



## Appendix 9 Transport Impact Assessment

# Kāpiti Gateway Transport Impact Assessment

Prepared for Kāpiti Coast District Council

Prepared by Beca Limited

15 December 2021



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**Appendix A – Traffic Data**

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## Revision History

Revision N°	Prepared By	Description	Date
A	Charles Fowler/Caron Greenough	Following Client comments	23/03/2020
B	Caron Greenough	Following s92 comments	5/02/2021
C	Caron Greenough	Final comments incorporated following design changes	15/06/2021
D	Caron Greenough	Incorporating further S92 comments and design changes	15/12/2021

## Document Acceptance

Action	Name	Signed	Date
Prepared by	Charles Fowler		23/03/2020
Reviewed by	Megan Taylor		
Approved by	Caron Greenough		1/12/2021
on behalf of	Beca Limited		

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# 1 Introduction

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The Kāpiti Coast District Council's (KCDC) Gateway Project Team has engaged Beca to carry out a transport impact assessment as part of the resource consent application associated with the development of the Kāpiti Gateway, named Te Uruhi, within the Marine Park Reserve.

Development of Te Uruhi includes the building of a Discovery/Visitor Centre at the northern end of the Marine Parade car park to provide a formal biosecurity area for visitors using the boats to access Kāpiti Island and a focus for tourist information in this area. The building footprint will require some changes to the parking supply, however as part of the overall Macleans Park Management Plan, more parking is proposed.

As well as changes to the car park, to improve pedestrian access, the Council are proposing localised widening of the footpath on Marine Parade between the new car park entrance and the roundabout, which includes removing and rebuilding, in a new location, the pedestrian crossing to align with the footpath from the new visitors centre.

This application does not include an increase in the visitor numbers to Kāpiti Island that already has approval but only seeks to provide assurance that the impact of Te Uruhi will be negligible from a transport perspective. This report assesses the impact of these changes in the context of the local network and the operation of the new building.

## 2 Study Area

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### 2.1 Location

The study area is located on the Paraparaumu Beach foreshore and whilst the building footprint does not impact on the Boat Club, or associated car park, these areas have been included as part of the study area to inform this assessment along with Manly Street, Kāpiti Road and Marine Parade and the intersection of Manly Street/Kāpiti Road/Marine Parade as shown in Figure 2.1.



Figure 2.1 Aerial photo of the site

The land within the study area is part of the MacLean Park Reserve and extends south of the current Marine Parade car park.

## 2.2 Planning Zones and Council Objectives

The study area sits within the Open Space (Conservation and Scenic) Zone within the Kāpiti Coast District Council (KCDC) District Plan. Chapter 8 of the District Plan outlines the objectives, policies and rules that apply to those parcels within the Open Space zone.

The objectives contained within *Chapter 2.14 Access and Transport* of the District Plan are relevant to resource management issues concerned with open space. The objectives for the transport system in the District, as outlined in Section 2.14, that guide this development are that the transport system:

- Improves the efficiency of travel and maximises mode choice to enable people to act sustainably as well as improving the resilience and health of communities.
- Avoid, remedies or mitigates adverse effects on land uses.
- Does not have its function and operation unreasonably compromised by other activities.

The key resource management issues as outlined in the District Plan that relate to access and transport in the District relevant to this proposal include:

- Ensuring equitable access to services by all.
- Traffic congestion and hazards at key road intersections.
- Transport system dangers and conflicts over conflicting modes and land uses.
- Demand for access to and between recreational open spaces, including the CWB (Cycleway-Bridleway) Network.

## 2.3 Study Area in the Context of the MacLean Park Management Plan

The MacLean Park Management Plan, which was prepared in 2017, sets out a framework for the long-term use, management and development of MacLean Park Reserve. Preparation of the Management Plan involved extensive public consultation and stakeholder engagement. The plan addresses any existing issues, key principles and values, objectives and measures of the Reserve and sets out a Development Plan for the MacLean Park area within Appendix 2 of the Management Plan Document.

The Development Plan guides the development of the Reserve by defining the actions, guiding principles and drivers/issues associated with the development of three areas of The Reserve. The study area is defined as Project Area A, Te Uruhi, within the development plan as shown in Figure 2.2.

Areas further south, including other car parks and park land are contained within the MacLean Park Development Plan and are generally being delivered under separate projects (Project Area B and Project Area C).

However as part of this consent new car parking areas within Area C have been brought forward to balance the parking supply that will be reduced as part of the Te Uruhi development.

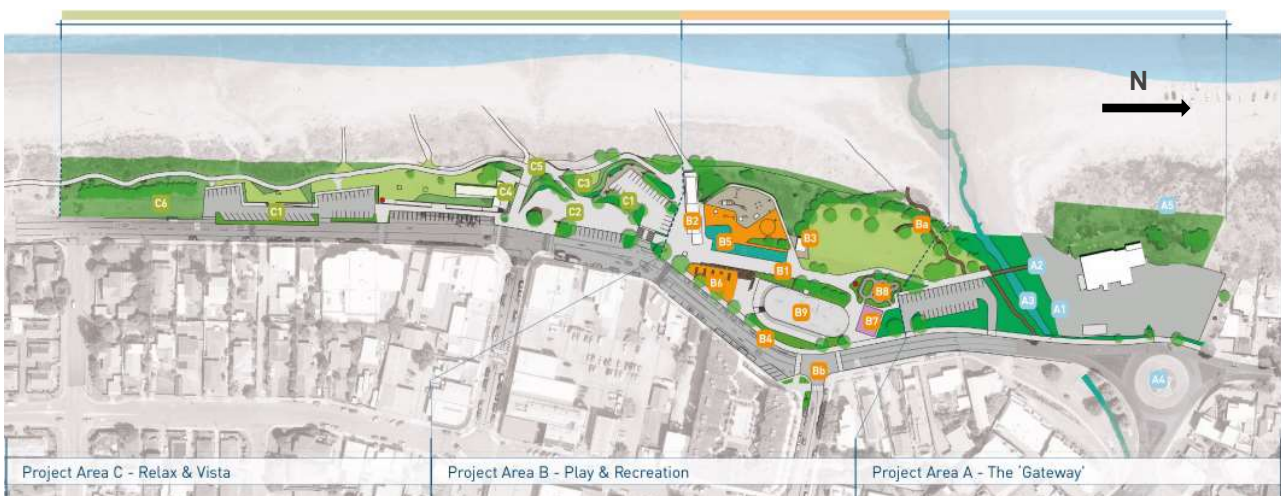


Figure 2.2 MacLean Park Development Plan (KCDC)

The MacLean Park Management Plan sets out several high-level proposals for Project Area A, which have since been developed in further detail. In the development of this assessment, as well as the impact from the development of the Visitors Centre, Beca also reviewed a number of options including:

- Consideration of options to extend the northern public car parking facility to compensate the loss of the car park spaces (due to building the visitors centre).
- Options to decrease the size of the roundabout to accommodate more car parks within the Boat Club car park.
- Consideration of improvements to the boat launching access in the current location.

For the purposes of this assessment Project Area A i.e. the building of the visitors centre, and potential changes associated with the car parking facilities, including a review of the roundabout capacity, are seeking resource consent independent of the overall MacLean Park Management Plan.

The desire is to provide a focus for visitors and information and to enhance the visitors experience along with providing improved biosecurity facilities for visitors to Kāpiti Island in order to protect the island's pest-free status.

It also serves to enhance passenger safety by resolving issues between pedestrians in the busy Boat Club carpark. Further details on the development is outlined in Section 4 below.

Funding for visitor centre, and associated infrastructure changes, has been sought via the Provincial Growth Fund (PGF).

## 3 Existing Transport Network

### 3.1 Road Network

The study area is located west of Marine Parade and to the south of Manly Street. Marine Parade and Manly Street are classified as Primary Collectors within the NZ Transport Agency's One Network Road Classification (ONRC). Kāpiti Road is categorised as an Arterial road in the ONRC and provides access to State Highway 1, approximately 2.5 km away from the study area.

To access the proposed Visitors Centre by vehicle, visitors will likely approach the site via the roundabout intersection with Marine Parade, Kāpiti Road and Manly Street.

The website Mobile Road indicates that the Annual Average Daily Traffic volume (AADT) of each road to be approximately between 5000 vehicles per day (VPD) and 7500 vpd and Heavy Commercial Vehicle (HCV) percentages on these roads is less than 5%. Both are presented in the database as estimates from 2020 and 2021.

A 30kph slow zone exists from south of Howell Road to north of Ocean Road up to

A traffic survey for the Kāpiti Road/Marine Parade roundabout was also obtained from Kāpiti Coast City Council from February 2018 and summarised in Appendix A of this report. These survey results were used in Section 7.3 below to assess the performance of the intersection. While this survey is slightly out of date there is no reason to suggest that traffic volumes have increased significantly (and may even have reduced as a result of Covid) plus sensitivity tests have been undertaken to overcome any potential growth.

#### 3.1.1 Public Transport Accessibility

For completeness it is noted that Paraparaumu Beach can be accessed via a number of different bus services which operate between Paraparaumu Town Centre and the Paraparaumu Beach.

A summary of the services which provide access to the Te Uruhi is provided in Table 1 and Figure 3.1 below.

Table 1 Local Area Bus Services

Bus Service	Route	Nearest Bus Stop	Distance to Te Uruhi
260	Raumati Beach – Paraparaumu Beach - Paraparaumu	Paraparaumu Beach Shops Stop B	230m
261	Paraparaumu Beach – Paraparaumu (via Guildford Drive)	Kāpiti Road near Golf Club	190m
262	Paraparaumu Beach – Paraparaumu (via Mazengarb Road)	Kāpiti Road near Golf Club	190m



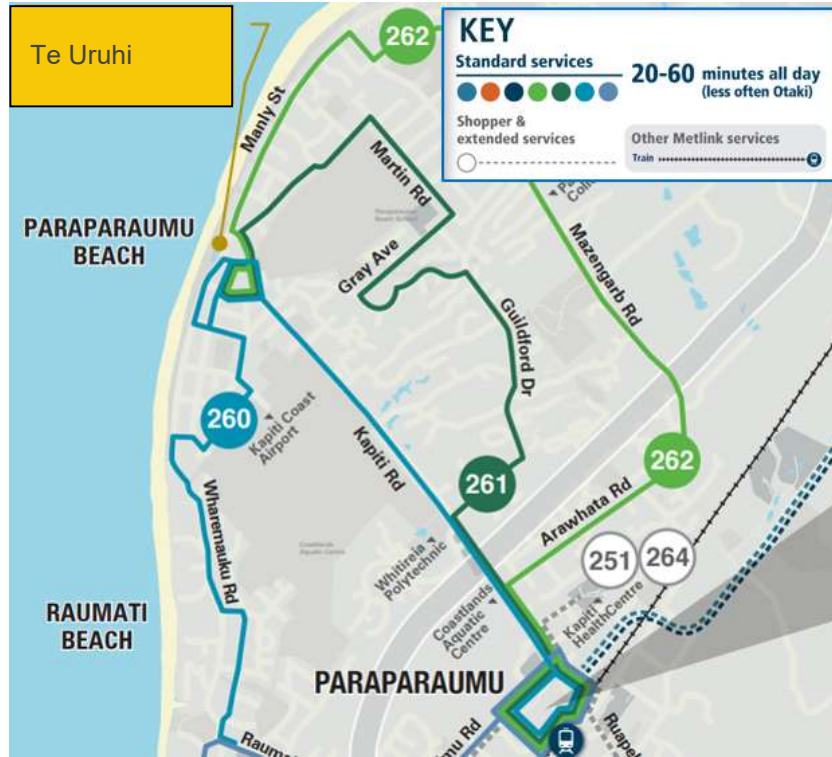


Figure 3.1 Local Area Bus Route Map

The public transport accessibility to the site is good, with three bus services operating to Paraparaumu Beach. The bus stops within the Paraparaumu Beach area are in close proximity to the Town Centre shops. The distance between the bus stops and Te Uruhi is less than 400 metres, which is typically an indicator of good accessibility for public transport, more than 400 metres is considered low accessibility for bus travel. The location of the bus stops and approximate walking distances to the Te Uruhi are shown in Figure 3.2 and indicate the key pedestrian routes for public transport users to the development.

Note the plan does not show the new location of the pedestrian crossing but it will be closer to the Kāpiti Road bus stops.

The project is also providing a space within the car park for drop off and pick up for taxis, ubers etc.

Papaparaumu train station is located close to the town centre near the southern end of Kapiti Road, approximately 2.5km away from the beach but is connected to the beach via the bus services.



Figure 3.2 Bus Stop Locations and walking routes



### 3.2 Crash Data

Crash data for the most recent 10-year period (2011-2020) and 2021 data up to 30 November 2021 was collected to identify any road safety issues along Marine Parade, at the existing roundabout or in the car parking areas within the study area.

A crash study area extending 600m south of the Marine Parade Car Park access to the south of the intersection of Marine Parade and Ocean Road and stretching to the north to encompass 50m along all roundabout legs, including the intersection of Kāpiti Road and Golf Road in the north was used. The crash study area along with the total number<sup>1</sup> and the number of serious, minor and non-injury crashes in the area is shown in Figure 3.3. The crash user types are shown in Figure 3.4.

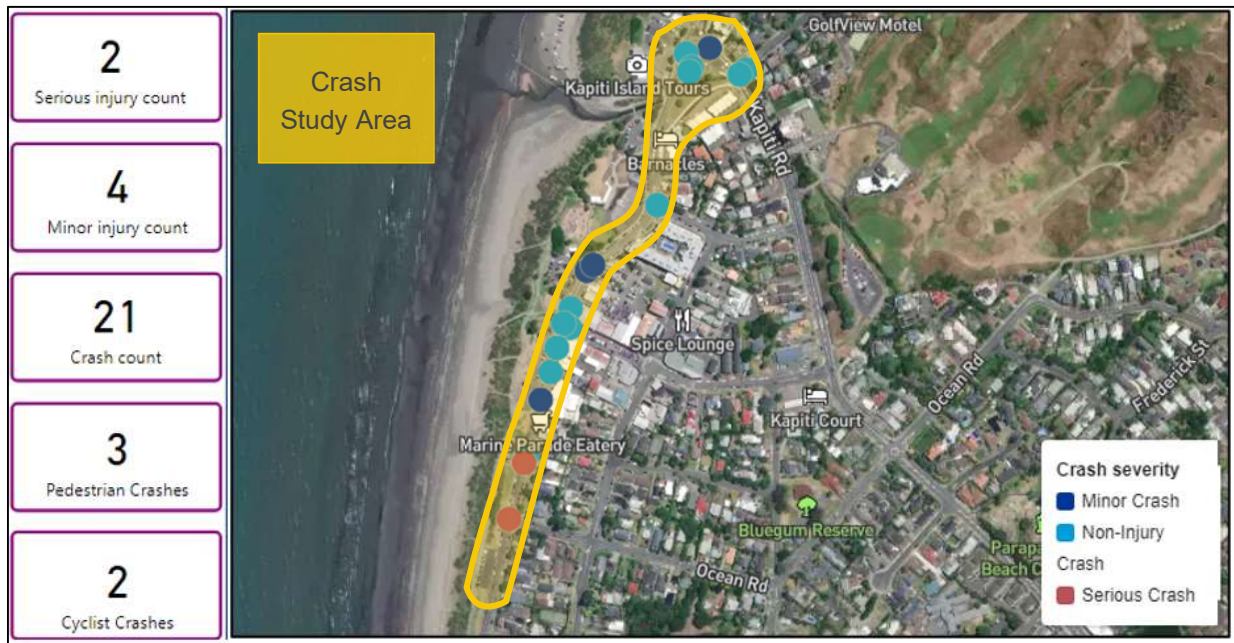


Figure 3.3 10-year Crash Data

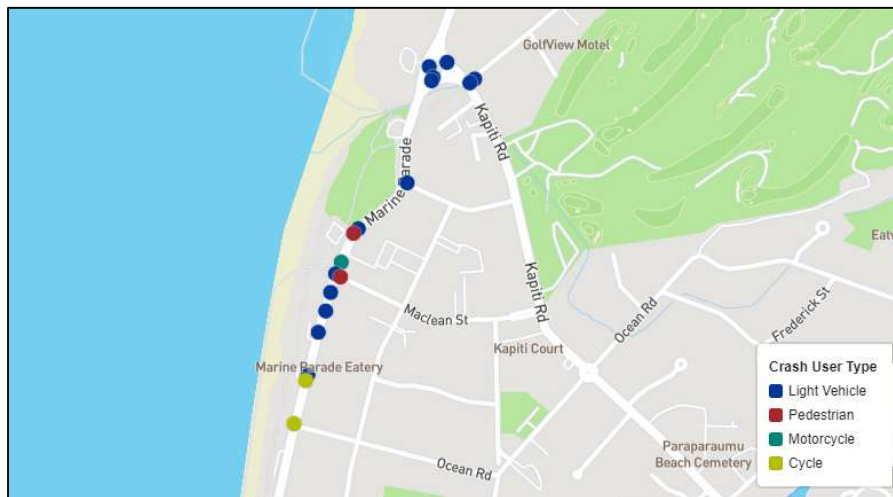


Figure 3.4 Crashes by Crash User Type

<sup>1</sup> The crash data has been sourced from CAS and analysed using Power BI, it is noted that multiple crashes have occurred at three of the points within the maps (although the maps only show one point for these multiple crashes)

Figure 3.5 shows yearly crashes by crash user type. A total of 19 crashes have occurred in the crash area from 2011 to 2021, and crashes have occurred in 2021. Of these crashes, two were serious crashes, four were minor crashes, and the remaining 15 were non-injury crashes.

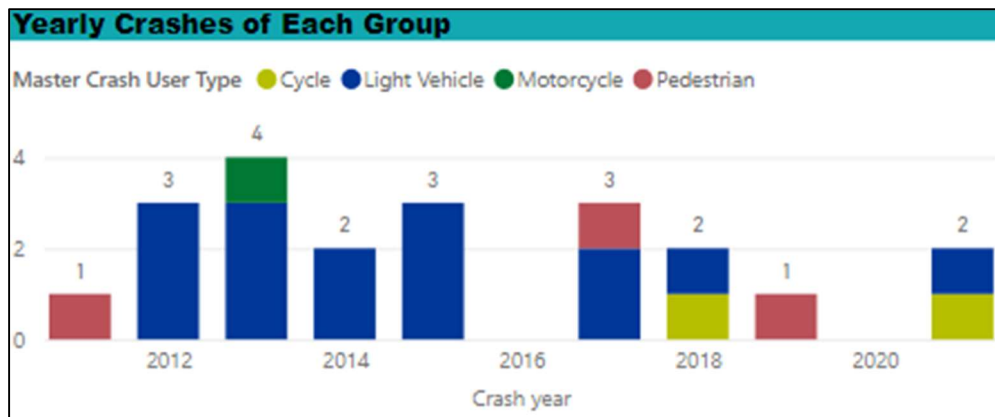


Figure 3.5 Yearly Crashes by Crash User Type

There have been no crashes directly related to any off-road car park accesses or the Boat Club access.

At the roundabout, light vehicle drivers were the only road user that were involved in any crashes. The minor crash at the roundabout (2015) was the result of drink driving.

There were two vehicle crashes along Marine Parade, involving a vehicle hitting a parked vehicle. They were both minor injury crashes.

One pedestrian crash near the MacLean Park car park (2017) was a minor injury crash involving a pedestrian on the zebra crossing being hit by a vehicle. The two other pedestrian crashes were at the intersection of Maclean Street and Marine Parade and were non-injury crashes. Note that all the pedestrian crashes occurred within the 30km/h zone on Marine Parade.

There have been two serious injury crashes since 2011. Both crashes occurred south of the 30km/h zone on Marine Parade and involved cyclists. One crash (2018) occurred at the intersection of Ocean Road and Marine Parade, involving a vehicle turning right into Ocean Road without giving way to a southbound cyclist. The other crash occurred in 2021, involving a southbound cyclist hitting a parked car as a vehicle was driving dangerously close to the cyclist, and the driver's reckless driving manner were identified as one of the crash factors.

Based on the above, there no particular patterns emerging however due to level of activity in the area there have been conflicts between cyclists and vehicles along Marine Parade. The 30km/h speed environment however reduces the severity of the crashes.

### 3.3 Site Visit

A site visit was conducted on Friday, 13<sup>th</sup> March 2020, between 11:30 am and 1:30 pm during the main development of this assessment to get an understanding of the study area, pedestrian routes, vehicle access, car parking and overall operation of the study area. Observations from the site visit, as they relate to the various aspects of the study area, are outlined in the relevant section below. Further site visits have been undertaken in 2021 and these support the observations, however due to Covid there may have been changes to travel behaviour and patterns in the area.



## 3.4 Existing Site Access

### 3.4.1 Marine Parade Car Park

Figure 3.6 (a) shows the plan of the existing Marine Parade Car Park, located south of the Boat Club. The car park is situated on the south side of Tikotu Stream. Marine Parade Car Park currently has two accesses for entry and exit separately. There is a parking space for people with disabilities beside each driveway.

The public can currently use the bridge over the Tikotu Stream to access to the beach and Boat Club as shown in Figure 3.6 (b).



Figure 3.6 (a) Plan of Marine Parade Car Park (left); (b) Bridge over Tikotu stream (right)

### 3.4.2 Boat Club

The Boat Club is located on the western side of the Manly Street/Marine Parade/Kāpiti Road roundabout. An aerial photo of the Boat Club is shown in Figure 3.7 (a). There is one 8m wide access to the Boat Club car park, located on eastern side of the club. The access can be considered as an unofficial western arm of the roundabout.

Boats and vehicles visiting the Boat Club are permitted to park on the beach. The arrows in Figure 3.7 (a) indicate how vehicles are expected to enter and leave the beach around an existing concrete island. Figure 3.7 (b) shows the actual appearance of the concrete island.

The Boat Club car park is included in this assessment only to show where the Kāpiti Island Tour boats access the beach and where visitors currently, and in the future, connect with the boats. The site visit did not raise any serious issues with where the boats stopped to load. For a short period of time this may block one side of the access to the beach but access could still be maintained. Beca have also reviewed the car park layout to confirm that there are no serious issues with the truck and boat trailer manoeuvring around the car park.

There are some minor concerns with pedestrians crossing the car park to access the boat and with visitors waiting in the car park before loading. The bridge connection from the existing grassed area, which is the preferred location for visitors to wait, connecting Marine Parade car park and the Boat Club car park is not well signposted.

With the new biosecurity requirements the likelihood of visitors using the car park to access the Island experience is significantly reduced.



Figure 3.7 (a) Plan of the Boat Club; (b) Concrete island

In addition to the aerial photograph show in Figure 3.7 above, KCDC have supplied Beca with a sketch showing the redesign of the carpark, implemented in 2019. This was undertaken in consultation with the users of the carpark and is in line with the required operation of the site.

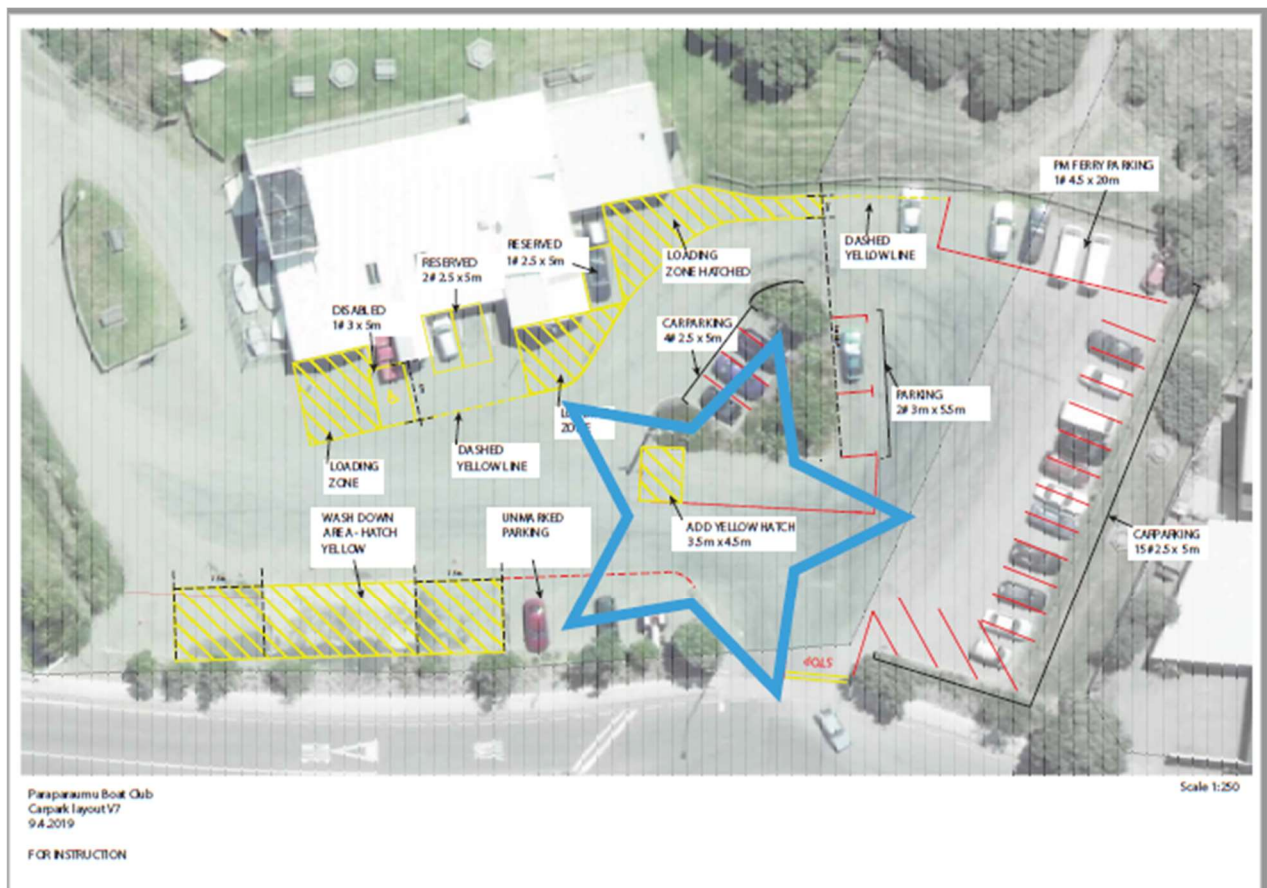


Figure 3.8 - Boat Club car park layout 2019

Beca have reviewed the layout and undertaken tracking of, in particular, a truck and boat trailer that typically use the car park. It is understood that the large tour boats are generally towed by tractor however these boats are typically parked on the beach during the day and only access the car park over night when the car park is less used. We have not been made aware of any issues with this arrangement.

The tracking did not show any significant issues with the layout, although showed that truck and trailers would need to use the traffic island at the northern end of the car park to turn around, and not be able to u-turn in the space directly outside the boat club, to utilise the wash down area. There was also a risk of overrunning the loading area and mobility park directly outside the Boat Club itself but the probability of these parks being utilised full time is low. In addition, if boats are parked up against this island, on the eastern side, vehicles would likely need to track closer to the access and this may create some safety issues but this would have been considered when the car park was redeveloped.

It is also recommended that KCDC review the visibility of the road markings in the car park to help mitigate any minor risk.

### 3.5 Existing Car Parking Occupancy

As mentioned above, along with the site visit on Friday, 13th March 2020, the current car park occupancy was noted.

The site visit revealed the following with respect to car parking:

- The on-street parking along Marine Parade, south of the roundabout, was almost full.
- There were 31 marked spaces, including two spaces for people with disabilities, in the Marine Parade car park and it was observed that 19 out of 31 car park spaces were occupied during the site visit.
- It was observed that the MacLean Park Car Park was almost fully occupied, and this may be due to it being near to the town centre.
- There are 21 marked car park spaces and about 10 unmarked spaces within the northern (Boat Club) car park. The unmarked spaces are located opposite to the Boat Club building, just north of the boat washing area and within the turning island.

Following the Covid 19 lockdown a more formal parking survey was undertaken on the request of Kāpiti Coast District Council to further inform the assessment however it should be noted that this was undertaken in the winter months. It does however go some way to add to the overall picture. The occupancy survey and associated analytics is contained in Appendix B.

In summary:

- The busiest time of the day for both the weekday and weekend survey was 11.00am.
- The number of unoccupied unrestricted parking spaces during the peak hour was 138 out of a total of 290 spaces surveyed.

Beca also reviewed the satellite imagery from Google Earth for comparison and while there are no time stamps on the images these do show that there are no occasions, dating back to 2005, where all the car parking spaces in the area are fully occupied. The 3<sup>rd</sup> March 2018 image shows an event on the beach, based on the number of vehicles parked on the sand, and both the boat club and Marine Parade car park are full but there are still unrestricted parking spaces on-road and further south.

### 3.6 Existing Safety and Amenity Issues

A number of observations were made during the site visit with respect to safety issues for pedestrians and vehicles within the study area, including:

- The existing pedestrian route from the Marine Parade Car Park to the car park next to the Boat Club, and to the beach, is poorly defined. There is no pedestrian signage and no pedestrian warning on the approach to the boat ramp further north.
- Some pedestrian paths in the Marine Parade car park are provided without dropped kerbs; all pedestrian paths should be designed to accommodate all users including the mobility impaired.

In addition to the observations, the Gateway Project team have informed Beca that boats for the Kāpiti Island Trips currently load in the boat club carpark, and concerns have been raised over pedestrians mingling with cars towing boats and accessing the beach, within the carpark. This will be addressed with the development proposals.

### 3.7 Kāpiti Island Trips

MacLean Park, and the Boat Club car park, is currently used to load and unload visitors to Kāpiti Island.

Kāpiti Island boat operators have an existing concession supplied by the Department of Conservation to allow for up to 160 visitors to the island in one day. The boat operators shuttle these visitors to the Island via 2 x boats that outside of operations are parked either on the beach (during the day) or within the Boat Club car park, overnight.

It is also assumed that this activity is permitted by Kāpiti Coast District Council and that the parking demand associated with this activity is also already permitted.

To assist with this project, the Gateway Project team conducted a customer survey to understand the travel and parking patterns of visitors. The relevant sections of the survey results are contained within Appendix C.

In summary:

- 86% of visits drove a private car and parked in the area
- 81% parked in an off-road car park area near the beach
- 49% were very likely/likely to use a secure off-road car park, near the departure point for a small fee, and use a free shuttle
- 90% of visitors went on the trip with one other person, or more – 45% were parties of 3 people or more

## 4 Development Proposal

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It is proposed to re-develop the 'Gateway' area, recently gifted the name Te Uruhi, which involves the construction of a Discovery/visitor Centre building within the Marine Parade car park and biosecurity facilities. The proposal includes:

- Discovery Centre to provide information for visitors to Kapiti Island and to the district.
- A modern biosecurity facility to improve the protection for the island.
- Building areas of 112.5m<sup>2</sup> for the Discovery Centre, 102m<sup>2</sup> for biosecurity and approximately 385m<sup>2</sup> of deck.
- Allowance for future increase by tour operators (not included in this consent).
- Extension of the Marine Parade car park south and reconfiguration of the layout including access points.
- Consideration of increasing parking provision in the area with the loss of some spaces within the Marine Parade Car Park.

The relocation of the car parking entrance and exit point and the relocation of the pedestrian crossing on Marine Parade to align with the car park also creates additional on road space for parking.

It is also assumed, at this time, that whilst the visitor numbers for the Kāpiti Island tours will grow on an annual basis, they are expected to remain within the current maximum daily limits as per their concession. Some sensitivity testing has been included to understand possible impact but it is assumed that this maximum baseline was tested on approval of the concession and therefore is not part of this consent.



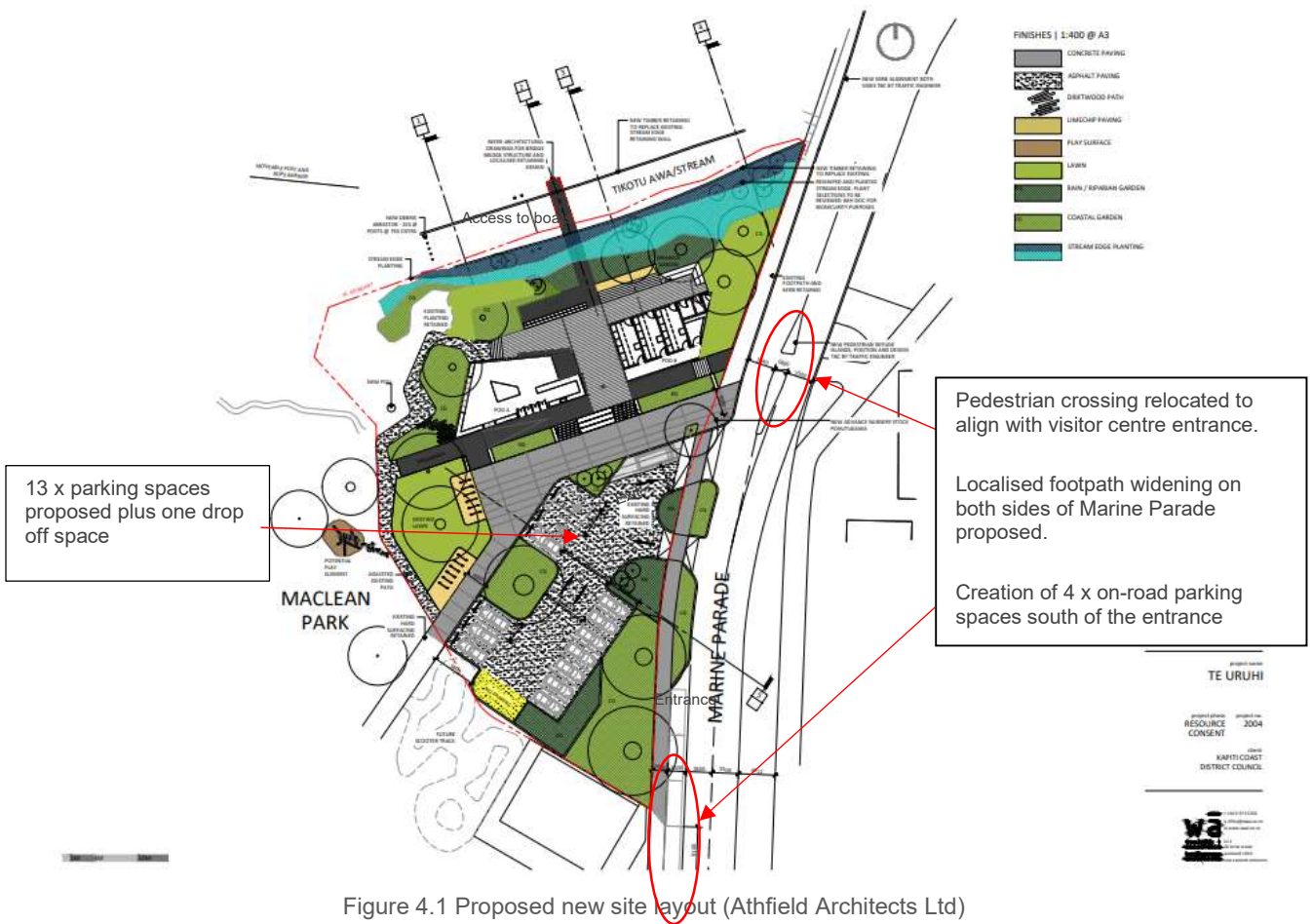


Figure 4.1 Proposed new site layout (Athfield Architects Ltd)

The analysis is based on the following understandings and assumptions:

- The Discovery Centre
  - Has a proposed floor area of 214.5m<sup>2</sup> of building, plus approximately 385m<sup>2</sup> of deck and takes up the northern section of the Marine Parade Car Park.
  - The building contains a Discovery Centre that is mainly focused on providing visitor information with the remaining area and deck concerned with processing Kāpiti Island Visitors. A gift shop with a takeaway coffee vendor is also included within the floor area.
- Boat Operation
  - Existing boat operation involves the use of 2 boats with a 30-person capacity, which provides access to Kāpiti Island from the Gateway with several sailings per boat a day (maximum of 160 people accessing the island a day).
- Parking
  - Existing parking demand for the car parks at Marine Parade and next to the Boat Club is unknown as it is intrinsically linked to the MacLean Park area, the beach and the town centre. Parking demand for the Discovery Centre will be based on District Plan requirements. This is discussed further in the assessment.
  - Additional parking locations are discussed and a preferred location for additional parking is included in this application.
- Access Configuration
  - The Marine Parade car park access points are reconfigured along with the car park layout.
  - The loading of passengers onto the Kāpiti Island boats will be via the bridge across the stream, and towards the boats on the beach. The pedestrian route will be marked by a movable fence.

- Traffic Analysis
  - Existing traffic is based on 2018 volumes and are considered more or less representative of the existing volumes. This includes an element of the current boat tour traffic.
  - The Discovery Centre is not expected to generate any additional traffic as visitors to the beach will already be present and while the boat tour traffic is expected to increase over time it is not expected to be above what is currently consented. However sensitivity testing has been included in the analysis.
  - 2% annual traffic growth is assumed in the AASidra modelling to allow for the future growth in traffic associated with population growth.
  - A doubling of the development traffic has also been assessed as a sensitivity test.

## 5 Parking Considerations

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### 5.1 District Plan Requirements

#### 5.1.1 Proposed District Plan Parking Policy 11.36

The District Plan states that *all new development shall provide for safe vehicular and pedestrian access and appropriate vehicle parking areas by:*

- *Providing parking numbers, layouts and dimensions consistent with parking standards*
- *Supplying adequate off-street parking to meet the demand of the land use while having regard to the following factors*
  - *The intensity, duration location and management of the activity*
  - *The adequacy of parking in the location and adjacent areas*
  - *The classification and use of the road, and the speed restrictions that apply*
  - *The nature of the site, in particular its capacity to accommodate car parking*
  - *The characteristics of the previous activity that utilised the site;*
- *Taking effects on the neighbouring areas into account when designing the location, layout and number of parking spaces (including car and cycle parks and disability car parks)*
- *Ensuring the location, layout and number of disability carparks and cycle parks is safe, user-friendly and appropriate; and*
- *Achieving a balance between encouraging mitigation of parking overflow effects (e.g. shared use of car parking), and discouraging car-based travel through use of travel plans.*

It should also be noted though that since the start of the development of this application the National Policy Statement (NPS) on Urban Development, Subpart 8 – Car Parking was been gazetted. This states that:

*“If the district plan of a tier 1, 2, or 3 territorial authority contains objectives, policies, rules, or assessment criteria that have the effect of requiring a minimum number of car parks to be provided for a particular development, land use, or activity, the territorial authority must change its district plan to remove that effect, other than in respect of accessible car parks.”*

The NPS was gazetted on 23 July 2020 and took effect on 20 August 2020. Kāpiti Coast City Council is a tier 1 territorial authority; therefore, the effect of the minimum number of car park will have to be removed not later than 20 February 2022. The project has had verbal confirmation that the NPS UD will be supported for this application however comment on current District Plan requirements are included below.

With regard to the District Plan it is assumed that the current activities in and around the beach are permitted activities, such as the retail within the town centre, and provide the correct amount of parking in accordance with the District Plan, however there is no requirement as part of this proposal to confirm this.

A parking rate for retail and non-retail commercial activities is provided in Table 11P.1 of the District Plan however there is no activity that would cover the unrestricted activities associated with MacLeans Park and the beach.

It is assumed that supply of car parking spaces over time has been largely organic however the supply and availability of vacant spaces does not appear to have changed since 2005, based on the Google imagery, and surveys undertaken.

### 5.1.2 Response to District Plan Requirements

Currently Section 11.7 of the Kāpiti Coast District Council (KCDC) District Plan sets out the requirements for car parking within Table 11P.1.

As a new activity the Discovery Centre within Table 11P.1 of the District Plan is classified as a non-retail commercial activity are classified as Retail. Assuming the biosecurity activity is classified as non-retail activity, 214.5m<sup>2</sup> is allocated to non-retail commercial activity and the rest is shelter for visitors who are largely congregating to access the tour boats to the Island and to pass through biosecurity.

This current biosecurity activity already occurs in the area and as previously mentioned has permitted activity status. In this regard this activity creates no additional demand for parking. New parking demand is therefore only associated with the Discovery Centre which is 112.5m<sup>2</sup> GFA.

Based, on the above, the car parking requirements for the new Discovery Centre are outlined in Table 2 below.

Table 2 District Plan Parking Requirement

Activity	Gross Floor Area	District Plan Requirement	Total Required
Visitor Centre (non-retail commercial activity)	112.5m <sup>2</sup>	3 x car parks per 100m <sup>2</sup> gross floor area	4 spaces
<b>Total</b>			<b>4 spaces</b>

To comply with the current Kāpiti Coast District Council Proposed District Plan, the new Discovery Centre would generate a requirement for **4 additional spaces**.

## 5.2 Existing Parking Demand

As outlined in Section 4 above the existing biosecurity activity associated with the Kāpiti Island Tours is an existing permitted activity. It is unknown what the original agreement included however as mentioned earlier there is also no official parking rate for this type of activity other than non-retail.

Using first principles, based on the maximum daily number of visitors expected i.e. 160, and the customer survey obtained by KCDC, a maximum of 47 of the 290 (16%) existing unrestricted spaces could currently be being occupied during the peak of this activity, which is also likely to coincide with the peak of visitors to the beach. Given the timing of the activity it is assumed that those closest to the biosecurity area will be occupied first. Off-peak these spaces will be available to use by other visitors.

As outlined in Section 3.5 the existing parking around Paraparaumu Beach is largely unrestricted and freely available to all users. The capacity for parking, given the beach environment, is likely to be very weather dependent and while the parking survey itself was undertaken in the winter months, and the Kāpiti Island Tours may not be operating at full capacity, there still appears to be parking spaces available within the area even though anecdotally there are times where this is not the case whichever the season.

## 5.3 Changes to Marine Parade and Boat Club Car Parking

The addition of the Visitor Centre does require the removal of some of the existing spaces in Marine Parade Car Park and the reconfiguration of the layout and access points.

However the relocation of the access points and the pedestrian crossing creates an additional 4 x on-road spaces south of the entrance where Marine Parade Road is wider and the shoulder markings can be extended. Parking on the shoulder along Marine Parade is currently permitted however the no stopping lines will need adjusting around the access point to allow this and prevent parking around the new pedestrian refuge.

In considering the NPS there is no requirement to provide additional spaces nor to offset the loss of spaces as the principle for these changes is to encourage more travel by active transport modes and public transport. However it was important to this project to at least offset the loss of spaces in the Marine Parade car park, and consider relocating them within the MacLean Park development area.

Options were initially considered within the Boat Club including reducing the size of the Marine Parade/Kāpiti Road roundabout. This option including an assessment of the capacity of the roundabout is contained in Section 7.2 below.

Overall no additional spaces are available within the Boat Club car park.

A summary of the change in parking **supply** within the Marine Parade car parks in the existing and future arrangement is provided in Table 3 below.

Table 3 Car Parking Changes

Scheme	Existing (no Visitor Centre)	Future (with Discovery Centre)	Difference
Marine Parade Car Park	31	13 plus 1 x space for drop off/pick up	-18
On-Road parking	0	4 additional on-road spaces	4
		TOTAL	-14

Based on the above, a shortfall of 14 spaces is anticipated against the existing provision of parking in the area. If additional spaces are required for the Discovery Centre there is an overall shortfall of 18 spaces.

To counter the shortfall Kāpiti Coast District Council considered a number of options:

- Increasing the supply in the Boat Club car park.
- Supplying dedicated parking elsewhere such as at the Golf Course.
- Increasing parking areas in other green space, such as at the southern end of Maclean Park (Area C on the management plan).

Discussion on some of these options are outlined below.

### 5.3.1 Boat Club Car Park

The Boat Club carpark was initially considered as an option to off-set the car parking spaces lost in the Marine Parade car park. Based on its current layout there are no additional spaces available.

An option was also considered that looked at reducing the size of the Marine Parade/Kāpiti Road roundabout and expanding the car parking area and the outcome of that capacity assessment is contained in Section 7.2.1 below, however this will not be progressing due to the costs associated with doing so.

### 5.3.2 Golf Club Car Park

Kāpiti Coast District Council discussed funding additional car parking at the Golf Course on Kāpiti Road, just south of the roundabout with Marine Parade.

The golf course are seeking to extend their car park at the northern end and were willing to allocate 20 spaces within this area plus a further 10 at the southern end.

Provision of additional spaces may have incurred additional costs that may or may not be offset through ticket sales to the Island. This option is not progressing.





**Area 2** is a new car parking area. It extends an existing area of parking and utilised the existing access point. Some existing spaces have been removed to allow for easier access and turn around. With landscaping an additional 19 spaces are created (including removal of one space in the existing car park). Two disabled spaces are proposed in this area.

Similar to Area 1 some spaces may be lost in the shoulder if the Council require sight distances to be maintained.

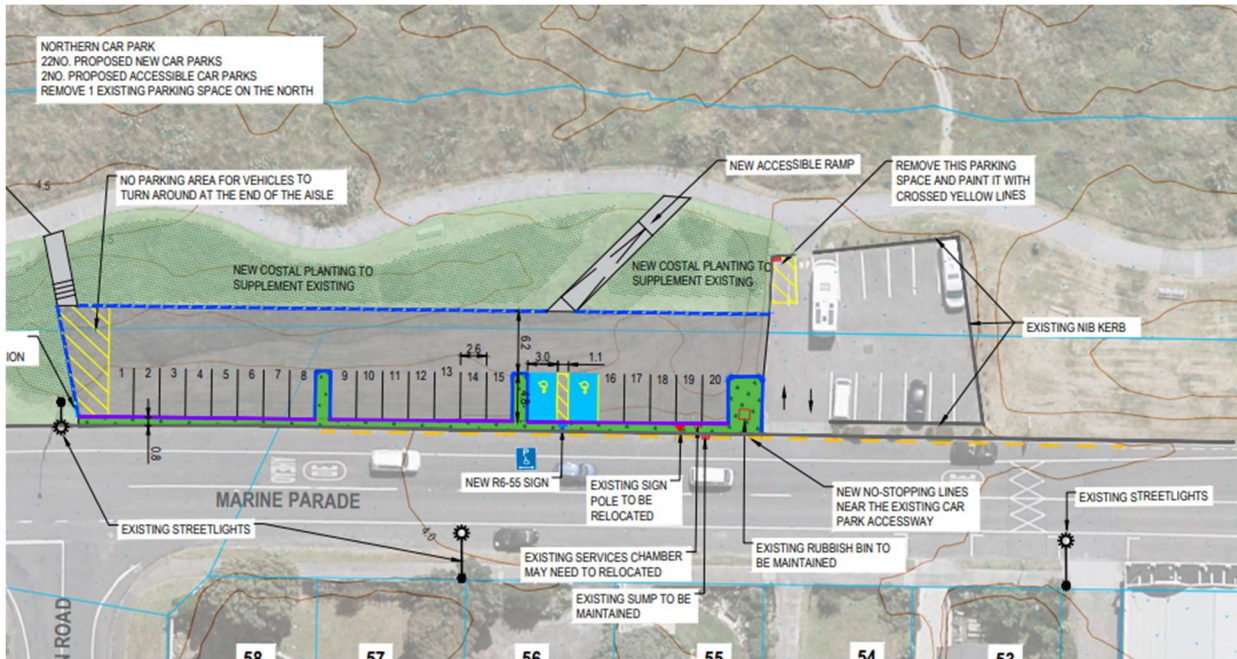


Figure 5.2 - Area 2 - Extract from proposed parking design

The net gain in parking spaces is:

Scheme	Existing	Future (with Discovery Centre)	Difference
Marine Parade Car Park	31	13 remaining	-18
On-Road parking	0	4 additional on-road spaces	4
Area 1	-9	15 additional spaces	6
Area 2	-9	19 additional spaces	10
		TOTAL	20

### 5.4 Other parking considerations

To accordance with the relevant rules and standards outlined within Section 11.7 of the District Plan, all new parking provided on-site will be to the relevant AS/NZS2890.1 and sealed, formed, marked and maintained for use in all weathers.

Line marking and pedestrian connection within and to/from all car parking areas will be designed to enable the safe and efficient movement of pedestrians within and between car parking areas including delineation of both pedestrian and vehicle paths.

## 5.5 Summary

In summary based on the permitted daily maximum operation of the Kāpiti Island tours, during peak times, there would be around 47 out of the 290 (16%) unrestricted spaces occupied in the local Paraparaumu Beach area. It is assumed that during peak times the spaces closest to the biosecurity area fill up with Island Tour visitors first and they generally park for most of the day or the duration of the tour. Off-peak however all of these spaces are available for use by the general public.

The use of the spaces is not going to change with the proposal however with the construction of Te Uruhi and the redevelopment of the Marine Parade car park 18 spaces will be removed but a further 20 spaces will replace them albeit in a different location but still within approximately 400m of Te Uruhi.

The provision of a new car parking area, as part of the Maclean Park Management Plan, is proposed in Area 2 along with remarking of an existing car park (Area 1), south of Ocean Road to compensate for the loss of spaces.

Along with additional provision on road there will be a net gain of two spaces.

It is recommended that KCDC review the timing restrictions within Maclean Park to encourage higher turnover of spaces closer to the retail area and and further encourage longer term parking further away.

## 6 Access and Site Layout

Access to the Visitor Centre is to be provided off Marine Parade, with the existing truck and boat trailers continuing to access the Boat Club car park via the western leg of the Marine Parade/Manly Street/Kāpiti Road roundabout.

These access configurations have been assessed against the requirements of the District Plan below.

### 6.1.1 District Plan Requirements

#### a. Vehicle Access Width

The District Plan indicates the following requirements for vehicle access:

- Commercial activities must be provided with an access of 6-metres minimum width and 2.8 metres unobstructed height.
- Sites containing non-residential activities, and which provide more than 6 car parks, shall provide two-way accesses which must be a minimum of 6 metres wide

A summary of the access conditions for the existing and proposed access are summarised in Table 4 below.

Table 4 Access Details

Access	Crossing Width
Existing access to Marine Parade car park	Two accesses (ingress and egress) approximately 4.5m width each
Proposed access to Marine Parade car park	Two accesses (ingress and egress) approximately 6.0m width each

The District Plan rules are understood to be in place to enable two-way entry and exit to parking areas for those car parks with a number of car parks (more than 6) and a certain number of vehicle movements.

Based on information contained in Table 4, the proposed Marine Parade car park complies with the District Plan rules. In this case, the Marine Parade car park is provided with two-way access through the provision of independent ingress and egress crossing points. This allows entering and exiting traffic to be separated and allows a smooth operation of the car park area.

When considered together the two accesses offer a combined width in excess of 6m and allow two-way access. As such the access to Marine Parade Car Park is considered appropriate.

The new car park at Area 2 will utilise an existing car parking access and is approximately 7.5m wide.

#### b. Access Spacing

*No crossing point must be located closer than 30m to an intersection.*

Both the existing accesses to the Marine Parade Car Park and the proposed new access (measured from northern edge of access to roundabout's intersection kerb line) are located over 30m from the intersecting kerb line of the roundabout to the north.

The new car park at Area 2 will utilise an existing car parking access and is already approximately 31m south of Middleton Road which is on the opposite side of the road. Similarly Area 1 is more than 30m from the intersection with Ocean Road, also on the opposite side of the road.

#### c. Sight Distance

For a commercial property off a road with a posted speed limit of 50km/h there is no minimum sight distance requirement between the access and the road however KDCDC have also adopted NZS4404 as minimum engineering standard. Paragraph 3.3.2 of NZS4404 identifies that on "collector / connector and arterial roads, sight distance criteria at intersections, as well as for stopping, overtaking, on curves, and to avoid obstructions should be applied in accordance with Austroads or NZTA guidelines".

While the access to the car park would be considered a driveway and not an intersection Austroads does recommend that similar standard are met. In this regard the approach sight distance (ASD) is expected to be a minimum of 55m with a reaction time of 2.0s and design speed of 50kph and similarly a Safe Intersection Sight Distance (SISD) of 97m.

The egress access to Marine Parade Car Park is approximately 86m from the Marine Parade/Kāpiti Road roundabout to the north but provides a clear view of the roundabout and to oncoming traffic that would meet both the ASD and SISD sight distance requirements. Similarly to the south, there is a slight curve in the road at approximately 100m but the view is unobstructed until that point. Given the lack of crash history associated with the existing access points it is Beca's opinion that these meet the standards for sight distance.

Both of the existing car park accesses for Area 1 and 2 comply with the ASD and SISD standards.

KDCDC District Plan requires, for high turn over driveways a minimum sight distance to be maintained. It is not clear from the District Plan if these car parking areas are classified as high turn over driveways however we have considered this requirement in our design. Note also that sight distances are not consistently maintained for all the car parking access points along Marine Parade and parking is typically permitted in the shoulders.

The posted speed in the area is 50kph however the operating speed is lower. Using 40km/h, a minimum sight distance of 73m should be provided (Austroads Road to Design Guide). The sight distance is measured 3.5m from the edgeline to the centre of each traffic lane. The installation of no stopping lines, if deemed required by Council, will maintain these sight distances.

All exits are considered safe and appropriate from a road safety perspective

Notwithstanding, specifically for the Marine Parade car park, all landscaping at the points of site access should be designed and maintained to offer visibility to and from the road and to meet the minimum standard sight distances as outlined within the District Plan.



#### d. Manoeuvring

The parking areas have been designed to offer sufficient manoeuvring space on-site to ensure no reversing onto the road is necessary and access to the car parking areas functions in a safe and efficient manner.

#### 6.1.2 Pedestrian access

For access to the Marine Parade car park there are existing footpaths along Marine Parade, on both sides of the road, with an existing pedestrian refuge across Marine Parade, close to the access to the carpark. The proposal includes widening the footpaths on both sides of Marine Parade and the pedestrian refuge is being relocated to better align with the car park and visitor centre access.

The walking distance from bus stops is less than 400m. 400 metres is often used as a rule of thumb to indicate good connectivity to a bus stop and public transport utilisation but also for good pedestrian connectivity.

Equally the new parking areas are within 400m of Te Uruhi and the close to the town centre.

## 7 Traffic Considerations

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### 7.1 Traffic Flows

Traffic flow data has been provided by Kāpiti Coast District Council, which is consistent with the MobileRoad data previously presented:

Marine Parade 150m North of Ocean Parade (Dec 2017) 4,724 vehicles per day

Outside 16 Manly Street (Sep 18) 3,942 vehicles per day

Kāpiti Road 20m West of Golf Road (Dec 18) 5,139 vehicles per day

### 7.2 Traffic Generation

#### 7.2.1 Development Traffic

As part of this access Council requested an assessment of the capacity of the Kapiti Road roundabout and any additional traffic generated by the new development. As stated previously there is no new traffic generated by the Visitor Centre as it is assumed visitors will already be present. However for completeness we have undertaken a sensitivity test as current Kāpiti Island Tour visitors are not yet at the consented level and also included an assessment should visitors be double the current consent – however this is not included in the application.

The traffic surveys above will already include an element of the existing visitors accessing the Island Tours, assuming there was some element of the tours being operated on the days of the survey but this is to an unknown degree.

As mentioned in Section 5.3.1 an assessment was also undertaken into reducing the size of the roundabout in order to provide additional parking within the Boat Club car park, at the request of the Council. The assessment has been presented below and should be considered as part of the overall assessment but the reduction in the roundabout itself has been rejected.

The existing and future generated traffic associated with the use of the site is based on the following assumptions:

- Existing:
  - Worst case at present is that the boat tours attracts the maximum of 160 people at any given time in the peak hour. With a worst case, being those arriving and leaving for the island are on the network in the same peak hour. Allowing for an occupancy of 2 people per car this gives an existing 80 trips associated with the tours.
- Future:
  - **Boat Tours:** A worst case in the future is that the boat tours attract a maximum of 320 people at any given time in the peak. With a worst case, being those arriving and leaving for the island on the network in the same peak hour. Allowing for an occupancy of 2 people per car, this would result in an additional 80 movements compared to the existing (160 movements in total).

The assessment has been restricted to the impact of traffic generated on the Marine Parade, Kāpiti Road and Manly Street roundabout only.

### 7.3 Intersection Modelling and feasibility of a smaller roundabout

AASidra modelling software has been used to establish the effects in terms of delay and congestion of the proposed development on the network, specifically the roundabout at the intersection of Marine Parade, Kāpiti Road and Manly Street. It is noted that the assessment considers an addition future scenario, whereby the size of the roundabout may be reduced.

#### 7.3.1 Scenarios modelled

The following scenarios have been modelled in AASidra to reflect the existing and potential future operating conditions of the roundabout:

1. Existing<sup>2</sup> traffic volume (see Appendix A) during peak hours on Thursday (5:00 – 6:00 pm) and Saturday (10:00 - 11:00 am) with existing site layout
2. Existing<sup>3</sup> traffic volume during peak hours on Saturday with reduced size of the roundabout
3. Existing<sup>4</sup> traffic plus the development generated traffic including 2% annual traffic growth over 10 years, as a small roundabout
  - Future boat operation generated traffic is assumed to be an additional 80 vehicles on the network (40 into and 40 vehicles out of the access) based on the worst-case scenario.
  - As a final sensitivity test, the development generated traffic was doubled as part of this scenario to assess the impact (an additional 160 movements)

<sup>2</sup> Existing traffic is based on the most recent volumes available at the roundabout, which are from 2018.

<sup>3</sup> Existing traffic is based on the most recent volumes available at the roundabout, which are from 2018.

<sup>4</sup> Existing traffic is based on the most recent volumes available at the roundabout, which are from 2018.

The results for each scenario are shown in Table 5.

Table 5 AASidra modelling results

Assessment summary				
Situation	Time	Average Delay (sec)	Intersection LOS	95% Back of queue
1	Thursday	5.0	A	1.0 veh
	Saturday	5.3	A	1.0 veh
2	Saturday	5.7	A	2.0 veh
3	Saturday	6.4	A	3.0 veh

#### 4.7.3 Roundabout Performance

The AASidra results from **Scenario 1** indicate that the roundabout works well during both the Thursday and Saturday peak periods. The level of service for all movements is A, and the delay is low. Saturday traffic volumes are greater than on Thursday, so the following models used to test the roundabout operation are based on Saturday's traffic.

For **Scenario 2** according to the Austroads: Guide to Road Design 4B Roundabout, the central island of the roundabout can be decreased to a radius of 8 m and the corresponding circulating width can be reduced to 8.4 m to allow semi-trailer to use.

The size of the existing roundabout is roughly 43 m including the central island and circulating lanes. The smallest roundabout can be approximately 33 m including the central island and roundabout circulating width.

It should be noted that only the diameter and the carriageway width is changed for the geometric data of the small roundabout. The entry angle and entry radius are unchanged from the original roundabout.

The number of movements in and out from the public car park is assumed to be as the same level as the current situation for **Scenario 2** to test the capability of the small roundabout. Scenario 2 results in a LOS A and low delay for each movement. This demonstrates that a small roundabout in this location can accommodate current traffic volumes.

**Scenario 3**, the future scenario was modelled as a small roundabout. It is assumed that there will be an additional 160 light vehicle movements on the network in the peak as a result of the development generated traffic. This scenario maintained a LOS A, which indicates a small roundabout is capable of accommodating the future development generated traffic, which in turn indicates the development generate traffic is expected to have an immaterial impact on the operation of the road network even if the roundabout was to be reduced in size.

The traffic assessment concluded that there are no issues with the capacity of the roundabout existing or with a potential doubling of traffic potentially generated by the Island Tour operation or any other activity. Also the size of the roundabout could be reduced in terms of vehicle capacity but was not considered value for money.

## 8 Conclusion

This report has assessed the traffic impact of the proposal to develop the Gateway, Te Uruhi, area along the Paraparaumu Beach foreshore.

The development proposal involves a number of changes to the existing site as part of the Maclean Park Management Plan:

- The building of a Kāpiti Island Visitor Centre and subsequent removal of car park spaces in the Marine Parade Car Park.
- Consideration of increasing parking provision in other locations, including the Boat Club, and improvements to access for vehicles and pedestrians.

The outcomes of the assessment indicate the following traffic impacts:

- Based on the parking survey, site observations and historic images, the loss of car parking spaces associated with Visitor Centre building and associated use, could be accommodated by the current available parking areas along Marine Parade, or within the town centre.
- The current maximum demand at peak times for parking for the Island Tours that is being accommodated is up to 47 spaces or 16% of the unrestricted spaces. A proportion of this is already happening and previously consented. An increase in the maximum is not the subject of this application.
- One existing car parking area south of Ocean Road (Area 1) is to be remarked to provide up to 15 additional spaces and one new car parking area is to be constructed (Area 2) to provide up to 19 new car parking spaces.
- The vehicle accesses proposed for the development and the new car parking area meet the District Plan Requirements and have been designed to mitigate any anticipated safety and amenity issues associated with site access.
- An existing and theoretical future traffic scenario was tested which included doubling of the Island Tour trips. This had an immaterial impact on the operation of the roundabout at the intersection of Marine Parade, Manly Street and Kāpiti Road and the wider road network.

In conclusion the Te Uruhi development and associated new carparking areas will have less than minor impact on the transport network.





Appendix A – Traffic Data



Traffic surveys were conducted at Manly Street/Kāpiti Rd/Marine Parade intersection on Thursday, 08/02/2018 and Saturday, 10/02/2018. The surveys were conducted to get an appreciation of the existing operation of the roundabout located east of the Boat Club Car Park. The peak hour on Thursday is between 17:00 and 18:00, and that on Saturday is between 10:00 and 11:00. The traffic data of the peak hour for both days is summarised in the Table 6 below.

Table 6 Traffic data of the roundabout

Movements	Thursday 17:00 – 18:00				Saturday 10:00 - 11:00			
	Cars	Trucks	Buses	Cyclists	Cars	Trucks	Buses	Cyclists
<b>Manly St (North)</b>	<b>149</b>	<b>0</b>	<b>3</b>	<b>6</b>	<b>269</b>	<b>1</b>	<b>1</b>	<b>16</b>
Left into Kāpiti Rd	67	0	3	3	98	0	1	3
Thru to Marine Parade	79	0	0	3	161	1	0	11
Right into Manly St (West)	3	0	0	0	9	0	0	0
U-Turn	0	0	0	0	1	0	0	2
<b>Kāpiti Rd</b>	<b>212</b>	<b>2</b>	<b>2</b>	<b>3</b>	<b>255</b>	<b>3</b>	<b>1</b>	<b>2</b>
U-Turn	4	0	0	0	0	0	0	0
Left into Marine Parade	70	1	0	2	155	2	0	2
Thru to Manly St (West)	10	0	0	0	19	0	0	0
Right into Manly St (North)	128	1	2	1	81	1	1	0
<b>Marine Parade</b>	<b>186</b>	<b>3</b>	<b>0</b>	<b>5</b>	<b>276</b>	<b>1</b>	<b>0</b>	<b>17</b>
U-Turn	1	0	0	0	15	0	0	1
Left into Manly St (West)	5	0	0	0	9	0	0	0
Thru to Manly St (North)	97	2	0	3	107	1	0	16
Right into Kāpiti Rd	83	1	0	2	145	0	0	0
<b>Manly St (West)</b>	<b>18</b>	<b>1</b>	<b>0</b>	<b>1</b>	<b>39</b>	<b>0</b>	<b>0</b>	<b>0</b>
U-Turn	0	0	0	0	0	0	0	0
Left into Manly St (North)	2	0	0	1	6	0	0	0
Thru to Kāpiti Rd	14	1	0	0	27	0	0	0
Right into Marine Parade	2	0	0	0	6	0	0	0
<b>Grand Total</b>	<b>565</b>	<b>6</b>	<b>5</b>	<b>15</b>	<b>839</b>	<b>5</b>	<b>2</b>	<b>35</b>

The HCV of the intersection is low. The intersection is busier on weekends as compared to weekdays for the following reasons:

- Morning market usually takes places on Saturday morning at Maclean Street.
- There are more visitors visiting Kāpiti Island and other activities on weekends.
- There are more people launching their boats on the beach on weekends.

# B

## Appendix B – Parking Occupancy Survey

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## Memorandum

**To:** Janice Hill  
**From:** Caron Greenough & Tessa Lin  
**Copy:**  
**Subject:** Parking Survey for Paraparaumu Beach Memorandum

**Date:** 9 September 2020  
**Our Ref:** 3821650-1135691850-35

### 1 Introduction

Beca has been commissioned by Kāpiti Coast District Council to carry out parking surveys in the Paraparaumu Beach to understand the existing demand for parking in the area and inform decision making around the proposal for a new visitor centre at the northern end of MacLean Park. The methodology of the count was a beat survey (every hour) recording occupied spaces from 7am to 5pm.

Two parking surveys have been undertaken as proposed on Wednesday 5<sup>th</sup> August 2020 and Saturday 8<sup>th</sup> August 2020. This memo outlines the parking survey results and further analytics based on the Kāpiti Island visitation numbers in 2019.

The parking survey has been undertaken within an approximate walking radius of 500m from the development site of interest (Marine Parade Car Park). There were two large parking areas, with several sub-areas, requiring two surveyors undertaking the parking survey at the same time and they were responsible for their own parking areas. The following is the location description of each parking sub-area:

- A1, B1, D1, E1 - Along Marine Parade (from just beyond its intersection with MacLean Street to the intersection of Manly Street, Marine Parade and Kāpiti Road)
- C1 - MacLean Park Car Park
- F1 - Howell Road
- G1 - Seaview Road (from MacLean Street to Howell Road)
- H1 - MacLean Street (from Marine Parade to Seaview Road)
- A2 - Marine Parade Car Park
- B2 - Boat Club Car Park
- C2 - Manly Street (from the roundabout to George Street)
- D2 - Golf Street (from the intersection with Kāpiti Road to McKay Street)
- E2 - Kāpiti Road between Howell Road and the intersection of Manly Street Marine Parade and Kāpiti Road



## Memorandum

Table 1-1 and Table 1-2 shows the supply of car parking of each sub-area. Given the supply of parking spaces for the unmarked on-street is hard to estimate when it is not occupied, it has been assumed that each parking space is 6m long. It should be noted that the supply in sub-area H1 is normally unavailable until 2:00 pm on Saturday due to the presence of the morning market.

**Table 1-1 Supply of Parking Area 1**

Parking Area 1				
Parking Areas	Marked parking space	Visitor Parking	Mobility parking	Total
A1	Yes	23	2	25
B1	Yes	7	2	9
C1	Yes	37	1	38
D1	No	26	0	26
E1	No	9	0	9
F1	Partially	16 marked parking spaces on the east of intersection of Howell Road and Seaview Road, assume 18 on the west of the intersection	0	34
G1	Yes	36	1	39
H1	Yes	24	0	23

**Table 1-2 Supply of Parking Area 2**

Parking Area 2				
Parking Areas	Marked parking space	Visitor Parking	Mobility parking	Total
A2	Yes	30	2	32
B2	Partially	21 marked + 10 unmarked	1	32
C2	No	36	0	36
D2	No	20	0	20
E2	Marked parking bay	29	0	29

## Memorandum

Figure 1-1 below shows the location of parking areas that were surveyed. The blue shading indicates the off-street car parking with the lines indicating the on-street car parking.



Figure 1-1 Parking survey study areas

## 2 Parking Survey Results

Figure 2-1 and Figure 2-2 presents the demand and supply of the proposed parking area and the occupation rate from 7:00 am to 5:00 pm. As the supply of sub-area H1 is not available by 2:00 pm on Saturday, the total supply in the proposed area dropped by 23. The busiest period was 11:00 am for both survey dates.

# Memorandum

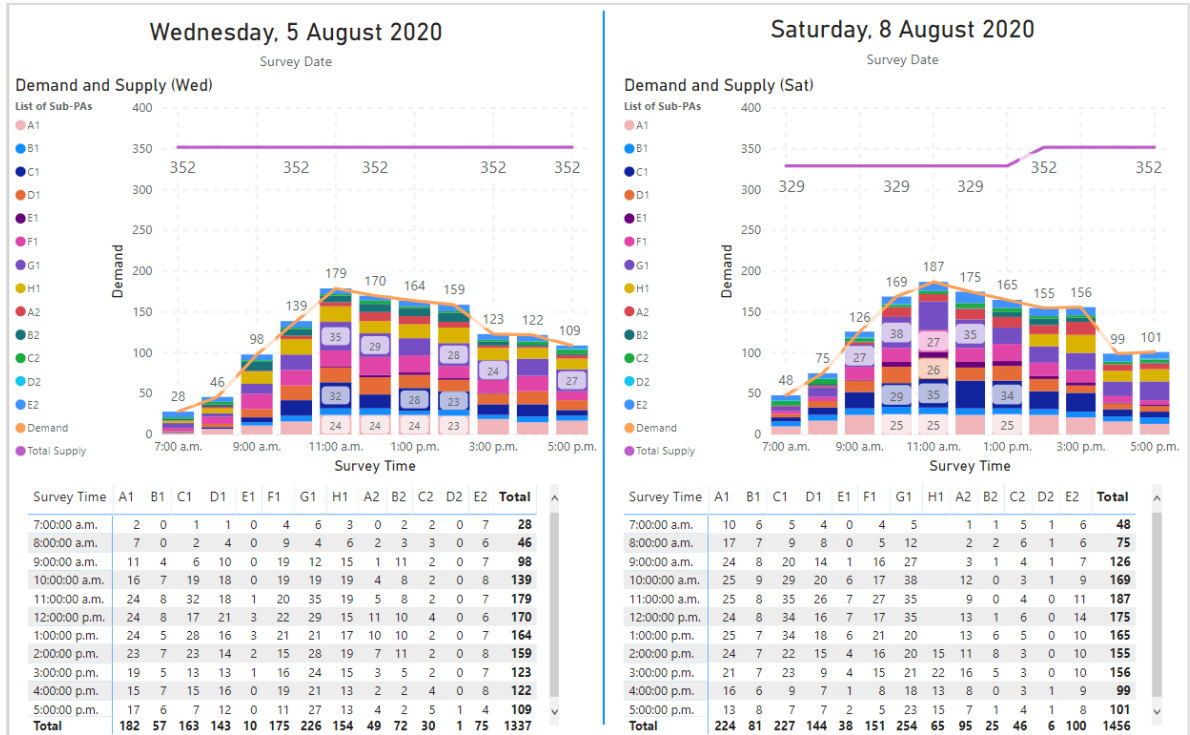


Figure 2-1 Parking demand and supply (all areas)

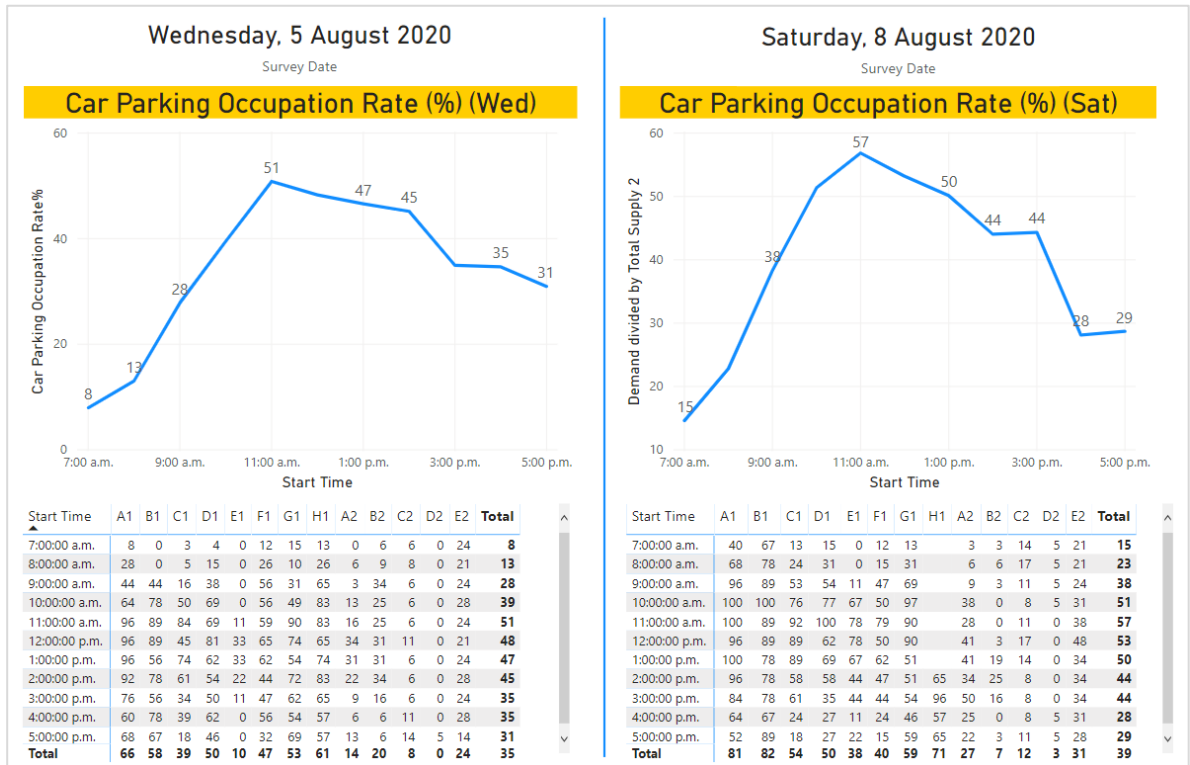


Figure 2-2 Parking occupation rate as a percentage (all areas)

# Memorandum

Parking spaces in sub-areas G1 and H1 have the time restriction of 60 minutes. It is assumed that Kāpiti island visitors will not park in G1 and H1 as they typically stay much more than 60 minutes. Figure 2-3 and Figure 2-4 illustrates the same kind of data as above but excluding the data of sub-areas G1 and H1.

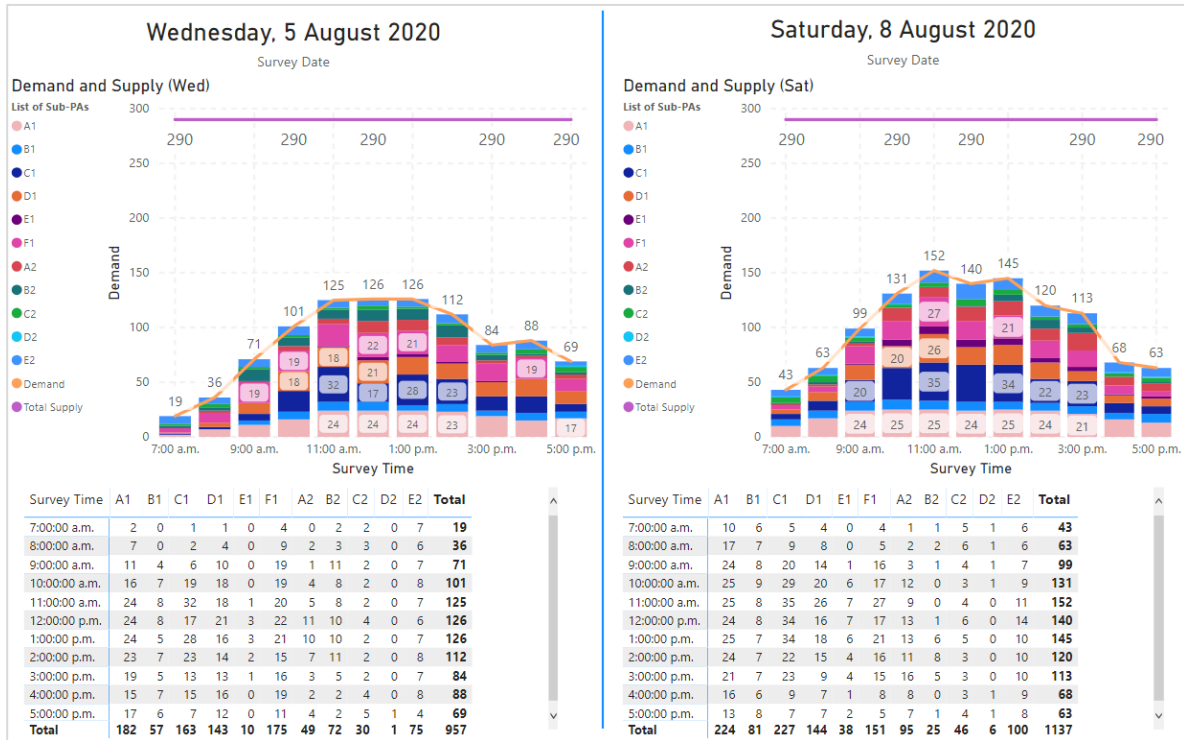


Figure 2-3 Parking demand and supply (exclude sub-areas G1 and H1)

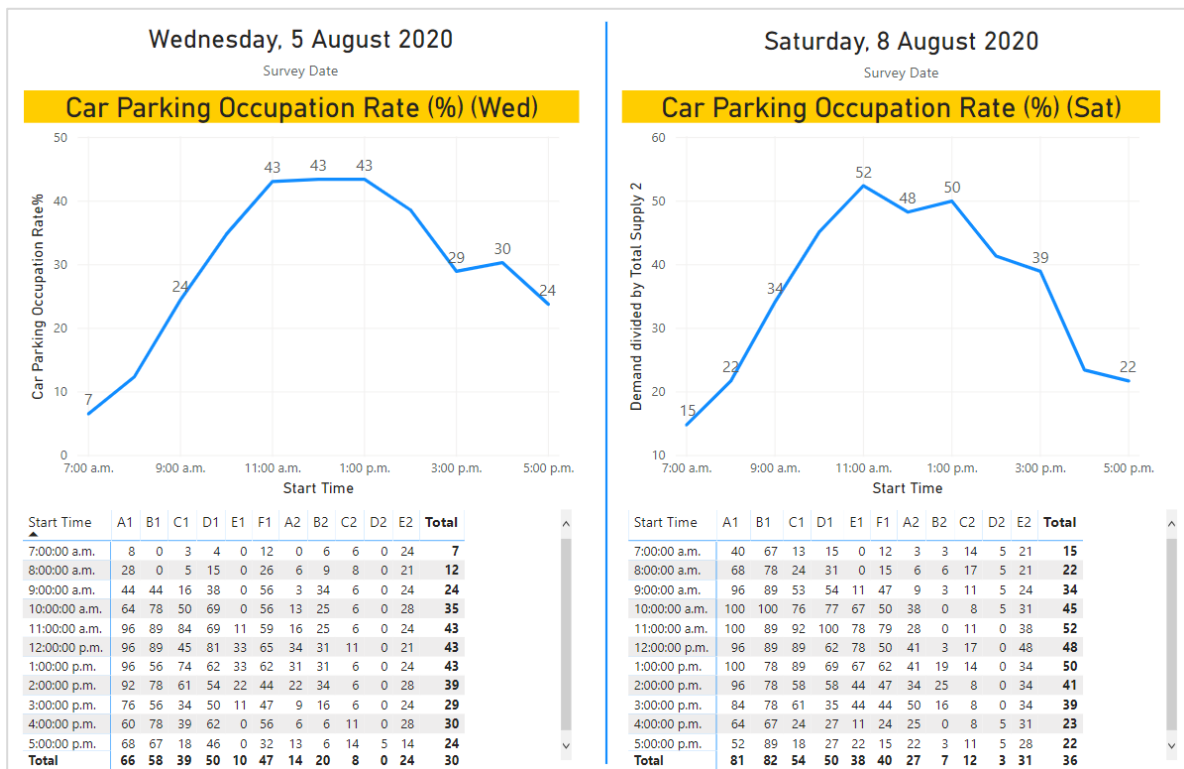


Figure 2-4 Parking occupation rate as a percentage (exclude sub-areas G1 and H1)



## Memorandum

### 3 Parking Demand in the Peak Month

Table 3-1 is the number of visitors to Kāpiti Island from 2013 to 2019, provided by Kāpiti Coast District Council. Given Kāpiti Island tours are normally unavailable in winter in July and August, the number of visitors to the island are very low, compared to the number of visitors in the summer, especially in February.

Also to note there were no there were no sailing on either survey dates. The average number of visitors over the winter months say May to September is 183 visitors or 6 per day.

The visitor number for the peak month of February is 2625 visitors to the Kāpiti Island in February 2019.

An occupancy of 2 visitors per car was demonstrated in the Kāpiti Gateway Transport Impact Assessment <sup>1</sup> based on the results of Kāpiti Island Visitor Survey completed in April 2020.

Based on that information at least 47<sup>2</sup> more parking spaces would be required for visitors on average per day in the peak season.

**Table 3-1 Kāpiti Island visitation numbers 2013-2019**

	2013	2014	2015	2016	2017	2018	2019
Jan	1569	402	1073	986	1380	1765	2221
Feb	768	321	649	1607	1451	1652	<b>2625</b>
Mar	1360	645	758	1605	986	1918	2338
Apr	463	287	434	1334	1048	1426	1478
May	128	113	346	373	513	440	497
Jun	43	209	40	387	554	0	269
Jul	61	68	135	0	155	0	38
Aug	21	34	5	34	21	0	107
Sept	236	56	94	215	257	1133	656
Oct	305	343	693	484	1056	1522	1311
Nov	696	427	898	540	1641	1987	2169
Dec	634	1674	1570	1940	1557	2099	2250
<b>Total</b>	<b>6284</b>	<b>4579</b>	<b>6695</b>	<b>9505</b>	<b>10619</b>	<b>13942</b>	<b>15959</b>

<sup>1</sup> Kāpiti Gateway Transport Impact Assessment prepared by Beca, issued on 11 May 2020

<sup>2</sup> In Feb 2019: (2625 visitors/28days) / (2 visitors/car) / 28 days = 47 cars/day

## Memorandum

Using the baseline from the parking survey, the number of unrestricted parking supply is approximately 290, and the number of unoccupied unrestricted parking spaces during the peak hour (11 am on Saturday) is 138. With 47 more parking spaces occupied, there would be at least 195 parking spaces occupied in the parking areas without time restriction during the peak hour in a busy day, with still 91 unrestricted parking spaces left.

However, it is difficult to estimate how many other parking spaces will be occupied by other activities in the vicinity in the summer.

The parking survey suggests that the restricted parking in the winter is nearly fully occupied or unavailable during the peak hour. Therefore, it is likely that people associated with other activities would use the unrestricted parking as well when the restricted parking is unavailable or fully occupied or in the situation that they will spend more than an hour in this area.

It should be noted that the number of Marine Parade Car Park spaces is proposed to be reduced by 18 because of the development of the new visitor centre. It will result in the reduction in the number of the unrestricted supply to 272 and increase the occupation rate of unrestricted parking to 72% during the busy period.

If island limits are changed in the future, the maximum envisioned will be a maximum of 160 unrestricted park spaces (equivalent to 320 visitors) available at any given time. The current parking supply in that scenario will likely be insufficient. The customer survey suggests that 45% of visitors arrive as a party of 3 or more; therefore, the demand of 160 unrestricted parking spaces associated with tours should rarely happen.

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# C

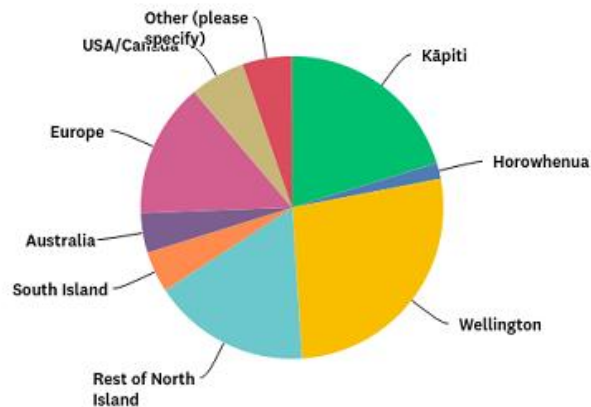
## Appendix C – Customer Survey

## KĀPITI ISLAND VISITOR SURVEY: Interim SurveyMonkey Report for Janice Hill 14-04-20

1939 responses (or 30.1%)    91% completion rate    11 minutes typical time to complete    6441 total data less bounce emails, unsubscribes, cleaned

<b>Where do you live?</b>		
Answer Choices	Responses	
Kāpiti	20.27%	359
Horowhenua	1.69%	30
Wellington	26.99%	478
Rest of North Island	16.83%	298
South Island	4.40%	78
Australia	4.23%	75
Europe	14.40%	255
USA/Canada	5.87%	104
Other (please specify)	5.31%	94
	<b>Answered</b>	<b>1771</b>
	<b>Skipped</b>	<b>168</b>

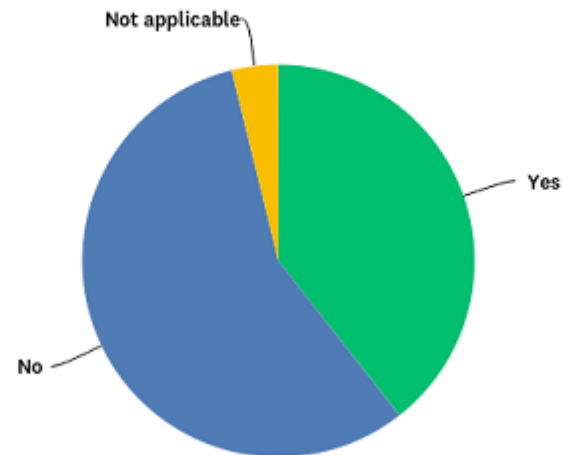
Q23 Where do you live?



**Did you stay overnight in the Kāpiti district before or after your trip?**

Answer Choices	Responses	
Yes	39.42%	557
No	56.76%	802
Not applicable	3.82%	54
	<b>Answered</b>	<b>1413</b>
	<b>Skipped</b>	<b>527</b>

Q24 Did you stay overnight in the Kāpiti district before or after your trip?

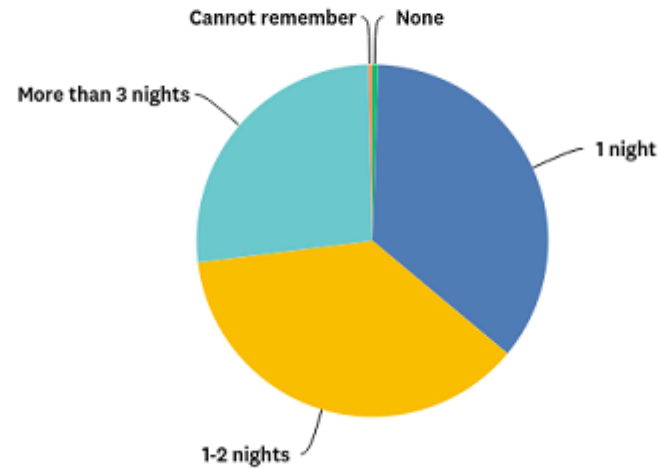




### How many nights did you stay in the Kāpiti district?

Answer Choices	Responses	
None	0.54%	3
1 night	35.54%	199
1-2 nights	36.96%	207
More than 3 nights	26.61%	149
Cannot remember	0.36%	2
	<b>Answered</b>	<b>560</b>
	<b>Skipped</b>	<b>1380</b>

### Q25 How many nights did you stay in the Kāpiti district?

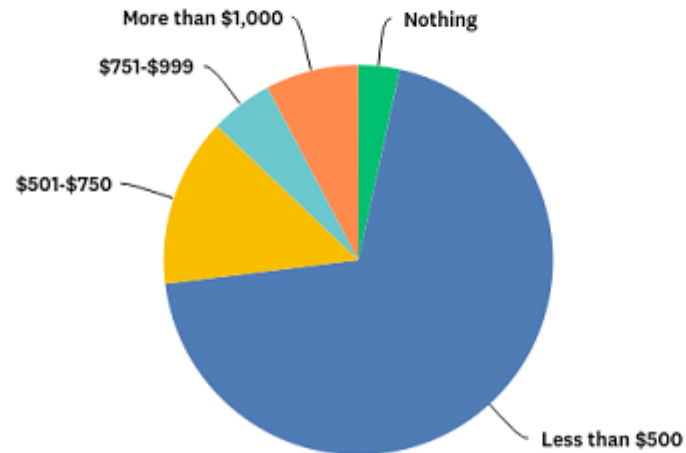




**Not including your Kāpiti Island trip tickets, what did you spend in total while in the Kāpiti district?**

Answer Choices	Responses	
Nothing	3.41%	19
Less than \$500	69.66%	388
\$501-\$750	14.00%	78
\$751-\$999	5.21%	29
More than \$1,000	7.72%	43
	<b>Answered</b>	<b>557</b>
	<b>Skipped</b>	<b>1383</b>

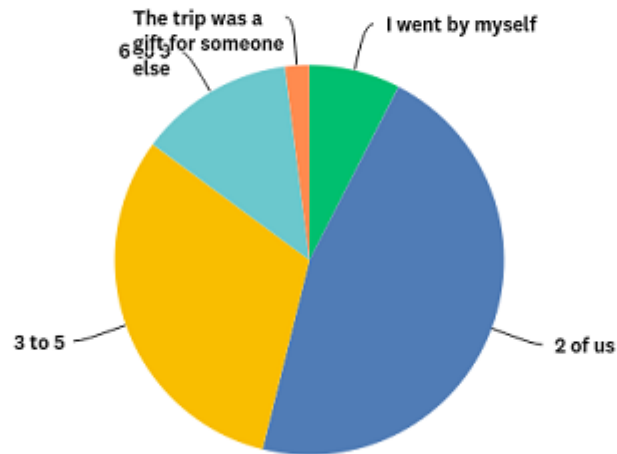
Q26 Not including your Kāpiti Island trip tickets, what did you spend in total while in the Kāpiti district?



### How many people were in your party when visiting Kāpiti Island?

Answer Choices	Responses	
I went by myself	7.58%	147
2 of us	46.29%	898
3 to 5	31.24%	606
6 to 9	12.89%	250
The trip was a gift for someone else	2.01%	39
	<b>Answered</b>	<b>1940</b>
	<b>Skipped</b>	<b>0</b>

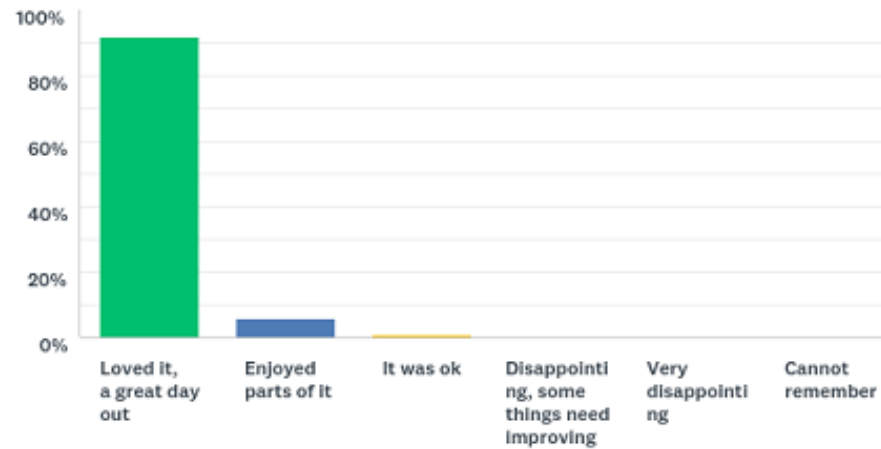
Q1 How many people were in your party when visiting Kāpiti Island?



### Overall, how would you describe your trip to Kāpiti Island?

Answer Choices	Responses	
Loved it, a great day out	91.77%	1705
Enjoyed parts of it	5.92%	110
It was ok	1.18%	22
Disappointing, some things need improving	0.70%	13
Very disappointing	0.22%	4
Cannot remember	0.22%	4
	<b>Answered</b>	<b>1858</b>
	<b>Skipped</b>	<b>83</b>

### Q7 Overall, how would you describe your trip to Kāpiti Island?



# D

## Appendix D – Concept Design Management Plan Area C





**NOTES:**

1. ALL DIMENSIONS ARE IN METRES UNLESS SHOWN OTHERWISE.
2. CONTRACTOR TO LOCATE AND IDENTIFY ALL SERVICES BEFORE COMMENCING WORK.
3. THE LAND SURFACE CAN BE REGRADED, AND THE LEVELS CAN BE ADJUSTED. RETAINING WALL FOR THE NORTHERN CAR PARK MAY BE REQUIRED. TOPO SURVEY AND GEOTECHNICAL ASSESSMENT NEED TO BE UNDERTAKEN TO UNDERSTAND WHETHER A RETAINING WALL IS REQUIRED.
4. THE LENGTH AND ALIGNMENT OF THE NEW FOOTPATHS MAY BE ADJUSTED, BASED ON THE HEIGHT DIFFERENCE AND GRADIENT REQUIREMENT FOR WHEELCHAIR USE.

**LEGEND:**

- PROPOSED NEW CAR PARK LINE MARKINGS (100mm WIDE CONTINUOUS WHITE LINES)
- PROPOSED NEW DISABLED CAR PARK LINE MARKINGS AND NO PARKING ZONE (100mm WIDE CONTINUOUS YELLOW LINES)
- NEW NIB KERB
- NEW NIB KERB OR NEW RETAINING WALL
- NEW STANDARD KERB AND CHANNEL
- CAR PARK PAVEMENT
- NEW RIPARIAN GARDEN - POTENTIAL STORMWATER FILTRATION
- KAPITI COAST CONTOURS (0.5m)
- CADSTRAL PROPERTY BOUNDARIES
- NO BUILD LINE (DISTRICT PLAN 1999 FEATURES)

**CONCEPT DESIGN  
NOT FOR CONSTRUCTION**

3	CONCEPT DESIGN	T.L	C.G	C.G	21.10.21	Original Scale (A1)	Design	T.LIN	13.12.21	Approved For Construction*
2	CONCEPT DESIGN	T.L	S.C	S.C	19.10.21	1:300	Drawn	T.LIN	13.12.21	
1	CONCEPT DESIGN	T.L	S.C	S.C	14.10.21	Reduced Scale (A3)	Drawn	S.CHAKKAPALLI	13.12.21	
0	FOR CLIENT REVIEW	T.L	S.C	S.C	08.10.21	1:600	Design Check	S.CHAKKAPALLI	13.12.21	Date
No.	Revision	By	Chk	Appd	Date					

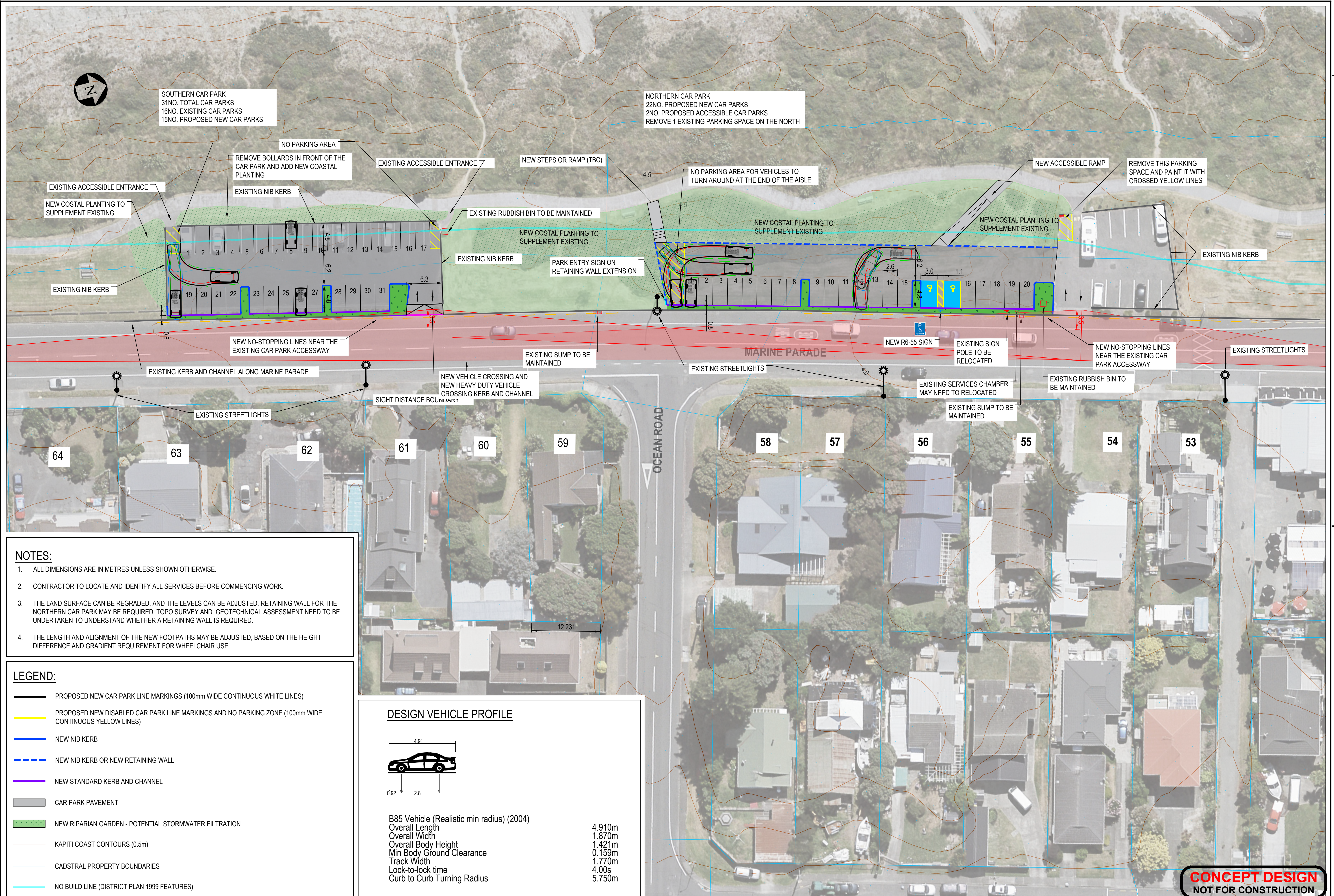
Client:	Project:	Title:	Discipline:
		MACLEAN PARK ZONE C6 CAR PARK DEVELOPMENT	TRANSPORT ADVISORY
			Drawing No. 3821650-TA-K001
			Rev. 4



KAPITI GATEWAY PROJECT

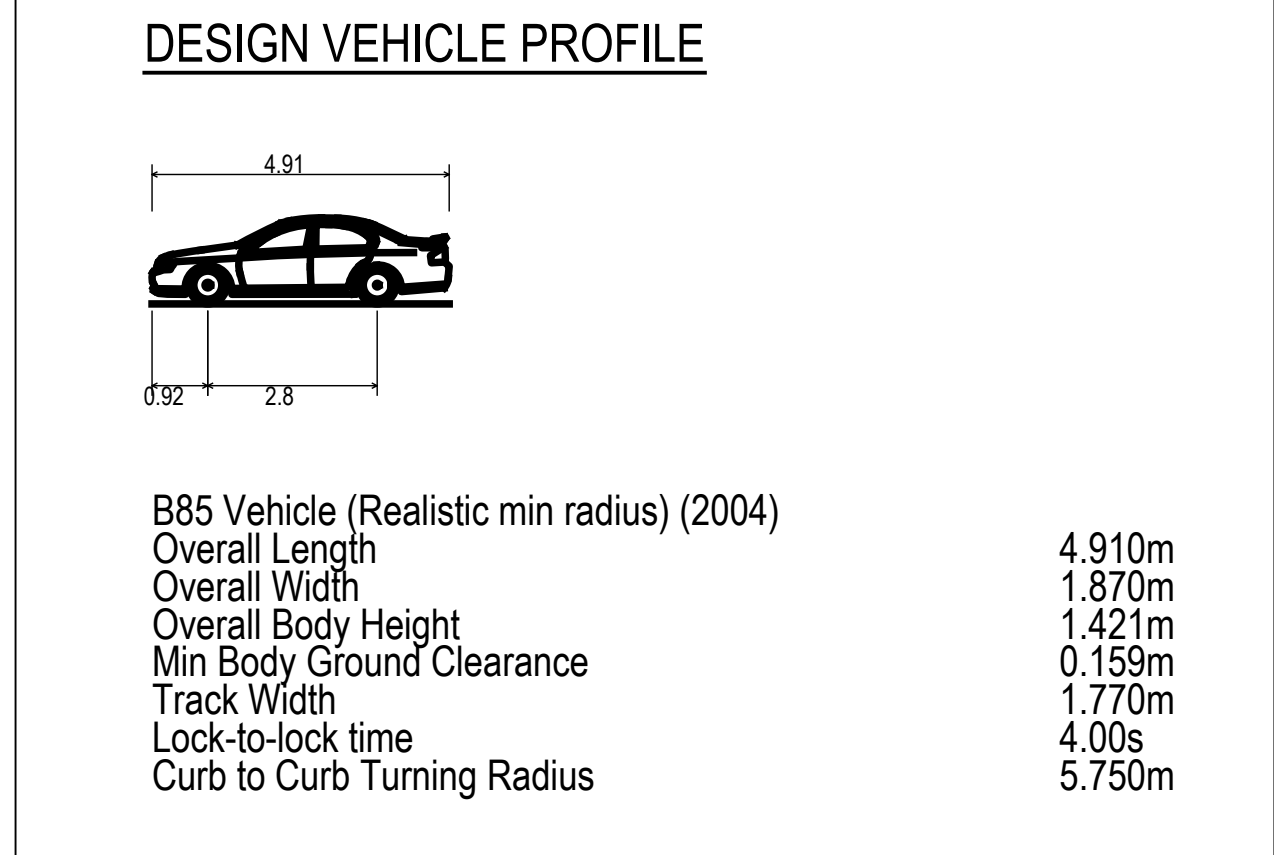
MACLEAN PARK ZONE C6 CAR PARK DEVELOPMENT  
TRANSPORT ADVISORY  
3821650-TA-K001  
Rev. 4





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  2. CONTRACTOR TO LOCATE AND IDENTIFY ALL SERVICES BEFORE COMMENCING WORK.
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  - PROPOSED NEW DISABLED CAR PARK LINE MARKINGS AND NO PARKING ZONE (100mm WIDE CONTINUOUS YELLOW LINES)
  - NEW NIB KERB
  - - - NEW NIB KERB OR NEW RETAINING WALL
  - NEW STANDARD KERB AND CHANNEL
  - CAR PARK PAVEMENT
  - NEW RIPARIAN GARDEN - POTENTIAL STORMWATER FILTRATION
  - KAPITI COAST CONTOURS (0.5m)
  - CADSTRAL PROPERTY BOUNDARIES
  - NO BUILD LINE (DISTRICT PLAN 1999 FEATURES)



3	CONCEPT DESIGN	T.L	C.G	C.G	21.10.21
2	CONCEPT DESIGN	T.L	S.C	S.C	19.10.21
1	CONCEPT DESIGN	T.L	S.C	S.C	14.10.21
0	FOR CLIENT REVIEW	T.L	S.C	S.C	08.10.21
No.	Revision	By	Chk	Appd	Date

Original Scale (A1)	1:300	Design	T.LIN	13.12.21	Approved For Construction*
Reduced Scale (A3)	1:600	Drawn	T.LIN	13.12.21	
		Dwg Verifier	S.CHAKKAPALLI	13.12.21	
		Dwg Check	S.CHAKKAPALLI	13.12.21	Date

\* Refer to Revision 1 for Original Signature



Client: KAPITI GATEWAY PROJECT

Title: VEHICLE TRACKING AND SIGHTLINES

Discipline: TRANSPORT ADVISORY  
 Drawing No: 3821650-TA-K002  
 Rev: 4

**CONCEPT DESIGN**  
**NOT FOR CONSTRUCTION**