
1	PRELIMINARY	HR	JF	04.08.25

PRELIMINARY - NOT FOR CONSTRUCTION

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TEMPORARY CARPARK
1680 CHANNEL HIGHWAY MARGATE
DA TRAFFIC DESIGN

MRV TURNPATHS

APPROVED BY: -	DATE: 04/08/2025
SCALES 1:200	ISSUE: 1
DRAWN HR	
DESIGN JF	
PROJECT NO. 25J781	DOCUMENT IDENTIFICATION -D-
DRAWING NO. P4	

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Howarth Fisher and Associates
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Structural, Civil and Traffic Engineering

Structural and Civil Engineering

Project Design and Management
Forensic Engineering and Structural Inspections
Research and Development Facilitators

Traffic Engineering

Traffic Management Studies and Traffic Impact Assessment
Expert Witness Representation
Road Safety Audits

Supplementary Proof of Evidence – Traffic
Michael Ball obo E Kalis v Kingborough Council
Margate Shopping Centre

Prepared for

Mr E. Kalis

Date
August 2011

Prepared by
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Table of Contents

	Name	Signature	Date
Authorised by:	Joanne Fisher		18th August 2011

1. Supplementary Proof of Evidence

Following amendment of the application to include a revised site plan, which accommodates additional car parking I have been asked to provide a supplementary proof of evidence which considers the ability of the proposal to satisfy the requirements of the planning scheme within my area of expertise.

2. Statement

2.1 Historical Background to Parking Provision

The development was originally approved by Council with 169 car spaces on site and 10 spaces near the sports field, giving a total of 179 spaces. The plans were approved on the requirement that more spaces would be constructed if the parking was shown to be insufficient in operation.

A number of development options were proposed on this site following extensive consultation with the Kingborough Council and members of the public at Margate Community Hall. Whilst there is an extensive area of land available on which the full compliment of parking could have been provided, following discussions with the Council it was acknowledged that the Kingborough Council parking requirements were generous and it was agreed between the parties that a lowered parking supply would be considered. The Council also advised that the *New South Wales, Road Traffic Authority, Guide to Traffic Generating Development* was an appropriate reference document to use to justify parking. A significant number of revisions took place to the development plans and associated car parking plans in close consultation with the Council. The Council were therefore always aware that the full parking requirement was not provided. If at any time they had advised that the full requirement was the only acceptable option then the full parking provision would and could have been provided, (given that there was enough land available. The figure of 169 spaces (179 with the spaces near the sports field) is 35 (45 with the spaces near the sports field) higher than the peak parking demand calculated using the *RTA Guide to Traffic Generating Developments* for retail shopping centres.

The 'fall back' position with Council was that the 'as constructed' car park would be surveyed to assess supply and demand and if there was an issue with parking provision then extra parking would be provided, given that Emmanuel Kalis owns the land and the extra parking could be readily provided. Furthermore, it is In Emmanuel Kalis' interests to provide adequate parking for his development.

Council originally accepted the proposal to provide additional parking and the Council reports outlining the parking issues have been appended at **Appendix A** of the report.

As stated in the Kingborough Council report by Brendon Moore dated, *8th December 2010,*

'In conclusion, the proposed site parking provision of 179 spaces lies between the low end requirements of the NSW Road Traffic Guidelines (102[1] car parking spaces) and the Kingborough Planning Scheme 2000, requirements (285 car parking spaces). To permit the proposal to proceed, the applicant shall be required to provide a further Traffic Impact Assessment by a suitably qualified person 12 months after the certificate of occupancy have been given for the development. Additional parking or other remedial works recommended in the TIA shall be undertaken within 90 days of the issues of the TIA to Council. The developer shall be required to enter into an agreement with Council to undertake the additional TIA and any other subsequent remedial works prior to the issue of a Building Permit'.

It was believed that Council had accepted the parking supply being reduced subject to a TIA to monitor the supply being undertaken.

2.2 Justification for Reducing Parking Supply

In spite of Emmanuel Kalis owning the land, it was proposed to provide 169 spaces (179 including the parking adjacent to the sporting ground) to service the development. Although short of the scheme requirements the parking provision was considered adequate and ensured that, the footprint of the development particularly within the residential zone was minimized. The additional parking is unnecessary to meet the needs of the development, as it met the requirements of the *New South Wales, Road Traffic Authority, Guide to Traffic Generating Developments. Furthermore it was acknowledged* that the development is located in an existing local centre, where there would be opportunity for shared and common parking to occur.

The adequacy of car parking is discussed in the proofs of evidence prepared prior to amending the car parking provision.

2.3 Reconfigured Car park

Following negotiations between the parties, at mediation, I prepared a reconfiguration of the car parking to provide at total of 231 parking spaces.

[1] 135 spaces after correction by HFA

This car park configuration exceeds the parking dimension requirements outlined in the *Australian Standards 2890.1 - Off street parking 2004* and met with the requirements of the 'acceptable solution' outlined in the Kingborough Planning Scheme notably 5.5metres x 2.6metres with 6.7metre aisles. In view of some of the parking spaces being some distance away from the supermarket, it was agreed that the furthest spaces could be signed as 'staff parking,' leaving the customers with the parking spaces located nearest the shops and other land uses.

A copy of the plans showing the newly configured parking can be found at Appendix A of this supplementary report.

The 231 spaces provided still does not meet the acceptable solution provided in Schedule 4 of the scheme however the additional parking enhances the ability of the development to meet the acceptable solution (as previously assessed in my original proof of evidence). I consider that Schedule 4 (number of car parking spaces) is met by application of the alternative solution as applied in my earlier evidence. There was sufficient parking to meet the scheme standard before and having added further car parks, the standard remains satisfied.

2.4 Impacts of Trip Generation to the Site

There will be no additional traffic created by the provision of additional parking, the trip generation rates are determined by the floor areas of the land uses as opposed to the number of parking spaces provided.

The additional supply of car parking will not therefore impact on trip generation to the site.

3. Other Issues on Appeal

3.1 Ground 1

The amendment to parking does not change my opinion in regard to the integration of the proposed development with the surrounding transport network for all modes of transport as expressed in my earlier proof.

3.2 Ground 10

The amendment to parking does not change my opinion in regard to the transport strategies identified in part 2 of the scheme or the prevalence of significant through traffic as expressed in my earlier proof.

4. Conclusion

In conclusion, the parking numbers were calculated in discussion and consultation with Council. The ability to provide for the full parking requirement at the site was not physically an issue as there was sufficient land available. However, the Client and Council acknowledging that the parking requirements were generous and not wanting to provide an excessive amount of car parking agreed to the reduction of the parking. The '*New South Wales, RTA, Guide to Traffic Generating Developments'* provide an nationally recognised reference document for determining parking supply figures and was used to provide a justification for a reasonable reduction in car parking at the site.

Council Officers approved this and recommended the proponent undertake a further TIA after 12 months of operation to ensure that the parking provision at the development was adequate. It was also in Emmanuel's interest to do this to ensure that parking provision was adequate for his development and tenants.

The *New South Wales, Road Traffic Authority Guide to Trip Generating Developments* provided a figure based on the land uses of 135 spaces (despite this a parking supply of 169 (179 including the 10 spaces on the access road were proposed). Emmanuel Kalis also owning the Tavern next door also had a temporary supply of spaces available to him in the unlikely event that additional temporary parking was required.

Howarth Fisher and Associates after surveying another shopping centre in Greenpoint with a requirement for a similar high number of parking spaces provided further evidence to show that the parking supply can be excessive. The Greenpoint shopping centre with a similar mix use of development showed there to be a maximum requirement representing 50% of its total capacity. These surveys successfully enabled the developer to provide more retail facilities on the site without further increasing parking provision. The Council, in effect acknowledging an oversupply of parking based on similar parking requirements to Kingborough.

The additional supply of car parking will not affect trip generation to the site and therefore there will be no impact on trip generation through residential area.

Based on the findings above I support the proposed works on traffic grounds. In my opinion, the proposed Margate Shopping Centre development meets the traffic and transport standards under the Scheme and should be approved.

5. Declaration

I, Joanne Fisher, declare that in the forming of the opinion expressed above I have made all enquiries, which I consider desirable and appropriate, and no matters of significance relevant to the hearing have, to my knowledge, been withheld from the Tribunal.

Joanne Fisher

BSc (hons), MSc Traffic Engineering and Transport Planning, CIT.

Traffic Engineer

APPENDIX A

CAR PARK PLAN

APPENDIX B

COUNCIL REPORTS