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**Issued via email: [joe@saddleback.nz](mailto:joe@saddleback.nz)**

Dear Joe

**ODERINGS RESIDENTIAL DEVELOPMENT, 57 BROOKVALE ROAD, HAVELOCK NORTH**

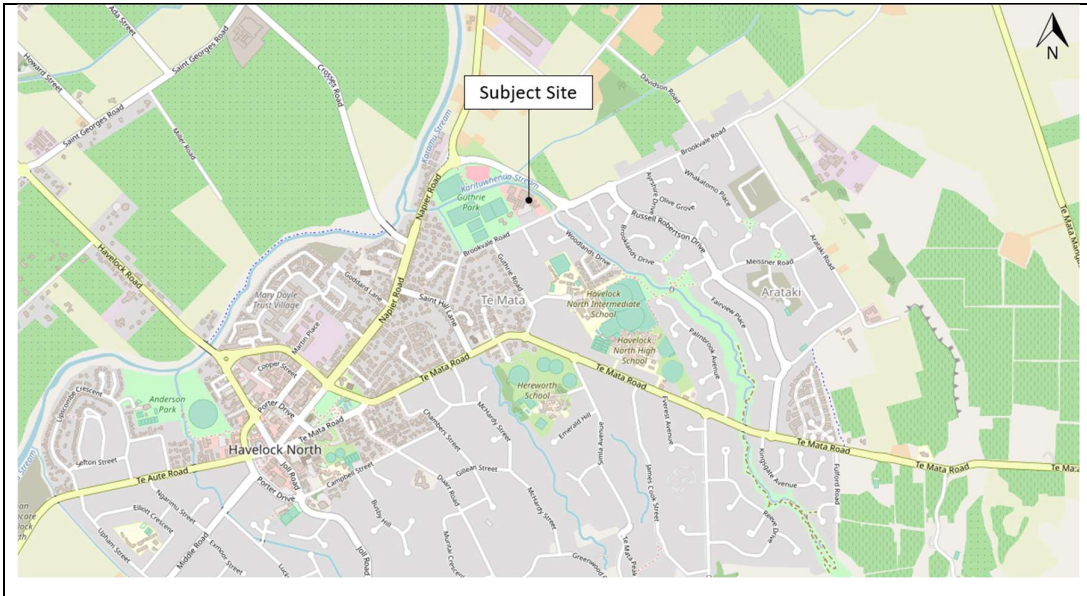
East Cape Consulting (ECC) has been engaged by Oderings Garden Centres Limited to prepare a Transportation Assessment Report (TAR) for the proposed redevelopment of their existing site at 57 Brookvale Road, Havelock North.

This report describes the site location and existing transport environment. It then assesses the additional travel demand generated by the redevelopment assesses the ability of the network to accommodate that demand.

Overall, it is concluded that the proposed layout can meet the transport needs of the activities, and integrate appropriately with the existing and planned networks in the area.

**1. Site Location**

Oderings is located at 57 Brookvale Road, approximately 1.5km north-east of the Havelock North town centre. The site is on the northern side of Brookvale Road, on the corner of the Romanes Drive/Brookvale Road roundabout. The site location and surrounding area are shown as Figure 1 and Figure 2 below.



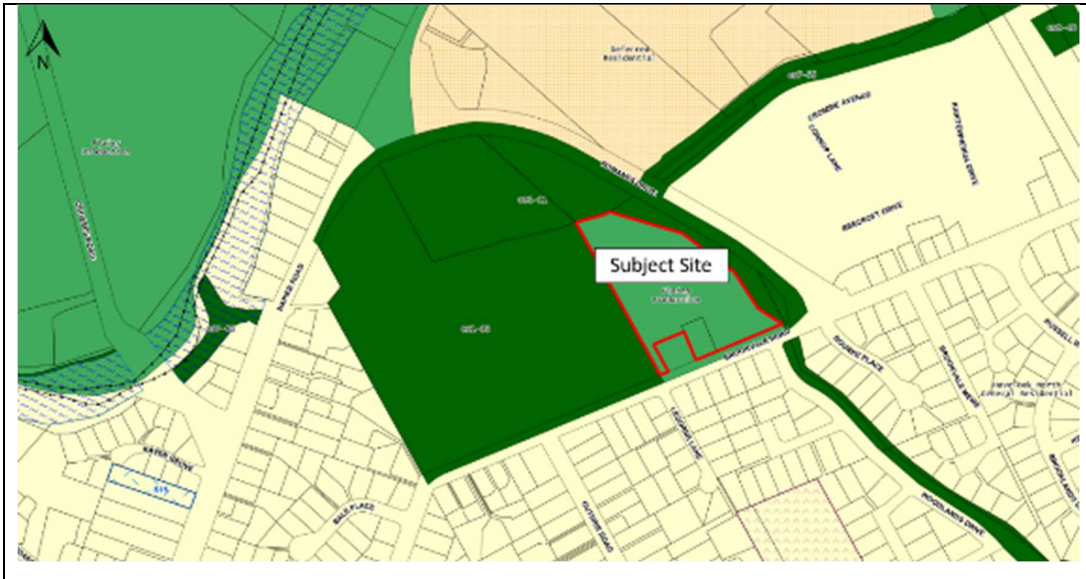
**Figure 1 – Site Location (Base Map Source: Open Street Maps)**



**Figure 2 – Aerial View (Base Map Source: HDC IntraMaps)**

The site has an area of approximately 2 Hectares (ha). It is surrounded by Guthrie Park on its north and west sides. Guthrie Park provides public open space, sports fields, and a bike track. There is an established residential area to the south and emerging residential (within the Brookvale Structure Plan area) to the east. Vehicle access is taken from Brookvale Road.

The site is zoned Plains Production Zone (PPZ) by the Hastings District Council (HDC) Operative District Plan (ODP). It is surrounded by a combination of Open Space, Residential and Deferred Residential Zones. The zoning context is shown as Figure 3.



**Figure 3 – ODP Zoning (Base Map Source: HDC IntraMaps)**

## **2. Existing Transport Network**

### **2.1 Road Hierarchy**

The site is surrounded by Romanes Drive to the east and Brookvale Road to the south.

Romanes Drive is classified as primary collector in the HDC ODP road hierarchy. Its role is to provide a strategically important link between areas of activity within a community. It provides a connection between the north-eastern areas of Havelock North and the State Highway network, via Napier Road.

Brookvale Road is classified as a secondary collector road. Its role is to provide local connectivity and be a locally preferred route. Brookvale Road provides an east-west connection between north-eastern areas of Havelock North and the town centre.

### **2.2 Existing Road Network**

Brookvale Road is formed to a width of approximately 7m along the site frontage. It provides one traffic lane in each direction separated by a painted centreline. The southern side has an urban treatment including a footpath and kerb and channel. The northern (site) side of the road has a grass berm only as shown in Figure 4.



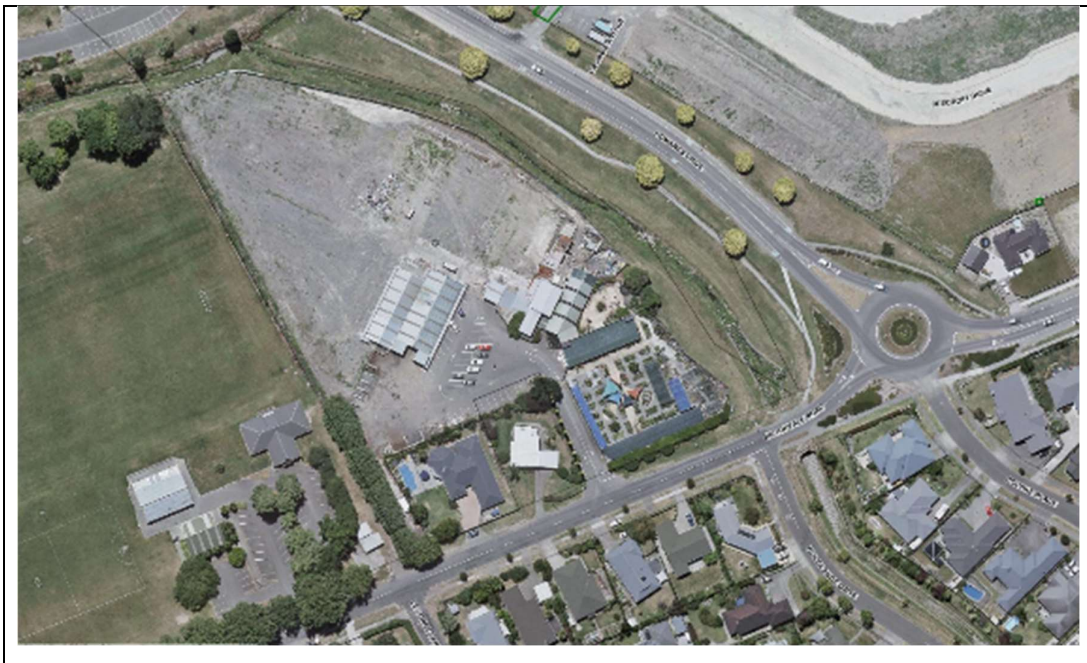


**Figure 4 – Brookvale Road Looking West (Site On Right)**

Side road intersections including those with Woodlands Drive and Legorne Lane are either Give Way controlled or unmarked priority intersections, through which Brookvale Road has priority.

Brookvale Road is generally straight and flat in this area and operates with a 50km/h posted speed limit. On-street parking is unrestricted on both sides of the road.

Romanes Drive is sealed to a width of approximately 12m. It provides one traffic lane in each direction and has on-road cycle lanes on both sides of the road. There is also an off-road path on the western side. The posted speed limit is 50km/h. The existing road frontages are shown as Figure 5.



**Figure 5 – Site and Road Frontages (Base Map Source: HDC IntraMaps)**

Brookvale Road meets Romanes Drive and Bourke Place at a four-leg roundabout. This roundabout provides a single circulating carriageway of approximately 8m around a 20m diameter roundabout island.

Figure 5 also shows the existing site access, which is on Brookvale Road approximately 100m west of the roundabout and 60m west of the Woodlands Drive intersection. The access is marked as a Give Way intersection and provides one entry and one exit lane. No access is provided to Romanes Drive.

### 2.3 Walking and Cycling

Walking and cycling catchments of up to 20 minutes around the subject site are shown as Figure 6 and Figure 7 below.

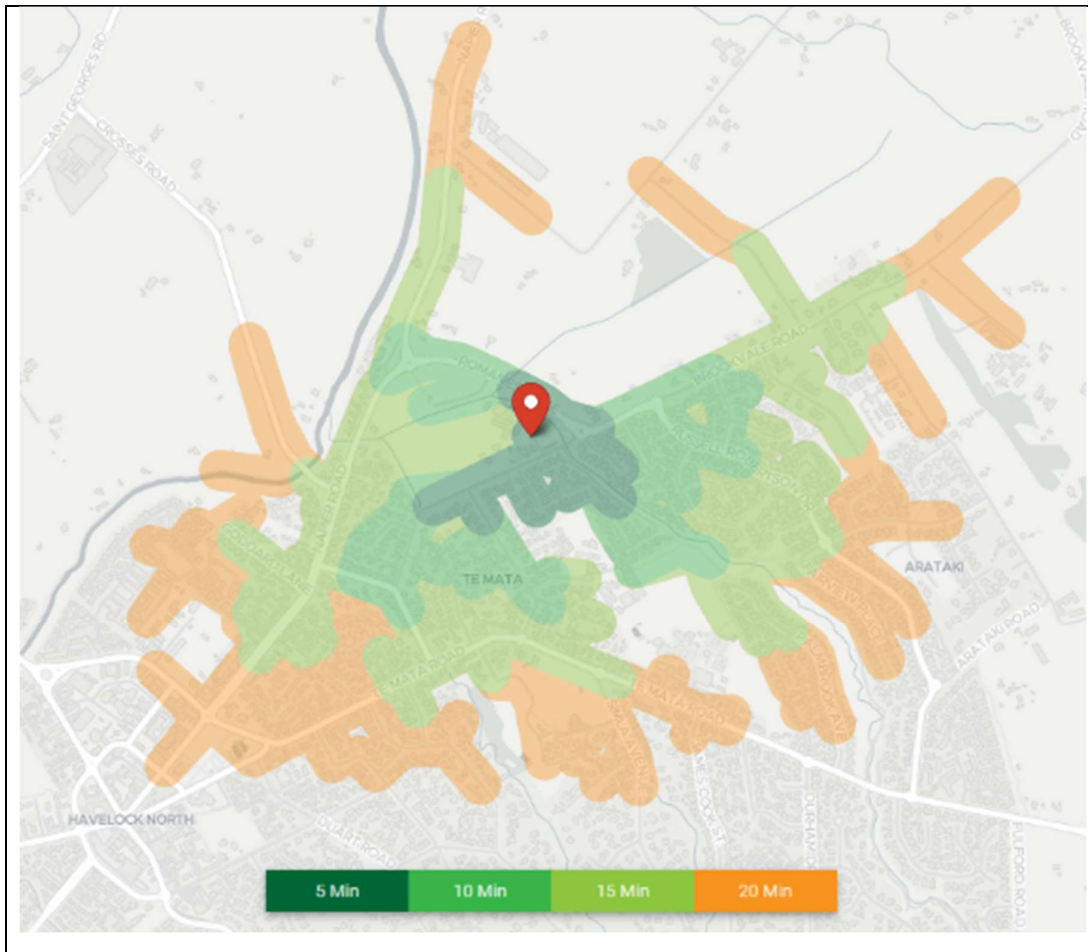
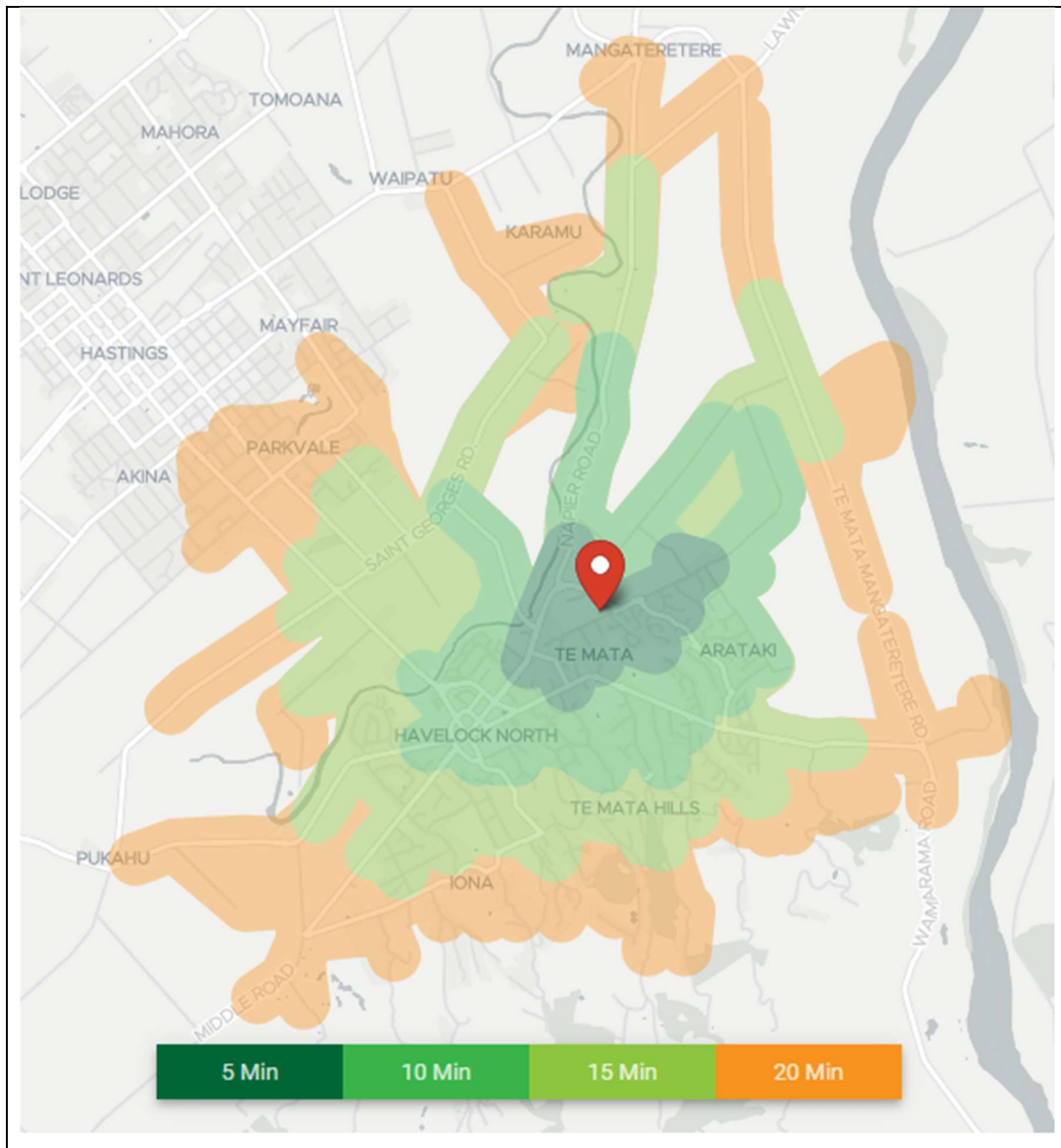


Figure 6 – Walking Catchment (Source: Targomo)



**Figure 7 – Cycling Catchment (Source: Targomo)**

The 20-minute walking catchment extends to the eastern edge of the town centre and captures a range of local destinations and facilities. These include open space areas, primary, intermediate, and secondary schools, churches and local shops. The 20-minute cycle catchment covers all of Havelock North and the southern part of Hastings.

A footpath is provided on the southern side of Brookvale Road. A path is also provided on the northern side, beyond Guthrie Park. Surrounding roads have footpaths on one or both sides.

The on-road cycle lanes and the off-road path on Romanes Drive are part of the ‘i-Way City Routes’. These connect north to other routes on Napier Road and Crosses Road.

## 2.4 Public Transport

The nearest existing bus stops to the site are on Te Mata Road, approximately 750m or a 10 minute walk from the site.

The 11 (Commuter Express (Havelock North to Napier and vice versa) and 21 (Hastings and Havelock North Loop) services call at these stops.

## 3. Traffic Volumes

### 3.1 Daily Volumes

The Mobileroad website, which sources information from Council road maintenance databases, gives the following daily traffic volumes, in vehicles per day (vpd), for roads in the area:

■ Romanes Drive	4,525 vpd
■ Brookvale Road (west of Romanes Drive)	2,529 vpd
■ Bourke Place	60 vpd
■ Woodlands Drive	201 vpd
■ Legorne Lane	178 vpd

### 3.2 Intersection Turning Movements

ECC arranged manual turning movement counts at the Romanes Drive/Brookvale Road/Bourke Place roundabout on Thursday 3 March 2022. The surveyed volumes were seasonally adjusted using the factors in Waka Kotahi Research Report 453 (RR453) to represent the fifth busiest week of the year.

The surveys were conducted for a 90-minute period during the morning (AM), 7:30am-9:00am and evening (PM), 4:00-5:30pm peak periods. These periods were selected based on review of tube count data from the area. The AM and PM peak hour movements at the intersection are summarised below as Figure 8.

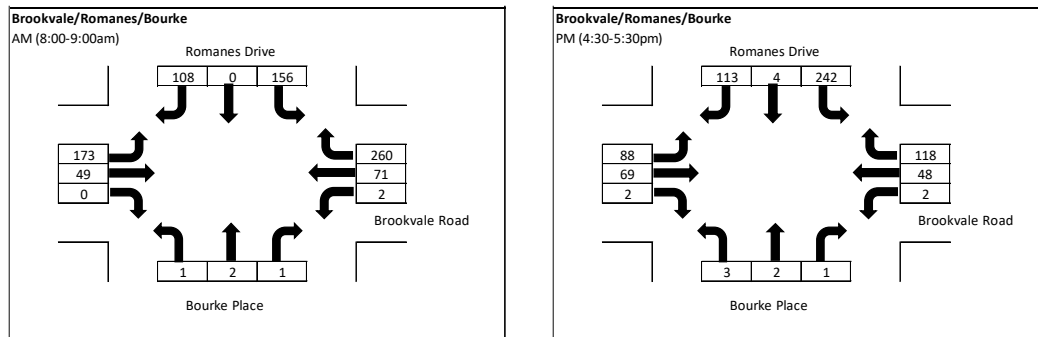


Figure 8 – Intersection Volumes (All Vehicles)

The surveys showed that:

- The roundabout volume is 823 vph during the AM peak and 692 vph during the PM peak;

- Heavy commercial vehicles (HCV) make up 2.8% of the AM peak volume and 0.7% of the PM peak volume.
- The volume along the Brookvale Road site frontage is 402 vph in the AM peak and 323 vph in the PM peak.
- The directional distribution slightly favours eastbound movement in the AM (55%) and westbound movement in the PM (51%).

#### **4. Road Safety**

The road safety history of the area was reviewed using the Waka Kotahi Crash Analysis System (CAS). The search covered the Brookvale Road and Romanes Drive frontages of the site and the following intersections:

- Romanes Drive/Brookvale Road roundabout;
- Brookvale Road/Woodlands Drive.
- Brookvale Road/Legorne Lane;
- The Oderings access.

Data was extracted for the five-year period 2018 to 2022 inclusive, as well as any available data from 2023.

One crash was reported. This occurred midway along the Romanes Drive frontage of the site and was associated with construction work on the opposite side of the road. The crash did not result in injury.

Overall, the road safety history does not indicate any underlying issues with the road network in this area.

#### **5. Planned Future Transport Network**

##### **5.1 Brookvale Structure Plan**

Land on the opposite side of Romanes Drive is part of the Brookvale Structure Plan (BSP). The intended future land use pattern and transport network in this area are shown below as Figure 9.



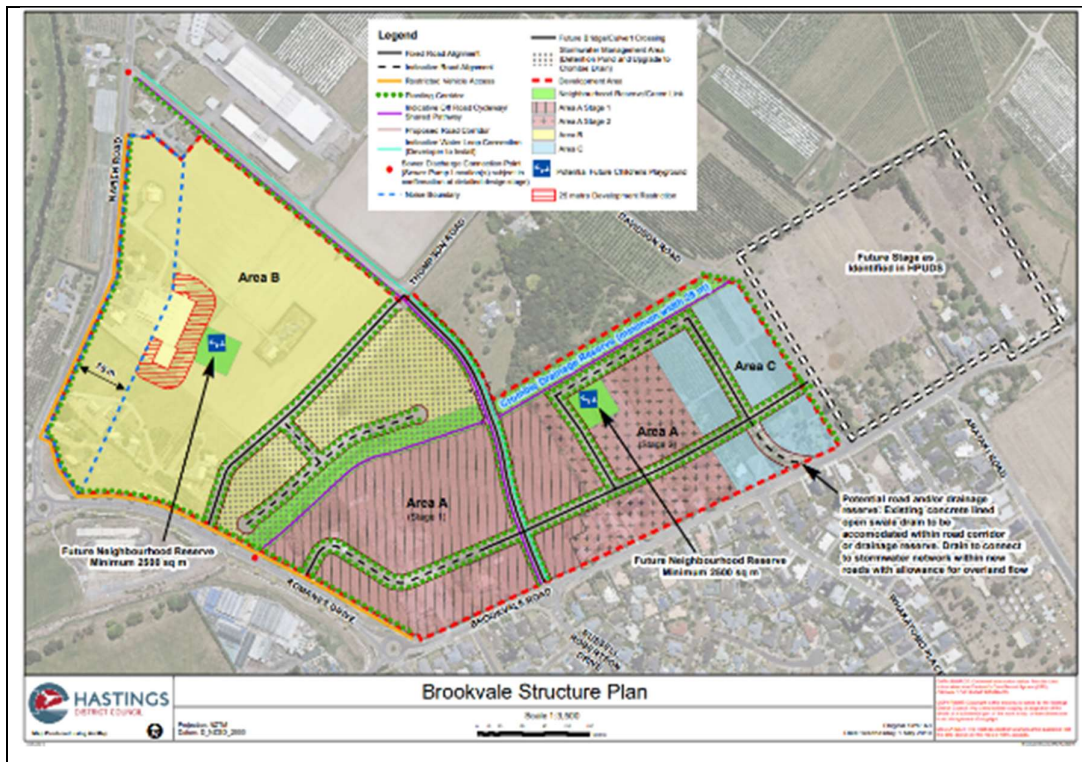


Figure 9 – Brookvale Structure Plan (Source: HDC)

The planned land use is staged residential development with a supporting network of open space. The transport network that will support the BSP includes:

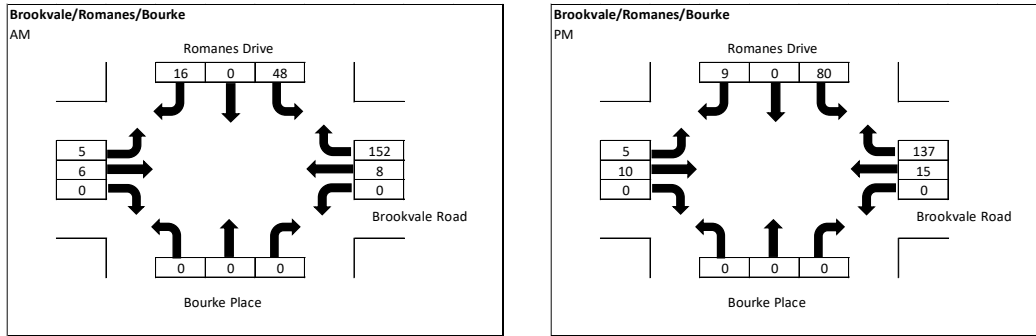
- An extension of Russell Robertson Drive to Thompson Road;
- Two new local road corridors connecting from Romanes Drive to the east; and
- Intersection upgrades at Napier Road/Thompson Road and Thompson Road/Russell Robertson Drive.

Walking and cycling paths are included on the new transport corridors and through the central Crombie drainage reserve.

## 5.2 Future Traffic Volumes & Intersection Performance

The Transportation Assessment Report<sup>1</sup> prepared for the BSP was provided to ECC by HDC. This report assessed the traffic generating potential of the overall BSP and assigned those trips to the surrounding network. The expected additional movements at the Romanes Drive/Brookvale Road roundabout are shown below as Figure 10.

<sup>1</sup> Brookvale Residential Development, Proposed Subdivision, Havelock North. Traffic Structure Plan Investigations, TDG, February 2018



**Figure 10 – BSP Generated Movements (All Vehicles)**

The assessment expected that the BSP would:

- Add 235 vph to the roundabout during the peak, an increase of 29% (compared to the volumes surveyed by ECC);
- Add 256 vpd to the roundabout during the PM peak, an increase of 37% on the surveyed volumes.
- Add 35-39 vph to the volume on the Brookvale Road frontage of the site at peak times.

The assessment modelled the operation of the existing roundabout in SIDRA software and concluded that it could accommodate the increased traffic movements. This assessment used base volumes collected in 2017, combined with the volumes presented above as Figure 9.

ECC repeated this analysis, replacing the 2017 base volumes with the more recent 2021 surveyed volumes presented as Figure 7. The modelling, outputs of which are included in Attachment 1, showed that the roundabout is expected to operate at Level of Service (LOS) A, during both peak hours. This confirms the conclusion of the Structure Plan assessment in relation to this intersection.

## 6. Proposed Development

### 6.1 Land Uses

The proposed redevelopment of Oderings will retain the garden centre and replace the existing nursery areas with 35 residential lots. In total, 4,850m<sup>2</sup> of the site will be retained for commercial use and 14,250m<sup>2</sup> will be converted to residential use. The proposed layout is shown as Figure 11.



*Figure 11 – Proposed Development (Prepared by Saddleback)*

## **6.2 Access and Parking**

Two lots (Lot 1 and Lot 35) are proposed to have direct property access to Brookvale Road. All other lots and the existing garden centre will be accessed via the existing entry road which will be reconfigured.

The garden centre will have a central parking area with 40 parking spaces, including two accessible spaces. This carpark and the residential lots will be accessed via the existing access road, which is proposed to have a roundabout at the carpark access. The loop road beyond the roundabout is proposed to be private and provide access to housing only.

Walking routes are provided throughout the site to provide access to the individual lots and the garden centre, and link with the existing paths on Romanes Drive and in Guthrie Park. The planned routes and path types are shown as Figure 12. The paths shown in dark green are intended to be public whilst the shared space generally north of the roundabout is proposed to be private.





**Figure 12 – Walking Routes (Prepared by Saddleback)**

A footpath is also proposed along half of the site frontage, from the western boundary to the access road.

### **6.3 Road Cross Sections**

The existing access is proposed to be formed as an 18m wide corridor, with a 7m wide carriageway and paths on both sides.

The private loop road is proposed to operate as a shared space with a single carriageway width of 6m. Additional width is provided in some areas to provide a total of eight parallel indented on-street parking spaces around the loop.

A 4.5m and 7m wide shared access driveway typology is proposed to serve lots 14-19 and lots 30-34 respectively. This cross-section will accommodate vehicle, pedestrian and cycle access, it also provides for vehicle manoeuvring space in a shared environment.

A similar cross-section with 3m wide accessway, widening to 5m where to allow for passing manoeuvres, is proposed to serve the three lots (Lots 7-9) near the garden centre car park.

### **6.4 Loading and Servicing**

The site has been designed to accommodate:



- An 11.5m large rigid truck circulating around the residential area. This represents a furniture removal/delivery truck, which will occasionally visit the site. It is noted that a rubbish collection vehicle, which will regularly visit the site, is typically smaller;
- An 8m medium rigid truck, 11.5m large rigid truck and B-train have all been tracked entering and exiting the garden centre loading area;
- A B99<sup>2</sup> vehicle turning around at the roundabout; and
- A B85<sup>3</sup> vehicle accessing individual residential lots.

The swept paths of these vehicles are included as Attachment 1. Based on these plans, all areas have been appropriately designed to accommodate the expected vehicles.

## 7. Trip Generation

According to RR453, the 50<sup>th</sup> percentile trip generation rates for garden centres are:

- 14.1 vph/100m<sup>2</sup> of gross floor area (GFA) at peak times; and
- 82.2 vpd/100m<sup>2</sup> of GFA over the day.

The existing GFA of the garden centre (that is to be retained) is approximately 500m<sup>2</sup> and on this basis it is estimated to generate:

- 71 vph at peak times; and
- 411 vpd over the course of the day.

It is likely that the peak of the garden centre activity will occur at the weekend whereas residential activities typically peak on weekdays. Conservatively, these two peaks have been combined.

The residential lots have been assessed as generating 0.9 vph/household during the peak hours of the day and 8.2 vpd/household over the course of the day (the 85<sup>th</sup> percentile outer suburban residential rate from RR453). The resulting total trip generation from the proposed development is summarised in Table 1.

Land Use	Size	Units	Peak Hour		Daily	
			Rate	Trips (vph)	Rate	Trips (vpd)
Garden Centre	500	m <sup>2</sup> GFA	14.1	71	82.2	411
Residential	35	Lots	0.9	32	8.2	287
TOTAL	-	-	-	103	-	699

*Table 1 – Traffic Generation Estimate*

In total, the proposed development is expected to generate 699 vpd (IN+OUT) including 103 vph (IN+OUT) during the peak hours of the day.

<sup>2</sup> Defined by AS/NZS2890.1-2004 Off-street car parking

<sup>3</sup> Defined by AS/NZS2890.1-2004 Off-street car parking

This analysis is particularly conservative in relation to the peak hour estimate. Residential activities typically peak during the morning and evening commuter peaks (around 8-9am and 4-5pm). At these times, the garden centre can reasonably be expected to be operating below its own peak, which is more likely to occur around the middle of the day.

The above trip generation assessment will produce a robust assessment of driveway and network effects.

## 8. Trip Distribution

Figure 13 presents the expected internal distribution and the expected daily volume on each section of internal road. This is based on how many lots rely on each section of road, either for direct access or as a route to and from Brookvale Road.



Figure 13 – Internal Distribution and Number of Lots Served<sup>4</sup>

Figure 13 shows that the shared access driveways accommodate 3-6 lots each. The loop road (6m wide) serves up to 19 lots on any one section, carrying up to 156 vpd. The entry road which serves the garden centre and 33 residential lots carries 682 vpd. The remaining two lots generate movements directly onto Brookvale Road.

New trips (generated by the residential lots) have been distributed to the surrounding network using the existing movement patterns in the area. The existing trip generation of Oderings (the garden centre and nursery functions) is already captured in the existing traffic surveys so no additional allowances are required. Conservatively, no reductions have been made for the parts of the Oderings activities that are being replaced by residential activities.

<sup>4</sup> Lots 10, 14, 15, 16, 17 and 18 are assumed to rely evenly on the two sides of the loop road (i.e. 50% of their traffic movements use each side).

The expected distribution of new residential trips at the site driveway and through the Brookvale Road/Romanes Drive roundabout for the AM and PM weekday peaks are shown as Figure 14 and Figure 15.

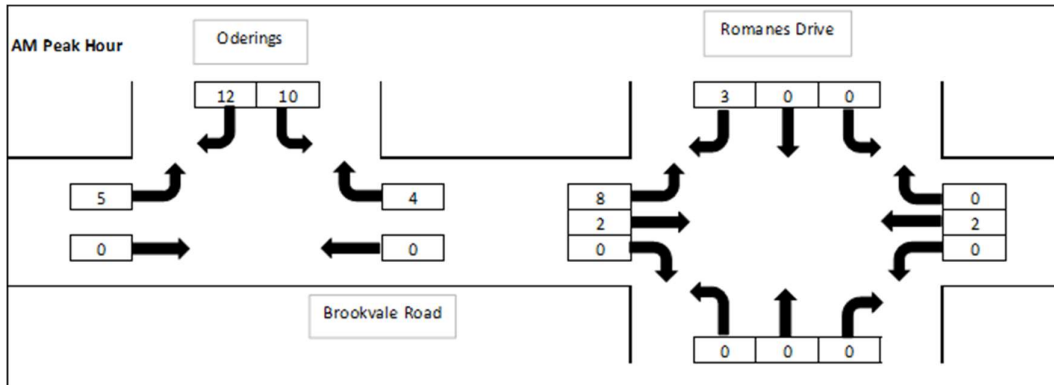


Figure 14 – Development Generated Intersection Movements (AM Peak)

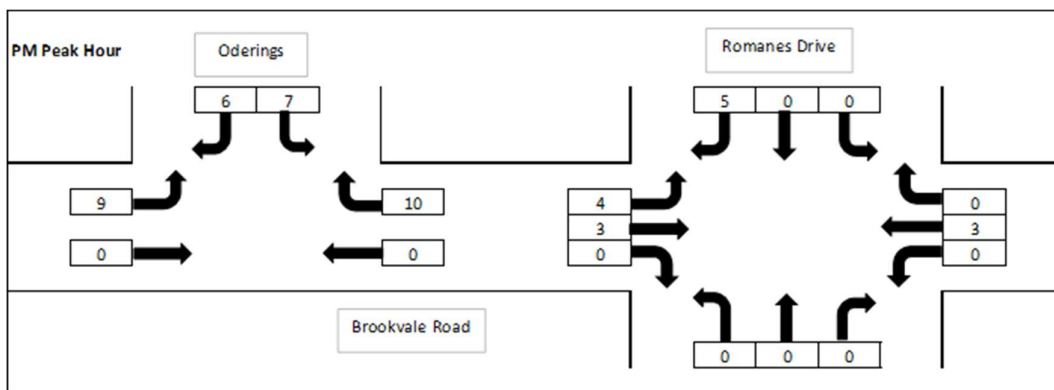


Figure 15 – Development Generated Intersection Movements (PM Peak)

## 9. Assessment of Effects

### 9.1 Network Effects

The residential activities are expected to add an additional 35 vph to the network at peak times of the day. Approximately half of these are expected to travel to and from the east, using the Brookvale Road/Romanes Drive roundabout.

This roundabout was modelled in SIDRA intersection analysis software using the expected volumes post-development of the Brookvale Structure Plan (BSP) area as a starting point. These future base volumes were estimated by adding the ECC survey data from 2022 to the increments estimated in the BSP assessment. The addition volumes from the Oderings development were then added to these.

The SIDRA analysis, which is included at Attachment 2, shows that the roundabout operates with LOS A or B for all movements, and LOS A overall.

Beyond this intersection, and to the west on Brookvale Road the incremental volumes distribute to multiple routes and are unlikely to have any noticeable effect on the operation of the network.

## **9.2 Walking and Cycling Effects**

The proposed site layout appropriately provides for walking and cycling with a combination of public dedicated paths and private shared spaces. Crossing treatments are provided near the garden centre entrance and across the carpark entry.

The shared space environment starts north and west of the internal roundabout so it will be important (as is proposed) to provide a clear visual distinction between these two environments.

The site layout provides a high degree of permeability, creating connections between the established garden centre, the future residential community, Guthrie Park and Brookvale Road. Externally, a footpath is proposed on the section of Brookvale Road between the western boundary and the site access road. It is recommended that this be extended east to complete a link to Romanes Drive (shown in Figure 4 and 5).

Overall, the proposed development layout appropriately provides for internal and external walking and cycling movement.

## **9.3 Parking**

According to RR453, a garden centre with a GFA of 500m<sup>2</sup> would typically generate parking demand for between 16 and 30 vehicles at the 50<sup>th</sup> and 85<sup>th</sup> percentile levels. The proposed parking area includes 40 parking spaces and is therefore able to accommodate the expected level of demand.

Each of the residential lots is expected to have appropriate size to accommodate on site parking if desired, noting that there is no longer a minimum requirement in the ODP.

Eight on-street parking spaces are also proposed on the internal road network. This equates to a rate of one space per 4.4 dwellings, which is an appropriate level of parking supply for visitor parking in a residential setting.

Overall, the proposed development has an appropriate level of parking to support its likely parking demands on site, without potential reliance on off-site areas.

## **9.4 Road Safety**

Other than two lots that front Brookvale Road, the proposed residential development will take access from a single established vehicle access to Brookvale Road. This access can provide appropriate sight distance in both directions and has no evident safety issues, based on its historic performance.

The internal transport network has been designed to create a low-speed environment for vehicles, with the minimum practical footprint provided for vehicle manoeuvring. Changes in surface treatments indicate an increasingly pedestrianised environment as users move further into the site and transition from the commercial garden centre environment to the residential and recreational environment at the rear and side of the site.

The horizontal alignment of the internal roads and use of a mini roundabout at the garden centre carpark also limit vehicle operating speeds.

Pedestrian crossings treatments are provided at two locations and a high degree of permeability for pedestrians and cyclists is provided throughout the site.



Overall, the design and its transport provisions are assessed as appropriately and safely accommodating the new residential demands.

## 10. DISTRICT PLAN COMPLIANCE

The following table sets out the compliance of the proposed residential development against the relevant rules of the HDC District Plan, Section 26.1. The garden centre has not been assessed as it is an existing activity.

Rule	Requirement	Compliance
<b>26.1.6A</b>	<b>Access</b>	
<b>1</b>	<b>Access to Property</b>	
<b>a</b>	Every owner or occupier shall provide a legal, safe and effective vehicular access to any activity undertaken on a site, and required parking or loading areas from an existing, formed legal road, to enable vehicles to enter the site, except where the site has Designated Retail Frontage (see Appendix 30) or where the site is within the Flaxmere Commercial Zone.	Complies.  Safe and effective vehicle access is provided to accommodate all expected vehicle types, including rigid trucks up to 11.5m long.
<b>b</b>	There shall be a maximum of one vehicle crossing per property within the Residential Zone. Where a property is bordered by 2 or more the vehicle access to the property shall be from the lower category road. The category of the road will be determined by its Road Hierarchy status in Appendix 69 or traffic volumes when hierarchy status is equal.	Complies.  Site is not in the Residential Zone. Site has two road frontages and takes access from the lower category road only.
<b>c</b>	The minimum legal widths for private access are contained in Table 26.1.6.1-1 below. Private access to properties shall allow the safe passage from the edge of the road to the legal boundary of the lot for a single site or household unit. For two or more sites or household units or for any Right of Way, formation of the access to the activity undertaken on the site is required in compliance with Table 26.1.6.1-1.	Does not comply. See Discussion below this Table.
<b>2</b>	<b>Distance of Vehicle Accesses from Road Intersections</b>	
<b>b</b>	In the Plains Production Zone: Vehicle access to any property shall be sited a minimum of 100 metres from an intersection of a State Highway.	Complies. There are no State Highway Intersections within 100m.
<b>26.1.6B</b>	<b>Safe Sightline Distances</b>	
<b>1</b>	Intersections shall be located to ensure that Safe Sightline Distances are maintained. Note: For vehicle accesses fronting a Local, Collector or Arterial Route (as defined in the Roading Hierarchy in Appendix 69) compliance with Austroads Standards is deemed an acceptable means of compliance. The minimum sight distance required for 50km/h roads is 90m.	Complies.  At least 90m can be achieved in both directions from the existing access.
<b>26.1.6C</b>	<b>Loading</b>	
<b>a</b>	(i) Every owner or occupier who proposes to construct or substantially alter, reconstruct or add to a building on any site, or change the activity carried out on the site shall provide a Loading Space. The Loading Space shall provide for the suitable or efficient accommodation of any loading or fuelling of vehicles which are likely to arise from the use of any building or activity carried out on	N/A  There is no loading requirement for residential activities.

	<p>the site, except where a service lane is designated or provided, or where the site has Designated Retail Frontage (see Appendix 30). Separate Loading Spaces shall be provided for each occupier of the site if there are more than one. The Loading Space shall be additional to the parking required in Table 26.1.6.1-4.</p> <p>(ii) Every Loading Space, together with access, shall be designed so that it is not necessary to reverse vehicles either on to or off the street. The Loading Space shall not be stacked or located within vehicle manoeuvring areas.</p> <p>(iii) The provision of a Loading Space in respect of any site may be made as part of the side and/or rear yard space, but not as part of the front yard space of that site.</p> <p>(iv) The method of loading shall ensure that the footpath or access to adjacent properties shall remain clear at all times and ensure traffic safety is maintained on the roads.</p>	
<b>b</b>	<b>Design of Loading Spaces</b>	
	<p>The design of Loading Spaces and the layout adopted will depend on the area and shape of the land available, the purpose for which loading is required, and the functional design of the building. The layout shall be of sufficient size to accommodate the following design vehicles:</p> <p>(i) Activities requiring loading facilities or servicing from heavy vehicles: A "Single Unit Bus / Truck" as defined in the "Austroads Design Vehicles and Turning Path Templates Guide" AP-G34-13, Austroads, 2013 - refer to Appendix 73 for the dimensions of this vehicle.</p> <p>(iii) The following minimum dimensions are provided as a means of compliance: Retail activities, offices, manufacturing premises and similar must have a minimum length of 8.5 metres and a minimum width of 3 metres.</p>	<p>N/A</p> <p>No loading requirement for residential activities.</p>
<b>26.1.6D</b>	<b>Parking</b>	
<b>3</b>	<b>Parking Spaces for People with Disabilities</b>	<p>No requirement for residential lots.</p> <p>The Garden Centre parking area provides two accessible spaces, which meets the requirement for a parking area with 21-50 spaces.</p>
<b>5</b>	<b>Design and Construction of Parking Areas</b>	
<b>a</b>	<u>Vehicle Dimensions</u> : All parking spaces and access and manoeuvring areas, including ramps shall be of a sufficient size and suitable layout to accommodate a passenger vehicle" as defined in the "Austroads Design Vehicles and Turning Path Templates Guide" AP-G34-13, Austroads, 2013 - refer to Appendix 72 for the dimensions of this vehicle.	<p>Complies.</p> <p>Appropriate design vehicle tested.</p>
<b>c</b>	<p>(b) <u>Parking Spaces for Residential Activities</u>. Parking spaces for Residential Activities in any Residential zone shall have minimum internal dimension of 3.0m width and 5.0m length.</p> <p>(c) <u>General Design and Construction Details</u> All public and required parking areas, and any outdoor display areas (such as car, caravan or boat sales yards) shall comply with the following general requirements:</p>	<p>Complies.</p> <p>Site is not in a Residential zone but each lot includes a 3.0m wide by 5.5m long car parking bay.</p> <p>Compliance expected.</p>

	(i) Parking areas in any Commercial or Industrial Zone shall be formed and sealed with an all-weather surface.	
	(ii) Parking areas shall be designed and constructed to ensure that stormwater runoff from the parking area does not adversely affect adjoining property.	
	(iii) Parking areas, together with access and turning space, shall be designed to ensure that vehicles negotiate the parking area at a safe speed and are not required to reverse either on to or off a street, provided that this requirement shall not apply in any Residential Zone where a single accessway serves not more than two residential buildings. Vehicles using the parking area shall only enter or leave the site by the accessway.	
	(iv) Where a public or non-residential parking area is within or adjoins a Residential Zone, a 1.8 metre high, fully enclosed screen shall be erected or a landscape strip of a minimum width of 5 metres adjoining the boundary or the Residential Zone shall be provided. These requirements may be reduced or waived with the consent of the adjoining neighbour.	
	(v) A reservoir space shall be provided within public carparks to prevent vehicles queuing on the street.	
	(vi) Provision shall be made for the illumination of access drives and pedestrian areas within public carparks. Such illumination is to be directed away from adjoining residentially zoned sites.	
	(vii) Non-residential parking spaces required to be sealed by standard 26.1.6.D.5(c)(i) shall be marked out and where there is a separate requirement for staff parking such spaces shall be clearly identified.	
<b>26.1.7A</b>	<b>ACCESS</b>	
<b>1</b>	<b>Vehicle Standing Bay</b>  (a) Residential Zones. In all Residential Zones, a 5m long Vehicle Standing Bay shall be located within the Vehicle Access to all garages and carports and notional garage spaces.	Can comply.  Site is not in a Residential Zone but all lots are shown with driveway standing bays 3.0m wide and 5.5m long.
<b>26.1.7B</b>	<b>INFRASTRUCTURE TO SUPPORT ALTERNATIVE TRANSPORT MODES</b>	
<b>1</b>	<b>Bicycle Spaces</b> Where on-site car parking is required provision shall also be made for purpose built bicycle stands on site. These shall be provided at a rate of 1 bicycle stand per 5 carpark spaces that are required except for supermarkets where the ratio shall be 1 bicycle stand per 20 carpark spaces that are required.  The bicycle stands shall meet the following requirements:  (a) They shall be securely attached to a wall or the ground and shall support the bicycle frame.  (b) Each cycle stand shall be adequately spaced to allow a cyclist to manoeuvre and attach a bicycle to the stand.  (c) They shall allow the bicycle to be secured.  (d) They shall be visible and signposted.	N/A  No requirement for residential activities.

**Table 2 – District Plan Assessment (Proposed Residential Lots)**

Table 2 shows that the proposed development can comply with the relevant Rules of the ODP, other than in relation to private access widths.

The proposal includes a range of road typologies including an 18m wide corridor for the main entry road, reducing to 11m on the loop road, and further reducing when serving only a limited number of lots.

The swept path analysis described at Section 6.4 confirms that the proposed layout is functional and can accommodate the needs of rubbish collection vehicles, occasional heavy vehicle demands such as removalists, and light vehicles moving around the site and to/from individual properties. The layout also provides for areas of on-street parking for visitors a ratio of 1 per 4.4 dwellings.

The site design includes a range of dedicated paths and shared spaces for walking and cycling and can appropriately accommodate the needs of these modes. Other road corridor functions including utility services are addressed in other parts of the Application.

Overall, it is concluded that whilst the proposed road cross-sections are a departure from the typical ODP standards, they can appropriately accommodate the needs of the new residential lots, combined with the established garden centre.

## **11. Conclusions**

Oderings proposes to redevelop their site at 57 Brookvale Road, Havelock North. The proposed development will retain the garden centre and replace the existing nursery areas with 35 residential lots. In total 4,850m<sup>2</sup> of the site will be retained for commercial use and 14,250m<sup>2</sup> will be converted to residential use.

A network of internal roads and paths will accommodate walking, cycling and vehicle demands including rubbish collection and servicing of the garden centre. These are designed to connect the development with Guthrie Park to the west and the garden centre to the east and provide for easy walking/cycling access between them.

The road and path network is proposed to be public as far as the garden centre and the east-west pedestrian connection to Guthrie Park, and private from that point on.

Two residential lots will have direct access to Brookvale Road and the remainder will share the existing, reconfigured, access road with the garden centre.

The incremental traffic generation from the new residential lots is expected to have a negligible effect on the operation of the surrounding road network, which has been assessed including planned development in the adjacent Brookvale Structure Plan area.

A footpath is proposed on the northern side of Brookvale Road, between the western boundary of the site and the new access road, to connect the existing and proposed activities with the broader walking and cycling network in Havelock North. It is recommended that this path be extended east to provide a continuous link with Romanes Drive.



The proposed internal road cross-sections are a departure from the District Plan standards but have been shown to appropriately accommodate the needs of light and heavy vehicles, as well as pedestrians and cyclists.

The individual lots are expected to provide on-lot parking and additional on-street parking is also proposed on the internal road network. The garden centre will have a parking area for 40 vehicles including two accessible parking spaces near the entry. These provisions are expected to accommodate the parking demands generated by the activity on the site without overspill parking effects.



Overall, it is assessed that the proposed development layout is appropriate for its traffic and parking needs, and it can be accommodated by the existing, and future planned, transport network in the area.

Yours sincerely,

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Attachment 1a – Vehicle Swept Paths (Prepared by Development Nous)

Attachment 1b – Loading Swept Paths (Prepared by Development Nous)

Attachment 2 – SIDRA Summaries