



# Metro Outer Joint Development Assessment Panel Agenda

**Meeting Date and Time:** Wednesday, 12 April 2023; 9:30am  
**Meeting Number:** MOJDAP/239  
**Meeting Venue:** Electronic Means

To connect to the meeting via your computer -  
<https://us06web.zoom.us/j/87885916257>

To connect to the meeting via teleconference dial the following phone number -  
**+61 8 6119 3900**  
Insert Meeting ID followed by the hash (#) key when prompted - **878 8591 6257**

*This DAP meeting will be conducted by electronic means (Zoom) open to the public rather than requiring attendance in person.*

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## **Attendance**

### **DAP Members**

Mr Eugene Koltasz (Presiding Member)  
Ms Karen Hyde (Deputy Presiding Member)  
Mr John Taylor (A/Third Specialist Member)  
Cr Lorna Buchan (Local Government Member, City of Rockingham)  
Cr Mark Jones (Local Government Member, City of Rockingham)

### **Officers in attendance**

Mr Mike Ross (City of Rockingham)  
Mr Marius Le Grange (City of Rockingham)

### **Minute Secretary**

Mr Stephen Haimes (DAP Secretariat)

### **Applicants and Submitters**

Mr Daniel Martinovich (CLE Town Planning & Design)  
Mr Michael Bower (Blueport)  
Mr Derek Hays (Hames Sharley)

### **Members of the Public / Media**

Nil.

## **1. Opening of Meeting, Welcome and Acknowledgement**

The Presiding Member declares the meeting open and acknowledges the traditional owners and pay respects to Elders past and present of the land on which the meeting is being held.

This meeting is being conducted by electronic means (Zoom) open to the public. Members are reminded to announce their name and title prior to speaking.

## **2. Apologies**

Mr Jason Hick (Third Specialist Member)

## **3. Members on Leave of Absence**

DAP Member, Mr Jason Hick (Third Specialist Member) has been granted leave of absence by the Director General for the period of 11 April 2023 to 24 April 2023 inclusive.

## **4. Noting of Minutes**

Signed minutes of previous meetings are available on the [DAP website](#).





## **5. Declarations of Due Consideration**

Any member who is not familiar with the substance of any report or other information provided for consideration at the DAP meeting must declare that fact before the meeting considers the matter.

## **6. Disclosure of Interests**

Nil.

## **7. Deputations and Presentations**

- 7.1** Mr Daniel Martinovich (CLE Town Planning & Design) presenting in support of the recommendation for the application at Item 8.1. The presentation will address support for the development and requesting some condition changes and deletions.
- 7.2** Mr Michael Bower (Blueport) presenting in support of the recommendation for the application at Item 8.1. The presentation will address support for the development and requesting some condition changes and deletions.
- 7.3** Mr Derek Hays (Hames Sharley) presenting in support of the recommendation for the application at Item 8.1. The presentation will address support for the development and requesting some condition changes and deletions.

The City of Rockingham may be provided with the opportunity to respond to questions of the panel, as invited by the Presiding Member.

## **8. Form 1 – Responsible Authority Reports – DAP Applications**

### **8.1 Lot 9014 Sixty Eight Road, Baldivis**

Development Description:	Proposed Neighbourhood Centre (Parkland Heights)
Applicant:	CLE Town Planning & Design
Owner:	Rockingham Park Pty Ltd
Responsible Authority:	City of Rockingham
DAP File No:	DAP/22/02387

## **9. Form 2 – Responsible Authority Reports – DAP Amendment or Cancellation of Approval**

Nil.



## 10. State Administrative Tribunal Applications and Supreme Court Appeals

Current SAT Applications				
File No. & SAT DR No.	LG Name	Property Location	Application Description	Date Lodged
DAP/18/01543 DR 75/2022	City of Joondalup	Lot 649 (98) O'Mara Boulevard, Iluka	Commercial development	02/05/2022
DAP/22/02159 DR163/2022	Shire of Murray	No. 630 (Lot 137) Pinjarra Road, Furnissdale	Proposed Petrol Filling Station	28/09/2022
DAP/21/02036 DR236/2022	City of Swan	Lot 97 (31) & 817 (47) Lakes Road, Hazelmere	Proposed Construction of a Logistics Depot with Ancillary Office Area	23/12/2022
DAP/22/02346 DR47/2023	City of Joondalup	8 Elcar Lane, Joondalup	Two Storey Mixed Used Development	17/03/2022

## 11. General Business

In accordance with Section 7.3 of the DAP Standing Orders 2020 only the Presiding Member may publicly comment on the operations or determinations of a DAP and other DAP members should not be approached to make comment.

## 12. Meeting Closure



## Presentation Request Form

[Regulation 40\(3\)](#) and [DAP Standing Orders 2020](#) cl. 3.5

**Must be submitted at least 72 hours (3 ordinary days) before the meeting**

### Presentation Request Guidelines

Persons interested in presenting to a DAP must first consider whether their concern has been adequately addressed in the responsible authority report or other submissions. Your request will be determined by the Presiding Member based on individual merit and likely contribution to assist the DAP's consideration and determination of the application.

Presentations are not to exceed **5 minutes**. It is important to note that the presentation content will be **published on the DAP website** as part of the meeting agenda.

Please complete a separate form for each presenter and submit to [daps@dplh.wa.gov.au](mailto:daps@dplh.wa.gov.au)

### Presenter Details

Name	Daniel Martinovich
Company (if applicable)	CLE Town Planning + Design
Please identify if you have any special requirements:	<b>YES</b> <input type="checkbox"/> <b>NO</b> <input checked="" type="checkbox"/> If yes, please state any accessibility or special requirements: <a href="#">Click or tap here to enter text.</a>

### Meeting Details

DAP Name	Metro Outer
Meeting Date	12 April 2023
DAP Application Number	DAP/22/02387
Property Location	Lot 9014 Sixty Eight Road, Baldivis
Agenda Item Number	8.1

### Presentation Details

I have read the contents of the report contained in the Agenda and note that my presentation content will be published as part of the Agenda:	<b>YES</b> <input checked="" type="checkbox"/>
Is the presentation in support of or against the <u>report recommendation</u> ? ( <i>contained within the Agenda</i> )	<b>SUPPORT</b> <input checked="" type="checkbox"/> <b>AGAINST</b> <input type="checkbox"/>
Is the presentation in support of or against the <u>proposed development</u> ?	<b>SUPPORT</b> <input checked="" type="checkbox"/> <b>AGAINST</b> <input type="checkbox"/>
Will the presentation require power-point facilities?	<b>YES</b> <input checked="" type="checkbox"/> <b>NO</b> <input type="checkbox"/> <b>If yes, please attach</b>



### **Presentation Content\***

These details may be circulated to the local government and applicant if deemed necessary by the Presiding Member. Handouts or power points will not be accepted on the day.

Brief sentence summary for inclusion on the Agenda	<i>The presentation will address:</i> <ul style="list-style-type: none"><li>• Support the recommendation for approval</li><li>• Request deletion of condition 4 i)</li><li>• Request deletion of condition 4 ii)</li><li>• Request that condition 10 i) be amended</li><li>• Request that condition 11 i) be corrected.</li><li>• Request that condition 11 iv) be amended.</li><li>• Available for questions as needed</li></ul>
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In accordance with Clause 3.5.2 of the [DAP Standing Orders](#), your presentation request must also be accompanied with a written document detailing the content of your presentation.

*Please attach detailed content of presentation or provide below:*

Please refer attached.

# Presentation Summary: Daniel Martinovich, CLE Town Planning + Design

<b>Subject</b>	DAP/22/02387 – Parkland Heights Neighbourhood Centre – Stage 1 Development Application
<b>Property Location</b>	Lot 9014 Sixty Eight Road, Baldivis
<b>DAP Meeting Date</b>	12 April 2023
<b>Author</b>	Daniel Martinovich, CLE Town Planning + Design

## Introduction and background

1. CLE Town Planning + Design is the applicant for the proposed development application.
2. As outlined in the responsible authority report (RAR), we have worked closely with the landowner and the City of Rockingham to progress the planning framework to deliver a neighbourhood centre for Parkland Heights.
3. The landowner proposes a first stage development application to establish a substantial component of the ultimate development scenario (as depicted on the approved Local Development Plan) that will bring services and amenities to southern Baldivis.
4. The 'Parkland Heights Neighbourhood Centre – Local Development Plan' (the LDP) provides the primary planning framework for the site, establishing a spatial layout for the Centre as well as a suite of development standards.
5. The final approved version of the LDP is different to that prepared and lodged by CLE on behalf of the landowner. The submitted version sought to accommodate development as proposed by this development application and included a staging plan to coordinate the staged development of the Centre. The City required modifications to the LDP prior to approval which are discussed in the relevant sections below.

## Purpose

6. We support the RAR recommendation for approval.
7. We respectfully request the deletion of condition 4 (including sub-clause (i) and (ii)) as outlined below.
8. We respectfully request that condition 10 i) be amended to remove reference to a specific number of car bays as outlined below.
9. We request that condition 11 iv) is modified to be less prescriptive, thereby enabling noise control measures to respond to the specific plant and equipment, once confirmed.
10. We recommend correction of an assumed typo at condition 11 i) as outlined below.

## Condition 4 i) – façade heights

11. Condition 4 i) would require an increase in the facade height for portions of the food and beverage precinct to 5.5m in accordance with clause 5 of the LDP.
12. The design approach for the Centre (as will be discussed in further detail below) seeks to coordinate increased height and scale with key functional elements of the main street rather than satisfy a 'minimum' requirement.
13. To accommodate this, the LDP initially submitted by CLE proposed a different approach to the assessment of building height, proposing a minimum average height calculation supplemented by an additional minimum height requirement. The City did not support this approach, instead requiring the LDP to be modified to require a minimum height of 5.5m only. We understand that the intent of this provision was to ensure a 'two storey' built form presentation to the main street.
14. As outlined in the City's RAR, only a small portion of the food and beverage precinct does not satisfy the minimum of 5.5m height requirement. Whilst we do not dispute the minor height variation, the proposed buildings will present at a two-storey equivalent height, therefore achieving the objective of the LDP.

15. The project architect's depiction of the food and beverage precinct's facade height as viewed from the main street is illustrated at Figure 1 below.

*Figure 1: Food and Beverage Precinct Height Calculation*



Source: Hames Sharley

16. As demonstrated above, the building height is only marginally below 5.5m. Increasing the height is unlikely to be discernible to the casual observer and is therefore unlikely to deliver an improved outcome. We therefore request the JDAP to exercise discretion and vary clause 5 of the LDP to approve the food and beverage façade heights as proposed.
17. As stated above, the architectural approach to the building height for the centre is one of articulation, variation and interest as compared to the maintenance of a 5.5m minimum height.
18. The varied approach to façade heights and the emphasis of height and scale to coincide with functional aspects of the Centre is demonstrate at Figure 2 below.

*Figure 2: Main Entrance Height Calculation*



Source: Hames Sharley

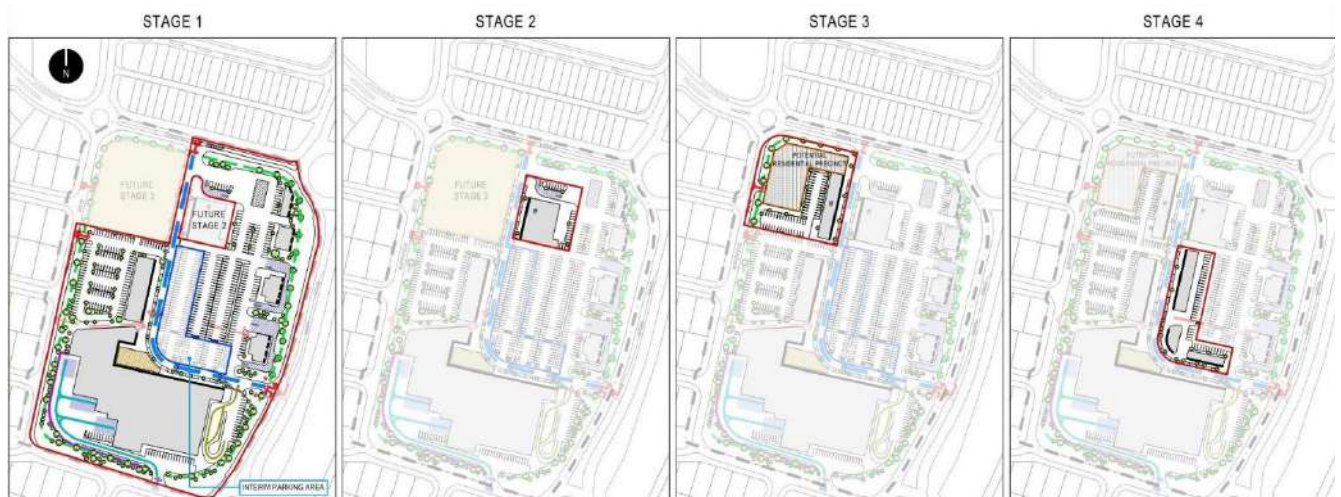
19. As demonstrated above, the minor reductions to the food and beverage precinct are more than offset by the increased heights around the main entrance and town square at 8.5m and 9.7m. Height is consolidated in this location to emphasise the main entrance to the internal mall and assist visitors navigate to the core element of the Centre – the anchor supermarket tenant and town square.
20. Increased height and scale in key locations balanced with a reduced scale in secondary locations as is proposed will achieve an interesting and coherent presentation that will assist with legibility and wayfinding throughout the Centre.
21. This is a significantly improved outcome to what could otherwise be delivered under the LDP. For example, a continuous 5.5m façade height would comply with the LDP however, present as monotonous and uninspiring. The minor variation to clause 5 of the LDP is more than offset by the increased height and scale over and above minimum LDP requirements in other intuitive locations.
22. Condition 4 i) is therefore superfluous when considered in the context of the overall height and scale of the Centre and we therefore request that it be deleted.



#### Condition 4 ii) – removal of interim parking bays

23. Condition 4 ii) would require the removal of 98 interim car bays and the instalment of landscaped pad sites.
24. We request that condition 4 ii) be deleted, as the provision of accessible car bays in the most convenient locations possible is critical for the successful establishment of Parkland Heights and indeed, shopping centres in general. The loss of these bays and quarantining of the land as pad sites is unnecessary and jeopardises the viability of the Centre.
25. For Centres of this scale, staging and the temporary use of future development sites as parking is a standard and accepted method of enabling centres to develop organically over time as the population catchment grows and customers shopping behaviour becomes established.
26. For this reason, the LDP submitted with the City for approval sought to coordinate development staging through the inclusion of a staging plan, as per Figure 3 below.

Figure 3: Proposed Staging Plan



27. As shown above, the submitted LDP sought to provide certainty regarding the staging intent for the Centre however, the City required the staging plan to be removed prior to approval.
28. The approved LDP depicts an ultimate development scenario that will be staged over many years as the catchment in southern Baldivis grows.
29. The delivery of convenient and attractive parking in close proximity to the major supermarket tenant during the Centres infancy is a commercial necessity to attract the anchor tenant.
30. The commitment of the anchor tenant for Parkland Heights is premised upon the understanding that the Centre would not be burdened with vacant shops and would be serviced by convenient parking from inception that meets their expectations. Future expansion of commercial floorspace at the Centre would be organic and commensurate with resident growth in the catchment.
31. The timeframe to remove the interim parking bays and develop commercial floorspace is therefore dependent on the growth of the catchment. It is not possible to accurately determine when this is expected to occur. The timing must be aligned with demand drivers in order to avoid a situation where vacant shop fronts exist which are a blight on main street precincts.
32. Setting the land aside as vacant pad sites as required by condition 4 ii) would separate shoppers from the supermarket entrance, detrimentally impacting convenience and impacting customer behaviour.

33. It is unlikely the development could proceed in its current form should a 45 to 65m-wide pad site be required between the major tenant and the most convenient parking location. Should the staged approach not be supported, the shopping centre would require a redesign and further consideration given to staging before a commercial commitment is made to proceed.
34. Once the anchor supermarket tenant and the broader first stage development have established and the catchment matures, the need for parking convenience will be superseded by the desire to increase commercial space and in turn, a greater overall offering to attract customers to the Centre. At this time, a reduction in parking convenience will be offset by the increased patronage and visitor turnover generated by the additional shops. Consumers will accept increased distance to the car park if it coincides with additional retail offering, for example a café, shop etc. Customers tend not to accept inconvenience if it does not deliver utility.
35. Strategies offered to assist alleviate the City's concerns during the assessment phase included physical delineation of the interim parking area within the car park, installation of service utility connections and an information board being displayed in a prominent location, illustrating the fact that the interim bays would be removed and developed for commercial floorspace in the future. These were not supported by the City, but remain a viable solution.
36. The evolution, development and expansion of shopping centres is a common occurrence. Whilst convenient, accessible and plentiful parking is critical early on, shopping centre owners are commercially motivated and seek increased return on investment. This typically manifests through the expansion of retail space and the associated additional rent revenue that is generated. The proponent for the Parkland Heights Neighbourhood Centre has pursued the outcome of future growth and expansion via the LDP. In the context of the market economy in which the Centre will operate, it is logical to conclude that the landowner will complete further development and increase their returns as soon as it is viable to do so.
37. In order to demonstrate the principle of staged, organic growth and expansion of activity centres, we have reviewed the examples provided in the RAR as illustrated below. Each example is accompanied with relevant discussion points, demonstrating that staging is a natural and necessary aspect of delivering larger-scale activity centres.

*Figure 4: Rockingham Strategic Centre, May 2008*



Source: Nearmap



*Figure 5: Rockingham Strategic Centre, February 2023*



*Source: Nearmap*

23. As demonstrated by the above images, development of the Rockingham Strategic Centre has been staged over a number of years. The Syren Street 'main street' example (top left corner of the plan) was only developed more recently as a food and beverage / entertainment precinct.
24. The main shopping malls that existed well before the main street was developed were well serviced by plentiful and conveniently located parking areas.
25. The relevant consideration to the proposed staging of the Parkland Heights Neighbourhood Centre is that even strategic metropolitan centres with their sizeable catchments are not developed all at once and need to be able to grow organically as additional floorspace and uses become viable over time, supported by good access to parking.



*Figure 6: Baldivis District Centre, February 2009*



Source: Nearmap

*Figure 7: Baldivis District Centre, February 2023*



Source: Nearmap



25. As demonstrated above, the Baldivis District Centre was not developed as a main street activity centre at the outset. The first stage, shown by the 2009 aerial image, was a typical shopping centre layout and included a supermarket anchor tenant.
26. As part of this first stage development, parking is plentiful and located at the entrance to the shopping mall in the most convenient and accessible location. This early availability of parking at the doorstep of the main shopping mall was a catalyst for future growth.
27. Development of the main street occurred incrementally and once the 'anchor' at the Centre had established.
28. The size, scale and layout of the Centre enabled plentiful parking to be provided as part of the first stage in an ultimate location and did not rely on interim parking areas.

*Figure 8: Secret Harbour, February 2009*



Source: Nearmap



*Figure 9: Secret Harbour, February 2023*



Source: Nearmap

29. As shown by the 2009 image above, the first stage of development at Secret Harbour included an interim car park in an area that is now developed as commercial floorspace.
30. The first stage development included a supermarket anchor tenant.
31. The interim parking area was removed and developed in 2016 for commercial floorspace as the Centre expanded.
32. The same staged approach, supported by interim parking bays, is proposed for this application.



*Figure 10: Makybe Drive Neighbourhood Centre*



Source: Nearmap

33. The Maybe Drive Neighbourhood Centre 'main street' is on a much smaller scale as the other examples (circa 4,400m<sup>2</sup> of commercial floorspace) and as such, was delivered in a single stage.
34. The Centre does not feature a major supermarket as an anchor tenant and was therefore likely delivered within a different commercial environment.
35. In relation to more general considerations, a matter that makes staging even more imperative for Parkland Heights (as compared to the above examples) is the fact that it does not and will not have an immediate population catchment to the west and south. Parkland Heights is located on the southern tip of Baldivis with the land to the south and west planned to remain in the 'Rural' zone of the Metropolitan Region Scheme.
36. This lesser catchment within a 360 degree radius for Parkland Heights means that the staged delivery of commercial floorspace in an organic manner that matches population growth is even more critical to ensure that retail floorspace trades at viable levels. Securing an anchor tenant is the critical first step however, convenient access to parking is fundamental to this and a key driver for tenants.

#### **Condition 10 i) – parking bays**

37. We request that condition 10 i) be amended to not reference a specific number of parking bays. As worded, the condition provides no flexibility or discretion to vary the number of bays at a later stage, should the number of bays need to be adjusted as part of the detailed design process.
38. For large sites such as this, discretion should exist for the local government to accept minor changes to parking numbers which may be necessary as the working drawings progress.
39. This is a generally accepted approach and is consistent with other conditions imposed by the JDAP on development applications for activity centres in the City of Rockingham. Specifically, condition 14 i) of DAP/21/02023 is worded consistent with our preferred approach.
40. To address this matter, we request that condition 10 i) be amended by deleting reference to “*Four hundred and Seventy Seven (477) car bays.*”
41. Condition 10 i) would instead read as follows: “*Prior to occupation of the development, the car parking areas must be designed, constructed, sealed, kerbed...*”.

#### **Condition 11 iv) – acoustic screening**

42. We request that condition 11 iv) is reworded as follows: “*The mechanical services are to be assessed by a suitably qualified acoustic consultant prior to the lodgement of the Building Permit to determine the required noise control for compliance with the Assigned Levels of the Environmental Protection (Noise) Regulations 1997. The necessary noise control is to be incorporated into the Building Permit documents.*”
43. This is due to a concern that draft condition 11 iv) as worded in the RAR is too prescriptive. The actual noise control requirements for the mechanical plant (i.e., the extent of the screening) cannot be determined until the mechanical services have been designed and the equipment selected. The alternative wording requested above would enable the noise control to respond specifically to the equipment once the equipment has been confirmed.

#### **Condition 11 i) –typo for correction**

44. We assume that reference to between “*9am and 5am*” as worded in the RAR is intended to be between ‘9am and 5pm’. We recommend that this typo be corrected.



# Parkland Heights Neighbourhood Centre – Development Application

Metro Outer JDAP – 12 April 2023

Presented by Daniel Martinovich,  
CLE Town Planning + Design

# Purpose

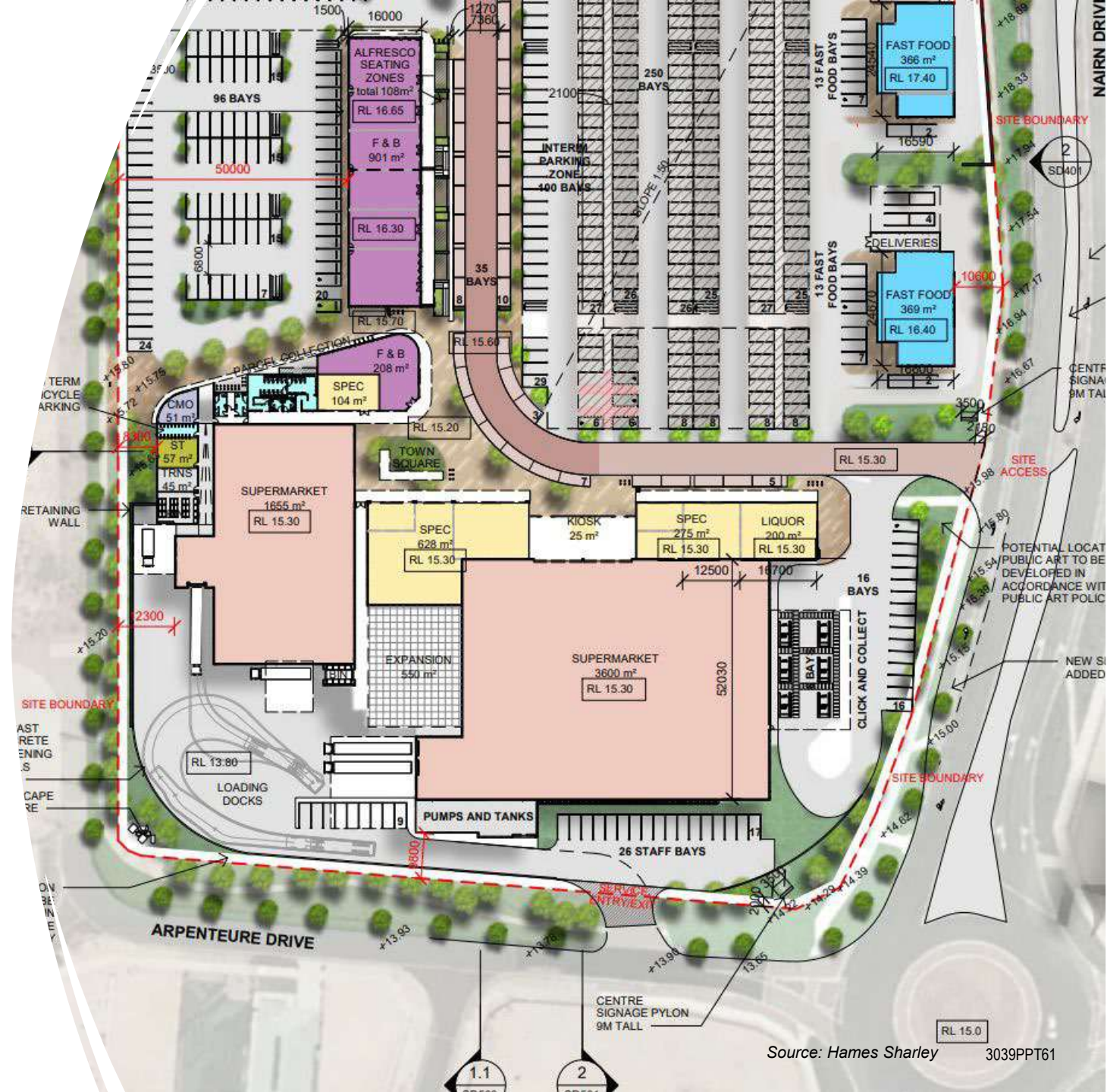
- Support RAR recommendation for approval.
- Request the deletion of condition 4 i).
- Request the deletion of condition 4 ii).
- Request that condition 10 i) be amended.
- Request that condition 11 iv) be amended.
- Recommend correction to condition 11 i).





## Condition 4 i) – request to delete

- The food and beverage precinct is marginally under the minimum height of 5.5m.
- Height and scale is focussed south of the main street at the core of the Centre.
- On average, building heights across the development will exceed the 5.5m minimum.





# Condition 4 i) – request to delete (cont'd)

Image Source: Hames Sharley



## Food and beverage precinct height calculation

# Condition 4 i) – request to delete (cont'd)



Main entrance height calculation



# Condition 4 ii) – request to delete

- Condition 4 ii) would require the removal of 98 interim car bays and the instalment of landscaped pad sites.
- The 98 interim car bays are critical to the first stage development.
- Development of the Centre will be staged over a number of years.

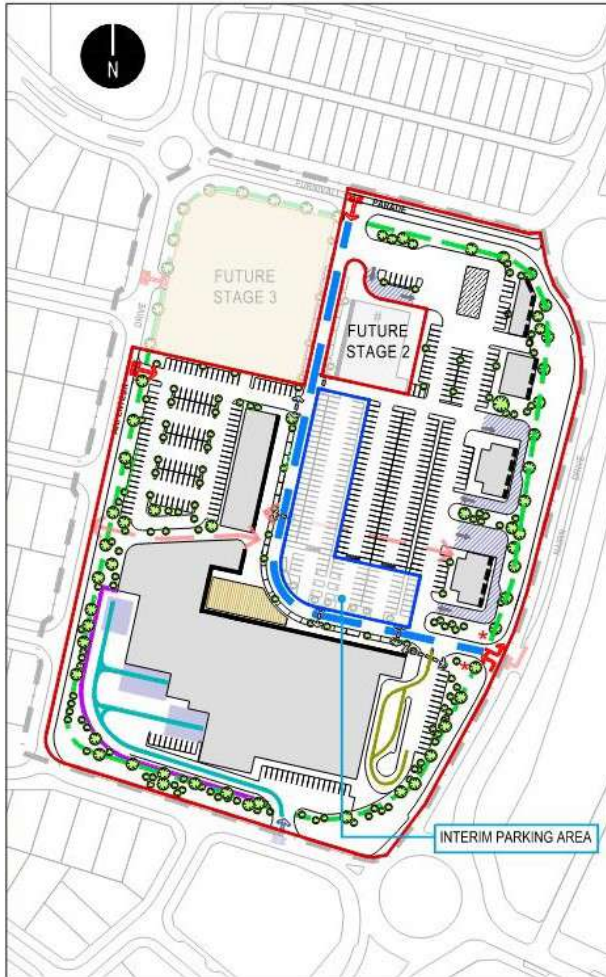


Source: Hames Sharley

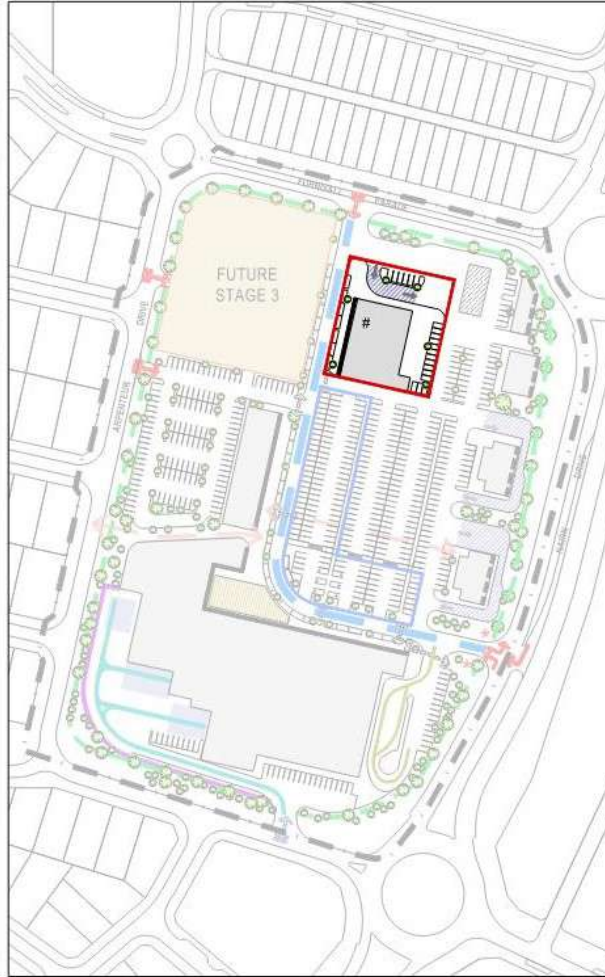


# Condition 4 i) – request to delete (cont'd)

STAGE 1



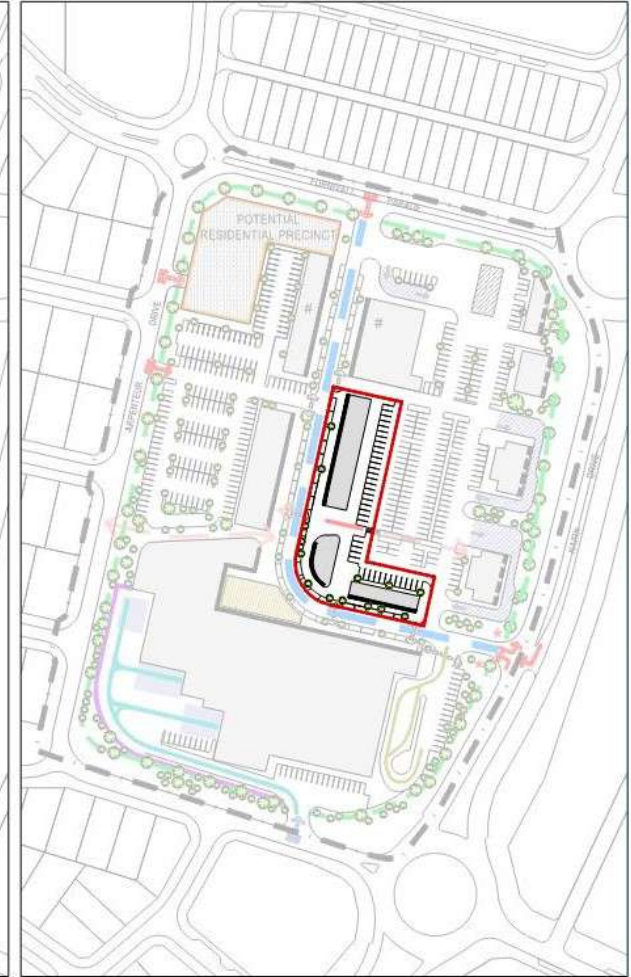
STAGE 2



STAGE 3



STAGE 4





# Condition 4 ii) – request to delete (cont'd)

- Parking in close proximity is a requirement of the anchor tenant.
- Once the Centre has established and the catchment grown, parking will give way to increased retail offering.
- Removal of parking would be an inefficient use of land and an unnecessary barrier to visitors.
- There are options to address concerns of interim parking i.e. physical delineation, notice board installed at the Centre.





## Condition 4 ii) – request to delete (cont'd)

- The interim parking scenario will still provide a high amenity, functional activity centre environment until the future stages of the main street are developed.



*Image Source: Hames Sharley*

## Condition 4 ii) – request to delete (cont'd)

- The interim parking scenario will still provide a high amenity, functional activity centre environment until the future stages of the main street are developed.





*Image Source: Hames Sharley*

## Condition 4 ii) – request to delete (cont'd)

- The interim parking scenario will still provide a high amenity, functional activity centre environment until the future stages of the main street are developed.



# Condition 4 ii) – request to delete (cont'd)

- Staging and interim parking is reasonable and expected for activity centres of this scale.



Rockingham Strategic Centre, May 2008



Rockingham Strategic Centre, Feb 2023



# Condition 4 ii) – request to delete (cont'd)

- Staging and interim parking is reasonable and expected for activity centres of this scale.



Baldivis District Centre, Feb 2009



Baldivis District Centre, Feb 2023



# Condition 4 ii) – request to delete (cont'd)

- Staging and interim parking is reasonable and expected for activity centres of this scale.



Secret Harbour Centre, Feb 2009



Secret Harbour Centre, Feb 2023

# Condition 10 i) – request amendment

- Request to remove reference to specific number of car bays (477).
- Condition as per RAR:
  - *“Prior to occupation of the development, the car parking areas must:*
    - *Four Hundred and Seventy Seven (477) car parking are to be designed, constructed, sealed, kerbed, drained and marked in accordance...”*
- Requested wording:
  - *Prior to occupation of the development, the car parking area must:*
    - *Be designed, constructed, sealed, kerbed, drained and marked in accordance...”*

# Condition 11 iv) – request amendment

- Request to reword condition 11 iv) as it prescribes an outcome that may not be warranted.
- Specific detail regarding the selected plant and equipment is needed to confirm a suitable noise mitigation response.
- Condition as per RAR:
  - *“Acoustic screening will also be required on the southern, western and northern side of the air-conditioning and refrigeration equipment located on the roof top of the supermarket to the specifications required within the report.”*
- Requested wording:
  - *The mechanical services are to be assessed by a suitably qualified acoustic consultant prior to the lodgement of the Building Permit to determine the required noise control for compliance with the Assigned Levels of the Environmental Protection (Noise) Regulations 1997. The necessary noise control is to be incorporated into the Building Permit documents.”*

# Condition 11 i) – typo correction

- We assume reference to “*9am to 5am*” in the *RAR condition* is intended to be “9am to 5pm”.





## Presentation Request Form

[Regulation 40\(3\)](#) and [DAP Standing Orders 2020](#) cl. 3.5

**Must be submitted at least 72 hours (3 ordinary days) before the meeting**

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Please complete a separate form for each presenter and submit to [daps@dplh.wa.gov.au](mailto:daps@dplh.wa.gov.au)

### Presenter Details

Name	Michael Bower
Company (if applicable)	Blueport Development Management
Please identify if you have any special requirements:	<b>YES</b> <input type="checkbox"/> <b>NO</b> <input checked="" type="checkbox"/> If yes, please state any accessibility or special requirements: <a href="#">Click or tap here to enter text.</a>

### Meeting Details

DAP Name	Metro Outer
Meeting Date	12 April 2023
DAP Application Number	DAP/22/02387
Property Location	Lot 9014 Sixty Eight Road, Baldivis
Agenda Item Number	8.1

### Presentation Details

I have read the contents of the report contained in the Agenda and note that my presentation content will be published as part of the Agenda:	<b>YES</b> <input checked="" type="checkbox"/>
Is the presentation in support of or against the <u>report recommendation</u> ? ( <i>contained within the Agenda</i> )	<b>SUPPORT</b> <input checked="" type="checkbox"/> <b>AGAINST</b> <input type="checkbox"/>
Is the presentation in support of or against the <u>proposed development</u> ?	<b>SUPPORT</b> <input checked="" type="checkbox"/> <b>AGAINST</b> <input type="checkbox"/>
Will the presentation require power-point facilities?	<b>YES</b> <input type="checkbox"/> <b>NO</b> <input checked="" type="checkbox"/> <b>If yes, please attach</b>





### **Presentation Content\***

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Brief sentence summary for inclusion on the Agenda	<i>The presentation will address:</i> <ul style="list-style-type: none"><li>• Support the recommendation for approval.</li><li>• Support presentation made by CLE Town Planning + Design. Specifically, the request to delete conditions 4 i) and 4 ii).</li><li>• Available for questions as needed.</li></ul>
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In accordance with Clause 3.5.2 of the [DAP Standing Orders](#), your presentation request must also be accompanied with a written document detailing the content of your presentation.

*Please attach detailed content of presentation or provide below:*

As the project manager and landowner's representative, I concur with CLE's presentation and the matters raised. Specifically, I also request the deletion of conditions 4i) and 4ii) for the reasons outlined in CLE's presentation.

I wish to make myself available to answer questions from the JDAP.



## Presentation Request Form

[Regulation 40\(3\)](#) and [DAP Standing Orders 2020](#) cl. 3.5

**Must be submitted at least 72 hours (3 ordinary days) before the meeting**

### Presentation Request Guidelines

Persons interested in presenting to a DAP must first consider whether their concern has been adequately addressed in the responsible authority report or other submissions. Your request will be determined by the Presiding Member based on individual merit and likely contribution to assist the DAP's consideration and determination of the application.

Presentations are not to exceed **5 minutes**. It is important to note that the presentation content will be **published on the DAP website** as part of the meeting agenda.

Please complete a separate form for each presenter and submit to [daps@dplh.wa.gov.au](mailto:daps@dplh.wa.gov.au)

### Presenter Details

Name	Derek Hays
Company (if applicable)	Hames Sharley
Please identify if you have any special requirements:	<b>YES</b> <input type="checkbox"/> <b>NO</b> <input checked="" type="checkbox"/> If yes, please state any accessibility or special requirements: <a href="#">Click or tap here to enter text.</a>

### Meeting Details

DAP Name	Metro Outer
Meeting Date	12 April 2023
DAP Application Number	DAP/22/02387
Property Location	Lot 9014 Sixty Eight Road, Baldivis
Agenda Item Number	8.1

### Presentation Details

I have read the contents of the report contained in the Agenda and note that my presentation content will be published as part of the Agenda:	<b>YES</b> <input checked="" type="checkbox"/>
Is the presentation in support of or against the <u>report recommendation</u> ? ( <i>contained within the Agenda</i> )	<b>SUPPORT</b> <input checked="" type="checkbox"/> <b>AGAINST</b> <input type="checkbox"/>
Is the presentation in support of or against the <u>proposed development</u> ?	<b>SUPPORT</b> <input checked="" type="checkbox"/> <b>AGAINST</b> <input type="checkbox"/>
Will the presentation require power-point facilities?	<b>YES</b> <input type="checkbox"/> <b>NO</b> <input checked="" type="checkbox"/> <b>If yes, please attach</b>



### Presentation Content\*

These details may be circulated to the local government and applicant if deemed necessary by the Presiding Member. Handouts or power points will not be accepted on the day.

Brief sentence summary for inclusion on the Agenda	<i>The presentation will address:</i> <ul style="list-style-type: none"><li>• Support the recommendation for approval.</li><li>• Support presentation made by CLE Town Planning + Design. Specifically, the request to delete conditions 4 i) and 4 ii).</li><li>• Available for questions as needed.</li></ul>
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In accordance with Clause 3.5.2 of the [DAP Standing Orders](#), your presentation request must also be accompanied with a written document detailing the content of your presentation.

*Please attach detailed content of presentation or provide below:*

As the project architect, I concur with CLE's presentation and the matters raised. Specifically, I also request the deletion of conditions 4i) and 4ii) for the reasons outlined in CLE's presentation.

I wish to make myself available to answer questions from the JDAP.

# **Lot 9014 - Sixty Eight Road Baldivis - Proposed Neighbourhood Centre (Parkland Heights)**

## **Form 1 – Responsible Authority Report** (Regulation 12)

<b>DAP Name:</b>	Metro Outer Joint Development Panel	
<b>Local Government Area:</b>	City of Rockingham	
<b>Applicant:</b>	CLE Town Planning + Design	
<b>Owner:</b>	Rockingham Park Pty Ltd	
<b>Value of Development:</b>	\$14 million <input checked="" type="checkbox"/> Mandatory (Regulation 5) <input type="checkbox"/> Opt In (Regulation 6)	
<b>Responsible Authority:</b>	Local Government	
<b>Authorising Officer:</b>	Mr Peter Ricci, Director Planning and Development Services	
<b>LG Reference:</b>	DA020.2022.293.1	
<b>DAP File No:</b>	DAP/22/02387	
<b>Application Received Date:</b>	5 December 2022	
<b>Report Due Date:</b>	29 March 2023	
<b>Application Statutory Process Timeframe:</b>	90 Days + 24 Days	
<b>Attachment(s):</b>	<ol style="list-style-type: none"> <li>1. Aerial Plan</li> <li>2. Development Plans</li> <li>3. Planning Report</li> <li>4. Local Development Plan</li> <li>5. Schedule of Submissions</li> <li>6. Schedule of External Authority responses</li> <li>7. Landscape Plan</li> <li>8. Traffic Impact Assessment</li> <li>9. Intersection Designs and Swept Paths</li> <li>10. Environmental Noise Report</li> <li>11. Waste Management Plan</li> <li>12. Retail Sustainability Assessment</li> <li>13. SPP 7.0 Assessment</li> <li>14. Local Development Plan Assessment</li> <li>15. Council Minutes</li> </ol>	
<b>Is the Responsible Authority Recommendation the same as the Officer Recommendation?</b>	<input type="checkbox"/> Yes	Complete Responsible Authority Recommendation section
	<input checked="" type="checkbox"/> N/A	
	<input type="checkbox"/> No	Complete Responsible Authority and Officer Recommendation sections

### **Responsible Authority Recommendation**

That the Metro Outer Joint Development Assessment Panel resolves to:

**Approve** DAP Application reference DAP/22/02387 and the accompanying plans received on 5 December 2023 and Amended Plans received on 20 February 2023:

- Overall Site Plan - Drawing No.SD100, Dated 20/02/2023;

- Ground Floor Plan Part 1 - Drawing No.SD200, Dated 17/02/2023 ;
- Ground Floor Plan Part 2 - Drawing No.SD201, Dated 17/02/2023;
- Ground Floor Plan Part 3 - Drawing No. D202, Dated 17/02/2023;
- North Site Elevations - Furnivall Parade - Drawing No.SD400, Dated 07/10/2022;
- East Site Elevations - Nairn Drive - Drawing No.SD401, Dated 07/10/2022;
- South Site Elevations - Arpentuer Drive - Drawing No.SD402, Dated 07/10/2022;
- West Site Elevations - Arpentuer Drive - Drawing No.SD404, Dated 07/10/2022;
- Section A Elevations - Drawing No.SD500, Dated 07/10/2022;
- Section B Elevations - Drawing No.SD501, Dated 07/10/2022;
- Section C Elevations - Drawing No.SD503, Dated 07/10/2022;
- Section D Elevations - Drawing No.SD504, Dated 07/10/2022;

In accordance with Clause 68 of the Planning and Development (Local Planning Schemes) Regulations 2015 subject to the following conditions as follows:

Conditions

1. Pursuant to clause 26 of the Metropolitan Region Scheme, this approval is deemed to be an approval under clause 24(1) of the Metropolitan Region Scheme.
2. This decision constitutes planning approval only and is valid for a period of 4 years from the date of approval. If the subject development is not substantially commenced within the specified period, the approval shall lapse and be of no further effect.
3. This Approval does not authorise or approve the use of the Service Station, Speciality Retail and two (2) Fast Food tenancies located on the eastern side of the subject lot. A separate Development Approval must be obtained for the development of any tenancy.
4. Prior to applying for a Building Permit, amended plans are to be approved by the City of Rockingham which include the following:-
  - (i) The 'Food and Beverage' building Main Street façade height shall be amended from 5.1m to 5.5m;
  - (ii) The 'Interim Parking' bays must be removed and vacant building envelopes placed and landscaped to the satisfaction of the City of Rockingham.
5. Prior to applying for a Building Permit, a Construction Management Plan (CMP) is to be submitted to and approved by the City of Rockingham addressing but not limited to:
  - (i) Hours of construction
  - (ii) Temporary Fencing
  - (iii) Traffic Management including, a Traffic Management Plan addressing site access, egress and parking arrangement for staff and contractors;
  - (iv) Management of vibration and dust
  - (v) Management of construction noise and other site generated noise.



6. Prior to applying for a Building Permit, a Stormwater Management Plan must be prepared by a suitably qualified engineering showing how stormwater will be contained on-site and those plans must be submitted to the City of Rockingham for its approval. All stormwater generated by the development must be managed in accordance with Planning Policy 3.4.3 - Urban Water Management to the satisfaction of the City of Rockingham. The approved plans must be implemented and all works must be maintained for the duration of the development.
7. Prior to applying for a Building Permit, the Applicant must submit full detailed civil engineering drawings showing the various footpaths, crossovers and car parking embayment to be adopted across the entire development site and adjoining road reserves, for review and approval by the City of Rockingham. Construction works in accordance with approved civil drawings are to be completed prior to occupation of the development, at the landowner's cost to the satisfaction of the City of Rockingham.
8. Prior to applying for a Building Permit, a Sign Strategy must be prepared (which must include the information required by Planning Policy 3.3.1, Control of Advertisements) to the satisfaction of the City of Rockingham and it must thereafter be implemented for the duration of the development.
9. Prior to applying for a Building Permit, a Landscaping Plan must be prepared and include the following detail to the satisfaction of the City of Rockingham:-
  - (i) The Location, number and type of proposed trees and shrubs (including street trees, shade trees within the car parking areas, and planting within the Special Landscape Area), indicating calculations for the landscaping area;
  - (ii) Any lawns to be established and areas to be mulched;
  - (iii) Those areas to be reticulated or irrigated;
  - (iv) The paving material used for the footpaths must be carried across driveways to the car parking areas in order to maintain visual continuity of the pedestrian network and aid pedestrian legibility;
  - (v) Detailed landscape, irrigation, lighting, playground, street furniture plans; and
  - (iv) All Verge areas;
10. Prior to occupation of the development, the car parking areas must:
  - (i) Four Hundred and Seventy Seven (477) car parking bays are to be designed, constructed, sealed, kerbed, drained and marked in accordance with User Class 3 of Australian/New Zealand Standard AS/NZS 2890.1:2004, Parking facilities, Part 1: Off-street car parking unless otherwise specified by this approval.
  - (ii) Provide Ten (10) car parking spaces dedicated to people with disabilities, which are designed, constructed, sealed, kerbed, drained and marked in accordance with Australian/New Zealand Standard AS/NZS 2890.6:2009, Parking facilities, Part 6: Off-street parking for people with disabilities and which are linked to the main entrance of the development by a continuous accessible path of travel designed and constructed in accordance with Australian Standard AS 1428.1—2009, Design for access and mobility, Part 1: General Requirements for access—New building work;

- (iii) Be constructed, sealed, kerbed, drained and marked prior to the development being occupied and maintained thereafter; and
  - (iv) Comply with the above requirements for the duration of the development.
- 11. The recommendations in the Environmental Noise Report (ENR) prepared by Gabriels Hearne Farrell (revision 3) dated 8th February 2023 shall be implemented in the design, construction and ongoing operation of the development at all times to the satisfaction of the City of Rockingham including but not limited to the following requirements:
  - (i) Deliveries to only occur between 7am and 7pm week days and 9am and 5am on Sundays and Public Holidays.
  - (ii) Trucks are not allowed to idle within the loading bay and as part of best practise are required to switch all vehicles off during loading and unloading periods
  - (iii) Acoustic screening is required around the Service/Loading Dock area, is to be constructed as follows:
    - (a) The screening shall be 3.5m taller than the ground level of the service area; and,
    - (b) The screening shall be constructed of materials without gaps or slots, with a minimum surface density of 10 kg/m<sup>2</sup> (e.g. 6mm glass, 12mm Perspex, 6mm fibre-cement, single leaf of masonry, etc.).
  - (iv) Acoustic screening will also be required on the southern, western and northern side of the air-conditioning and refrigeration equipment located on the roof top of the supermarket to the specifications required within the report.
  - (v) A revised Noise Assessment is to be provided to the City of Rockingham within 30 days of the occupation of the development in order to determine compliance with the *Environmental (Noise) Regulations 199*.
- 12. The recommendations in the Waste Management Plan (WMP) prepared by Talis Consultants dated 7 November 2022 shall be implemented in the design, construction and ongoing operation of the development at all times to the satisfaction of the City of Rockingham including but not limited to the following requirements:
  - (i) A private waste collection company will collect refuse and recyclable waste once a week from the 2 allocated Bin Storage areas.
  - (ii) Waste vehicles (rear loaded) to obtain access from the loading dock area and circulate to the southern exit on Arpentuer Drive; and
  - (iii) Waste collection to occur within acceptable Noise Regulation parameters.
- 13. Prior to the occupation of the development, any damage to existing City infrastructure within the road reservation including kerb, road pavement, turf, irrigation, bollards and footpaths is to be repaired to the satisfaction of the City of Rockingham at the cost of the Applicant.
- 14. Prior to the occupation of the development, a final illumination report must be prepared which demonstrates to the satisfaction of the City of Rockingham, that the completed development complies with the requirements of Australian Standard AS 4282—2019, Control of the obtrusive effects of outdoor lighting and .

15. Prior to the occupation of the development and in accordance with City of Rockingham Planning Policy 3.3.14 - Bicycle parking and End of Trip Facilities, at least two showers (1 male, 1 female), change rooms and clothing lockers must be provided for the development which must be designed in accordance with that Policy and approved by the City of Rockingham. The showers, change rooms and lockers must be retained and maintained in good and safe condition for the duration of the development.
16. Prior to the occupation of the development, thirteen (13) long-term and twenty nine (29) short-term bicycle parking spaces must be designed in accordance with AS2890.3-1993, *Parking facilities, Part 3: Bicycle parking facilities*, and located within the development to the satisfaction of the City of Rockingham.
17. Prior to the occupation of the development, In accordance with Planning Policy 3.3.25 *Percent for Public Art – Private Developer Contribution*, the developer shall make a contribution to the City of Rockingham equal to 1% of the total construction value for the provision of public art, being \$140,000 in value.
18. Earthworks over the site associated with the development must be stabilised to prevent sand or dust blowing off the site, and appropriate measures shall be implemented within the time and in the manner directed by the City of Rockingham in the event that sand or dust is blown from the site.
19. All plant and roof equipment and other external fixtures must be designed to be located away from public view/or screened for the life of the development to the satisfaction of the City of Rockingham.

Advice Notes:

- The disposal of wastewater into the Water Corporation's sewerage system must be with approval of the Water Corporation; the Applicant and owner should liaise with the Water Corporation in this regard.
- The development must comply with the Food Act 2008, the Food Safety Standards and Chapter 3 of the Australian New Zealand Food Standards Code (Australia Only); the Applicant and owner should liaise with the City's Health Services in this regard.
- A Building Permit must be obtained for the proposed works prior to commencement of site works. The Applicant and owner should liaise with the City's Building Services in this regard.
- The development must comply with the Environmental Protection (Noise) Regulations 1997; contact the City's Health Services for information on confirming requirements.
- All works in the road reserve, including construction of a crossover, planting of street trees, and other streetscape works and works to the road carriageway must be to the specifications of the City of Rockingham; the Applicant should liaise with the City of Rockingham's Engineering Services in this regard.
- In regards to Condition 5, dust management is to be in accordance with the Department of Environment and Conservation Guideline: A guideline for managing the impacts of dust and associated contaminants from land development sites, contaminated sites remediation and other related activities.
- All future development is to comply with the Liquor Control Act 1988, all relevant approvals, licences are to be sought prior to the occupation of the development in conjunction with the Department of Racing, Gaming and Liquor.



- All playground installations must be installed and maintained in accordance with all relevant Australian Standards AS 4685:2014 1-6, 11 and all relevant amendments including additional criteria outlined in the following:
- AS 4685.0:2017 Playground equipment and surfacing Part 0: Development, installation, inspection, maintenance and operation; and
- AS/NZS 4422:1996 - Playground Surfacing - Specifications, Requirements & Test Methods; Suitable impact absorbing surfacing, termed soft-fall must be installed, wherever falls from fixed or portable playground equipment is possible.
- Where a development approval has so lapsed, no development shall be carried out without further approval having first been sought and obtained, unless the Applicant has applied and obtained Development Assessment Panel approval to extend the approval term under regulation 17(1)(a) of the Planning and Development (Development Assessment Panels) Regulations 2011.

#### Details: Outline of development application

Region Scheme	Metropolitan Region Scheme
Region Scheme - Zone/Reserve	Urban, Other Regional Road
Local Planning Scheme	Town Planning Scheme No.2
Local Planning Scheme - Zone/Reserve	Development
Structure Plan/Precinct Plan	Parklands Height Structure Plan
Structure Plan/Precinct Plan - Land Use Designation	Commercial
Use Class and permissibility:	<b>Permitted</b> Shop <b>Discretionary</b> Restaurant/Café Liquor Store - Small
Lot Size:	6.679 Ha
Existing Land Use:	Vacant
State Heritage Register	No
Local Heritage	<input checked="" type="checkbox"/> N/A <input type="checkbox"/> Heritage List <input type="checkbox"/> Heritage Area
Design Review	<input checked="" type="checkbox"/> N/A <input type="checkbox"/> Local Design Review Panel <input type="checkbox"/> State Design Review Panel <input type="checkbox"/> Other
Bushfire Prone Area	No
Swan River Trust Area	No

#### Context

The site is located centrally to the 'Parklands Height' Estate in Baldivis. The proposed development is located approximately 3km south of the Baldivis District Shopping Centre ('Baldivis Town Centre') and 2.7km west of the Kwinana Freeway. The site is bound by Nairn Drive to the east, Furnivall Parade to the north and Arpentuer Drive to the south and west.

The land to the east contains the Pine View Primary School, and the land to the north, west and south is existing residential development.

### Shopping Centre Development

The layout of the proposed development is centred on a Main Street design. A Main Street is a central internal access road that provides circulation through a development site. A Main Street is expected to provide building frontages abutting the road and have features for activation such as active shop frontages and high quality built form. The Main Street provides access from Nairn Drive through to Furnivall Parade and has been designed with the provision of street trees and associated parallel parking bays. The proposed development also provides a Town Square space leading into the retail areas and other spaces.

The Applicant seeks Development Approval for the following:

- 5,255m<sup>2</sup> in supermarket retail space comprising of:
  - 3,600m<sup>2</sup> full scale supermarket located on the southern portion of the site, consisting of a contained public entrance lobby, associated click and collect bays and loading dock areas. An additional 550m<sup>2</sup> expansion section is proposed attached to the western side of the supermarket.
  - 1,655m<sup>2</sup> scale secondary supermarket located in the south western portion of the site, with direct entry taken from the Town Square. The area includes an associated loading dock.
- 200m<sup>2</sup> liquor store attached to the northern side of the supermarket.
- 1,306m<sup>2</sup> specialty retail spaces spread across four (4) tenancies over the site.
- 1,109m<sup>2</sup> food and beverage space located central to the site, west of the internal Main Street. This includes associated alfresco dining spaces fronting the Main Street.
- 25m<sup>2</sup> retail kiosk located inside the supermarket entry lobby.
- 575 car parking bays and 86 bicycle parking bays. The car bays are proposed to have a shade structure spanning a large portion of the bays directly north of the Supermarket.
- Utility area comprising of a centre management office, restrooms, end of trip facilities, bike storage room, store room, bin store and electrical maintenance room.
- 9m tall signage pylon located at the entrance of the Furnivall Parade crossover and the Nairn Drive crossover.
- 5m tall signage pylon located next to the eastern Arpentuer Drive crossover.
- A 1.5m to 0.3m high retaining wall proposed along the eastern portion of the Furnivall Parade boundary running to the approximate midway mark of the Nairn Drive boundary.
- A 3.5m high Acoustic wall located along the south eastern portion of the boundary abutting the proposed loading dock area.
- Landscaping has been proposed to the external boundary areas and the adjoining verges. Internal landscaped areas are also included within the car parking areas and the Main Street.

The site plan identifies 'pad sites' for future Fast Food outlets and other commercial tenancies that are not part of this approval, however, they have been examined in relation to determining the robust nature of the car park and internal circulation areas. These include:

- 736m<sup>2</sup> of fast food tenancies located abutting Nairn Drive, 2 tenancies have been proposed with each tenancy is providing 4 drive thru bays, associated circulation zones, delivery points and parking.
- 300m<sup>2</sup> of speciality retail located to the north of the fast food tenancies. The site will incorporate the associated parking bays.
- 216m<sup>2</sup> of Service Station, associated fuel board/s, overhead roof cover area with associated fuel pumps and service points located in the north eastern corner of the site facing Nairn Drive.
- The future development sites are located to the northern portion of the site. The sites are 4,605m<sup>2</sup> and 1,777m<sup>2</sup>.

For the purposes of the City's assessment the 'pad sites' are recommended to be excluded from the Development Approval.

The City raised the following concerns with the applicant:

- Indication that the 'pad sites' are not seeking approval;
- Crossover locations did not meet the relevant Australian Standards (AS)
- The proposed building facades were not 5.5m in building height.
- The 'interim parking' bays were located inside future building areas.
- Excessive number of crossovers onto the Main Street.

The Applicant submitted amended plans which addressed the following concerns raised by the City:

- Indicative Hatching for the proposed Pad Sites not to be included as part of the proposal;
- Alteration of the car parking layout;
- Removal of two (2) crossovers from the western car park onto the Main Street; and
- Revised intersections onto Furnivall Parade and Arpentuer Drive (South) to accommodate delivery vehicles.

The submitted application is accompanied by the following technical reports and plans:

- Planning Report;
- Transport Impact Assessment;
- Environmental Noise Assessment;
- Waste Management Plans;
- Landscape Masterplan; and
- Site and Elevation Plans and Perspectives.



## **Background:**

In February 2013, the Western Australian Planning Commission (WAPC) approved the Parkland Heights Local Structure Plan (PHLSP), the purpose of which was to guide the development of over 120ha of land owned by Rockingham Park Pty Ltd. The PHLSP indicated a desire to include 700m<sup>2</sup> NLA of Commercial zoned land within a Village Centre precinct abutting Nairn Drive, however, this was excluded from the approved LSP as there was no commercial floor space allocated for it in the City's Planning Policy 3.1.2 - Local Commercial Strategy (LCS) at the time.

In July 2018, Council considered an amendment to the PHLSP and LCS to include the Neighbourhood Centre and resolved to:-

- Recommend that the WAPC approve the PHLSP amendment for a Neighbourhood Centre, subject to various matters being addressed.
- Amend the LCS to designate a Neighbourhood Centre within the 'Parkland Heights' Estate with up to 10,000m<sup>2</sup> of retail floor area.

On 14 February 2019, the WAPC approved the PHLSP amendment.

In September 2019, the City approved a Local Development Plan (LDP), which informed the development of the Neighbourhood Centre on the western side of Nairn Drive. The Local Development provided holistic guidance on the built form outcome, building location, access and movement.

## **Legislation and Policy:**

### Legislation

- Planning and Development Act 2005
- Metropolitan Region Scheme
- Planning and Development (Local Planning Schemes) Regulations 2015 (the Regulations)
- Town Planning Scheme No.2 (TPS2)
- Environmental Protection (Noise) Regulations 1997

### State Government Policies

- State Planning 4.1 - Industrial Interface (SPP4.1)
- State Planning Policy 4.2 - Activity Centres in Perth and Peel (SPP4.2)
- State Planning Policy 7.0 - Design of the built Environment (SPP7.0)

### Structure Plans/Activity Centre Plans

- Parkland Heights Local Structure Plan (PHLSP)

### Local Policies

- Planning Policy 3.1.2 - Local Commercial Strategy (LCS)
- Planning Policy 3.3.14 Bicycle Parking and End of Trip Facilities (PP3.3.14)
- Planning Policy 3.3.25 Percent for Public Art - Developer Contributions (PP3.3.25)

### Local Development Plans

- Parkland Heights Neighbourhood Centre Local Development Plan (LDP)

The application was advertised for public comment in the following manner:

- Four (4) submissions were received at the conclusion of the advertising period:

- Two (2) neutral comments were received by owners/occupiers living in proximity to the Site, however, the submissioners raised the matter of the continuation of a cul-de-sac.
- One (1) letter of support was received by a landowner living outside of the consultation area.
- One (1) neutral submission was received by an owner/occupier outside of the consultation area. The submissioner queried upgrading of the round-about at the in the intersection of Sixty Eight Road and Eighty Road.



### Figure 1 - Consultation Map

**Submission:**

**Intersection at Sixty Eight Road and Eighty Road should be upgraded.**

**Applicant's Response**

"The broader Parkland Heights Local Structure Plan and the accompanying Transport Impact Assessment (TIA) address this matter. The ultimate road network planning for Eighty Road shows that it will deviate at its southern end and terminate at a future intersection with Nairn Drive, controlled by a four-way roundabout. Nairn Drive, as an Integrator A road, will then provide the main connection onto Sixty Eight Road, also controlled by a four-way roundabout.

This matter will therefore be resolved as development of the broader Parkland Heights estate progresses and as part of the Nairn Drive extension.

The TIA that accompanies this development application demonstrates that trip generation to / from a westerly direction (and Eighty Road beyond) is minimal, with most trips to the Centre using Nairn Drive. The issue raised by the submitter is not directly linked to this proposal and appears to be a pre-existing concern arising from broader traffic movement on the external network."

**City Response**

The subject intersection is not located in proximity to the proposed application. The City recognises that the Traffic Impact Assessment (TIA) identifies that there is minimal trip generation from the south. The endorsed PHLSP documents have highlighted that the future intersection will be upgraded as part of the future subdivision of land within the 'Parklands Heights 'Estate. This application does not trigger that requirement and the matter will be addressed as part of future subdivision works in the locality.





**Submission:**

**McDougal Way to be kept as a Cul-De-Sac to limit traffic to the shopping centre in order to minimise the number of cars moving through the street.**

**Applicant's Response**

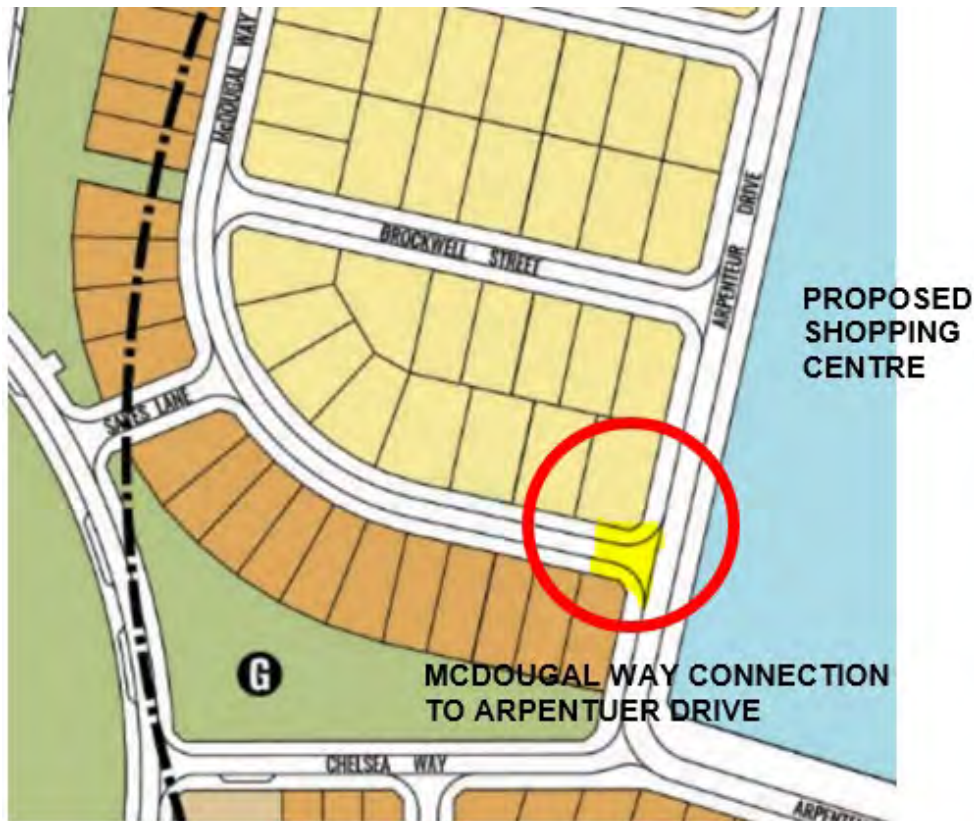
"The Parkland Heights Local Structure Plan and accompanying TIA show that at ultimate, McDougal Way is planned to connect with Arpenteur Drive as a priority-controlled T-intersection.

As demonstrated by the TIA that accompanies this development application, no changes to the external road network or intersections are required, as the road planning for the estate has considered, and is based upon, a Neighbourhood Centre of the size and scale proposed.

We understand that the existing cul de sac is an interim traffic management measure which is typical in large estates where subdivision and development are staged."

**City's Response**

The PHLSP identifies that McDougal Way is proposed to be connected (See figure below) to provide connectivity to Arpentuer Drive. It is not expected that extra traffic will utilise McDougal Way, as demonstrated through the TIA, as it is anticipated that majority of traffic will utilise Nairn Drive as the main access route.



A copy of the submissions and the applicant's responses have been attached. (Attachment 5)

**Referrals/consultation with Government/Service Agencies**

The application was referred to the following Government Agencies for comment:

- Department of Planning, Lands and Heritage (DPLH);
- Department of Education (DoE); and
- Water Corporation

The comments received include:

**Department of Planning, Lands and Heritage (DPLH) (Summarised)**

The DPLH provided the following comments:-

- The Nairn Drive intersection design is endorsed;
- No queuing assessment has been undertaken for the 'Click and Collect';
- SIDRA assessment has been undertaken for 2031 and it is unclear when the site will be fully developed. It is recommended to undertake SIDRA assessment for the 10 years to the anticipated full-development of the site (possibly for 2041)
- Swept Path analysis to be provided to demonstrate access capabilities from the crossovers

Applicant's Comment:

"Click and collect does not attract vehicles in the same manner as other parking areas. The supermarket operator manages the allotted times where customers can pick up groceries based on operational constraints. For example, only a limited number of pickups can be facilitated at any one time. Customers do not have the option of arriving and queuing on a whim, as their pickup time must be confirmed in advance. The 6 designated click and collect bays are proposed to accommodate typical supermarket operations and are informed by the requirements of Coles. Management of the click and collect service by the supermarket will avoid queuing on main street making the matter redundant. Notwithstanding the above, there is approximately 30m separation between the main street and the edge of the nearest click and collect bay, providing adequate contingency for up to 5 vehicles to queue should the need ever arise.

This is a Stage 1 development application and the supporting TIA reflects the anticipated development timeframe. The typical condition on a development approval issued by the JDAP requires development to commence within 4 years of the approval date, providing certainty regarding the timeframe to develop.

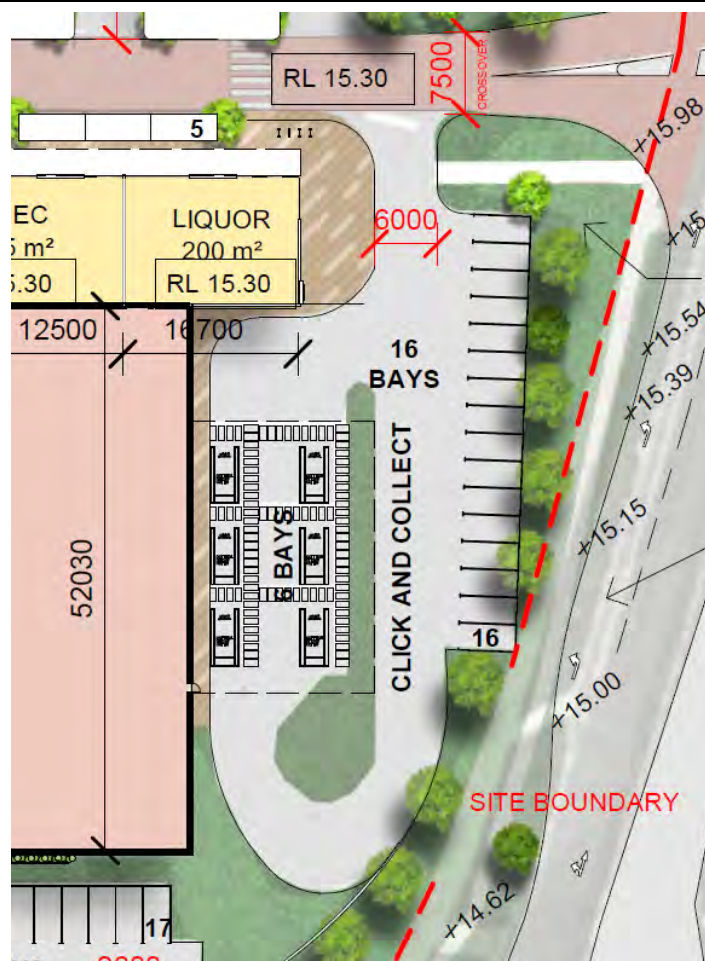
Subsequent stages of development not included in the traffic modelling for the current application will require their own TIA. The future TIA's will need to reflect any changes to traffic conditions and volumes. It should be noted that the DPLH provided comments on the Local Development Plan and did not raise the SIDRA as an issue. Preparation of the DA was subsequently guided by the LDP. In their submission on the LDP, the DPLH confirmed that Nairn Drive traffic volumes in 2041 are not modelled to increase beyond the volumes forecast for 2031. SIDRA modelling to 2041 is therefore unnecessary as traffic volumes on the external road network are not modelled to increase beyond 2031 levels in any case.

A swept path diagram has been submitted to the City."

City's Comment:

Click and Collect

The City considers that the 'Click and Collect' does not attract queuing in the same manner as a Fast Food drive-thru, especially during peak times. The proposed 'Click and Collect' arrangement is considered to have sufficient stacking area and adjoins a parking area which can assist with any potential for queuing as shown in the figure below.



### Traffic Modelling

The TIA models traffic generated by stage 1 of the Neighbourhood Centre up to 2031 as per the requirements of the Western Australian Planning Commission Transport Assessment Guidelines for Developments. For 2041 values, it cannot be considered given the development timeframe for the balance of the site is unknown. Further traffic modelling will occur as part of future Development Applications and would be based on more accurate information and data at that time.

### Swept Paths

Traffic Swept Path Analysis for service vehicles from the northern, southern and internal areas has been provided and reviewed by the City. The Furnivall Parade and Arpentuer Drive South crossovers have been amended to show compliance with relevant Australian Standards.

### **Department of Education (DoE) (summarised)**

The DoE provided the following comment:

- Amended plans should be provided that clearly show aspects that are not proposed as part of the development application.
- The liquor shop should be relocated so that it is not directly visible from the school.
- The service station should be a minimum distance from the primary school site.
- The Department does not support fast food outlets near public school sites.



### Department of Education (DoE) (summarised)

#### Applicant's Comment:

"Amended plans have been submitted with the City, clearly showing that the application does not seek approval of the Service Station and Fast Food Pad Sites. They are shown for information purposes only to enable a holistic assessment of the Stage 1 proposal.

The tenancy in question is north facing, with its primary orientation and signage to the main street. The subject primary school is located to the east. The side elevation that may be temporarily visible from the school will comprise a solid wall with a small corner element of glazing and will not obviously present as a liquor store from that perspective. Notwithstanding, development of the commercial site on the opposite side of Nairn Drive in the future will screen views of the shopping Centre from the school and resolve this issue. The suitability of the small liquor store within its locational context will be considered as part of the liquor license application in accordance with the *Liquor Control Act 1988*.

The service station does not form part of this development application and is shown for information purposes to enable the holistic consideration of the Stage 1 development application.

The service station will be subject to a future development application based on the specifics of the proposal, which can only be confirmed by the future proponent. Compliance with the relevant planning framework will need to be demonstrated as part of the future development application.

The fast food sites do not form part of this development application and are shown for information purposes only."

#### City's Comment:

The Applicant has clarified that the two (2) Fast Food Outlets, Specialty Retail and Service Station are excluded from the application.

The 'Liquor Store – Small' use is a discretionary use ('D') in the 'Commercial' zone in TPS2. Clause 67 of the Deemed Provisions of the *Planning and Development (Local Planning Scheme) Regulations 2015* (the Regulations) sets out the matters that can be taken into consideration when determining an application. The Regulations do not include requirements which restrict these types of uses in proximity to schools.

In relation to the future Service Station site, it will be required to comply with the requirements of the Environmental Protection Agency 'Guidance Statement for Separation Distances between Industrial and Sensitive Land Uses' and/or studies upon lodgement of a Development Application. City Officers have already advised the Applicant of the potential land-use conflicts.

### Water Corporation (Summarised)

The Water Corporation advised that reticulated water and sewerage services are available to the area, and that a sewer pressure main that traverses the site is in the process of being relocated into road reserve (i.e. the future alignment of Nairn Drive).

The Water Corporation does not object to the application.

#### Applicant Comment:

Noted.

#### City's Comment:

The Water Corporation's submission is noted and an advice note has been recommended.

A copy of the agency responses have been attached (Attachment 6)

### **Planning Assessment:**

The proposal has been assessed against all the relevant legislative requirements of the Scheme, State and Local Planning Policies, as outlined in the Legislation and Policy section of this report. The following matters have been identified as key considerations for the determination of this application:

#### State Planning Policy 4.2 - Activity Centres in Perth and Peel (SPP4.2)

SPP4.2 specifies broad planning requirements for the planning and development of new activity centres and the redevelopment of existing centres. SPP4.2 is primarily concerned with the distribution, function, broad land use and urban design criteria of activity centres, together with coordinating their land use and infrastructure planning.

##### *Clause 5.1 - Activity Centre Hierarchy*

'Parklands Heights' is an identified Neighbourhood Centre within the hierarchy of activity centres outlined in the City's LCS.

As discussed further below, the proposal is consistent with the planned hierarchy, given the function of a Neighbourhood Centre is to provide for the daily and weekly household shopping and community needs, while providing a focus for medium density housing.

##### *Clause 5.2 - Activity*

A range of land uses are proposed that cater for household shopping needs, convenience services and community health needs, as well as land uses that generate activity outside of normal business hours.

##### *Clause 5.3 - Movement*

Activity centres should be designed to be accessible by a variety of transport modes. The proposed development is designed to be accessed by car, freight vehicles, bus, bicycle and pedestrians.

SPP4.2 suggests that decision makers set upper limits to car parking, in view of opportunities for reciprocal and shared parking; the availability of on-street parking and the need for land efficiency. As a guide, SPP4.2 recommends that two bays per 100m<sup>2</sup> are provided for Offices and four to five bays per 100m<sup>2</sup> for Shops in order to optimise the efficient provision of car parking.

SPP4.2 also requires that parking facilities are to be located, scaled, designed and landscaped to avoid visual domination of street and public space frontages, and to avoid discontinuity of the urban form and pedestrian amenity. The proposed car parking area is not designed in accordance with the Model Centre Framework (MCF), due to the lack of sleeving and separation of car parking bays and the street. The car parking is currently proposed adjacent to the Main Street where otherwise it should be setback and separated by a commercial building.

##### *Clause 5.4 - Urban Form*

The buildings are designed with active frontages to address the proposed Main Street in accordance with the approved LDP, which is currently planned as a one-sided street. It should be noted that this one-sided arrangement is intended to be interim until the development of the second portion of the Main Street buildings. The Applicant has explained that the location of car parking bays as close to the entrance as possible is essential for the commercial viability of the shopping centre. This is because it will provide the required convenience and accessibility to attract and retain customers, particularly for the major supermarket tenant.

A Main Street and Town Square provides a public space which promotes vitality and natural surveillance, in a location that will connect the proposed shopping centre. It is noted that various design elements of the approved LDP have been derived from SPP4.2, which are discussed further in the Report.

The application is considered to be generally consistent with provisions SPP4.2 with the exception of Clauses 5.3 and 5.4.

#### Draft State Planning Policy 4.2 – Activity Centres in Perth and Peel (Draft SPP4.2)

The WAPC is currently reviewing SPP4.2, and released a draft revised Policy in 2020 for public comment. Draft SPP4.2 is therefore considered to be a 'seriously entertained' planning instrument. The major changes in the Draft SPP4.2 relate to guidance on the definition, form and function of Activity Centres. The Draft SPP4.2 primary defaults on design to be addressed as part of State Planning Policy 7.2 – Precinct Design (SPP7.2) which provides guidance to the built form outcomes. Considering that both the PHLSP and LDP, which offer development guidance, have been provided and endorsed, it is deemed that the application is in line with the draft SPP4.2.

It is noted an Impact Test (previously known as a Retail Sustainability Assessment) is required for the development sites pursuant to Table 2: Major activity centre use floor space threshold, as the development exceeds the specified 5,000m<sup>2</sup> NLA thresholds for a proposed Neighbourhood Centre.

A Retail Sustainability Assessment (RSA) which was endorsed as part of the approved PHLSP. The RSA provides provision for retail land uses to be approved up to 10,000m<sup>2</sup>. As this proposal does not exceed the 10,000m<sup>2</sup> retail floor space it can be considered to be compliant with the intent and objectives of the Draft SPP4.2.

#### State Planning Policy 7.0 – Design of the Built Environment (SPP7.0)

SPP7.0 provides the extensive framework for the design of the built environment and applies to including the assessment of Development Applications which includes evaluating that have a public impact. The application has been assessed against and is considered to be compliant with the 10 design principles of SPP7.0 with the exception of façade heights in one location. An assessment against the objectives of SPP7.0 have been provided as an attachment to the RAR (Attachment 13)

#### PP3.1.2 – Local Commercial Strategy (LCS)

The LCS was recently adopted by Council in February 2023, at the time of lodgement of the Development Application the LCS was in draft status. The LCS provides holistic guidance regarding Local Commercial and Activity Centres within the City of Rockingham and its relationship with relevant State Planning Policies.

The LCS foreshadows that the classification of 'Parkland Heights Neighbourhood Centre' will be reviewed in the medium term as a potential District Centre. Any change to its hierarchical classification will be dependent on the outcomes of a future 'Impact Test' resulting from the 'Needs Assessment' for the future Karnup District Structure Plan. The City will assess the 'Impact Test' once it has been submitted in accordance with SPP4.2 and will amend the LCS to accommodate any future retail expansion, if warranted at that time.

The 'Parklands Heights' hierarchical classification is currently a Neighbourhood Centre (maximum 10,000 m<sup>2</sup> Retail NLA). The proposed development is 'consistent with the role and function of a Neighbourhood Centre in that:

- The extent of retail floor space proposed (9,397m<sup>2</sup>) is within the range of 4,500m<sup>2</sup> -10,000m<sup>2</sup>;



- The range of proposed land uses for this type of centre is expected to the service the needs of the local community under SPP4.2; and
- The proposal will provide a focal point of the 'community' for residents living in proximity to the centre.
- The proposal is considered to meet the requirements of the LCS.

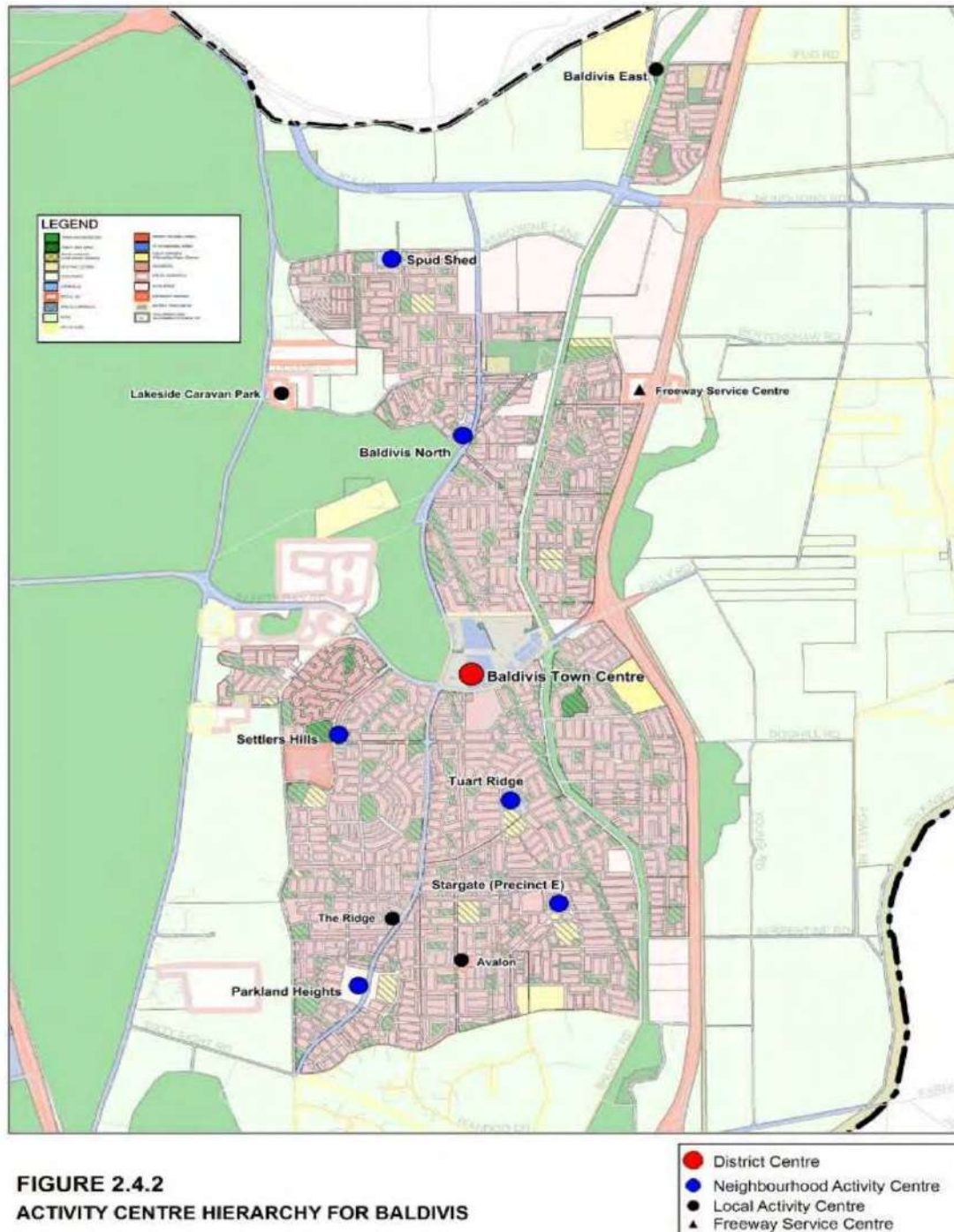


Figure 2 - Hierarchy Map for Baldvis

### Planning Policy 3.3.14 Bicycle Parking and End-of-Trip Facilities (PP3.3.14)

The aim of the Policy is to appropriately provide for secure, well defined and effective on site bicycle parking and end-of-trip (EOT) facilities, to encourage the use of bicycles as a means of transport and access within the City.

#### *Bicycle Parking Requirement*

Land Use	Required				Provided
	Minimum Short		Minimum Long		
	Term	Number	Term	Number	
Shop – Neighbourhood Centre 9397 <sup>2</sup> )	0.30 spaces per 100m <sup>2</sup> NLA	28.19	0.12 spaces per 100m <sup>2</sup> NLA	11.27	86
Total Required	29		13		42 spaces

The application provides a storage area for 19 private bikes and various public bike racks located in pedestrian circulation areas. A condition is recommended for the bike areas to be provided in accordance with the policy and Australian Standard (AS).

#### *End of Trip Facilities (EoT)*

The requirements of the Policy stipulate the proposal to include EoT facilities when long term bicycle parking is required:

Requirement	No of Long Term Bike Parking	No of Showers	Change Rooms
<i>One shower following the first five (5) long-term parking spaces, plus an additional shower for each four (4) bicycle parking spaces thereafter</i>	13	4 (2 Male) (2 Female)	(2) Male and Female

A condition is recommended requiring the provision of EOT facilities in the event Development Approval is granted. The proposal otherwise satisfies the requirements of PP3.3.14.

### Planning Policy 3.3.25 Percent for Public Art – Developer Contributions (PP3.3.25)

In accordance with PP3.3.25, when a proposed development has an estimated construction costs exceeding \$5 million, there is a requirement to provide public art to a value of not less than 1% of the building works. Given the proposed \$14 million in building works, the developer is required to provide a public art contribution to the value of \$140,000.

PP3.3.25 provides for the developer to nominate the method of providing public art, to either:

- Provide public artwork in a publicly visible location within the boundaries of an approved development site; or*
- Provide a cash-in-lieu payment to enable the City to procure artwork for installation on public land within the vicinity of the approved development site.*

As part of the broader development and subdivision of 'Parkland Heights', the developer proposes the following:

- Value of works to equate to \$140,000 (1%)
- Two (2) horse sculpture displays and arenas located in the adjoining north-eastern and south-eastern roundabouts of Nairn Drive.
- The remainder of the public art in the form of horse sculptures and associated works is proposed to be provided within the pedestrian circulation areas directly on site.

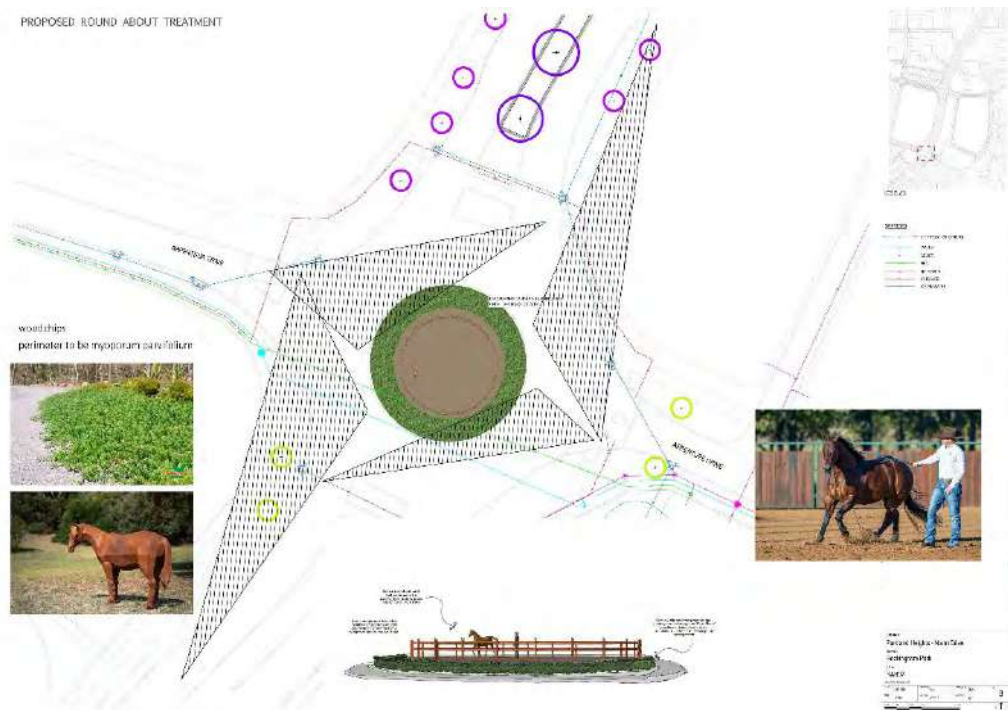


Figure 3 - Indicative Public Art Proposal within ORR



Figure 4 - Indicative onsite Public Art



The City supports the public art proposal. As full details of the works have not been provided, it is recommended that a condition be imposed for public art to be provided to the value of \$140,000.

#### Parkland Heights Local Structure Plan (PHLSP)

Clause 27 of Schedule 2 of the Deemed Provisions states that a decision-maker for an application for Development Approval in an area that is covered by a Structure Plan is to have “due regard” to, but is not constrained by a Structure Plan when deciding an application.

Clause 67 of the Deemed Provisions outlines the matters to which the Local Government is to give due regard when considered relevant to an application. Where relevant, these are discussed throughout the Report.

#### Parkland Heights Local Development Plan (LDP)

The LDP over the subject land includes development control provisions intended to achieve a Main Street based Neighbourhood Centre, which is of a scale appropriate to its role as a focal point for the local community.

#### *Building Heights*

The LDP requires the development to have a continuous building frontage height of 5.5m. The speciality Retail Store and Liquor Store abutting the supermarket currently presents at 5.3m and 4.5m in lieu of 5.5m respectively.



Figure 5 - Elevation Liquor Store and Speciality Retail

The proposed food and beverage areas located along the eastern side of the Main Street currently proposes a height of 5.1m in lieu of the 5.5m requirement.



Figure 6 - Elevation Food and Beverage

The façade height of the food and beverage building is 5.1m in lieu of 5.5m for majority of its length. The variation in height does not present appropriately within the context of a Main Street. Given its scale and limited architectural relief, the variation of height is not supported in this instance.

Conversely, the liquor store building abutting, which has the supermarket in the background, creates a varied streetscape which is considered acceptable. As the majority of the development demonstrates compliance, the lack of other elements to support the variation such as larger adjoining development diminishes the Food and Beverage tenancies ability to provide 2 storey equivalent development.

It is recommended that a condition be imposed requiring that the façade height for the food and beverage elevation be modified to meet a minimum height of 5.5m in accordance with the approved LDP.

#### *Interim Parking Bays*

The development proposes parking in the location of future Main Street buildings as shown on the LDP (i.e. 'pad sites'). The City, during its assessment, requested the Applicant delete the interim bays as part of the proposal and for the sites to be marked as 'future development'. The proposed interim bays contravene the LDP and may not be removed once installed. If installed, it may ultimately undermine the delivery of commercial buildings on both sides of the Main Street. In previous development approaches, such as Baldivis and Secret Harbour Town Centres (see historic aerial photos below), Main Street development sites have not been appropriated with car parking, as an interim measure prior to development, and have remained vacant until developed.

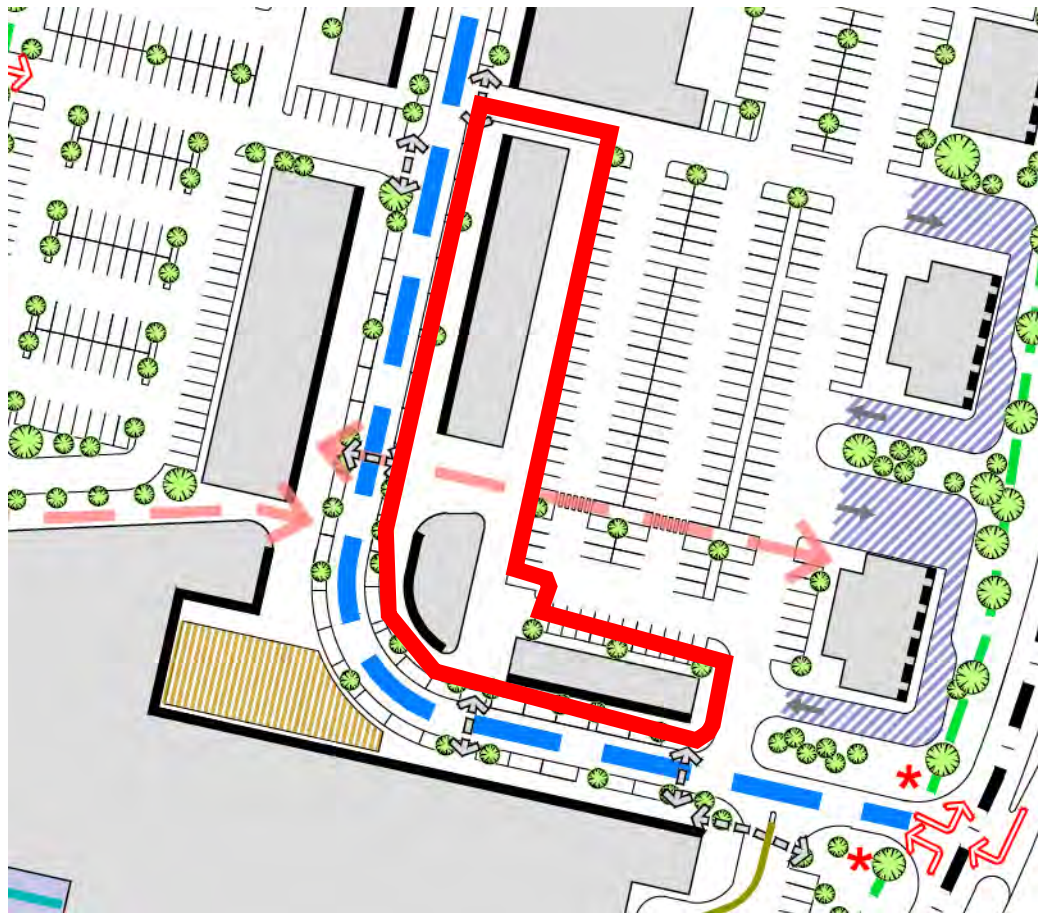


Figure 7 - Excerpt from LDP (Eastern Pad Site Location)



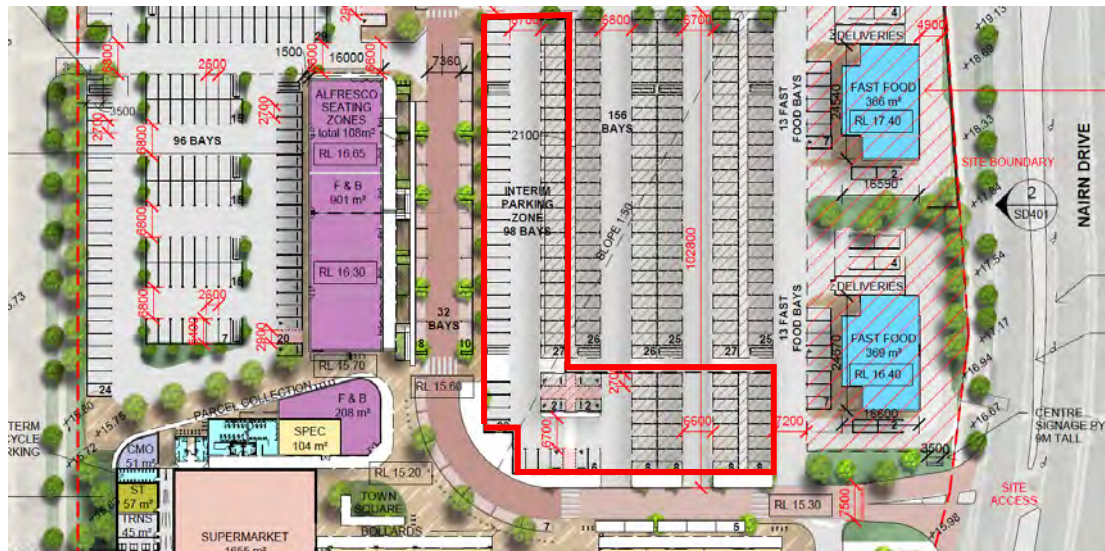


Figure 8 - Excerpt from Development Plans (Interim Parking Bays)

It is noted, that through Draft SPP4.2 that the MCF is replaced with the requirements of SPP7.2. The application provides this requirement through the establishment of the PHLSP and the LDP. The application is not compliant with the LDP.

In accordance with SPP4.2 (*Clause 5.4 - Urban Form*) new Activity Centre development should include 'sleeving' of large-scale retail buildings and car parks, with more externally-oriented or active building frontage and fewer blank walls as discussed within the Model Centre Framework (MCF of SPP4.2) The MCF includes principles of design and key considerations related to planning for activity centres. In this case, as there is no endorsed activity centre structure plan, any major development should still satisfy the relevant requirements of the MCF Clause - 3.6- Parking:

*"Car parking also takes up large amounts of space, and potentially causes visual blight...." Planning Considerations: Design: Parking should be well-integrated with the urban form, and not detract from pedestrian amenity in the walkable catchment.*

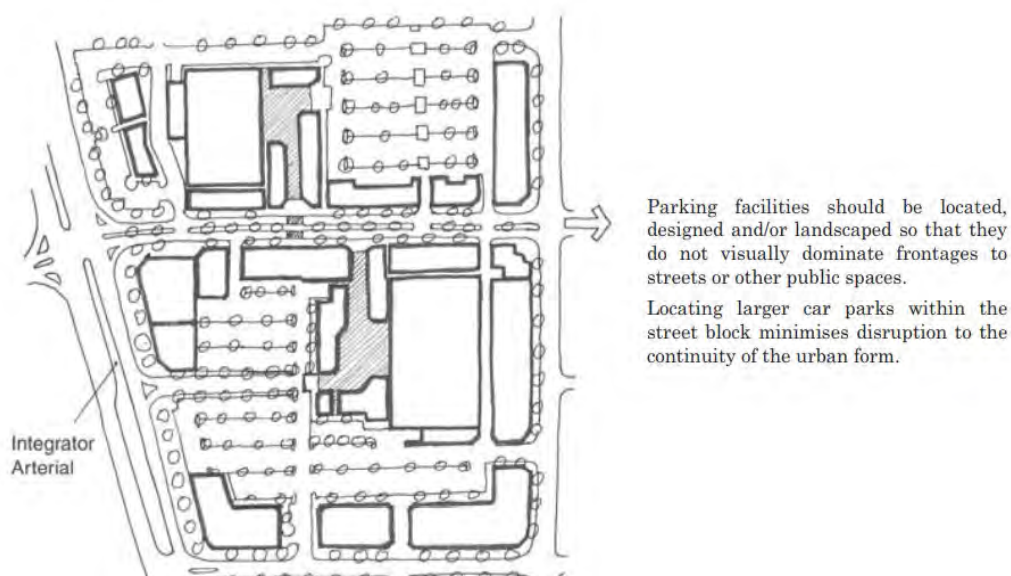


Figure 9- Excerpt from SPP4.2 - Appendix 2 - MCF regards to guidance on development and parking



Examples of this Main Street approach throughout the City of Rockingham are provided below.



Figure 10 - Rockingham Strategic Centre



Figure 11 - Baldvis District Centre (~2010)





Figure 12 - Baldvis District Centre (Current)

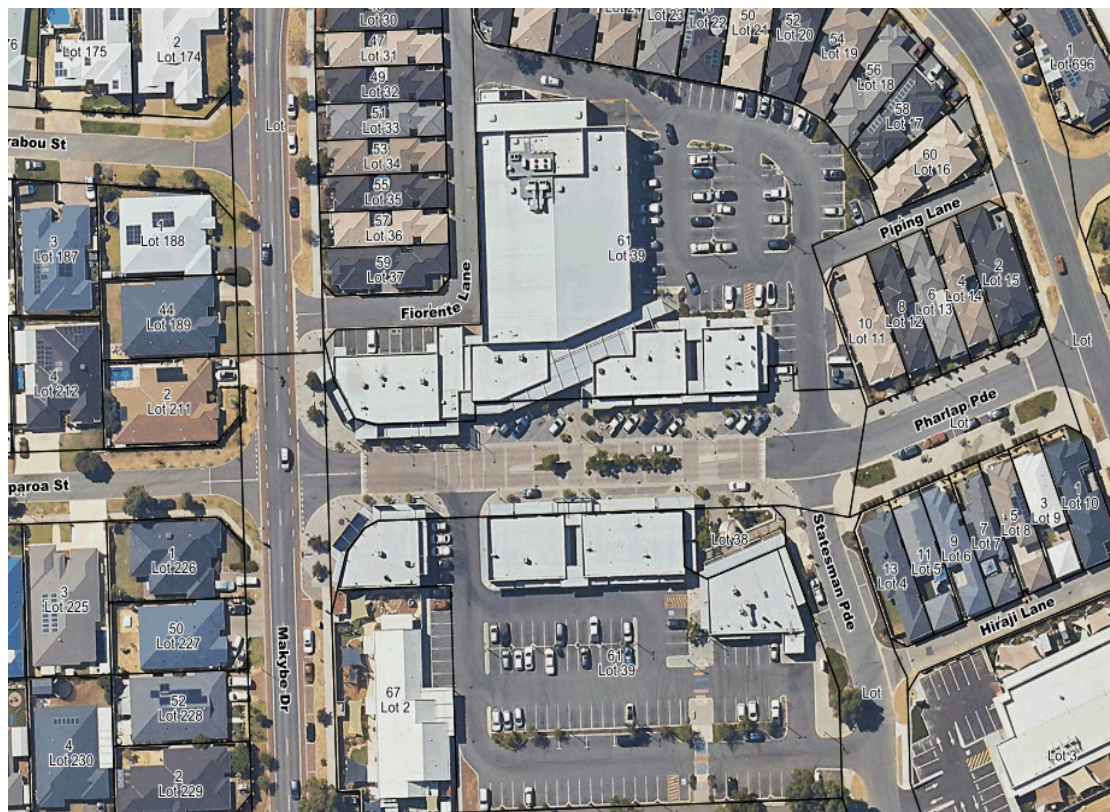


Figure 13 - Makybe Drive Neighbourhood Centre





Figure 14 - Secret Harbour District Centre

Within the figures above, there is a clear approach to development to align with the objectives and clauses outlined in SPP4.2. There are also examples of where the 'pad sites' have remained undeveloped (and not used as parking) until built form has been delivered.

The Applicant is proposing interim car parking bays close to the supermarket entrance based on the needs of the major tenant. Temporary parking is unjustified, as there is no suitable timeframe or any guarantee of future development. It is also the case that customers will become accustomed to parking in this location and potentially object to its removal when the 'pad sites' are ready for development.

If the interim bays are removed, there will be other bays located between 45 meters and 65 meters from the entrance to the supermarket (excluding the Main Street car parking bays).

Supporting the interim bays over the future Main Street 'pad sites' may ultimately compromise the intended development outcomes outlined in the LDP and SPP4.2. It is recommended that a condition be imposed deleting the interim bays on the future Main Street 'pad sites' to comply with the requirements of the approved LDP.

#### City of Rockingham Town Planning Scheme No.2 (TPS2)

The subject lot is currently zoned 'Development' under 'TPS2. Within Schedule No. 8 of the TPS2, establishes that a LSP is to be approved together with an LDP which shall guide subdivision and development of the site.

The PHLSP sets the zoning to the site as 'Commercial' '.



## Land Uses

The application proposes the following land uses:

Land Use	'Commercial' Zone Permissibility
Shop	Permitted ('P')
Restaurant/Café	Discretionary ('D')
Liquor Store - Small	Discretionary ('D')

### Clause 4.6.1 - Commercial Zone Objective

The development complies with the objective of the Commercial zone, being:

*"to provide for the development of District, Neighbourhood and Local shopping facilities to cater for the present and future residents of the Local Government consistent with the Local Government's Local Commercial Strategy and supported by any other Plan or Policy that the Local Government from time to time may adopt as a guide for the future development within the zone."*

The locality is a developing residential area and as such, the proposed Neighbourhood Centre will provide an amenity and service to the existing and future residents of the locality.

### Clause 4.6.2 - Form of Development

TPS2 requires that when considering applications for Development Approval in the 'Commercial' zone, the site planning, scale, built form, elevations and landscaping of the development and that it shall positively contribute to the streetscape, appearance and amenity of the locality.

The proposed Neighbourhood Centre has been assessed against SPP 7.0 in regards to built form, appearance, context and character and landscaping. It is considered that the proposal generally demonstrates a sympathetic design outcome which will be compatible with the surrounding neighbourhood.

### Clause 4.6.3 - Parking

On-site car parking is required to be provided in accordance with Table No.4 of TPS2. As noted previously, 'Liquor Store – Small' is currently not listed within Table 4 and has been assessed as a 'Shop' in accordance with Clause 4.15.5.

The provision of car parking is summarised as follows:

Car Parking Required – TPS2			
Shopping Centre Site			
Use	Rate	Area:	Number
Shop	6 bays per 100m <sup>2</sup> NLA	(7,336m <sup>2</sup> NLA)	440
Restaurant/Café (1109m <sup>2</sup> )	1 per 4 persons the building is designed to accommodate	Indoor Seating – 560m <sup>2</sup>	140
Total bays required			580
Total Interim Bays			98
Total Provided – Including Interim			575
Total Provided – Not including Interim			477
Total Shortfall			103

Pursuant to Clause 4.15.3 of TPS2, the number of car parking bays required by reference to Table No.2 of TPS2 must be provided on site.

The Application proposes 477 long term on-site car parking bays, whereas 580 bays are required. Under Clause 4.20.3 of TPS2, the decision maker is given discretion to vary the requirements of the TPS2.

Clause 4.20.3 states:

*“The power conferred by this clause may only be exercised if Local Government is satisfied that:-*

- (a) *Approval of the proposed development would be appropriate having regard to the criteria set out in Clause 67 of the deemed provisions;*
- (b) *Approval of the proposed development would be consistent with the orderly and proper planning of the locality and the preservation of the amenity of the locality;*
- (c) *The non-compliance will not have any adverse effect upon the occupiers or users of the development, the inhabitants of the locality or the likely future development of the locality; and*
- (d) *The spirit and purpose of the requirements or standards will not be unreasonably departed from.”*

The City can consider the variation in regards to the criteria set out in Clause 67 of the deemed provisions, clause 67(2f) enables the local government to have “due regard” to any policy of the State;

Under the existing SPP4.2, parking may be provided at a rate of 4-5 bays per 100m<sup>2</sup> for shops. Draft SPP4.2 currently does not provide any requirements for parking rates. The State Government previously considered a modification to the established parking rates for large scale Activity Centres. The aim was to provide Precinct Structure Plans in accordance with SPP7.2 to establish parking rates in lieu of the Local Planning Scheme rates. This has not yet been finalised and thus falls under the scope of the existing SPP4.2 rate.

<b>Car Parking Required – SPP 4.2</b>			
<b>Shopping Centre Site</b>			
<b>Use</b>	<b>Rate</b>	<b>Area:</b>	<b>Number</b>
Shop	4-5 bays per 100m <sup>2</sup> NLA	(7,896 m <sup>2</sup> NLA)	376/395*
<b>Total bays required</b>			<b>395</b>
<b>Total Interim Bays</b>			<b>98</b>
<b>Total Provided – Not including Interim bays</b>			<b>477</b>
<b>Total Provided – Including Interim bays</b>			<b>575</b>
<b>Total Surplus – Excluding Interim bays</b>			<b>82</b>

\* - Min/Max total

As noted above, the application proposes 98 interim bays. As part of this assessment, it is demonstrated that the proposal complies with the parking standard set out within SPP 4.2 in consideration.

The use of SPP 4.2 calculation is suitable in this instance given the consistent consideration for other shopping centres within the City. Secret Harbour Shopping Centre was calculated to require a total of 854 parking bays under TPS2 in lieu of 758 bays under SPP4.2. A variation was granted by the Joint Development Assessment Panel (JDAP) in consideration of the reciprocal uses.

The Baldivis Town Centre was previously considered by the JDAP in 2014, whilst the SPP4.2 rates were not applied, the JDAP considered a 20% variation to the car parking requirements of 1,771 bays to an approved rate of 1,381 bays. The variation was considered on the same principles of SPP4.2 in relation that reciprocity of uses were considered.

The SPP4.2 rates were used in the assessment of the application and are considered to be reasonable given that they allow for reciprocity of uses for large scale Activity Centres.

#### *Clause 4.6.5 - Landscaping*

Within any development in the 'Commercial' zone, a minimum of ten percent (10%) of the total site area shall be provided as landscaping. The Applicant has provided a landscape Intent that demonstrates that this can be achieved.

#### Traffic Impact Assessment

The Applicant has provided a TIA accompanying the application which provides a comprehensive Signalised & un-signalised Intersection Design and Research Aid (SIDRA). The TIA provides analysis of the traffic performance of the proposal, impacts on intersections, crossovers assessment and the traffic of the locality, which assesses the overall performance and impact on the surrounding network.

Vehicular Access is proposed to be provided from four (4) entry points to the site at each road frontage, with the primary access to the taken from Nairn Drive via a Left In, Right In, Left Out configuration. The proposed northern Furnivall Parade and western Arpentuer Drive crossover are standard all ways intersections. The southern Arpentuer Drive crossover has been intended for service vehicle movements.

A revised TIA and swept path diagrams were requested as part of a request for further information that demonstrated that the analysis meets the requirements requested by DPLH and the City. The main changes included providing revised crossovers to Furnivall Parade and Arpentuer Drive south to accommodate for turning movements of service vehicles.

A condition has been recommended for civil engineering drawings and car parking design plans to be provided.

#### Landscaping

The LDP provides:

- Two (2) landscaping strips along property boundaries;
- Landscaping strips to screen parking, loading and building facades;
- A minimum of 10% landscaping across the site; and
- Car parking areas to include shade trees at a minimum rate of 1 tree per six (6) bays.

The Applicant provided a 'landscaping intent' as part of the application. The overall development provides adequate landscaping as assessed against the LDP and it is expected that any future landscaping is addressed by the remaining development sites.

A standard condition is recommended to provide a detailed Landscaping Plan to be submitted.

#### Waste Management:

The City must have due regard to the availability and adequacy for the development to accommodate waste for the proposed development. A Waste Management Plan (WMP) outlined waste measures for the proposal.



The proposed waste storage area for the main shopping area is located to the rear of the development as part of the utility areas (loading dock, maintenance rooms). Details of the WMP include:

- A private waste collection company will collect refuse and recyclable waste once a week from the 2 allocated Bin Storage areas.
- Waste vehicles (rear loaded) to obtain access from the loading dock area and circulate to the southern exit on Arpentuer Drive.
- Waste collection to occur within acceptable Noise Regulation parameters (detailed within the ENR)

The City is satisfied the provided WMP met relevant requirements for waste collection. A condition has been recommended for the development to comply with the requirements and recommendations of the WMP.

#### Environmental Protection (Noise) Regulations 1997

The Applicant had provided an Environmental Noise Report (ENR) to demonstrate compliance with the relevant *Environmental Protection (Noise) Regulations 1997* (Noise Regulations). In this instance, the rear loading dock is the main noise emitter to the adjacent residents. The submitted ENR provides an assessment for the noise emissions from delivery vehicles, loading dock and the mechanical plant. The following considerations have been taken into account:

- The initial assessment of the delivery vehicles have demonstrated that there is an expected compliance requirement for deliveries to only occur after 7am week days and 9am on Sundays & Public Holidays with the provision of the associated noise wall constructed.
- Trucks are not allowed to idle within the loading bay and as part of best practise are required to switch all vehicles off during loading and unloading periods.
- The mechanical plant whilst operating on a 'worst case' scenario meets the required limits.

A 3.5m noise wall is proposed from the finished level of the dock (3m as viewed from the street) in order to meet required noise level compliance.

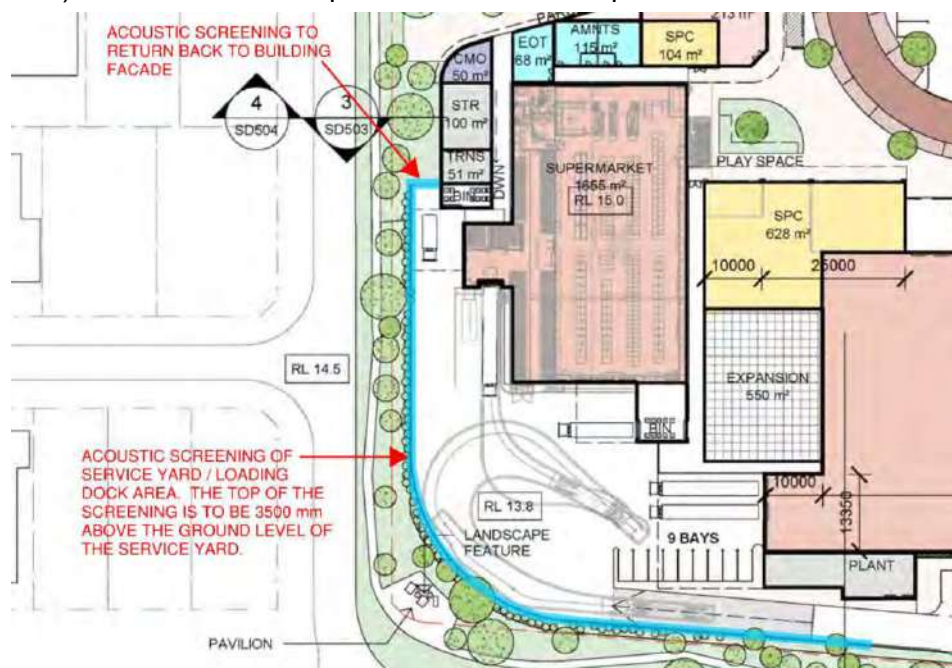


Figure 15 - Proposed Noise Wall

The noise wall is:

- 3.5m or taller than the ground level of the service area; and,
- Constructed of materials without gaps or slots, with a minimum surface density of 10 kg/m<sup>2</sup> (e.g. 6 mm glass, 12 mm Perspex, 6 mm fibre-cement, single leaf of masonry, etc.)

The initial ENR lacked significant detail in regards to the operation of the loading bays, machinery and other management items. As part of the request for further information the ENR was amended to include operational measures, details of machinery operation and best practise methods. The amended ENR demonstrates compliance with the Noise Regulations.

A condition has been recommended for the development to implement the noise wall requirements listed within the ENR.

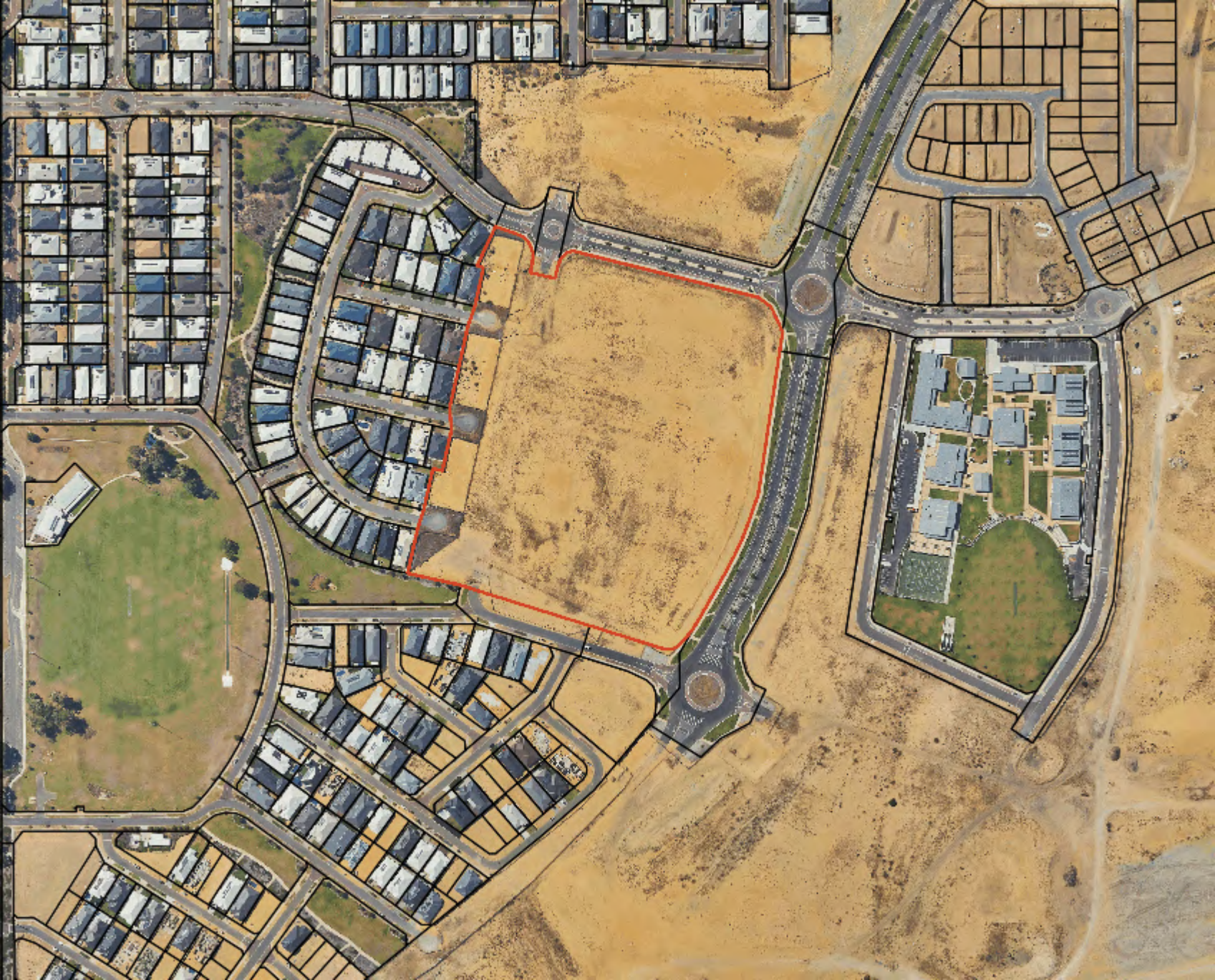
**Conclusion:**

The proposed 'Parkland Heights' Neighbourhood Centre has undergone a thorough assessment in line with the relevant TPS2, LDP and Policy framework. While the development generally complies with the planning requirements for matters such as land use, landscaping and design, there are some areas of non-compliance that require consideration. Specifically, the façade heights of some the Main Street buildings, the proposed interim parking bays and a parking ratio below the TPS2 requirements (but consistent with SPP4.2).

The application's parking provision has been assessed against the requirements of SPP4.2, and although there is a significant shortfall of 103 bays under TPS2 calculations, it is considered acceptable given compliance with SPP4.2 requirements. The City is satisfied that the provided car parking will be adequate for normal retail operating condition for the Neighbourhood Centre. Façade heights of the proposed Food and Beverage building do not meet the minimum required by the LDP, and departure from the LDP is not considered suitable. Proposed interim parking bays on future building 'pad sites' of the Main Street provide no certainty that the future sites will be developed.

It is recommended that the application is approved, subject to conditions which address the façade height and interim parking matter amongst other standard requirements.









DEVELOPMENT SUMMARY

RETAIL AREA	9397m <sup>2</sup>
SUPERMARKET	5255m <sup>2</sup>
LIQUOR	200m <sup>2</sup>
SPECIALTY	1306m <sup>2</sup>
FOOD & BEVERAGE	1109m <sup>2</sup>
FAST FOOD	736m <sup>2</sup>
CONVENIENCE	216m <sup>2</sup>
KIOSK	25m <sup>2</sup>
FUTURE EXPANSION	550m <sup>2</sup>
ALFRESCO (NOT INCLUDED)	108m <sup>2</sup>

CAR PARKING

PROVIDED	575 BAYS
MAIN CARPARK	549 BAYS
ONLINE PICKUP	6 BAYS
STAFF BAYS	26 BAYS
DISABLED BAYS	14 BAYS
INTERIM PARKING	98 BAYS
TOTAL EXCL INTERIM	477 BAYS

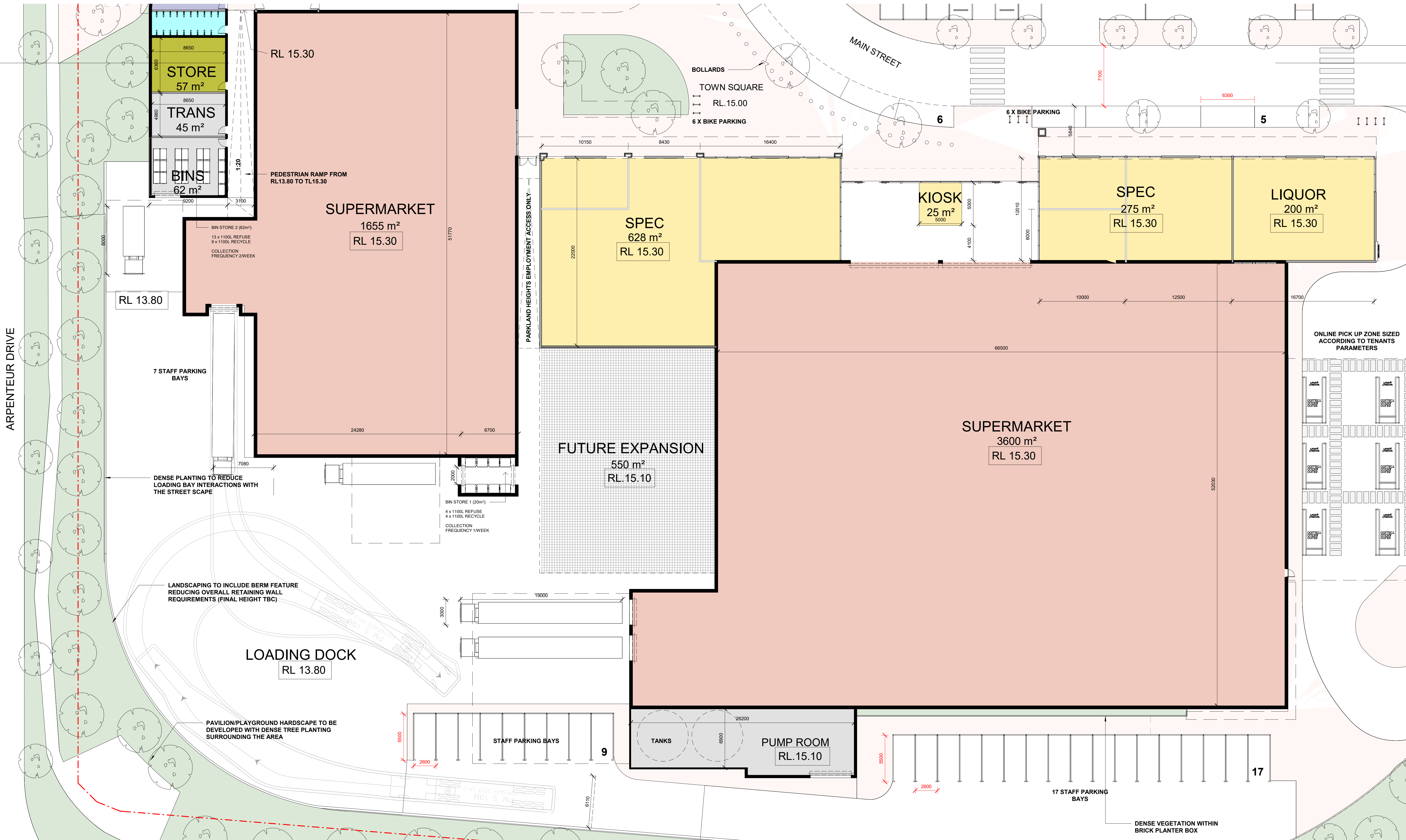
BIKE PARKING

PROVIDED	86 BAYS
PUBLIC / SHORT TERM	67 BAYS
PRIVATE / LONG TERM	19 BAYS





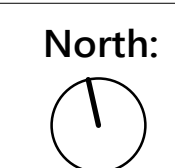




GROUND FLOOR PLAN - PART 2  
BALDIVIS NEIGHBOURHOOD SHOPPING CENTRE

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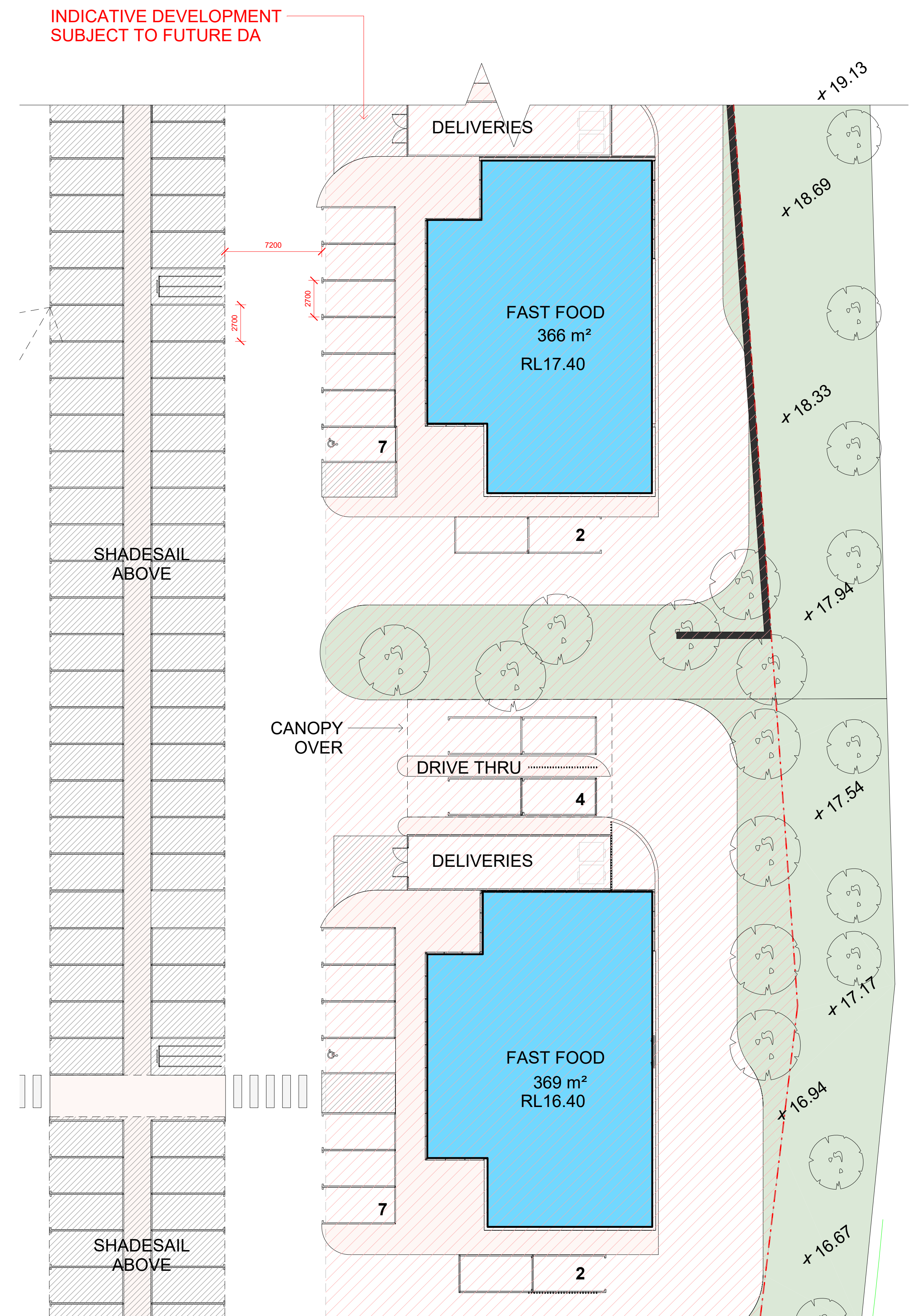
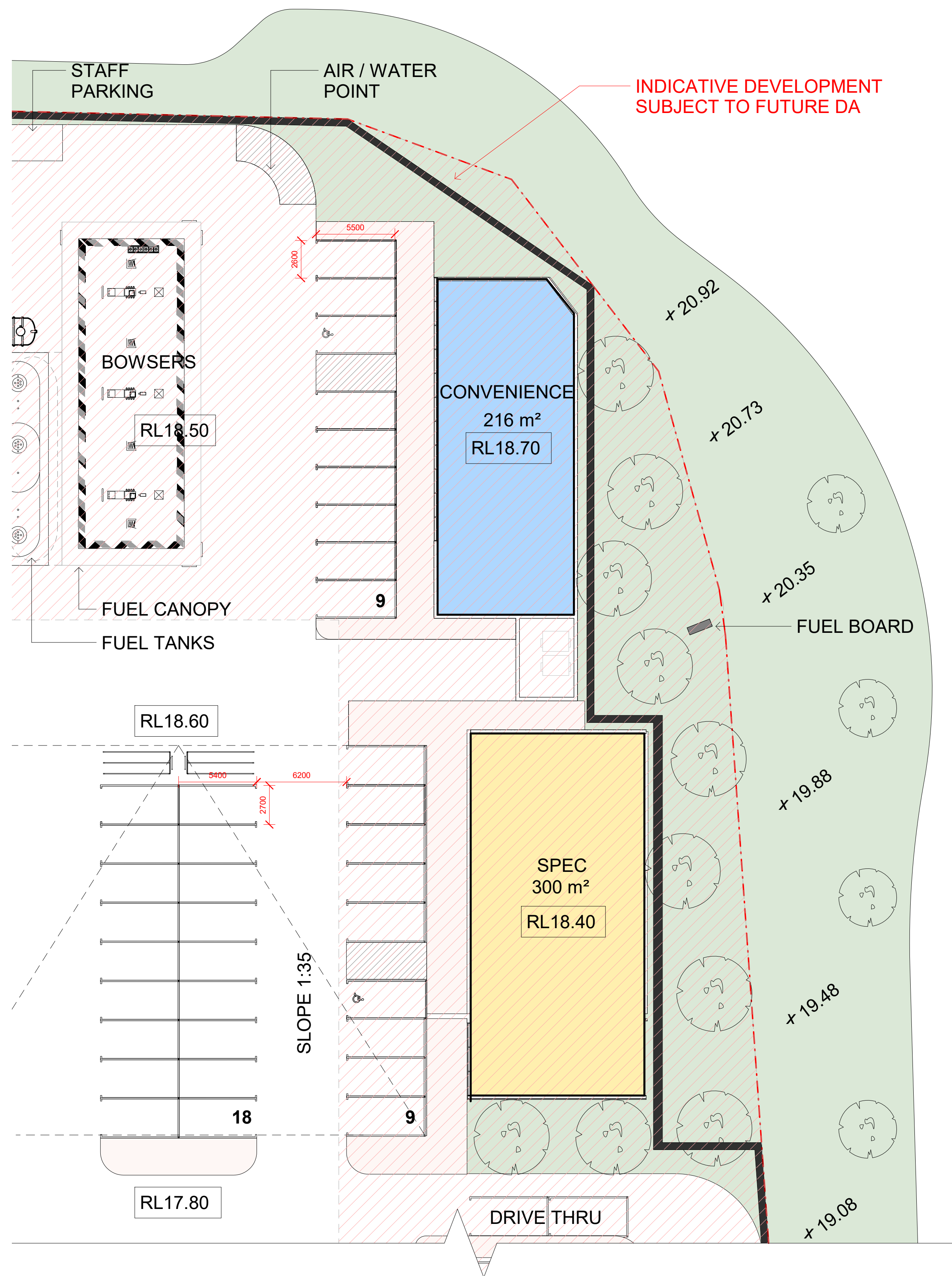
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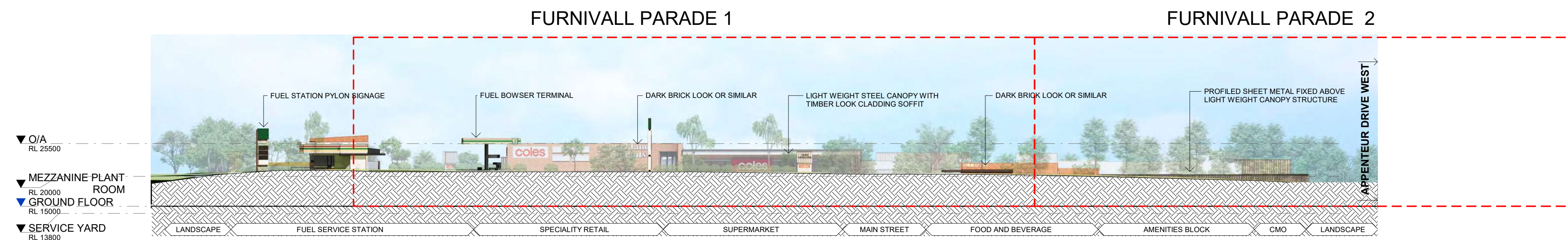
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Date: 17/02/2023











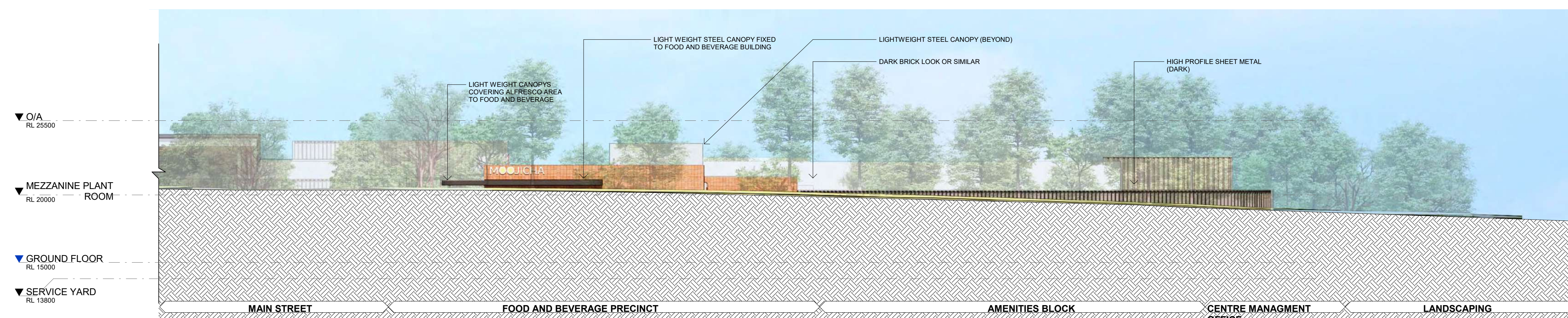
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**ACTIVE EDGES (% GLAZING): 85%**

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FURNIVALL PARADE 1 OF 2  
1 : 200

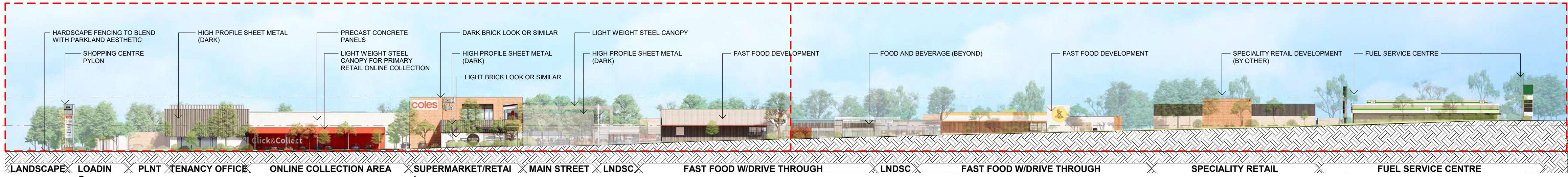


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NAIRN DRIVE 1

NAIRN DRIVE 2



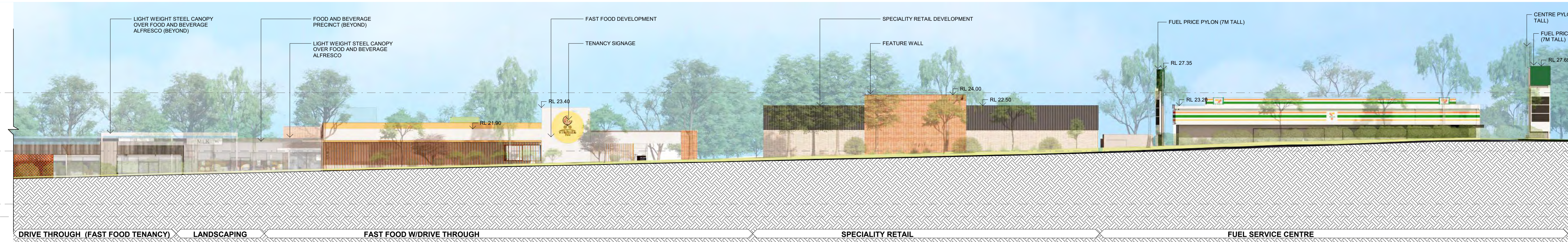
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AVERAGE FACADE HEIGHTS ACROSS  
DEVELOPMENT: 6m

ACTIVE EDGES (% GLAZING): 85%



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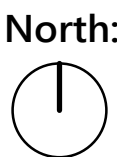
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EAST SITE ELEVATIONS - NAIRN DRIVE  
BALDIVIS NEIGHBOURHOOD SHOPPING CENTRE

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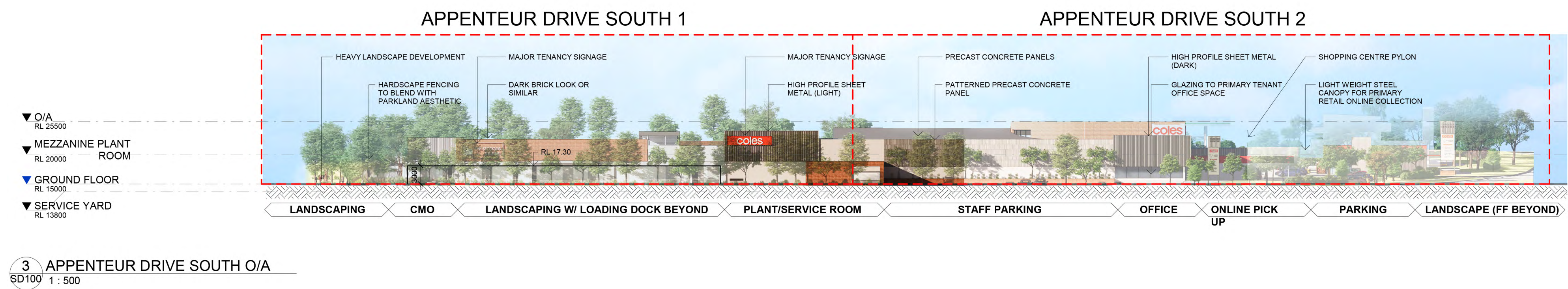
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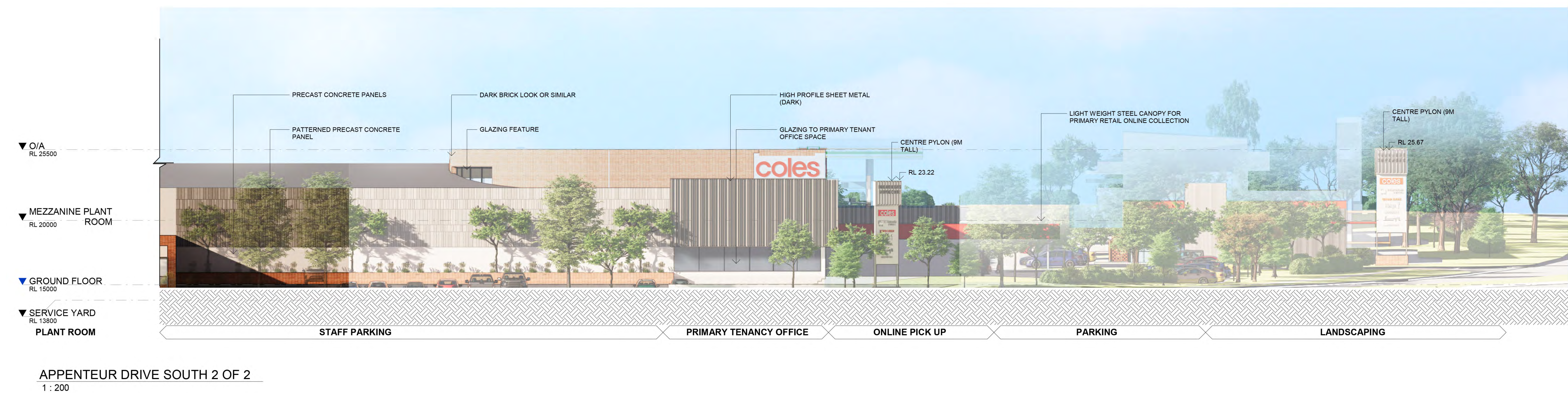
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Revision: E  
Date: 07/10/2022

Hames  
Sharley





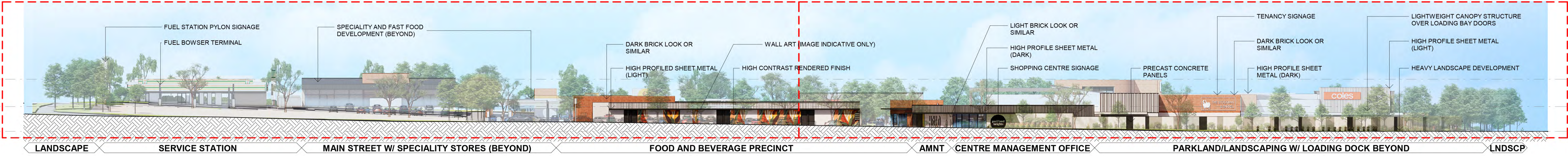
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APPENTEUR DRIVE WEST 1

APPENTEUR DRIVE WEST 2



4 APPENTEUR DRIVE WEST O/A  
SD100 1 : 500



APPENTEUR DRIVE WEST 1 OF 2  
1 : 200



APPENTEUR DRIVE WEST 2 OF 2  
1 : 200



WEST SITE ELEVATIONS - ARPENTEUR DRIVE  
BALDIVIS NEIGHBOURHOOD SHOPPING CENTRE

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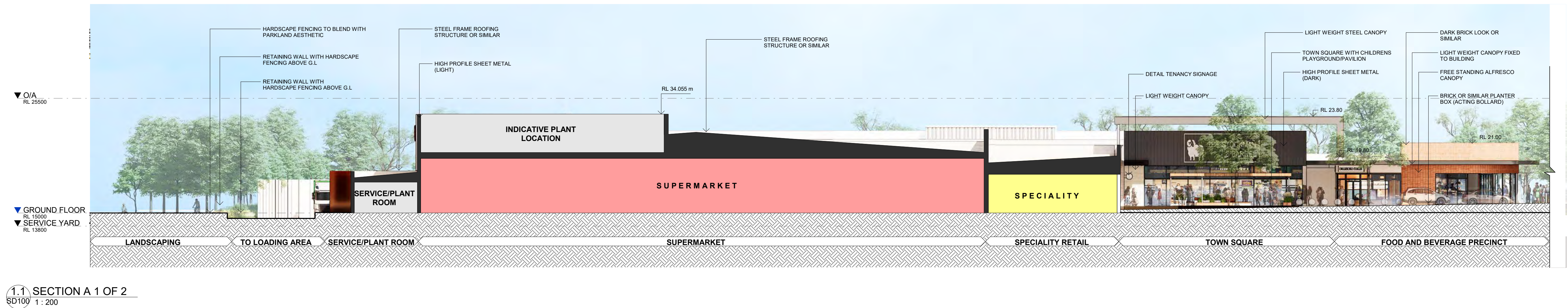
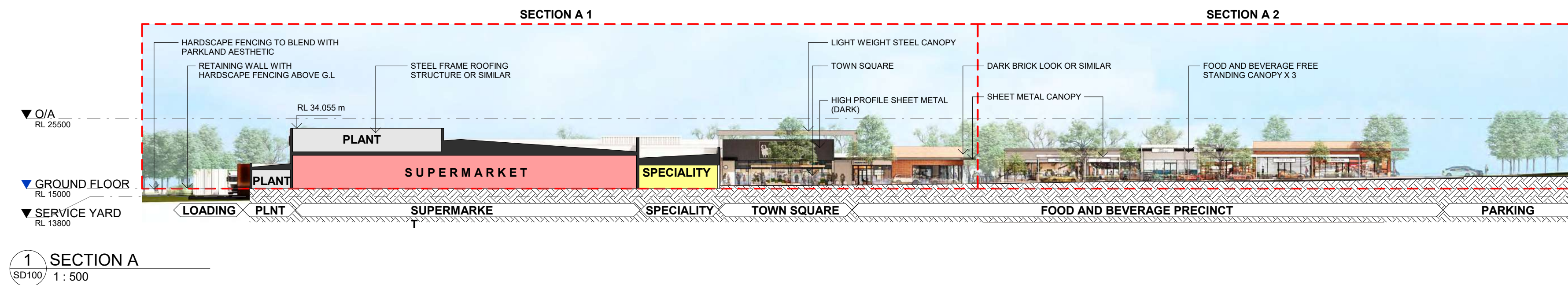
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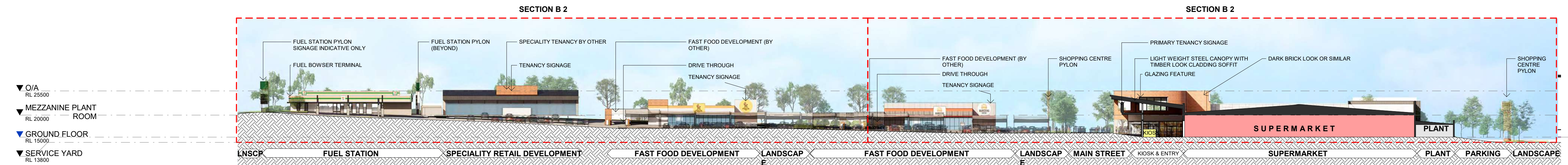
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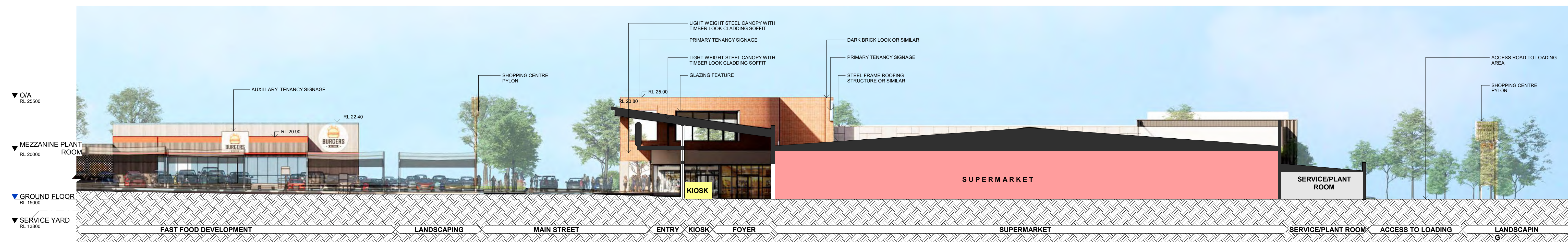




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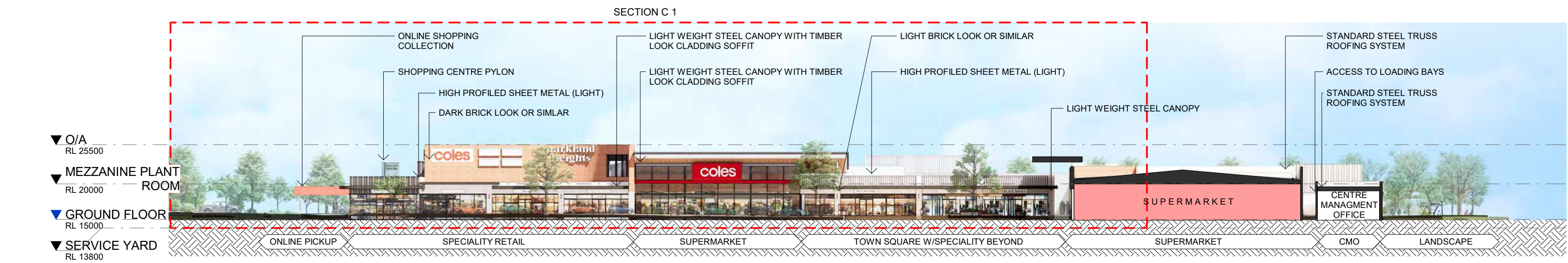


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SECTION B 2 OF 2  
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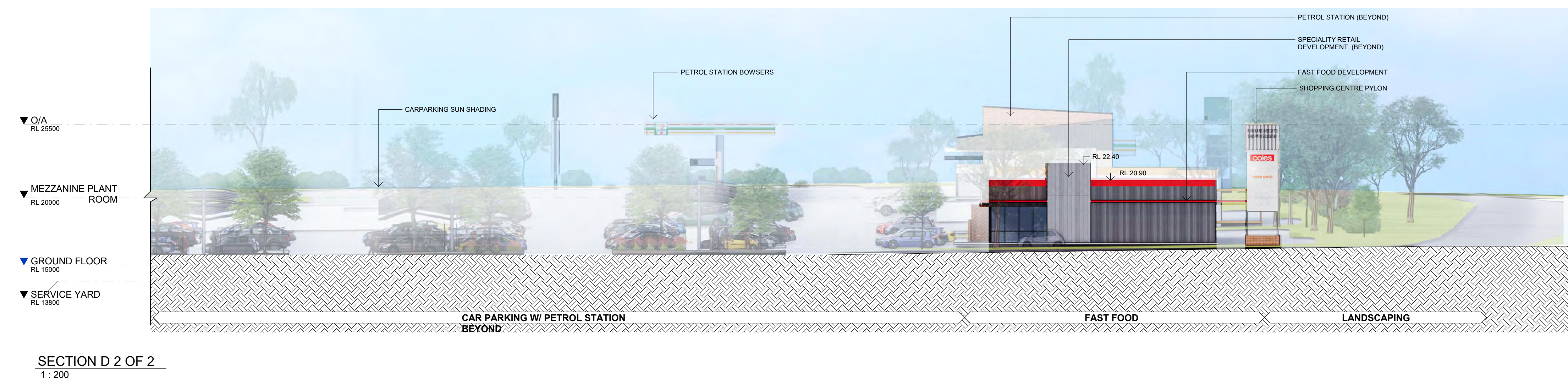
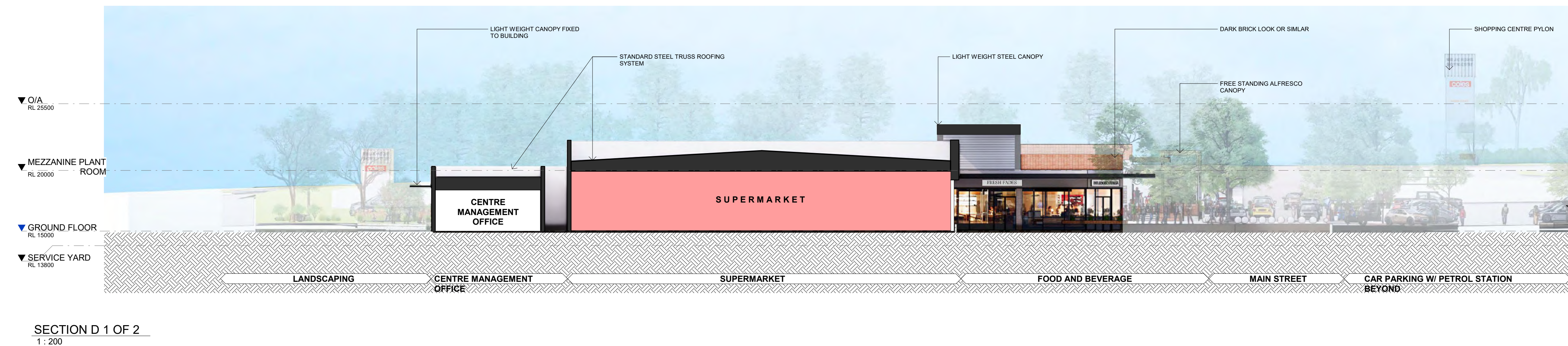
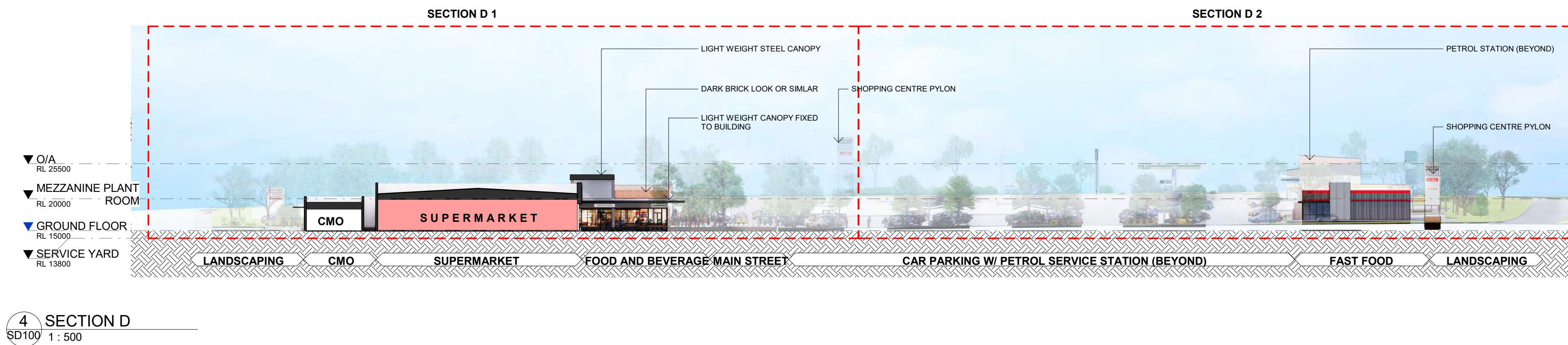


3 SECTION C  
SD100 1 : 500



SECTION C 1 OF 1  
1 : 200









PARKLAND HEIGHTS NEIGHBOURHOOD CENTRE  
Stage 1 Development Application

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<b>Title:</b>	Parkland Heights Neighbourhood Centre - Stage 1 Development Application
<b>Prepared for:</b>	Rockingham Park Pty Ltd
<b>Cover Image Source:</b>	Hames Sharley
<b>CLE Reference:</b>	3039Rep48B
<b>Date:</b>	24 November 2022
<b>Status:</b>	Final
<b>Prepared by:</b>	CLE Town Planning + Design
<b>Project Team:</b>	Blueport Development Management – Project Management Hames Sharley – Project Architect Transcore – Traffic Impact Assessment LD Total – Landscape Plan Talis – Waste Management Plan Gabriels Hearne Farrell - Environmental Noise Report

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## EXECUTIVE SUMMARY

This development application proposes to establish a 9,397m<sup>2</sup> shopping centre as the first stage development for the Parkland Heights Neighbourhood Centre (the Centre). The application is the culmination of several years' work to develop a planning framework to deliver a Neighbourhood Centre for Parkland Heights in southern Baldivis. The process to this point has followed an orderly sequence whereby all fundamental considerations for development of the site have been addressed. This includes matters such as retail sustainability and the establishment of an activity centre hierarchy for Baldivis, as well as traffic and movement around the site including the broader external movement network. An approved local development plan provides a spatial layout for the site accompanied by a discreet set of development controls which seek to deliver a functional, thriving and commercially sustainable activity centre based on main street principles.

The stage 1 composition proposed as part of this application has been carefully considered, balancing the need to provide a broad range of services and amenities to an establishing community, with the need to optimise trading floorspace and support commercial viability for tenants. To achieve this, Stage 1 proposes a full line supermarket and a secondary supermarket supported by a mix of specialty retail tenancies and a food and beverage precinct. The range of offerings to the community is further expanded by the proposed pad sites on Nairn Drive which will cater for more car-based businesses, specifically fast food and a fuel retailer. The proposed centre will bring much needed services and amenities to southern Baldivis within a built form context that seeks to provide opportunities for engagement, activation and recreation. In doing so, the Centre will serve as a cornerstone of the community, providing a built environment that attracts people to visit and interact, assisting to foster the social fabric and sense of place for both Parkland Heights and broader Baldivis.

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# ATTACHMENTS

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Attachment 1	Application forms (City of Rockingham, MRS and JDAP)
Attachment 2	Certificate of Title
Attachment 3	Development Plans (Hames Sharley)
Attachment 4	Site Feature Survey (MNG)
Attachment 5	Landscape Plan (LD Total)
Attachment 6	Traffic Impact Assessment (Transcore)
Attachment 7	Intersection Designs (Transcore)
Attachment 8	Environmental Noise Report (Gabriels Hearne Farrell)
Attachment 9	Waste Management Plan (Talis)

# 1.0



*Image Source: Hames Sharley*

## PROJECT OVERVIEW + BACKGROUND



## 1.0 PROJECT OVERVIEW AND BACKGROUND

An amendment to the City of Rockingham's 'Local Commercial Strategy' (the Strategy) in 2018 reviewed the activity centre hierarchy designation for Parkland Heights, increasing its size from a local centre designation to a neighbourhood centre with an approximate floorspace of 10,000m<sup>2</sup>. Guided by the preceding amendment to the Strategy, Amendment 4 to the Parkland Heights Local Structure Plan (the LSP) established the zoning and planning framework to deliver a neighbourhood centre for Parkland Heights. An economic analysis was undertaken in support of Amendment 4 which also underpinned the 2018 amendment to the Strategy, demonstrating the retail sustainability of a 10,000m<sup>2</sup> neighbourhood centre within the established and future activity centre hierarchy for Baldivis. Amendment 4 to the LSP was approved by the Western Australian Planning Commission (WAPC) in February 2019 after which a Local Development Plan (LDP 1) was prepared and lodged with the City to coordinate the spatial layout and more specific, design-related considerations for the Neighbourhood Centre.

LDP 1 for the Parkland Heights Neighbourhood Centre was approved by the City in September 2019 and constitutes the site-specific planning framework for the assessment and determination of development applications. The LDP comprises an indicative spatial layout as well as a discreet set of development controls to guide the preparation and assessment of development proposals for the Centre.

Since the time the LDP was approved, the proponent has undertaken in-depth market research and engagement with potential anchor tenants. These investigations led to a review of the Centre layout depicted by LDP 1 in order to achieve a more efficient and functional layout that responds to commercial drivers. Whilst the updated layout generally aligned with the principles of LDP 1, it was deemed that an amended LDP should be prepared and lodged with the City to coordinate the updated design.

Consistent with the aforementioned LDP amendment, this development application is the final step of a comprehensive planning process which has carefully considered the context of the Centre within the broader activity centre hierarchy and established a detailed design framework to address the key design considerations for the site such as access, main street design principles and built form presentation.

### 1.1 Development Proposal

This application proposes the first stage development for the Parkland Heights Neighbourhood Centre that will deliver a full line supermarket supported by a range of specialty shops, food and beverage operators as well as a secondary supermarket. The application will significantly improve the range of services and amenities for Baldivis residents, delivering on the long-term planning for the site. Key elements of the development proposal are summarised in Table 1 below.

Table 1: Key Elements of the Parkland Heights Neighbourhood Centre

ELEMENT	AREA (m²)	DESCRIPTION
Main Street	N/A	<p>Coordinated by the LDP, the internal main street seeks to create a high-quality pedestrian environment with abutting uses that engage with and activate the main street.</p>  <p>Image Source: Hames Sharley</p>
Town Square	N/A	<p>Located at the heart of the main street, the town square is designed to be a multi-functional informal space where the community can meet, interact and play. Activation of this space is supported by the tenancy orientation and integration as well as its location on the main street.</p>  <p>Image Source: Hames Sharley</p>
Supermarket 1 & Liquor	3,600 + 200	<p>Supermarket 1 will be a full-line, major supermarket tenant that is familiar to the public. A critical element to every activity centre, the supermarket will anchor the early stages of development and trade, providing for the daily and weekly shopping needs of the community. A small liquor retailer will be accommodated in association with the larger supermarket tenant and will be directly accessible from the main street.</p> <p>Supermarket 1 will be provided with a 6 car bay 'click and collect' service to meet contemporary customer expectations.</p> <p>A loading dock area accessed from Arpenteur Drive to the south will service the supermarket.</p>



<b>Supermarket 2</b>	1,655	<p>The secondary, smaller supermarket operator is proposed to offer a different retail format to the major supermarket, expanding the range of services and amenities available to the community.</p> <p>Whilst furnished with a separate loading dock, access will be shared with Supermarket 1, thereby consolidating noise-generating activities in one location and minimising the extent of potential impact.</p>
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<b>Specialty Retailers</b>	1,032	<p>Specialty retail tenancies and one kiosk are proposed at the entrance to Supermarket 1 and adjoining the town square. A separate specialty retail tenancy (104m<sup>2</sup>) is proposed at the entrance to Supermarket 2. The location and orientation of the specialty retailers seeks to maximise exposure to foot traffic as well as providing activation and engagement with the main street and town square.</p>
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<b>Food and Beverage Precinct</b>	1,114	<p>Oriented to the main street, the food and beverage precinct is provided with space for alfresco dining and is designed to engage with, and activate, the main street.</p>
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<b>Pad Sites x 3</b>	736 + 300	<p>Two fast food pad sites abutting Nairn Drive are proposed to diversify the food offerings at the Centre. The proposed location will facilitate exposure to Nairn Drive and maximise opportunities to capture passing trade. The location will also separate fast food traffic from the main street.</p> <p>A 300m<sup>2</sup> specialty retail tenancy is also proposed abutting Nairn Drive to provide an alternate location to the main street for retail tenants who rely on exposure to vehicular traffic.</p>
<b>Service Station Pad Site</b>	215	A retail fuel offering pad site is proposed in a location that provides high exposure to motor vehicles, enables convenient access and separates traffic from the main street.
<b>Car Parking</b>	N/A	<p>580 formal car bays are proposed, comprising:</p> <ul style="list-style-type: none"> <li>• 535 standard car bays</li> <li>• 26 staff bays</li> <li>• 13 accessible bays</li> <li>• 6 'click and collect' bays</li> </ul> <p>200 of the standard car bays will be covered by shade sails with all other parking areas suitably landscaped.</p>
<b>End of trip facilities</b>	36	Separate male and female end of trip facilities are provided in a convenient location close to bicycle parking areas.
<b>Screen Wall</b>	N/A	A screen wall is proposed to the south-west corner of the centre and will serve a dual purpose. The wall will ameliorate the potential visual impacts of loading and back of house areas as well as reduce noise emanating from trucks and other service vehicles.
<b>Signage</b>	N/A	<p>The application proposes four pylon signs – one at each end of the main street, one at the western access point and one on the south-east corner of the site. Whilst serving an advertising function, the signs will also assist with wayfinding by clearly demarcating the entrances to the Centre.</p> <p>Further details regarding signage on buildings will be coordinated by a separate 'signage strategy' for the Centre to be lodged with the City as a future application.</p>





**Figure 1 - Artist Impression**

*Source: Hames Sharley*

## 1.2 Pad Sites

This first stage development application depicts four pad sites comprising the service station, a specialty retailer and two fast food outlets. Development approval is not sought for these uses as part of this application. The pad sites are shown as part of this development application to allow for the holistic assessment and consideration of Stage 1 development and to ensure a coordinated approach to matters such as car parking, circulation, building orientation and the distribution of land uses. The individual tenants for each pad site will prepare and lodge their own separate development application based on their specific proposal. These future applications will address matters such as floorplans, signage, colours and materials within the overall framework of this development application.

## 1.3 Pre-lodgement Consultation

The design and layout of the Centre has been extensively discussed with the City of Rockingham as part of the amended LDP process. This involved several meetings and pieces of written correspondence between the City, CLE and the proponent which assisted to refine the overall concept layout for the Centre. Several modifications were made to the layout and design in response to matters raised during the pre-lodgement consultation process. Given the extensive engagement and refinement to the amended LDP, a referral to the City's Design Review Panel was deemed unnecessary by the City.

# 2.0



*Image Source: Hames Sharley*

**SITE DESCRIPTION + CONTEXT**

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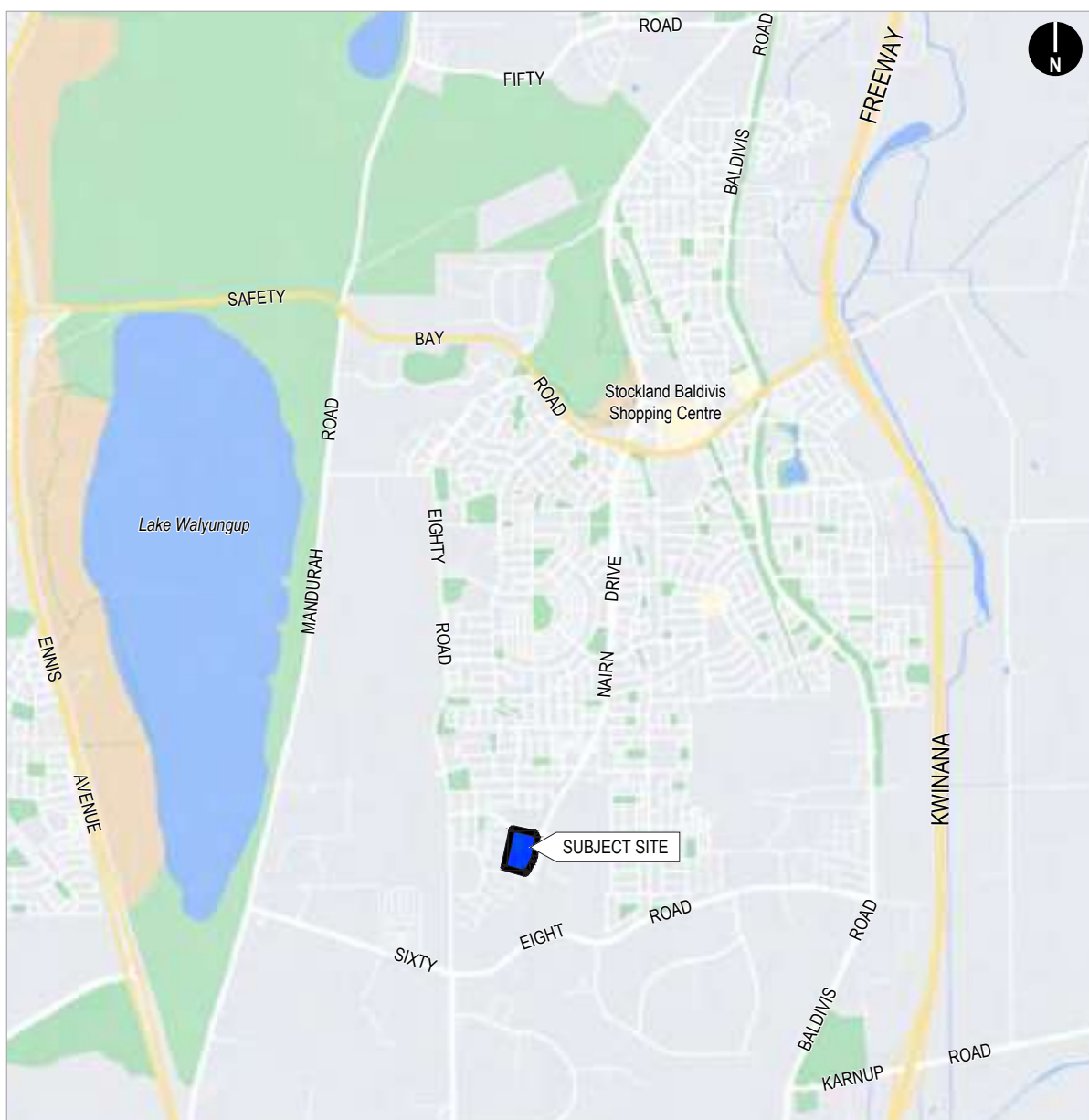


## 2.0 SITE DESCRIPTION AND CONTEXT

### 2.1 Location

The proposed Neighbourhood Centre is located central to the Parkland Heights estate, abutting the western side of Nairn Drive at the southern end of Baldvis. It is on the opposite side of Nairn Drive to the recently constructed 'Pine View Primary School' and is approximately 2.7 km west of the Kwinana Freeway. A location plan is provided at Figure 2 below.

The site is bound by Nairn Drive to the east, Furnivall Drive to the north and Arpenteur Drive to the south and west.



**Figure 2 - Location Plan**

Source: Google Maps

## 2.2 Area, Land Use and Topography

The Neighbourhood Centre site is approximately 5.1 hectares in area. It has been cleared and constructed as part of the civil works for the Parkland Heights estate and is development-ready. Subdivision roads have been constructed and ceded to the north, east and west with the road reserves defining the site boundaries. An orthophoto of the development site is provided at Figure 3 below.



**Figure 3 - Development Site**

Source: Neamap



The land to the north is undeveloped but is planned to accommodate medium-density residential development. The land directly to the east on the opposite side of Nairn Drive is similarly undeveloped but is planned to accommodate complementary commercial uses that are less intensive and traffic-dependent due to its immediate proximity to the primary school.

The residential lots directly west of the Centre have been held back by the developer (who is also the proponent for the Neighbourhood Centre) and remain untitled. This is a deliberate strategy to assist manage the interface between the Neighbourhood Centre and the nearest residential lots. These lots will only be titled and sold once the Centre has established and is operating so that future purchases are aware of the land use context.

The land to the south has been partially developed for single housing with the remaining grouped housing site undeveloped.

The site slopes by approximately 6 metres from a high point in the north-east corner to a low point in the south-west corner. Given the size of the site, the level differences result in a gentle gradient of 1:52. The topography of the site is accommodated within the design of the buildings, carparks and main street levels to ensure pedestrian and vehicular accessibility.

### 2.3 Legal Description and Ownership

The Neighbourhood Centre site is on balance title 9012 which is owned by our Client, Rockingham Park Pty Ltd. As the owners and developers of the Parkland Heights estate, our Client also own the untitled residential land to the west and north, the future commercial site to the east of Nairn Drive and the grouped housing site (lot 851) to the south.

# 3.0



Image Source: Hames Sharley



### 3.0 ZONING AND PLANNING FRAMEWORK

#### 3.1 Zoning

The land is zoned 'Urban' under the Metropolitan Region Scheme (MRS) (refer Figure 4 below) and 'Development' under the City of Rockingham's Town Planning Scheme No.2 (TPS2) (refer Figure 5 below).



Figure 4 - Metropolitan Region Scheme

Source: Neamap



Figure 5 - Town Planning Scheme No. 2

Source: DPLH



The Neighbourhood Centre directly abuts an 'Other Regional Road' (ORR) reserve under the MRS in the form of Nairn Drive. The Department of Planning, Lands and Heritage (DPLH) commented on the preceding LDP with regard to the ORR, confirming no objection to the Neighbourhood Centre and the proposed access from Nairn Drive.

Pursuant to clause 4.2.2 of TPS2 for 'Development' zones, the Parkland Heights Local Structure Plan has been prepared and approved to coordinate subdivision, land use and development of the land.

### 3.2 Parkland Heights Local Structure Plan

The Parkland Heights Local Structure Plan (LSP) coordinates the subdivision and development of the estate, zoning the Neighbourhood Centre site 'Commercial' to accommodate its intended purpose as an activity centre (refer Figure 6 below). Pursuant to clause 4.1 of the LSP, land use permissibility is in accordance with the 'Commercial' zone under TPS2, which is discussed in further detail below.

Clause 5.2 of the LSP requires the preparation and approval of an LDP prior to subdivision and development of the 'Commercial' zoned land. Accordingly, LDP 1 for the Parkland Heights Neighbourhood Centre was approved by the City of Rockingham in September 2019. The LDP establishes the general layout as well as a discreet set of development controls to guide the preparation and assessment of future development applications. The original 2019 LDP is shown below at Figure 7.

An amendment to the LDP was lodged in July 2022 and was subsequently advertised for a period of 21 days in August. The amended LDP was prepared and lodged to accommodate modifications to the layout of the Centre in response to more detailed market testing and discussions with potential tenants. At the time of preparation, the amended LDP has been approved by the City subject to modifications. Compliance with the LDP is discussed in further detail under the 'Planning Assessment' heading below.

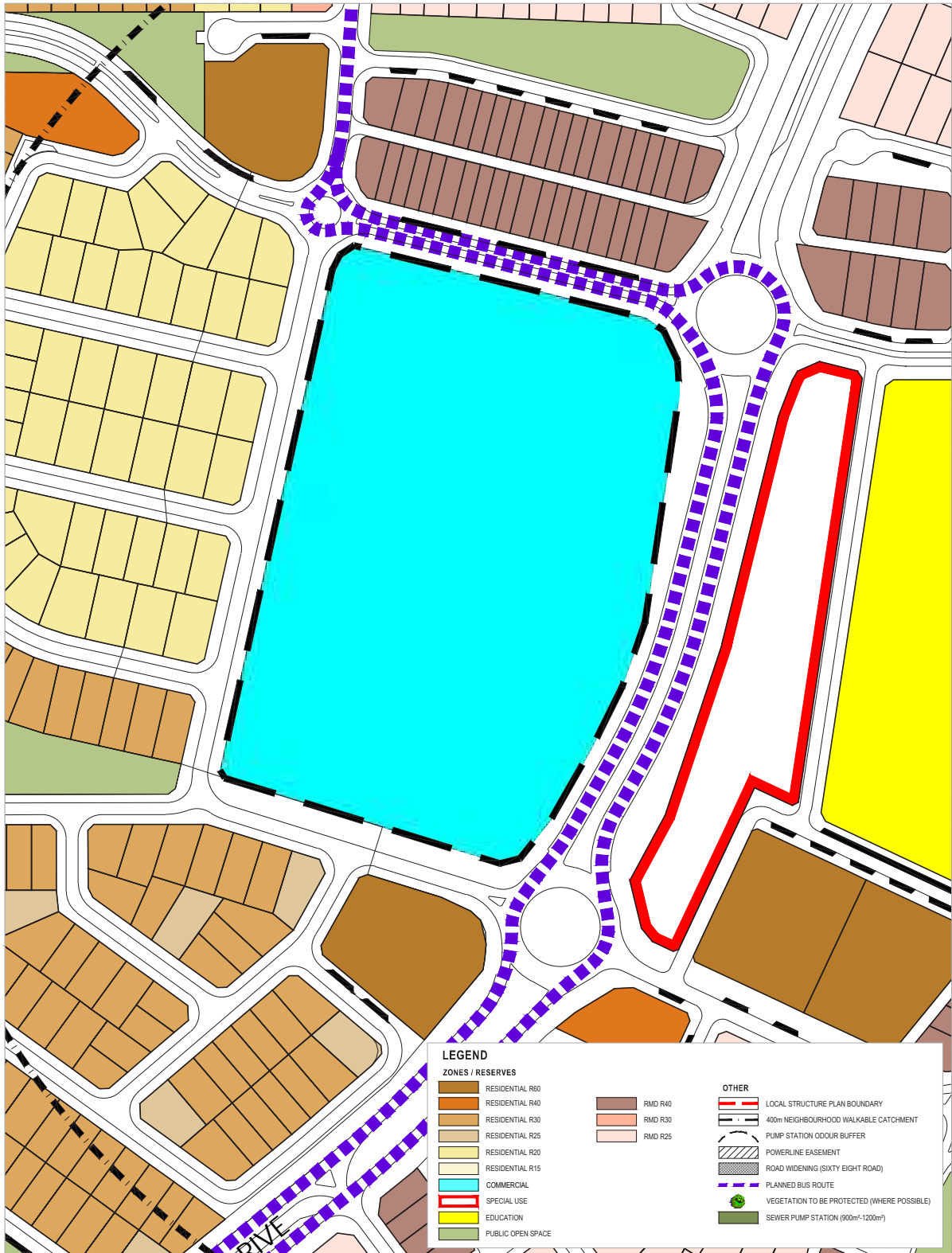
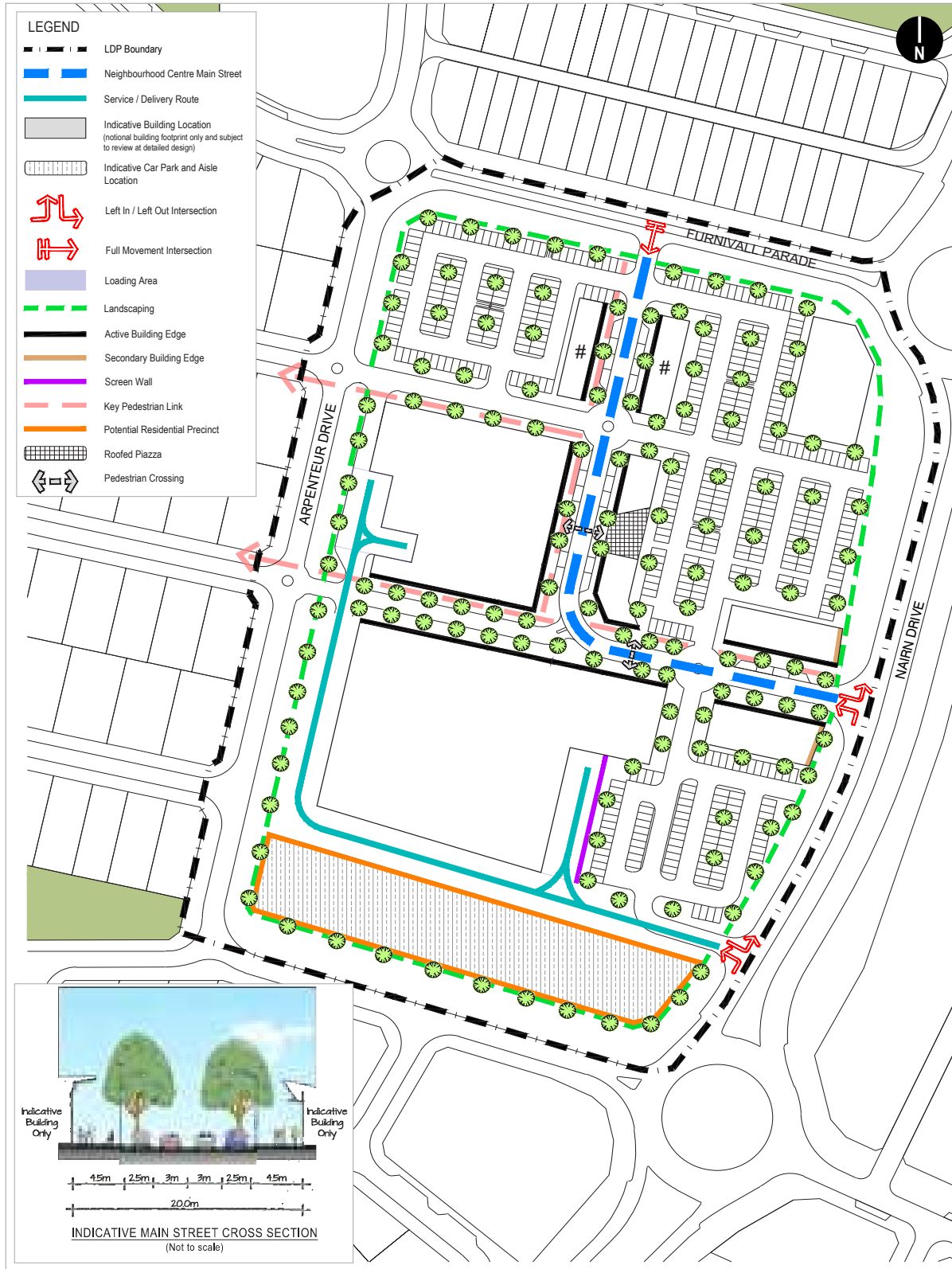


Figure 6 - Local Structure Plan





**Figure 7 - Previous Local Development Plan**  
(superseded by Amendment 1)

# 4.0



Image Source: Hames Sharley



## 4.0 PLANNING ASSESSMENT

### 4.1 Land Use Permissibility

Table 2 below outlines the proposed land uses and their associated permissibility under the 'Commercial' zone designation of the LSP.

Table 2: Land Use Permissibility

PROPOSED USE	TPS 2 LAND USE CLASSIFICATION	PERMISSIBILITY
Convenience	Service Station	D
Fast Food	Fast Food Outlet	D
Specialty Retail (SPC)	Shop	P
Supermarket	Shop	P
Food and beverage	Restaurant/café	D

In accordance with clause 3.2.2 of TPS 2, a 'P' use *"means that the use is permitted by the Scheme providing the use complies with the relevant development standards and the requirements of the Scheme."*

A 'D' use *"means that the use is not permitted unless the local government has exercised its discretion by granting development approval."*

The proposed supermarket and specialty retail uses are permitted as of right, whilst the uses of convenience (service station), fast food (fast food outlet) and food and beverage (restaurant/café) are capable of approval, subject to the exercise of discretion.

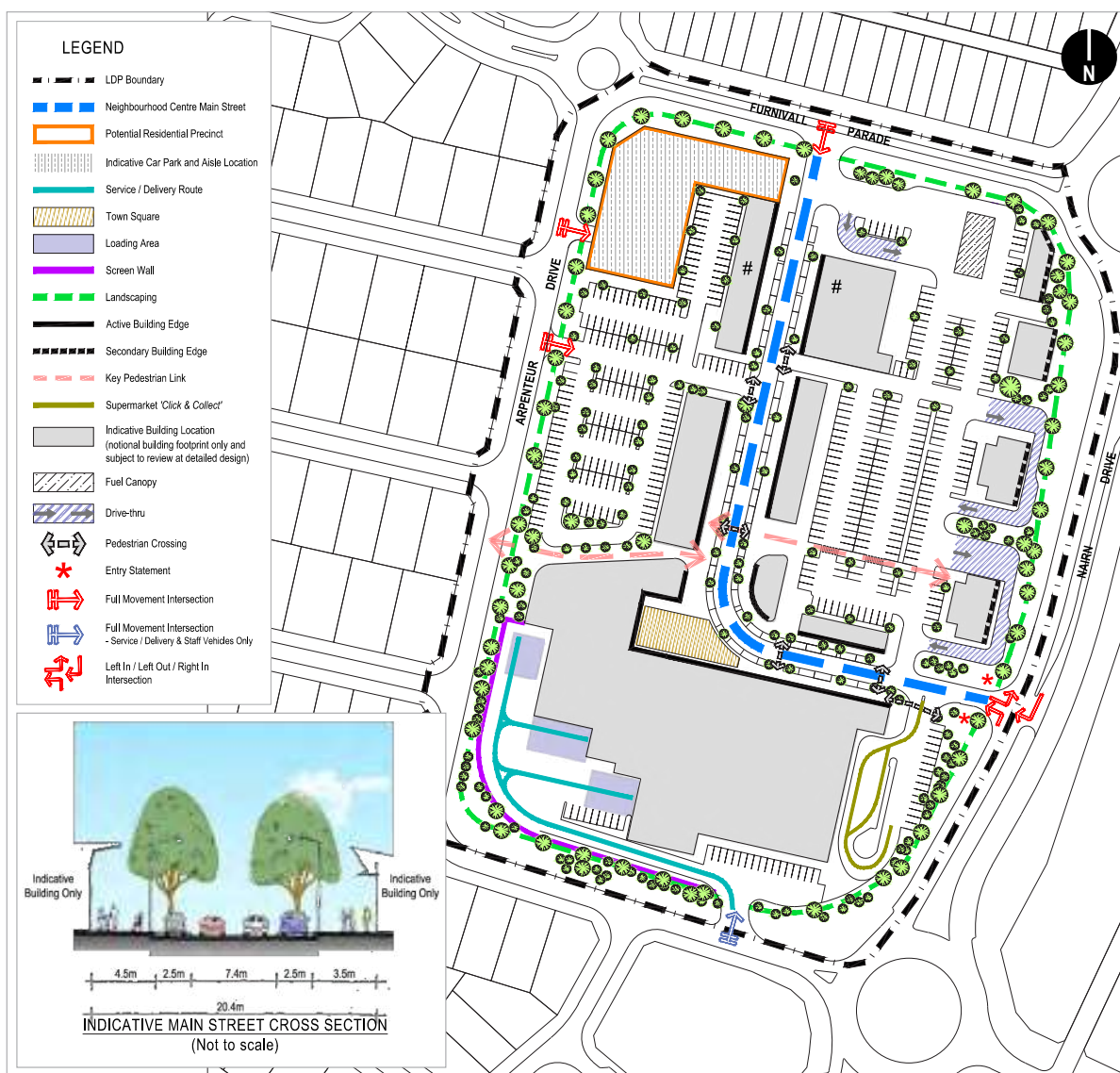
With reference to the discretionary 'D' uses proposed by this application, the exercise of discretion is warranted as these uses are critical components of a thriving, active and viable activity centre. All proposed uses are compatible with one another and provide opportunities for shared trade, encouraging multi-purpose trips to the Centre. The specific siting of the 'D' uses has been carefully considered in the planning for the centre based on the following key considerations:

- The service station is detached from the main street and retail core to assist separate service station traffic from the main street;
- The fast-food outlets are located adjoining Nairn Drive to maximise opportunities for custom from passing trade and to make the drive-thru's conveniently accessible. This location complies with the provisions of the City's *Planning Policy 3.3.9 – Fast Food Outlets* as discussed in further detail below; and
- The food and beverage precinct orients towards the main street, creating opportunities for alfresco dining and activation of the street. It also interfaces with the town square, providing surveillance of public spaces.

## 4.2 Parkland Heights Neighbourhood Centre - Local Development Plan 1

The Local Development Plan is the primary planning instrument that applies to the development of the site. The LDP comprises two primary components as follows:

1. The LDP map, which provides a spatial depiction of the general layout of the site. The LDP coordinates the distribution and location of key elements of the Neighbourhood Centre including the main street, building locations, car park locations, access points, loading docks, landscaping and pedestrian connectivity. The LDP responds to the sites context and outlines measures to manage the interface with both established and future residential uses. A copy of the amended LDP is provide at Figure 8 below.
2. A list of 'development standards' that prescribe built-form outcomes to be demonstrated at the development application stage as outlined in further detail at Table 3 below.



**Figure 8 - Current Local Development Plan**  
(approved subject to modifications)



As outlined above, an amendment to the LDP (refer Figure 8 above) has been approved by the City, subject to modifications. This development application is entirely consistent with the layout depicted on the LDP with the exception of the proposed staging approach to the delivery of the Centre. Specifically, this Stage 1 application proposes to establish an interim parking area to the east of the main street which at full build out, will ultimately be developed as commercial building sites. The lodged and advertised version of the LDP originally proposed a staging plan to coordinate the staged delivery of the Centre however, the City's approval is contingent upon the LDP being modified to remove the staging plan. The proposed staging plan is provided at Figure 9 with the staging approach discussed in further detail below.

### Staging

Whilst substantial in scope, this application is the first of four planned stages of development proposed for the Centre. As depicted on the LDP, additional development sites are planned to occur at the northern end and on the eastern side of the main street. Development staging is an important consideration for activity centres of this size to ensure that the scale of development and extent of commercial floorspace is commensurate with what can be supported by the population catchment. In developing residential estates such as Parkland Heights, the population catchment is still growing as more and more residents establish in the area. The current population can therefore only support a first stage development of a certain size as compared to the ultimate population of Baldivis once it is fully established.

Until such time as full development of the Centre is commercially viable, carparking is proposed to be constructed on the east side of the main street and is shown as 'interim parking' on the site plan. Parking in this location is critical for the early success of the Centre whilst customer shopping behaviour is established as the provision of parking as close as possible to the supermarket entrance encourages shoppers to the centre and attracts business.



**Figure 9 - Proposed Staging**

As the centre establishes and its catchment matures over time, the need for parking convenience will be superseded by the desire to increase commercial space and in turn, a greater overall offering. Once the anchor supermarket tenant and the broader first stage development have established trade within the catchment, any reduced parking convenience will be offset by the increased patronage and expanded catchment resulting from an improved offering. Whilst the primary objective at the inception stage is to establish a trading catchment, ultimately once the commercial drivers and demand exist, market forces will drive the growth of the centre and development on the eastern side of the main street as coordinated by the LDP.

#### [Demonstrated compliance with the LDP](#)

Table 3 below provides an assessment against the LDP development controls, demonstrating compliance with the relevant standards.



Table 3: LDP Key Development Standards

NUMBER	DEVELOPMENT STANDARD	DESIGN COMPLIANCE RESPONSE
1 - 3	Main Street	<ul style="list-style-type: none"> <li>Pedestrian crossings are proposed at intuitive locations to ensure unfettered pedestrian movement to, and across, the main street.</li> <li>The incorporation of a different pavement colour, plentiful on-street parking and landscaping with mature trees will assist to create a low-speed environment.</li> <li>A total of 37 on-street bays are proposed – the maximum which can be accommodated within the functionality of the design.</li> <li>As demonstrated by the Landscape Plan (refer Attachment 5) a combination of feature trees, normal trees and low car park landscaping will soften the landscape and create a high amenity public space.</li> <li>The town square will provide public furniture and seating for casual interaction and respite whilst the extensive alfresco dining area associated with the food and beverage precinct will enhance seating and amenity options for the main street.</li> </ul>
4 - 8	Active Building Edges	<ul style="list-style-type: none"> <li>All buildings have a nil setback to footpaths where possible.</li> <li>Façade heights vary between 4.5m and 7m with a calculated average height of 6m across all main street facades.</li> <li>85% of the 'active building edges' are proposed as glazing.</li> <li>In conjunction with the nil setback to footpaths, awnings are proposed to all buildings, providing pedestrian shelter and adding visual interest to the elevations.</li> <li>All proposed uses fronting the main street are 'preferred' uses as defined by the LDP.</li> </ul>
9	Other Building Facades	<ul style="list-style-type: none"> <li>As demonstrated on the elevation drawings, a mix of colours and materials is proposed for building edges that are highly visible. The main design response elements include the use of different colours, textures and materials that complement the colour palette and character of the Centre.</li> </ul>
10 - 11	Vehicle access	<ul style="list-style-type: none"> <li>All intersection locations and treatments are consistent with the LDP.</li> </ul>
12 - 13	Pedestrian access	<ul style="list-style-type: none"> <li>Paved areas abutting the food and beverage tenancies are 6.1m wide comprising 3.0m for pedestrians and 3.1m for alfresco dining, exceeding the LDP requirement of 4.5m. All other footpaths either meet or exceed the 3.5m minimum footpath width.</li> <li>Where possible, primary pedestrian access points are proposed from the main street</li> </ul>
14 - 17	Landscaping	<p>The accompanying Landscape Plan demonstrates the following in accordance with the LDP:</p> <ul style="list-style-type: none"> <li>2m wide landscape buffers are provided within the site in most locations. Minor reductions in width are required in limited, specific locations due to boundary angles however, these are offset by wider landscaped areas in other locations.</li> <li>A combination of trees, shrubs and ground cover is proposed adjoining all car park areas.</li> <li>Approximately 4,730m<sup>2</sup> of landscaping is proposed within the site, equating to 9.3% of the total site. This excludes future landscaping within later stages which once included, will easily satisfy the minimum 10% requirement.</li> <li>Except for areas covered by shade sails, car parks are provided with a minimum of 1 tree per 6 bays. Where shade sails are proposed, trees are provided on the periphery to soften the edges of these areas.</li> </ul>

18 - 20	<b>Potential Residential Precinct</b>	No development is proposed within the 'Potential Residential Precinct'. This area will form part of a future development stage and will be subject to a separate development application.
21 - 22	<b>Noise Management</b>	An Acoustic Assessment accompanies this application and is discussed in further detail under the corresponding heading below.  The elevation drawings detail the proposed screen wall, proposing precast concrete panelling as a suitable material to attenuate noise from the loading dock/service yard.
<b>Notes</b>	<b>LDP Map</b>	The spatial layout of the site and building footprints for the Stage 1 development application are entirely consistent with the LDP. The location and sizing of the car parks is also consistent with the LDP.
	<b>Main Street Cross-section</b>	The proposed main street cross section provides on-street car parking as well as wide, landscaped footpaths to accommodate alfresco dining abutting the food and beverage precinct.
	<b>Visual Sightlines</b>	Clear sightlines are maintained at the corners of intersecting carriageways in accordance with the LDP.
	<b>Parking</b>	37 on-street bays are proposed.
	<b>Pedestrian Connections</b>	Pedestrian connections are generally consistent with the LDP and have been refined as necessary.
	<b>Stormwater</b>	Stormwater will be managed in accordance with the addendum to the Parkland Heights LWMS specifically, underground storage cells will be installed within carparks and landscaped areas. Adequate unencumbered space exists on the site to accommodate the necessary underground drainage infrastructure. Specific details regarding the sizing and location of underground cells will be detailed as part of the building permit process.
	<b>Intersection Treatments</b>	All intersections treatments are consistent with the LDP. Detailed designs for the intersection treatments form part of the development application (refer Attachment 7).
	<b>Landscaping and Trees</b>	A comprehensive Landscape Masterplan accompanies the application and is discussed in further detail below.

### 4.3 Landscaping

As outlined above, the Landscape Masterplan (refer Attachment 5) complies with the specific development standards established by the LDP and will screen the edges of the development through a combination of tiered planting that includes turf, plants, shrubs and trees. More densely landscaped areas are concentrated along the south-western edge of the Centre to buffer the screen wall, minimising the potential bulk on the streetscape. Trees and other planted areas are distributed through out the Centre where possible to provide shade and visually soften car parks and paved areas.

### 4.4 Transport and Movement

Forecast traffic volumes, trip distribution and the potential impact on the surrounding network of roads and intersections was extensively modelled and addressed by Amendment 4 to the LSP. The TIA which accompanied Amendment 4 demonstrated that a Neighbourhood Centre of the scale proposed could be delivered without affecting the safe and efficient operation of the road network. To ensure a robust analysis, the LSP TIA took a conservative approach and modelled a larger centre of circa 11,500m<sup>2</sup>. The LSP TIA also confirmed the road hierarchy adjoining the Centre based on the ultimate forecast traffic volumes and has guided subdivision and the construction roads adjoining the site.



The TIA lodged with this development application builds on the comprehensive traffic analysis undertaken as part of the LSP and LDP and addresses more detailed matters as relevant to this process such as intersections with adjoining roads, internal circulation/movement areas and parking.

### Intersections

Four external intersections are proposed for the Parkland Heights Neighbourhood Centre to ensure safe and efficient access to and from the site. These intersections are described and assessed under Table 4 below.

Table 4: Intersection Treatments

INTERSECTION	DESCRIPTION	DISCUSSION
1	<b>Nairn Drive right-in/left-in/ left out</b>	<ul style="list-style-type: none"> <li>The intersection location and design are consistent with the LDP.</li> <li>A right turn lane within the Nairn Drive median is proposed to allow deceleration and avoid potential queues impacting southbound traffic on Nairn Drive. The right turn lane will be approximately 110 metres in length based on the relevant standards.</li> <li>An approximate 78m long left turn inbound deceleration lane is proposed to ensure no impact to northbound traffic flows along Nairn Drive.</li> <li>A right turn out is precluded to ensure optimal performance of the intersection.</li> <li>The intersection will operate at level of service (LOS) A or B during peak periods, indicating very good operation with minimal delays.</li> </ul>
2	<b>Furnivall Parade and main street, full movement</b>	<ul style="list-style-type: none"> <li>The intersection location and design are consistent with the LDP.</li> <li>A full movement intersection is proposed in this location and is modelled to operate at LOS A during peak periods, indicating good operation with minimal delays.</li> <li>The central median will require modification to accommodate this movement, as shown in the detailed intersection design.</li> </ul>
3	<b>Arpenteur Drive south</b>	<ul style="list-style-type: none"> <li>The intersection location and design are consistent with the LDP.</li> <li>This intersection is designed to primarily accommodate service and delivery vehicles with some staff parking. It will avoid potential traffic conflict between larger delivery trucks and passenger vehicles by providing a dedicated and restricted access point.</li> <li>The restricted, full movement intersection is modelled to operate at LOS A during peak periods, indicating good operation with minimal delays.</li> </ul>
4	<b>Arpenteur Drive west</b>	<ul style="list-style-type: none"> <li>A full movement intersection is proposed to provide access to the western car park from Arpenteur Drive.</li> <li>The LSP TIA models this section of road to accommodate very low traffic volumes (1,700 vehicles per day). There are therefore no circumstances that restrict full movement access in this location and a SIDRA analysis has not been undertaken.</li> </ul>

### *External Circulation and Movement*

The surrounding network of road reserves will provide public access to the centre. Furnivall Parade on the northern boundary, Nairn Drive on the eastern boundary and Arpenteur Drive on the southern boundary have all been constructed and ceded as part of the broader subdivision works. All roads have been designed and constructed to accommodate traffic generated by the proposed Neighbourhood Centre as planned by the LSP. Minor modifications are required to the external road network as follows:

- Modification of the central median on Furnivall Parade to accommodate a full-movement intersection.
- Modification of the Nairn Drive median to accommodate a right-turn in movement for southbound traffic on Nairn Drive.
- Relocation of the east-west pedestrian crossing on Nairn Drive in response to the location of the aforementioned right-turn lane.

Detailed design drawings for the road modifications are included as part of this application – refer Attachment 7.

Arpenteur Drive (west) is yet to be constructed as part of the broader subdivisional works for Parkland Heights. Whilst not fundamental to this development application, it is intended that the western connection of Arpenteur Drive will be constructed and ceded to coincide with the opening of the Centre. This will be coordinated via the separate subdivision process.

### *Internal Circulation and Movement*

All carparks and internal circulation areas are designed in accordance with the minimum relevant Australian Standards. Minimum 6m wide aisle widths are proposed with a 7.36m wide carriageway for the main street, given its role and function as the primary connection through the Centre.

A wider 10.9m-wide crossover is provided for the service access onto Arpenteur Drive (south) to accommodate swept paths of delivery trucks and service vehicles.

### *Parking*

Parking is provided in accordance with the guidance established by *State Planning Policy 4.2 – Activity Centre for Perth and Peel* (SPP 4.2) which specifies a parking ratio of 4-5 bays per 100m<sup>2</sup> of floorspace. Whilst less than the City of Rockingham's technical parking standards as set out at 'Table No. 2 – Carparking Table' of LPS 2 below, parking is provided based on the principles of SPP 4.2 which seek to make activity centres accessible by car whilst maximising and encouraging opportunities for alternative methods of transport such as public transport, walking and cycling.



Table 5: SPP 4.2 Parking Calculation

USE	RATIO	AREA	PARKING REQUIREMENT
Shop, Fast Food, Restaurant/Café, Service Station	4 – 5 bays per 100m <sup>2</sup>	9,402m <sup>2</sup>	376 – 470 bays
Provided			580 bays

Table 6: LPS 2 Parking Calculation

USE	RATIO	AREA	PARKING REQUIREMENT
Fast Food	1 per 11m <sup>2</sup> NLA	730m <sup>2</sup>	66 – 26 (the number of bays that can queue within drive-thrus) = 40
Restaurant/Cafe	1 per 4 persons	Indoor seating – 560m <sup>2</sup> = 560 ppl	140
		Alfresco – 330m <sup>2</sup> = 330 ppl	83
Service Station	1 bay per service bay	NA	8
	1 bay per employee	NA	3
	6 per 100m <sup>2</sup> NLA	216m <sup>2</sup>	13
Shop	6 bays per 100m <sup>2</sup> NLA	7,336m <sup>2</sup> (includes expansion)	440
		Required by LPS 2	727
		Provided	580

As demonstrated above, the provision of parking for the Centre seeks to balance the requirements of SPP 4.2 and TPS 2, providing greater than the SPP 4.2 standard (6.2 bays per 100m<sup>2</sup> in lieu of 4 – 5 bays) but less than the TPS 2 requirement (580 bays in lieu of 727 bays). Provision of the full 727 bays as required by TPS 2 is not proposed as it would likely result in an overprovision of parking and associated loss of services. Further, it is inconsistent with the guiding principles of SPP 4.2 which acknowledges the important role private vehicle parking has to play for Centres, but not at the expense of encouraging alternative methods of transport. The TIA submitted in support of this application further supports this position, that parking in accordance with SPP 4.2 is suitable for a Neighbourhood Centre of this size and composition.

As per the draft LDP, land has been set aside in the north-west corner of the Centre for the provision of additional parking in the future should it be required. Whether the land is needed for parking or not will be confirmed as part of the development approval process for this precinct. The Centre is expected to be established by the time planning for the future stage in the north-west progresses, enabling the actual parking demand for the Centre to be quantified. At that time, should the need for further parking be confirmed, it can be provided seamlessly at that future stage. Alternatively, it may be confirmed that the car parks are operating with spare capacity, meaning that the north-west future stage could be developed for residential purposes. With the benefit of time, parking demand and capacity at the Centre can be quantified and will inform planning for future stages. In the shorter term, should it become clear that additional parking is required then it would be in the owners best interests to construct the additional car parking in this area sooner rather than later to ensure the Centre is performing at its optimum level.

### *Pedestrian and Cyclist Accessibility*

2.5m wide shared paths have been constructed on the northern and eastern boundaries of the Centre which will connect with future shared paths along the western and southern boundaries. The external path network is coordinated by the LSP TIA with existing paths designed and delivered as part of the subdivision process.

The existing east-west pedestrian crossing on Nairn Drive will be relocated south of the new intersection as recommended by the development application TIA. This location is the safest for pedestrians and will align with the internal path network for the Centre.

Within the site, safe and easy pedestrian movement is accommodated via the main street which will feature wide paths on each side. Movement from carparks to the main street and across the main street is accommodated via an intuitive network of dedicated pedestrian crossings.

## **4.5 Noise**

An Environmental Noise Report has been prepared to accompany the development application and is included at Attachment 8. The Environmental Noise Report demonstrates that potential noise emissions from the Neighbourhood Centre can be managed to comply with the *Environmental Protection (Noise) Regulations 1997* subject to the following standard mitigation measures:

- Acoustic screening to be provided around the loading dock/service area to a minimum height of 3.5 metres above the ground level of the loading dock.
- Deliveries by larger trucks (19m and longer) are not permitted before 7 am Monday to Saturday or before 9 am on a Sunday or Public Holiday. If occurring after 9 am on a Sunday or Public Holiday, deliveries by larger trucks are only permitted once every 4 hours.
- If a small truck/delivery van is delivering prior to 7 am and is fitted with a traditional reversing 'beeper', the small truck/delivery van shall only be driven forward.
- The engines and refrigeration units of all delivery vehicles shall be turned off whilst unloading.
- Screening to be provided to rooftop air conditioning and refrigeration equipment as specified and quiet operation equipment selected.

The drawings that accompany the application provide details of a screen wall 3.5 metres high above the loading dock. The screen wall will be constructed of precast concrete panels painted in contrasting colours that match the selected colour palette for the Centre. Heavy landscape screening will be established in front of the screen wall to soften the visual appearance. This ensures that noise can be suitably attenuated whilst minimising the potential for building bulk on the streetscape.

Potential noise from delivery vehicles and other noise from the loading dock will be managed in accordance with the outcomes of the Noise Report. It should be noted that the Environmental Noise Report does not address potential noise from the pad sites (the service station and two fast food outlets) as these will be subject to their own separate development applications and associated noise reports.

## **4.6 Waste Management**

A Waste Management Plan (WMP) has been prepared to accompany the development application (refer Attachment 9), demonstrating that the Centre provides adequately sized bin storage areas based on the estimated volume of waste and a suitable configuration of bins. The key elements of the WMP are summarised as follows:

- Bin storage will be accommodated in two separate areas. Bin Store 1 is 20m<sup>2</sup> in area and adjoins the south-east corner of Supermarket 2. Bin Store 2 is 62m<sup>2</sup> and adjoins the western loading dock. The



size and function of each bin storage area has been determined based on waste volume estimates.

- Bin Storage Area 1 will accommodate eight 1,100 litre bins for storage of refuse and recycling with collection occurring once a week. It will service the three specialty retail areas at the entrance to supermarket as well as centre management.
- Bin Storage Area 2 will accommodate twenty-two 660 litre bins for storage of refuse and recycling with collection occurring more frequently at twice a week. It will primarily service the food and beverage precinct and a specialty retail tenancy.
- All storage areas are sized to accommodate the anticipated volume of waste in bins and can be easily accessed.
- All waste collection will be undertaken by a private contractor, overseen by the Centre Manager.
- Each of the supermarkets will have their own back of house and will manage waste via their own internal processes as per standard practice.
- All waste collection will occur via the loading dock with collection vehicles utilising the designated 'service access' from Arpenteur Drive (south).

## 4.7 State Planning Policies

### *State Planning Policy 4.2 – Activity Centres for Perth and Peel (SPP 4.2)*

SPP 4.2 is primarily concerned with the establishment of an activity centre hierarchy to guide long-term planning, promote investment and ensure the community has access to services and amenities commensurate with typical shopper behaviour. It also provides high-level guidance for the planning and design both within and around activity centres. The objectives and provisions of SPP 4.2 are reflected in the planning framework for the site which has been progressively developed in an orderly sequence as follows:

1. Local Commercial Strategy Amendment.
2. Local Structure Plan Amendment.
3. Local Development Plan.

The designation of Parkland Heights as a circa 10,000m<sup>2</sup> Neighbourhood Centre within the broader activity centre hierarchy is resolved by the City's 'Local Commercial Strategy' and the Parkland Heights LSP. Under this framework, the Parkland Heights role and function is planned as a large Neighbourhood Centre servicing the daily and weekly shopping needs of the community.

The spatial layout of the Centre and the design response to prevailing neighbourhood context is coordinated by the LDP as outlined above, which provides the primary planning instrument for assessment of the development application.

### *Draft State Planning Policy 4.2 – Activity Centres for Perth and Peel (SPP 4.2)*

Draft SPP 4.2 does not contain any provisions over and above the gazetted version that would have a particular bearing on the development application. The draft SPP 4.2 advocates maximising the potential for travel modes such as walking, cycling and public transport whilst minimising the reliance on private vehicles.

*State Planning Policy 7.0 – Design of the Built Environment (SPP 7.0)*

Table 7 below provides an assessment against the ten design principles of SPP 7.0.

Table 7: Design Principles Assessment

NO.	DESIGN PRINCIPLES	RESPONSE
1	<b>Context and Character</b>	<ul style="list-style-type: none"> <li>The emphasis on landscaped parks and streets within the broader Parkland Heights estate will be carried over and reinforced within the Neighbourhood Centre with particular focus on the main street and the edges of the site where it interfaces with the established residential community.</li> <li>The surrounding built form context is predominantly residential with a neutral-themed colour palette coordinated by restrictive covenants requiring the use of brick, stone, render, tiles and Colourbond. The colour and material palette for the Centre draws from this established theme, ensuring the buildings integrate with the prevailing context.</li> <li>Buildings orientate towards the main street and away from the external boundaries of the site adjacent the residential lots, assisting to minimise potential impact of building bulk on the prevailing single-storey, residential character.</li> <li>Buildings addressing the main street are at a neighbourhood scale, designed to integrate with the visual landscape from a broader context whilst providing visual interest and presence at the pedestrian level.</li> <li>The surrounding residential community is still growing and developing with the neighbourhood character yet to be fully established. The Centre seeks to provide an accessible and engaging environment that evolves as a cornerstone of the community, providing the necessary services and amenities for a thriving community within a built environment that attracts and encourages people to linger and interact.</li> </ul>
2	<b>Landscape Quality</b>	<ul style="list-style-type: none"> <li>A densely planted, park-like landscaped area is proposed on the south-west corner of the site in front of the screen wall as break out area within the green link. This will provide any area for respite whilst assisting the soften the screen wall.</li> <li>A combination of turf and trees are proposed within the adjoining road verge to soften and cool the landscape.</li> <li>The edges of the Centre abutting the road verge will be planted with a mix of plants and shrubs with trees overtop.</li> <li>An additional tier of screening trees and shrubs will be established in front of the screen wall to minimise the potential visual impact on the streetscape.</li> <li>Car park planting and shade trees are provided in accordance with the City's policy and wherever possible to soften the landscape and provide shade.</li> <li>A combination of hard and soft landscaping will be implemented along the main street providing shade, colour and assisting to calm traffic.</li> </ul>
3	<b>Built Form and Scale</b>	<ul style="list-style-type: none"> <li>Main street design principles underpin the layout and form of the Centre, providing a strong connection to the external movement network with internalised anchors that focus activity and provide structure to both pedestrian and vehicle movements.</li> <li>The highest intensity scale, form and land use are concentrated at the core of the main street and around the town square to create a vibrant heart of the Centre where people movement is concentrated. Land uses and business that interface with these areas will benefit from the foot traffic and contribute to the activation of the town square.</li> <li>The location and orientation of specialty retailers relative to the centrally located supermarket anchor are provided with the opportunity to maximise trade from passing foot traffic accessing the supermarkets.</li> <li>Moving away from the mains street core to the edges of the Centre and the two ends of the main street, land use and built form transitions to a less-intensive character to provide a suitable interface with the external residential environment.</li> </ul>



<b>4</b>	<b>Functionality and Built Quality</b>	<ul style="list-style-type: none"> <li>• The Centre is designed to be highly functional with pedestrian-based uses oriented to the main street with more car dependent uses fronting Nairn Drive.</li> <li>• Loading docks and back of house areas are provided with separate access and are entirely independent of the main street both in terms of access of appearance.</li> <li>• The main street pedestrian realm provides a shelter, landscaped and inviting environment for shoppers, seeking to deliver a comfortable environment where they are encouraged to linger and interact with other retailers in addition to simply the supermarkets.</li> <li>• Car parking is located conveniently so as to encourage patronage.</li> <li>• Materials, colours and finishes are sympathetic to the prevailing character and selected for their visual aesthetic and robustness. A high percentage of glazing is proposed to the main street servicing to create a safe environment by optimising opportunities for surveillance whilst also serving to engage with and thereby activate the main street.</li> </ul>
<b>5</b>	<b>Sustainability</b>	<ul style="list-style-type: none"> <li>• The design of the centre is underpinned by triple bottom line principles, proposing a Centre that is economically viable, environmentally responsive and socially cohesive.</li> <li>• Economic sustainability is supported by the complementary mix of uses, operational efficiency of the layout, location and composition of parking areas commensurate with shopper expectations and the approach to staging. Staging is critical to ensure that the extent of commercial floorspace matches populations demand, which is still growing in Baldivis and is yet to mature.</li> <li>• Environmental sustainability is promoted through the selective use of building materials, shaded walkways and landscaped areas, encouragement of active transport methods through provision of facilities and transport infrastructure and sustainable waste management.</li> <li>• Social sustainability is achieved by fulfilling a gap in current level of services by providing a full line supermarket supported by a range of complementary retail and food &amp; beverage services. These uses will exist within an overall built form that encourages social interaction and fosters a sense of place and community.</li> </ul>
<b>6</b>	<b>Amenity</b>	<ul style="list-style-type: none"> <li>• The town square and food and beverage precinct provide opportunities for intangible social amenity. The food and beverage precinct features prominent alfresco areas to enjoy the outdoors environment under formalised shade areas.</li> <li>• Pedestrian amenity is accommodated by wide thoroughfares, continuous shade adjoining building facades and high levels of surveillance form adjoining uses.</li> <li>• A considered landscape response within the Centre and along its edges assists to soften the visual appearance and cool the landscape.</li> <li>• Non-active building edges are treated in a manner that balances function and form, with blank walls finished in a combination of colours and materials and artwork incorporated where suitable. Semi active building edges also feature in suitable locations without undermining the primacy of the main street.</li> <li>• Bulk, mass and overshadowing are centralised within the site to minimise potential impact on residential amenity adjacent the Centre.</li> </ul>
<b>7</b>	<b>Legibility</b>	<ul style="list-style-type: none"> <li>• The main street has clear and defined connections at either end with the external movement network, providing for excellent legibility both in terms of pedestrian and vehicle movement.</li> <li>• The buildings edges, combined with the massing of bulk and scale at the main street core provide for intuitive wayfinding from both the external pedestrian network and carparks.</li> <li>• Paths around the periphery of the Centre connect with key-pedestrian linkages through the site, encouraging alternative methods of transport.</li> <li>• In addition to the primary pedestrian connection along the main street, east-west pedestrians to the main street are clearly defined and accommodated.</li> </ul>

8	<b>Safety</b>	<ul style="list-style-type: none"> <li>• The concentration of active building edges along the main street ensures good sightlines and visibility to /from shopfronts and the main pedestrian routes.</li> <li>• East-west pedestrian links through the site provide visual corridors to the main street.</li> <li>• Passive surveillance is provided from secondary building edges where possible in the form of office areas and bike racks which attract turn over of people and movement.</li> <li>• The main street is designed as a safe pedestrian environment with traffic calming measures, designated pedestrian crossing and generous areas dedicated to pedestrian movement.</li> <li>• The loading dock and back of house area can be secured during times when not in use.</li> <li>• Lockable bike stores and end of trip facilities are provided to encourage alternative methods of transport by providing a safe environment for property and hygiene.</li> </ul>
9	<b>Community</b>	<ul style="list-style-type: none"> <li>• Commensurate with its role in the planning for Parkland Heights, the Centre will be a key focus of the local community, providing a place to meet, play, shop and interact.</li> <li>• The public spaces and food and beverage precinct are designed to encourage social interaction by creating engaging places where people are encouraged to sit and relax.</li> <li>• The numerous specialty retail tenancies and food and beverage tenancies provide opportunities for cultural diversity, offering a range of trading formats conducive to all types of operators.</li> <li>• The click and collect format provides accessible shopping for those who may prefer to procure groceries without having to enter the shops.</li> </ul>
10	<b>Aesthetics</b>	<ul style="list-style-type: none"> <li>• The material palette responds to the surrounding neighbourhood context, seeking to incorporate sympathetic materials such as brick, tile and metal sheeting.</li> <li>• The colour palette gravitates towards neutral, warm tones with varying colours and textures implemented in locations that are highly prominent or necessitate emphasis.</li> <li>• Main street facades are predominantly glazed with warm and inviting colours used for external finishes at the pedestrian scale.</li> <li>• In accordance with the LDP, other building facades are treated with alternative colours and finishes, adding visual interest and avoiding monotonous and blank external walls.</li> </ul>

## 4.8 Local Planning Policies

### *Planning Policy 3.1.2 – Local Commercial Strategy (PP 3.1.2)*

PP 3.1.2 identifies Parkland Heights as a 'Neighbourhood Activity Centre'. Neighbourhood Centres are planned to service an approximate catchment of 5,000 to 20,000 residents with a typical floorspace provision of 4,500m<sup>2</sup> to 10,000m<sup>2</sup>. The Parkland Heights Neighbourhood Centre's size and layout is largely resolved via the LSP and LDP which have informed the detailed design proposed by this development application. Development of the Centre as proposed by this application will see the delivery of a range of service and amenities for the local community, consistent with the strategic intent of PP 3.1.2.



*Planning Policy 3.3.9 – Fast Food Outlets (PP 3.3.9)*

The location, siting and access of the two proposed fast food pad sites is consistent with the principles and requirements of PP 3.3.9 as follows:

- They are not adjacent residential properties, rather the fast food sites front Nairn Drive and the future commercial site on the opposite side of the road. This assists to minimise potential amenity impacts on adjoining land uses by providing separation.
- The fast food 'back of house' areas about a carpark, ensuring no direct impact on surrounding land uses.
- As detailed in the 'Landscape Plan' which accompanies the application (refer Attachment 5), generous landscaping within the site and the verge is proposed to soften the building edges and provide visual screening to drive-thru areas.
- The drive-thru's can accommodate 13 queuing vehicles, greater than the minimum required 10 vehicles under PP 3.3.9.
- The fast food sites are located away from the main street to separate vehicle movements as well as the trading typologies. Separation of the fast food sites is important in delivering the vision for the main street, as they have the potential to undermine the character and compete with other food retailers. They are a desirable and necessary component of activity centres and have been planned accordingly, consistent with the principles of PP 3.3.9.

*Planning Policy 3.3.14 – Bicycle Parking and End of Trip Facilities (PP 3.3.14)*

Table 8 below sets out a bicycle parking calculation in accordance with PP3.3.14.

Table 8: Bicycle Parking Calculation

LAND USE	REQUIRED				PROVIDED
	MINIMUM SHORT TERM		MINIMUM LONG TERM		
	RATE	NUMBER	RATE	NUMBER	
Shop – Neighbourhood Centre (8,288m²)	0.3 spaces per 100m² NLA	25	0.12 spaces per 100m²	10	58 short term 19 secured, long term.
Food and drink premises (1,109m² assumed 890 seats, 70 staff)	0.1 spaces per 5 seats	18	0.1 spaces per staff	7	
Total Required		43		17	60 spaces

Based on a requirement for 16 long term bicycle parking spaces, PP3.3.14 requires end-of-trip facilities with four showers. In accordance with the policy requirements, two female and two male showers are provided in separate rooms.

*Planning Policy 3.3.25 – Percent for Public Art – Developer Contributions*

Based on the estimated cost of development of \$14 million, PP 3.3.25 requires a \$140,000 public art contribution based on a calculation methodology of 1% of the building works. The site plan identifies three potential locations to accommodate public art, described as follows:

- At the eastern entrance to the Main Street at the Nairn Drive intersection.
- On the screen wall abutting the loading docks along the south-west corner of the plan.
- On the western building edge of the food and beverage precinct, facing the eastern carpark.

In accordance with PP 3.3.25, the final location and form of the public art contribution will be resolved via a condition of approval so that the matter may be more fully explored and agreed with the City.



# 5.0



Image Source: Hames Sharley

## CONCLUSION

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## 5.0 CONCLUSION

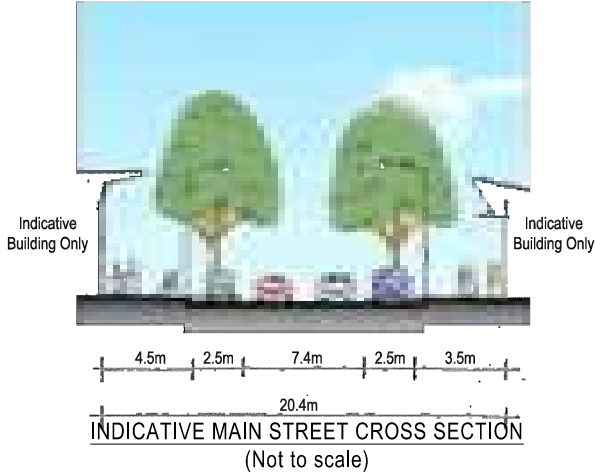
This Stage 1 development application is the final process in delivering a Neighbourhood Centre for southern Baldivis and is preceded by the establishment of an orderly and comprehensive planning framework, comprising the City's Local Commercial Strategy, the Parkland Heights Local Structure Plan and the Local Development Plan. The intent for the site is well established, and this application will bring to fruition several years planning and design to deliver an activity centre for Parkland Heights.

The application comprehensively addresses the applicable planning framework, demonstrating compliance with the relevant development controls and consistency with the broader strategic objectives. The proposal will provide the community with much needed services and amenities in an accessible location that will enhance quality of life. The planning and delivery of the Centre has been carefully considered to ensure the physical form responds to local context and minimises potential impacts on the established streetscape and broader residential character of the area. Operational matters such as traffic, parking, noise and servicing have also been considered in the design and layout of the Centre in order to manage potential external impacts on resident amenity. Through the design response and subsequent management measures, these potential impacts are mitigated such that the Centre can co-exist within the established community in accordance with the historic planning for the site.



LEGEND

- LDP Boundary
- Neighbourhood Centre Main Street
- Potential Residential Precinct
- Indicative Car Park and Aisle Location
- Service / Delivery Route
- Town Square
- Loading Area
- Screen Wall
- Landscaping
- Active Building Edge
- Secondary Building Edge
- Key Pedestrian Link
- Supermarket 'Click & Collect'
- Indicative Building Location (notional building footprint only and subject to review at detailed design)
- Fuel Canopy
- Drive-thru
- Pedestrian Crossing
- Entry Statement
- Full Movement Intersection
- Full Movement Intersection - Service / Delivery & Staff Vehicles Only
- Left In / Left Out / Right In Intersection



PARKLAND HEIGHTS NEIGHBOURHOOD CENTRE

LOCAL DEVELOPMENT PLAN 1

APPLICATION OF LOCAL DEVELOPMENT PLAN

The provisions of this Local Development Plan (LDP) are in addition to any requirements under Local Planning Scheme No.2 (LPS No.2) and any development control provisions prescribed under a Local Structure Plan.

DEVELOPMENT STANDARDS

Main Street

- The main street shall be designed as a low-speed traffic environment that prioritises pedestrian movement over vehicles. Traffic-calming measures should be incorporated into the design with pedestrian crossings provided that generally align with entrance points to buildings.
- The main street shall accommodate on-street parking as well as loading zones for service vehicles on each side of the main street where practical and safe.
- The main street shall be designed for a high-level of pedestrian amenity and incorporate features such as street furniture, low planting, street trees and lighting where practicable and safe.

Active Building Edges

Where identified, active building edges shall:

- Have a nil setback to the footpath.
- Have a continuous frontage with a minimum building facade height of 5.5m.
- Comprise a minimum of 60% glazing for the length of the ground floor facade.
- Provide continuous pedestrian shelter that extends over the width of the adjoining footpath to the extent that they do not pose a hazard for passing vehicles (eg. delivery and service trucks).
- Comprise 'preferred' uses with the exception of where entry points are required for access to internal shopping centre pedestrian malls and buildings denoted with a # symbol. 'Preferred' uses include 'fast food outlet', 'market', 'restaurant', 'small bar', 'tavern', and 'shop'. Other uses may be considered in accordance with Clause 4.1 of the Parkland Heights Local Structure Plan and Table No.1 - Zoning Table of LPS No.2.

Other Building Facades

- With the exception of 'Active Building Edges' and walls adjoining loading areas, building facades should avoid blank walls to enhance visual presentation through the use of features such as glazing (where conducive to the floor plan and use), alternative colours, finishes and textures and/or intrusions and extrusions in the wall.
- In addition to the above, 'Secondary Building Edges' are to be designed to provide visual relief through an architectural response.

Vehicle Access

- Intersection treatments for vehicle access points to the Neighbourhood Centre are to be provided in accordance with the LDP.
- Alternative intersection treatments may be considered where a Traffic Impact Assessment is provided to the satisfaction of the City of Rockingham.

Pedestrian Access

- Footpaths adjacent 'Active Building Edges' are to have a minimum width of 4.5m in order to accommodate alfresco dining opportunities and pedestrian movement. A reduction to 3.5m wide may be considered where alfresco dining is not proposed or contemplated by the specific land use.
- For buildings abutting the main street, primary pedestrian access to building entries is to be provided from the main street.

Landscaping

- Landscaping strips a minimum of 2.0m wide are to be provided within the property boundary in the general locations depicted on the LDP. Timing for the installation of the landscaping is to coincide with the construction of the adjoining car park to provide screening.
- Where landscaping strips adjoin car parking areas, loading areas and buildings facades, the Landscape Plan that accompanies the Development Application is to provide details that demonstrate screening of these areas through the use of shrubs and tree planting.
- A minimum of 10% of the site area should be provided as landscaping. This may include shade trees and landscaping areas within car parks.
- Car parking areas are to include shade trees at a minimum rate of 1 tree per 6 car bays. Where shade structures are proposed over parking areas, the requisite number of trees may be provided on the periphery of, or adjacent to, the covered area.

Potential Residential Precinct

- The north-west corner of the site identified as a 'Potential Residential Precinct' may be developed for residential purposes where it can be demonstrated that the land is not necessary to satisfy the parking requirements for the Neighbourhood Centre.
- Should residential development be proposed within the 'Potential Residential Precinct' at a future stage, a separate LDP will be required in order to coordinate vehicle access and built form outcomes.
- A separate LDP for the 'Potential Residential Precinct' shall consider and respond to potential sources of noise emanating from the Neighbourhood Centre. The LDP should be accompanied by an Acoustic Assessment prepared by a suitably qualified Acoustic Consultant that identifies potential sources of noise and outlines strategies to mitigate and manage the potential impact of noise on dwellings.

Noise Management

- A Development Application that includes a 'Loading Area' depicted on the LDP is to be accompanied by an Acoustic Assessment prepared by a suitably qualified Acoustic Consultant that outlines strategies to mitigate and manage the potential impacts of noise from delivery vehicles and activities on surrounding sensitive land uses.
- The screen wall is to be articulated and finished in materials and colours that match the overall development and seek to minimise the potential impact of bulk and form on the streetscape.

NOTES

- The LDP depicts indicative building and intersection locations only for the purpose of spatial planning. The building and intersection locations are subject to more detailed design which will be refined as part of the Development Application but shall be generally consistent with the LDP.
- The car park designs and locations depicted on the LDP are indicative only for the purpose of spatial site planning. The exact configuration and location of car parks is to be refined as part of the Development Application but shall be generally consistent with the LDP.
- The indicative 'Main Street Cross Section' depicted on the LDP has been prepared for illustrative purposes only and is subject to refinement at the Development Application stage. Widths and dimensions may vary from those shown on the indicative cross section as part of the detailed design process.
- Building truncations that maintain appropriate visual sightlines at the corners of intersections are to be demonstrated at the Development Application stage.
- The location and number of on-street parking bays is indicative only and subject to more detailed design at the Development Application stage.
- The location and alignment of pedestrian crossings are indicative only and subject to change at the detailed Development Application stage.
- Stormwater management on the site is to be in accordance with the approved addendum to the Parkland Heights Local Water Management Strategy dated 22 February 2018 in accordance with WSUD principles.
- Design details for intersection treatments are to be provided at the development application stage.
- Landscape drawings submitted with development applications are to include details of landscaping within verge areas.
- Trees along the perimeter of the site as depicted on the LDP are to be planted at a rate of one tree every 10 metres where vehicle access, parking and sightlines permit.

THIS LDP HAS BEEN APPROVED BY THE CITY UNDER SCHEDULE 2, CLAUSE 52(1)(A) OF THE PLANNING AND DEVELOPMENT (LOCAL PLANNING SCHEMES) REGULATIONS 2015.

MANAGER, STATUTORY PLANNING

19/01/2023  
DATE

**Schedule Of Submissions**  
**Proposed Parkland Heights Neighbourhood Centre - Lot 9014 Sixty Eight Road, Baldivis**  
**(20.2022.293.1)**

PUBLIC SCHEDULE OF SUBMISSIONS		
Name	Address	Comment
1. Mrs Janice Harwood	22 Ukich Place BALDIVIS WA 6171	Fully support this development. It will be good to have another shopping centre close by as Baldivis and Secret Harbour are getting too busy. I hope though that the intersection at Sixty Eight/Eighty Rd - where there have already been 4 fatalities - is going to be upgraded to make this safe for both vehicles, pedestrians and those using Mother Theresa's BEFORE this application is approved. The increase in URBAN traffic volume will make this very old outdated RURAL intersection even more dangerous. It is currently unfit for purpose and school times are a nightmare. Many local residents have been asking for this intersection to be upgraded for years - it needs to be done before this development is completed.
2. Mr Mark Wilson	27 McDougal Way BALDIVIS WA 6171	McDougal Way be kept as a cul de sac so that people will use the main roads to access the proposed shopping centre.
3. Mrs Lisa P Ingram	9 Chalice Way BALDIVIS WA 6171	I fully support this application, it appears well thought out and caters reasonably well for parking, a significant improvement on other developments. It would be good if it had the support of a primary supermarket like Coles as per the imagery and not just an IGA.
4. Mr Matthew S Brook	54 McDougal Way BALDIVIS WA 6171	McDougal Way Rd continuance onto Arpentuer Drive. Due to the nature of the project it would be requested that McDougal way does not continue through and is blocked off into a culdesac with only walking access. Given the close proximity of entrances to this via other streets and the use as a cut through to the shops this would keep the peace and quiet of this street and safety of our kids.



Submission No.	Submitter Comment	Applicant Response
1	Fully support the development.	Noted.
	Hopes that the intersection of Sixty Eight Road / Eighty Road will be upgraded.	<p>The broader Parkland Heights Local Structure Plan and the accompanying Transport Impact Assessment (TIA) address this matter. The ultimate road network planning for Eighty Road shows that it will deviate at its southern end and terminate at a future intersection with Nairn Drive, controlled by a four-way roundabout. Nairn Drive, as an Integrator A road, will then provide the main connection onto Sixty Eight Road, also controlled by a four-way roundabout.</p> <p>This matter will therefore be resolved as development of the broader Parkland Heights estate progresses and as part of the Nairn Drive extension.</p> <p>The TIA that accompanies this development application demonstrates that trip generation to / from a westerly direction (and Eighty Road beyond) is minimal, with most trips to the Centre using Nairn Drive. The issue raised by the submitter is not directly linked to this proposal and appears to be a pre-existing concern arising from broader traffic movement on the external network.</p>
2 & 4	McDougall Way should be kept as a cul de sac.	<p>The Parkland Heights Local Structure Plan and accompanying TIA show that at ultimate, McDougal Way is planned to connect with Arpenteur Drive as a priority-controlled T-intersection.</p> <p>As demonstrated by the TIA that accompanies this development application, no changes to the external road network or intersections are required, as the road planning for the estate has considered, and is based upon, a Neighbourhood Centre of the size and scale proposed.</p> <p>We understand that the existing cul de sac is an interim traffic management measure which is typical in large estates where subdivision and development are staged.</p>
3	Fully support the application.	Noted.
	It would be good if it had the support of a primary supermarket like Coles.	The desire to attract the support of a primary supermarket i.e. Coles, is the driving factor that has informed the staged approach to development of the Centre, as compared to the ultimate scenario depicted on the approved LDP. Specifically, maximising the number of car bays in

	close proximity to the entrance of the shopping centre at the initial stages of operation is a critical factor in attracting an anchor supermarket to Parkland Heights.
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Hi Marius,

Good afternoon and sincere apology for delayed comments.

DPLH provided comments for this site during the Local development Plan (LDP) amendment application based on regional transport. Please see below comments which are still valid:

- DPLH note that right in / left in / left out (RILILO) crossover on Nairn Drive (ORR) is now endorsed.
- No queue assessment has been provided for the proposed Click & Collect site. This Click&Collect locates very close to the Nairn Dr crossover and likely to impact traffic flows at the full development.
- SIDRA assessment has been undertaken for 2031 and it is unclear when the site will be fully developed. It is recommended to undertake SIDRA assessment for the 10years to the anticipated full-development of the site (possibly for 2041) in accordance with WAPC TIA Guidelines for Individual Developments (Vol 4).
- Swept path to be provided for service vehicle access to/from the proposed Arpenture Drive crossover to the satisfaction of the City

Please let me know if you want to discuss further.

Regards,  
Saikat

**Saikat Mitra**

Senior Planning and Engineering Officer | Strategy and Engagement

Department of Planning, Lands and Heritage

140 William Street, Perth WA 6000

[wa.gov.au/dplh](http://wa.gov.au/dplh) | 6551 9832 | |



The Department acknowledges the Aboriginal people of Western Australia as the traditional custodians of this land, and we pay our respects to their Elders, past and present.

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Chief Executive Officer  
Shire of Rockingham

Email: rebekah.gibbins@rockingham.wa.gov.au  
Marius.LeGrange@rockingham.wa.gov.au

Attention: Marius Le Grange  
Senior Planning Officer

Dear Sir / Madam

**Proposed Development Assessment Panel Application for Parkland Heights  
Neighbourhood Centre - Lot 9014 Sixty Eight Road, Baldivis**

Thank you for your letter dated 7 December 2022 concerning the above proposed Joint Development Assessment Panel (JDAP) development application (DA).

The Department of Education (the Department) has reviewed the information in support of the application for the proposed Neighbourhood Centre and makes the following comments:

Pine View Primary School (Primary School) is located approximately 100m east from the subject site, separated by a major road (Nairn Drive). Given that the Neighbourhood Centre proposal is in close proximity to the Primary School, the Department is to have due regard to the Western Australian Planning Commission's Operational Policy – Planning for School Sites (OP 2.4). One of the requirements of OP 2.4 is to ensure careful consideration is given to the compatibility of land uses to facilitate good health and well-being outcomes.

Subject Proposal

The subject JDAP DA consists of a Town Square, an internal 'main street', supermarkets, various retail/food and beverage outlets with associated car parking. As per the City of Rockingham's correspondence, it is understood that the Service Station/Convenience Store, Specialty Retail and 2 x Fast Food Outlets referenced on the plan(s) are not included in this application. Consequently, the Department recommends the relevant plan(s) be updated to clearly show that these do not form part of the current JDAP DA.

It is evident a liquor shop is nominated on the south-east side of the Neighbourhood Centre. The liquor shop is located approximately 135m west from the Primary School site in full view of the basketball courts and playing field. It is imperative that land uses such as this are positioned in locations where adverse impacts do not result in respect to the health and well-being of occupants. Therefore, the Department recommends swapping the location of the liquor shop away from direct line of sight of the school site.

In terms of the anticipated traffic generated from the proposal, the Department notes that the traffic impact statement indicates minimal traffic and congestion impacts will result from the proposal during peak periods. Therefore, based on the above information the Department has no objections to the subject JDAP DA. However, wishes to raise aspects in relation to the future development that is not part of the subject proposal.



### Future Development

#### *Service Station/Convenient Store*

The proposed Service Station (nominated as a Convenience Store on the proposed plans) is located approximately 110m from the Primary School site. However, as per the provisions of the Environmental Protection Authority's 'Separation Distances between Industrial and Sensitive Land Uses, June 2005' (EPA Guidelines), it is evident service station land use operations should be a minimum distance of 150m or 200m depending on the type of facility.

Service stations by their operational nature may generate a range of emissions of pollutants and safety risks, which if not carefully managed, may adversely impact the health, amenity and wellbeing of occupants of schools. The Department does not support service station land uses in close proximity to public school sites and wishes to reinforce this to the applicant when considering the location of the future service station site.

#### *Fast-food Outlets*

The Department notes there are 2 x Fast Food Outlets proposed approximately 110m from the Primary School. Please be advised that the Department does not support fast food outlets near public school sites as these food outlets may cause unhealthy diets and obesity which are the leading risk factors for death, disease and disability in Western Australia. Refer to Attachment 1 – an 'Evidence brief: food, built environments and obesity, page 1 of 8' published by the Department of Health. In this regard, it is noted that the WA Government's Sustainable Health Review, April 2019 has recognised these issues and has recommended prioritising 'changes to planning laws to limit unhealthy food outlets and to support access to healthy food options, including near schools'.

Should you have any questions in relation to the above, please do not hesitate to contact Joshua Gould, Senior Consultant - Land Planning on 9264 4008 or email [joshua.gould@education.wa.edu.au](mailto:joshua.gould@education.wa.edu.au).

Yours sincerely



Matt Turnbull  
**Manager Land and Property**

31 January 2023



# Evidence brief: food, built environments and obesity

Unhealthy diets, overweight, and obesity are the leading risk factors for death, disease and disability in Western Australia (WA), after tobacco use.<sup>1</sup> Most WA adults (71 per cent) are overweight or obese and one in four WA children are overweight or obese.<sup>2,3</sup> If current trends continue, hospitalisation costs linked to overweight and obesity in WA are set to rise by 80 per cent, to \$610 million by 2026.<sup>4</sup>

Overweight and obesity are closely linked to the environments in which people are born, live, work, learn, play, and age.<sup>5</sup> Today's environment has been referred to as obesity-promoting or 'obesogenic' as it encourages people to consume more energy than their bodies need and to be less physically active,<sup>6</sup> which are drivers of obesity and diet-related disease.<sup>7,8,9</sup>

Our food environments are shaped by food production and supply, food composition, food prices and affordability, nutrition labelling, marketing and promotions, and access to healthy and unhealthy food retail outlets.<sup>10</sup>

Our current food environments promote excess energy intake from cheap, widely available and heavily promoted energy-dense, nutrient-poor and/or highly processed products that should be limited or avoided in a healthy diet.<sup>11</sup> There is also evidence of inequitable access to healthy food outlets both within and outside metropolitan areas.<sup>12,13</sup>

This brief summarises evidence regarding the location, proximity and density of healthy and unhealthy food retail outlets, the impact this has on dietary intake, overweight and obesity, and policy options to address these issues.

## WA policy context

The Sustainable Health Review (SHR) is a 10 year blueprint for the WA health system that emphasises the importance of prevention. Recognising that rising rates of overweight and obesity are placing undue burden on the health system, recommendation 2a of the SHR is to halt the rise in obesity and increase the number of adults who have a healthy weight.<sup>14</sup> A priority for implementation under recommendation 2a is "Changes to planning laws to limit unhealthy food outlets and to support access to healthy food options including near schools".<sup>14</sup> Supporting this, the Western Australian Health Promotion Strategic Framework 2022-2026 includes a strategic direction to "Work across government and key sectors to influence urban planning to ensure urban design and infrastructure promotes and supports healthy eating patterns in line with the Australian Dietary Guidelines, increases local access to healthy food and drink, and reduces children's exposure to unhealthy food outlets."





## What does the evidence say?

The study of the impact of unhealthy and healthy food outlets on dietary intake and health is an evolving field and in recent years, there has been a significant body of evidence collected on the Perth metropolitan area (Perth). A summary of the evidence is provided on the following pages.

### Perth neighbourhoods are dominated by unhealthy food outlets

- Food outlets considered by health professionals to be 'unhealthy' (such as convenience stores, café restaurants and takeaway/fast food outlets) were present in greater numbers than healthy food outlets (such as supermarkets/greengrocers) in both established and newly developed neighbourhoods from 2004 - 2011.<sup>12</sup>
- Between 2005 and 2010, cross-sectional data showed that within 3 km of the average Perth home, there were 28 fast food outlets and only 10 healthy food outlets.<sup>15</sup>
- Between 2005 and 2010, for every 1,000 people in Perth there were 1.4 fast food outlets compared to 0.5 healthy food outlets.<sup>15</sup>
- Between 2004 and 2011, the number of unhealthy food outlets increased more than the number of healthy food outlets in both established and newly developed Perth neighbourhoods.<sup>12</sup>

### Areas of lower relative socioeconomic advantage have more unhealthy food outlets

- There were significantly fewer supermarket/greengrocers and a lower proportion of healthy food outlets in areas of low socioeconomic advantage compared to areas of high socioeconomic advantage, in newly developed neighbourhoods between 2004-11.<sup>12</sup>
- Between 2004 and 2011, established neighbourhoods had more unhealthy food outlets in closer proximity to the home in areas of lower socioeconomic advantage compared with higher socioeconomic areas.<sup>12</sup>
- The density of fast food outlets and the 'top 4' fast food chains was greater in areas with more relative socioeconomic disadvantage in 2018-19.<sup>16</sup>
- In 2018-2019, with each increasing level of relative socioeconomic advantage the number of fast food outlets decreased by 6 per cent and the number of 'top 4' fast food chains decreased by 10 per cent.<sup>18</sup>



### More unhealthy food outlets are located closer to the home than healthy food outlets

- More unhealthy food outlets were located closer to home than healthy food outlets in both established and newly developed Perth neighbourhoods studied between 2004 and 2011.<sup>12</sup>
- Between 2005 and 2010, 41 per cent of children had at least one unhealthy food outlet within 800 m of their home.<sup>15</sup>

- Between 2005 and 2010, the average distance from a person's home to a fast food outlet was around 1.3 km, compared to 1.5 km to a healthy food outlet.<sup>15</sup>

It should be noted that people purchase and/or consume food and drink in a variety of outlets located around places they work, learn and recreate. Limited research has been undertaken to assess the impact of food outlets away from the place of residence.

## **Unhealthy food outlets are located close to schools**

### **Studies during 2017-2019 show that:**

- Perth schools had an average of 1.8 fast food outlets located within 400 m; 5.7 fast food outlets within 800 m; and 8.1 fast food outlets within 1 km.<sup>16</sup>
- 86 per cent of Perth schools had at least one fast food outlet located within 1 km.<sup>16</sup>
- 11 per cent of Perth schools had at least one of the 'top 4' fast food chains within 400 m; 32 per cent had one within 800 m; 41 per cent had one within 1 km.<sup>16</sup>
- Perth secondary schools were significantly more likely than primary schools and K-12 schools to have at least one fast food outlet within 1 km.<sup>16</sup>
- An increase in the number of 'top 4' fast food chain outlets within 400 m, 800 m and 1 km of a school was significantly associated with an increase in the frequency of secondary school students purchasing unhealthy (discretionary) foods from food outlets near their school.<sup>16, 17</sup>
- 45 per cent of secondary school students surveyed (n=2389) purchased discretionary foods from food outlets near their school once a week or more.<sup>17</sup>
- Schools located in lower socioeconomic areas had a significantly higher number of fast food outlets within 400 m and 'top 4' fast food chain outlets within 400 m and 1 km, than schools located in higher socioeconomic areas.<sup>16</sup>

## **Accessibility to food outlets has an impact on dietary intake and obesity**

- Australian evidence is mixed in relation to the neighbourhood density and proximity of supermarkets and obesity however, several international and local studies suggest a lower likelihood of obesity is linked with the presence of supermarkets.<sup>19, 20, 21</sup>
- The number of healthy food outlets within 800 m of home is consistently associated with a decreased risk of children being overweight or obese.<sup>15</sup>
- Locating healthy food outlets within 800 m of home<sup>22</sup>, school, and work increases healthy food intake.<sup>23</sup>
- Living in an area with a greater proportion of healthy food outlets is associated with healthy food intake,<sup>6</sup> healthier purchases, and the consumption of healthier items, particularly vegetables.<sup>19</sup>
- Relocating to an area with a greater percentage of healthy food outlets near the home is significantly associated with an increased intake of fruit and vegetables.<sup>24</sup>
- Moving to a new residential development with a higher number of unhealthy food outlets (convenience stores and café restaurants) near the home is significantly associated with an increased intake of unhealthy food.<sup>24</sup>
- Over time, diets become healthier as the percentage of healthy food outlets near the home increases.<sup>25</sup>



- A 2018-19 study of fast food outlets in Perth found some evidence of relationships between fast food outlets and 'top 4' chain fast food outlet availability near homes, vegetable intake, and body mass index.<sup>16</sup>

## Accessing healthy food is more difficult in rural and remote areas

- In rural and remote areas, transport challenges, inadequate supply, poor variety and low quality of fresh food, and high prices, means that fresh and healthy food is not always available in more remote food outlets, making it difficult for people to access a healthy diet.<sup>26, 27</sup>

## Improved public transport access and walkability to healthy food outlets promotes healthy eating

- Not having access to a car can be a barrier to accessing healthy food.<sup>25</sup>
- Locating healthy food outlets close to where people live, and along public transport routes can reduce barriers to accessing healthy food.<sup>20</sup>
- Improving public transport access and providing safe connected walking and cycling paths and networks allow people to more easily access healthy food outlets.<sup>20</sup>



## Good practice

The literature identifies a range of strategies for use across government that can increase access to healthy food and reduce access to unhealthy food. These strategies have been drawn from evidence and expert opinions. Some of the key strategies are listed below.

- Embed healthy food environments as a key objective and planning mechanism in planning policies and legislation.<sup>28 - 31</sup>
- Change planning laws, zoning restrictions and land use policies and strategies to limit unhealthy food outlets and to support access to healthy food options, including near schools.<sup>14, 32, 33</sup>
- Implement restrictions on opening hours of unhealthy food outlets near schools.<sup>35</sup>
- Provide economic or other incentives for food outlets selling predominantly healthy foods, including near schools.<sup>37</sup>
- Implement policies to ensure menus provide healthier options and/or that healthier options are the default option.<sup>32</sup>
- Provide a variety of fresh and nutritious food outlets such as supermarkets and grocery stores within walking distance of where people live and near public transport, walking and cycling routes.<sup>38 - 41</sup>
- Ensure healthy food outlet positioning is competitive and well balanced with other food outlets.<sup>31</sup>
- Co-locate healthy food outlets with other key destinations to facilitate multiple activities as part of one trip e.g. within activity centres and near schools.<sup>30, 31</sup>

- Take policy action in remote communities and their community stores to improve availability of healthy foods and limit availability and sales of unhealthy foods<sup>32</sup> e.g. transport subsidies, incentives for store owners.
- Provide economic or other incentives to support the development of supermarkets in food deserts.<sup>34, 35</sup>
- Use zoning and/or land use policies to establish and encourage farmers markets and community-based gardens to improve local access to fresh produce.<sup>34, 42, 43</sup>
- Facilitate healthy mobile food vendors and other innovative nutritious food retail and distribution initiatives, particularly in areas underserved with fresh food stores e.g. mobile vendors or farmers markets selling fresh fruit, vegetables or other produce.<sup>23, 44</sup>

## Conclusion

Evidence for a link between exposure to unhealthy food environments and poor diet is accumulating.<sup>9, 39, 45</sup> Unhealthy food environments can adversely affect food consumption and be a driver of obesity and diet-related chronic diseases such as type 2 diabetes, cardiovascular disease, and some cancers. Improving community food environments is an equitable approach to support consumers to make healthier food and beverage choices and reduce their risk of obesity and chronic diseases.

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16 February 2023

City Of Rockingham  
PO Box 2142  
ROCKINGHAM WA 6967

Attention of: Mr Marius Le Grange

**Re: Lot 9014 Sixty Eight Rd - Parklands Heights N/Centre DAP**

Thank you for the opportunity to comment on this proposal.

The proposed development does not appear to affect Water Corporation assets and the site is serviced with water and wastewater reticulation.

This proposal will require approval by our Building Services section prior to the commencement of works. Infrastructure Contributions and fees may be required to be paid prior to approval being issued.

For further information about building applications, please follow this link:

<https://www.watercorporation.com.au/Developing-and-building/Building/Lodging-a-building-application>

Should you have any queries, please do not hesitate to contact the Enquiries Officer.

Daniel Lawrence  
Senior Planner  
DEVELOPMENT SERVICES



5

### Department of Education

Amended plans should be provided that clearly show aspect that are not proposed as part of the development application.

Amended plans have been submitted with the City, clearly showing that the application does not seek approval of the service station and fast food pad sites. They are shown for information purposes only to enable a holistic assessment of the Stage 1 proposal.

The liquor shop will be visible from the school and should be relocated so that it is not directly visible from the school.

The tenancy in question is north facing, with its primary orientation and signage to the main street. The subject primary school is located to the east. The side elevation that may be temporarily visible from the school will comprise a solid wall with a small corner element of glazing and will not obviously present as a liquor store from that perspective. Notwithstanding, development of the commercial site on the opposite side of Nairn Drive in the future will screen views of the shopping centre from the school and resolve this issue.

The suitability of the small liquor store within its locational context will be considered as part of the liquor license application in accordance with the *Liquor Control Act 1988*.

The service station should be a minimum distance from the primary school site.

The service station does not form part of this development application and is shown for information purposes to enable the holistic consideration of the Stage 1 development application.

The service station will be subject to a future development application based on the specifics of the proposal, which can only be confirmed by the future proponent. Compliance with the relevant planning framework will need to be demonstrated as part of the future development application.

The Department does not support fast food outlets near public school sites.

The fast food sites do not form part of this development application and are shown for information purposes only.

6	<u>Department of Planning, Lands and Heritage</u>	
	Nairn Drive intersection is now endorsed.	Noted.
	No queue assessment has been undertaken for the click and collect.	<p>Click and collect does not attract vehicles in the same manner as other parking areas. The supermarket operator manages the allotted times where customers can pick up groceries based on operational constraints. For example, only a limited number of pickups can be facilitated at any one time. Customers do not have the option of arriving and queuing on a whim, as their pickup time must be confirmed in advance. The 6 designated click and collect bays are proposed to accommodate typical supermarket operations and are informed by the requirements of Coles. Management of the click and collect service by the supermarket will avoid queuing on main street making the matter redundant.</p> <p>Notwithstanding the above, there is approximately 30m separation between the main street and the edge of the nearest click and collect bay, providing adequate contingency for up to 5 vehicles to queue should the need ever arise.</p>
	SIDRA assessment has been undertaken for 2031 and it is unclear when the site will be fully developed. It is recommended to undertake SIDRA assessment for the 10years to the anticipated full-development of the site (possibly for 2041) in accordance with WAPC TIA Guidelines for Individual Developments (Vol 4).	<p>This is a Stage 1 development application and the supporting TIA reflects the anticipated development timeframe. The typical condition on a development approval issued by the JDAP requires development to commence within 4 years of the approval date, providing certainty regarding the timeframe to develop.</p> <p>Subsequent stages of development not included in the traffic modelling for the current application will require their own TIA. The future TIA's will need to reflect any changes to traffic conditions and volumes.</p> <p>It should be noted that that the DPLH provided comments on the Local Development Plan and did not raise the SIDRA as an issue. Preparation of the DA was subsequently guided by the LDP. In their submission on the LDP, the DPLH confirmed that Nairn Drive traffic volumes in 2041 are not modelled to increase beyond the volumes forecast for 2031. SIDRA modelling to 2041 is therefore unnecessary as traffic volumes on the external road network are not modelled to increase beyond 2031 levels in any case.</p>



	Swept path to be provided for service vehicle access to/from the proposed Arpenteure Drive crossover to the satisfaction of the City.	A swept path diagram has been submitted to the City.
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# Parkland Heights, Baldivis - Neighbourhood Centre Stage 1 Development

## Transport Impact Assessment

PREPARED FOR:  
Rockingham Park Pty Ltd

February 2023



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# 1 Introduction

This Transport Impact Assessment (TIA) relates to a proposed development application for Stage 1 of the Parkland Heights Neighbourhood Centre in Baldvis, in the City of Rockingham.

The subject site is located on the western side of Nairn Drive between Furnivall Parade and Chelsea Way / Arpenteur Drive, as shown in **Figure 1**.



**Figure 1: Location of the subject site**



As part of the development, it is proposed to provide a right in / left in / left out (RILILO) crossover on Nairn Drive on the eastern side of the site, a full movement driveway on Furnivall Parade on the northern side of the site and full movement driveway crossovers on Arpenteur Drive on the western and southern sides of the site.

This TIA will estimate the trip generation and distribution of the proposed development and will assess the impact of the proposed development traffic on the surrounding roads.

The key issues that will be addressed in this report include the traffic generation of the proposed development, establishing the resultant traffic pattern on the surrounding road network and capacity analysis of the proposed development's crossovers and the existing roundabouts on Nairn Drive adjacent to the subject site.

## 2 Existing Situation

### 2.1 Existing Land Use

The subject site is currently vacant land located near the centre of the Baldivis Heights Local Structure Plan (LSP). Subdivisional development has commenced in the northwest quarter of this LSP area abutting Eighty Road. The LSP area is abutted on the northern side by the existing subdivision known as “The Ridge” and by “The Dales” and “Avalon at Baldivis” estates to the east, as can be seen in **Figure 1**.

The Pine View Primary School is located about 70m east of Nairn Drive, south of Regency Avenue, within this LSP area. A vacant development site about 40m to 60m wide runs along the eastern side of Nairn Drive south of Regency Avenue, so the school site does not directly abut Nairn Drive, as shown in **Figure 2**.



**Figure 2: Existing land use and roads**



## 2.2 Existing Road Network

The existing road network in the surrounding area is illustrated in **Figure 3**, which shows the current classification of roads in the Main Roads WA functional road hierarchy.



**Figure 3: Existing road network and road hierarchy**

**Nairn Drive** is constructed as a 4-lane, dual carriageway road with a 6m median and 1.5m on-road cycle lanes. 2.5m shared paths are provided on both sides of the road in the vicinity of the subject site.

Nairn Drive is currently classified as a Local Distributor in the Main Roads WA functional road hierarchy, but is planned as an Integrator Arterial the LSP and is already constructed to Integrator A standard. The default built up area speed limit of 50km/h currently applies on this section of Nairn Drive within the LSP area but on other sections further north (north of the LSP area boundary) a 70km/h posted speed limit applies.

**Furnivall Parade** is constructed as a 2-lane divided road with a 3m median and 1.5m on-road cycle lanes and parallel parking bays indented in the verge on both sides in this vicinity. 2.5m shared paths are provided on both sides of the road in the vicinity of the subject site.

Furnivall Parade is currently classified as an Access Road in the Main Roads WA functional road hierarchy, but is planned as a Neighbourhood Connector A the LSP and is already constructed to that standard. The default built up area speed limit of 50km/h applies on this road.

**Arpenteur Drive** is classified as a Local Distributor on the sections that have been constructed north of Furnivall Parade and further north of the LSP area. The section of Arpenteur Drive on the western side of the Subject Site has not yet been constructed but the section abutting the southern boundary of the site is constructed as a single carriageway, 2-lane road with 7.4m width between kerbs. It currently has a 2m path on the southern side only. The default built up area speed limit of 50km/h applies on this road.

## 2.3 Existing Traffic Volumes

The City of Rockingham have provided the following traffic count information on roads in the surrounding area, although no traffic counts are currently available adjacent to the subject site.

- Arpenteur Drive (south of Ridge Boulevard) 1,146vpd (April 2019)
- Regency Avenue (west of Gareth Land) 298vpd (July 2018)
- Nairn Drive (north of Ridge Boulevard) 6,030vpd (April 2022)

The Main Roads WA website provides a 2020/21 traffic count on Eighty Road north of Sixty Eight Road, which recorded average weekday traffic flows of 3,325 vehicles per day with 7.4% heavy vehicles.

## 2.4 Public Transport Access

The existing bus service in the Baldivis area includes routes 564 and 565 from Warnbro station, as shown in **Figure 4**. Route 564 currently terminates at Ridge Boulevard approximately 450m north of the subject site and route 565 passes to the east of the LSP area on Smirk Road, approximately 750m east of the subject site. Route 565 deviates to Stockland Baldivis Shopping Centre during business hours (typically 9am to 5pm) on all days of the week. Both services operate hourly on all days with higher frequency of service for peak direction travel during weekday peak hours.



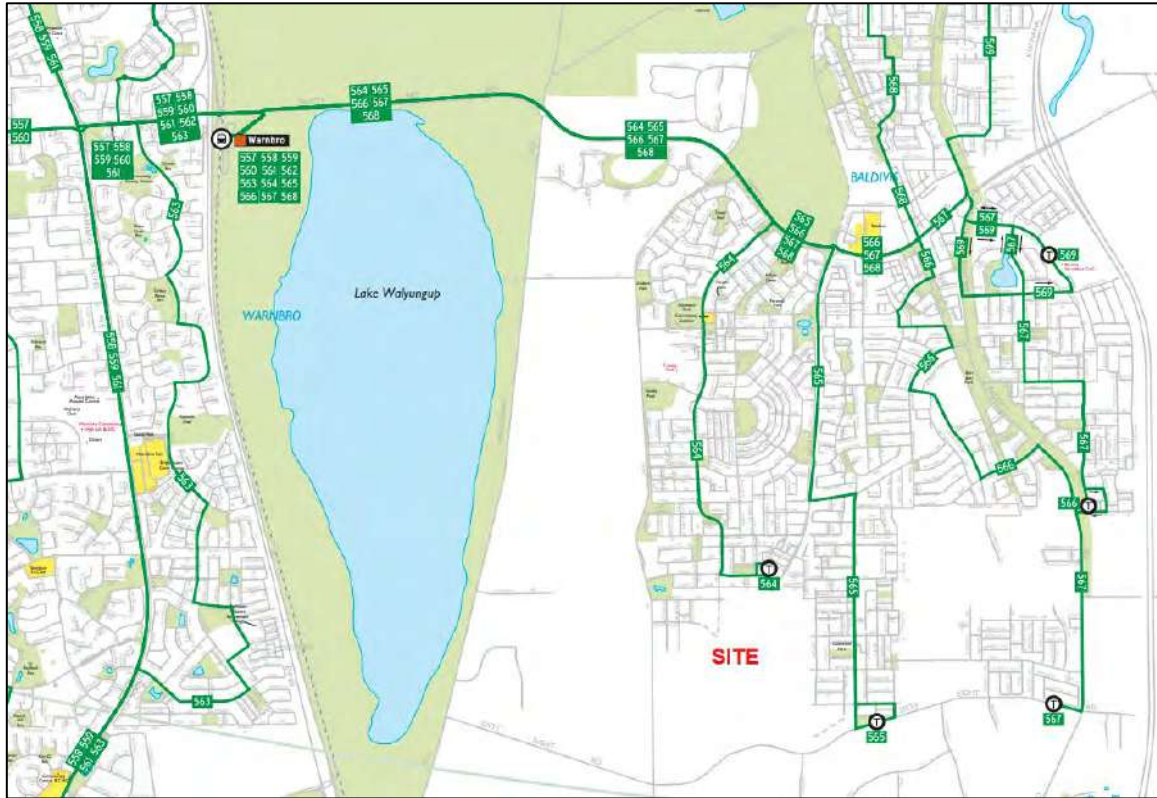


Figure 4. Existing bus routes (source: Transperth)

## 2.5 Pedestrian and Cyclist Facilities

Shared paths are provided on both sides of Nairn Drive and Furnivall Parade, and on the southern side of Chelsea Way / Arpenteur Drive opposite the southern boundary of the site. Pedestrian crossing opportunities with refuge islands are available at each of the roundabouts at the southeast, northeast and northwest corners of the site and midblock on Nairn Drive adjacent to the subject site, as can be seen in **Figure 2**.

As noted in section 2.2 there are also 1.5m on-road cycle lanes provided on Nairn Drive and Furnivall Parade adjacent to the subject site.





**Table 1: Proposed land use**

Land Use	Floor Area
Supermarket	5,255 m <sup>2</sup>
Specialty stores	1,306 m <sup>2</sup>
Food & Beverage	1,109 m <sup>2</sup>
Fast Food	736 m <sup>2</sup>
Convenience (petrol station with 6 vehicle fuelling positions)	216 m <sup>2</sup>
Liquor	200 m <sup>2</sup>
Kiosk	25 m <sup>2</sup>
Future expansion	550 m <sup>2</sup>
<b>Total</b>	<b>9397 m<sup>2</sup></b>

## 3.2 Proposed Access Arrangements

The proposed access system for the stage 1 development comprises:

- Crossover 1: a right in / left in / left out driveway crossover on Nairn Drive;
- Crossover 2: a full movement driveway crossover on Furnivall Parade;
- Crossover 3: a full movement driveway crossover on Arpenteur Drive on the southern frontage of the subject site used mainly by staff and service vehicles; and
- Crossover 4: a full movement driveway crossover on Arpenteur Drive.

The main circulation roadway through the site forms a L-shape from Crossover 1 at Nairn Drive in the east to Crossover 2 at Furnivall Parade in the north.

## 4 Changes to Surrounding Transport Networks

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Full development of the Parkland Heights LSP area will include construction of Nairn Drive southwards to connect to Eighty Road at the existing Eighty Rd / Sixty Eight Rd intersection. This will complete this arterial road link from Safety Bay Road to Sixty Eight Road and will take over that arterial route function from the corresponding section of Eighty Road.

Eighty Road will be realigned north of Sixty Eight Road to connect at right angles to Nairn Drive about 200m north of Sixty Eight Road and the current alignment immediately north of Sixty Eight Road will be closed off. This will reinforce the arterial route function of Nairn Drive northwards through Baldivis past the planned Parkland Heights Neighbourhood Centre.



## 5 Integration with Surrounding Area

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The Parkland Heights Neighbourhood Centre is an integral component of the surrounding Parkland Heights Local Structure Plan. It is appropriately located adjacent to the main arterial route (Nairn Drive) through this precinct and well located to serve the local catchment area in this southwestern portion of Baldivis.

## 6 Hours of Operation

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The proposed development is primarily a neighbourhood shopping centre and, as such, it would be anticipated to be open during normal retail trading hours, 7 days per week.

The two fast food outlets would typically be open until later in the evening than the main shopping centre and the petrol station / convenience store would potentially operate 24 hours per day if warranted by the volume of passing trade on Nairn Drive.



## 7 Traffic Assessment

### 7.1 Assessment Period

An assessment year of 2031 has been adopted for this transport impact assessment, which is consistent with the traffic analysis undertaken for the *Parkland Heights Neighbourhood Centre LSP Amendment Transport Impact Assessment* report (December 2018).

The current analysis builds upon the work undertaken for that LSP TIA report and therefore the 2031 weekday AM and PM peak hour operation of key intersections and driveway crossovers along Nairn Drive are assessed in this report. The busiest period for combined road network and development traffic would typically occur during the weekday PM peak period.

### 7.2 Traffic Generation

The traffic volume anticipated to be generated by the proposed shopping centre has been calculated using formulae provided in the *New South Wales Guide to Traffic Generating Developments* (2002). Those formulae take account of different types of land use within the proposed development (supermarket, specialty stores, office/medical, etc.) to provide a more accurate estimate of traffic generation for the particular mix of land uses that are actually proposed.

The land use components for this calculation are as follows:

- $A(S)$  = slow trade =  $0m^2$
- $A(F)$  = faster trade =  $0m^2$
- $A(SM)$  = supermarket =  $5255m^2$
- $A(SS)$  = specialty shops =  $3926m^2$
- $A(OM)$  = office / medical =  $0m^2$

The service station's  $216m^2$  floor area (convenience store) is not included in these floor areas as the service station traffic generation is calculated separately, as discussed below.

In the following formulae each area is input as per  $1000m^2$  (i.e.  $5255m^2$  is input as 5.255 in these calculations).

Thursday PM peak hour traffic generation

$$= 20A(S) + 51A(F) + 155A(SM) + 46A(SS) + 22A(OM) = 995vph$$

The NSW guide does not provide AM peak hour traffic formulae for shopping centres but the *ITE Trip Generation Manual* does provide weekday AM and PM peak hour trip rates for shopping centres. The ITE trip rates indicate that shopping centres generate approximately 25% as much traffic during the road network AM peak hour compared

to their traffic generation during the road network PM peak hour. Accordingly, it is anticipated that the proposed stage 1 development will generate approximately 255vph during that AM peak period.

The *ITE Trip Generation Manual* also provides an indication of directional split of this shopping centre traffic generation. It is typically 62% in / 38% out during the AM peak hour but more evenly split during the PM peak hour.

Accordingly, the following traffic generation and directional split are anticipated for the proposed stage 1 development shopping centre (excluding the service station and its convenience store, as discussed below):

- AM Peak Hour: 249vph (154 in / 95 out)
- PM Peak Hour: 995vph (498 in / 497 out)

Fast food outlets are listed as included in the specialty shops component in the NSW formulae but service stations are not specifically mentioned. Accordingly, traffic generation for the service station with convenience store has been calculated separately using trip rates from the *ITE Trip Generation Manual* (11<sup>th</sup> Edition, land use 945, convenience store / gas station). It indicates trip rates of 16.06 vph per vehicle fueling position during the road network AM peak and 18.42 during the road network PM peak, with 50/50 directional split during both periods. Therefore, the traffic generation of the service station with 6 vehicle fueling positions would be 96vph during the AM peak and 111vph during the PM peak. However, this does not make any allowance for reciprocity (i.e. a significant number of service station trips will also visit other uses on site such as fast food) and different peak days for the different land uses (service stations peak on Tuesday due to fuel pricing whereas shopping centres peak later in the week). Accordingly, a 50% discount has been applied to take into account reciprocity and the reduced traffic generation of a service station during the shopping centre peak days.

The overall traffic generation for the proposed Stage 1 development (including the service station with convenience store) is as follows:

- AM Peak Hour: 297vph (178 in / 119 out)
- PM Peak Hour: 1050vph (525 in / 525 out)

Approximately 20% of the shopping centre traffic is anticipated to be pass-by trips by vehicles that would normally be travelling past this site on Nairn Drive as part of another journey (eg. a person who visits the shopping centre on their way home from work), based on guidance in the *NSW Guide to Traffic Generating Developments*. The remaining 80% of traffic generated by the shopping centre are referred to as primary trips.

Service stations are more reliant on passing trade. The *ITE Trip Generation Handbook* (3<sup>rd</sup> Edition) indicates that typically around 60% of service station traffic generation consists of pass-by trips.



## 7.3 Traffic Distribution

Traffic distribution was modelled for the overall LSP area and for this Neighbourhood Centre in the *Parkland Heights Neighbourhood Centre LSP Amendment Transport Impact Assessment* report (December 2018). Modelled total daily traffic flows to/from the Neighbourhood Centre were shown in Figure C6 in that report.

Traffic distribution for the primary trips generated by this Neighbourhood Centre has therefore been determined by analysis of the modelled traffic flows in Figure C6 of that report. The anticipated distribution of primary trips is summarised in **Table 2**.

**Table 2: Traffic distribution**

Approach Road	Percentage of Primary Trips
Nairn Drive north	53.8%
Arpenteur Drive north	6.7%
Furnivall Parade west	1.8%
Chelsea Way west (etc.)	1.9%
Nairn Drive south	15.6%
Chelsea Way east	7.0%
Regency Avenue east	13.2%

Pass-by trips are assumed to be mainly passing the site on Nairn Drive and have been calculated as half coming from northbound and half from southbound Nairn Drive traffic passing the subject site.

Traffic flows generated by the proposed Stage 1 development have been manually assigned on the driveway crossovers and adjacent road network in accordance with the trip distribution discussed above. The resultant AM and PM peak hour traffic flows generated by the proposed Stage 1 development are shown in **Figure 6**.

Due to the relatively low traffic flows assigned at the southern and western driveway crossovers, minor changes in the traffic distribution assumptions may result in the western crossover (#4) carrying more traffic than the southern crossover (#2) but both would still be less than the eastern (#1) and northern (#2) crossovers. This is addressed through a sensitivity test in the intersection analysis for Crossover 4 in section 7.5.

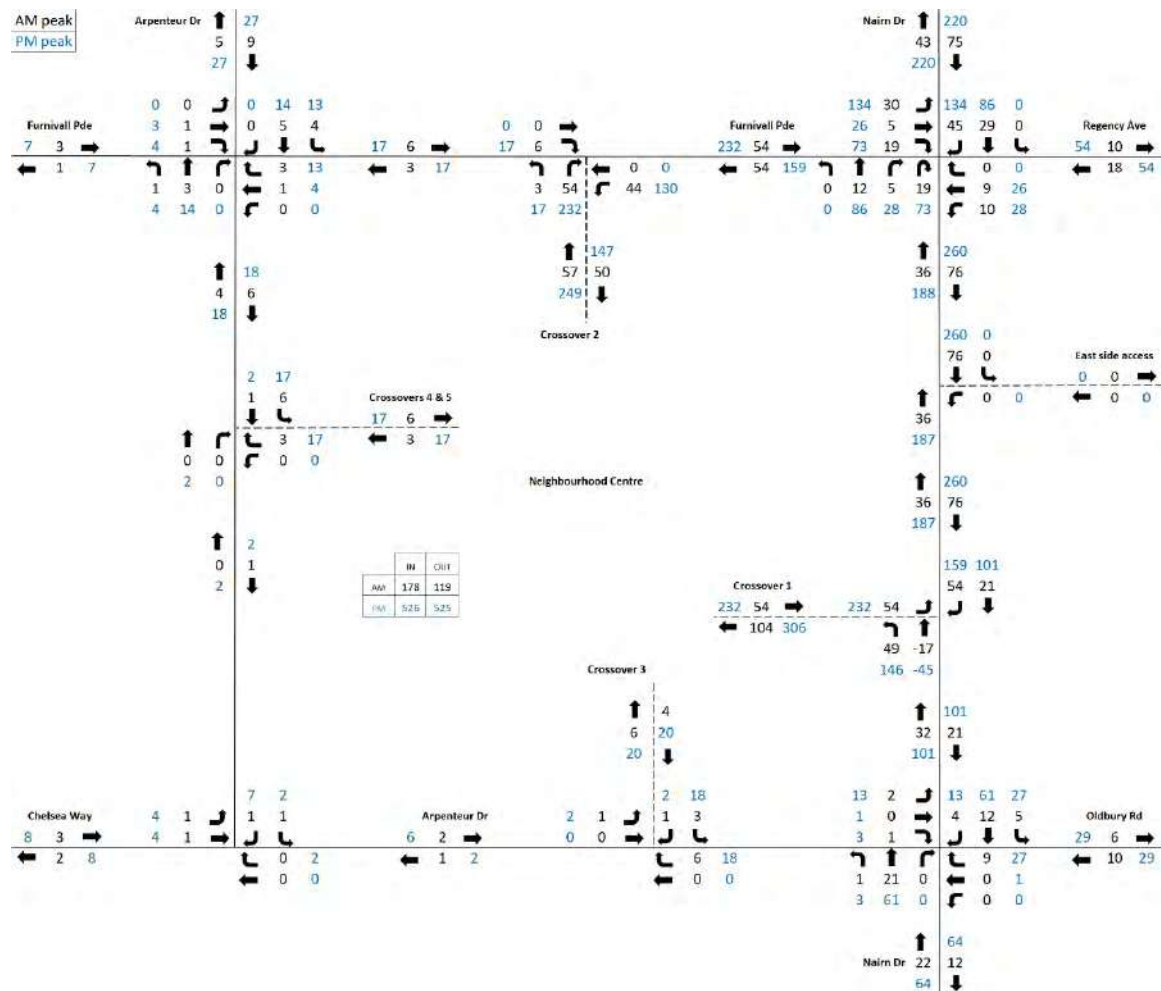


Figure 6: Peak hour traffic flows generated by Neighbourhood Centre Stage 1



## 7.4 Total Traffic Flows

Total daily traffic flows on the LSP area road network were documented in the *Parkland Heights Neighbourhood Centre LSP Amendment Transport Impact Assessment* report (December 2018). Those total daily traffic flows were for a full development scenario for the whole of Baldivis, including the Parkland Heights LSP area, and are nominally referred to as 2031 traffic projections although timing of full development of this area cannot be accurately predicted at this stage.

Weekday AM and PM peak hour traffic flows were derived in that report for each of the Nairn Drive intersections from those modelled 2031 daily traffic flows by applying peak hour directional splits. Peak hour traffic to/from Baldivis residential areas was based on the directional splits implied by the residential trip rates in the *WAPC Transport Impact Assessment Guidelines* (AM 25% in / 75% out and PM 62.5% in / 37.5% out) and external through traffic on Nairn Drive was based on observed directional splits on Eighty Road.

Arpenteur Drive daily traffic is significantly less than on Nairn Drive or the eastern end of Furnivall Parade and peak hour traffic flows on this road were not calculated in the LSP TIA report. Daily traffic flows of only 1700vpd are indicated in the LSP TIA report. Development traffic will also be minimal on this road so it generally has not been assessed further in this TIA report.

The calculated Stage 1 development traffic flows have therefore been manually added to the 2031 base traffic flows to determine 2031 AM and PM peak hour traffic flows for analysis of the Nairn Drive intersections adjacent to the Neighbourhood Centre site and the proposed two main driveway crossovers for this development. The resultant 2031 AM and PM peak hour total traffic flows with the proposed Stage 1 development are shown in **Figure 7**.

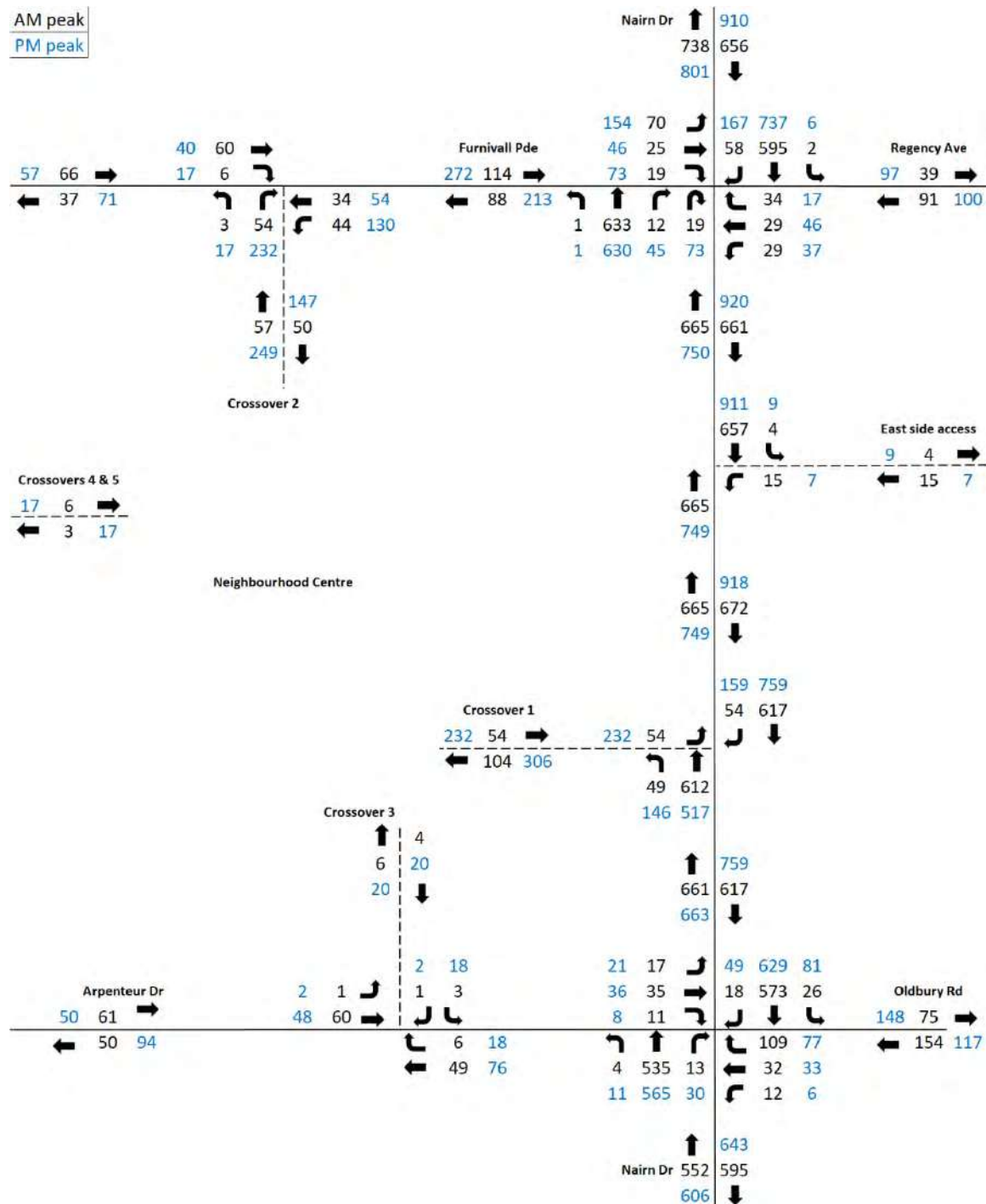


Figure 7: 2031 Peak hour total traffic flows with Neighbourhood Centre Stage 1







## 7.5 Intersection Analysis

SIDRA Network analysis has been undertaken for the subject site crossovers on Nairn Drive and Furnivall Parade, the Nairn Dr / Furnivall Pde / Regency Ave roundabout and the Nairn Dr / Arpenteur Dr / Oldbury Rd roundabout to confirm satisfactory intersection operations under the modelled 2031 AM and PM peak hour traffic flows shown in **Figure 7**.

For this assessment, relevant heavy vehicle parameters in SIDRA were updated in accordance with current Main Roads WA guidelines.

The SIDRA package is a commonly used intersection-modelling tool by traffic engineers for all types of intersections. SIDRA outputs are presented in the form of Degree of Saturation, Level of Service, Average Delay and 95% Queue. These items are defined as follows:

-  **Degree of Saturation** is the ratio of the arrival traffic flow to the capacity of the approach during the same period. The Degree of Saturation ranges from close to zero for varied traffic flow up to one for saturated flow or capacity.
-  **Level of Service** is the qualitative measure describing operational conditions within a traffic stream and the perception by motorists and/or passengers. In general, there are 6 levels of service, designated from A to F, with Level of Service A representing the best operating condition (i.e. free flow) and Level of Service F the worst (i.e. forced or breakdown flow).
-  **Average Delay** is the average of all travel time delays for vehicles through the intersection.
-  **95% Queue** is the queue length below which 95% of all observed queue lengths fall.

The results of the SIDRA analysis are summarised in **Appendix B**.

The SIDRA Network layout of the intersections and driveway crossovers that have been analysed is shown in **Figure B1** in **Appendix B**.

It should be noted that this SIDRA Network model also includes a left in / left out driveway crossover on the eastern side of Nairn Drive (labelled as east side access), which is consistent with the access arrangement anticipated on that side of Nairn Drive in the *Parkland Heights Neighbourhood Centre LSP Amendment Transport Impact Assessment* report (December 2018).

The SIDRA results for the Nairn Dr / Furnivall Pde / Regency Ave roundabout are shown in Tables B2a (AM peak) and B2b (PM peak). They indicate that this existing dual-lane roundabout would operate at degree of saturation 0.237 in the AM peak and 0.351 in the PM peak. The overall intersection will be at level of service (LoS) A in both peak periods with all movements at LoS A or B indicating very good operation with minimal traffic delays.

The SIDRA results for the Nairn Dr / Arpenteur Dr / Oldbury Rd roundabout are shown in Tables B5a (AM peak) and B5b (PM peak). They indicate that this existing

dual-lane roundabout would operate at degree of saturation 0.205 in the AM peak and 0.253 in the PM peak. The overall intersection will also be at LoS A in both peak periods with all movements at LoS A or B indicating very good operation with minimal traffic delays.

The Nairn Dr / Crossover 1 driveway crossover is proposed to accommodate right in / left in / left out (RILIO) traffic movements. It will have a right turn lane in the Nairn Drive median to allow right turning vehicles to slow and queue within that right turn lane without impeding southbound through traffic on Nairn Drive. A left turn inbound deceleration lane is also included due to the modelled left turn traffic volume in the PM peak, although this has not been required at most other existing intersections along Nairn Drive.

The SIDRA results for this RILIO driveway crossover are shown in Tables B4a (AM peak) and B4b (PM peak). They indicate that this proposed access arrangement would operate at degree of saturation 0.181 in the AM peak and 0.412 in the PM peak. All movements would be at LoS A or B indicating very good operation with minimal traffic delays. The right turn inbound movement only shows a 95% queue length of 1.8 vehicles in the PM peak hour, so the proposed right turn lane in the median will easily accommodate this movement.

The SIDRA results for the Furnivall Pde / Crossover 2 driveway crossover are shown in Tables B1a (AM peak) and B1b (PM peak). They indicate that this proposed access arrangement would operate at degree of saturation 0.052 in the AM peak and 0.239 in the PM peak. All movements would be at LoS A indicating very good operation with minimal traffic delays and minimal traffic queues.

The SIDRA results for the proposed full movement crossover 3 on Arpenteur Drive (south) are shown in Tables B6a (AM peak) and B6b (PM peak). They indicate that this proposed access arrangement would operate at degree of saturation 0.034 in the AM peak and 0.054 in the PM peak. All movements would be at LoS A indicating very good operation with minimal traffic delays and minimal traffic queues.

The SIDRA results for the proposed full movement crossover 4 on Arpenteur Drive (west) are shown in Tables B7a (AM peak) and B7b (PM peak). They indicate that this crossover would operate at degree of saturation 0.057 in the AM peak and 0.067 in the PM peak. All movements would be at LoS A indicating very good operation with minimal traffic delays and minimal traffic queues. As a sensitivity test, an additional analysis has also been undertaken with double the traffic flows turning in and out of crossover 4. This sensitivity test is documented in Table 7c and shows that all movements would still be at LoS A with minimal traffic delays and minimal traffic queues.

## 7.6 Impact on Surrounding Roads

The WAPC Transport Impact Assessment Guidelines (2016) provides guidance on the assessment of traffic impacts:



*“As a general guide, an increase in traffic of less than 10 per cent of capacity would not normally be likely to have a material impact on any particular section of road, but increases over 10 per cent may. All sections of road with an increase greater than 10 per cent of capacity should therefore be included in the analysis. For ease of assessment, an increase of 100 vehicles per hour for any lane can be considered as equating to around 10 per cent of capacity. Therefore, any section of road where the structure plan traffic would increase flows by more than 100 vehicles per hour for any lane should be included in the analysis.”*

From **Figure 6** it can be seen that development traffic flows are only above this threshold on Nairn Drive adjacent to and north of the site and the eastern end of Furnivall Parade. Those locations are already included in the traffic analysis in this report. North of Nairn Drive the PM peak hour traffic flows are 220vph each way, which is approximately 110vph per traffic lane on this 4-lane road. That traffic will quickly disperse on the adjacent side roads and drop below that 100vph per lane threshold, so no further intersection analysis is considered to be warranted.

## 7.7 Impact on Neighbouring Areas

The proposed Neighbourhood Centre is an integral component of this LSP area, so the traffic generated by the proposed development is already factored into the planning for the neighbouring areas in the LSP.

## 7.8 Traffic Noise and Vibration

It generally requires a doubling of traffic volumes on a road to produce a perceptible 3dB increase in road noise. The proposed development traffic will be less than half of the total future traffic on most roads, including Nairn Drive, so will not have a noticeable effect on traffic noise on those roads.

One of the few places where the Neighbourhood Centre traffic will represent more than half of the total future traffic flows is on the eastern section of Furnivall Parade between Nairn Drive and Crossover 2. On this section there would be a noticeable difference in traffic noise if there was no Neighbourhood Centre traffic there. However, it should be noted that the proposed right turn in from Nairn Drive at Crossover 1 actually reduces the amount of Neighbourhood Centre traffic that would use this section of Furnivall Parade if the right turn in at Crossover 1 was not permitted. Nonetheless, Furnivall Parade is planned as a Neighbourhood Connector A road and is a suitable standard of road for the total traffic flows that will use this road, inclusive of the traffic generated by the proposed Neighbourhood Centre.

## 8 Parking

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The proposed site plan at Appendix A documents the proposed parking provision for this Stage 1 development.

The proposed site plan provides a total of 480 parking bays including 13 disabled bays and 6 online ordering bays for the supermarket. In addition, it indicates the potential for a further 100 bays of “interim parking” to be provided on the future development sites along the northern and eastern sides of the neighbourhood centre main street within the site.

With the Stage 1 development floor area of 9,397m<sup>2</sup> NLA, the proposed parking provision of 480 bays (or interim provision of up to 580 bays) would equate to 5.1 (or 6.2) bays per 100m<sup>2</sup> of floor area.

This parking provision would be consistent with WAPC Statement of Planning Policy 4.2 – Activity Centres, which recommends “As a guide, two bays per 100m<sup>2</sup> for showrooms and offices and 4-5 bays per 100m<sup>2</sup> for shops.”

The proposed parking provision is therefore considered sufficient for this proposed development.

## 9 Public Transport Access

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The existing public transport services in the area are described in Section 2.4 of this report. This includes existing bus route 564 on Arpenteur Drive north of the LSP area.

The *Parkland Heights Neighbourhood Centre LSP Amendment Transport Impact Assessment* report (December 2018) provides further information on future bus route planning by the Public Transport Authority including extension of route 564 south from Arpenteur Drive to a new terminus north of Sixty Eight Road.

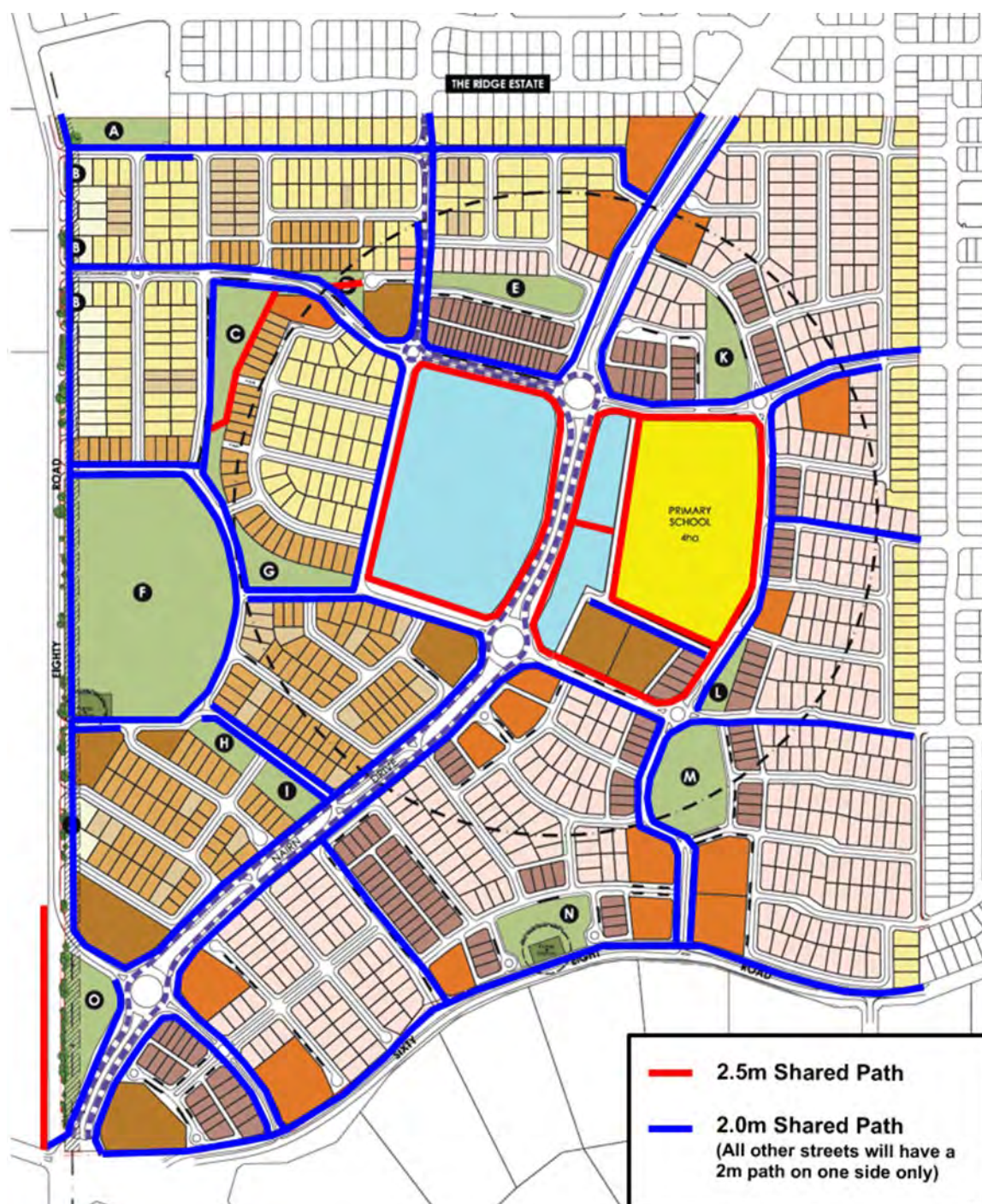
This bus route will therefore pass adjacent to the subject site (shown dotted on Furnivall Parade and Nairn Drive in **Figure 8**) when that future bus route extension occurs.



## 10 Pedestrian and Cyclist Access

Existing pedestrian and cyclist facilities are described in Section 2.5 of this report.

The *Parkland Heights Neighbourhood Centre LSP Amendment Transport Impact Assessment* report (December 2018) provides the following diagram of future pedestrian and cyclist facilities, reproduced here in this report as **Figure 8**.



**Figure 8: LSP area pedestrian and cyclist facilities**



There are currently facilities for pedestrians to cross Nairn Drive at the Nairn Dr / Furnivall Pde / Regency Ave roundabout, at the Nairn Dr / Arpenteur Dr / Chelsea Way roundabout and at a midblock location halfway between those two roundabouts, as can be seen in **Figure 2**.

The proposed right turn lane in the Nairn Drive median will impact upon that midblock pedestrian facility. It would be appropriate to relocate that pedestrian facility to the southern side of the proposed Crossover 1 RILLO driveway crossover, similar to the location of the current pedestrian facility at the Nairn Drive / Pymmes Junction RILLO intersection further north on Nairn Drive, as shown in **Figure 9**.



**Figure 9: Pedestrian facilities location at a RILLO intersection**

Appropriate bicycle parking facilities for visitors and staff and end-of-trip facilities for staff will need to be provided for the proposed development in accordance with the City of Rockingham requirements.

# 11 Conclusions

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This Transport Impact Assessment (TIA) relates to a proposed development application for Stage 1 of the Parkland Heights Neighbourhood Centre in Baldvis, in the City of Rockingham.

The subject site is located on the western side of Nairn Drive between Furnivall Parade and Chelsea Way / Arpenteur Drive.

The proposed access system for the stage 1 development comprises:

- Crossover 1: a right in / left in / left out driveway crossover on Nairn Drive;
- Crossover 2: a full movement driveway crossover on Furnivall Parade;
- Crossover 3: a full movement driveway crossover on Arpenteur Drive on the southern frontage of the subject site used mainly by staff and service vehicles; and
- Crossover 4: a full movement driveway crossover on Arpenteur Drive.

The main circulation roadway through the site forms a L-shape from Crossover 1 at Nairn Drive in the east to Crossover 2 at Furnivall Parade in the north.

The busiest period for combined road network and development traffic would typically occur during the weekday PM peak period when the proposed development is anticipated to generate approximately 1050vph (approximately 525 in / 525 out).

Traffic analysis has been undertaken for weekday AM and PM peak hours for modelled traffic growth to the year 2031, which is consistent with the traffic analysis undertaken for the previous *Parkland Heights Neighbourhood Centre LSP Amendment Transport Impact Assessment* report (December 2018).

The traffic analysis indicates that all of the key intersections and driveways around this site will all operate satisfactorily under the projected future traffic flows.

Shared paths are already constructed on Nairn Drive and Furnivall Parade adjacent to the subject site and are planned in the Local Structure Plan on Arpenteur Drive on the western and southern sides of the site.

The proposed right turn lane in the median of Nairn Drive at the proposed right in / left in / left out driveway (crossover 1) will require relocation of an existing midblock pedestrian facility on Nairn Drive. This facility should be relocated to the southern side of the proposed driveway crossover, where it will also align better with pedestrian access into the proposed neighbourhood centre.

Appropriate bicycle parking facilities for visitors and staff and end-of-trip facilities for staff will need to be provided for the proposed development in accordance with the City of Rockingham requirements.



In conclusion, the findings of this Transport Impact Assessment are supportive of the proposed development.



# Appendix A

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## PROPOSED DEVELOPMENT PLAN





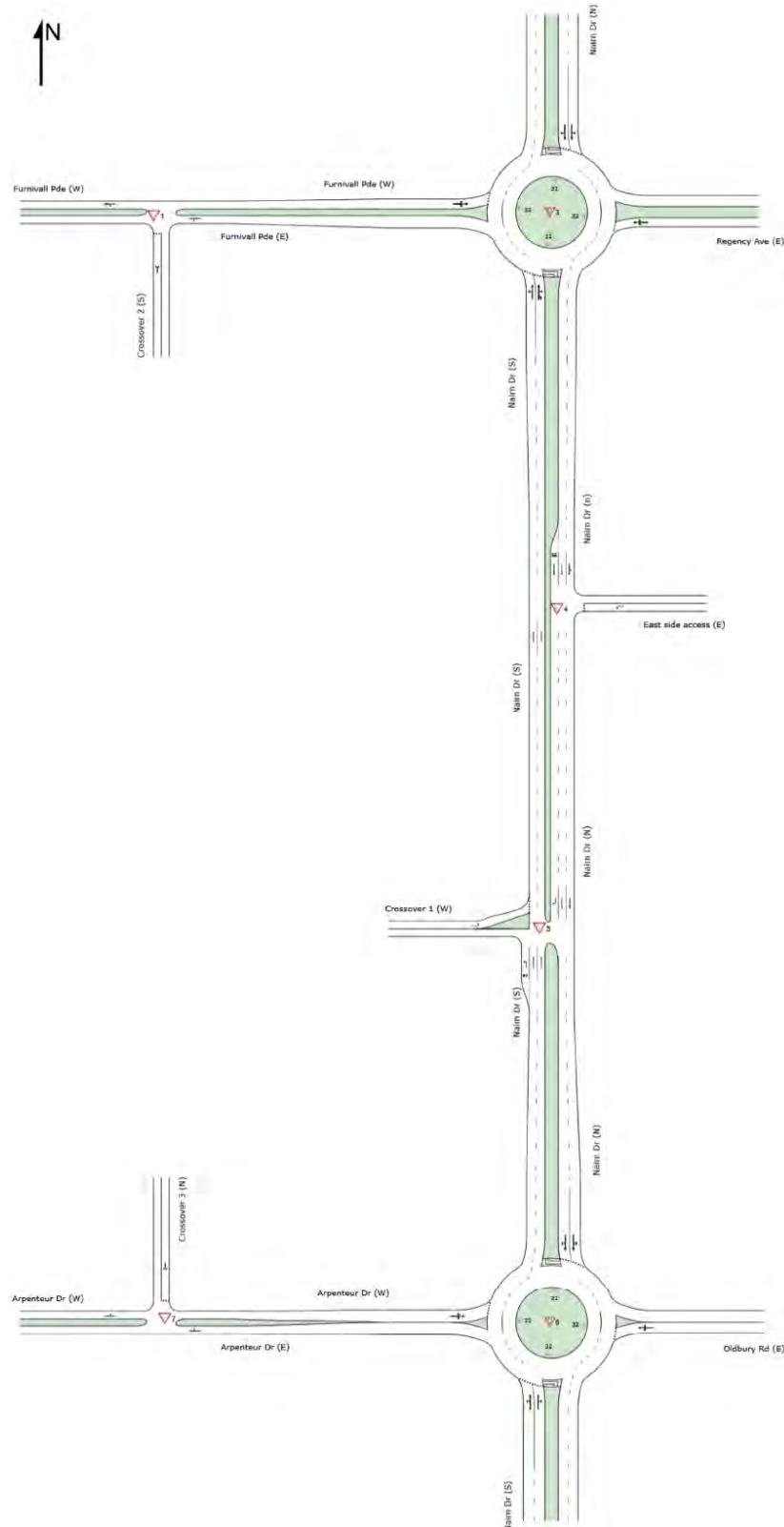
# Appendix B

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## SIDRA Intersection Analysis

Layout pictures are schematic functional drawings reflecting input data. They are not design drawings.

Not to Scale



**Figure B1: Nairn Drive Intersections and Neighbourhood Centre Driveway Crossovers Analysed in SIDRA Network**

**Table B1a. SIDRA results – Furnivall Pde / Crossover 2 intersection – 2031**  
**Weekday AM peak (with Stage 1 development)**

Vehicle Movement Performance														
Mov ID	Turn	DEMAND FLOWS		ARRIVAL FLOWS		Deg. Satn	Aver. Delay	Level of Service	95% BACK OF QUEUE		Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed
		[ Total veh/h	HV %	[ Total HV veh/h	%	v/c	sec		[ Veh. veh	Dist ] m				km/h
South: Crossover 2 (S)														
7	L2	3	3.0	3	3.0	0.052	0.1	LOS A	0.2	1.3	0.19	0.19	0.19	24.0
9	R2	57	3.0	57	3.0	0.052	1.0	LOS A	0.2	1.3	0.19	0.19	0.19	17.7
Approach		60	3.0	60	3.0	0.052	0.9	LOS A	0.2	1.3	0.19	0.19	0.19	18.3
East: Furnivall Pde (E)														
10	L2	46	3.0	46	3.0	0.044	4.6	LOS A	0.0	0.0	0.00	0.31	0.00	35.1
11	T1	36	3.1	36	3.1	0.044	0.0	LOS A	0.0	0.0	0.00	0.31	0.00	41.6
Approach		82	3.0	82	3.0	0.044	2.6	NA	0.0	0.0	0.00	0.31	0.00	38.0
West: Furnivall Pde (W)														
5	T1	63	3.1	63	3.1	0.037	0.0	LOS A	0.0	0.3	0.04	0.05	0.04	45.7
6	R2	6	3.0	6	3.0	0.037	4.8	LOS A	0.0	0.3	0.04	0.05	0.04	37.7
Approach		69	3.1	69	3.1	0.037	0.5	NA	0.0	0.3	0.04	0.05	0.04	44.5
All Vehicles		212	3.0	212	3.0	0.052	1.4	NA	0.2	1.3	0.07	0.19	0.07	34.0

**Table B1b. SIDRA results – Furnivall Pde / Crossover 2 intersection – 2031**  
**Weekday PM peak (with Stage 1 development)**

Vehicle Movement Performance														
Mov ID	Turn	DEMAND FLOWS		ARRIVAL FLOWS		Deg. Satn	Aver. Delay	Level of Service	95% BACK OF QUEUE		Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed
		[ Total veh/h	HV %	[ Total HV veh/h	%	v/c	sec		[ Veh. veh	Dist ] m				km/h
South: Crossover 2 (S)														
7	L2	18	3.0	18	3.0	0.239	0.2	LOS A	0.9	7.0	0.27	0.26	0.27	23.6
9	R2	244	3.0	244	3.0	0.239	1.4	LOS A	0.9	7.0	0.27	0.26	0.27	17.2
Approach		262	3.0	262	3.0	0.239	1.3	LOS A	0.9	7.0	0.27	0.26	0.27	18.0
East: Furnivall Pde (E)														
10	L2	137	3.0	137	3.0	0.105	4.6	LOS A	0.0	0.0	0.00	0.38	0.00	33.6
11	T1	57	3.1	57	3.1	0.105	0.0	LOS A	0.0	0.0	0.00	0.38	0.00	39.9
Approach		194	3.0	194	3.0	0.105	3.3	NA	0.0	0.0	0.00	0.38	0.00	35.5
West: Furnivall Pde (W)														
5	T1	42	3.1	42	3.1	0.034	0.3	LOS A	0.1	0.8	0.19	0.16	0.19	37.2
6	R2	18	3.0	18	3.0	0.034	5.2	LOS A	0.1	0.8	0.19	0.16	0.19	33.4
Approach		60	3.1	60	3.1	0.034	1.7	NA	0.1	0.8	0.19	0.16	0.19	35.6
All Vehicles		516	3.0	516	3.0	0.239	2.1	NA	0.9	7.0	0.16	0.29	0.16	27.6



**Table B2a. SIDRA results – Nairn Dr / Furnivall Pde / Regency Ave roundabout – 2031 Weekday AM peak (with Stage 1 development)**

Vehicle Movement Performance														
Mov ID	Turn	DEMAND FLOWS		ARRIVAL FLOWS		Deg. Satn	Aver. Delay	Level of Service	95% BACK OF QUEUE		Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed
		[ Total veh/h	HV %	[ Total veh/h	HV %	v/c	sec		[ Veh. veh	Dist ] m				km/h
South: Nairn Dr (S)														
1	L2	1	3.1	1	3.1	0.237	5.0	LOS A	1.4	11.1	0.29	0.44	0.29	41.1
2	T1	666	9.1	666	9.1	0.237	5.3	LOS A	1.4	11.1	0.30	0.46	0.30	56.4
3	R2	13	3.1	13	3.1	0.237	11.3	LOS B	1.3	10.8	0.31	0.48	0.31	50.9
3u	U	20	3.1	20	3.1	0.237	14.0	LOS B	1.3	10.8	0.31	0.48	0.31	39.6
Approach		700	8.8	700	8.8	0.237	5.6	LOS A	1.4	11.1	0.30	0.46	0.30	56.1
East: Regency Ave (E)														
4	L2	31	3.1	31	3.1	0.112	3.9	LOS A	0.5	3.4	0.49	0.60	0.49	36.3
5	T1	31	3.1	31	3.1	0.112	4.2	LOS A	0.5	3.4	0.49	0.60	0.49	36.3
6	R2	36	3.1	36	3.1	0.112	9.8	LOS A	0.5	3.4	0.49	0.60	0.49	54.0
Approach		97	3.1	97	3.1	0.112	6.2	LOS A	0.5	3.4	0.49	0.60	0.49	45.9
North: Nairn Dr (N)														
7	L2	2	3.1	2	3.1	0.223	4.9	LOS A	1.2	9.9	0.21	0.41	0.21	55.9
8	T1	626	9.1	626	9.1	0.223	5.2	LOS A	1.2	9.9	0.22	0.44	0.22	56.7
9	R2	61	3.1	61	3.1	0.223	11.1	LOS B	1.2	9.6	0.23	0.48	0.23	55.7
Approach		689	8.6	689	8.6	0.223	5.7	LOS A	1.2	9.9	0.22	0.44	0.22	56.6
West: Furnivall Pde (W)														
10	L2	74	3.1	74	3.1	0.123	3.6	LOS A	0.5	3.9	0.45	0.53	0.45	53.9
11	T1	26	3.1	26	3.1	0.123	3.7	LOS A	0.5	3.9	0.45	0.53	0.45	45.6
12	R2	20	3.1	20	3.1	0.123	9.3	LOS A	0.5	3.9	0.45	0.53	0.45	31.8
Approach		120	3.1	120	3.1	0.123	4.6	LOS A	0.5	3.9	0.45	0.53	0.45	50.9
All Vehicles		1606	7.9	1606	7.9	0.237	5.6	LOS A	1.4	11.1	0.29	0.46	0.29	55.4

**Table B2b. SIDRA results – Nairn Dr / Furnivall Pde / Regency Ave roundabout –  
2031 Weekday PM peak (with Stage 1 development)**

Vehicle Movement Performance														
Mov ID	Turn	DEMAND FLOWS		ARRIVAL FLOWS		Deg. Satn	Aver. Delay	Level of Service	95% BACK OF QUEUE		Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed
		[ Total veh/h	HV %	[ Total veh/h	HV %				[ Veh. veh	Dist ] m				
South: Naim Dr (S)														
1	L2	1	3.1	1	3.1	0.291	5.4	LOS A	1.8	14.9	0.43	0.49	0.43	38.8
2	T1	663	9.1	663	9.1	0.291	5.8	LOS A	1.8	14.9	0.44	0.53	0.44	54.7
3	R2	47	3.1	47	3.1	0.291	11.9	LOS B	1.8	13.8	0.46	0.60	0.46	47.2
3u	U	77	3.1	77	3.1	0.291	14.6	LOS B	1.8	13.8	0.46	0.60	0.46	35.8
Approach		788	8.1	788	8.1	0.291	7.0	LOS A	1.8	14.9	0.44	0.54	0.44	53.5
East: Regency Ave (E)														
4	L2	39	3.1	39	3.1	0.149	4.8	LOS A	0.7	5.2	0.63	0.65	0.63	36.0
5	T1	48	3.1	48	3.1	0.149	5.3	LOS A	0.7	5.2	0.63	0.65	0.63	36.0
6	R2	18	3.1	18	3.1	0.149	10.9	LOS B	0.7	5.2	0.63	0.65	0.63	54.1
Approach		105	3.1	105	3.1	0.149	6.1	LOS A	0.7	5.2	0.63	0.65	0.63	41.4
North: Naim Dr (N)														
7	L2	6	3.1	6	3.1	0.351	5.5	LOS A	2.2	18.0	0.44	0.50	0.44	54.1
8	T1	776	9.1	776	9.1	0.351	5.9	LOS A	2.2	18.0	0.45	0.53	0.45	54.1
9	R2	176	3.1	176	3.1	0.351	12.0	LOS B	2.1	16.9	0.47	0.61	0.47	52.4
Approach		958	8.0	958	8.0	0.351	7.0	LOS A	2.2	18.0	0.45	0.55	0.45	53.8
West: Furnivall Pde (W)														
10	L2	162	3.1	162	3.1	0.318	4.1	LOS A	1.6	12.0	0.57	0.65	0.57	52.5
11	T1	48	3.1	48	3.1	0.318	4.2	LOS A	1.6	12.0	0.57	0.65	0.57	43.8
12	R2	77	3.1	77	3.1	0.318	9.8	LOS A	1.6	12.0	0.57	0.65	0.57	30.0
Approach		287	3.1	287	3.1	0.318	5.7	LOS A	1.6	12.0	0.57	0.65	0.57	48.5
All Vehicles		2139	7.1	2139	7.1	0.351	6.8	LOS A	2.2	18.0	0.47	0.56	0.47	52.6

**Table B3a. SIDRA results – Nairn Dr / East side access LILO intersection – 2031  
Weekday AM peak (with Stage 1 development)**

Vehicle Movement Performance														
Mov ID	Turn	DEMAND FLOWS		ARRIVAL FLOWS		Deg. Satn	Aver. Delay	Level of Service	95% BACK OF QUEUE		Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed
		[ Total veh/h	HV ] %	[ Total HV ] veh/h	%	v/c	sec		[ Veh. veh	Dist ] m				km/h
South: Naim Dr (S)														
5	T1	700	9.1	700	9.1	0.195	0.0	LOS A	0.0	0.0	0.00	0.00	0.00	69.9
Approach		700	9.1	700	9.1	0.195	0.0	NA	0.0	0.0	0.00	0.00	0.00	69.9
East: East side access (E)														
7	L2	16	3.0	16	3.0	0.015	0.9	LOS A	0.1	0.4	0.31	0.17	0.31	17.8
Approach		16	3.0	16	3.0	0.015	0.9	LOS A	0.1	0.4	0.31	0.17	0.31	17.8
North: Naim Dr (n)														
10	L2	4	3.0	4	3.0	0.129	6.4	LOS A	0.0	0.0	0.00	0.01	0.00	46.0
11	T1	692	9.1	692	9.1	0.129	0.0	LOS A	0.0	0.0	0.00	0.00	0.00	69.5
Approach		696	9.1	696	9.1	0.129	0.0	NA	0.0	0.0	0.00	0.00	0.00	69.3
All Vehicles		1412	9.0	1412	9.0	0.195	0.0	NA	0.1	0.4	0.00	0.00	0.00	68.2

**Table B3b. SIDRA results – Furnivall Pde / East side access LILO intersection –  
2031 Weekday PM peak (with Stage 1 development)**

Vehicle Movement Performance														
Mov ID	Turn	DEMAND FLOWS		ARRIVAL FLOWS		Deg. Satn	Aver. Delay	Level of Service	95% BACK OF QUEUE		Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed
		[ Total veh/h	HV %	[ Total HV ] veh/h	%	v/c	sec		[ Veh. veh	Dist ] m				km/h
South: Naim Dr (S)														
5	T1	788	9.1	788	9.1	0.219	0.0	LOS A	0.0	0.0	0.00	0.00	0.00	69.9
Approach		788	9.1	788	9.1	0.219	0.0	NA	0.0	0.0	0.00	0.00	0.00	69.9
East: East side access (E)														
7	L2	7	3.0	7	3.0	0.008	1.4	LOS A	0.0	0.2	0.37	0.22	0.37	17.4
Approach		7	3.0	7	3.0	0.008	1.4	LOS A	0.0	0.2	0.37	0.22	0.37	17.4
North: Naim Dr (n)														
10	L2	9	3.0	9	3.0	0.180	6.4	LOS A	0.0	0.0	0.00	0.02	0.00	45.7
11	T1	959	9.1	959	9.1	0.180	0.0	LOS A	0.0	0.0	0.00	0.01	0.00	69.3
Approach		968	9.0	968	9.0	0.180	0.1	NA	0.0	0.0	0.00	0.01	0.00	68.8
All Vehicles		1764	9.0	1764	9.0	0.219	0.0	NA	0.0	0.2	0.00	0.00	0.00	68.6



**Table B4a. SIDRA results – Nairn Dr / Crossover 1 RILILO intersection – 2031  
Weekday AM peak (with Stage 1 development)**

Vehicle Movement Performance														
Mov ID	Turn	DEMAND FLOWS		ARRIVAL FLOWS		Deg. Satn	Aver. Delay	Level of Service	95% BACK OF QUEUE		Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed
		[ Total veh/h	HV %	[ Total HV veh/h	%	v/c	sec		[ Veh. veh	Dist ] m				km/h
South: Naim Dr (S)														
10	L2	52	3.1	52	3.1	0.028	5.4	LOS A	0.0	0.0	0.00	0.60	0.00	34.0
11	T1	644	9.1	644	9.1	0.179	0.0	LOS A	0.0	0.0	0.00	0.00	0.00	69.9
Approach		696	8.7	696	8.7	0.179	0.4	NA	0.0	0.0	0.00	0.04	0.00	63.0
North: Naim Dr (N)														
5	T1	649	9.1	649	9.1	0.181	0.0	LOS A	0.0	0.0	0.00	0.00	0.00	69.9
6	R2	57	3.1	57	3.1	0.142	10.6	LOS B	0.5	3.6	0.64	0.84	0.64	19.5
Approach		706	8.6	706	8.6	0.181	0.9	NA	0.5	3.6	0.05	0.07	0.05	51.7
West: Crossover 1 (W)														
7	L2	57	3.1	57	3.1	0.061	1.6	LOS A	0.2	1.6	0.39	0.29	0.39	17.6
Approach		57	3.1	57	3.1	0.061	1.6	LOS A	0.2	1.6	0.39	0.29	0.39	17.6
All Vehicles		1459	8.4	1459	8.4	0.181	0.7	NA	0.5	3.6	0.04	0.07	0.04	54.4

**Table B4b. SIDRA results – Furnivall Pde / Crossover 1 RILILO intersection – 2031  
Weekday PM peak (with Stage 1 development)**

Vehicle Movement Performance														
Mov ID	Turn	DEMAND FLOWS		ARRIVAL FLOWS		Deg. Satn	Aver. Delay	Level of Service	95% BACK OF QUEUE		Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed
		[ Total veh/h	HV ] %	[ Total HV veh/h	%				[ Veh. veh	Dist ] m				
South: Naim Dr (S)														
10	L2	154	3.1	154	3.1	0.085	5.4	LOS A	0.0	0.0	0.00	0.60	0.00	34.0
11	T1	544	9.1	544	9.1	0.151	0.0	LOS A	0.0	0.0	0.00	0.00	0.00	69.9
Approach		698	7.8	698	7.8	0.151	1.2	NA	0.0	0.0	0.00	0.13	0.00	53.5
North: Naim Dr (N)														
5	T1	799	9.1	799	9.1	0.222	0.0	LOS A	0.0	0.0	0.00	0.00	0.00	69.9
6	R2	167	3.1	167	3.1	0.412	13.1	LOS B	1.8	14.0	0.72	0.95	0.98	17.1
Approach		966	8.1	966	8.1	0.412	2.3	NA	1.8	14.0	0.12	0.16	0.17	37.9
West: Crossover 1 (W)														
7	L2	244	3.1	244	3.1	0.248	1.5	LOS A	1.0	7.7	0.41	0.32	0.41	17.5
Approach		244	3.1	244	3.1	0.248	1.5	LOS A	1.0	7.7	0.41	0.32	0.41	17.5
All Vehicles		1908	7.3	1908	7.3	0.412	1.8	NA	1.8	14.0	0.12	0.17	0.14	39.0

**Table B5a. SIDRA results – Nairn Dr / Arpenteur Dr / Oldbury Rd roundabout –  
2031 Weekday AM peak (with Stage 1 development)**

Vehicle Movement Performance														
Mov ID	Turn	DEMAND FLOWS		ARRIVAL FLOWS		Deg. Satn	Aver. Delay	Level of Service	95% BACK OF QUEUE		Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed
		[ Total veh/h	HV %	[ Total HV ] veh/h	%	v/c	sec		[ Veh. veh	Dist ] m				km/h
South: Naim Dr (S)														
1	L2	4	3.1	4	3.1	0.199	5.1	LOS A	1.0	8.3	0.30	0.45	0.30	56.5
2	T1	563	9.1	563	9.1	0.199	5.4	LOS A	1.0	8.3	0.31	0.46	0.31	56.2
3	R2	14	3.1	14	3.1	0.199	11.4	LOS B	1.0	8.0	0.32	0.48	0.32	59.4
Approach		581	8.9	581	8.9	0.199	5.6	LOS A	1.0	8.3	0.31	0.46	0.31	56.3
East: Oldbury Rd (E)														
4	L2	13	3.1	13	3.1	0.158	3.3	LOS A	0.5	4.0	0.41	0.65	0.41	50.6
5	T1	34	3.1	34	3.1	0.158	3.3	LOS A	0.5	4.0	0.41	0.65	0.41	35.3
6	R2	115	3.1	115	3.1	0.158	8.9	LOS A	0.5	4.0	0.41	0.65	0.41	35.3
Approach		161	3.1	161	3.1	0.158	7.3	LOS A	0.5	4.0	0.41	0.65	0.41	37.5
North: Naim Dr (N)														
7	L2	27	3.1	27	3.1	0.205	3.8	LOS A	1.0	8.0	0.16	0.40	0.16	47.1
8	T1	603	9.1	603	9.1	0.205	4.1	LOS A	1.0	8.0	0.17	0.41	0.17	58.5
9	R2	19	3.1	19	3.1	0.205	10.0	LOS A	1.0	7.9	0.18	0.43	0.18	40.8
Approach		649	8.7	649	8.7	0.205	4.3	LOS A	1.0	8.0	0.17	0.41	0.17	58.0
West: Arpenteur Dr (W)														
10	L2	18	3.1	18	3.1	0.063	2.5	LOS A	0.2	1.5	0.36	0.45	0.36	31.3
11	T1	37	3.1	37	3.1	0.063	2.8	LOS A	0.2	1.5	0.36	0.45	0.36	47.4
12	R2	12	3.1	12	3.1	0.063	8.0	LOS A	0.2	1.5	0.36	0.45	0.36	58.6
Approach		66	3.1	66	3.1	0.063	3.6	LOS A	0.2	1.5	0.36	0.45	0.36	48.5
All Vehicles		1458	7.9	1458	7.9	0.205	5.1	LOS A	1.0	8.3	0.26	0.46	0.26	55.2

**Table B5b. SIDRA results – Nairn Dr / Arpenteur Dr / Oldbury Rd roundabout –  
2031 Weekday PM peak (with Stage 1 development)**

Vehicle Movement Performance														
Mov ID	Turn	DEMAND FLOWS		ARRIVAL FLOWS		Deg. Satn	Aver. Delay	Level of Service	95% BACK OF QUEUE		Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed
		[ Total veh/h	HV %	[ Total HV ] veh/h	%	v/c	sec		[ Veh. veh	Dist ] m				km/h
South: Nairn Dr (S)														
1	L2	12	3.1	12	3.1	0.217	5.1	LOS A	1.1	9.0	0.29	0.45	0.29	56.5
2	T1	595	9.1	595	9.1	0.217	5.4	LOS A	1.1	9.0	0.30	0.47	0.30	56.1
3	R2	32	3.1	32	3.1	0.217	11.4	LOS B	1.1	8.7	0.32	0.49	0.32	59.0
Approach		638	8.7	638	8.7	0.217	5.7	LOS A	1.1	9.0	0.30	0.47	0.30	56.3
East: Oldbury Rd (E)														
4	L2	6	3.1	6	3.1	0.124	3.4	LOS A	0.4	3.1	0.43	0.64	0.43	50.8
5	T1	35	3.1	35	3.1	0.124	3.4	LOS A	0.4	3.1	0.43	0.64	0.43	35.5
6	R2	81	3.1	81	3.1	0.124	9.0	LOS A	0.4	3.1	0.43	0.64	0.43	35.5
Approach		122	3.1	122	3.1	0.124	7.2	LOS A	0.4	3.1	0.43	0.64	0.43	37.0
North: Nairn Dr (N)														
7	L2	85	3.1	85	3.1	0.253	3.9	LOS A	1.3	10.1	0.19	0.42	0.19	46.8
8	T1	662	9.1	662	9.1	0.253	4.2	LOS A	1.3	10.1	0.20	0.44	0.20	58.0
9	R2	52	3.1	52	3.1	0.253	10.0	LOS B	1.2	9.9	0.21	0.46	0.21	39.3
Approach		799	8.1	799	8.1	0.253	4.5	LOS A	1.3	10.1	0.20	0.44	0.20	56.8
West: Arpenteur Dr (W)														
10	L2	22	3.1	22	3.1	0.065	2.6	LOS A	0.2	1.6	0.36	0.44	0.36	31.5
11	T1	38	3.1	38	3.1	0.065	2.8	LOS A	0.2	1.6	0.36	0.44	0.36	47.9
12	R2	8	3.1	8	3.1	0.065	8.0	LOS A	0.2	1.6	0.36	0.44	0.36	59.0
Approach		68	3.1	68	3.1	0.065	3.4	LOS A	0.2	1.6	0.36	0.44	0.36	47.5
All Vehicles		1627	7.7	1627	7.7	0.253	5.2	LOS A	1.3	10.1	0.26	0.47	0.26	55.2

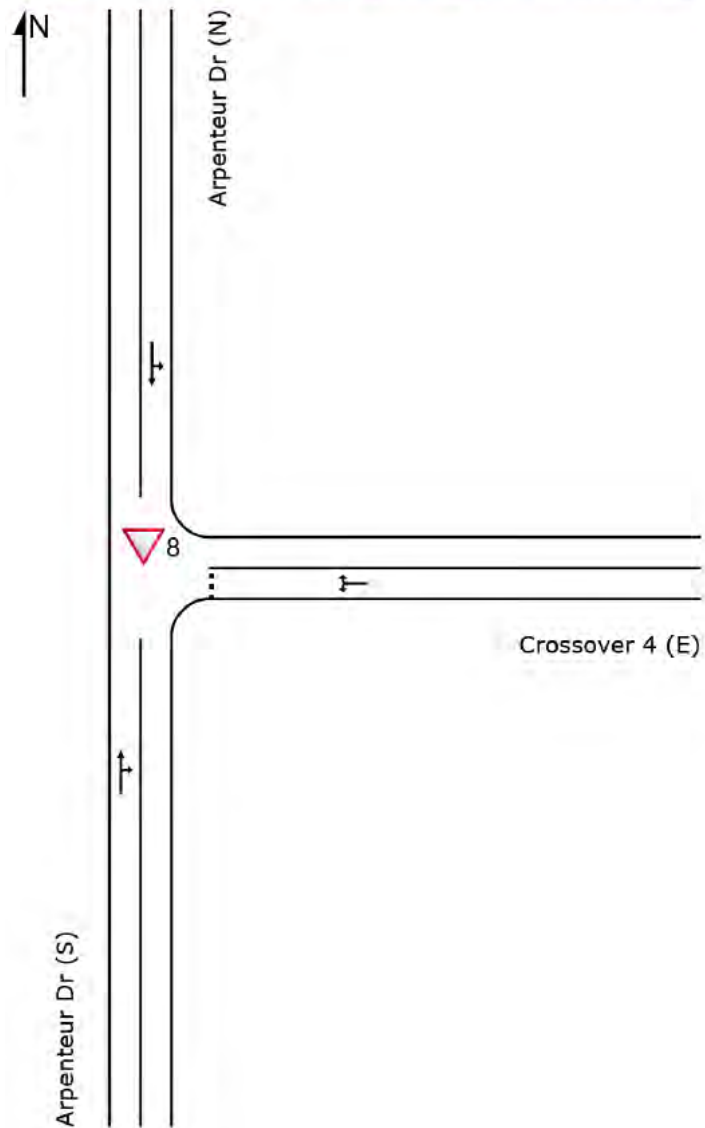


**Table B6a. SIDRA results – Arpenteur Dr / Crossover 3 – 2031 Weekday AM peak  
(with Stage 1 development)**

Vehicle Movement Performance														
Mov ID	Turn	DEMAND FLOWS		ARRIVAL FLOWS		Deg. Satn	Aver. Delay	Level of Service	95% BACK OF QUEUE		Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed
		[ Total veh/h	HV %	[ Total HV ] veh/h	%	v/c	sec		[ Veh. veh	Dist ] m				km/h
East: Arpenteur Dr (E)														
5	T1	52	3.1	52	3.1	0.031	0.0	LOS A	0.0	0.3	0.04	0.06	0.04	47.9
6	R2	6	3.0	6	3.0	0.031	4.0	LOS A	0.0	0.3	0.04	0.06	0.04	35.6
Approach		58	3.1	58	3.1	0.031	0.5	NA	0.0	0.3	0.04	0.06	0.04	46.8
North: Crossover 3 (N)														
7	L2	3	3.0	3	3.0	0.003	0.2	LOS A	0.0	0.1	0.14	0.07	0.14	18.7
9	R2	1	3.0	1	3.0	0.003	0.9	LOS A	0.0	0.1	0.14	0.07	0.14	29.8
Approach		4	3.0	4	3.0	0.003	0.4	LOS A	0.0	0.1	0.14	0.07	0.14	23.1
West: Arpenteur Dr (W)														
10	L2	1	3.0	1	3.0	0.034	4.6	LOS A	0.0	0.0	0.00	0.01	0.00	34.3
11	T1	63	3.1	63	3.1	0.034	0.0	LOS A	0.0	0.0	0.00	0.01	0.00	49.6
Approach		64	3.1	64	3.1	0.034	0.1	NA	0.0	0.0	0.00	0.01	0.00	49.1
All Vehicles		126	3.1	126	3.1	0.034	0.3	NA	0.0	0.3	0.02	0.03	0.02	46.9

**Table B6b. SIDRA results – Arpenteur Dr / Crossover 3 – 2031 Weekday PM peak  
(with Stage 1 development)**

Vehicle Movement Performance														
Mov ID	Turn	DEMAND FLOWS		ARRIVAL FLOWS		Deg. Satn	Aver. Delay	Level of Service	95% BACK OF QUEUE		Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed
		[ Total veh/h	HV %	[ Total HV ] veh/h	%	v/c	sec		[ Veh. veh	Dist ] m				km/h
East: Arpenteur Dr (E)														
5	T1	80	3.1	80	3.1	0.054	0.1	LOS A	0.1	0.9	0.07	0.10	0.07	46.4
6	R2	19	3.0	19	3.0	0.054	4.0	LOS A	0.1	0.9	0.07	0.10	0.07	34.2
Approach		99	3.1	99	3.1	0.054	0.8	NA	0.1	0.9	0.07	0.10	0.07	44.5
North: Crossover 3 (N)														
7	L2	19	3.0	19	3.0	0.014	0.2	LOS A	0.1	0.4	0.14	0.06	0.14	18.8
9	R2	2	3.0	2	3.0	0.014	1.1	LOS A	0.1	0.4	0.14	0.06	0.14	29.9
Approach		21	3.0	21	3.0	0.014	0.3	LOS A	0.1	0.4	0.14	0.06	0.14	20.8
West: Arpenteur Dr (W)														
10	L2	1	3.0	1	3.0	0.034	4.6	LOS A	0.0	0.0	0.00	0.01	0.00	34.3
11	T1	63	3.1	63	3.1	0.034	0.0	LOS A	0.0	0.0	0.00	0.01	0.00	49.6
Approach		64	3.1	64	3.1	0.034	0.1	NA	0.0	0.0	0.00	0.01	0.00	49.1
All Vehicles		184	3.1	184	3.1	0.054	0.5	NA	0.1	0.9	0.05	0.07	0.05	43.1



**Figure B2: Arpenteur Drive / Crossover 4 layout analysed in SIDRA**

**Table B7a. SIDRA results – Arpenteur Dr / Crossover 4 – 2031 Weekday AM peak  
(with Stage 1 development)**

Vehicle Movement Performance															
Mov ID	Turn	Mov Class	Demand Flows		Arrival Flows		Deg. Satn	Aver. Delay	Level of Service	95% Back Of Queue		Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed
			[ Total HV ]	%	[ Total HV ]	%	v/c	sec		[ Veh. veh	Dist ] m				km/h
South: Arpenteur Dr (S)															
5	T1	All MCs	107	3.1	107	3.1	0.057	0.0	LOS A	0.0	0.1	0.00	0.01	0.00	49.9
6	R2	All MCs	1	3.0	1	3.0	0.057	4.6	LOS A	0.0	0.1	0.00	0.01	0.00	36.2
Approach			108	3.1	108	3.1	0.057	0.0	NA	0.0	0.1	0.00	0.01	0.00	49.7
East: Crossover 4 (E)															
7	L2	All MCs	1	3.0	1	3.0	0.004	0.2	LOS A	0.0	0.1	0.21	0.15	0.21	31.0
9	R2	All MCs	3	3.0	3	3.0	0.004	1.1	LOS A	0.0	0.1	0.21	0.15	0.21	25.0
Approach			4	3.0	4	3.0	0.004	0.9	LOS A	0.0	0.1	0.21	0.15	0.21	26.8
North: Arpenteur Dr (N)															
10	L2	All MCs	6	3.0	6	3.0	0.042	4.6	LOS A	0.0	0.0	0.00	0.04	0.00	21.2
11	T1	All MCs	73	3.1	73	3.1	0.042	0.0	LOS A	0.0	0.0	0.00	0.04	0.00	49.1
Approach			79	3.1	79	3.1	0.042	0.4	NA	0.0	0.0	0.00	0.04	0.00	46.3
All Vehicles			192	3.1	192	3.1	0.057	0.2	NA	0.0	0.1	0.01	0.02	0.01	47.7

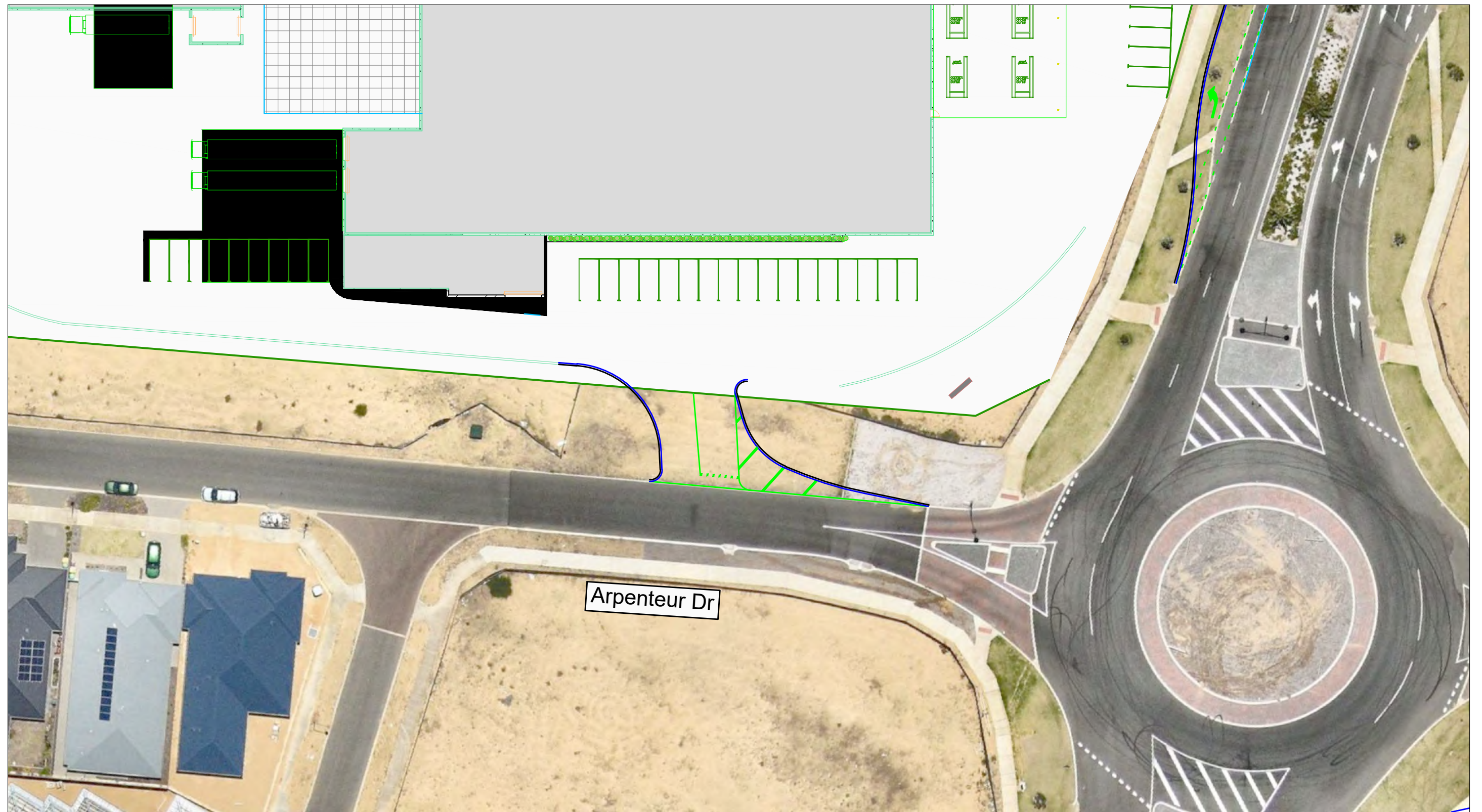
**Table B7b. SIDRA results – Arpenteur Dr / Crossover 4 – 2031 Weekday PM peak  
(with Stage 1 development)**

Vehicle Movement Performance															
Mov ID	Turn	Mov Class	Demand Flows		Arrival Flows		Deg. Satn	Aver. Delay	Level of Service	95% Back Of Queue		Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed
			[ Total HV ]	%	[ Total HV ]	%	v/c	sec		[ Veh. veh	Dist ] m				km/h
South: Arpenteur Dr (S)															
5	T1	All MCs	74	3.1	74	3.1	0.039	0.0	LOS A	0.0	0.1	0.01	0.01	0.01	49.8
6	R2	All MCs	1	3.0	1	3.0	0.039	4.8	LOS A	0.0	0.1	0.01	0.01	0.01	36.2
Approach			75	3.1	75	3.1	0.039	0.1	NA	0.0	0.1	0.01	0.01	0.01	49.5
East: Crossover 4 (E)															
7	L2	All MCs	1	3.0	1	3.0	0.017	0.3	LOS A	0.1	0.4	0.25	0.21	0.25	30.8
9	R2	All MCs	18	3.0	18	3.0	0.017	1.2	LOS A	0.1	0.4	0.25	0.21	0.25	24.8
Approach			19	3.0	19	3.0	0.017	1.2	LOS A	0.1	0.4	0.25	0.21	0.25	25.2
North: Arpenteur Dr (N)															
10	L2	All MCs	18	3.0	18	3.0	0.067	4.6	LOS A	0.0	0.0	0.00	0.08	0.00	21.0
11	T1	All MCs	109	3.1	109	3.1	0.067	0.0	LOS A	0.0	0.0	0.00	0.08	0.00	48.5
Approach			127	3.1	127	3.1	0.067	0.7	NA	0.0	0.0	0.00	0.08	0.00	43.7
All Vehicles			221	3.1	221	3.1	0.067	0.5	NA	0.1	0.4	0.02	0.07	0.02	43.8

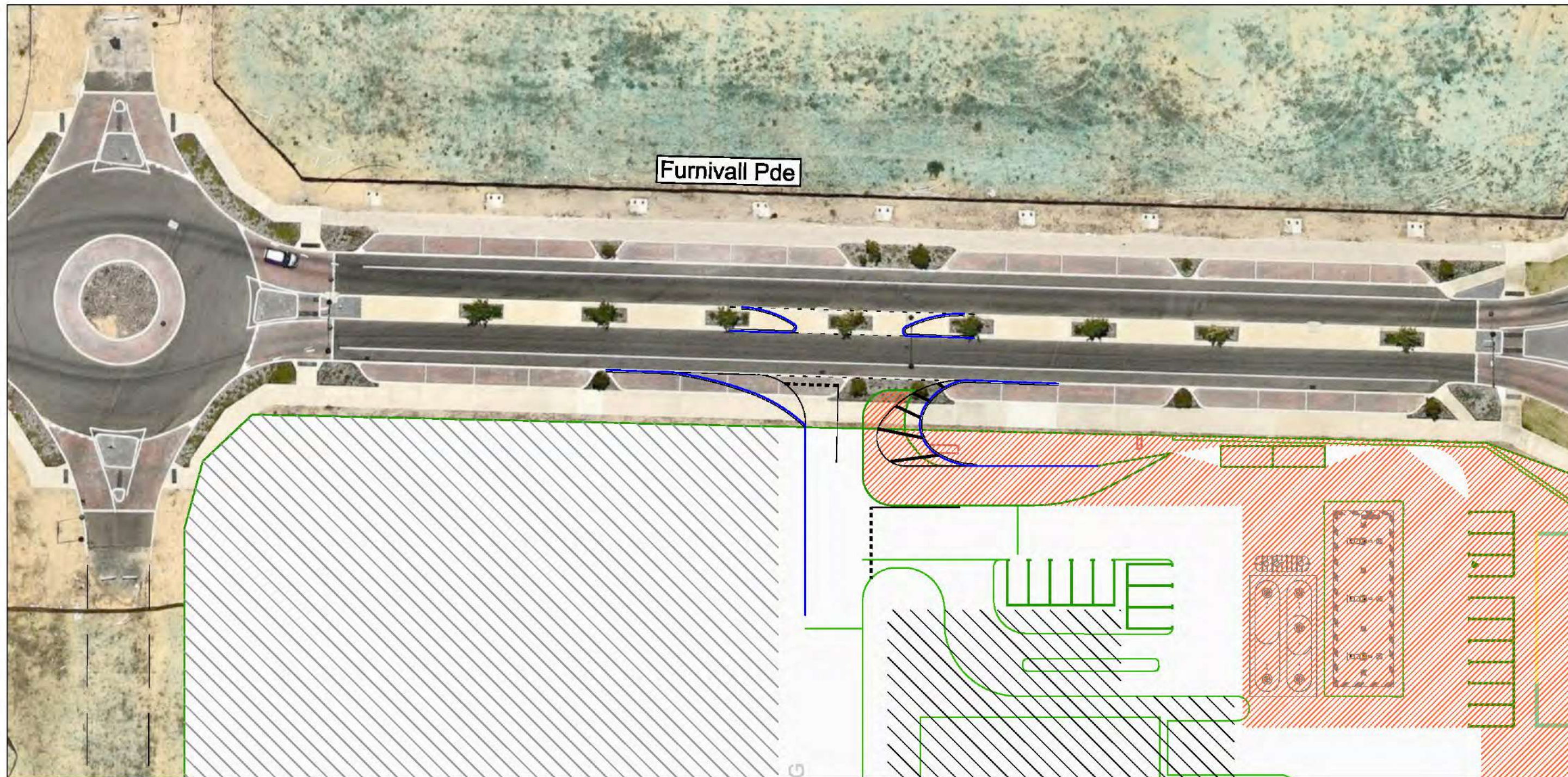


**Table B7c. SIDRA results – Arpenteur Dr / Crossover 4 – 2031 Weekday PM peak  
(with Stage 1 development) sensitivity test with double traffic volumes on  
Crossover 4**

Vehicle Movement Performance															
Mov ID	Turn	Mov Class	Demand Flows		Arrival Flows		Deg. Satn	Aver. Delay	Level of Service	95% Back Of Queue		Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed
			[ Total HV ]	%	[ Total HV ]	%	v/c	sec		[ Veh. veh	Dist ]				km/h
South: Arpenteur Dr (S)															
5	T1	All MCs	74	3.1	74	3.1	0.040	0.0	LOS A	0.0	0.1	0.02	0.02	0.02	49.5
6	R2	All MCs	2	3.0	2	3.0	0.040	5.0	LOS A	0.0	0.1	0.02	0.02	0.02	36.1
Approach			76	3.1	76	3.1	0.040	0.1	NA	0.0	0.1	0.02	0.02	0.02	49.1
East: Crossover 4 (E)															
7	L2	All MCs	2	3.0	2	3.0	0.035	0.3	LOS A	0.1	0.9	0.26	0.23	0.26	30.8
9	R2	All MCs	36	3.0	36	3.0	0.035	1.3	LOS A	0.1	0.9	0.26	0.23	0.26	24.7
Approach			38	3.0	38	3.0	0.035	1.2	LOS A	0.1	0.9	0.26	0.23	0.26	25.2
North: Arpenteur Dr (N)															
10	L2	All MCs	36	3.0	36	3.0	0.077	4.6	LOS A	0.0	0.0	0.00	0.13	0.00	20.7
11	T1	All MCs	109	3.1	109	3.1	0.077	0.0	LOS A	0.0	0.0	0.00	0.13	0.00	47.5
Approach			145	3.1	145	3.1	0.077	1.1	NA	0.0	0.0	0.00	0.13	0.00	39.5
All Vehicles			259	3.1	259	3.1	0.077	0.9	NA	0.1	0.9	0.04	0.11	0.04	39.8







## Parkland Heights Neighbourhood Centre

Proposed Access Arrangement - Furnivall Pde

Light vehicle - full movement

Semi-trailer - Left in/Left out movement

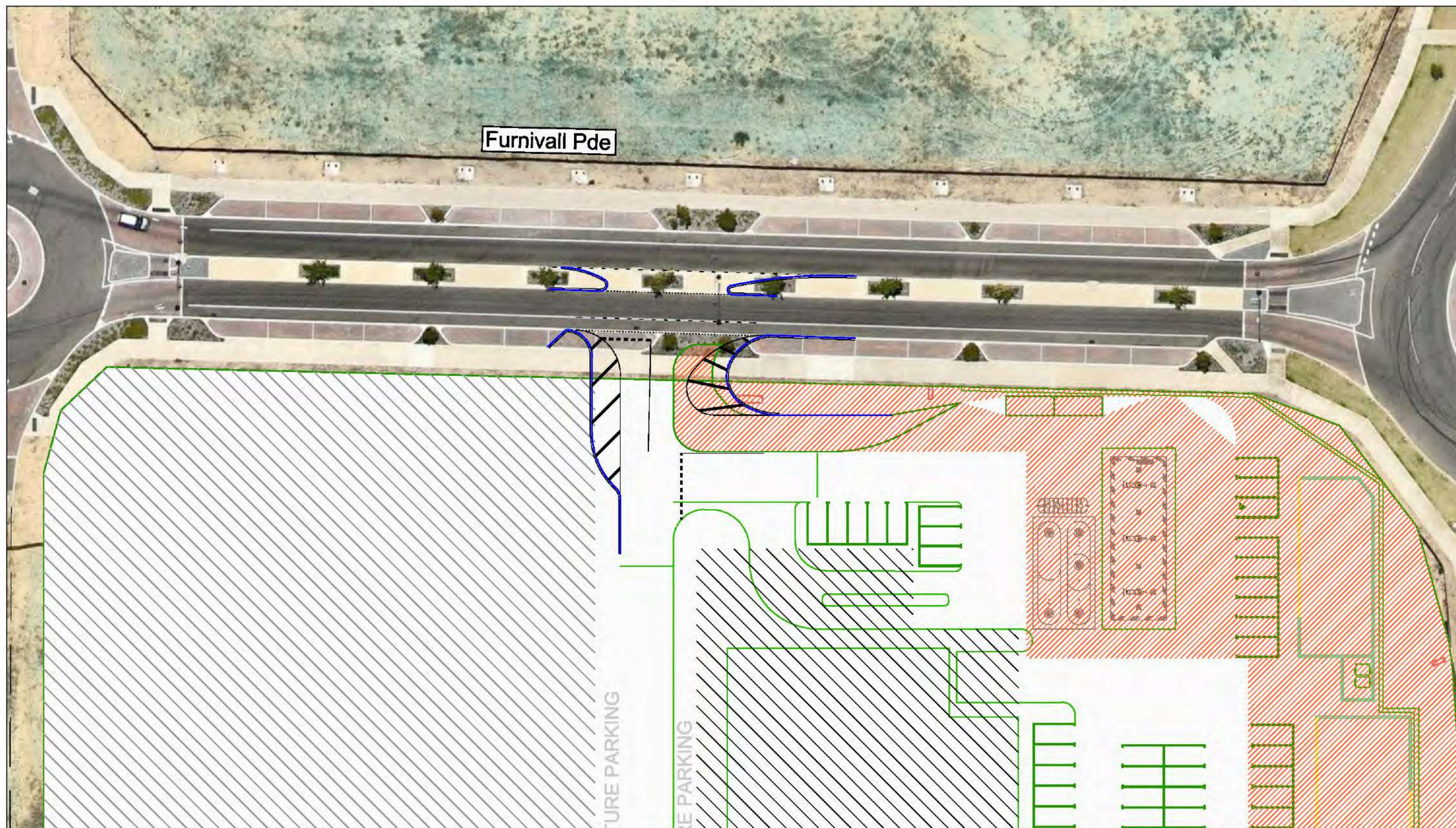
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15/02/2023

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## Parkland Heights Neighbourhood Centre

Proposed Access Arrangement - Furnivall Pde

Light vehicle - full movements

Semi-trailer - Left in/Right out movements

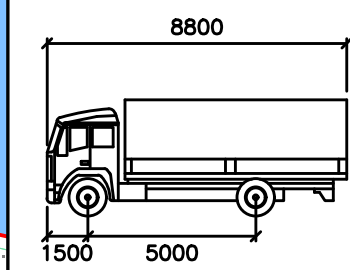
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MRV	
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Steering Angle	: 34.0

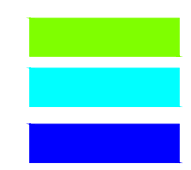
**13 BAYS**

# Parkland Heights Neighbourhood Centre LSP Amendment

8.8m Rigid truck  
Service truck exit (Fast Food 2)

## LEGEND

Vehicle Body  
Wheel Path  
500mm Clearance

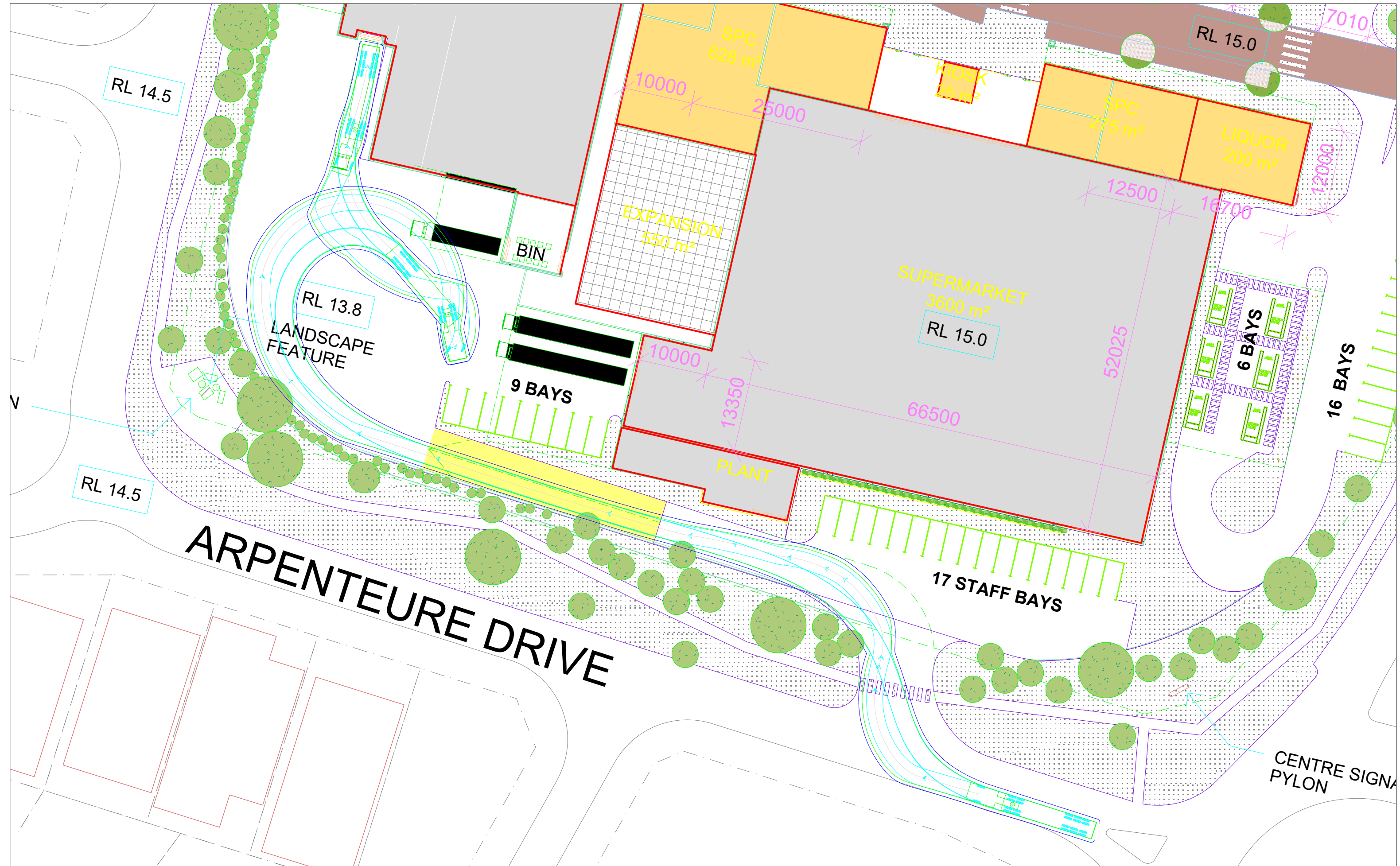


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07/10/2022

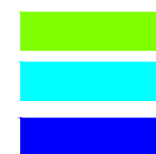
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Parkland Heights Neighbourhood Centre LSP Amendment  
 19m semi-trailer  
 Service truck entry (Supermarket 1)

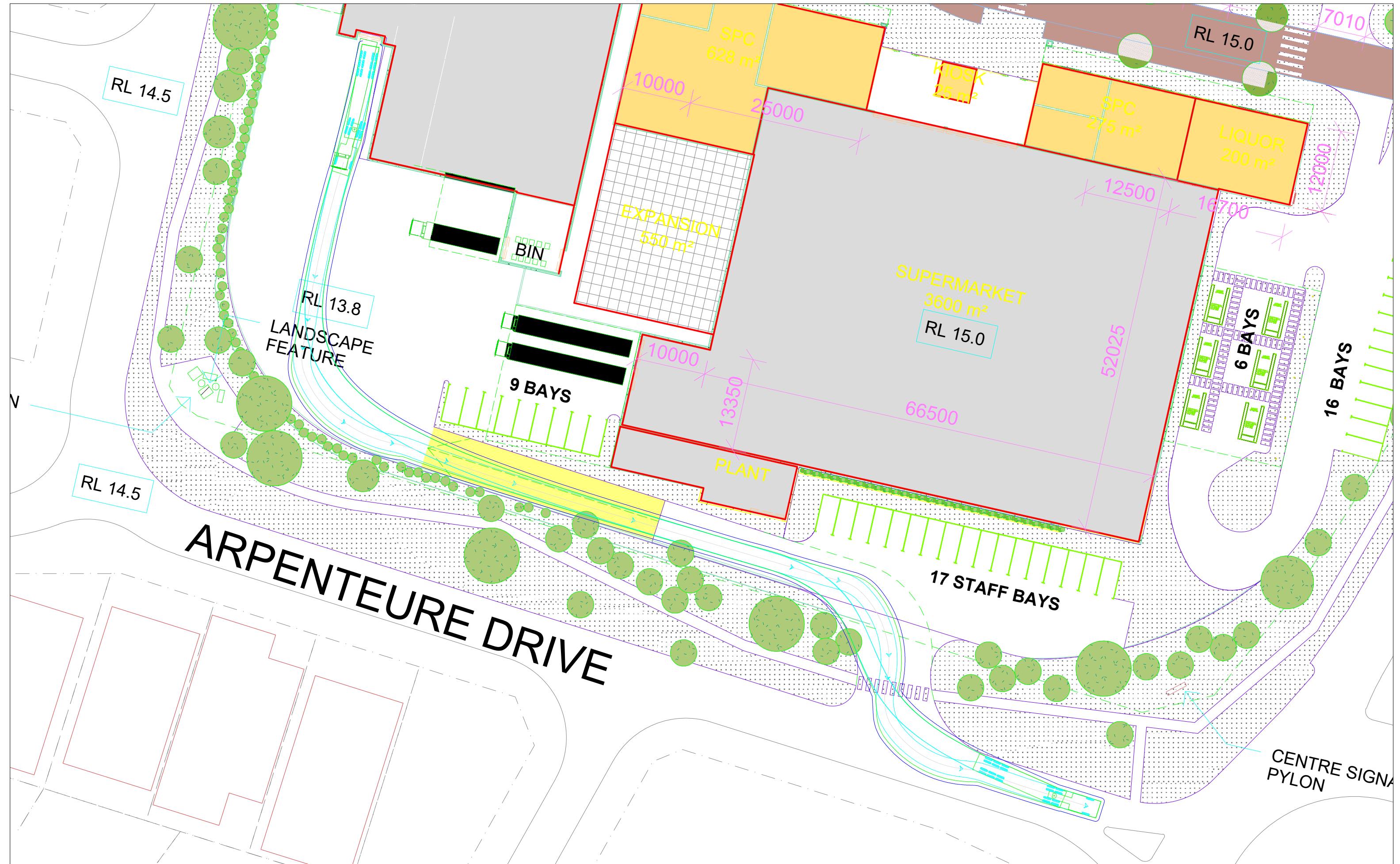
**LEGEND**  
 Vehicle Body  
 Wheel Path  
 500mm Clearance



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 04/10/2022  
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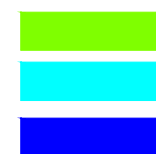






Parkland Heights Neighbourhood Centre LSP Amendment  
19m semi-trailer  
Service truck exit (Supermarket 1)

**LEGEND**  
Vehicle Body  
Wheel Path  
500mm Clearance

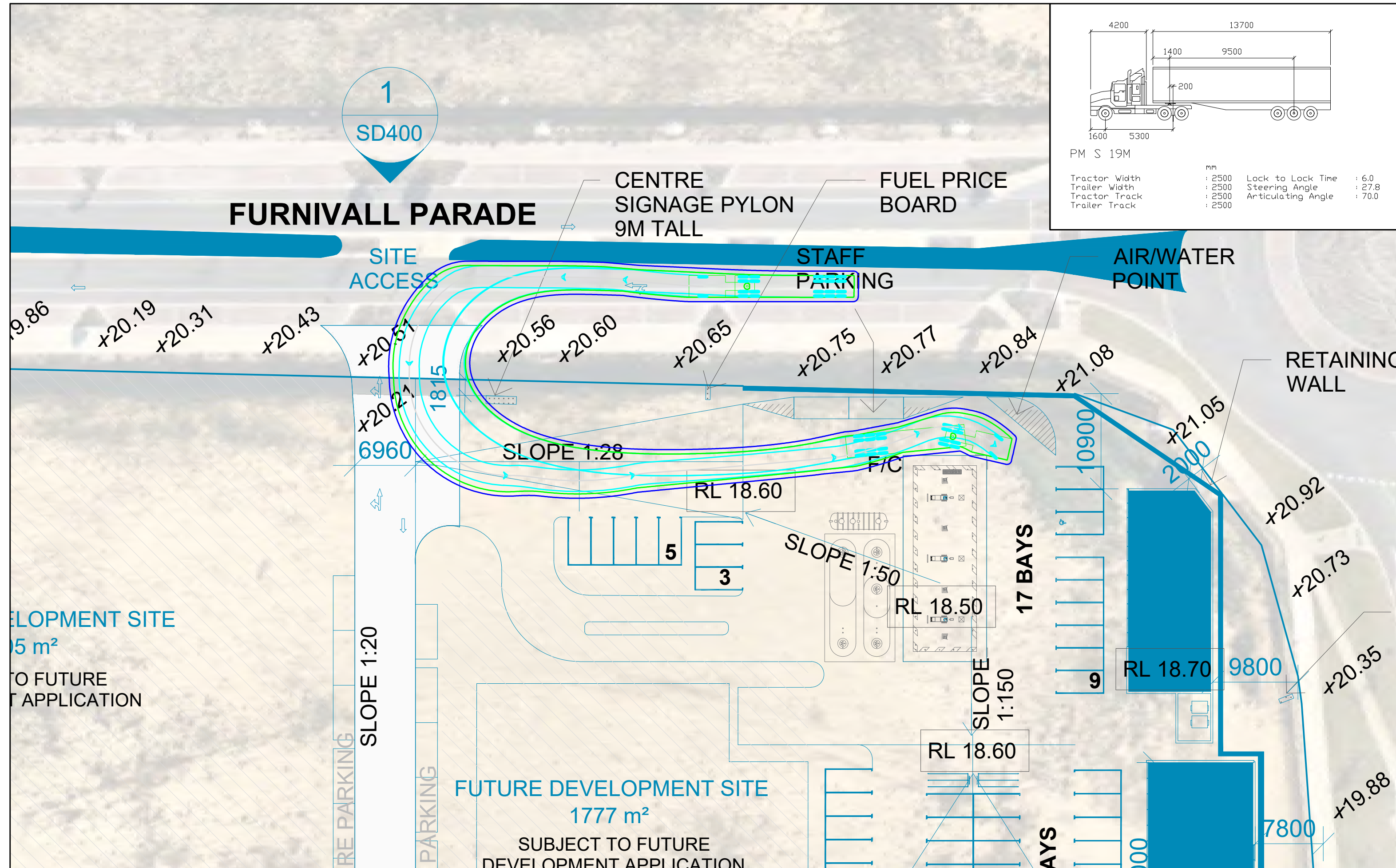
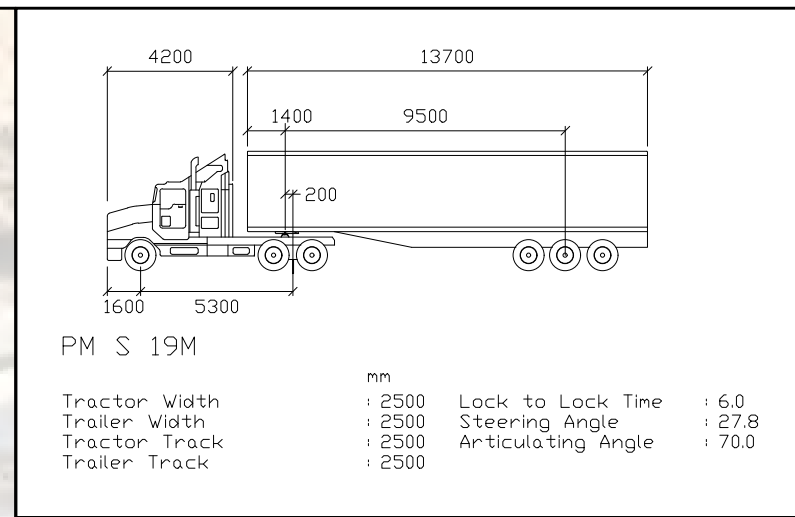


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04/10/2022

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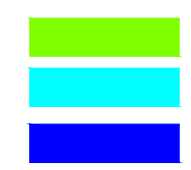


# Parkland Heights Neighbourhood Centre LSP Amendment

19m Fuel tanker  
Fuel tanker enter

## LEGEND

Vehicle Body  
Wheel Path  
500mm Clearance



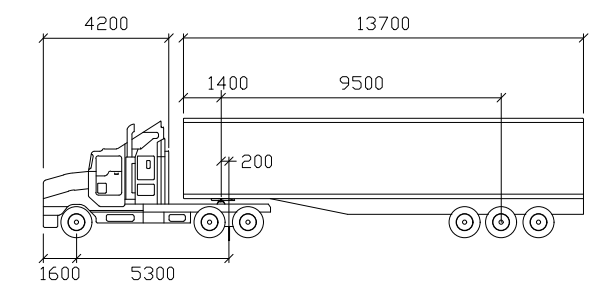
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25/10/2022

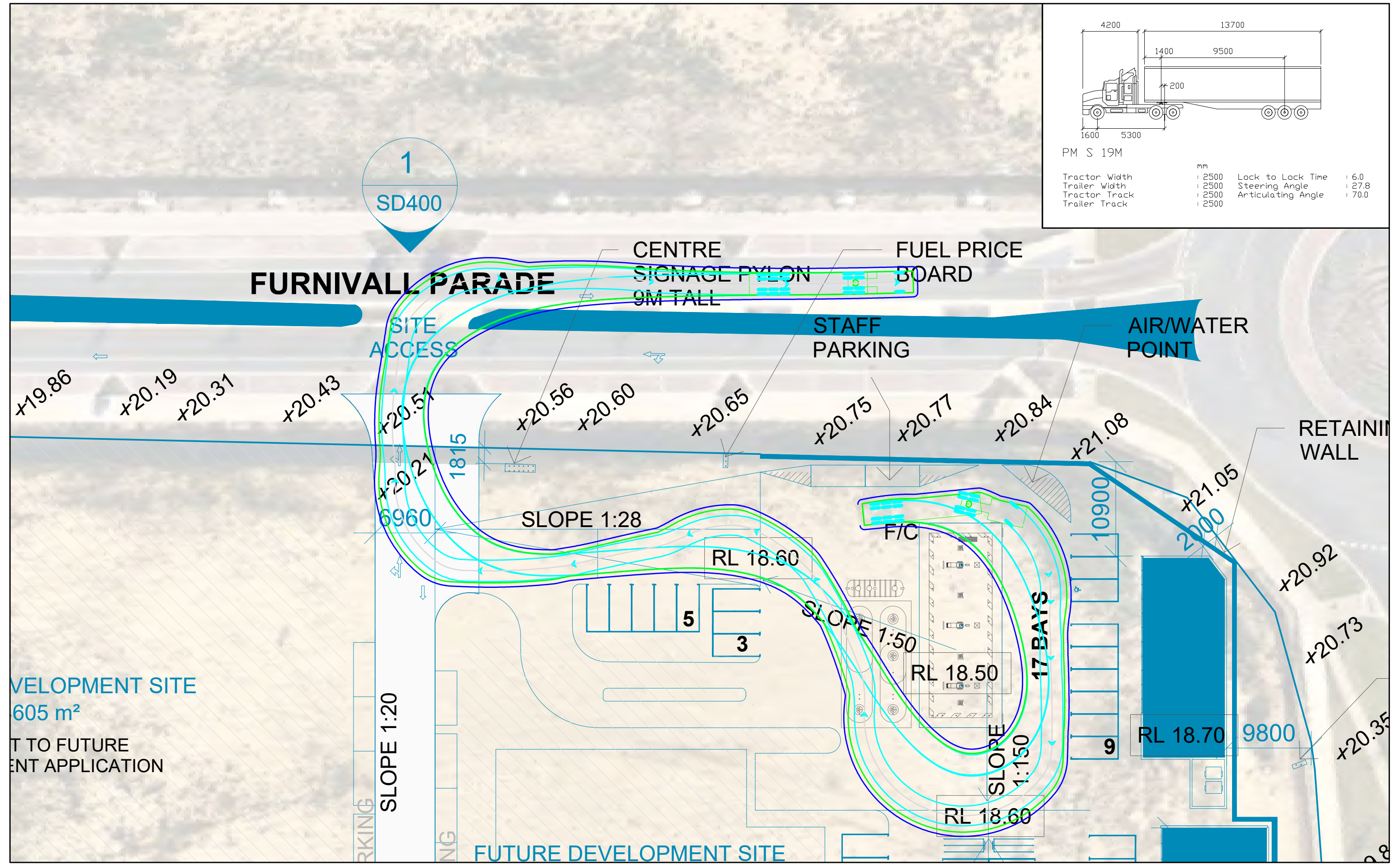
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PM S 19M		
Tractor Width	mm	Lock to Lock Time
Trailer Width	: 2500	: 6.0
Tractor Track	: 2500	Steering Angle
Trailer Track	: 2500	: 27.8
		Articulating Angle
		: 70.0



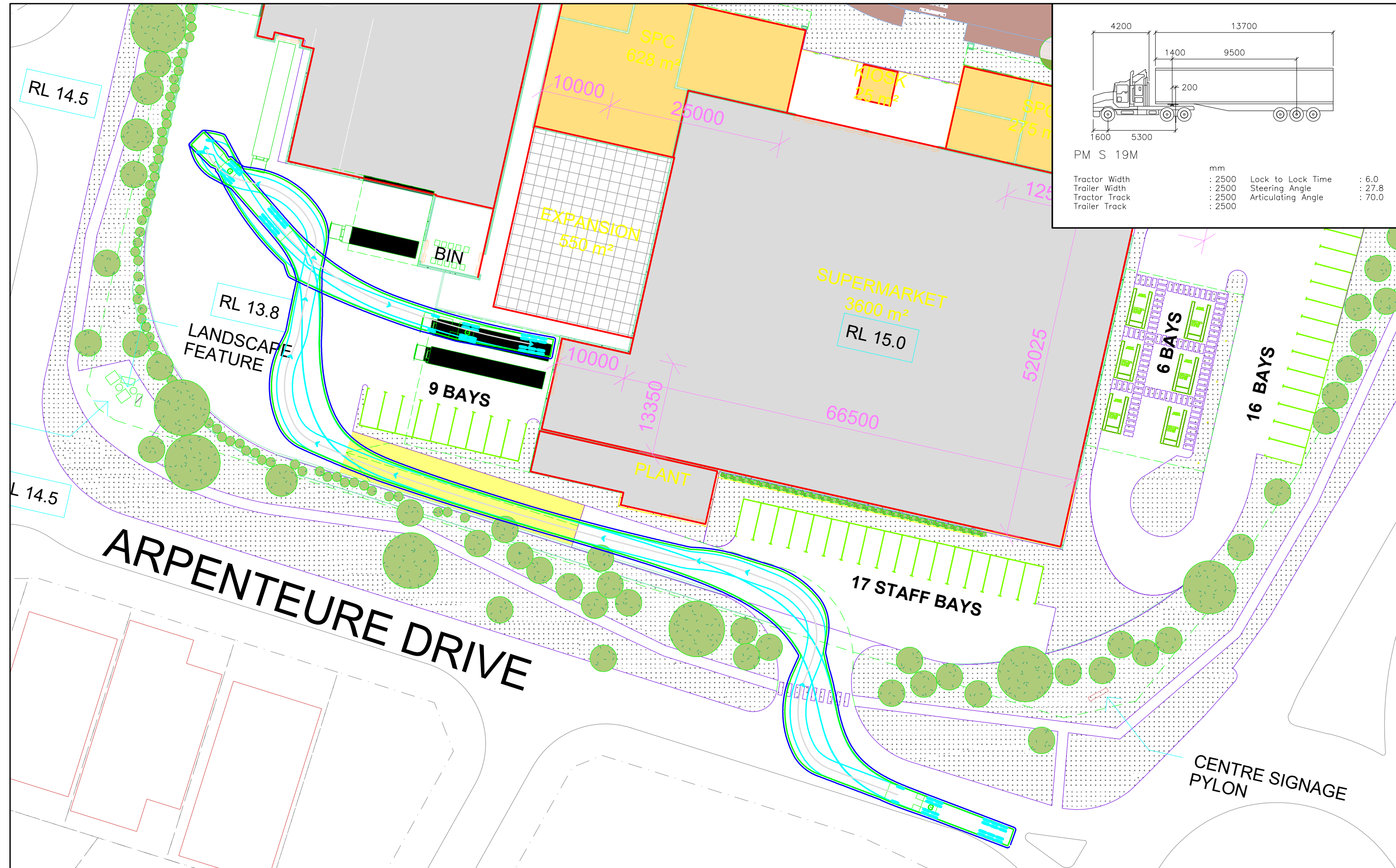
Parkland Heights Neighbourhood Centre LSP Amendment  
19m Fuel tanker  
Fuel tanker exit

**LEGEND**  
Vehicle Body  
Wheel Path  
500mm Clearance

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25/10/2022  
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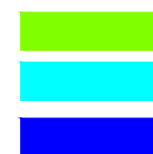






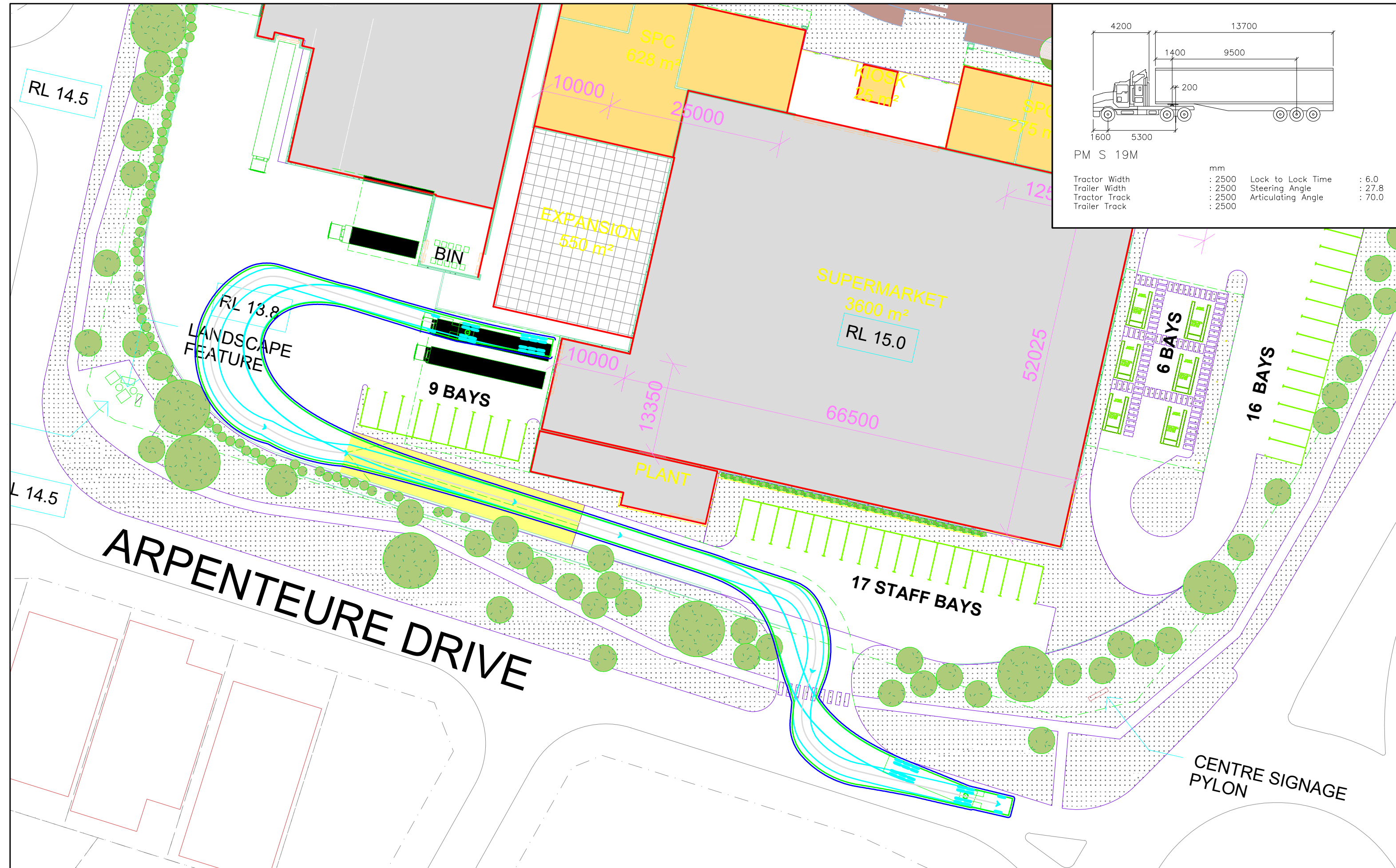
Parkland Heights Neighbourhood Centre LSP Amendment  
 19m semi-trailer  
 Service truck entry (Supermarket 2)

**LEGEND**  
 Vehicle Body  
 Wheel Path  
 500mm Clearance



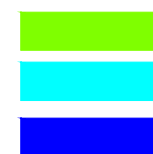
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 07/10/2022  
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Parkland Heights Neighbourhood Centre LSP Amendment  
 19m semi-trailer  
 Service truck exit (Supermarket 2)

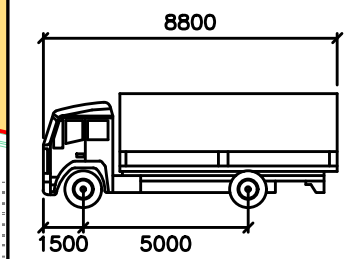
**LEGEND**  
 Vehicle Body  
 Wheel Path  
 500mm Clearance



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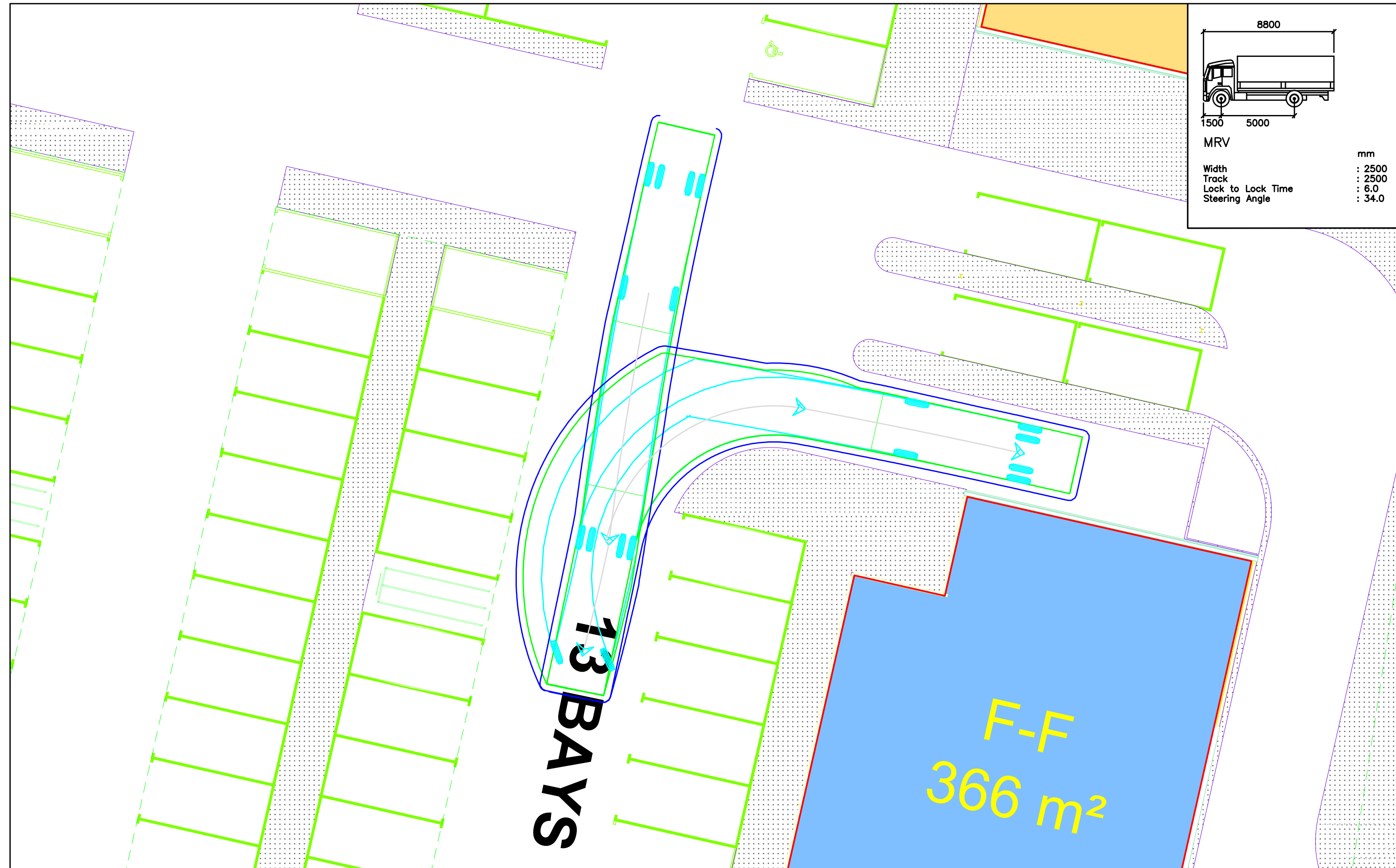






MRV

Width	mm
Track	: 2500
Lock to Lock Time	: 6.0
Steering Angle	: 34.0

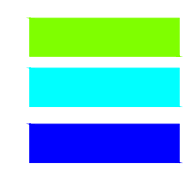


# Parkland Heights Neighbourhood Centre LSP Amendment

8.8m Service truck  
Service truck entry (Fast Food 1)

## LEGEND

Vehicle Body  
Wheel Path  
500mm Clearance



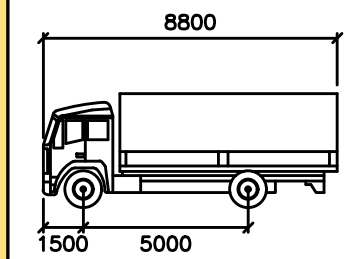
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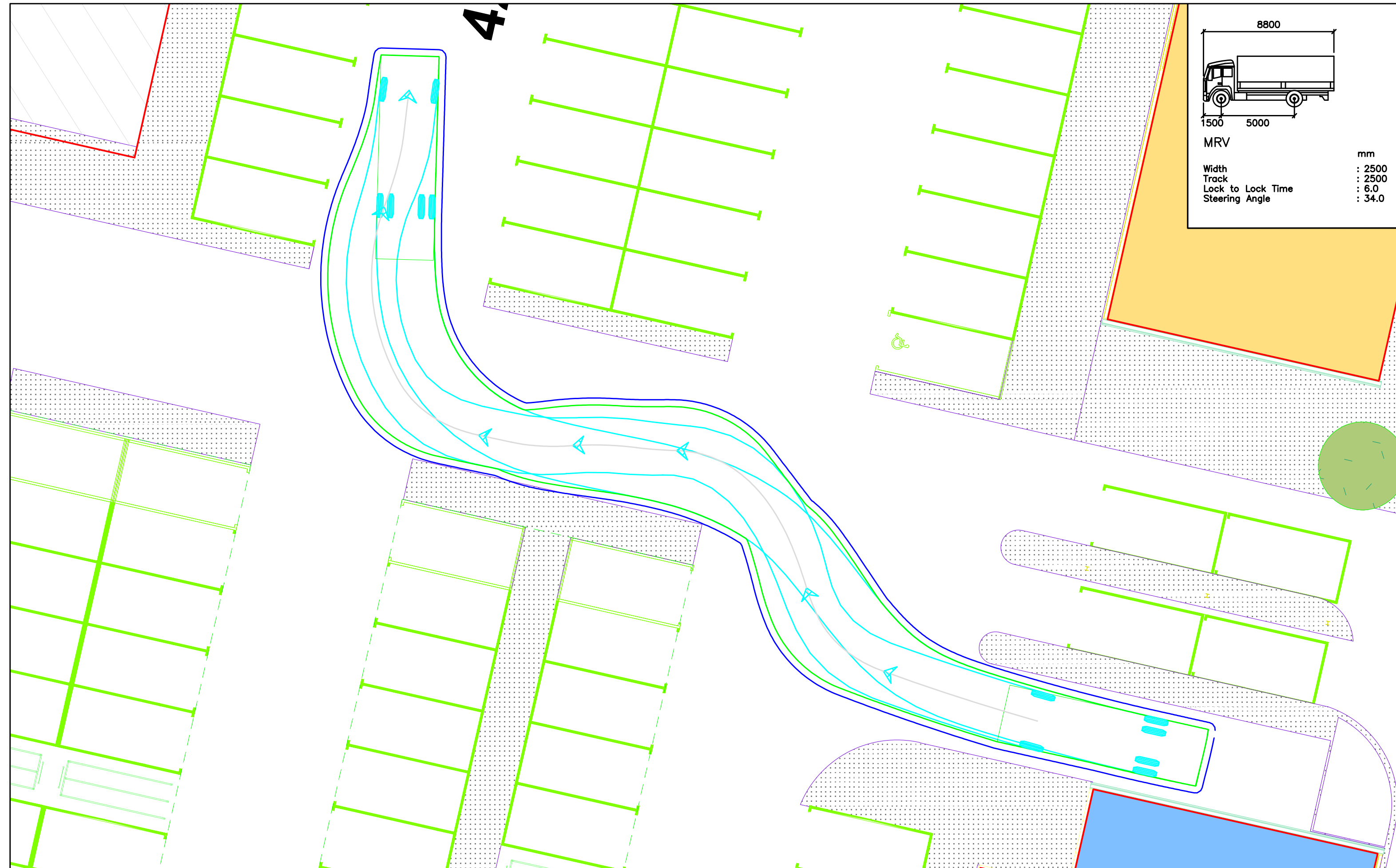






MRV

Width	: 2500
Track	: 2500
Lock to Lock Time	: 6.0
Steering Angle	: 34.0

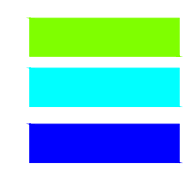


# Parkland Heights Neighbourhood Centre LSP Amendment

8.8m Service truck  
Service truck exit (Fast Food 1)

## LEGEND

Vehicle Body  
Wheel Path  
500mm Clearance

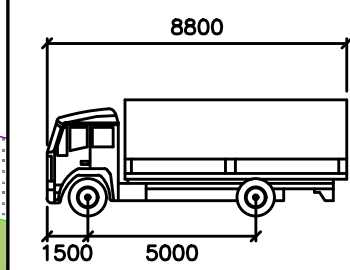


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07/10/2022

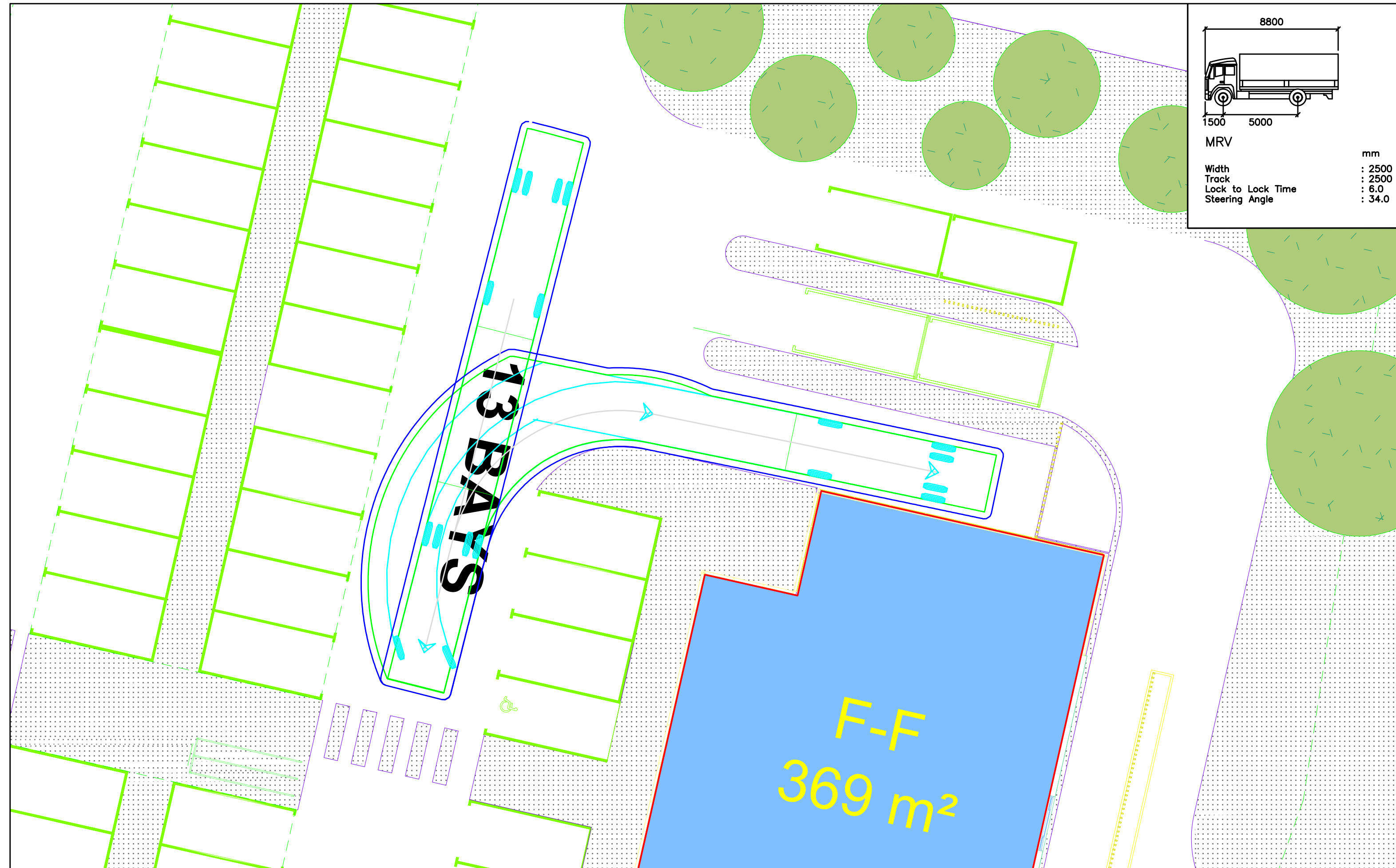
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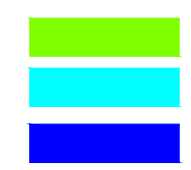
MRV	
Width	: 2500
Track	: 2500
Lock to Lock Time	: 6.0
Steering Angle	: 34.0

mm  
: 2500  
: 2500  
: 6.0  
: 34.0



Parkland Heights Neighbourhood Centre LSP Amendment  
8.8m Rigid truck  
Service truck entry (Fast Food 2)

LEGEND  
Vehicle Body  
Wheel Path  
500mm Clearance



t16.337.sk13  
07/10/2022  
Scale: 1:150 @ A3





# **ENVIRONMENTAL NOISE REPORT (DA STAGE)**

## **REVISION 3**

### **PARKLAND HEIGHTS SHOPPING CENTRE**

8<sup>th</sup> February 2023



For

**BLUEPORT DEVELOPMENT MANAGEMENT**

**Level 2/14 Lyall St  
SOUTH PERTH WA 6151**



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8. GENERAL NOISE MANAGEMENT PLAN.....	11
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## ATTACHMENTS

- APPENDIX A NOISE CONTOUR PLANS

Report Version	Author	Notes	Date
3	Benjamin Farrell	Updated following comments from the CoR	8 <sup>th</sup> February 2023

Gabriels Hearne Farrell Pty Ltd is a Member Firm of the Association of Australasian Acoustical Consultants. The report author is a full member of the Australian Acoustical Society.

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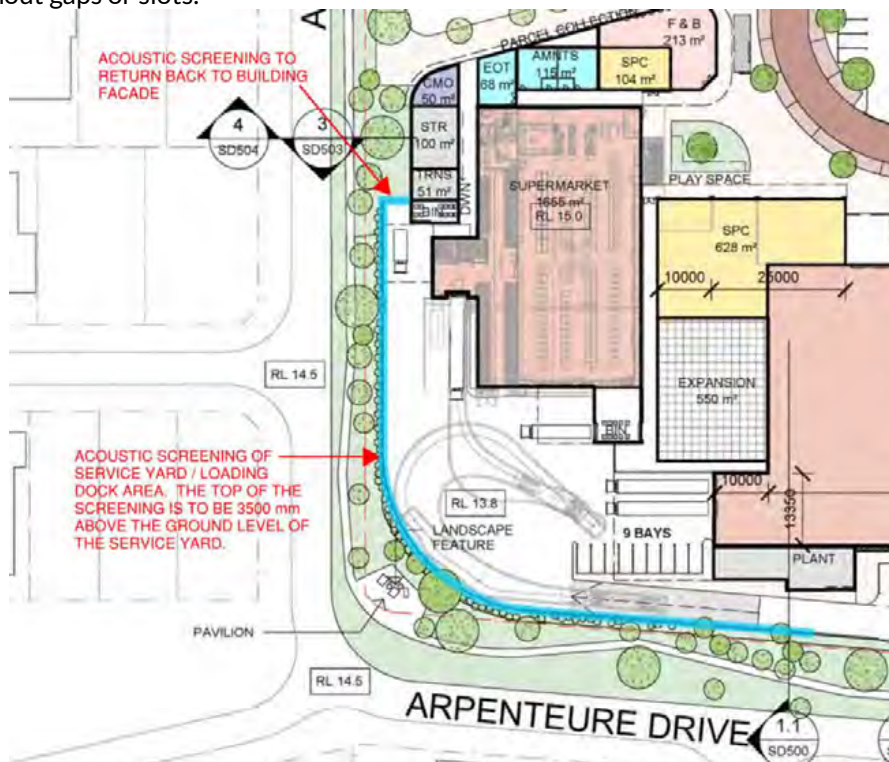


## EXECUTIVE SUMMARY

The potential environmental noise emissions from the proposed Parkland Heights Shopping Centre have been modelled using the SoundPLAN 8.2 software. The assessment indicates that the development is capable of complying with the Environmental Protection (Noise) Regulations 1997. Compliance is reliant on the following noise control strategies.

### Delivery vehicles

- Deliveries by the large 19 metre trucks are not permitted before 7 am Monday to Saturday. Only a single delivery from a 19 metre truck is permitted on Sundays and Public Holidays per 4 hour period, and shall not occur prior to 9 am on these days.
- Deliveries by small trucks / Delivery vans (ie bread deliveries) are permitted at any time of day, 7 days a week. Prior to 7 am, if a bread truck is fitted with a traditional reversing beeper instead of a broadband 'woosher', the truck shall only be driven forwards within the loading dock. There is sufficient room in the service area for a small truck to turn around without reversing.
- The engines and refrigeration units of all delivery vehicles shall be turned-off whilst unloading occurs. Signage shall be installed in the loading dock area advising drivers of this requirement.
- Acoustic screening is required around the Service/Loading Dock area, as illustrated in the image below. The screening is to be 3500 mm taller than the ground level of the service area, and to be constructed of a material without gaps or slots.



### Mechanical plant

- Based on the preliminary noise modelling, acoustic screening will be required along the southern and western sides of the Coles air-conditioning and refrigeration equipment located on the roof. Acoustic screening will also be required on the southern, western and northern side of the air-conditioning and refrigeration equipment located on the roof top of the supermarket.
- The acoustic screening shall be at least 400 mm taller than the top of the air-conditioning / refrigeration equipment. The acoustic screening shall consist of solid sheeting such as 6 mm fibre-cement, or 300 mm acoustic louvres.
- The air-cooled air-conditioning and refrigeration equipment (eg condensers and chillers) must be selected on the basis of quiet operation.
- Updated noise modelling of the mechanical plant will be required prior to the lodgement of the Building Permit application based on the actual equipment selections. The noise modelling shall consider the air-conditioning and refrigeration units, roof mounted fans, break-out from the compressor / AHU plant room, and noise emissions from the fire pumps.



## 1. INTRODUCTION

Gabriels Hearne Farrell Pty Ltd were commissioned to undertake modelling of the potential environmental noise emissions from the proposed Parkland Heights Shopping Centre.

The purpose of the assessment was to ensure that the proposed development has the capability of complying with the Environmental Protection (Noise) Regulations 1997, at the Development Application stage.

This report is based on the Development Application drawings issued late August 2022.

## 2. SITE CONTEXT

The proposed Parkland Heights Shopping Centre will be located on Nairn Drive in Baldvis . The development consists of a Coles, a supermarket, and a several smaller tenancies. As illustrated in Figure 1 below, the Service/Loading dock area will be located at the south-west corner of the site.

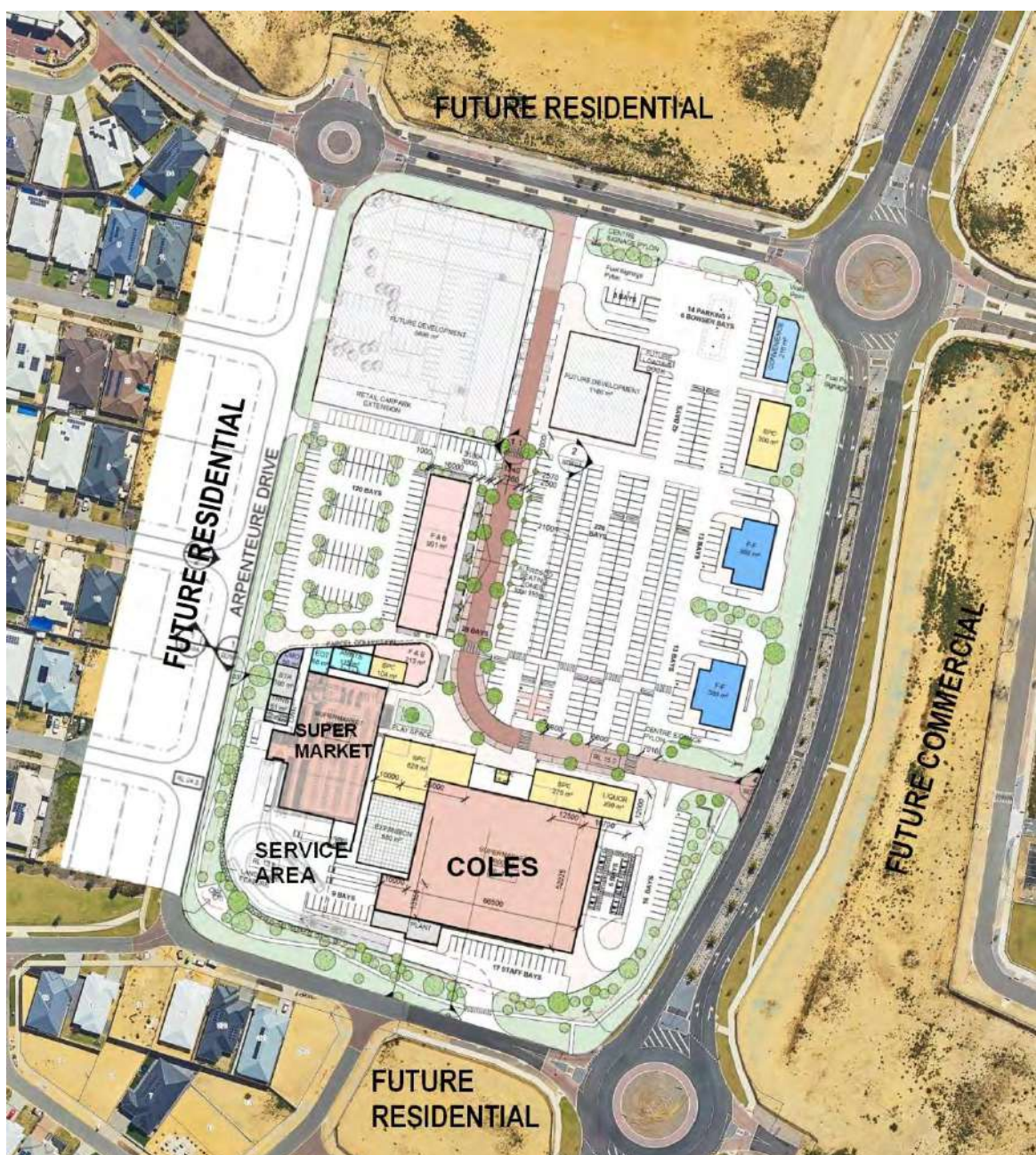


Figure 1 – Site context



As illustrated in Figure 1, there are existing and future residential developments to the south, west, and north sides of the proposed Shopping Centre. There will be future commercial premises proposed across Nairn Drive to the east.

Please note that there are several 'pad sites' on the northern half of the overall lot which will be subject to their own Development Application (ie service station, fast food tenancies, etc). Therefore these 'pad sites' have not been included in this noise modelling exercise.

### 3. NOISE LEVEL CRITERIA

In Western Australia, noise transmission from one property to another is governed by the Environmental Protection (Noise) Regulations 1997. These regulations establish 'Assigned Levels' which are the noise levels that cannot be exceeded at surrounding noise sensitive premises.

#### 3.1 'Assigned Levels' for the residences surrounding the shopping centre

The 'Assigned Levels' for the residences surrounding the proposed shopping centre are provided in Table 1 below. The 'Assigned Levels' are based on a total *influencing factor* of 2 dB:

- 30% of the 100 m circle is commercial land-use.
- 8% of the 450 m circle is commercial land-use.

Part of premises receiving noise	Time of day	Assigned Level (dB)		
		LA10	LA1	LA max
Noise sensitive premises: highly sensitive area	7 am to 7 pm Monday to Saturday	47	57	67
	9 am to 7 pm Sunday and public holidays	42	52	67
	7 pm to 10 pm all days	42	52	57
	10 pm to 7 am Monday to Saturday and 10 pm to 9 am on Sundays and public holidays	37	47	57

Table 1 – Assigned Levels for the residences surrounding the Parkland Heights Shopping Centre

LAmax - the noise level which is not to be exceeded at any time.

LA1 - the noise level which is not to be exceeded for more than 1% of the time (eg for more than 144 seconds over a 4 hour period).

LA10 - the noise level which is not to be exceeded for more than 10% of the time (eg for more than 24 minutes over a 4 hour period).

#### 3.2 Noise Character

Regulation 7 requires that the noise emission must be 'free' of annoying characteristics, namely tonality (eg whining, droning), modulation (like a siren), and impulsiveness (eg thumping). Where noise emissions do exhibit the above noise characteristics, an adjustment is made to the measured/calculated noise level:

<i>Tonality</i>	5 dB is added to the measured level
<i>Modulation</i>	5 dB is added to the measured level
<i>Impulsiveness</i>	10 dB is added to the measured level

The above adjustments only apply where the 'noise character' is audible and measurable at both the noise source and noise receiver.

## 4. NOISE MODELLING PROCEDURE

The noise emissions from the proposed Parkland Heights Shopping Centre have been modelled using the *SoundPLAN* 8.2 software with the *Concawe* algorithm. This software allows the input of topographical data, building heights and forms, meteorological conditions, and noise source data. The software produces noise contour plans, indicating the predicted noise level over a given area.

Note – the output noise levels from *SoundPLAN* are base noise levels not including adjustment for noise character.

### 4.1 Meteorological Conditions

The meteorological conditions used in the calculations were as follows (based on the document titled 'Guidance for the Assessment of Environmental Factors – Environmental Noise'):

- Temperature – 20°C
- Relative Humidity – 50%
- Wind – 4 m/s in all directions simultaneously.
- Pasquil Stability Class - E

### 4.2 Topography and Building Form

The building form, height, and configuration were input into the noise model, based on the Development Application drawings. Topography information was obtained from the LocateWA (Landgate) tool. All roads and carpark areas were input into the noise model as hard reflecting ground surface.

## 5. ASSESSMENT OF NOISE EMISSIONS FROM DELIVERY VEHICLES

It is important to note the noise from all vehicles (including delivery vehicles) is exempt from compliance with the 'Assigned Levels' when the vehicle is on a 'road' (Regulation 3(1)(a)). It is accepted amongst accredited acoustic consultants (AAS & AAAC) that publicly accessible roads and carparks that are part of a shopping centre development are considered to be a part of the road network. However, given the service/loading dock area is not considered to be publicly accessible, the noise emissions from delivery vehicles must comply with the 'Assigned Levels' when the vehicle is manoeuvring within the service/loading dock area.

In order to control noise emissions from the loading dock area, the noise model has included acoustic screening around the loading dock, as identified in blue in Figure 2 below.

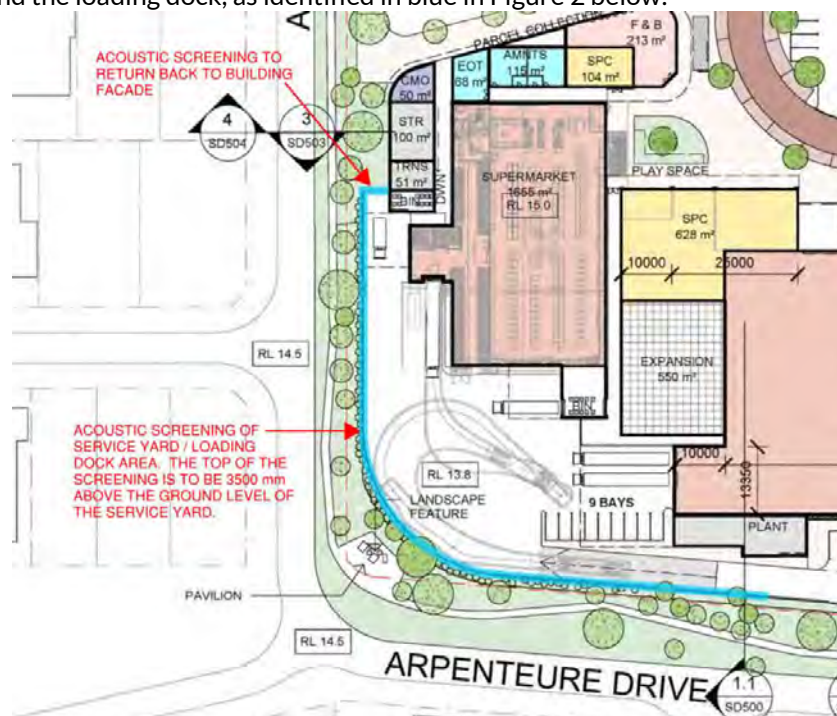


Figure 2 – Extent of acoustic screening around service/loading area

The acoustic screening shall be as follows:

- The screening shall be 3500 mm taller than the ground level of the service area; and,
- The screening shall be constructed of materials without gaps or slots, with a minimum surface density of 10 kg/m<sup>2</sup> (eg 6 mm glass, 12 mm Perspex, 6 mm fibre-cement, single leaf of masonry, etc).

## 5.1 Sound Power Levels of noise sources

The potential noise emissions from delivery vehicles has been assessed based on the following Sound Power Levels. These Sound Power Levels have been determined based on recent measurement of trucks at the Coles Distribution Centre near Perth Airport.

Frequency (Hz)	63	125	250	500	1k	2k	4k	dB(A)
19 m refrigerated truck - driving slowly	107	102	90	92	91	89	87	<b>96</b>
19 m refrigerated truck - Reversing into dock (inclusive of reversing beeper)	104	100	89	90	96	89	86	<b>98</b>
19 metre truck-ldling	106	101	90	92	91	89	86	<b>96</b>
Small rigid truck/delivery van (eg bread truck) - Moving slowly	93.4	88.5	85.7	84.6	80.6	76.3	71	<b>86</b>

Table 2 – Sound Power Level of delivery vehicles

The large 19 metre trucks will only access the Coles and Aldi loading docks. The smaller tenancies will be served by vans and or small rigid trucks.

## 5.2 Noise emissions from a 19 metre refrigerated truck driving into the loading dock (Scenario 1A)

The noise emission from a 19 metre refrigerated truck manoeuvring into and driving away from the loading dock is assessed against the L<sub>1</sub> criteria given that the noise will occur for less than 10% of the time, as the duration of the noise is several seconds rather than minutes per delivery.

The Scenario 1A noise contour plan in Appendix A illustrates the potential noise emission from a large 19 metre refrigerated truck driving forward within the service area. The results are summarised in Table 3 below.

Noise receiver location	Calculated noise level	Adjusted noise level#	Criteria	Compliance
Residences on to the south, across Arpenture Drive	L <sub>1</sub> 50 to 52 dB(A)	L <sub>1</sub> 50 to 52 dB(A)	L <sub>1</sub> 57 dB(A) after 7 am, L <sub>1</sub> 47 dB(A) before 7 am	YES after 7:00 am
Future residences to the west (highest value)	L <sub>1</sub> 45 dB(A)	L <sub>1</sub> 45 dB(A)	L <sub>1</sub> 57 dB(A) after 7 am, L <sub>1</sub> 47 dB(A) before 7 am	YES after 7:00 am

Table 3 – Scenario 1A results (19 metre reticulated vehicle driving forwards)

# - A +5 dB adjustment for 'tonality' is not applicable given that for L<sub>1</sub> noise emissions the tonal spike must be 8 dB which in our experience will not be detectable at the residences from a truck moving forward.

The results indicate that 19 metre reticulated delivery trucks are permitted after 7 am (Monday to Saturday), but will not comply with the 'Assigned Levels' before 7 am. As such it will be necessary to



implement a noise management plan whereby deliveries by large 19 metre reticulated vehicles only occur after 7 am. This is a common requirement for shopping centres within suburban areas.

Note – The predicted noise levels will not comply with the L<sub>1</sub> 'Assigned Levels' at any time on Sundays and Public Holidays. However, it may be possible to allow a single delivery from a 19 metre truck per 4 hour period on Sundays and Public Holidays, as the less stringent L<sub>max</sub> criteria of L<sub>max</sub> 67 dB(A) would apply in this scenario. This is because limiting the number of 19 m trucks to one per 4 hours shortens the duration of the noise. These limited deliveries would only be permitted after 9 am on Sundays and Public Holidays.

### 5.3 Noise emissions from a 19 metre refrigerated vehicle reversing into the loading dock (Scenario 1B)

Scenario 1B demonstrates the potential noise emissions from a 19 m refrigerated vehicle reversing within the loading dock area, inclusive of the reversing beeper. The results of Scenario 1B are presented on the appended noise contour plan, and summarised in Table 4 below.

Noise receiver location	Calculated noise level	Adjusted noise level#	Criteria	Compliance
Residences on to the south, across Arpenture Drive	L <sub>1</sub> 51 to 52 dB(A)	L <sub>1</sub> 56 to 57 dB(A)	L <sub>1</sub> 57 dB(A) after 7 am, L <sub>1</sub> 47 dB(A) before 7 am	YES after 7:00 am
Future residences to the west (highest value)	L <sub>1</sub> 45 dB(A)	L <sub>1</sub> 50 dB(A)	L <sub>1</sub> 57 dB(A) after 7 am, L <sub>1</sub> 47 dB(A) before 7 am	YES after 7:00 am

Table 4 – Simulation 1B results (19 metre reticulated vehicle driving forwards)

# - Includes the + 5 dB penalty for 'tonality' given that reversing beepers are very 'tonal'. Trucks that incorporate the broad-band 'whoosher' warning devices instead of beepers will not attract the 5 dB penalty for 'tonality'.

As per Scenario 1A, the noise emissions from 19 metre refrigerated trucks comply with the 'Assigned Levels' after 7 am (Monday to Saturday), but not before 7 am. Therefore, as stated in Section 5.2, deliveries from 19 metre trucks shall only occur:

- After 7 am Monday to Saturday; and,
- After 9 am on Sundays and Public Holidays and shall be limited to 1 delivery per 4 hours.

Please note that we have modelled a single 19 metre truck manoeuvring within the loading dock area at a single point in time, given that it will not be possible or practical to have multiple trucks moving about simultaneously due to the vehicle sweep paths. Furthermore, the vans/small rigid trucks will not manoeuvre about within the loading dock area at the same time as a 19 metre truck.

### 5.4 Noise emissions from 19 metre refrigerated trucks idling within the loading dock area (Scenario 1C)

Scenario 1C was undertaken to assess the potential noise emissions from a 19 metre refrigerated vehicle idling within the loading dock area. The results need to be compared with the L<sub>10</sub> criteria given that the noise emissions from idling vehicles would likely occur for more than 10% of the time.. The results are presented on the appended Scenario 1C noise contour plan, and summarised in Table 5.

Noise receiver location	Calculated noise level	Adjusted noise level#	Criteria	Compliance
Residences on to the south, across Arpenture Drive	L <sub>10</sub> 51 to 53 dB(A)	L <sub>10</sub> 56 to 58 dB(A)	L <sub>10</sub> 47 dB(A) after 7 am	NO
Future residences to the west (highest value)	L <sub>10</sub> 50 dB(A)	L <sub>10</sub> 55 dB(A)	L <sub>10</sub> 47 dB(A) after 7 am	NO

Table 5 – Scenario 1D results (19 metre reticulated vehicle idling within the loading dock area)

# - Includes the + 5 dB penalty for 'tonality'.

The noise modelling indicates that a 19 metre reticulated truck will not comply if the engine/refrigeration unit are left on whilst the truck is being unloaded. Therefore, it will be necessary for signage to be installed within the loading dock to instruct all drivers to switch off their vehicles whilst unloading. This is a common requirement for shopping centres within suburban areas throughout Western Australia.

### 5.5 Noise emissions from a small rigid truck (eg bread delivery) prior to 7 am (Scenario 1D)

It is common for the bread deliveries to a Coles or supermarket to occur before 7 am, in the form of a small rigid truck or large van. Scenario 1D demonstrates the potential noise emissions from a small rigid truck manoeuvring within the loading dock area. The results are summarised in Table 6.

Noise receiver location	Calculated noise level	Adjusted noise level#	Criteria	Compliance
Residences on to the south, across Arpenture Drive	L <sub>1</sub> 40 dB(A)	L <sub>1</sub> 40 dB(A)	L <sub>1</sub> 47 dB(A) before 7 am	YES
Future residences to the west (highest value)	L <sub>1</sub> 36 dB(A)	L <sub>1</sub> 36 dB(A)	L <sub>1</sub> 47 dB(A) before 7 am	YES

Table 6 – Scenario 1D results (small rigid truck manoeuvring within the loading dock area)

# - A +5 dB adjustment for 'tonality' is not applicable given that for L<sub>1</sub> noise emissions the tonal spike must be 8 dB which in our experience will not be detectable at the residences.

The modellings suggests that a delivery or two from small rigid trucks (eg bread delivery) is permitted before 7 am. However, as per all other delivery vehicles the engine must be switched off whilst the vehicle is being unloaded.

Given that a traditional reversing beeper will not comply before 7 am, it will be necessary for the bread trucks to be fitted with broadband 'wooshers', or only driven forwards to avoid activation of the 'beeper'. We understand that there is sufficient space within the service yard to allow a small truck / van to turn around without needing to reverse.

### 5.6 Noise emissions associated with the doors of the delivery vehicles

The delivery vehicles have swing and/or roller doors which produce a degree of noise, particularly when closed. This particular noise source has not been specifically modelled given that it will be inconsequential in relation to compliance. The reasons being:

- The Sound Power Level of a vehicle door closing is in the order of L<sub>max</sub> 85 dB(A), which is noticeably lower than the reversing beeper that has been modelled (Sound Power Level of 98 dB(A) as per Table 2); and,
- The very short duration of this noise source (split seconds per closure) mean that vehicle doors are assessed against the L<sub>max</sub> 'Assigned Levels' which is less stringent than the L<sub>1</sub> 'Assigned Levels' which were used as the criteria in Scenario 1A, 1B, and 1D.

### 5.7 Noise from waste collection vehicles

When the Environmental Protection (Noise) Regulations 1997 were amended in January 2017, the requirements regarding waste collection were changed. Regulation 14A specifically addresses the noise emissions from waste collection. Essentially, Regulation 14A states that provided waste collection only occurs during the following hours, the noise emissions from the waste collection vehicles do not need to comply with the 'Assigned Levels':

- 7 am to 7 pm, Monday to Saturday; and,
- 9 am to 7 pm Sundays and Public Holidays.

If one of the tenants wishes to have waste collection occurring out of these hours (known as Class 2 works) then a separate noise management plan will be required for the waste collection.

## 6. ASSESSMENT OF NOISE EMISSIONS FROM THE LOADING DOCK

There will be noise emissions from the loading docks themselves, such as use of pallet jacks, unloading of trucks, and staff talking. Based on noise level measurements conducted at other shopping centres the estimated Sound Power Level for each loading dock is as follows:

Frequency (Hz)	63	125	250	500	1k	2k	4k	dB(A)
Loading dock activities	92	91	85	79	78	74	70	84

Table 7 – Sound Power Level for loading dock activities

## 6.1 Noise emissions from loading dock activities (Scenario 2)

Scenario 2 in Appendix A illustrates the potential noise emissions from general loading dock activities. The resultant noise levels are summarised in Table 8 on the following page.

Noise receiver location	Calculated noise level	Adjusted noise level#	Criteria	Compliance
Residences on to the south, across Arpenture Drive	L <sub>10</sub> 35 dB(A)	L <sub>10</sub> 35 dB(A)	L <sub>10</sub> 47 dB(A) after 7 am, L <sub>10</sub> 37 dB(A) before 7 am	YES
Future residences to the west (highest value)	L <sub>10</sub> 34 dB(A)	L <sub>10</sub> 34 dB(A)	L <sub>10</sub> 47 dB(A) after 7 am, L <sub>10</sub> 37 dB(A) before 7 am	YES

Table 8 – Scenario 2 - General loading dock activities

# - The general loading dock activities are not known to have ‘annoying’ characteristics as defined by Regulation 9.

The resultant noise levels are compliant with the ‘Assigned Levels’, including before 7 am. However, it is recommended that the supermarket operators implement the general noise management practices outlined in Section 8 of this report.

## 6.2 Compactor(s)

It is possible that cardboard compactors will be used by Coles and Aldi within the loading dock area. In this case it is not necessary to model this specific noise source, given that Scenario 2 (Section 6.1) is compliant. The reasons being:

- Compactors have a Sound Power Level of around 85 dB(A), which is similar to the Sound Power Level modelled in Scenario 2 (Scenario 2 is compliant with the relevant ‘Assigned Level’); and,
- Given the noise from a compactor is intermittent, it would be assessed against the less stringent L<sub>1</sub> ‘Assigned Levels’. Whereas Scenario 2 is compliant with the more stringent L<sub>10</sub> ‘Assigned Levels’.

Notwithstanding the above, as per Section 8 of this report it is suggested that the compactors not be operated in the night period between 10 pm and 7 am.

## 7. ASSESSMENT OF NOISE EMISSIONS FROM THE MECHANICAL PLANT

At this early stage of the project, there is no mechanical design or equipment selections that can be assessed. However, it is possible to demonstrate that compliance with the ‘Assigned Levels’ is achievable by utilising noise level data for mechanical equipment used on another similarly sized shopping centre development.

The noise modelling assessment included acoustic screening of the roof-top plant areas, as described below:

- Acoustic screening on the southern and western sides of the Coles roof-top plant area (where the air-cooled air-conditioning and refrigeration equipment will be located).
- Acoustic screening on the southern, western, and partially north side of the supermarket roof top plant area.
- In all cases the acoustic screening is solid without gaps or slots (such as 6 mm fibre-cement) or 300 mm acoustic louvres where ventilation is necessary.
- The acoustic screening shall be at least 400 mm taller than the top of the mechanical plant.



## 7.1 Noise source data

Table 8 provides the Sound Power Levels that were utilised for the assessment of the mechanical plant.

Frequency (Hz)	63	125	250	500	1k	2k	4k	dB(A)
Air-cooled condensers (2 on the roof of Coles, 1 on the roof of the Supermarket)								
High speed	85	87	82	80	80	75	68	84
Low speed	78	79	77	78	76	69	61	80
Refrigeration Condensers (2 on the roof of Coles, 1 on the roof of the Supermarket)								
High speed	80	81	81	78	79	75	65	83
Low speed	80	79	79	75	75	69	65	79
Large Packaged A/C unit (2 off)	82	84	78	76	74	70	63	78
Medium Packaged A/C unit (2 off)	79	80	73	68	68	62	60	73
Small Packaged A/C unit (2 off)	82	83	70	67	63	59	52	71

Table 9 – Sound Power Levels of mechanical plant

## 7.2 Modelling of worst case daytime mechanical plant operation (Scenario 3A)

The 'Assigned Level' of L<sub>10</sub> 42 dB(A) is applicable to the daytime noise emissions from the mechanical plant, given that the shopping centre will operate seven days a week. Scenario 3A demonstrates the worst case scenario daytime conditions, where all mechanical plant is operating at full load simultaneously.

The results of the assessment are provided in Appendix A, with a summary provided on the following page:

Noise receiver location	Calculated noise level	Adjusted noise level#	Criteria	Compliance
Residences on to the south, across Arpenture Drive	L <sub>10</sub> 37 dB(A)	L <sub>10</sub> 42 dB(A)	L <sub>10</sub> 42 dB(A)	YES
Future residences to the west (highest value)	L <sub>10</sub> 37 dB(A)	L <sub>10</sub> 42 dB(A)	L <sub>10</sub> 42 dB(A)	YES

Table 10 – Scenario 3A – Daytime noise emissions from mechanical services.

# - Includes a +5 dB penalty for 'tonality' as per Regulation 9.

The results indicate that it is possible to achieve compliance with the 'Assigned Levels'.

## 7.3 Modelling of night time mechanical plant noise emissions (Scenario 3B)

Scenario 3B was undertaken to demonstrate compliance with the 'Assigned Levels' at night after 10 pm, when the 'Assigned Level' of L<sub>10</sub> 37 dB(A) is applicable.

The modelling has been based on the following configuration:

- Coles and supermarket air-cooled condensers (A/C) operating at low load; and,
- Coles and supermarket refrigeration condensers operating at low speed.
- Tenancy mechanical plant not operating.

The attached Scenario 3B results confirm that the night noise emissions are compliant with the relevant 'Assigned Level' of L<sub>10</sub> 37 dB(A).

Noise receiver location	Calculated noise level	Adjusted noise level#	Criteria	Compliance
Residences on to the south, across Arpenture Drive	L <sub>10</sub> 32 dB(A)	L <sub>10</sub> 37 dB(A)	L <sub>10</sub> 37 dB(A)	YES
Future residences to the west (highest value)	L <sub>10</sub> 32 dB(A)	L <sub>10</sub> 37 dB(A)	L <sub>10</sub> 37 dB(A)	YES

Table 11 – Scenario 3B – Night noise emissions from mechanical services (after 10 pm)

#### 7.4 Fire pumps

It is noted that Fire Pumps will be installed within an enclosed room near the loading dock. The noise emissions from the fire pumps when they are operating for testing and maintenance purposes shall comply with the daytime 'Assigned Level' of L<sub>1</sub> 57 dB(A) at the surrounding residences. In our experience, this requires the following specification:

- The radiated noise from the diesel engine shall be a packaged attenuated unit achieving a noise level of <88 dB(A) at 1 metre (eg Allied Pumps Enviropac Fire Pump with Class 1 attenuation).
- The diesel exhaust(s) will require residential grade mufflers achieving a noise level of L<sub>eq</sub> 78 dB(A) at 1 metre from the exhaust (eg Allied Pumps Enviropac Fire Pump with Class 1 attenuation).

#### 7.5 Acoustic report for Building Permit

An updated acoustic assessment will be required prior to the lodgement of Building Permit. This will need to be based on the actual equipment selected for this project, including the various roof mounted fans.

### 8. GENERAL NOISE MANAGEMENT PLAN

In addition to the noise management practices established previously in this report, it is recommended that the following policies be adopted by the supermarket operators:

- It is recommended that the waste compactor is not operated between 10 pm and 7 am.
- Deliveries by the 19 metre reticulated vehicles shall be scheduled to avoid any queuing of vehicles.
- The supermarket operators shall be encouraged to only use delivery vehicles that utilise the broadband type reversing alarms in lieu of traditional tonal alarms.
- External loudspeakers shall not be fitted outside of the loading dock which play store announcements or music.
- The roller door of the Loading Docks shall be selected for quiet operation, to avoid loud impulsive noise when the door is opened and closed.

### 9. CONCLUSION

The potential noise emissions from the Parkland Heights Shopping Centre have been modelled using the SoundPLAN 8.2 software. The noise modelling confirms that the proposed development is capable of complying with the Environmental Protection (Noise) Regulations 1997. Compliance is reliant on a combination of acoustic treatments and noise management practices, which are summarised in the Executive Summary of this report.

Regards,

**Benjamin Farrell**  
Director M.A.A.S.



**GABRIELS HEARNE FARRELL PTY LTD**

Member Firm - Association of Australian Acoustical Consultants

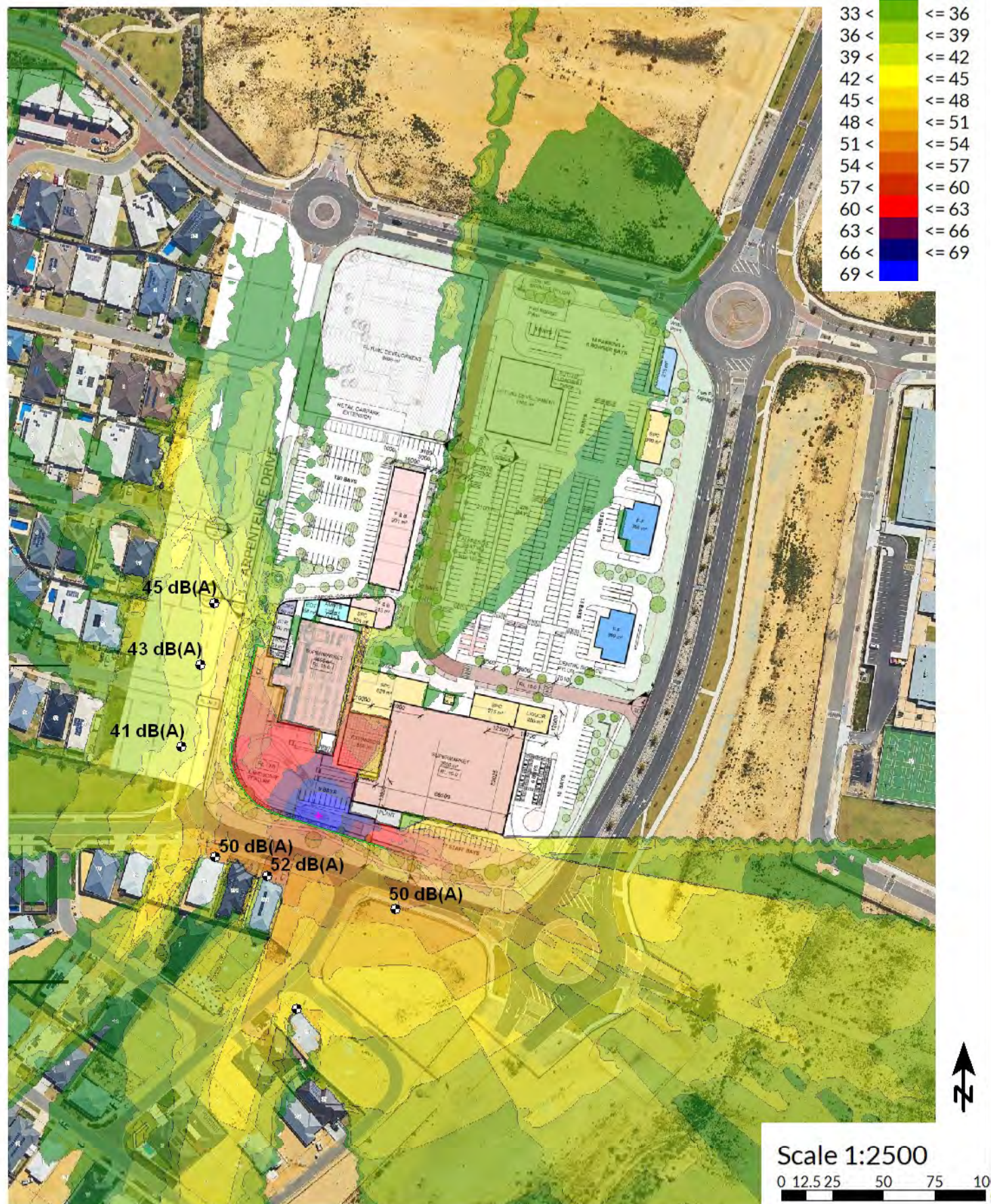
## **ATTACHMENTS**

- APPENDIX A NOISE CONTOUR PLANS



# ENVIRONMENTAL NOISE ASSESSMENT PARKLAND HEIGHTS SHOPPING CENTRE (DA STAGE)

Noise level  
L1 dB(A)



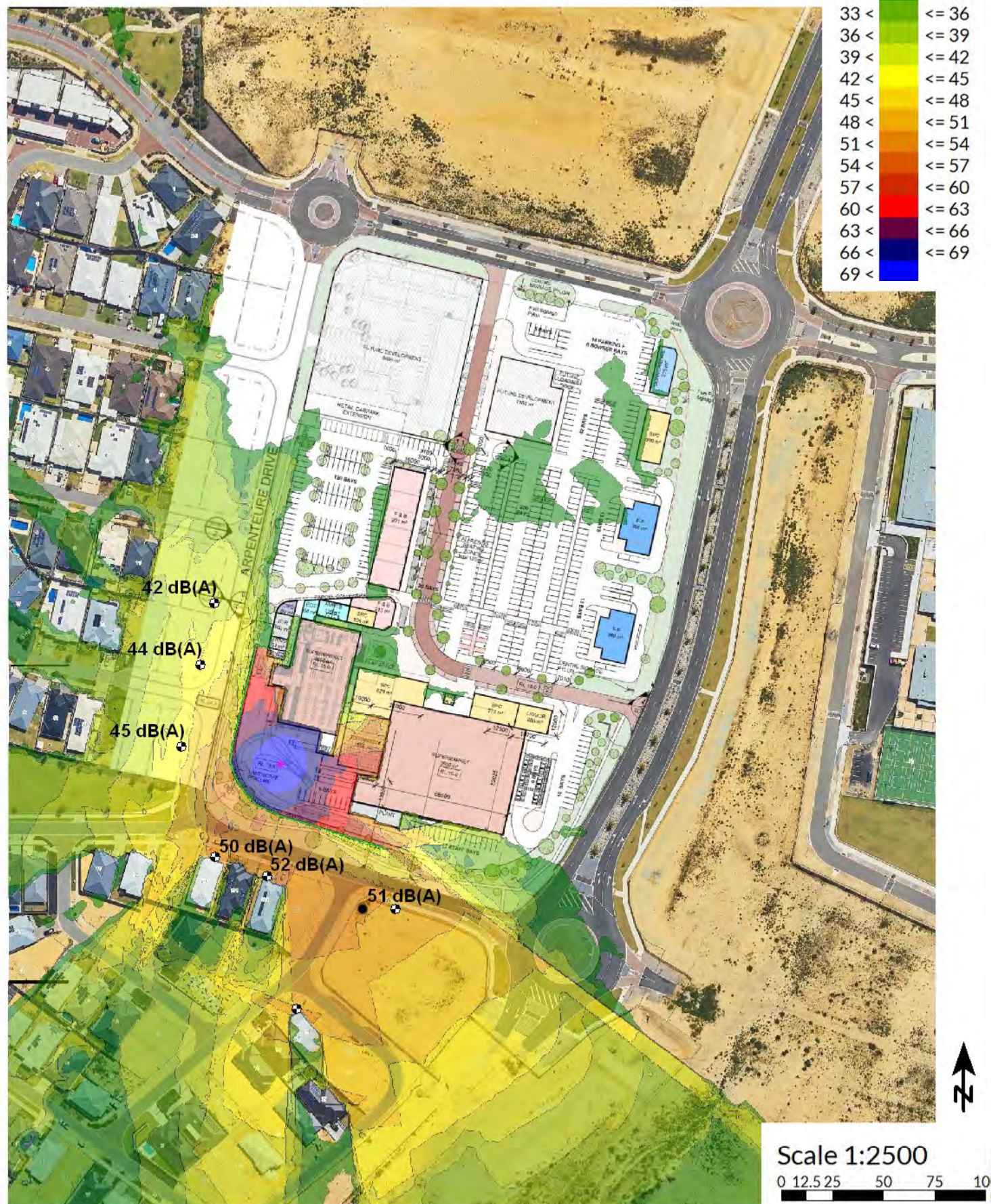
## SCENARIO 1A - 19 m REFRIGERATED TRUCK DRIVING INTO SERVICE AREA

- TOP OF ACOUSTIC SCREENING OF SERVICE/LOADING AREA IS 3500 mm ABOVE THE GROUND LEVEL OF THE SERVICE AREA. EXTENT OF SCREENING SHOWN IN GREEN.



# ENVIRONMENTAL NOISE ASSESSMENT PARKLAND HEIGHTS SHOPPING CENTRE (DA STAGE)

Noise level  
L1 dB(A)



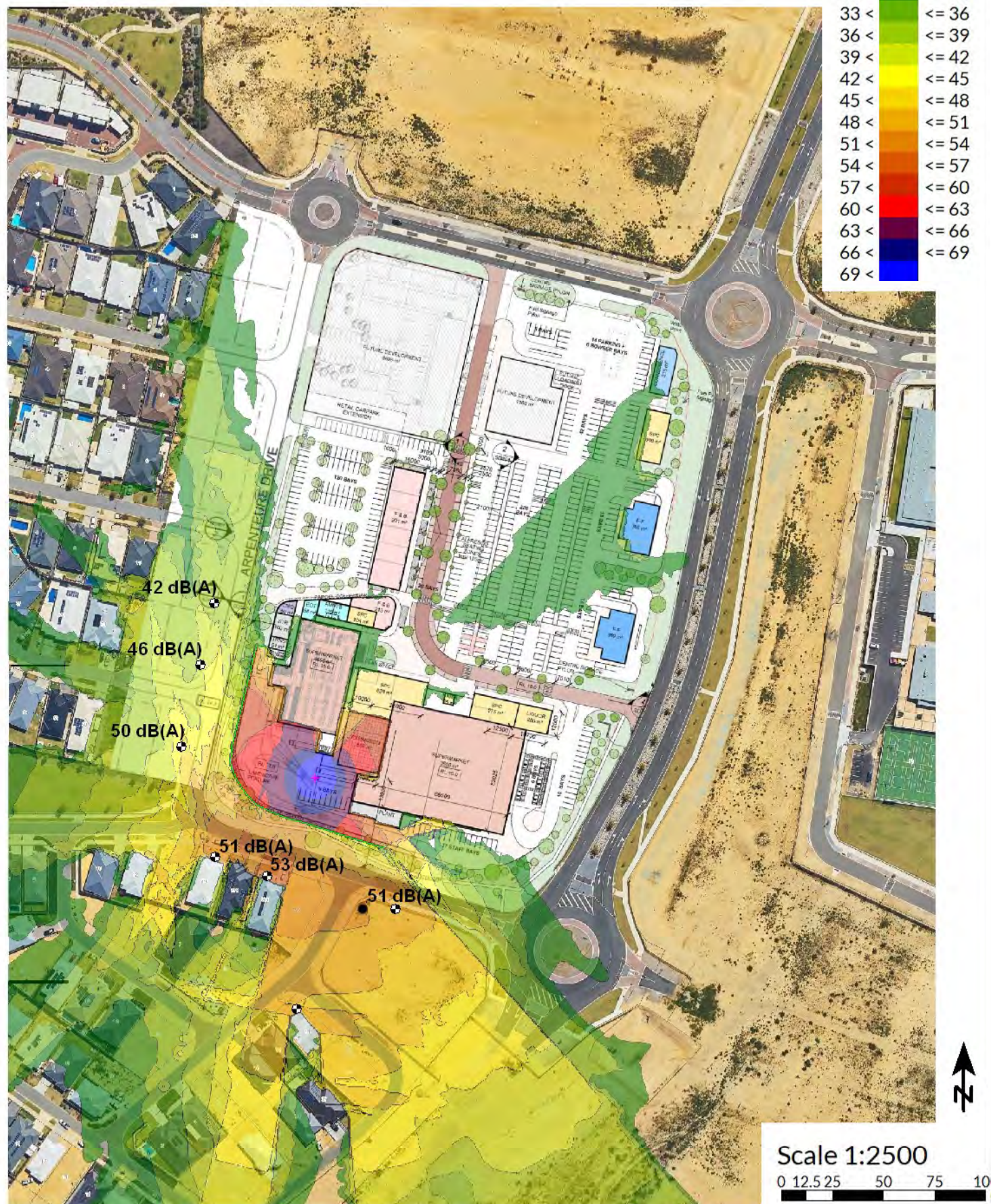
## SCENARIO 1B - 19 m REFRIGERATED TRUCK REVERSING INTO LOADING DOCK

- INCLUDES DOMINANT REVERSING BEEPER
- TOP OF ACOUSTIC SCREENING OF SERVICE/LOADING AREA IS 3500 mm ABOVE THE GROUND LEVEL OF THE SERVICE AREA. EXTENT OF SCREENING SHOWN IN GREEN.



# ENVIRONMENTAL NOISE ASSESSMENT PARKLAND HEIGHTS SHOPPING CENTRE (DA STAGE)

Noise level  
L10 dB(A)



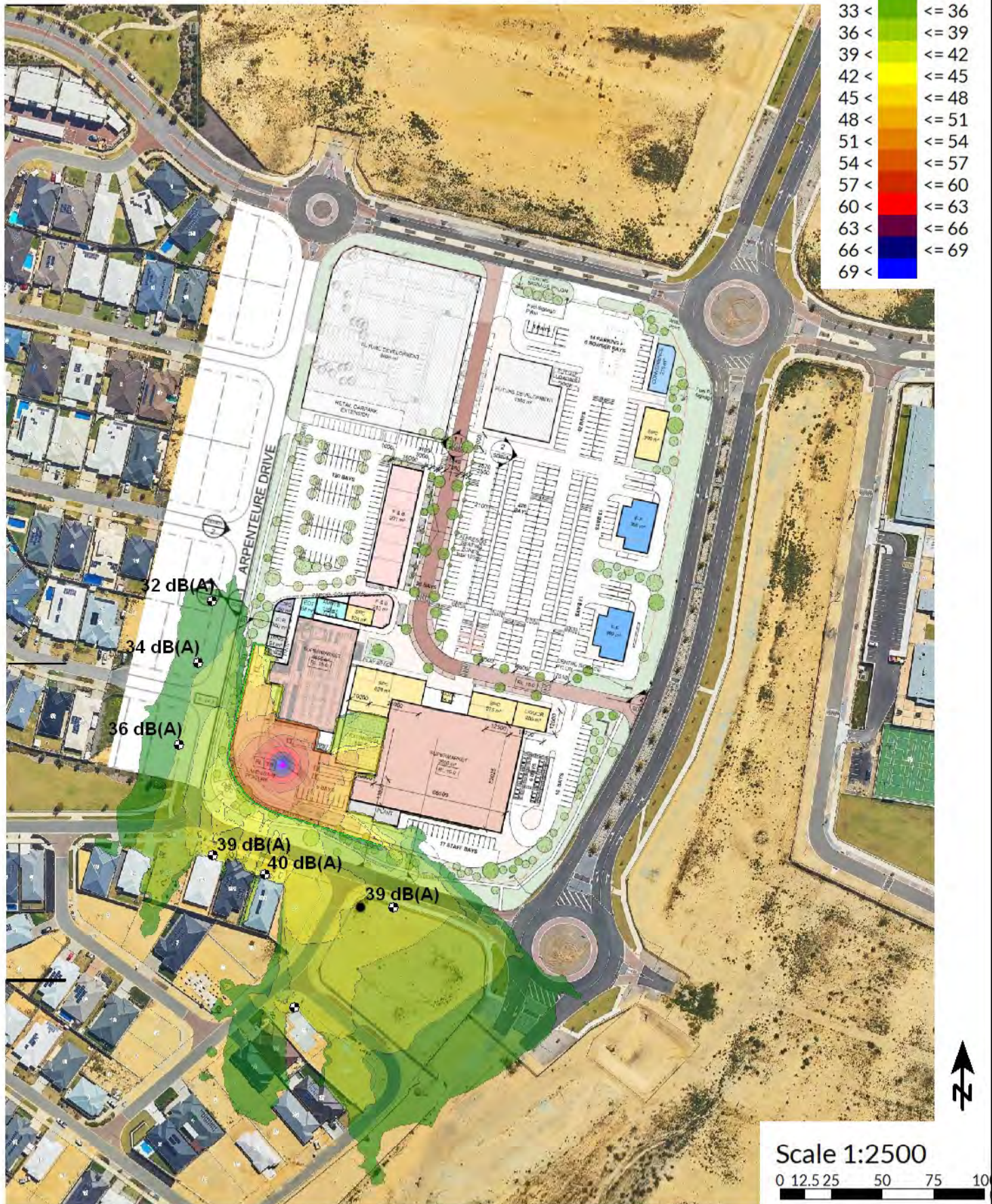
## SCENARIO 1C - 19 m REFRIGERATED TRUCK IDLING AT LOADING DOCK

- TOP OF ACOUSTIC SCREENING OF SERVICE/LOADING AREA IS 3500 mm ABOVE THE GROUND LEVEL OF THE SERVICE AREA. EXTENT OF SCREENING SHOWN IN GREEN.



# ENVIRONMENTAL NOISE ASSESSMENT PARKLAND HEIGHTS SHOPPING CENTRE (DA STAGE)

Noise level  
L1 dB(A)



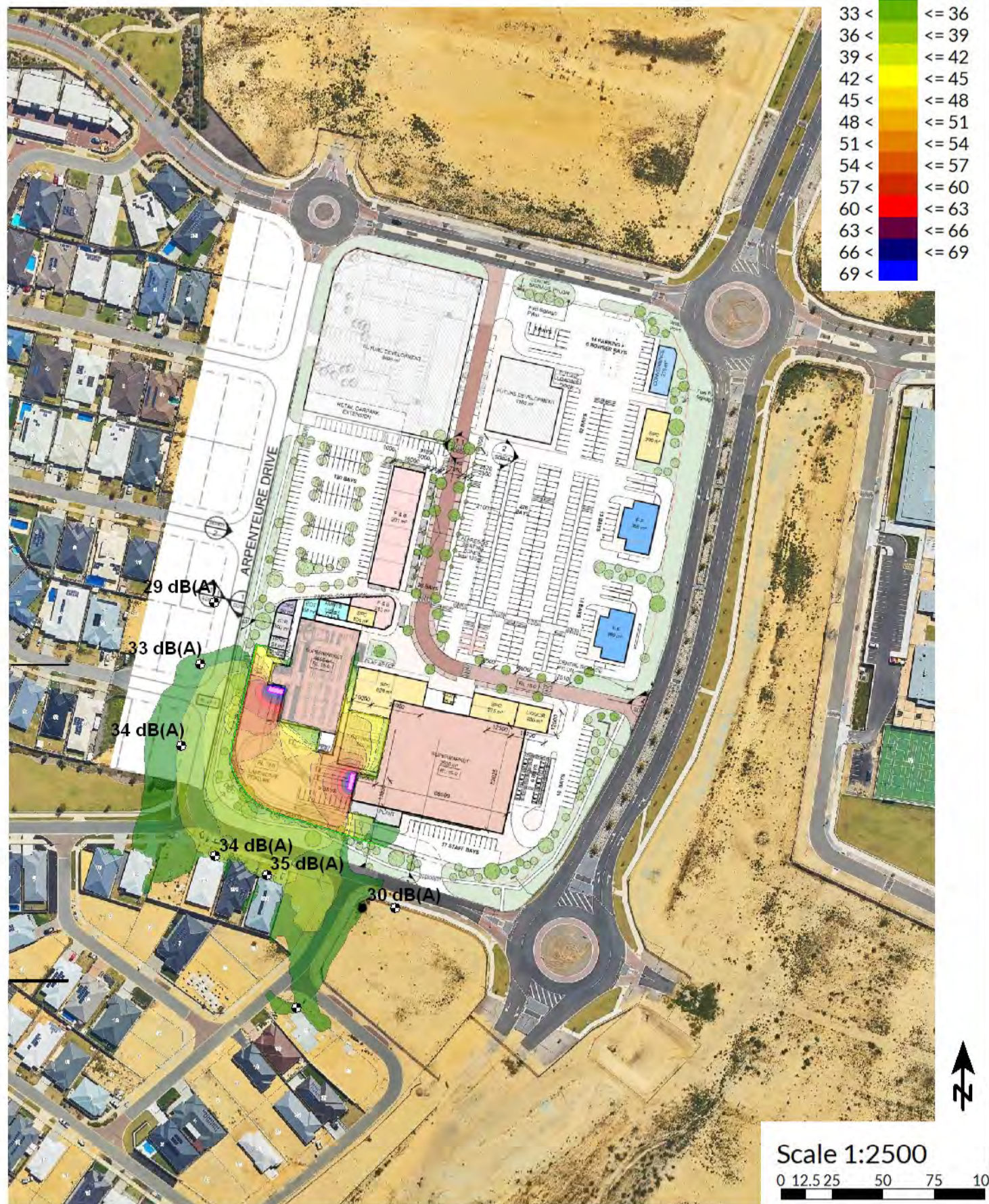
## SCENARIO 1D - DELIVERY VAN / SMALL TRUCK WITHIN SERVICE AREA

- TOP OF ACOUSTIC SCREENING OF SERVICE/LOADING AREA IS 3500 mm ABOVE THE GROUND LEVEL OF THE SERVICE AREA. EXTENT OF SCREENING SHOWN IN GREEN.



# ENVIRONMENTAL NOISE ASSESSMENT PARKLAND HEIGHTS SHOPPING CENTRE (DA STAGE)

Noise level  
L10 dB(A)



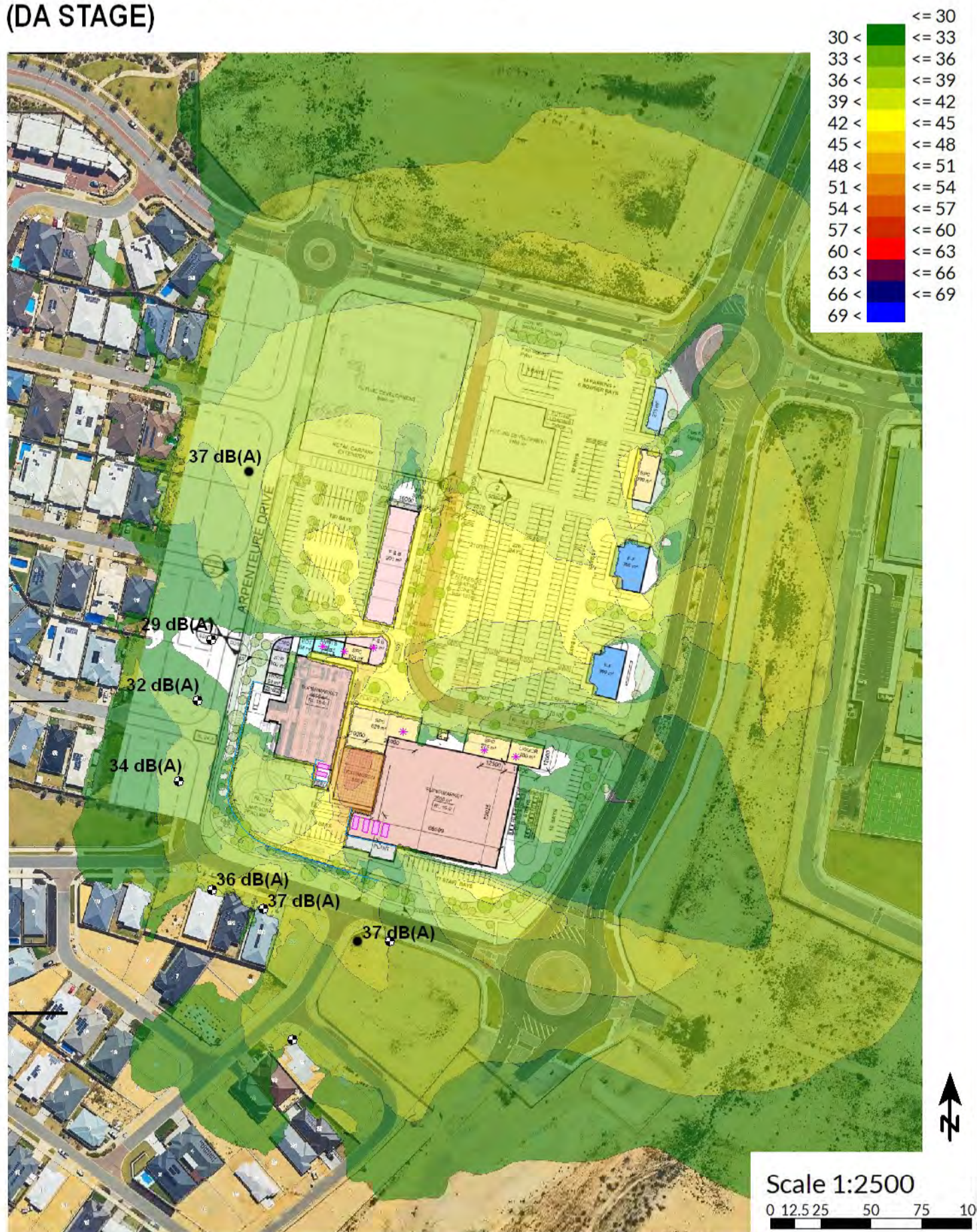
## SCENARIO 2 - NOISE EMISSIONS FROM LOADING DOCK

- GENERAL USE OF LOADING DOCKS INCLUDING USE OF PALLET JACKS, UNLOADING OF TRUCKS, AND STAFF TALKING.



# ENVIRONMENTAL NOISE ASSESSMENT PARKLAND HEIGHTS SHOPPING CENTRE (DA STAGE)

Noise level  
L10 dB(A)



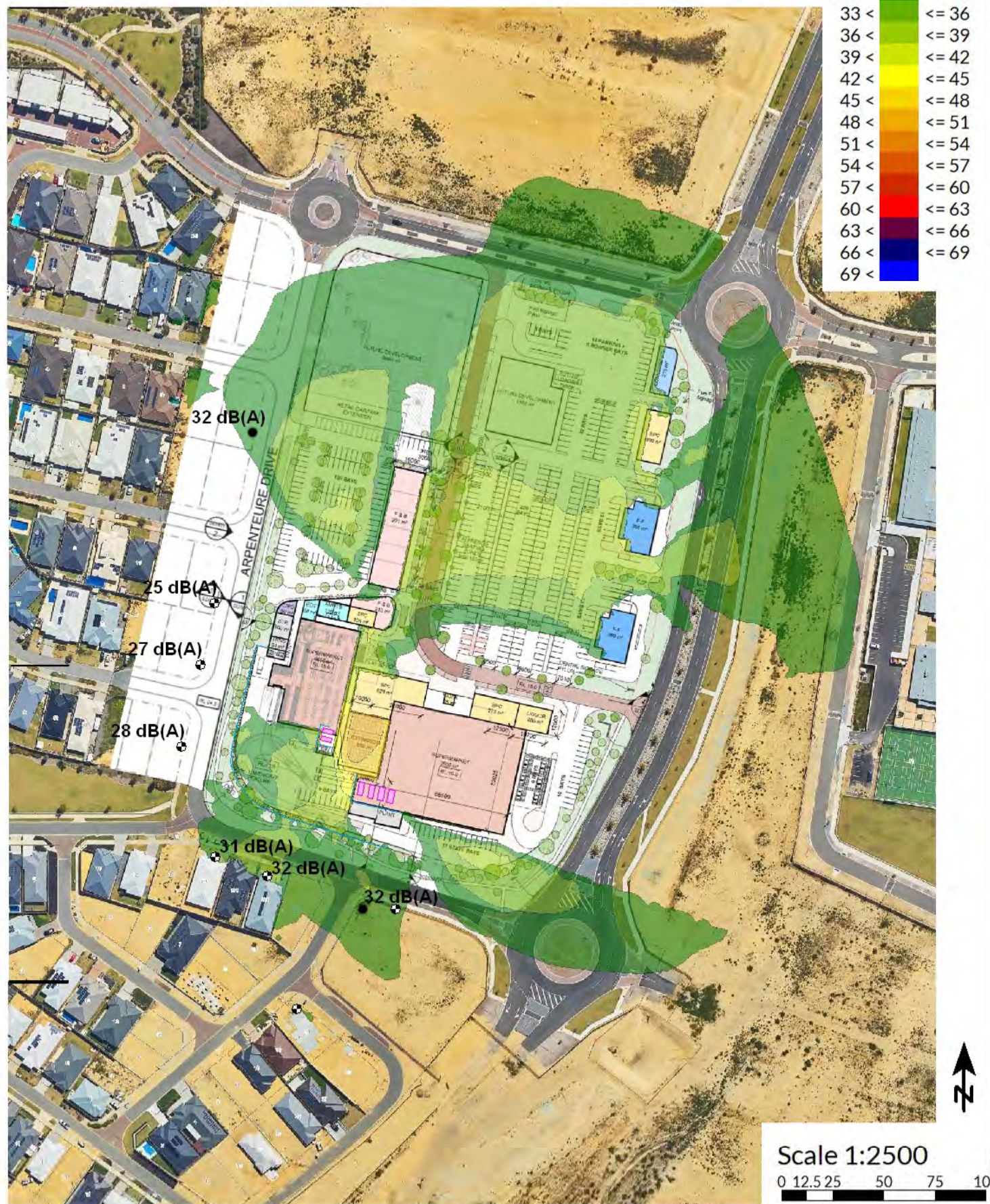
## SCENARIO 3A - DAYTIME NOISE EMISSIONS FROM MECHANICAL PLANT

- AIR-CONDITIONING AND REFRIGERATION EQUIPMENT OPERATING AT FULL LOAD
- ACOUSTIC SCREENING ON SOUTH AND WEST SIDES OF THE COLES ROOF-TOP PLANT AREA.
- ACOUSTIC SCREENING ON THE SOUTH, WEST, AND PARTIAL NORTH SIDE OF ALDI ROOF-TOP PLANT AREA



# ENVIRONMENTAL NOISE ASSESSMENT PARKLAND HEIGHTS SHOPPING CENTRE (DA STAGE)

Noise level  
L10 dB(A)



## SCENARIO 3B - NIGHT NOISE EMISSIONS FROM MECHANICAL PLANT

- AIR-CONDITIONING AND REFRIGERATION EQUIPMENT OPERATING AT LOW LOAD
- TENANCY AIR-CONDITIONING NOT OPERATING
- ACOUSTIC SCREENING ON SOUTH AND WEST SIDES OF THE COLES ROOF-TOP PLANT AREA.
- ACOUSTIC SCREENING ON THE SOUTH, WEST, AND PARTIAL NORTH SIDE OF ALDI ROOF-TOP PLANT AREA





# Waste Management Plan

Parkland Heights, Baldivis

Prepared for Rockingham Park Pty Ltd

7 November 2022

Project Number: TW22132

#### DOCUMENT CONTROL

Version	Description	Date	Author	Reviewer	Approver
1.0	First Approved Release	7/11/2022	AB	DP	DP

#### Approval for Release

Name	Position	File Reference
Dilan Patel	Project Manager – Waste Management Consultant	TW22132-02_Waste Management Plan_1.0
<b>Signature</b>		

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## Executive Summary

Rockingham Park Pty Ltd is seeking development approval for the proposed Baldivis Neighbourhood Shopping Centre development (Part 1 and Part 2) located on the corner of Arpenteur Drive and Nairn Drive, Baldivis (the Proposal).

As part of the development application the City of Rockingham (the City) requires the submission of a Waste Management Plan (WMP) that will identify how waste is to be stored and collected from the Proposal. Talis Consultants has been engaged to prepare this WMP to satisfy the City's requirements.

A summary of the bin size, numbers, collection frequency and collection method is provided in the below table.

### Proposed Waste Collection Summary

Waste Type	Generation (L/week)	Bin Size (L)	Number of Bins	Collection Frequency	Collection
Bin Storage Area 1					
Refuse	4,260	1,100	Four	Once each week	Private Contractor
Recycling	4,260	1,100	Four	Once each week	Private Contractor
Bin Storage Area 2					
Refuse	17,094	660	Thirteen	Two times each week	Private Contractor
Recycling	11,746	660	Nine	Two times each week	Private Contractor

A private contractor will service the Proposal onsite, directly from the Bin Storage Areas utilising the dedicated loading areas within the carpark. The private contractor's waste collection vehicle will enter and exit the Proposal in forward gear via Arpenteur Drive.

The centre manager will oversee the relevant aspects of waste management at the Proposal.

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Figure 1: Locality Plan



# 1 Introduction

Rockingham Park Pty Ltd is seeking development approval for the proposed commercial development located at the corner of Arpenteur Drive and Nairn Drive (the Proposal).

As part of the development application the City of Rockingham (the City) requires the submission of a Waste Management Plan (WMP) that will identify how waste is to be stored and collected from the Proposal. Talis Consultants has been engaged to prepare this WMP to satisfy the City's requirements.

The Proposal is bordered by Furnivall Parade to the north, Nairn Drive to the east and Arpenteur Drive to the south and west, as shown in Figure 1.

## 1.1 Objectives and Scope

The objective of this WMP is to outline the equipment and procedures that will be adopted to manage waste (refuse and recyclables) at the Proposal. Specifically, the WMP demonstrates that the Proposal is designed to:

- Adequately cater for the anticipated volume of waste to be generated;
- Provide adequately sized Bin Storage Areas, including appropriate bins; and
- Allow for efficient collection of bins by appropriate waste collection vehicles.

To achieve the objective, the scope of the WMP comprises:

- Section 2: Waste Generation;
- Section 3: Waste Storage;
- Section 4: Waste Collection;
- Section 5: Waste Management; and
- Section 6: Conclusion.

## 2 Waste Generation

The following section shows the waste generation rates used and the estimated waste volumes to be generated at the Proposal.

### 2.1 Proposed Tenancies

The anticipated volume of refuse and recyclables is based on the floor area (m<sup>2</sup>) of the commercial tenancies at the Proposal. The Proposal consists of the following:

#### Bin Storage Area 1:

- Centre Management Office – 50m<sup>2</sup>;
- Specialty – 104m<sup>2</sup>;
- Specialty – 628m<sup>2</sup>;
- Specialty – 275m<sup>2</sup>; and
- Liquor – 200m<sup>2</sup>.

#### Bin Storage Area 2:

- Café 1 – 64m<sup>2</sup>;
- Gift Shop – 150m<sup>2</sup>;
- Café 2 – 125m<sup>2</sup>;
- Burger – 125m<sup>2</sup>;
- Health Food – 150m<sup>2</sup>;
- Pasta – 100m<sup>2</sup>;
- Bakery – 150m<sup>2</sup>;
- Sandwich – 150m<sup>2</sup>; and
- Ice-cream – 100m<sup>2</sup>.

Note, the Supermarket has their own back of house and will manage waste through their own internal processes governed by national waste collections contracts, and therefore has not been included as part of this report.

### 2.2 Waste Generation Rates

In order to achieve an accurate projection of waste volumes for the Proposal, consideration was given to the City of Melbourne's *Guidelines for Waste Management Plans* (2021).

Table 2-1 shows the waste generation rates which have been applied to the Proposal.



**Table 2-1: Waste Generation Rates**

Tenancy Use Type	Melbourne Guideline Reference	Refuse Generation Rate	Recycling Generation Rate
Centre Management Office	Office	10L/100m <sup>2</sup> /day	10L/100m <sup>2</sup> /day
Specialty	Shops (non-food)	50L/100m <sup>2</sup> /day	50L/100m <sup>2</sup> /day
Liquor	Shops (non-food)	50L/100m <sup>2</sup> /day	50L/100m <sup>2</sup> /day
Café	Café	300L/100m <sup>2</sup> /day	200L/100m <sup>2</sup> /day
Gift Shop	Shops (non-food)	50L/100m <sup>2</sup> /day	50L/100m <sup>2</sup> /day
Burger	Restaurants	660L/100m <sup>2</sup> /day	200L/100m <sup>2</sup> /day
Health Food	Takeaway/Café	150L/100m <sup>2</sup> /day	150L/100m <sup>2</sup> /day
Pasta	Takeaway/Café	150L/100m <sup>2</sup> /day	150L/100m <sup>2</sup> /day
Bakery	Takeaway/Café	150L/100m <sup>2</sup> /day	150L/100m <sup>2</sup> /day
Sandwich	Takeaway/Café	150L/100m <sup>2</sup> /day	150L/100m <sup>2</sup> /day
Ice-cream	Takeaway/Café	150L/100m <sup>2</sup> /day	150L/100m <sup>2</sup> /day

## 2.3 Waste Generation Volumes

Waste generation is estimated by volume in litres (L) as this is generally the influencing factor when considering bin size, numbers and storage space required.

### 2.3.1 Bin Storage Area 1 Waste Generation

Waste generation volumes in litres per week (L/week) adopted for the Bin Storage Area 1 tenancies for this waste assessment are shown in Table 2-2. It is estimated that these commercial tenancies will generate 4,260L of refuse and 4,260L of recyclables each week.

**Table 2-2: Estimated Waste Generation – Bin Storage Area 1**

Commercial Tenancies	Area (m <sup>2</sup> )	Waste Generation Rate (L/100m <sup>2</sup> /day)	Waste Generation (L/week)
<b>REFUSE</b>			
Centre Management Office	50	10	35
Specialty	104	50	364
Specialty	628	50	2,198
Specialty	275	50	963
Liquor	200	50	700
<b>Total</b>			<b>4,260</b>
<b>RECYCLABLES</b>			
Centre Management Office	50	10	35
Specialty	104	50	364
Specialty	628	50	2,198
Specialty	275	50	963
Liquor	200	50	700
<b>Total</b>			<b>4,260</b>

### 2.3.2 Bin Storage Area 2 Waste Generation

Waste generation volumes in litres per week (L/week) adopted for the Bin Storage Area 2 tenancies for this waste assessment are shown in Table 2-3. It is estimated that these commercial tenancies will generate 17,094L of refuse and 11,746L of recyclables each week.

**Table 2-3: Estimated Waste Generation – Bin Storage Area 2**

Commercial Tenancies	Area (m <sup>2</sup> )	Waste Generation Rate (L/100m <sup>2</sup> /day)	Waste Generation (L/week)
<b>REFUSE</b>			
Café 1	64	300	1,344
Gift Shop	150	50	525
Café 2	125	300	2,625
Burger	125	660	5,775
Health Food	150	150	1,575
Pasta	100	150	1,050
Bakery	150	150	1,575
Sandwich	150	150	1,575
Ice-cream	100	150	1,050
<b>Total</b>			<b>17,094</b>
<b>RECYCLABLES</b>			
Café 1	64	200	896
Gift Shop	150	50	525
Café 2	125	200	1,750
Burger	125	200	1,750
Health Food	150	150	1,575
Pasta	100	150	1,050
Bakery	150	150	1,575
Sandwich	150	150	1,575
Ice-cream	100	150	1,050
<b>Total</b>			<b>11,746</b>



### 3 Waste Storage

Waste materials generated within the Proposal will be collected in the bins located in the Bin Storage Areas, as shown in Diagram 1 and Diagram 2, and discussed in the following sub-sections.

#### 3.1 Internal Transfer of Waste

To promote positive recycling behaviour and maximise diversion from landfill, internal bins will be available throughout the Proposal for the source separation of refuse and recycling.

These internal bins will be collected by the staff/cleaners and transferred to the respective Bin Storage Area for consolidation into the appropriate bins, as required. This internal servicing method may be conducted outside of main operational hours to mitigate disturbances to staff/visitors.

All bins will be colour coded and labelled in accordance with Australian Standards (AS 4123.7) to assist visitors, staff and cleaners to dispose of their separate waste materials in the correct bins.

#### 3.2 Bin Sizes

Table 3-1 gives the typical dimensions of standard bins sizes that may be utilised at the Proposal. It should be noted that these bin dimensions are approximate and can vary slightly between suppliers.

**Table 3-1: Typical Bin Dimensions**

Dimensions	Bin Sizes		
	240L	660L	1,100L
Depth (mm)	730	780	1,070
Width (mm)	585	1,260	1,240
Height (mm)	1,060	1,200	1,300

Reference: SULO Bin Specification Data Sheets

#### 3.3 Bin Storage Area 1 Size

To ensure sufficient area is available for storage of the bins for the Bin Storage Area 1 tenancies, the amount of bins required for Bin Storage Area 1 was modelled utilising the estimated waste generation in Table 2-2, bin sizes in Table 3-1 and based on collection of refuse and recyclables once each week.

Based on the results shown in Table 3-2, Bin Storage Area 1 has been sized to accommodate:

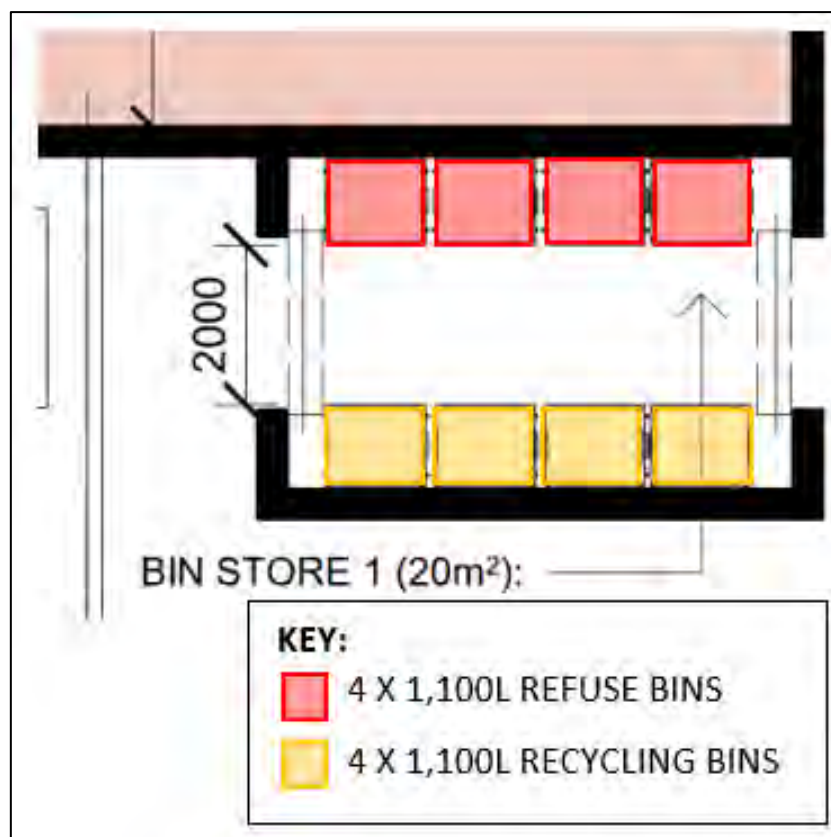
- Four 1,100L refuse bins; and
- Four 1,100L recycling bins.

**Table 3-2: Bin Requirements for Bin Storage Area 1**

Waste Stream	Waste Generation (L/week)	Number of Bins Required		
		240L	660L	1,100L
Refuse	4,260	18	7	4
Recycling	4,260	18	7	4

The configuration of these bins within Bin Storage Area 1 is shown in Diagram 1. It is worth noting that the number of bins and corresponding placement of bins shown in Diagram 1 represents the maximum requirements assuming one collection each week of refuse and recyclables.

Diagram 1: Bin Storage Area 1



### 3.4 Bin Storage Area 2 Size

To ensure sufficient area is available for storage of the bins for the Bin Storage Area 2 tenancies, the amount of bins required for Bin Storage Area 2 was modelled utilising the estimated waste generation in Table 2-3, bin sizes in Table 3-1 and based on collection of refuse and recyclables two times each week.

Based on the results shown in Table 3-3, Bin Storage Area 2 has been sized to accommodate:

- Thirteen 660L refuse bins; and
- Nine 660L recycling bins.

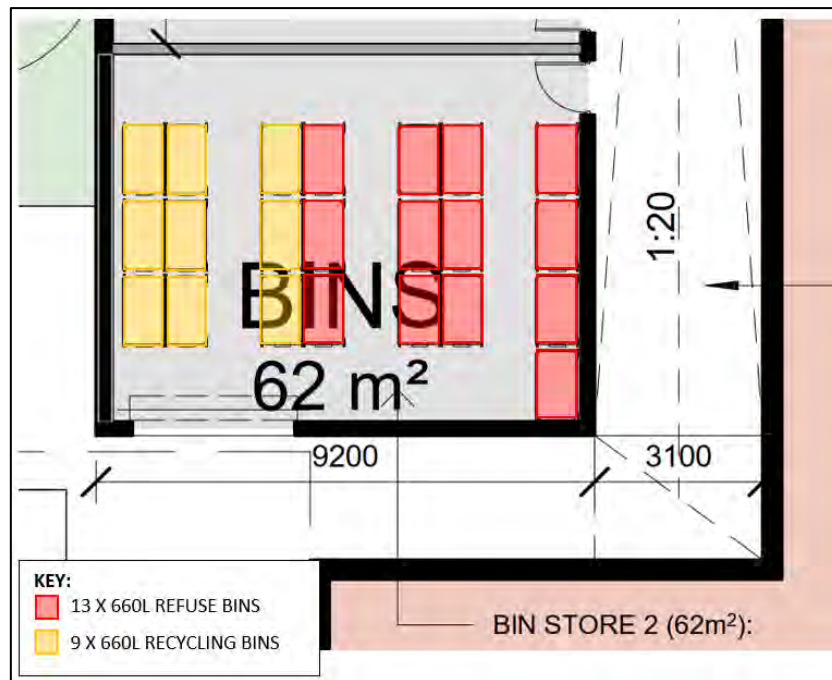
Table 3-3: Bin Requirements for Bin Storage Area 2

Waste Stream	Waste Generation (L/week)	Number of Bins Required		
		240L	660L	1,100L
Refuse	17,094	36	13	8
Recycling	11,746	25	9	6

The configuration of these bins within Bin Storage Area 2 is shown in Diagram 2. It is worth noting that the number of bins and corresponding placement of bins shown in Diagram 2 represents the maximum requirements assuming two collections each week of refuse and recyclables.



Diagram 2: Bin Storage Area 2



### 3.5 Bin Storage Area Design

The design of the Bin Storage Areas will take into consideration:

- Smooth impervious floor sloped to a drain connected to the sewer system;
- Taps for washing of bins and Bin Storage Areas;
- Adequate aisle width for easy manoeuvring of bins;
- No double stacking of bins;
- Doors to the Bin Storage Areas self-closing and vermin proof;
- Doors to the Bin Storage Areas wide enough to fit bins through;
- Ventilated to a suitable standard;
- Appropriate signage;
- Undercover where possible and be designed to not permit stormwater to enter the drain;
- Located behind the building setback line;
- Bins not to be visible from the property boundary or areas trafficable by the public; and
- Bins are reasonably secured from theft and vandalism.

Bin numbers and storage space within the Bin Storage Areas will be monitored by the centre manager during the operation of the Proposal to ensure that the number of bins and collection frequency is sufficient.

## 4 Waste Collection

A private waste collection contractor will service the Proposal from the respective Bin Storage Area at the required collection frequencies (refer Section 3), utilising a rear loader waste collection vehicle.

The private contractor's rear lift waste collection vehicle will enter the Proposal's carpark in forward gear and pull up directly opposite the Bin Storage Areas for servicing. Private contractor's staff will ferry bins to and from the rear loader waste collection vehicle and the Bin Storage Areas during servicing.

The private contractor will be provided with key/PIN code access to the Bin Storage Areas and security access gates to facilitate servicing, if required.

Once servicing is complete the private contractor's waste collection vehicle will exit the Proposal in a forward motion, turning onto Arpenteur Drive moving with traffic flow.

The above servicing method will preserve the amenity of the area by removing the requirement for bins to be presented to the street on collection days. In addition, servicing of bins onsite will reduce the noise generated in the area during collection. Noise from waste vehicles must comply with the Environmental Protection (Noise) Regulations and such vehicles should not service the site before 7.00am or after 7.00pm Monday to Saturday, or before 9.00am or after 7.00pm on Sundays and Public Holidays.

The ability for service vehicles to access the Proposal in a safe manner has been assessed by Transcore and will be included within their traffic impact statement.

### 4.1 Bulk and Speciality Waste

Adequate space may be allocated throughout the Proposal for placement of cabinets/containers for collection and storage of bulk and specialty wastes that are unable to be disposed of within the bins. These may include items such as:

- Refurbishment wastes from fit outs;
- Batteries and E-wastes;
- White goods/appliances;
- Used cooking oil;
- Cleaning chemicals; and
- Commercial light globes.

These materials will be removed from the Proposal once sufficient volumes have been accumulated to warrant disposal. A temporary skip bin could be utilised for collections, if required. Bulk and specialty waste collection will be monitored by centre management who will organise their transport to the appropriate waste facility, as required.



## 5 Waste Management

The centre manager will be engaged to complete the following tasks:

- Monitoring and maintenance of bins and the Bin Storage Areas;
- Cleaning of bins and Bin Storage Areas, when required;
- Ensure all tenants at the Proposal are made aware of this WMP and their responsibilities thereunder;
- Monitor tenant behaviour and identify requirements for further education and/or signage;
- Monitor bulk and speciality waste accumulation and assist with its removal, as required;
- Regularly engage with tenants to develop opportunities to reduce waste volumes and increase resource recovery; and
- Regularly engage with the private contractors to ensure efficient and effective waste service is maintained.

## 6 Conclusion

As demonstrated within this WMP, the Proposal provides sufficiently sized Bin Storage Areas for storage of refuse and recyclables, based on the estimated waste generation volumes and suitable configuration of bins. This indicates that adequately designed Bin Storage Areas have been provided, and collection of refuse and recyclables can be completed from the Proposal.

The above is achieved using:

### **Bin Storage Area 1:**

- Four 1,100L refuse bins, collected once each week; and
- Four 1,100L recycling bins, collected once each week.

### **Bin Storage Area 2:**

- Thirteen 660L refuse bins, collected two times each week; and
- Nine 660L recycling bins, collected two times each week.

A private contractor will service the Proposal onsite, directly from the Bin Storage Areas utilising the dedicated loading areas within the carpark. The private contractor's waste collection vehicle will enter and exit the Proposal in forward gear via Arpenteur Drive.

The centre manager will oversee the relevant aspects of waste management at the Proposal.

## Figures

Figure 1: Locality Plan





Data source: Roads, Cadastre • Landgate, 2022; Imagery: Nearmap, 2022.

LEGEND

- Site Boundary
- Cadastre

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LOCALITY

Parkland Heights  
Baldvis WA 6171

Rockingham Park Pty Ltd



Prepared: T Baskerville	Date: 12/09/2022
Reviewed: A Brouwer	Revision: A
Project: TW22132	



Figure 01





**Assets | Engineering | Environment | Noise | Spatial | Waste**

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## APPENDIX 1:

### Retail Sustainability Assessment





# **Rockingham Park Pty Ltd**

Parkland Heights Retail Sustainability Assessment

Final Report

**August 2017**



Document Control				
Document Version	Description	Prepared By	Approved By	Date Approved
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v 1.1	Parkland Heights Retail Sustainability Assessment – Final	Dawson Demassiet-Huning	Per Sauer	28 Feb 2017
v 1.2	Parkland Heights Retail Sustainability Assessment – Final	Dawson Demassiet-Huning	Per Sauer	08 Aug 2017

#### Disclaimer

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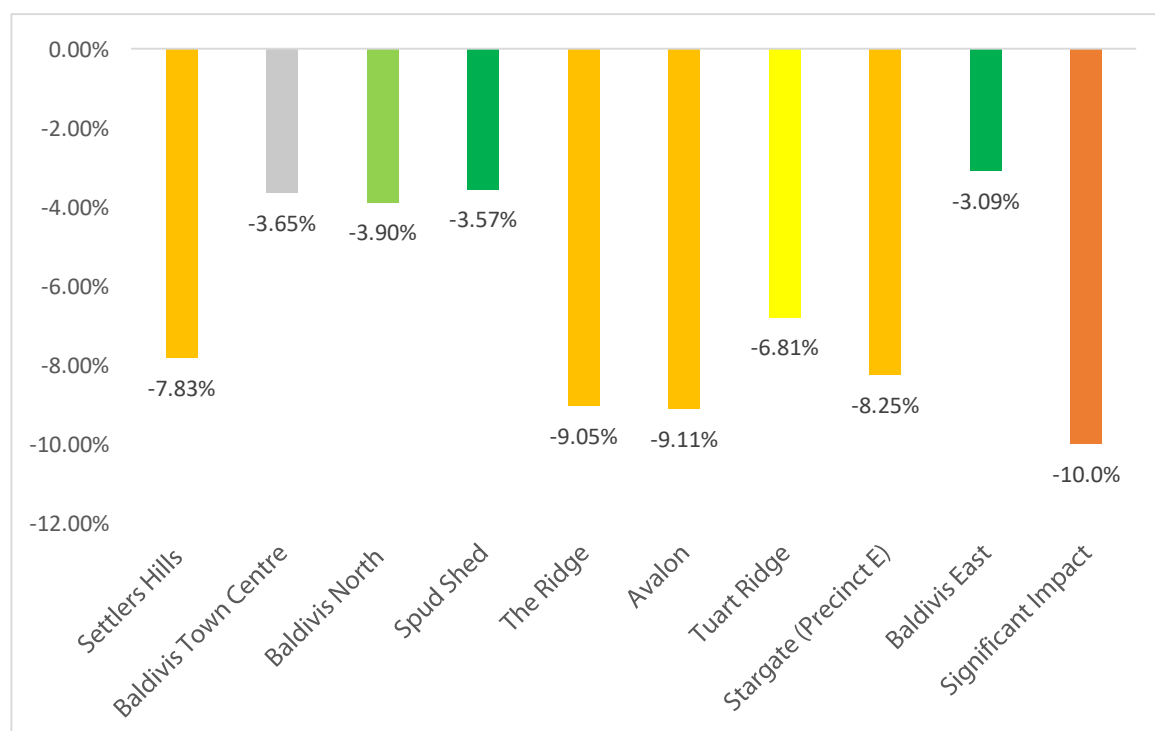
## 1 EXECUTIVE SUMMARY

Pracsys have conducted a Retail Sustainability Assessment (RSA) on behalf of Rockingham Park Pty Ltd (RPPL) in order to investigate the potential impact of the proposed Parkland Heights Neighbourhood Centre (PHNC). Under the the City of Rockingham Local Commercial Strategy (CRLCS) this centre is currently defined as a Local centre. The apparent current lack of retail offerings proximate to Parkland Heights has led to the investigation of the change in centre size to a Neighbourhood Centre of approximately 10,000sqm.

As a newly established and fast growing area, Baldivis currently relies heavily on the Baldivis Town Centre (Stockland Baldivis – District Centre) for retail trade, however as the area expands to the south the development of other Local and Neighbourhood centres (as planned under the CRLCS) will become important to the lifestyle of residents, easing of congestion and creation of local employment opportunities. A review of the surrounding Local and Neighbourhood centres has found that, critically, under capacity is expected to exist in South Baldivis based largely on the lack of land availability at The Ridge (Neighbourhood centre).

To investigate the effect of the proposed PHNC on the surrounding centres planned under the CRLCS, the analysis has considered the hypothetical development of all centres by 2021. This is considered to be conservative as the rapid population growth in the area will lead to higher floorspace productivities (and therefore less relative impact) in future years. The analysis then compares the impact of the proposed PHNC to that of a Local centre as per the current centre designation (Figure 1). As population increases, all centres are likely to see large increases in turnover, which further underpin their viability.

**Figure 1. Estimated Impact of PHNC on Primary Catchment Centres**



Source: HHES 2009/2010, ABS Place of Usual Residence 2011, Forecast.id 2016, Pracsys 2016



The results show that, even under the conservative assumptions applied, the relative impact of the proposed PHNC on the surrounding centres is less than 10%. In addition, the creation of a centre of this size is expected to add to total local turnover and employment. This result indicates that, without the proposed PHNC, a significant amount of leakage of retail expenditure beyond Baldivis would be experienced, suggesting longer trip requirements for local residents who must access alternative centres for daily and weekly shopping needs.

The key factors supporting the proposed PHNC are summarised below:

- A 10,000sqm PHNC development would not negatively impact the viability of existing or future potential surrounding centres as planned under the CRLCS.
- The PHNC offers the opportunity to increase the local ability to capture retail spend. Total expenditure in the primary catchment increases by approximately 6%, which equates to an estimated \$29 million in 2021 alone.
- Overall catchment floorspace productivity levels remain at a relatively high average of \$6,700/sqm (in 2021), indicating a healthy mix of total floorspace to expenditure. This is despite the inclusion of all potential expansions within in the primary catchment.
- This points to a large undersupply should expansions not be allowed to go ahead, to the detriment of the local catchment. The healthy trading levels in the catchment are expected to increase with population growth and, by 2026, the catchment is expected to provide enough expenditure to increase productivity levels by 19%, with a further 12% increase by 2031.
- With an estimated \$45 million construction cost, the PHNC would create approximately 57 FTEs over the course of its construction.
- The PHNC would contribute an additional 294 permanent employment opportunities, 89 of which would be diverted from other centres and 161 which would be new jobs for the primary catchment.
- The PHNC will be directly accessible via Nairn Drive, facilitating shopping trips for passing traffic. There is currently a planned bus route through the Local Structure Plan (LSP), which would facilitate increased use of public transport.
- The PHNC will provide a mix of both supermarkets and specialty stores which can meet both daily and weekly shopping needs for its catchment. This reduces the number of trips residents of the neighbourhood will need to make in order to satisfy their usual shopping needs.
- In addition, it will be located across from a primary school, enabling local families to create multi-purpose visits to the area, further reducing the need to travel

## 2 INTRODUCTION

Pracsys has been engaged by Rockingham Park Pty Ltd (RPPL) to undertake a Retail Sustainability Assessment (RSA) for the Parkland Heights Neighbourhood Centre (PHNC). A RSA as stipulated by the City of Rockingham Local Commercial Strategy (CRLCS) must address/ include the following criteria:

- A need or demand for Centre floorspace provision to serve the identified catchment;
- The current and forecast population level within the catchment for the next 5 to 10 years;
- Depending on the land use proposed, the assessment should highlight key demand factors, such as spending (retail), jobs (commercial), etc.;
- Show where the proposed Centre provision would fit within the hierarchy;
- Indicate the existing major competing supply serving the catchment;
- Provide details of any other proposals for new or expanded development which could have an effect on the viability of what is proposed;
- Indicate whether there are any existing gaps which the proposal will fill; and
- Provide details, where required by the City, on any relevant alternative sites to the proposed site, and demonstrate how the proposed site is the preferred site for the proposal.

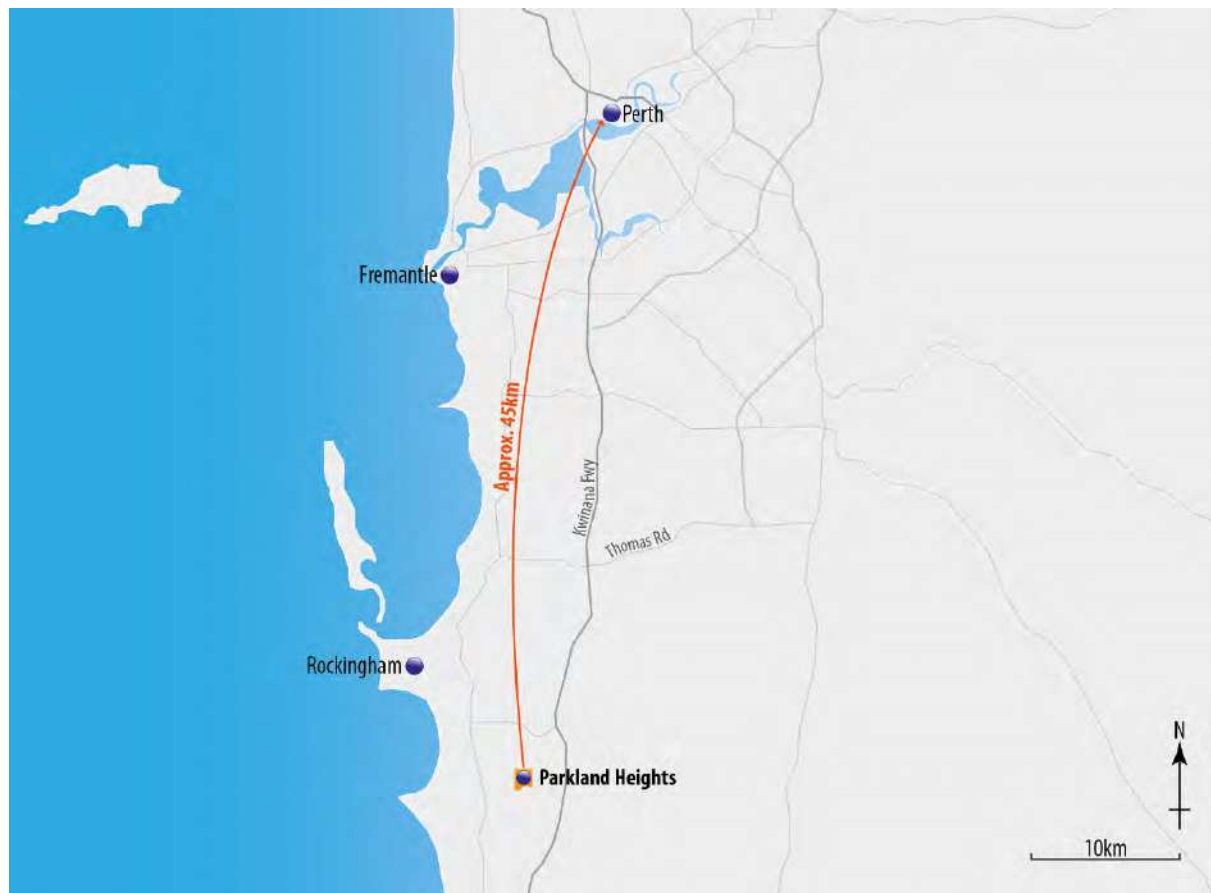
This RSA is designed to fulfill these requirements and will demonstrate the potential effects of the PHNC on the local catchment and other centres within the local network of the proposed development. This RSA will measure the impact of the proposed PHNC on competing local and neighbourhood centres as well as Baldivis Town Centre, a district centre, which plays an important role in the local activity centre hierarchy.



### 3 CONTEXT

Parkland Heights is a new subdivision located within the rapidly expanding South Baldivis area in Perth's southern suburbs, approximately 45km from Perth (Figure 2). At full build out it is expected to accommodate approximately 4,000 new dwellings with a primary school and PHNC.

**Figure 2. Parkland Heights Context**



Source: Pracsys 2016

#### 3.1 Proposed Development

The proposed PHNC development is expected to occur on Lot 1507, Sixty Eight Road, Baldivis (Figure 3), centrally placed within the Parkland Heights development.

**Figure 3. Parkland Heights Neighbourhood Centre Context**

**Source: Pracsys 2016**

As shown, Parkland Heights will have Nairn Drive as its main thoroughfare. This connector allows easy access to major arterials and thus the freeway. The centre will be well serviced in regards to public transport with a bus route proposed that passes directly in front of the centre. In addition, the proposed development is co-located with a primary school allowing for multipurpose trips. The road in front of the centre will also be designed to create a safer environment for the activity centre.

In forming the base assumptions for the analysis, the scale and tenancy mix of the proposed development has been based on the Waikiki Village Shopping Centre as a reference for a successfully operating centre within the City of Rockingham. The Waikiki Shopping Centre comprises two supermarkets and a mix of specialty retail options, for this analysis the following assumptions were made accordingly:

**Figure 4. PHNC Retail Mix**

Tenancy Mix	Floorspace (NLA) (sqm)
Supermarket 1	4,200
Supermarket 2	1,700
Specialty Retail	3,500
Food and Beverage	600
Total	10,000

Source: NH Architecture 2015, Pracsys 2016

It should be noted that while the proposed PHNC development will include non-retail commercial floorspace, this does not affect the retail sustainability assessment results and has therefore not been listed above.

### 3.2 Planning Policy

RSAs assess the potential economic and related effects of a significant retail expansion on the activity centres in a locality, to determine if the retail network can support the expansion from a profitability perspective<sup>1</sup>.

#### State Planning Policy 4.2

As part of State Planning Policy 4.2 (SPP 4.2), PHNC is expected to support the planning objectives for the Perth metropolitan region. According to SPP 4.2, Local Centres are typically confined to delicatessens and convenience stores that provide for the day-to-day needs of local communities. A Neighbourhood Centre should be an important local community focal point that performs a vital role in providing for the main daily to weekly household needs for a neighbourhood. In addition, it should support planning objectives including:

- Reducing the overall need to travel
- Supporting the use of public transport
- Promoting a more energy-efficient urban form

The following criteria for a neighbourhood centre are outlined by the strategy:

**Figure 5. Neighbourhood Centre Criteria**

Neighbourhood Centre Desired Characteristics	Description
Neighbourhood multi-purpose centre	Neighbourhood centres provide for daily and weekly household shopping needs, community facilities and a small range of other convenience services.
Public transport access	Stopping / transfer point for bus network.
Diverse retail and commercial offering	Supermarket/s, personal services, convenience shops and local professional services
Approximate 1 km neighbourhood catchment with sufficient population	Within a 1km radius it is advised there be between 2000–15,000 persons

<sup>1</sup> Western Australian Government Gazette 2010, 'Activity Centres for Perth and Peel', State Planning Policy 4.2, Planning and Development Act 2005, State of Western Australia, p. 4154



Walkable catchment	The centre has a walking Catchment of approximately 200 m
Medium density	Persons per ha – min 15, desirable 25
No required mix	No specified mix

Source: SPP 4.2 2010

### City of Rockingham Local Commercial Strategy (CRLCS)

The CRLCS states that developments increasing a centre's floorspace by more than 3,000sqm to a total of more than 6,000sqm must provide a RSA. While PHNC is not an existing centre, it is currently designated by the CRLCS as a local centre. Local centres are generally less than 1,500sqm in size; the proposed development will be 10,000sqm in size and as such a RSA is required.

The CRLCS was reviewed in 2012 to incorporate SPP 4.2 recommendations. Notably, a more flexible approach has been taken with regards to floorspace maximums as they have resulted in an apparent undersupply of retail floorspace for local residents (see Section 3). The CRLCS now assesses the role and function of a centre instead of a specific size in terms of retail floorspace. Specific consideration for allowing an expansion of retail floorspace is given on the following factors:

- There is an assessment of the expected impact/trading effect on existing Centres;
- There is a demonstration of the extent to which the proposal is expected to lead to an overall improvement in the provision of facilities;
- An assessment is undertaken of the estimated employment outcome, including any loss of employment within other Centres;
- Significant net employment is generated during construction and operation;
- The Centre contributes to public transport usage;
- There is an increase in the choice and competition provided to the community - particularly for retail uses;
- There is a contribution to other community-related goals such as social interaction and safety; and
- There has been a consideration where appropriate of other factors such as traffic and parking impacts, amenity, etc.

The CRLCS currently recognises Parkland Heights as a Local Activity Centre. This RSA will consider the factors above in providing evidence and justifying that PHNC can be expand its floorspace and reclassify to a Neighbourhood centre with beneficial results to the local catchment and existing activity centre network.

## 4 RETAIL SUSTAINABILITY ASSESSMENT

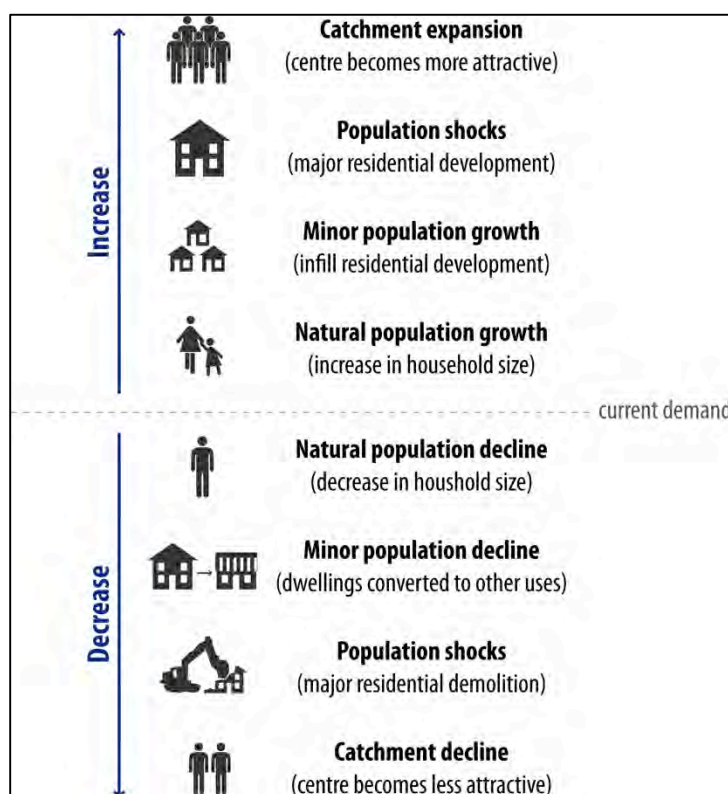
A demand distribution gravity model and catchment analysis have been used to assess the quantitative impacts and sustainability of PHNC

### 4.1 Drivers of retail floorspace demand

Demand changes can result in increased or decreased expenditure. The potential causes of demand changes are shown in Figure 6. These largely show that an increasing population increases demand, and vice versa.

Demand can also increase from rising incomes, or wealth, because people have more disposable income to spend on retail. Demand can also be increased by reducing leakage. Leakage for retail is largely caused by online retail, as well as travel outside of the local catchment area.

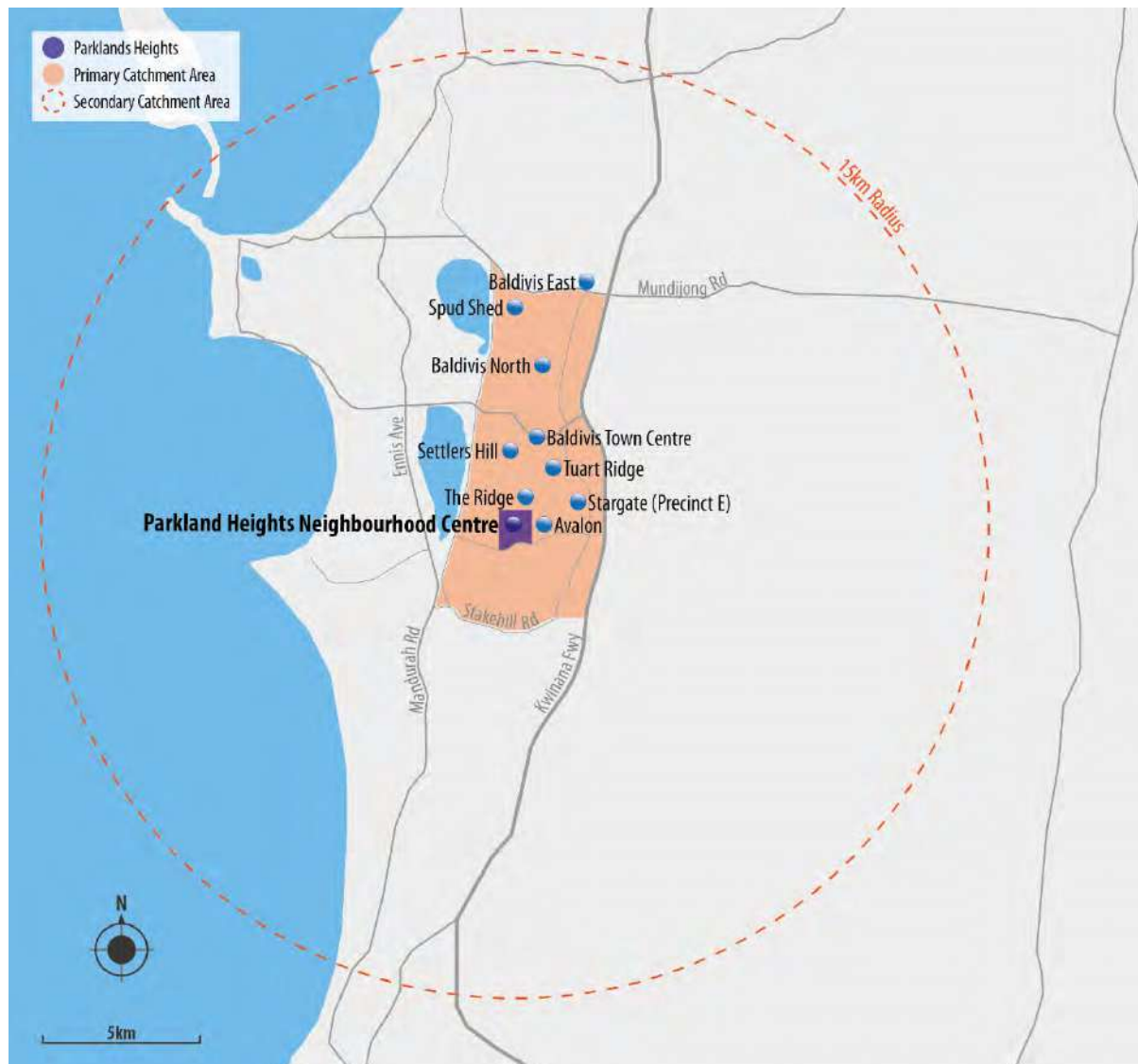
**Figure 6. Drivers of retail floorspace demand**



Source: Pracsys 2016

### 4.2 Catchment Analysis

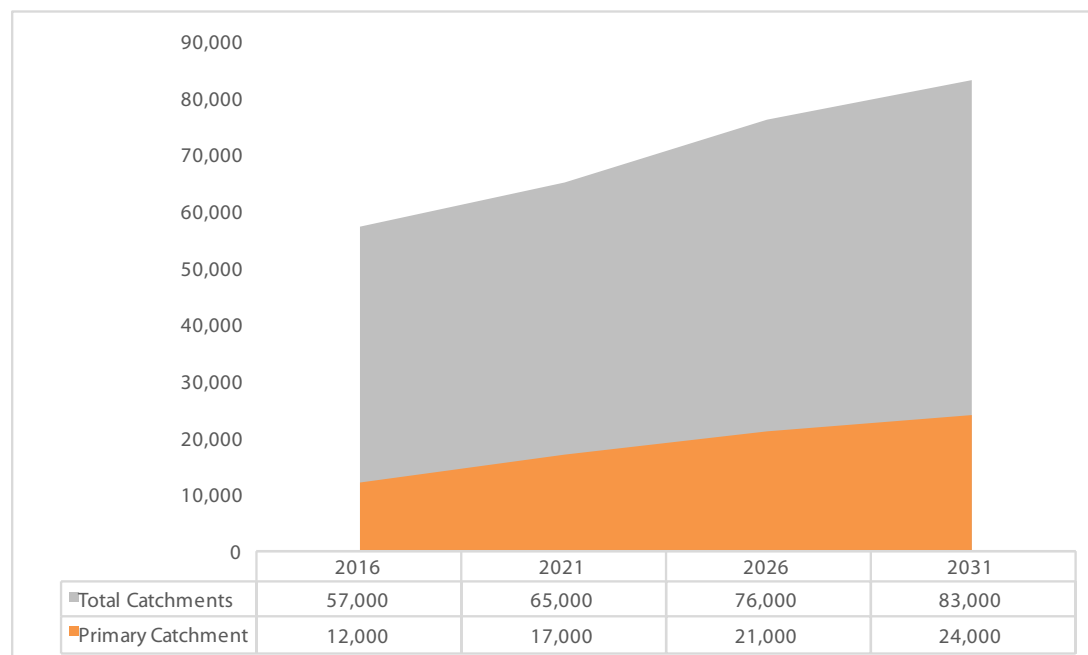
The study area for the PHNC is relatively large in order to allow the RSA to measure the potential impact of the centre on the activity centre hierarchy in Baldivis (Figure 7). The primary catchment is formed by both North and South Baldivis and includes the proposed neighbourhood and local centres in the CRLCS.

**Figure 7. PHNC Retail Catchment**

**Source: Pracsys 2016**

A larger 15 km secondary catchment has been included due to the significant attractiveness the retail offerings at the Rockingham City Strategic Metropolitan Centre may have on the Baldvis population. Forecast.id was used to estimate dwelling growth until 2031 (Figure 8).



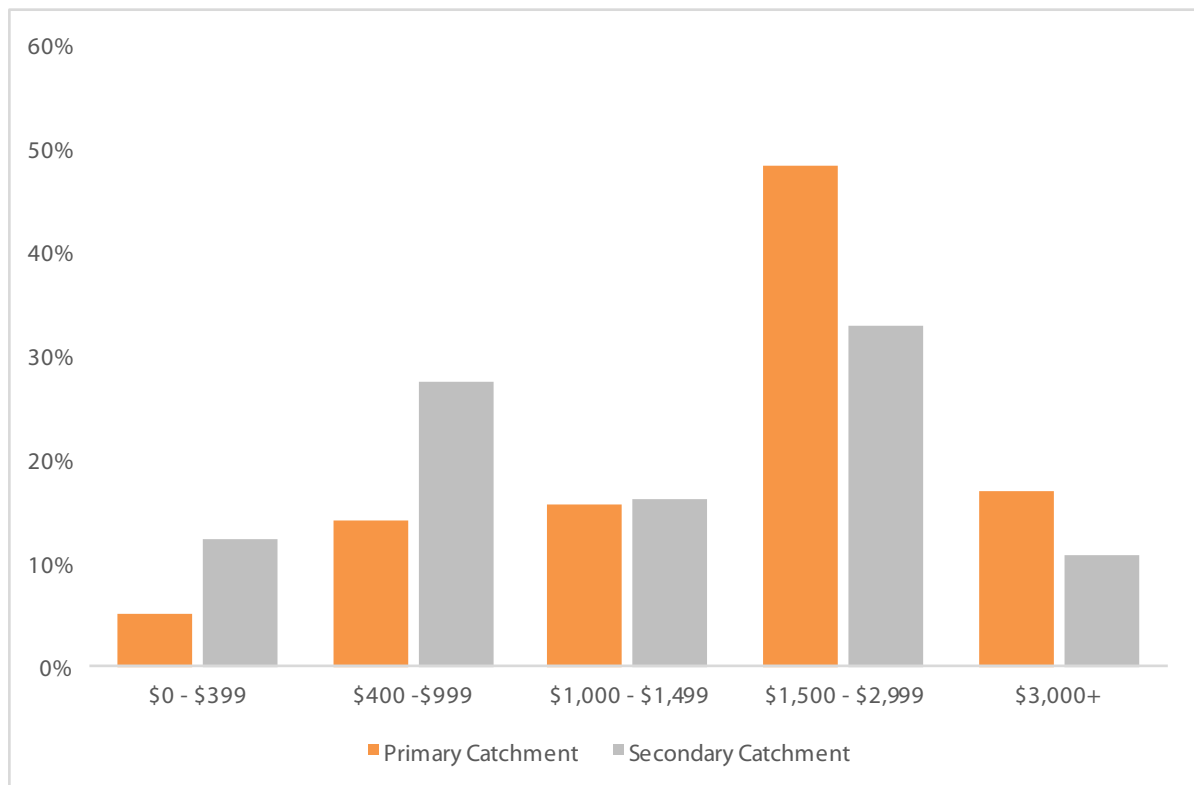
**Figure 8. Projected number of dwellings within the catchment population**

**Source: Forecast.id 2016, Pracsys 2016**

Between 2016 and 2031 the total number of dwellings in the primary catchment is expected to grow by approximately 208% (Figure 8). For the purpose of the analysis, the areas that constitute Karnup within and adjacent to the primary catchment have been grown at the average growth rate for Rockingham (excluding Baldivis, 2011 to 2031 growth of 32%) as there was insufficient information to project otherwise. While there may be greater growth in Karnup and therefore additional expenditure for PHNC, there would also likely be shopping centres that develop to accommodate some of this growth. The approach in this analysis is considered a conservative estimate to account for these unknowns.

## Expenditure

The number of dwellings and the spend per household form the basis for the expenditure pool of the PHNC catchment. ABS Data provides the estimated distribution of income level per dwelling in the primary catchment (Figure 9).

**Figure 9. Primary Catchment Income Profile**

Source: Pracsys (2016), ABS Place of Residence (2011)

The analysis found that over half of the households within the primary catchment are in the fourth income quintile, indicating a high average level of income and thus discretionary spend within the catchment. The secondary catchment has a higher proportion of households in the lower quintiles indicating a lower level of discretionary spend. ABS Household Expenditure Survey data was used to estimate the average spend per dwelling by income quintile. Based on this, the retail expenditure pool of the catchments was calculated (Figure 10).

**Figure 10. Projected Retail Expenditure from the catchment population (per annum)**

Turnover (\$million)	2016	2021	2026	2031
Primary Catchment	\$406	\$566	\$695	\$792
Total Catchments	\$1,769	\$1,986	\$2,276	\$2,485

Source: Forecast.id 2016, Pracsys 2016, HHES Survey 2009-2010

Total expenditure (less leakage) grows from \$406 million to \$792 million from 2016 to 2031. This growth is estimated through increases in dwellings as well as real retail expenditure growth.

### 4.3 Floorspace supply

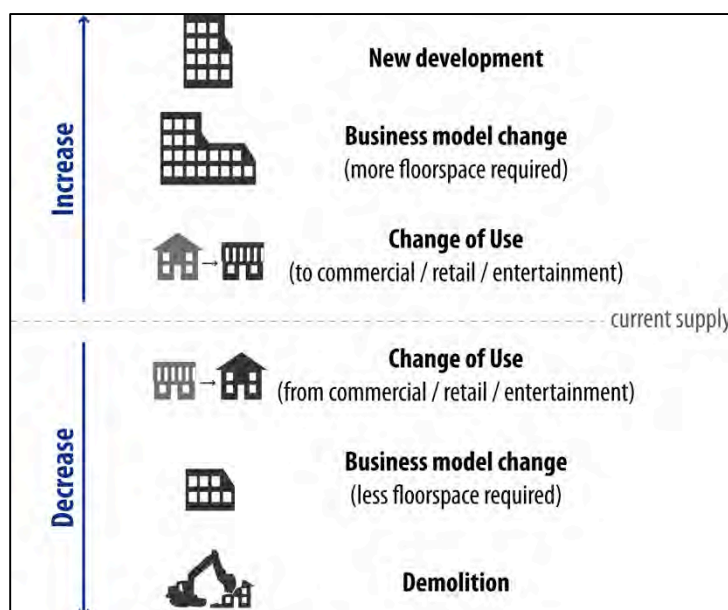
Retail floorspace Net Lettable Area (NLA) was analysed for both the primary and secondary catchments. The full future floorspace potential for all centres (under the CRLCS) in the primary catchment, and strategic and

district centres in the secondary catchment, was assumed to be developed by 2021. It is important to note that is a conservative assumption for modelling purposes only.

### Drivers of retail supply

Supply changes can result in increased or decreased retail floorspace. The potential causes of supply changes are shown in Figure 11. It is also important to note that an expansion of floorspace at PHNC will possibly be providing floorspace for tenants not currently present in the Primary Catchment market, so it has the potential to reduce leakage outside of the local activity centres network.

**Figure 11. Drivers of retail floorspace supply**



Source: Pracsys 2016



## Primary Catchment

There are currently two centres near Parkland Heights, Baldivis Town Centre and Settlers Hill Village Centre. According to CRLCs there are an additional five neighbourhood centres and 4 local centres planned for the suburb of Baldivis<sup>2</sup>. Pracsys has further examined local structure plans for the City of Rockingham and the following developments have been included in this analysis (Figure 12).

**Figure 12. Primary Catchment Retail Supply Assumptions**

Centre	Future Floorspace NLA (sqm)	References
Baldivis North	5,500	Baldivis North District Structure Plan Final Report
Spud Shed	7,000	Provided by City of Rockingham
Rivergum	Discontinued	Rivergums East Structure Plan Report Part 2
The Ridge	2,240	Provided by City of Rockingham
Avalon <sup>3</sup>	1,500	Avalon (Smirk Road North) Structure Plan
Tuart Ridge	3,005	Tuart Ridge IDGP Plan
Stargate (Precinct E)	4,500	DA 35(b) Structure Plan Report Part 2
Pike Road	Discontinued	Baldivis Grove Structure Plan Report Part 2
Baldivis East <sup>4</sup>	1500	Provided by City of Rockingham
Settlers Hills	3,240	Provided by City of Rockingham
Baldivis Town Centre – Stockland Baldivis (District Centre)	36,000	City of Rockingham Planning and Engineering Services Committee Meeting Minutes Monday 17 February 2014
<b>Total</b>	<b>64,920</b>	

**Source:** See references in table

The model assumed that all centres are developed by 2021 in order to estimate the impact that the PHNC would have in a fully developed retail activity centre hierarchy. This enabled the model to measure the PHNC's impact on both the Baldivis Town Centre and the viability of other centres that have been proposed in the CRLCS.

## Secondary Catchment

Listed expansions to strategic metropolitan centres and district centres in the secondary catchment were included in the analysis (Figure 13).

<sup>2</sup> City of Rockingham Local Commercial Strategy (Amended July 2013), p. 29.

<sup>3</sup> The Avalon Local Centre is proposing 5,000sqm of commercial floorspace, due to its categorisation as a local centre it is assumed only 1,500sqm will be for retail purposes.

<sup>4</sup> East Baldivis Structure Plan Report indicated a local centre would not be viable at this location. The report concluded there was a long term possibility of a small centre (500 m<sup>2</sup>)

**Figure 13. Secondary Catchment Supply Assumptions**

Centre	Current Floorspace NLA (sqm)	Future Floorspace (NLA) (sqm)	Comments
Rockingham City Centre (Strategic Metropolitan Centre)	59,000	85,000 (+26,000)	City of Rockingham Strategic Regional Centre – Centre Plan
Smart Villages	-	12,000	City of Rockingham Strategic Regional Centre – Centre Plan
Rockingham Beach (District Centre)	10,500	18,000 (+7,500)	City of Rockingham Strategic Regional Centre – Centre Plan
Warnbro (District Centre)	15,500	22,000 (+6,500)	Provided by City of Rockingham
Secret Harbour Town Centre (District Centre)	8,000	15,000 (+7,000)	City of Rockingham Local Commercial Plan
<b>Total Additional</b>		<b>+59,000</b>	

Source: Pracsys 2016

The model assumed that all centres are developed by 2021 in order to estimate the potential impact that the PHNC would have on a fully developed retail activity centre hierarchy.

#### 4.4 Turnover and Productivity Impact

Gravity modelling has been used to determine the turnover impacts on centres throughout the network under assumptions around retail expansion and population growth. The model accounts for income and population growth in the network to determine current and future levels of supportable retail floorspace.

Two scenarios have been modelled to understand the impact of PHNC as a Neighbourhood Centre:

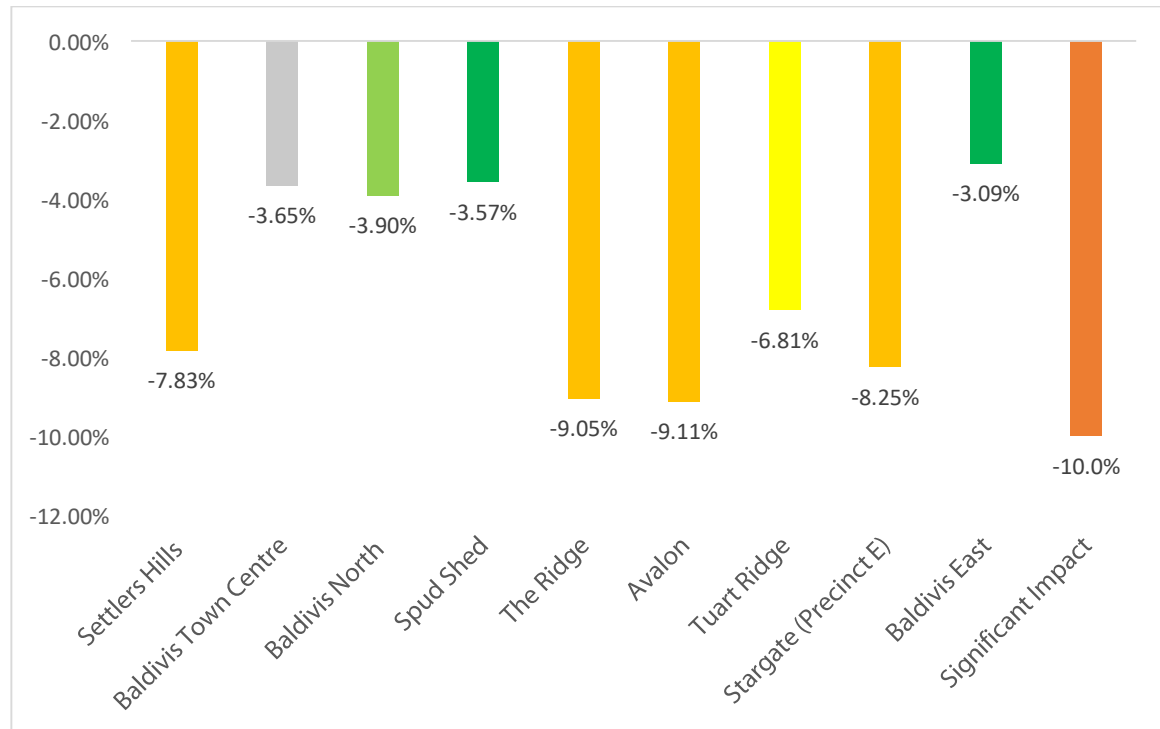
- **Scenario 1: Local Centre** – Acts as a control scenario to demonstrate what could happen if PHNC is developed to 1,500sqm by 2021. All known or likely expansions in the primary catchment are included as well as the expansion of Rockingham City and all district centres in the secondary catchment.
- **Scenario 2: Neighbourhood Centre** – Presents the impacts on retail turnover for all current and potential centres in the primary catchment if PHNC were developed to 10,000sqm by 2021. This scenario is designed to show the impact on the local activity network and assumes the same expansions as Scenario 1.

#### Centre Impact

The sustainability of a centre is typically considered significantly impacted when their profitability is reduced by more than 10%. The analysis compares the difference in retail floorspace productivity (\$/sqm) between

scenario 1 and scenario 2. Results indicate that through the initial impact in 2021 no centre will be impacted by more than 9.11%, with the Baldivis Town Centre impacted by approximately 3.65% (Figure 14).

**Figure 14. Estimated Impact of PHNC on Primary Catchment Centres**



Source: HHES 2009/2010, ABS Place of Usual Residence 2011, Forecast.id 2016, Pracsys 2016

The most significantly impacted centres are The Ridge (proposed Neighbourhood Centre) and Avalon (proposed Local Centre). These two centres are in close proximity to PHNC although both are restricted to serving more local needs. While The Ridge is listed as a neighbourhood centre its allocated retail floorspace offering is 2,240sqm (GLA), well below the general size range of a neighbourhood centre according to the CRLCS (4,500sqm to 10,000sqm). Avalon is a nearby local centre that is surrounded by residential houses and lies on smaller residential roads creating a specific local catchment. Despite these impacts the modelling shows the centres to be trading at healthy and profitable levels implying that there will be no impact to consumer amenity (Figure 15).

**Figure 15. Estimated Floorspace Productivity of Primary Catchment Centres – Scenario 2**

Centre	Floorspace Productivity (\$/sqm)
Settlers Hills	\$5,939
Baldivis Town Centre	\$7,126
Baldivis North	\$6,540
Spud Shed	\$6,910
The Ridge	\$7,100
Avalon	\$7,147



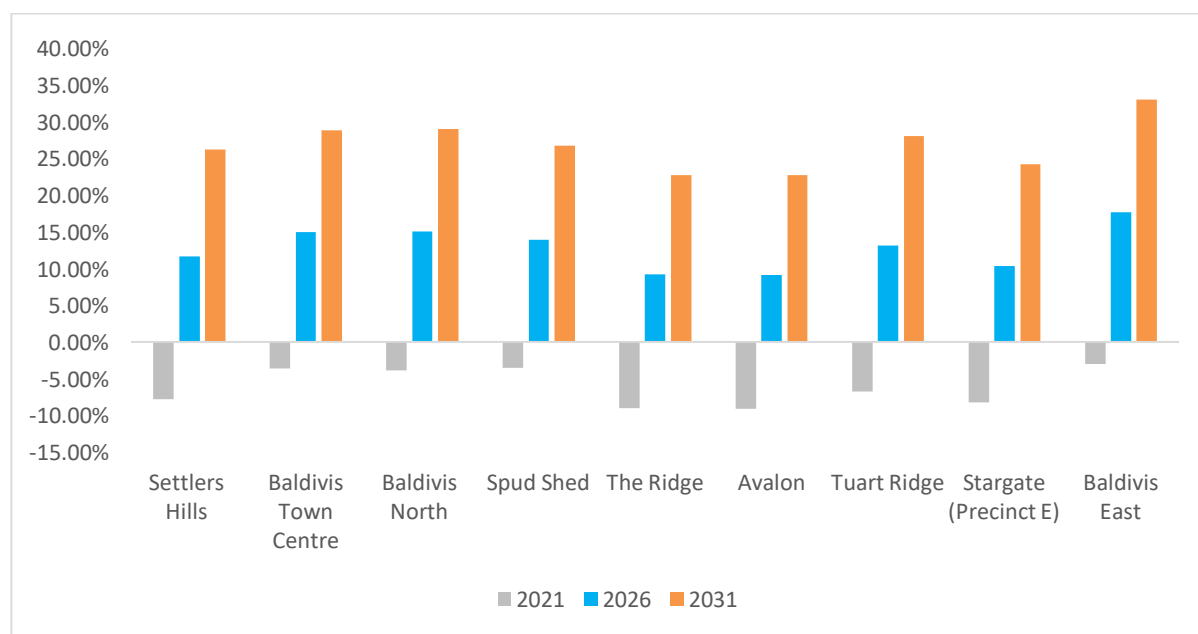
Centre	Floorspace Productivity (\$/sqm)
Tuart Ridge	\$6,571
Stargate (Precinct E)	\$6,156
Baldivis East	\$2,445
Proposed PHNC	\$6,306

Source: HHES 2009/2010, ABS Place of Usual Residence 2011, Forecast.id 2016, Pracsys 2016

It should be noted that Baldivis East has a very low productivity level, this is due to a small catchment in the northeast of Baldivis upon which PHNC has a very low impact (-3.09%). A feasibility carried out for the Baldivis East Structure Plan found that the centre would likely not have a large enough catchment to be sustainable at 1,500 m<sup>2</sup> <sup>5</sup>.

The results support the conclusion that the development of the proposed PHNC does not affect the viability of the surrounding centres. Additionally, by 2026 it is estimated that all centres will have floorspace productivity levels above the initial scenario 1 levels, further increasing by 2031 (Figure 16).

**Figure 16. Scenario 2 Growth in Floorspace Productivity Compared to Scenario 1 (2021)**



Source: HHES 2009/2010, ABS Place of Usual Residence 2011, Forecast.id 2016, Pracsys 2016

This indicates a healthy retail activity hierarchy that is profitable and able to meet the needs of the primary catchment. Scenario 2 would provide the necessary floorspace to meet the rapid increase in demand for retail floorspace due to the projected population growth in Baldivis, specifically in South Baldivis where Parkland Heights is located. Without developing PHNC to the scale of a neighbourhood centre, it is likely there will be a large gap in the local capacity to provide retail services for South Baldivis and the greater primary catchment.

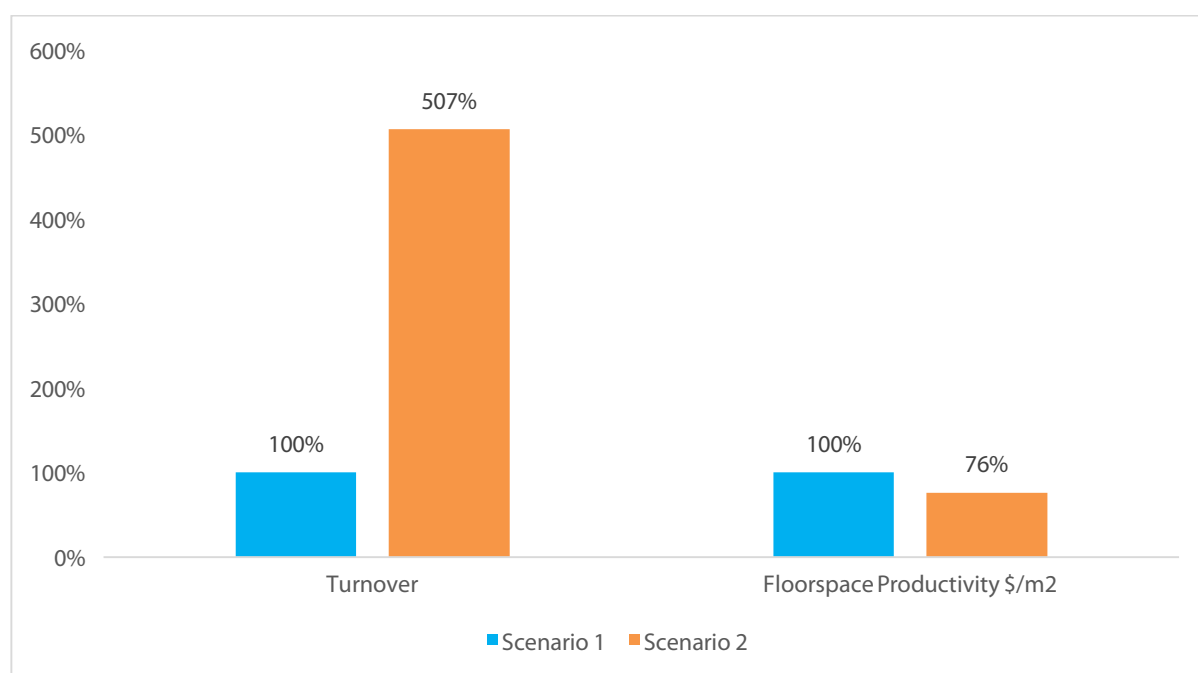
<sup>5</sup> Baldivis East Structure Plan 2012: <http://www.rockingham.wa.gov.au/getmedia/77aac559-cf39-43b9-a9f3-f6ce063a44ac/PD-East-Baldivis-District-Structure-Plan-Report.pdf.aspx>

This would put more pressure on the retail amenity in other centre's while also creating greater traffic flows in local neighbourhoods.

### PHNC Impact

PHNC itself appears to be able to support the expansion with an estimated floorspace productivity in 2021 of \$6,306/sqm, well above the assumed minimum threshold level of \$5,000/sqm. Total turnover for PHNC increases from \$12 million to \$63 million in 2021 and continues to increase through 2031 (Figure 17).

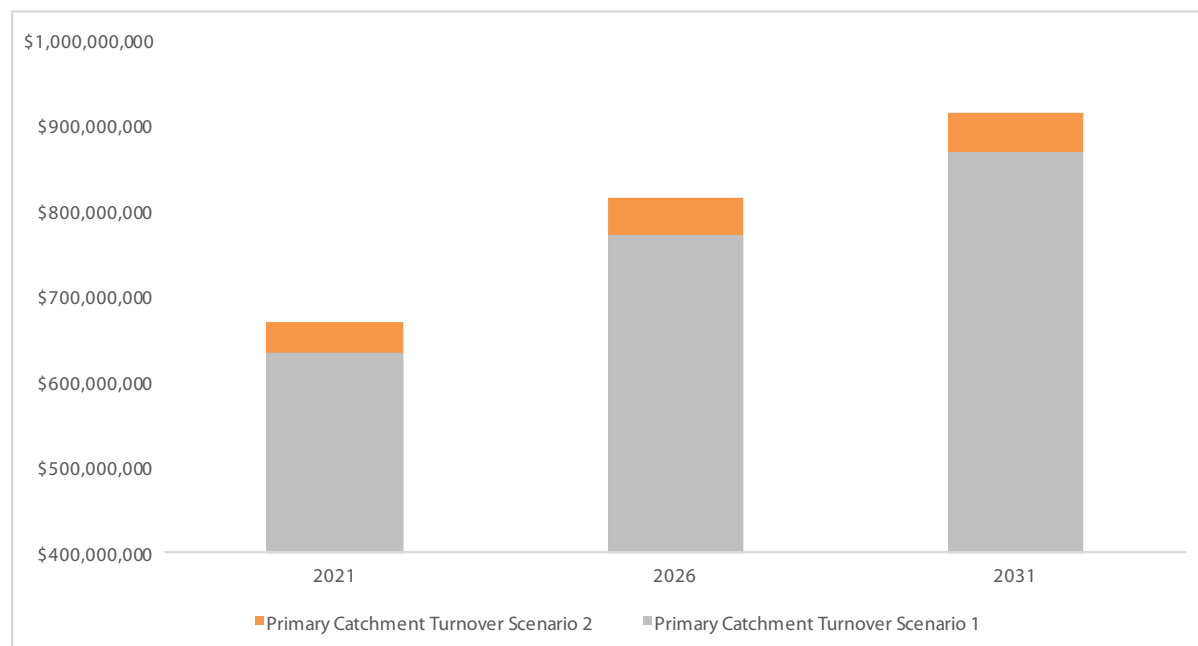
**Figure 17. Scenario 2 – Proportionate Growth in Turnover and Decrease in Floorspace Productivity**



Source: HHES 2009/2010, ABS Place of Usual Residence 2011, Forecast.id 2016, Pracsys 2016

### Primary Catchment Impact

PHNC offers the opportunity to increase the local ability to capture retail spend. The analysis found that total expenditure in the primary catchment increases by approximately 6.13%, which equates to \$29 million in 2021 alone. The additional floorspace at PHNC will provide a sustainable increase in overall turnover for the primary catchment in the long term (Figure 18).

**Figure 18. Total Catchment Turnover Growth**

Source: HHES 2009/2010, ABS Place of Usual Residence 2011, Forecast.id 2016, Pracsys 2016

## 4.5 Impact Summary

The analysis found there is an initial redistribution of expenditure away from centres in the primary catchment, as could be expected. No impact was shown to be greater than - 9.11% and centres remain at healthy viable and profitable turnover levels. Similarly, the overall catchment floorspace productivity level remain at a relatively high \$6,700/sqm, indicating a healthy mix of total floorspace to expenditure. This is despite the inclusion of all potential expansions in the primary catchment. This points to a large undersupply should expansions not be allowed to go ahead, to the detriment of the local catchment. The healthy trading levels in the catchment are expected to increase with population growth and, by 2026, the catchment is expected to provide enough expenditure to increase turnover levels by 19%, with a further 12% increase by 2031 to trading levels of approximately \$800 million and \$900 million respectively.



## 5 RETAIL IMPACTS

### 5.1 Retail Supply Gap

The total population in Baldivis more than doubled between 2011 and 2016, from 16,520 to 34,000. This rapid population growth has meant that the area has been underserved in terms of retail offering. Evidence of this comes from the 2015 Shopping Centre Directory which indicates that Stockland Baldivis has been trading at a very high floorspace productivity level of over \$18,000/sqm<sup>6</sup>; this is far above a normal trading level. Since the directory was published the Baldivis centre has been expanded, it is likely that it will still be over performing due to the size of the population in its catchment and the lack of retail offerings. Warnbro centre, also in the City of Rockingham, recently expanded from 11,000sqm (Gross Lettable Area Retail (GLAR)) to 21,000sqm. This led to a drop in its floorspace productivity level from \$11,800/sqm to \$7,100/sqm (this would likely be understating the new floorspace productivity as it is expected the centre would have traded lower during the period of expansion). A centre with a productivity level of \$7,100/sqm is still functioning well and highly viable; Warnbro Centre's total turnover increased by 15% in the year that the expansion took place and will most probably have increased further in the following year.

The analysis found that Baldivis Town Centre as a whole would be trading at \$10,000/sqm when measured at a floorspace of 29,500sqm in 2016 (this includes retail which is generally less productive per sqm than the Stockland shopping centre). It is likely that Stockland Baldivis will see an even greater increase in turnover due to the rapidly growing Baldivis population. With the population growing to 68,000 by 2031 there will likely be a significant need to expand retail floorspace in the catchment.

**Figure 19. Projected number of dwellings within the catchment population**

Year	2016	2021	2026	2031
Population	34,000	49,000	61,000	68,000

Source: Forecast id 2016

### Leakage and Secondary Catchment Spend

With such a high level of retail floorspace productivity within the catchment it is likely that there is a great deal of leakage of retail spend from the primary catchment. This leakage would likely grow with the projected population growth for the primary catchment. While development of PHNC could help reduce the leakage from the primary catchment it is likely that multiple centres would be needed to achieve a desirable leakage rate. In addition to leakage, there would be a high proportion of primary catchment expenditure that is being spent in the secondary catchment. While this will always be the case due to the diversity of retail offering at the Rockingham City Strategic Centre, the effect is likely exacerbated for goods that would normally be bought at a neighbourhood centre (i.e. weekly grocery shopping, etc). PHNC would play an important role in providing the necessary retail offering to meet local needs. In addition, with a rapidly growing population, it

<sup>6</sup> Property Council of Australia 2015, 'Directory of Shopping Centres'

is important to engage new members of the community in order to create behavioural shopping patterns. Developing PHNC would create a local option for the population as it grows, further minimising the chance of its expenditure going elsewhere.

## 5.2 Neighbourhood Centre 1km Catchment

SPP 4.2 recommends a population of between 2,000 and 15,000 persons within approximately 1km of a neighbourhood centre. PHNC is located in the South Baldvis area which has a projected 2016 population of approximately 25,000 persons<sup>7</sup>. Of this population, approximately 5,000 are currently within a 1 km radius of PHNC, sufficient population to warrant a Neighbourhood Centre. The Parkland Heights development will increase this population by approximately 4,000 persons<sup>89</sup>, indicating the need for a larger neighbourhood centre (Figure 20).

**Figure 20. Projected number of dwellings within the catchment population**

Baldvis South Dwelling Size (2026)	Parkland Heights Dwellings	Increase In Population	Total 1 km Population Post Development
2.99	1,400	4,000	9,000

Source: Forecast id 2016, Parkland Heights Structure Plan 2012

A neighbourhood centre according to the CRLCS is generally 4,500sqm to 10,000sqm. Currently, the Ridge centre is the only proposed neighbourhood centre within this radius. It is constrained however by plot sizes and is projected to offer a maximum retail floorspace of 2,240sqm (GLA) well below the general floorspace provided by a neighbourhood centre. PHNC is the only designated centre within this neighbourhood which can provide the necessary retail floorspace to meet the needs of the projected 9,000 person population.

<sup>7</sup> Forecast.id 2016: <http://forecast.id.com.au/rockingham/about-forecast-areas?WebID=110>

<sup>8</sup> Forecast.id projection of 2.99 persons per household in 2026:

<http://forecast.id.com.au/rockingham/population-households-dwellings?WebID=110>

<sup>9</sup> Parkland Heights Local Structure Plan projected 1,400 dwellings:

<http://www.rockingham.wa.gov.au/getmedia/764b94a1-f42a-4d59-be4d-b04c3d3ae422/PD-DA19-Appendix-H-Transport-Assessment.pdf.aspx>

## 6 EMPLOYMENT ASSESSMENT

### 6.1 Construction Employment

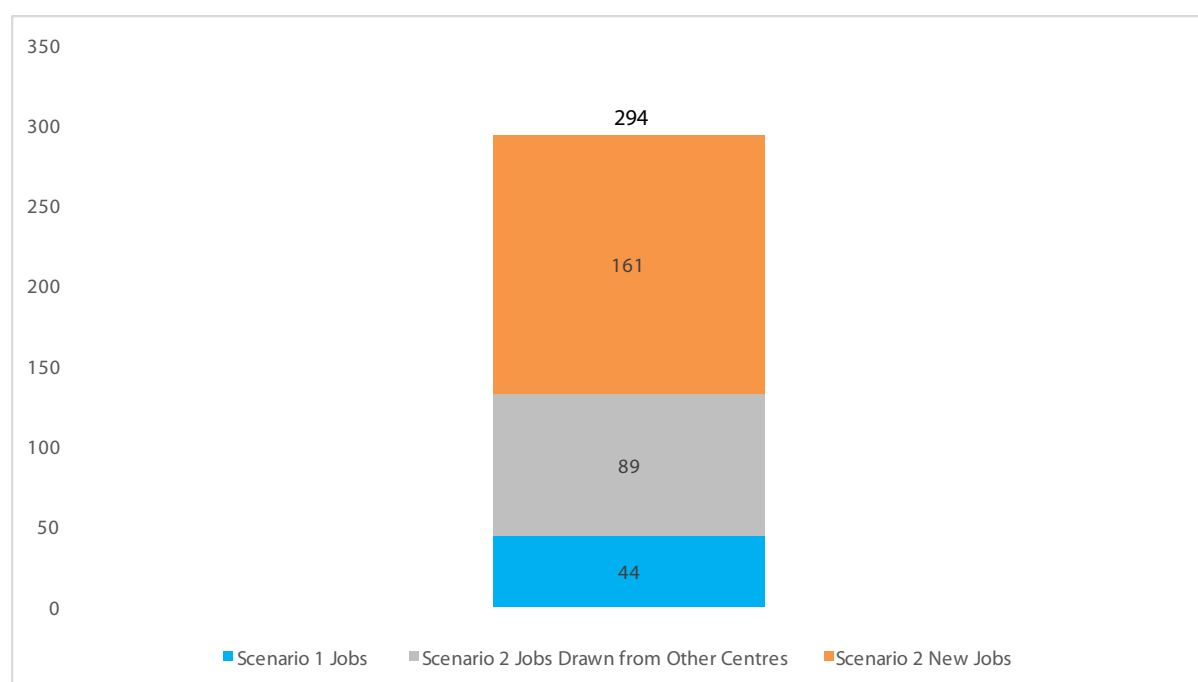
While costings have not been confirmed for the PHNC development, an estimate of costs based on Rawlinsons Australian Construction Handbook has provided an approximate cost for the purposes of calculating potential construction employment opportunities. It was assumed that the Scenario 2 neighbourhood centre would be an enclosed mall with good standard finishes. It is estimated that a shopping centre of this kind with a floorspace of 10,000sqm would cost \$45 million to construct, at a conservative estimate. Currently, Secret Harbour Square is refurbishing and adding just over 4,000sqm of retail floorspace for approximately \$57 million.

Using National Account ABS data, it is possible to estimate the Full Time Equivalent (FTE) employment generated through the development of a \$45 million centre. PHNC would create approximately 57 FTEs over the course of its construction.

### 6.2 Long Term Employment

This analysis assumes that full development potential of all centres in the primary catchment is reached by 2021. If this were the case, there would be enough retail floorspace to support approximately 1,870 jobs. In Scenario 1, PHNC would contribute an additional 44 jobs as a local centre. As a neighbourhood centre in Scenario 2, PHNC would contribute an additional 294 employment opportunities, 89 of which would be diverted from other centres and 161 which would be new jobs for the primary catchment (Figure 21).

**Figure 21. PHNC Employment – Scenario 2**



Source: ABS National Accounts (Catalogue 5206)



It is estimated that in Scenario 2 PHNC would increase retail employment opportunities in the primary catchment by 8.6%. Perth and Peel@3.5 million has set employment targets for each of the metropolitan sub-regions. The South West sub-region has an Economic Self-Sufficiency (ESS) target of 77.5% by 2031, an increase of over 10% from 2011 levels. The jobs created by PHNC will be important in helping to reach this target as well as meeting local employment needs for the rapidly growing population.

## **6.3 Transport**

### **Road Access**

The main road passing through Parkland Heights will be Nairn Drive which is classified as an 'Other Regional Road' in the Metropolitan Region Scheme. It provides North – South movement through Baldivis and is planned to be the main District Distributor road through Baldivis and Karnup<sup>10</sup>. PHNC will be directly accessible via Nairn Drive, facilitating shopping trips for passing traffic. It has been proposed that this section of Nairn Drive be classified as an Integrator B road due to the planned primary school and village centre, thus allowing for slower speeds and slightly less traffic passing PHNC<sup>11</sup>. This mitigates the impact of traffic accessing the centre and supports the viability of expanding PHNC to a neighbourhood centre.

### **Public Transport**

A key component of meeting SPP 4.2 requirements for a neighbourhood centre is to support the use of public transport. There is currently a planned bus route through the Local Structure Plan (LSP). While the final path of the bus has not been decided, the proposed route would pass directly in front of PHNC, providing direct public transport access and meeting SPP 4.2 requirements<sup>12</sup>.

## **6.4 Multi Purpose Use**

SPP 4.2 and CRLCAS both indicate that a neighbourhood centre should reduce the overall need to travel, creating a more efficient urban form. PHNC will provide a mix of both supermarkets and specialty stores which can meet both daily and weekly shopping needs for its catchment. This reduces the number of trips residents of the neighbourhood will need to make in order to satisfy their usual shopping needs. In addition, it will be located across from a primary school, enabling local families to create multi-purpose visits to the area, further reducing the need to travel (Figure 22).

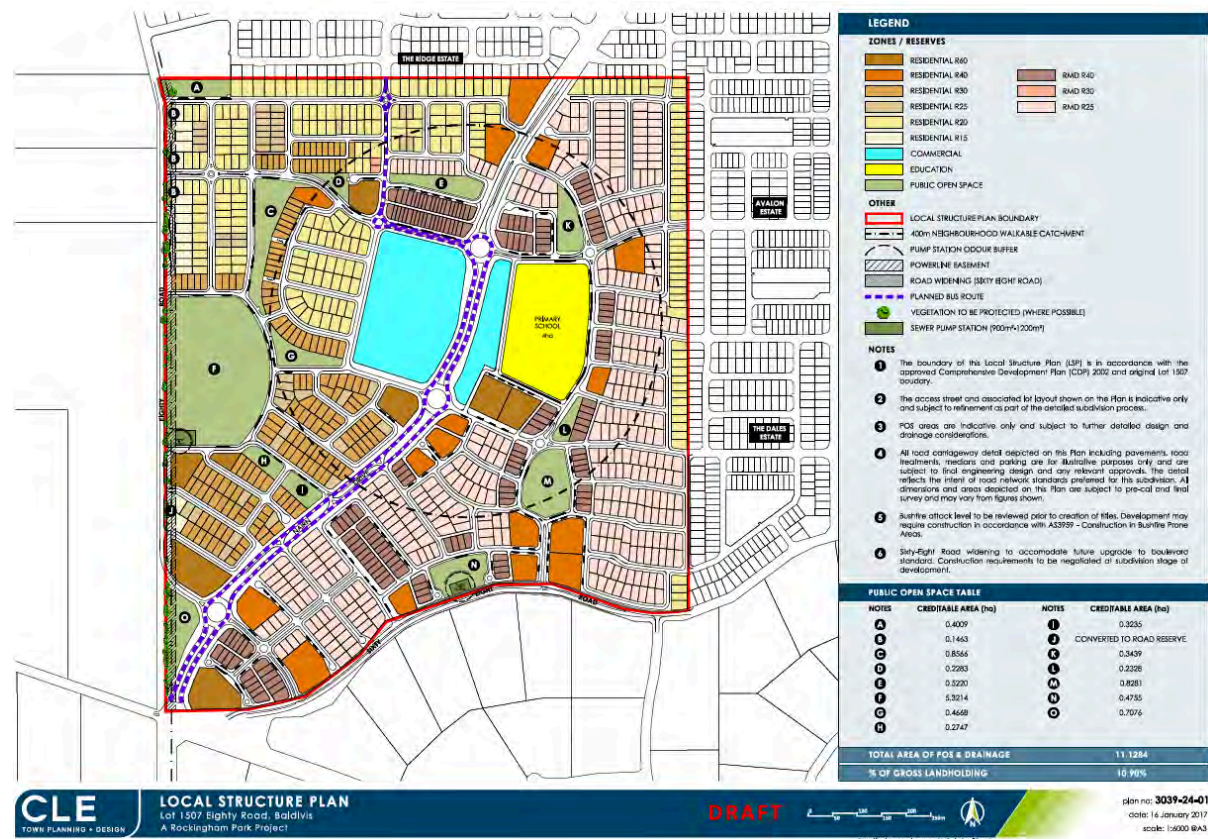
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<sup>10</sup> Spires Estate Local Structure Plan - Appendix Six:  
[http://www.rockingham.wa.gov.au/getmedia/eeaa02e3-36ee-4713-a211-9db1a656166a/PD-DA22\(e\)-Appendix-6-Transport-Assessment.pdf.aspx](http://www.rockingham.wa.gov.au/getmedia/eeaa02e3-36ee-4713-a211-9db1a656166a/PD-DA22(e)-Appendix-6-Transport-Assessment.pdf.aspx)

<sup>11</sup> Parkland Heights Local Structure Plan – Appendix H:  
<http://www.rockingham.wa.gov.au/getmedia/764b94a1-f42a-4d59-be4d-b04c3d3ae422/PD-DA19-Appendix-H-Transport-Assessment.pdf.aspx>

<sup>12</sup> Parkland Heights Local Structure Plan – Appendix H:  
<http://www.rockingham.wa.gov.au/getmedia/764b94a1-f42a-4d59-be4d-b04c3d3ae422/PD-DA19-Appendix-H-Transport-Assessment.pdf.aspx>

Figure 22. Parkland Heights Plan



Given this, the proposed development offers an excellent opportunity to further the multipurpose trip agenda of SPP 4.2 as well as CRLCS.

## 7 CONCLUSION

The town of Baldivis is experiencing a rapid rate of growth with the population projected to double by 2031. The analysis found that the local population had high average income rates and thus disposable incomes. There is currently an apparent undersupply of retail floorspace within Baldivis, leading to unsustainable demand on few centres. This creates the potential for increased leakage rates and loss of potential turnover and employment within Baldivis.

Parkland Heights is a development in South Baldivis which will introduce approximately 1,400 new dwellings (4,000 residents) to the area. Currently, there is a Local Centre planned for development within the CRLCS, however due to population estimates and retail supply constraints in the area, it is proposed that the Parkland Heights Neighbourhood centre be developed to 10,000sqm.

In investigating the potential impact of the PHNC on the surrounding centres, the model assumes that all developments within the primary catchment, as well as significant centres in the secondary catchment, expand to full potential retail floorspace (under CRLCS) by 2021. This is considered to be conservative given the lack of developed Local and Neighbourhood centres within the primary catchment.

With this in mind, the analysis concludes that while PHNC would attract turnover from other centres in its primary catchment, the centres would remain viable in that no centre suffers a loss in turnover of greater than 10%. These centres then increase in profitability by over 25% to 2031 due to rapid population growth. PHNC would increase total retail turnover in Baldivis by 6%, providing a total of 57 construction jobs and 294 long term employment opportunities. The centre would meet both State Planning Policy 4.2 and City of Rockingham Local Commercial Strategy goals, including public transport access, sufficient population within 1km and a reduction in the need to travel, among others.

The RSA concludes that the development of the PHNC to 10,000sqm is supportable and provides additional turnover and employment opportunities within Baldivis without affecting the viability of existing centre or future centres within the area.



## 8 APPENDIX 1 – GRAVITY MODELLING METHODOLOGY

Gravity models allow for the measurement of spatial interaction as a function of distance to determine the probability of a given customer shopping at a centre and provide an approximation of trade area and sales potential for a development. This modelling technique uses the distance between a household and each centre, and a measure of 'attractiveness' to define the probability model. The 'attractiveness' of a centre has been defined by total floorspace and the distance has been calculated by measuring straight-line distances between each centre and population. The gravity model probability formula is shown in Figure 23.

**Figure 23. Gravity model probability formula**

$$P_{ij} = \frac{\frac{A_{jk}^a}{D_{ij}^\beta}}{\sum_{j=1}^m \frac{A_{jk}^a}{D_{ij}^\beta}}$$

$P_{ij}$  = Probability of customer living/working in statistical area i shopping at complex j.  
 $A_i$  = Area of floorspace in centre, j in square metres, according to the type of supply, k.  
 $D_{ij}$  = Distance between statistical area of households, i and complex j.  
 $a$  = Area exponent  
 $\beta$  = Distance exponent  
 $k$  = Type of supply or expenditure, either Convenience or Comparison  
 $i$  = Statistical area ( $i=1, \dots, n$ )  
 $j$  = Complexes ( $j=1, \dots, m$ )

Source: Carter, C (1993) 'Assumptions Underlying the Retail Gravity Model', *Appraisal Journal*, Vol 61, No 4, pp510; Pracsys (2014)

**Figure 24. Gravity model demand formula**

$$D_{kj} = \sum_{i=1}^n (P_{ij} * E_i)$$

$D_{kj}$  = Demand for retail category k, at centre j.  
 $E_i$  = Expenditure pool of statistical area i.

Source: Carter, C (1993) 'Assumptions Underlying the Retail Gravity Model', *Appraisal Journal*, Vol 61, No 4, pp510; Pracsys (2012)

Figure 24 shows that the demand for retail category k<sup>13</sup>, at centre j (Busselton Town Centre), is equal to the sum of the probabilities of customers living in statistical areas i to n, multiplied by the expenditure pool of statistical area i. In other words, the demand for retail is a function of the probability of customer from particular statistical area attending the centre multiplied by the expenditure pool of that statistical area. The expenditure pool is derived through the population multiplied by its income distribution.

In its core form gravity modelling provides a clearer, reproducible outcome that can be easily assessed. However, it does not consider local factors, including:

- The comparative value proposition of centres (e.g. the presence of an 'anchor' attractor that draws significant market share);
- The brand preference of users; or
- The efficiency of transport networks, as well as geographical barriers (e.g. in some cases it may be easier for customers to access a centre that lies physically further away).

<sup>13</sup> Retail categories are determined by their PLUC code and whether they are convenience or comparison goods. Convenience goods are day-to-day items such as groceries, pharmaceuticals and fast food. Comparison goods are items where consumers are willing to travel further distances, and are bought less frequently such as clothing, furniture, electronics, or other household items.

## 9 APPENDIX 2 – GRAVITY MODEL ASSUMPTIONS AND INPUT DATA

### 9.1 Overview of Assumptions

Gravity models are an accepted practice for conducting Retail Sustainability Assessments. They relate household expenditure to activity centre turnover, within a defined catchment, through a probabilistic distribution. The modelling technique uses a set of established assumptions, being:

- There is an available pool of retail expenditure, based on the number of households and average relevant household expenditure in the catchment
  - The number of households in each expenditure quintile is based on the income level of households by quintile. This for a more accurate spatial distribution of expenditure.
  - Expenditure is separated into two categories; 'convenience' (e.g. day to day groceries) and 'comparison' (e.g. clothing)
- Some of this expenditure 'leaks'. The leakage rate applied (17.5%) is based on secondary research that reflect that:
  - Online retail captures expenditure
  - Large centres outside of the catchment such as the Perth CBD capture some expenditure

The remainder of the expenditure is spent at the centres included in the catchment.
- Convenience and comparison expenditure are separately distributed to all centres within the model based on the relevant floorspace (i.e. convenience and comparison floorspace) and their distance from each household:
  - As distance increases, expenditure captured from a particular household decreases
  - Centre size affects the 'attractiveness' of a centre for all households
  - The combination of distance from centres and centre 'attractiveness' is used to estimate the probability that a household will spend money at individual activity centres
  - These probabilities are used to distribute expenditure across the activity centre network

For instance; for a given centre distance, a large centre will attract significantly more expenditure relative to a smaller centre. This relationship reflects the role and catchments of centres throughout the activity centre hierarchy. For small centres, the 'attractiveness' of the centre will not be sufficient to draw meaningful levels of expenditure from areas outside of the immediate locality. However, due to their relative size, large district centres will draw expenditure away from Local of Neighbourhood centres within a wider radius.
- Actual centre turnover figures are used to calibrate the model improving its accuracy
- The inclusion of new floorspace at a define location in the model provides an objective measure of impact on surrounding centres



## 9.2 Data Sources

The gravity model developed for Rockingham Park used the following data sources. These sources are publically available meaning that the model can be replicated by other qualified professionals, or used under alternative methodologies if desired.

Model Input	Source
Number and distribution of households	ABS Census 2011 dwelling count by SA1 area Forecast.id dwelling growth estimates by City of Rockingham and small areas
Household retail expenditure	ABS Census 2011 dwelling count by income category ABS Household Expenditure Survey 2009/2010 WA Treasury CPI figures
Expenditure leakage (from model catchment)	NAB Online Retail Sales Index Secondary sources for retail expenditure patterns
Centre size and distribution	Department of Planning Land Use and Employment Survey (LUES) City of Rockingham Local Commercial Strategy Various City of Rockingham Structure Plans
Existing centre floorspace turnover (for calibration of the model)	Property Council: Shopping Centre Directory

The centres used in the model are listed in Appendix B (with the calculated impact results). It is important to note that the terms 'Primary Catchment' and 'Secondary Catchment' are used for reporting purposes (to describe centres within the Baldivis area versus those outside) and has no effect on the model.

## 9.3 Model Calibration

Calibration of the gravity model is based on current centre turnover and sizes and is used to improve the accuracy of the model. Where possible, the PNHG gravity model used actual turnover figures to calibrate specific centres to their published turnover levels. Key centres used to calibrate the model are listed with their respective turnover levels sourced from the Property Council Shopping Centre Directory (2015):

- Rockingham City Centre: \$488 million per annum (\$9,633/sq)
- Kwinana Marketplace: \$141 million per annum (\$5,961/sqm)
- Warnbro: \$150 million per annum (\$8,025/sqm)

Where published data was not available, a scan for outliers (centres where the gravity model may have distributed too much or too little expenditure) was undertaken. Average turnover productivity levels were applied in these cases based on benchmarked centre averages.

## 10 APPENDIX 3 - IMPACT OF CENTRES IN PRIMARY AND SECONDARY CATCHMENT

### Primary Catchment

Centre	Latitude	Longitude	Floorspace	Impact
Avalon	115.8135	-32.3571	1,500	-9%
The Ridge	115.8077	-32.3536	2,240	-9%
Stargate (Precinct E)	115.8230	-32.3521	4,500	-8%
Settlers Hills	115.8030	-32.3381	3,240	-8%
Tuart Ridge	115.8181	-32.3436	3,005	-7%
Baldivis North	115.8137	-32.3139	5,500	-4%
Baldivis Town Centre	115.8170	-32.3310	36,000	-4%
Spud Shed	115.8084	-32.2979	7,000	-4%
Baldivis East	115.8295	-32.2925	1,500	-3%

Source: Pracsys 2017

### Secondary Catchment

Centre Name	Latitude	Longitude	Total SHP Floorspace	Impact
SER-JARR ISOLATED USES	-32.2911	115.9880	2,570	-4%
WARNBRO AVE	-32.3466	115.7630	22,000	-4%
ST CLAIR	-32.3531	115.7550	4,735	-3%
GOLDEN BAY	-32.4328	115.7520	100	-3%
BAYSHORE GARDEN	-32.4386	115.7550	290	-3%
ROCKINGHAM WINERIES ETC	-32.4118	115.7890	307	-3%
DAMPIER DRIVE	-32.4260	115.7540	740	-3%
PORT KENNEDY	-32.3669	115.7550	1,490	-3%
FORESHORE VILLAGE	-32.4094	115.7470	330	-3%
OASIS DRIVE	-32.4087	115.7590	15,000	-3%
READ ROAD	-32.3141	115.7540	7,505	-2%
ORELIA	-32.2347	115.8220	655	-2%
PACE ROAD	-32.2358	115.8070	1,062	-2%
CASUARINA	-32.2468	115.8470	393	-2%
WARNBRO	-32.3268	115.7510	1,614	-2%
CALISTA AVENUE	-32.2488	115.8080	153	-2%
NAVAL BASE	-32.1940	115.7820	3,485	-2%
PARMELIA	-32.2473	115.8270	370	-2%



Centre Name	Latitude	Longitude	Total SHP Floorspace	Impact
ROCKINGHAM BEACH	-32.2763	115.7330	18,000	-2%
KWINANA BEACH	-32.2295	115.7730	1,477	-2%
COOLOONGUP	-32.2953	115.7630	1,902	-2%
SHOALWATER	-32.2927	115.7100	3,835	-2%
WAIKIKI	-32.3097	115.7330	190	-2%
BAYSIDE	-32.3035	115.7110	1,228	-2%
MALIBU	-32.3035	115.7450	1,050	-2%
ROCKINGHAM CITY	-32.2825	115.7470	85,000	-2%
SMART VILLAGES	-32.2825	115.7470	12,000	-2%
CHARTHOUSE WAIKIKI	-32.3130	115.7450	1,127	-2%
McLARTY	-32.3003	115.7050	150	-2%
LEDA	-32.2596	115.8070	3,068	-1%
BENT STREET	-32.3061	115.7200	358	-1%
SAFETY BAY ROAD	-32.2987	115.7100	396	-1%
EAST ROCKINGHAM	-32.2642	115.7670	13,446	-1%
SUMMERTON	-32.2405	115.8080	360	-1%
KWINANA CENTRE	-32.2480	115.8150	20,517	-1%
BELL	-32.2791	115.7160	230	-1%
PARKIN STREET	-32.2796	115.7210	260	-1%
ENTERPRISE	-32.2686	115.7500	8,442	-1%

Source: Pracsys 2017



## APPENDIX 1:

### Retail Sustainability Assessment



# **Rockingham Park Pty Ltd**

Parkland Heights Retail Sustainability Assessment

Final Report

**August 2017**

Document Control				
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#### Disclaimer

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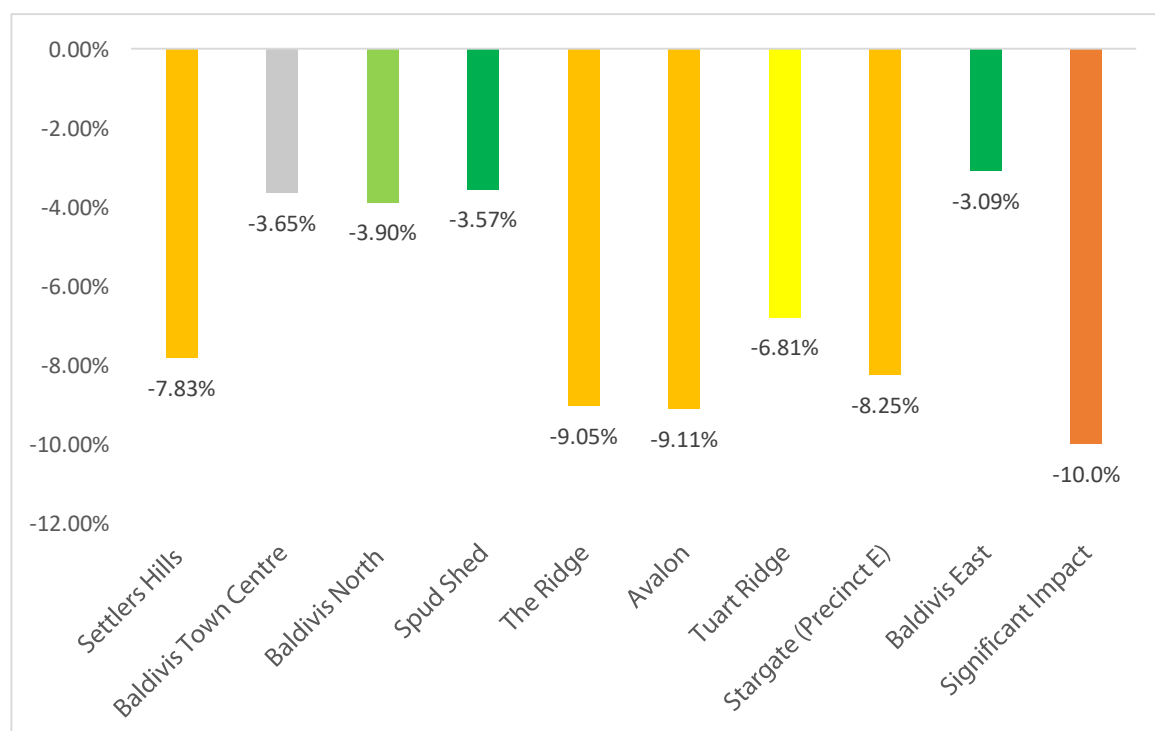
## 1 EXECUTIVE SUMMARY

Pracsys have conducted a Retail Sustainability Assessment (RSA) on behalf of Rockingham Park Pty Ltd (RPPL) in order to investigate the potential impact of the proposed Parkland Heights Neighbourhood Centre (PHNC). Under the the City of Rockingham Local Commercial Strategy (CRLCS) this centre is currently defined as a Local centre. The apparent current lack of retail offerings proximate to Parkland Heights has led to the investigation of the change in centre size to a Neighbourhood Centre of approximately 10,000sqm.

As a newly established and fast growing area, Baldivis currently relies heavily on the Baldivis Town Centre (Stockland Baldivis – District Centre) for retail trade, however as the area expands to the south the development of other Local and Neighbourhood centres (as planned under the CRLCS) will become important to the lifestyle of residents, easing of congestion and creation of local employment opportunities. A review of the surrounding Local and Neighbourhood centres has found that, critically, under capacity is expected to exist in South Baldivis based largely on the lack of land availability at The Ridge (Neighbourhood centre).

To investigate the effect of the proposed PHNC on the surrounding centres planned under the CRLCS, the analysis has considered the hypothetical development of all centres by 2021. This is considered to be conservative as the rapid population growth in the area will lead to higher floorspace productivities (and therefore less relative impact) in future years. The analysis then compares the impact of the proposed PHNC to that of a Local centre as per the current centre designation (Figure 1). As population increases, all centres are likely to see large increases in turnover, which further underpin their viability.

**Figure 1. Estimated Impact of PHNC on Primary Catchment Centres**



Source: HHES 2009/2010, ABS Place of Usual Residence 2011, Forecast.id 2016, Pracsys 2016

The results show that, even under the conservative assumptions applied, the relative impact of the proposed PHNC on the surrounding centres is less than 10%. In addition, the creation of a centre of this size is expected to add to total local turnover and employment. This result indicates that, without the proposed PHNC, a significant amount of leakage of retail expenditure beyond Baldivis would be experienced, suggesting longer trip requirements for local residents who must access alternative centres for daily and weekly shopping needs.

The key factors supporting the proposed PHNC are summarised below:

- A 10,000sqm PHNC development would not negatively impact the viability of existing or future potential surrounding centres as planned under the CRLCS.
- The PHNC offers the opportunity to increase the local ability to capture retail spend. Total expenditure in the primary catchment increases by approximately 6%, which equates to an estimated \$29 million in 2021 alone.
- Overall catchment floorspace productivity levels remain at a relatively high average of \$6,700/sqm (in 2021), indicating a healthy mix of total floorspace to expenditure. This is despite the inclusion of all potential expansions within in the primary catchment.
- This points to a large undersupply should expansions not be allowed to go ahead, to the detriment of the local catchment. The healthy trading levels in the catchment are expected to increase with population growth and, by 2026, the catchment is expected to provide enough expenditure to increase productivity levels by 19%, with a further 12% increase by 2031.
- With an estimated \$45 million construction cost, the PHNC would create approximately 57 FTEs over the course of its construction.
- The PHNC would contribute an additional 294 permanent employment opportunities, 89 of which would be diverted from other centres and 161 which would be new jobs for the primary catchment.
- The PHNC will be directly accessible via Nairn Drive, facilitating shopping trips for passing traffic. There is currently a planned bus route through the Local Structure Plan (LSP), which would facilitate increased use of public transport.
- The PHNC will provide a mix of both supermarkets and specialty stores which can meet both daily and weekly shopping needs for its catchment. This reduces the number of trips residents of the neighbourhood will need to make in order to satisfy their usual shopping needs.
- In addition, it will be located across from a primary school, enabling local families to create multi-purpose visits to the area, further reducing the need to travel



## 2 INTRODUCTION

Pracsys has been engaged by Rockingham Park Pty Ltd (RPPL) to undertake a Retail Sustainability Assessment (RSA) for the Parkland Heights Neighbourhood Centre (PHNC). A RSA as stipulated by the City of Rockingham Local Commercial Strategy (CRLCS) must address/ include the following criteria:

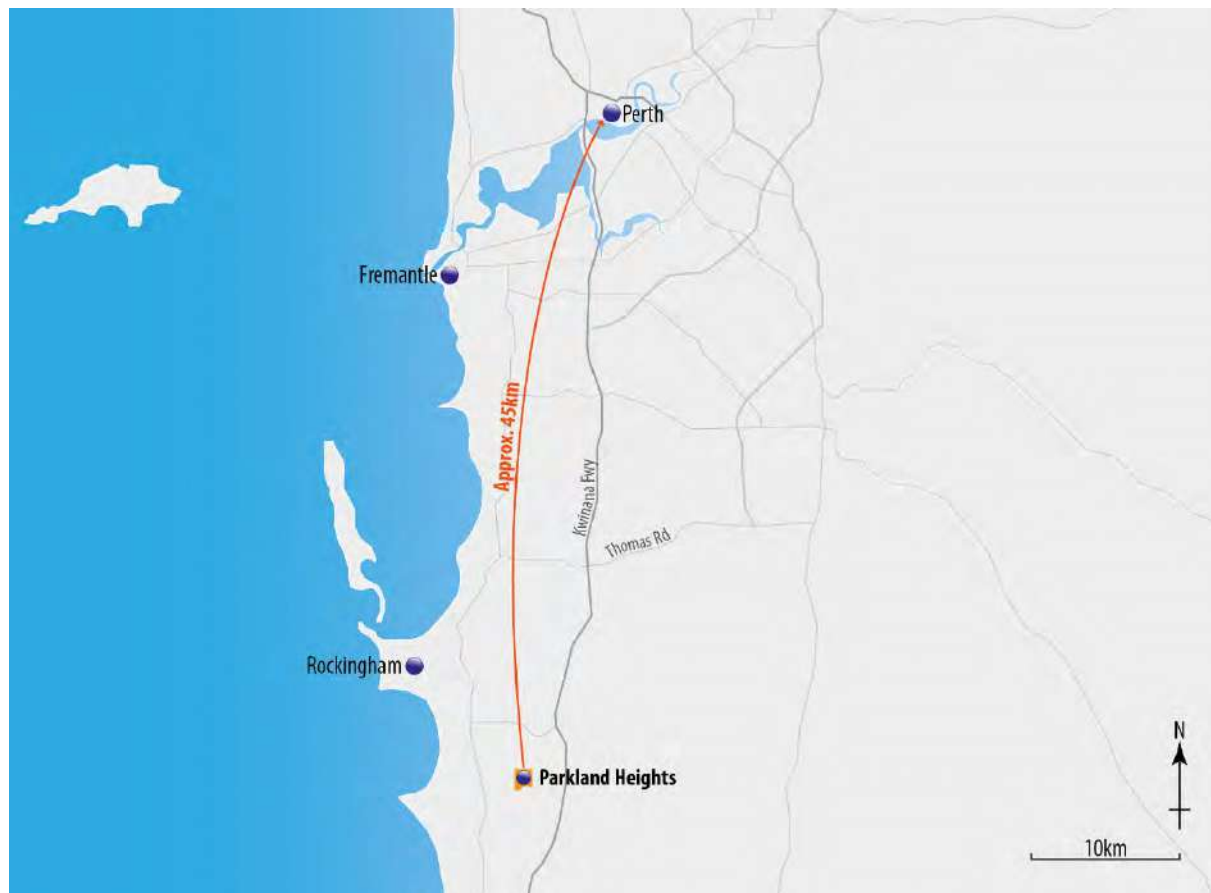
- A need or demand for Centre floorspace provision to serve the identified catchment;
- The current and forecast population level within the catchment for the next 5 to 10 years;
- Depending on the land use proposed, the assessment should highlight key demand factors, such as spending (retail), jobs (commercial), etc.;
- Show where the proposed Centre provision would fit within the hierarchy;
- Indicate the existing major competing supply serving the catchment;
- Provide details of any other proposals for new or expanded development which could have an effect on the viability of what is proposed;
- Indicate whether there are any existing gaps which the proposal will fill; and
- Provide details, where required by the City, on any relevant alternative sites to the proposed site, and demonstrate how the proposed site is the preferred site for the proposal.

This RSA is designed to fulfill these requirements and will demonstrate the potential effects of the PHNC on the local catchment and other centres within the local network of the proposed development. This RSA will measure the impact of the proposed PHNC on competing local and neighbourhood centres as well as Baldivis Town Centre, a district centre, which plays an important role in the local activity centre hierarchy.

### 3 CONTEXT

Parkland Heights is a new subdivision located within the rapidly expanding South Baldivis area in Perth's southern suburbs, approximately 45km from Perth (Figure 2). At full build out it is expected to accommodate approximately 4,000 new dwellings with a primary school and PHNC.

**Figure 2. Parkland Heights Context**



Source: Pracsys 2016

#### 3.1 Proposed Development

The proposed PHNC development is expected to occur on Lot 1507, Sixty Eight Road, Baldivis (Figure 3), centrally placed within the Parkland Heights development.

**Figure 3. Parkland Heights Neighbourhood Centre Context**

**Source: Pracsys 2016**

As shown, Parkland Heights will have Nairn Drive as its main thoroughfare. This connector allows easy access to major arterials and thus the freeway. The centre will be well serviced in regards to public transport with a bus route proposed that passes directly in front of the centre. In addition, the proposed development is co-located with a primary school allowing for multipurpose trips. The road in front of the centre will also be designed to create a safer environment for the activity centre.

In forming the base assumptions for the analysis, the scale and tenancy mix of the proposed development has been based on the Waikiki Village Shopping Centre as a reference for a successfully operating centre within the City of Rockingham. The Waikiki Shopping Centre comprises two supermarkets and a mix of specialty retail options, for this analysis the following assumptions were made accordingly:



**Figure 4. PHNC Retail Mix**

Tenancy Mix	Floorspace (NLA) (sqm)
Supermarket 1	4,200
Supermarket 2	1,700
Specialty Retail	3,500
Food and Beverage	600
Total	10,000

Source: NH Architecture 2015, Pracsys 2016

It should be noted that while the proposed PHNC development will include non-retail commercial floorspace, this does not affect the retail sustainability assessment results and has therefore not been listed above.

### 3.2 Planning Policy

RSAs assess the potential economic and related effects of a significant retail expansion on the activity centres in a locality, to determine if the retail network can support the expansion from a profitability perspective<sup>1</sup>.

#### State Planning Policy 4.2

As part of State Planning Policy 4.2 (SPP 4.2), PHNC is expected to support the planning objectives for the Perth metropolitan region. According to SPP 4.2, Local Centres are typically confined to delicatessens and convenience stores that provide for the day-to-day needs of local communities. A Neighbourhood Centre should be an important local community focal point that performs a vital role in providing for the main daily to weekly household needs for a neighbourhood. In addition, it should support planning objectives including:

- Reducing the overall need to travel
- Supporting the use of public transport
- Promoting a more energy-efficient urban form

The following criteria for a neighbourhood centre are outlined by the strategy:

**Figure 5. Neighbourhood Centre Criteria**

Neighbourhood Centre Desired Characteristics	Description
Neighbourhood multi-purpose centre	Neighbourhood centres provide for daily and weekly household shopping needs, community facilities and a small range of other convenience services.
Public transport access	Stopping / transfer point for bus network.
Diverse retail and commercial offering	Supermarket/s, personal services, convenience shops and local professional services
Approximate 1 km neighbourhood catchment with sufficient population	Within a 1km radius it is advised there be between 2000–15,000 persons

<sup>1</sup> Western Australian Government Gazette 2010, 'Activity Centres for Perth and Peel', State Planning Policy 4.2, Planning and Development Act 2005, State of Western Australia, p. 4154

Walkable catchment	The centre has a walking Catchment of approximately 200 m
Medium density	Persons per ha – min 15, desirable 25
No required mix	No specified mix

Source: SPP 4.2 2010

### City of Rockingham Local Commercial Strategy (CRLCS)

The CRLCS states that developments increasing a centre's floorspace by more than 3,000sqm to a total of more than 6,000sqm must provide a RSA. While PHNC is not an existing centre, it is currently designated by the CRLCS as a local centre. Local centres are generally less than 1,500sqm in size; the proposed development will be 10,000sqm in size and as such a RSA is required.

The CRLCS was reviewed in 2012 to incorporate SPP 4.2 recommendations. Notably, a more flexible approach has been taken with regards to floorspace maximums as they have resulted in an apparent undersupply of retail floorspace for local residents (see Section 3). The CRLCS now assesses the role and function of a centre instead of a specific size in terms of retail floorspace. Specific consideration for allowing an expansion of retail floorspace is given on the following factors:

- There is an assessment of the expected impact/trading effect on existing Centres;
- There is a demonstration of the extent to which the proposal is expected to lead to an overall improvement in the provision of facilities;
- An assessment is undertaken of the estimated employment outcome, including any loss of employment within other Centres;
- Significant net employment is generated during construction and operation;
- The Centre contributes to public transport usage;
- There is an increase in the choice and competition provided to the community - particularly for retail uses;
- There is a contribution to other community-related goals such as social interaction and safety; and
- There has been a consideration where appropriate of other factors such as traffic and parking impacts, amenity, etc.

The CRLCS currently recognises Parkland Heights as a Local Activity Centre. This RSA will consider the factors above in providing evidence and justifying that PHNC can be expand its floorspace and reclassify to a Neighbourhood centre with beneficial results to the local catchment and existing activity centre network.

## 4 RETAIL SUSTAINABILITY ASSESSMENT

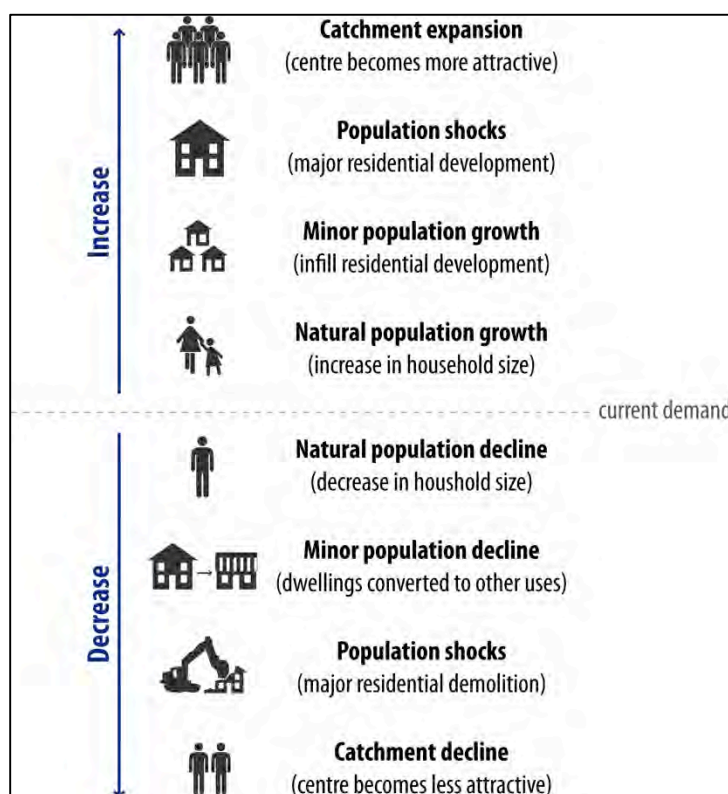
A demand distribution gravity model and catchment analysis have been used to assess the quantitative impacts and sustainability of PHNC

### 4.1 Drivers of retail floorspace demand

Demand changes can result in increased or decreased expenditure. The potential causes of demand changes are shown in Figure 6. These largely show that an increasing population increases demand, and vice versa.

Demand can also increase from rising incomes, or wealth, because people have more disposable income to spend on retail. Demand can also be increased by reducing leakage. Leakage for retail is largely caused by online retail, as well as travel outside of the local catchment area.

**Figure 6. Drivers of retail floorspace demand**

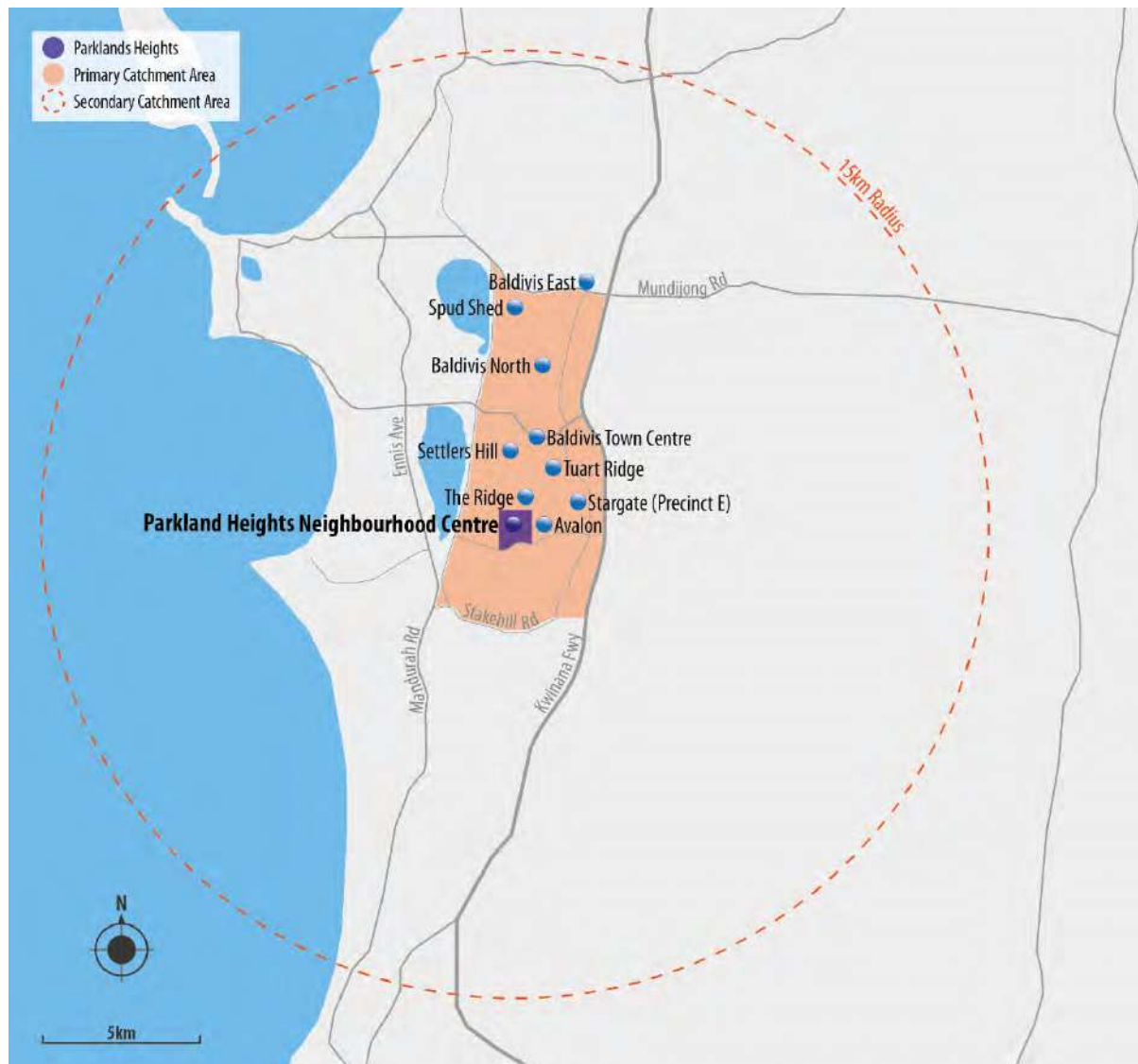


Source: Pracsys 2016

### 4.2 Catchment Analysis

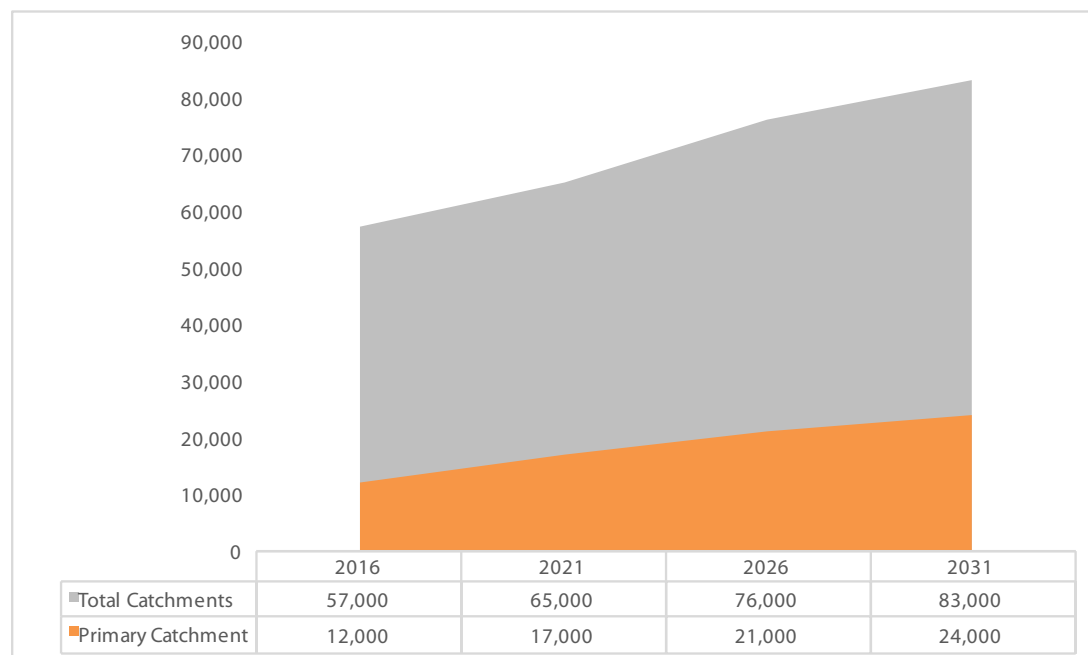
The study area for the PHNC is relatively large in order to allow the RSA to measure the potential impact of the centre on the activity centre hierarchy in Baldivis (Figure 7). The primary catchment is formed by both North and South Baldivis and includes the proposed neighbourhood and local centres in the CRLCS.



**Figure 7. PHNC Retail Catchment**

**Source: Pracsys 2016**

A larger 15 km secondary catchment has been included due to the significant attractiveness the retail offerings at the Rockingham City Strategic Metropolitan Centre may have on the Baldvis population. Forecast.id was used to estimate dwelling growth until 2031 (Figure 8).

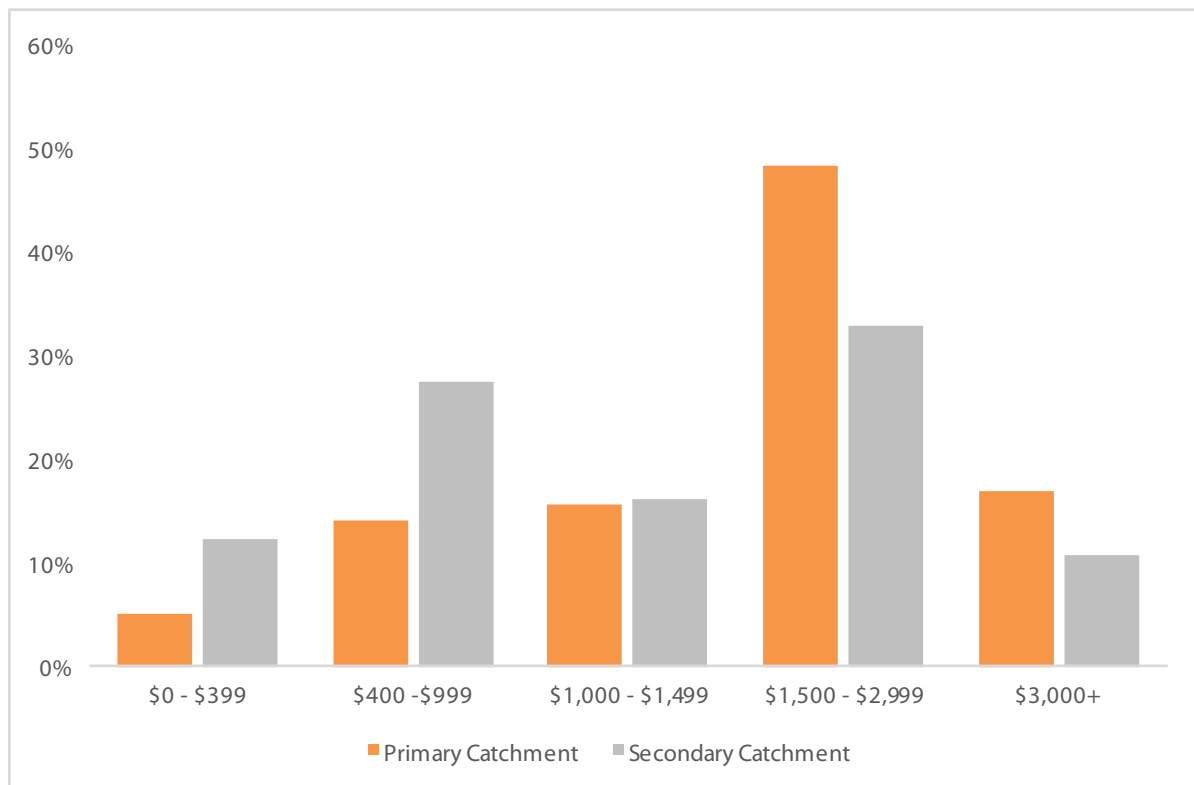
**Figure 8. Projected number of dwellings within the catchment population**

**Source: Forecast.id 2016, Pracsys 2016**

Between 2016 and 2031 the total number of dwellings in the primary catchment is expected to grow by approximately 208% (Figure 8). For the purpose of the analysis, the areas that constitute Karnup within and adjacent to the primary catchment have been grown at the average growth rate for Rockingham (excluding Baldivis, 2011 to 2031 growth of 32%) as there was insufficient information to project otherwise. While there may be greater growth in Karnup and therefore additional expenditure for PHNC, there would also likely be shopping centres that develop to accommodate some of this growth. The approach in this analysis is considered a conservative estimate to account for these unknowns.

## Expenditure

The number of dwellings and the spend per household form the basis for the expenditure pool of the PHNC catchment. ABS Data provides the estimated distribution of income level per dwelling in the primary catchment (Figure 9).

**Figure 9. Primary Catchment Income Profile**

Source: Pracsys (2016), ABS Place of Residence (2011)

The analysis found that over half of the households within the primary catchment are in the fourth income quintile, indicating a high average level of income and thus discretionary spend within the catchment. The secondary catchment has a higher proportion of households in the lower quintiles indicating a lower level of discretionary spend. ABS Household Expenditure Survey data was used to estimate the average spend per dwelling by income quintile. Based on this, the retail expenditure pool of the catchments was calculated (Figure 10).

**Figure 10. Projected Retail Expenditure from the catchment population (per annum)**

Turnover (\$million)	2016	2021	2026	2031
Primary Catchment	\$406	\$566	\$695	\$792
Total Catchments	\$1,769	\$1,986	\$2,276	\$2,485

Source: Forecast.id 2016, Pracsys 2016, HHES Survey 2009-2010

Total expenditure (less leakage) grows from \$406 million to \$792 million from 2016 to 2031. This growth is estimated through increases in dwellings as well as real retail expenditure growth.

### 4.3 Floorspace supply

Retail floorspace Net Lettable Area (NLA) was analysed for both the primary and secondary catchments. The full future floorspace potential for all centres (under the CRLCS) in the primary catchment, and strategic and

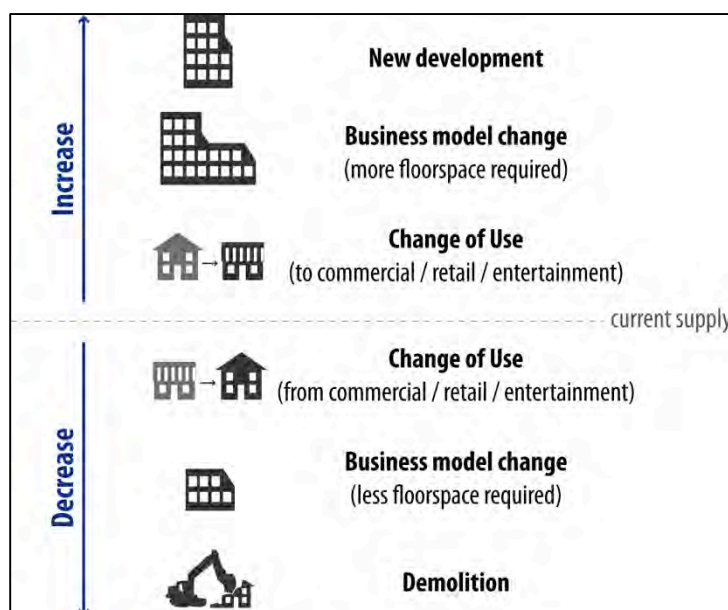


district centres in the secondary catchment, was assumed to be developed by 2021. It is important to note that is a conservative assumption for modelling purposes only.

### Drivers of retail supply

Supply changes can result in increased or decreased retail floorspace. The potential causes of supply changes are shown in Figure 11. It is also important to note that an expansion of floorspace at PHNC will possibly be providing floorspace for tenants not currently present in the Primary Catchment market, so it has the potential to reduce leakage outside of the local activity centres network.

**Figure 11. Drivers of retail floorspace supply**



Source: Pracsys 2016

## Primary Catchment

There are currently two centres near Parkland Heights, Baldivis Town Centre and Settlers Hill Village Centre. According to CRLCs there are an additional five neighbourhood centres and 4 local centres planned for the suburb of Baldivis<sup>2</sup>. Pracsys has further examined local structure plans for the City of Rockingham and the following developments have been included in this analysis (Figure 12).

**Figure 12. Primary Catchment Retail Supply Assumptions**

Centre	Future Floorspace NLA (sqm)	References
Baldivis North	5,500	Baldivis North District Structure Plan Final Report
Spud Shed	7,000	Provided by City of Rockingham
Rivergum	Discontinued	Rivergums East Structure Plan Report Part 2
The Ridge	2,240	Provided by City of Rockingham
Avalon <sup>3</sup>	1,500	Avalon (Smirk Road North) Structure Plan
Tuart Ridge	3,005	Tuart Ridge IDGP Plan
Stargate (Precinct E)	4,500	DA 35(b) Structure Plan Report Part 2
Pike Road	Discontinued	Baldivis Grove Structure Plan Report Part 2
Baldivis East <sup>4</sup>	1500	Provided by City of Rockingham
Settlers Hills	3,240	Provided by City of Rockingham
Baldivis Town Centre – Stockland Baldivis (District Centre)	36,000	City of Rockingham Planning and Engineering Services Committee Meeting Minutes Monday 17 February 2014
<b>Total</b>	<b>64,920</b>	

Source: See references in table

The model assumed that all centres are developed by 2021 in order to estimate the impact that the PHNC would have in a fully developed retail activity centre hierarchy. This enabled the model to measure the PHNC's impact on both the Baldivis Town Centre and the viability of other centres that have been proposed in the CRLCS.

## Secondary Catchment

Listed expansions to strategic metropolitan centres and district centres in the secondary catchment were included in the analysis (Figure 13).

<sup>2</sup> City of Rockingham Local Commercial Strategy (Amended July 2013), p. 29.

<sup>3</sup> The Avalon Local Centre is proposing 5,000sqm of commercial floorspace, due to its categorisation as a local centre it is assumed only 1,500sqm will be for retail purposes.

<sup>4</sup> East Baldivis Structure Plan Report indicated a local centre would not be viable at this location. The report concluded there was a long term possibility of a small centre (500 m<sup>2</sup>)

**Figure 13. Secondary Catchment Supply Assumptions**

Centre	Current Floorspace NLA (sqm)	Future Floorspace (NLA) (sqm)	Comments
Rockingham City Centre (Strategic Metropolitan Centre)	59,000	85,000 (+26,000)	City of Rockingham Strategic Regional Centre – Centre Plan
Smart Villages	-	12,000	City of Rockingham Strategic Regional Centre – Centre Plan
Rockingham Beach (District Centre)	10,500	18,000 (+7,500)	City of Rockingham Strategic Regional Centre – Centre Plan
Warnbro (District Centre)	15,500	22,000 (+6,500)	Provided by City of Rockingham
Secret Harbour Town Centre (District Centre)	8,000	15,000 (+7,000)	City of Rockingham Local Commercial Plan
<b>Total Additional</b>		<b>+59,000</b>	

Source: Pracsys 2016

The model assumed that all centres are developed by 2021 in order to estimate the potential impact that the PHNC would have on a fully developed retail activity centre hierarchy.

#### 4.4 Turnover and Productivity Impact

Gravity modelling has been used to determine the turnover impacts on centres throughout the network under assumptions around retail expansion and population growth. The model accounts for income and population growth in the network to determine current and future levels of supportable retail floorspace.

Two scenarios have been modelled to understand the impact of PHNC as a Neighbourhood Centre:

- **Scenario 1: Local Centre** – Acts as a control scenario to demonstrate what could happen if PHNC is developed to 1,500sqm by 2021. All known or likely expansions in the primary catchment are included as well as the expansion of Rockingham City and all district centres in the secondary catchment.
- **Scenario 2: Neighbourhood Centre** – Presents the impacts on retail turnover for all current and potential centres in the primary catchment if PHNC were developed to 10,000sqm by 2021. This scenario is designed to show the impact on the local activity network and assumes the same expansions as Scenario 1.

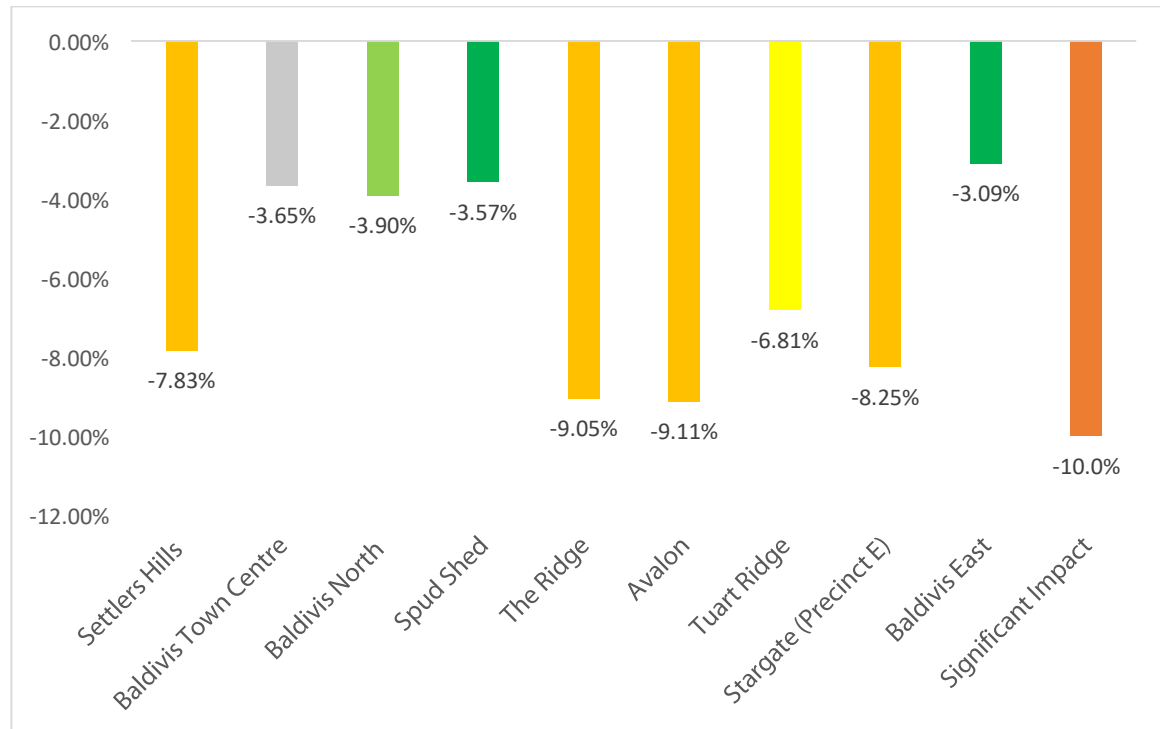
#### Centre Impact

The sustainability of a centre is typically considered significantly impacted when their profitability is reduced by more than 10%. The analysis compares the difference in retail floorspace productivity (\$/sqm) between



scenario 1 and scenario 2. Results indicate that through the initial impact in 2021 no centre will be impacted by more than 9.11%, with the Baldivis Town Centre impacted by approximately 3.65% (Figure 14).

**Figure 14. Estimated Impact of PHNC on Primary Catchment Centres**



Source: HHES 2009/2010, ABS Place of Usual Residence 2011, Forecast.id 2016, Pracsys 2016

The most significantly impacted centres are The Ridge (proposed Neighbourhood Centre) and Avalon (proposed Local Centre). These two centres are in close proximity to PHNC although both are restricted to serving more local needs. While The Ridge is listed as a neighbourhood centre its allocated retail floorspace offering is 2,240sqm (GLA), well below the general size range of a neighbourhood centre according to the CRLCS (4,500sqm to 10,000sqm). Avalon is a nearby local centre that is surrounded by residential houses and lies on smaller residential roads creating a specific local catchment. Despite these impacts the modelling shows the centres to be trading at healthy and profitable levels implying that there will be no impact to consumer amenity (Figure 15).

**Figure 15. Estimated Floorspace Productivity of Primary Catchment Centres – Scenario 2**

Centre	Floorspace Productivity (\$/sqm)
Settlers Hills	\$5,939
Baldivis Town Centre	\$7,126
Baldivis North	\$6,540
Spud Shed	\$6,910
The Ridge	\$7,100
Avalon	\$7,147

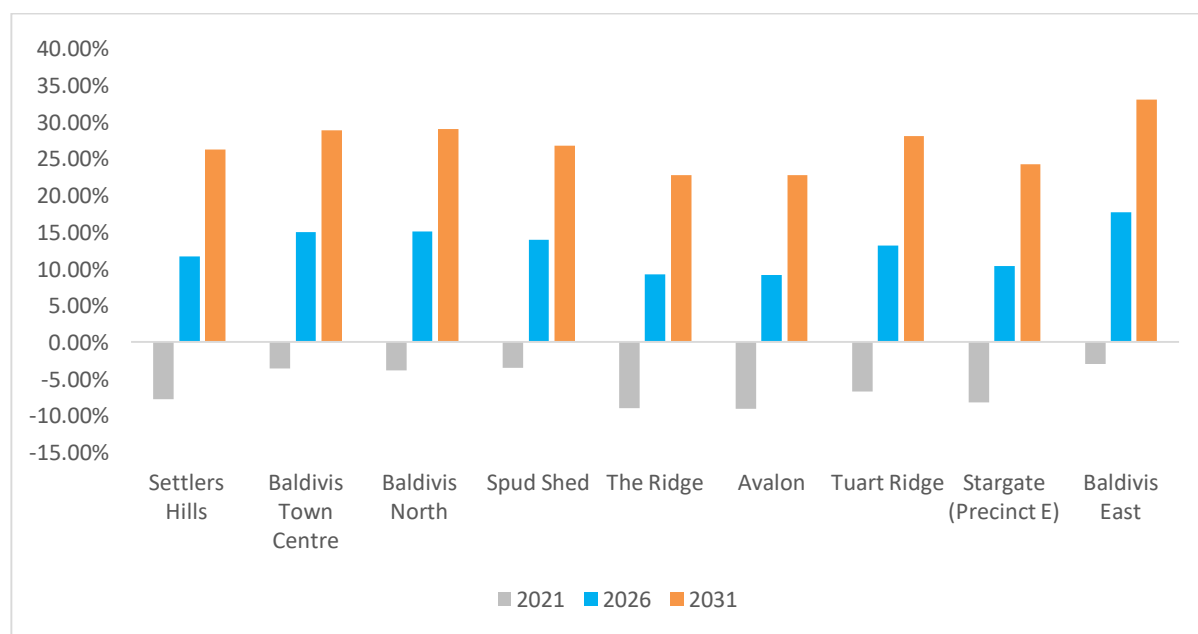
Centre	Floorspace Productivity (\$/sqm)
Tuart Ridge	\$6,571
Stargate (Precinct E)	\$6,156
Baldivis East	\$2,445
Proposed PHNC	\$6,306

Source: HHES 2009/2010, ABS Place of Usual Residence 2011, Forecast.id 2016, Pracsys 2016

It should be noted that Baldivis East has a very low productivity level, this is due to a small catchment in the northeast of Baldivis upon which PHNC has a very low impact (-3.09%). A feasibility carried out for the Baldivis East Structure Plan found that the centre would likely not have a large enough catchment to be sustainable at 1,500 m<sup>2</sup> <sup>5</sup>.

The results support the conclusion that the development of the proposed PHNC does not affect the viability of the surrounding centres. Additionally, by 2026 it is estimated that all centres will have floorspace productivity levels above the initial scenario 1 levels, further increasing by 2031 (Figure 16).

**Figure 16. Scenario 2 Growth in Floorspace Productivity Compared to Scenario 1 (2021)**



Source: HHES 2009/2010, ABS Place of Usual Residence 2011, Forecast.id 2016, Pracsys 2016

This indicates a healthy retail activity hierarchy that is profitable and able to meet the needs of the primary catchment. Scenario 2 would provide the necessary floorspace to meet the rapid increase in demand for retail floorspace due to the projected population growth in Baldivis, specifically in South Baldivis where Parkland Heights is located. Without developing PHNC to the scale of a neighbourhood centre, it is likely there will be a large gap in the local capacity to provide retail services for South Baldivis and the greater primary catchment.

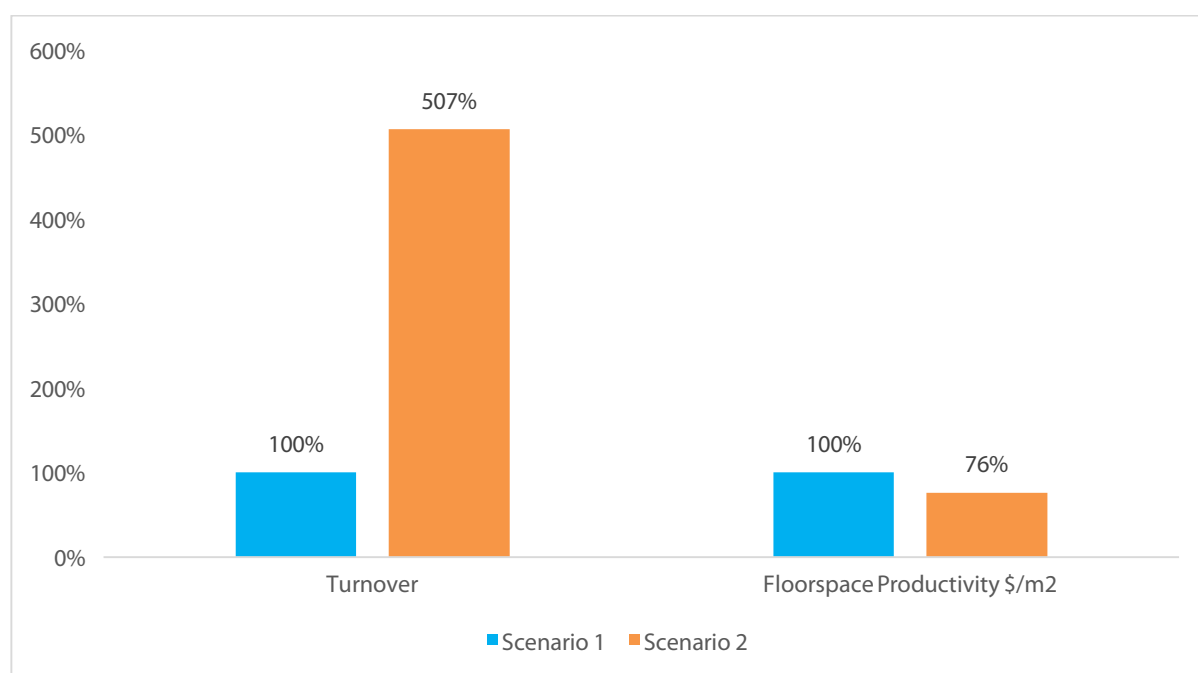
<sup>5</sup> Baldivis East Structure Plan 2012: <http://www.rockingham.wa.gov.au/getmedia/77aac559-cf39-43b9-a9f3-f6ce063a44ac/PD-East-Baldivis-District-Structure-Plan-Report.pdf.aspx>

This would put more pressure on the retail amenity in other centre's while also creating greater traffic flows in local neighbourhoods.

### PHNC Impact

PHNC itself appears to be able to support the expansion with an estimated floorspace productivity in 2021 of \$6,306/sqm, well above the assumed minimum threshold level of \$5,000/sqm. Total turnover for PHNC increases from \$12 million to \$63 million in 2021 and continues to increase through 2031 (Figure 17).

**Figure 17. Scenario 2 – Proportionate Growth in Turnover and Decrease in Floorspace Productivity**

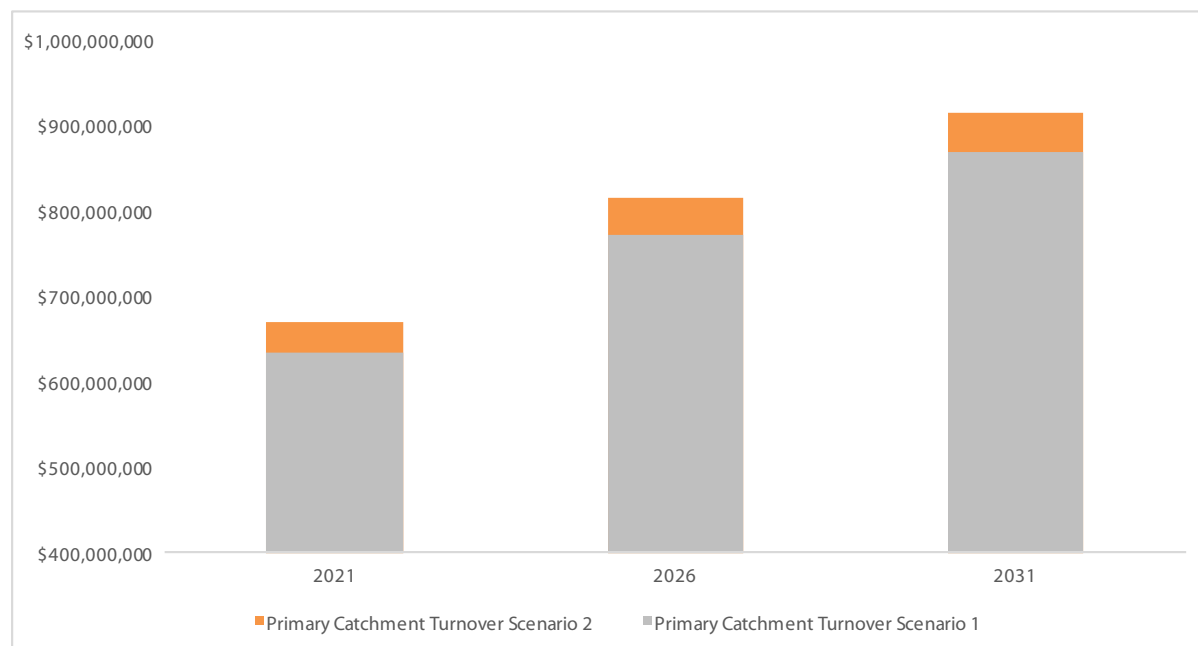


Source: HHES 2009/2010, ABS Place of Usual Residence 2011, Forecast.id 2016, Pracsys 2016

### Primary Catchment Impact

PHNC offers the opportunity to increase the local ability to capture retail spend. The analysis found that total expenditure in the primary catchment increases by approximately 6.13%, which equates to \$29 million in 2021 alone. The additional floorspace at PHNC will provide a sustainable increase in overall turnover for the primary catchment in the long term (Figure 18).



**Figure 18. Total Catchment Turnover Growth**

Source: HHES 2009/2010, ABS Place of Usual Residence 2011, Forecast.id 2016, Pracsys 2016

## 4.5 Impact Summary

The analysis found there is an initial redistribution of expenditure away from centres in the primary catchment, as could be expected. No impact was shown to be greater than - 9.11% and centres remain at healthy viable and profitable turnover levels. Similarly, the overall catchment floorspace productivity level remain at a relatively high \$6,700/sqm, indicating a healthy mix of total floorspace to expenditure. This is despite the inclusion of all potential expansions in the primary catchment. This points to a large undersupply should expansions not be allowed to go ahead, to the detriment of the local catchment. The healthy trading levels in the catchment are expected to increase with population growth and, by 2026, the catchment is expected to provide enough expenditure to increase turnover levels by 19%, with a further 12% increase by 2031 to trading levels of approximately \$800 million and \$900 million respectively.

## 5 RETAIL IMPACTS

### 5.1 Retail Supply Gap

The total population in Baldivis more than doubled between 2011 and 2016, from 16,520 to 34,000. This rapid population growth has meant that the area has been underserved in terms of retail offering. Evidence of this comes from the 2015 Shopping Centre Directory which indicates that Stockland Baldivis has been trading at a very high floorspace productivity level of over \$18,000/sqm<sup>6</sup>; this is far above a normal trading level. Since the directory was published the Baldivis centre has been expanded, it is likely that it will still be over performing due to the size of the population in its catchment and the lack of retail offerings. Warnbro centre, also in the City of Rockingham, recently expanded from 11,000sqm (Gross Lettable Area Retail (GLAR)) to 21,000sqm. This led to a drop in its floorspace productivity level from \$11,800/sqm to \$7,100/sqm (this would likely be understating the new floorspace productivity as it is expected the centre would have traded lower during the period of expansion). A centre with a productivity level of \$7,100/sqm is still functioning well and highly viable; Warnbro Centre's total turnover increased by 15% in the year that the expansion took place and will most probably have increased further in the following year.

The analysis found that Baldivis Town Centre as a whole would be trading at \$10,000/sqm when measured at a floorspace of 29,500sqm in 2016 (this includes retail which is generally less productive per sqm than the Stockland shopping centre). It is likely that Stockland Baldivis will see an even greater increase in turnover due to the rapidly growing Baldivis population. With the population growing to 68,000 by 2031 there will likely be a significant need to expand retail floorspace in the catchment.

**Figure 19. Projected number of dwellings within the catchment population**

Year	2016	2021	2026	2031
Population	34,000	49,000	61,000	68,000

Source: Forecast id 2016

### Leakage and Secondary Catchment Spend

With such a high level of retail floorspace productivity within the catchment it is likely that there is a great deal of leakage of retail spend from the primary catchment. This leakage would likely grow with the projected population growth for the primary catchment. While development of PHNC could help reduce the leakage from the primary catchment it is likely that multiple centres would be needed to achieve a desirable leakage rate. In addition to leakage, there would be a high proportion of primary catchment expenditure that is being spent in the secondary catchment. While this will always be the case due to the diversity of retail offering at the Rockingham City Strategic Centre, the effect is likely exacerbated for goods that would normally be bought at a neighbourhood centre (i.e. weekly grocery shopping, etc). PHNC would play an important role in providing the necessary retail offering to meet local needs. In addition, with a rapidly growing population, it

<sup>6</sup> Property Council of Australia 2015, 'Directory of Shopping Centres'

is important to engage new members of the community in order to create behavioural shopping patterns. Developing PHNC would create a local option for the population as it grows, further minimising the chance of its expenditure going elsewhere.

## 5.2 Neighbourhood Centre 1km Catchment

SPP 4.2 recommends a population of between 2,000 and 15,000 persons within approximately 1km of a neighbourhood centre. PHNC is located in the South Baldvis area which has a projected 2016 population of approximately 25,000 persons<sup>7</sup>. Of this population, approximately 5,000 are currently within a 1 km radius of PHNC, sufficient population to warrant a Neighbourhood Centre. The Parkland Heights development will increase this population by approximately 4,000 persons<sup>89</sup>, indicating the need for a larger neighbourhood centre (Figure 20).

**Figure 20. Projected number of dwellings within the catchment population**

Baldvis South Dwelling Size (2026)	Parkland Heights Dwellings	Increase In Population	Total 1 km Population Post Development
2.99	1,400	4,000	9,000

Source: Forecast id 2016, Parkland Heights Structure Plan 2012

A neighbourhood centre according to the CRLCS is generally 4,500sqm to 10,000sqm. Currently, the Ridge centre is the only proposed neighbourhood centre within this radius. It is constrained however by plot sizes and is projected to offer a maximum retail floorspace of 2,240sqm (GLA) well below the general floorspace provided by a neighbourhood centre. PHNC is the only designated centre within this neighbourhood which can provide the necessary retail floorspace to meet the needs of the projected 9,000 person population.

<sup>7</sup> Forecast.id 2016: <http://forecast.id.com.au/rockingham/about-forecast-areas?WebID=110>

<sup>8</sup> Forecast.id projection of 2.99 persons per household in 2026:

<http://forecast.id.com.au/rockingham/population-households-dwellings?WebID=110>

<sup>9</sup> Parkland Heights Local Structure Plan projected 1,400 dwellings:

<http://www.rockingham.wa.gov.au/getmedia/764b94a1-f42a-4d59-be4d-b04c3d3ae422/PD-DA19-Appendix-H-Transport-Assessment.pdf.aspx>



## 6 EMPLOYMENT ASSESSMENT

### 6.1 Construction Employment

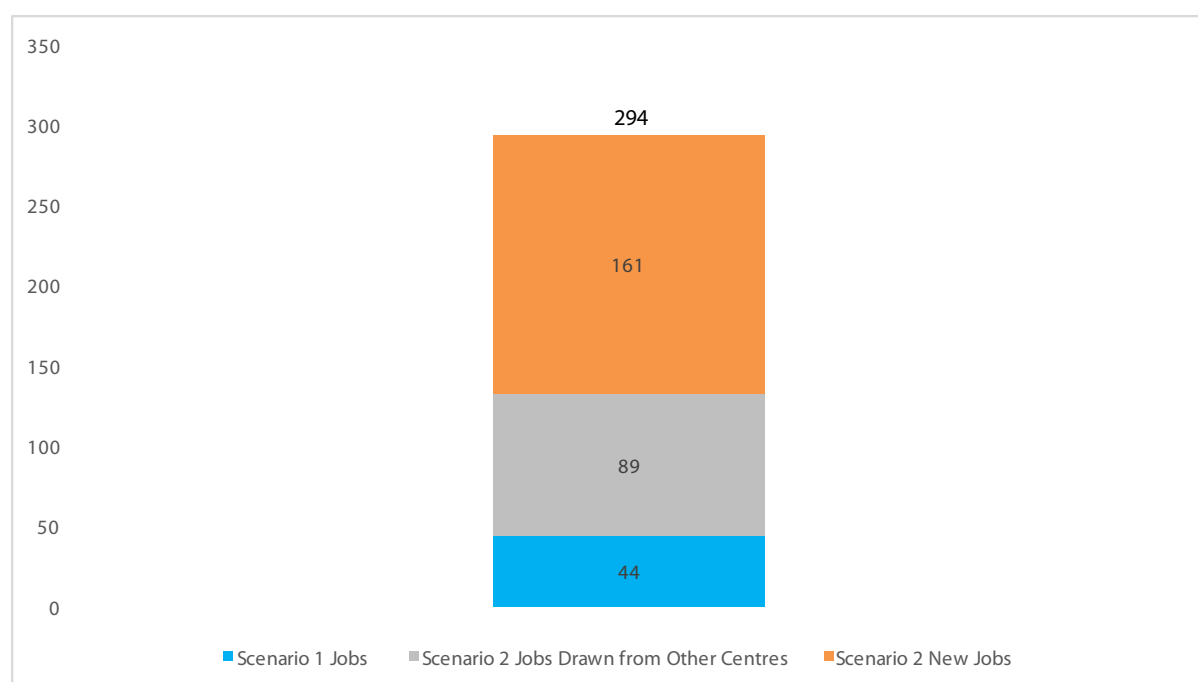
While costings have not been confirmed for the PHNC development, an estimate of costs based on Rawlinsons Australian Construction Handbook has provided an approximate cost for the purposes of calculating potential construction employment opportunities. It was assumed that the Scenario 2 neighbourhood centre would be an enclosed mall with good standard finishes. It is estimated that a shopping centre of this kind with a floorspace of 10,000sqm would cost \$45 million to construct, at a conservative estimate. Currently, Secret Harbour Square is refurbishing and adding just over 4,000sqm of retail floorspace for approximately \$57 million.

Using National Account ABS data, it is possible to estimate the Full Time Equivalent (FTE) employment generated through the development of a \$45 million centre. PHNC would create approximately 57 FTEs over the course of its construction.

### 6.2 Long Term Employment

This analysis assumes that full development potential of all centres in the primary catchment is reached by 2021. If this were the case, there would be enough retail floorspace to support approximately 1,870 jobs. In Scenario 1, PHNC would contribute an additional 44 jobs as a local centre. As a neighbourhood centre in Scenario 2, PHNC would contribute an additional 294 employment opportunities, 89 of which would be diverted from other centres and 161 which would be new jobs for the primary catchment (Figure 21).

**Figure 21. PHNC Employment – Scenario 2**



Source: ABS National Accounts (Catalogue 5206)

It is estimated that in Scenario 2 PHNC would increase retail employment opportunities in the primary catchment by 8.6%. Perth and Peel@3.5 million has set employment targets for each of the metropolitan sub-regions. The South West sub-region has an Economic Self-Sufficiency (ESS) target of 77.5% by 2031, an increase of over 10% from 2011 levels. The jobs created by PHNC will be important in helping to reach this target as well as meeting local employment needs for the rapidly growing population.

## **6.3 Transport**

### **Road Access**

The main road passing through Parkland Heights will be Nairn Drive which is classified as an 'Other Regional Road' in the Metropolitan Region Scheme. It provides North – South movement through Baldivis and is planned to be the main District Distributor road through Baldivis and Karnup<sup>10</sup>. PHNC will be directly accessible via Nairn Drive, facilitating shopping trips for passing traffic. It has been proposed that this section of Nairn Drive be classified as an Integrator B road due to the planned primary school and village centre, thus allowing for slower speeds and slightly less traffic passing PHNC<sup>11</sup>. This mitigates the impact of traffic accessing the centre and supports the viability of expanding PHNC to a neighbourhood centre.

### **Public Transport**

A key component of meeting SPP 4.2 requirements for a neighbourhood centre is to support the use of public transport. There is currently a planned bus route through the Local Structure Plan (LSP). While the final path of the bus has not been decided, the proposed route would pass directly in front of PHNC, providing direct public transport access and meeting SPP 4.2 requirements<sup>12</sup>.

## **6.4 Multi Purpose Use**

SPP 4.2 and CRLCAS both indicate that a neighbourhood centre should reduce the overall need to travel, creating a more efficient urban form. PHNC will provide a mix of both supermarkets and specialty stores which can meet both daily and weekly shopping needs for its catchment. This reduces the number of trips residents of the neighbourhood will need to make in order to satisfy their usual shopping needs. In addition, it will be located across from a primary school, enabling local families to create multi-purpose visits to the area, further reducing the need to travel (Figure 22).

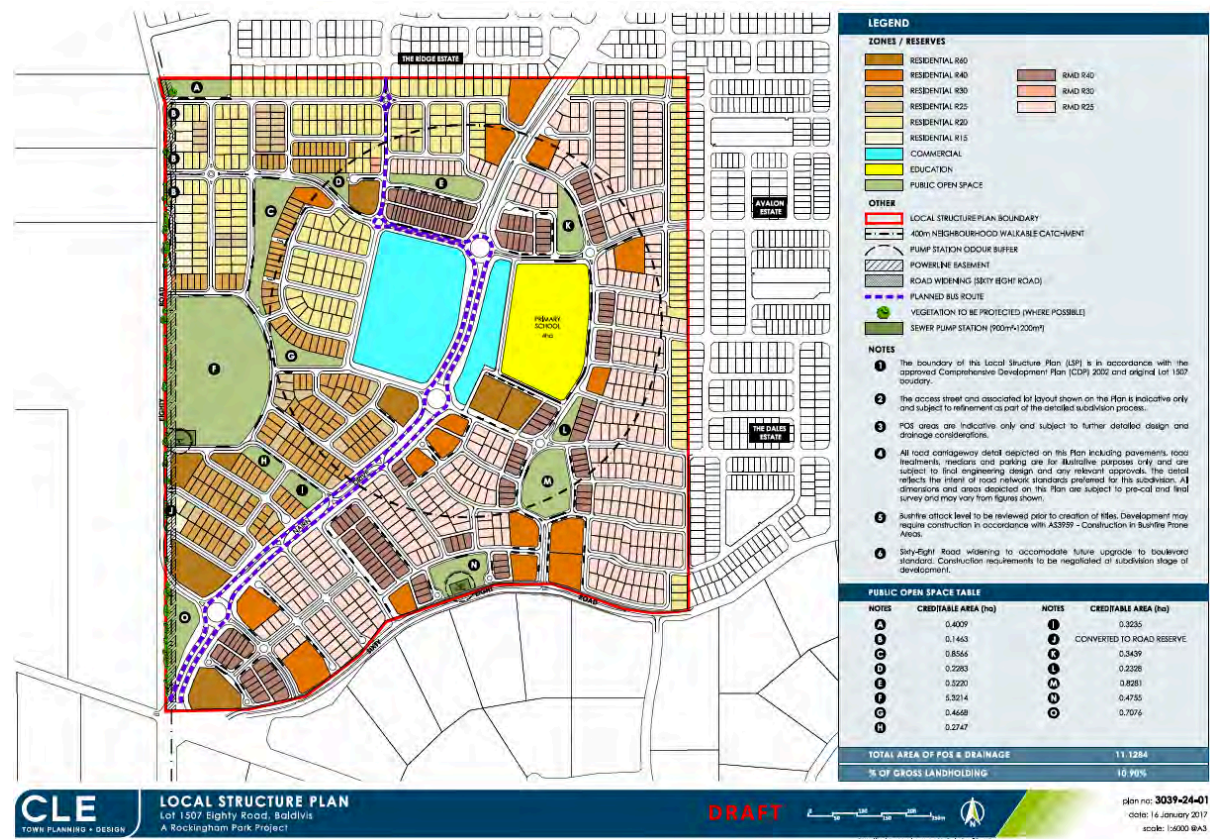
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<sup>10</sup> Spires Estate Local Structure Plan - Appendix Six:  
[http://www.rockingham.wa.gov.au/getmedia/eeaa02e3-36ee-4713-a211-9db1a656166a/PD-DA22\(e\)-Appendix-6-Transport-Assessment.pdf.aspx](http://www.rockingham.wa.gov.au/getmedia/eeaa02e3-36ee-4713-a211-9db1a656166a/PD-DA22(e)-Appendix-6-Transport-Assessment.pdf.aspx)

<sup>11</sup> Parkland Heights Local Structure Plan – Appendix H:  
<http://www.rockingham.wa.gov.au/getmedia/764b94a1-f42a-4d59-be4d-b04c3d3ae422/PD-DA19-Appendix-H-Transport-Assessment.pdf.aspx>

<sup>12</sup> Parkland Heights Local Structure Plan – Appendix H:  
<http://www.rockingham.wa.gov.au/getmedia/764b94a1-f42a-4d59-be4d-b04c3d3ae422/PD-DA19-Appendix-H-Transport-Assessment.pdf.aspx>

Figure 22. Parkland Heights Plan



Given this, the proposed development offers an excellent opportunity to further the multipurpose trip agenda of SPP 4.2 as well as CRLCS.



## 7 CONCLUSION

The town of Baldivis is experiencing a rapid rate of growth with the population projected to double by 2031. The analysis found that the local population had high average income rates and thus disposable incomes. There is currently an apparent undersupply of retail floorspace within Baldivis, leading to unsustainable demand on few centres. This creates the potential for increased leakage rates and loss of potential turnover and employment within Baldivis.

Parkland Heights is a development in South Baldivis which will introduce approximately 1,400 new dwellings (4,000 residents) to the area. Currently, there is a Local Centre planned for development within the CRLCS, however due to population estimates and retail supply constraints in the area, it is proposed that the Parkland Heights Neighbourhood centre be developed to 10,000sqm.

In investigating the potential impact of the PHNC on the surrounding centres, the model assumes that all developments within the primary catchment, as well as significant centres in the secondary catchment, expand to full potential retail floorspace (under CRLCS) by 2021. This is considered to be conservative given the lack of developed Local and Neighbourhood centres within the primary catchment.

With this in mind, the analysis concludes that while PHNC would attract turnover from other centres in its primary catchment, the centres would remain viable in that no centre suffers a loss in turnover of greater than 10%. These centres then increase in profitability by over 25% to 2031 due to rapid population growth. PHNC would increase total retail turnover in Baldivis by 6%, providing a total of 57 construction jobs and 294 long term employment opportunities. The centre would meet both State Planning Policy 4.2 and City of Rockingham Local Commercial Strategy goals, including public transport access, sufficient population within 1km and a reduction in the need to travel, among others.

The RSA concludes that the development of the PHNC to 10,000sqm is supportable and provides additional turnover and employment opportunities within Baldivis without affecting the viability of existing centre or future centres within the area.

## 8 APPENDIX 1 – GRAVITY MODELLING METHODOLOGY

Gravity models allow for the measurement of spatial interaction as a function of distance to determine the probability of a given customer shopping at a centre and provide an approximation of trade area and sales potential for a development. This modelling technique uses the distance between a household and each centre, and a measure of 'attractiveness' to define the probability model. The 'attractiveness' of a centre has been defined by total floorspace and the distance has been calculated by measuring straight-line distances between each centre and population. The gravity model probability formula is shown in Figure 23.

**Figure 23. Gravity model probability formula**

$$P_{ij} = \frac{\frac{A_{jk}^a}{D_{ij}^\beta}}{\sum_{j=1}^m \frac{A_{jk}^a}{D_{ij}^\beta}}$$

$P_{ij}$  = Probability of customer living/working in statistical area i shopping at complex j.  
 $A_i$  = Area of floorspace in centre, j in square metres, according to the type of supply, k.  
 $D_{ij}$  = Distance between statistical area of households, i and complex j.  
 $a$  = Area exponent  
 $\beta$  = Distance exponent  
 $k$  = Type of supply or expenditure, either Convenience or Comparison  
 $i$  = Statistical area ( $i=1, \dots, n$ )  
 $j$  = Complexes ( $j=1, \dots, m$ )

Source: Carter, C (1993) 'Assumptions Underlying the Retail Gravity Model', *Appraisal Journal*, Vol 61, No 4, pp510; Pracsys (2014)

**Figure 24. Gravity model demand formula**

$$D_{kj} = \sum_{i=1}^n (P_{ij} * E_i)$$

$D_{kj}$  = Demand for retail category k, at centre j.  
 $E_i$  = Expenditure pool of statistical area i.

Source: Carter, C (1993) 'Assumptions Underlying the Retail Gravity Model', *Appraisal Journal*, Vol 61, No 4, pp510; Pracsys (2012)

Figure 24 shows that the demand for retail category k<sup>13</sup>, at centre j (Busselton Town Centre), is equal to the sum of the probabilities of customers living in statistical areas i to n, multiplied by the expenditure pool of statistical area i. In other words, the demand for retail is a function of the probability of customer from particular statistical area attending the centre multiplied by the expenditure pool of that statistical area. The expenditure pool is derived through the population multiplied by its income distribution.

In its core form gravity modelling provides a clearer, reproducible outcome that can be easily assessed. However, it does not consider local factors, including:

- The comparative value proposition of centres (e.g. the presence of an 'anchor' attractor that draws significant market share);
- The brand preference of users; or
- The efficiency of transport networks, as well as geographical barriers (e.g. in some cases it may be easier for customers to access a centre that lies physically further away).

<sup>13</sup> Retail categories are determined by their PLUC code and whether they are convenience or comparison goods. Convenience goods are day-to-day items such as groceries, pharmaceuticals and fast food. Comparison goods are items where consumers are willing to travel further distances, and are bought less frequently such as clothing, furniture, electronics, or other household items.



## 9 APPENDIX 2 – GRAVITY MODEL ASSUMPTIONS AND INPUT DATA

### 9.1 Overview of Assumptions

Gravity models are an accepted practice for conducting Retail Sustainability Assessments. They relate household expenditure to activity centre turnover, within a defined catchment, through a probabilistic distribution. The modelling technique uses a set of established assumptions, being:

- There is an available pool of retail expenditure, based on the number of households and average relevant household expenditure in the catchment
  - The number of households in each expenditure quintile is based on the income level of households by quintile. This for a more accurate spatial distribution of expenditure.
  - Expenditure is separated into two categories; 'convenience' (e.g. day to day groceries) and 'comparison' (e.g. clothing)
- Some of this expenditure 'leaks'. The leakage rate applied (17.5%) is based on secondary research that reflect that:
  - Online retail captures expenditure
  - Large centres outside of the catchment such as the Perth CBD capture some expenditure

The remainder of the expenditure is spent at the centres included in the catchment.
- Convenience and comparison expenditure are separately distributed to all centres within the model based on the relevant floorspace (i.e. convenience and comparison floorspace) and their distance from each household:
  - As distance increases, expenditure captured from a particular household decreases
  - Centre size affects the 'attractiveness' of a centre for all households
  - The combination of distance from centres and centre 'attractiveness' is used to estimate the probability that a household will spend money at individual activity centres
  - These probabilities are used to distribute expenditure across the activity centre network

For instance; for a given centre distance, a large centre will attract significantly more expenditure relative to a smaller centre. This relationship reflects the role and catchments of centres throughout the activity centre hierarchy. For small centres, the 'attractiveness' of the centre will not be sufficient to draw meaningful levels of expenditure from areas outside of the immediate locality. However, due to their relative size, large district centres will draw expenditure away from Local of Neighbourhood centres within a wider radius.
- Actual centre turnover figures are used to calibrate the model improving its accuracy
- The inclusion of new floorspace at a define location in the model provides an objective measure of impact on surrounding centres

## 9.2 Data Sources

The gravity model developed for Rockingham Park used the following data sources. These sources are publically available meaning that the model can be replicated by other qualified professionals, or used under alternative methodologies if desired.

Model Input	Source
Number and distribution of households	ABS Census 2011 dwelling count by SA1 area Forecast.id dwelling growth estimates by City of Rockingham and small areas
Household retail expenditure	ABS Census 2011 dwelling count by income category ABS Household Expenditure Survey 2009/2010 WA Treasury CPI figures
Expenditure leakage (from model catchment)	NAB Online Retail Sales Index Secondary sources for retail expenditure patterns
Centre size and distribution	Department of Planning Land Use and Employment Survey (LUES) City of Rockingham Local Commercial Strategy Various City of Rockingham Structure Plans
Existing centre floorspace turnover (for calibration of the model)	Property Council: Shopping Centre Directory

The centres used in the model are listed in Appendix B (with the calculated impact results). It is important to note that the terms ‘Primary Catchment’ and ‘Secondary Catchment’ are used for reporting purposes (to describe centres within the Baldivis area versus those outside) and has no effect on the model.

## 9.3 Model Calibration

Calibration of the gravity model is based on current centre turnover and sizes and is used to improve the accuracy of the model. Where possible, the PNHG gravity model used actual turnover figures to calibrate specific centres to their published turnover levels. Key centres used to calibrate the model are listed with their respective turnover levels sourced from the Property Council Shopping Centre Directory (2015):

- Rockingham City Centre: \$488 million per annum (\$9,633/sq)
- Kwinana Marketplace: \$141 million per annum (\$5,961/sqm)
- Warnbro: \$150 million per annum (\$8,025/sqm)

Where published data was not available, a scan for outliers (centres where the gravity model may have distributed too much or too little expenditure) was undertaken. Average turnover productivity levels were applied in these cases based on benchmarked centre averages.

## 10 APPENDIX 3 - IMPACT OF CENTRES IN PRIMARY AND SECONDARY CATCHMENT

### Primary Catchment

Centre	Latitude	Longitude	Floorspace	Impact
Avalon	115.8135	-32.3571	1,500	-9%
The Ridge	115.8077	-32.3536	2,240	-9%
Stargate (Precinct E)	115.8230	-32.3521	4,500	-8%
Settlers Hills	115.8030	-32.3381	3,240	-8%
Tuart Ridge	115.8181	-32.3436	3,005	-7%
Baldivis North	115.8137	-32.3139	5,500	-4%
Baldivis Town Centre	115.8170	-32.3310	36,000	-4%
Spud Shed	115.8084	-32.2979	7,000	-4%
Baldivis East	115.8295	-32.2925	1,500	-3%

Source: Pracsys 2017

### Secondary Catchment

Centre Name	Latitude	Longitude	Total SHP Floorspace	Impact
SER-JARR ISOLATED USES	-32.2911	115.9880	2,570	-4%
WARNBRO AVE	-32.3466	115.7630	22,000	-4%
ST CLAIR	-32.3531	115.7550	4,735	-3%
GOLDEN BAY	-32.4328	115.7520	100	-3%
BAYSHORE GARDEN	-32.4386	115.7550	290	-3%
ROCKINGHAM WINERIES ETC	-32.4118	115.7890	307	-3%
DAMPIER DRIVE	-32.4260	115.7540	740	-3%
PORT KENNEDY	-32.3669	115.7550	1,490	-3%
FORESHORE VILLAGE	-32.4094	115.7470	330	-3%
OASIS DRIVE	-32.4087	115.7590	15,000	-3%
READ ROAD	-32.3141	115.7540	7,505	-2%
ORELIA	-32.2347	115.8220	655	-2%
PACE ROAD	-32.2358	115.8070	1,062	-2%
CASUARINA	-32.2468	115.8470	393	-2%
WARNBRO	-32.3268	115.7510	1,614	-2%
CALISTA AVENUE	-32.2488	115.8080	153	-2%
NAVAL BASE	-32.1940	115.7820	3,485	-2%
PARMELIA	-32.2473	115.8270	370	-2%





Centre Name	Latitude	Longitude	Total SHP Floorspace	Impact
ROCKINGHAM BEACH	-32.2763	115.7330	18,000	-2%
KWINANA BEACH	-32.2295	115.7730	1,477	-2%
COOLOONGUP	-32.2953	115.7630	1,902	-2%
SHOALWATER	-32.2927	115.7100	3,835	-2%
WAIKIKI	-32.3097	115.7330	190	-2%
BAYSIDE	-32.3035	115.7110	1,228	-2%
MALIBU	-32.3035	115.7450	1,050	-2%
ROCKINGHAM CITY	-32.2825	115.7470	85,000	-2%
SMART VILLAGES	-32.2825	115.7470	12,000	-2%
CHARTHOUSE WAIKIKI	-32.3130	115.7450	1,127	-2%
McLARTY	-32.3003	115.7050	150	-2%
LEDA	-32.2596	115.8070	3,068	-1%
BENT STREET	-32.3061	115.7200	358	-1%
SAFETY BAY ROAD	-32.2987	115.7100	396	-1%
EAST ROCKINGHAM	-32.2642	115.7670	13,446	-1%
SUMMERTON	-32.2405	115.8080	360	-1%
KWINANA CENTRE	-32.2480	115.8150	20,517	-1%
BELL	-32.2791	115.7160	230	-1%
PARKIN STREET	-32.2796	115.7210	260	-1%
ENTERPRISE	-32.2686	115.7500	8,442	-1%

Source: Pracsys 2017

Attachment 13 – SPP7.0 Assessment

Design Principle	Design Outcome	Complies?
1. Context and character – <i>Good design responds to and enhances the distinctive characteristics of a local area, contributing to a sense of place.</i>	The development proposes a ‘main street’ based neighbourhood activity centre that caters for the needs of an emerging community through the provision of suitably scaled, distinctive architectural built form and landscaped public spaces that is compatible with the predominantly single storey surrounding (future) residential context.	Yes
2. Landscape quality – <i>Good design recognises that together landscape and buildings operate as an integrated and sustainable system, within a broader ecological context.</i>	Hard and soft landscaping elements integrate with the proposed building form to optimise the external amenity of the subject site and the internal “main street and the “town centre”  The proposal ties into the existing Nairn Drive landscaping areas without detracting from the neighbourhood centre itself.	Yes
3. Built form and scale – <i>Good design ensures that the massing and height of development is appropriate to its setting and successfully negotiates between existing built form and the intended future character of the local area.</i>	The topography slopes gently down from the North to South  The proposed built form responds to site topography by proposing the larger supermarket structure towards the low lying portions of the site and subsequently progressing development up the slope of the site. The bulky scale development is located centrally on the site and provide ability for the development to integrate into the surrounding residential land.  The proposed building scale and form is compatible with the predominantly single storey (future) surrounding residential precinct.	Yes
4. Functionality and build quality – <i>Good design meets the needs of users efficiently and effectively, balancing functional requirements to perform well and deliver</i>	The development provides generally well design functional spaces that are suited to their intended uses, and which relate well to adjoining public spaces of the ‘Town Centre’ and the ‘Main Street’.	Yes


<p><i>optimum benefit over the full life cycle.</i></p>	<p>The development provides a well design functional “main street” and “town centre” space which allows for effective pedestrian and traffic circulation throughout the site.</p> <p>The interface between the built form and the development sites flexibility allows for efficacious use of the tenancies without major modifications to the built form. The development fronts onto the “Main Street” element and allows for effective use of the alfresco area to operate in conjunction with the proposed or any other future land use.</p> <p>The peripheral development of the service station and fast food outlets provide activation along the Nairn Drive frontage without impacting the functionality of the Town Centre/Main Street area.</p>	
<p>5. Sustainability – <i>Good design optimises the sustainability of the built environment, delivering positive environmental, social and economic outcomes.</i></p>	<p>The proposed development includes passive solar design measures such as optimising building orientation in response to local climate.</p> <p>The “Main Street” enjoys awning design and alfresco to maximise patrons usage of winter sun. The orientation and design of the pedestrian circulation spaces are open to all sides and allows for effective ventilation.</p> <p>The building facades allow for hidden solar collectors mitigating any visual impact on the streetscape whilst providing long term economic and environmental benefits to the users of the development.</p> <p>The provision of bicycle parking and end-of-trip facilities promotes alternative forms of travel to the centre, reducing vehicle traffic and emissions.</p> <p>A condition is recommended to ensure that storm-water from the development is managed in accordance with water sensitive urban design principles.</p>	<p>Yes</p>



<p>6. <i>Amenity – Good design provides successful places that offer a variety of uses and activities while optimising internal and external amenity for occupants, visitors and neighbours, providing environments that are comfortable, productive and healthy.</i></p>	<p>The proposed development provides for activated street frontages through the provision of openings and substantial glazing to the tenancies. Overhanging roof structures and shade trees provide shelter or the amenity of the public, shoppers and pedestrians</p> <p>The development incorporates a mix of land uses that will contribute to the vitality of the neighbourhood centre at different times of the day, and provide choices for shopping, employment and entertainment.</p> <p>End of trip facilities are provided which will promote alternative modes of transport to/from the site.</p>	<p>Yes</p>
<p>7. <i>Legibility – Good design results in buildings and places that are legible, with clear connections and easily identifiable elements to help people find their way around.</i></p>	<p>The proposed layout of the buildings and pedestrian pathways provide for good lines of sight, both within and between the pedestrian circulation spaces and the car parking areas. Adequate connection has been provided connecting all modes of transport including pedestrian access.</p> <p>Building development and design promotes good legibility. With substantial level of building mass proposed for the super market and the transition of to 2 storey scale development to the 'Main Street', pedestrians and vehicles are wayfinding and legibility is achieved.</p>	<p>Yes</p>
<p>8. <i>Safety – Good design optimises safety and security, minimising the risk of personal harm and supporting safe behaviour and use.</i></p>	<p>"Main Street" outdoor seating promotes adequate active and passive surveillance opportunities. The "Town Centre" in conjunction with the pedestrian access areas are open, large and legible with clear sightlines to the surrounding areas.</p> <p>The development area is considered well-lit and access ways are provided with clear lines of sight, development has minimal entrapment spaces outside of control circulation areas.</p> <p>Lighting will be provided to the development in accordance with CPTED principles.</p>	<p>Yes</p>

<p>9. Community – <i>Good design responds to local community needs as well as the wider social context, providing environments that support a diverse range of people and facilitate social interaction.</i></p>	<p>The proposed development encourages social engagement and provides physical activity opportunities for the surrounding community through the proposed range of land uses, alfresco dining and connection routes.</p> <p>Public Art proposed to the entry areas and pedestrian circulation spaces provides a sense of place to the development site.</p>	Yes
<p>10. Aesthetics – <i>Good design is the product of a skilled, judicious design process that results in attractive and inviting buildings and places that engage the senses.</i></p>	<p>The application proposes a well-considered built form, development and materials selected are of a contemporary nature which blends into the fabric of the future and existing residential areas.</p>	Yes

## Attachment 14 - Local Development Plan Assessment

Provisions	Provided	Compliance
<b>Main Street</b>		
1. The main street shall be designed as a low-speed traffic environment that prioritises pedestrian movement over vehicles. Traffic-calming measures should be incorporated into the design with pedestrian crossings provided that generally align with entrance points to buildings.	Main street provided, pedestrian orientated design with crossings and pedestrian calming measures provided.	Yes - Conditions to address compliance
2. The main street shall accommodate on-street parking as well as loading zones for service vehicles on each side of the main street where practical and safe.	Main Street provides adequate on street parking and opportunity for loading zones both sides of the Main Street.	Yes
3. The main street shall be designed for a high-level of pedestrian amenity and incorporate features such as street furniture, low planting, street trees and lighting where practicable and safe.	Impressions and elevations showcase ample street furniture.	Yes - Conditions to address
<b>Active Building Edges</b>		
Where identified, active building edges shall:		
4. Where identified, active building edges shall: Have a nil setback to the footpath.	Active building edges developed in conjunction with the alfresco dining areas.	Yes
5. Have a continuous frontage with a minimum building facade height of 5.5	Food and Beverage Precinct southern buildings are calculated to be at 5.1m	No
		
6. Comprise a minimum of 60% glazing for the length of the ground floor facade.	Elevations do not provide clear indication, from the elevations provided it can be established that the elevations provide over 60% window glazing.	Yes - Condition
7. Provide continuous pedestrian shelter that extends over the width of the adjoining footpath to the	Elevations and Floor Plans, detail awning/pedestrian shelters extending to an	Yes



extent that they do not pose a hazard for passing vehicles (eg. delivery and service trucks).	acceptable length over pedestrian circulation areas.	
8. Comprise 'preferred' uses with the exception of where entry points are required for access to internal shopping centre pedestrian malls and buildings denoted with a # symbol. 'Preferred' uses include 'fast food outlet', 'market', 'restaurant', 'small bar', 'tavern', and 'shop'. Other uses may be considered in accordance with Clause 4.1 of the Parkland Heights Local Structure Plan and Table No.1 - Zoning Table of LPS No.2.	No other land use has been proposed in # indicated structures. Not part of this phase.	Yes
<b>Other Building Facades</b>		
Where identified, primary active street frontages shall:		
9. With the exception of 'Active Building Edges' and walls adjoining loading areas, building facades should avoid blank walls to enhance visual presentation through the use of features such as glazing (where conducive to the floor plan and use), alternative colours, finishes and textures and/or intrusions and extrusions in the wall.	Glazing provided to all frontages to a satisfactory level 60% to 100% provided across building facades.	Yes
10. In addition to the above, 'Secondary Building Edges' are to be designed to provide visual relief through an architectural response.	All secondary building edges are considered to address all other street frontages and create visual interest outside of the "Main Street"	Yes
<b>Vehicle Access</b>		
11. Intersection treatments for vehicle access points to the Neighbourhood Centre are to be provided in accordance with the LDP.	Intersections have been provided.	Yes
12. Alternative intersection treatments may be considered where a Traffic Impact Assessment is provided to the satisfaction of the City of Rockingham.	No alternative access' have been provided	Yes
<b>Pedestrian Access</b>		
13. Footpaths adjacent 'Active Building Edges' are to have a minimum width of 4.5m in order to accommodate alfresco dining opportunities and pedestrian movement. A reduction to 3.5m wide may be considered where	Main street alfresco dining area is provided at approximately 4m in width. The total width of the whole circulation space is approx. 6.8m which complies with the requirement	Yes

alfresco dining is not proposed or contemplated by the specific land use.		
14. For buildings abutting the main street, primary pedestrian access to building entries is to be provided from the main street.	All tenancies abutting the "Main Street" is proposing access from there.	Yes
<b>Landscaping</b>		
15. Landscaping strips a minimum of 2.0m wide are to be provided within the property boundary in the general locations depicted on the LDP. Timing for the installation of the landscaping is to coincide with the construction of the adjoining car park to provide screening.	Landscaping has been provided as per the LDP. Condition to be included to ensure compliance	Yes – Condition.
16. Where landscaping strips adjoin car parking areas, loading areas and buildings facades, the Landscape Plan that accompanies the Development Application is to provide details that demonstrate screening of these areas through the use of shrubs and tree planting.	Landscaping plans show areas abutting car parks, loading areas and other entries way to comply. Landscaping plans to be conditioned to comply.	Yes – Condition.
17. A minimum of 10% of the site area should be provided as landscaping. This may include shade trees and landscaping areas within car parks.	Landscaping has been currently calculated at 9.3%. The remainder of the future stages are able to accommodate the remaining 0.7%	Yes
18. Car parking areas are to include shade trees at a minimum rate of 1 tree per 6 car bays. Where shade structures are proposed over parking areas, the requisite number of trees may be provided on the periphery of, or adjacent to, the covered area.	Except for areas that are proposed to be covered by shade sails, the car parking areas are provided with a minimum of 1 tree per 6 bays.  Trees are provided to the periphery of the area.	Yes
<b>Potential Residential Precinct</b>		
19. The north-west corner of the site identified as a 'Potential Residential Precinct' may be developed for residential purposes where it can be demonstrated that the land is not necessary to satisfy the parking requirements for the Neighbourhood Centre	No development proposed	N/A
20. Should residential development be proposed within the 'Potential Residential Precinct' at a future stage, a separate LDP will be required in order to coordinate vehicle access and built form outcomes.	No development proposed	N/A

21. Separate LDP for the 'Potential Residential Precinct' shall consider and respond to potential sources of noise emanating from the Neighbourhood Centre. The LDP should be accompanied by an Acoustic Assessment prepared by a suitably qualified Acoustic Consultant that identifies potential sources of noise and outlines strategies to mitigate and manage the potential impact of noise on dwellings.	No development proposed	N/A
<b>Noise Management</b>		
22. A Development Application that includes a 'Loading Area' depicted on the LDP is to be accompanied by an Acoustic Assessment prepared by a suitably qualified Acoustic Consultant that outlines strategies to mitigate and manage the potential impacts of noise from delivery vehicles and activities on surrounding sensitive land uses.	An acoustic report has been provided with the details of the noise wall attached to the development plans. The acoustics have been considered to meet the requirements of the Regulations	Yes
23. The screen wall is to be articulated and finished in materials and colours that match the overall development and seek to minimise the potential impact of bulk and form on the streetscape.	The applicant has provided details for the screen wall to be screened with additional vegetation to the adjoining future dwellings on the site.	Yes
<b>NOTES</b>		
<ul style="list-style-type: none"> <li>The LDP depicts indicative building and intersection locations only for the purpose of spatial planning. The building and intersection locations are subject to more detailed design which will be refined as part of the Development Application but shall be generally consistent with the LDP.</li> <li>The car park designs and locations depicted on the LDP are indicative only for the purpose of spatial site planning. The exact configuration and location of car parks is to be refined as part of the Development Application but shall be generally consistent with the LDP</li> <li>The indicative 'Main Street Cross Section' depicted on the LDP has been prepared for illustrative purposes only and is subject to refinement at the Development Application stage. Widths and dimensions may vary from those shown on the indicative cross section as part of the detailed design process.</li> <li>Building truncations that maintain appropriate visual sightlines at the corners of intersections are to be demonstrated at the Development Application stage.</li> <li>The location and number of on-street parking bays is indicative only and subject to more detailed design at the Development Application stage.</li> <li>The location and alignment of pedestrian crossings are indicative only and subject to change at the detailed Development Application stage.</li> </ul>		



- Stormwater management on the site is to be in accordance with the approved addendum to the Parkland Heights Local Water Management Strategy dated 22 February 2018 in accordance with WSUD principles.
- Design details for intersection treatments are to be provided at the development application stage.
- Landscape drawings submitted with development applications are to include details of landscaping within verge areas.
- Trees along the perimeter of the site as depicted on the LDP are to be planted at a rate of one tree every 10 metres where vehicle access, parking and sightlines permit.

The Baldivis Town Centre was previously considered by the JDAP in 2014, whilst the SPP4.2 rates were not applied, the JDAP considered a 20% variation to the car parking requirements of 1,771 bays to an approved rate of 1,381 bays. The variation was considered on the same principles of SPP4.2 in relation that reciprocity of uses were considered.

The SPP4.2 rates were used in the assessment of the application and are considered to be reasonable given that they allow for reciprocity of uses for large scale Activity Centres.

*Clause 4.6.5 - Landscaping*

Within any development in the 'Commercial' zone, a minimum of ten percent (10%) of the total site area shall be provided as landscaping. The Applicant has provided a landscape Intent that demonstrates that this can be achieved.

**g. Risk**

**All Council decisions are subject to risk assessment according to the City's Risk Framework.**

Implications and comment will only be provided for the following assessed risks.

*Customer Service / Project management / Environment: High and Extreme Risks*

*Finance / Personal Health and Safety: Medium, High and Extreme Risks*

Nil

### Comments

The proposed 'Parkland Heights' Neighbourhood Centre has undergone a thorough assessment in line with the relevant TPS2, LDP and Policy framework. While the development generally complies with the planning requirements for matters such as land use, landscaping and design, there are some areas of non-compliance that require consideration. Specifically, the façade heights of some the Main Street buildings, the proposed interim parking bays and a parking ratio below the TPS2 requirements (but consistent with SPP4.2).

The application's parking provision has been assessed against the requirements of SPP4.2, and although there is a significant shortfall of 103 bays under TPS2 calculations, it is considered acceptable given compliance with SPP4.2 requirements. The City is satisfied that the provided car parking will be adequate for normal retail operating condition for the Neighbourhood Centre. Façade heights of the proposed Food and Beverage building do not meet the minimum required by the LDP, and departure from the LDP is not considered suitable. Proposed interim parking bays on future building 'pad sites' of the Main Street provide no certainty that the future sites will be developed.

It is recommended that the application is approved, subject to conditions which address the façade height and interim parking matter amongst other standard requirements.

### Voting Requirements

Simple Majority

### Officer Recommendation

That Council **ADOPTS** the Responsible Authority Report for the application for the proposed Neighbourhood Shopping Centre at Lot 9014 Sixty Eight Road, Baldivis, contained as Attachment 1 as the report required to be submitted to the presiding member of the Metro Outer Joint Development Assessment Panel (MOJDAP) pursuant to Regulation 12 of the *Planning and Development (Development Assessment Panels) Regulation 2011*.

### Committee Recommendation

That Council **ADOPTS** the Responsible Authority Report for the application for the proposed Neighbourhood Shopping Centre at Lot 9014 Sixty Eight Road, Baldivis, contained as Attachment 1 as the report required to be submitted to the presiding member of the Metro Outer Joint Development Assessment Panel (MOJDAP) pursuant to Regulation 12 of the *Planning and Development (Development Assessment Panels) Regulation 2011*.

Committee Voting (Carried) - 6/0

### The Committee's Reason for Varying the Officer's Recommendation

Not Applicable

### Implications of the Changes to the Officer's Recommendation

Not Applicable

### Council Resolution

That Council **ADOPTS** the Responsible Authority Report for the application for the proposed Neighbourhood Shopping Centre at Lot 9014 Sixty Eight Road, Baldivis, contained as Attachment 1 as the report required to be submitted to the presiding member of the Metro Outer Joint Development Assessment Panel (MOJDAP) pursuant to Regulation 12 of the *Planning and Development (Development Assessment Panels) Regulation 2011*, which recommends:

That the Metro Outer Joint Development Assessment Panel resolves to:

**Approve** DAP Application reference DAP/22/02387 and the accompanying plans received on 5 December 2023 and Amended Plans received on 20 February 2023:

- Overall Site Plan - Drawing No. SD100, Dated 20/02/2023;
- Ground Floor Plan Part 1 - Drawing No. SD200, Dated 17/02/2023 ;
- Ground Floor Plan Part 2 - Drawing No. SD201, Dated 17/02/2023;
- Ground Floor Plan Part 3 - Drawing No. SD202, Dated 17/02/2023;
- North Site Elevations - Furnivall Parade - Drawing No. SD400, Dated 07/10/2022;
- East Site Elevations - Nairn Drive - Drawing No. SD401, Dated 07/10/2022;
- South Site Elevations - Arpentuer Drive - Drawing No. SD402, Dated 07/10/2022;
- West Site Elevations - Arpentuer Drive - Drawing No. SD404, Dated 07/10/2022;
- Section A Elevations - Drawing No. SD500, Dated 07/10/2022;
- Section B Elevations - Drawing No. SD501, Dated 07/10/2022;
- Section C Elevations - Drawing No. SD503, Dated 07/10/2022;
- Section D Elevations - Drawing No. SD504, Dated 07/10/2022;

In accordance with Clause 68 of the Planning and Development (Local Planning Schemes) Regulations 2015 subject to the following conditions as follows:

#### Conditions

1. Pursuant to clause 26 of the Metropolitan Region Scheme, this approval is deemed to be an approval under clause 24(1) of the Metropolitan Region Scheme.
2. This decision constitutes planning approval only and is valid for a period of 4 years from the date of approval. If the subject development is not substantially commenced within the specified period, the approval shall lapse and be of no further effect.
3. This Approval does not authorise or approve the use of the Service Station, Speciality Retail and two (2) Fast Food tenancies located on the eastern side of the subject lot. A separate Development Approval must be obtained for the development of any tenancy.
4. Prior to applying for a Building Permit, amended plans are to be approved by the City of Rockingham which include the following:
  - (i) The 'Food and Beverage' building Main Street façade height shall be amended from 5.1m to 5.5m;
  - (ii) The 'Interim Parking' bays must be removed and vacant building envelopes placed and landscaped to the satisfaction of the City of Rockingham.
5. Prior to applying for a Building Permit, a Construction Management Plan (CMP) is to be submitted to and approved by the City of Rockingham addressing but not limited to:



- (i) Hours of construction;
  - (ii) Temporary Fencing;
  - (iii) Traffic Management including a Traffic Management Plan addressing site access, egress and parking arrangement for staff and contractors;
  - (iv) Management of vibration and dust; and
  - (v) Management of construction noise and other site generated noise.
6. Prior to applying for a Building Permit, a Stormwater Management Plan must be prepared by a suitably qualified engineering showing how stormwater will be contained on-site and those plans must be submitted to the City of Rockingham for its approval. All stormwater generated by the development must be managed in accordance with Planning Policy 3.4.3 - Urban Water Management to the satisfaction of the City of Rockingham. The approved plans must be implemented and all works must be maintained for the duration of the development.
7. Prior to applying for a Building Permit, the Applicant must submit full detailed civil engineering drawings showing the various footpaths, crossovers and car parking embayment to be adopted across the entire development site and adjoining road reserves, for review and approval by the City of Rockingham. Construction works in accordance with approved civil drawings are to be completed prior to occupation of the development, at the landowner's cost to the satisfaction of the City of Rockingham.
8. Prior to applying for a Building Permit, a Sign Strategy must be prepared (which must include the information required by Planning Policy 3.3.1, Control of Advertisements) to the satisfaction of the City of Rockingham and it must thereafter be implemented for the duration of the development.
9. Prior to applying for a Building Permit, a Landscaping Plan must be prepared and include the following detail to the satisfaction of the City of Rockingham:-
- The Location, number and type of proposed trees and shrubs (including street trees, shade trees within the car parking areas, and planting within the Special Landscape Area), indicating calculations for the landscaping area;
- (i) Any lawns to be established and areas to be mulched;
  - (ii) Those areas to be reticulated or irrigated;
  - (iii) The paving material used for the footpaths must be carried across driveways to the car parking areas in order to maintain visual continuity of the pedestrian network and aid pedestrian legibility;
  - (iv) Detailed landscape, irrigation, lighting, playground, street furniture plans; and
  - (v) All Verge areas.
10. Prior to occupation of the development, the car parking areas must:
- (i) Four Hundred and Seventy Seven (477) car parking bays are to be designed, constructed, sealed, kerbed, drained and marked in accordance with User Class 3 of Australian/New Zealand Standard AS/NZS 2890.1:2004, Parking facilities, Part 1: Off-street car parking unless otherwise specified by this approval;
  - (ii) Provide Ten (10) car parking spaces dedicated to people with disabilities, which are designed, constructed, sealed, kerbed, drained and marked in accordance with Australian/New Zealand Standard AS/NZS 2890.6:2009, Parking facilities, Part 6: Off-street parking for people with disabilities and which are linked to the main entrance of the development by a continuous accessible path of travel designed and constructed in accordance with Australian Standard AS 1428.1—2009, Design for access and mobility, Part 1: General Requirements for access—New building work;
  - (iii) be constructed, sealed, kerbed, drained and marked prior to the development being occupied and maintained thereafter; and
  - (iv) Comply with the above requirements for the duration of the development.

11. The recommendations in the Environmental Noise Report (ENR) prepared by Gabriels Hearne Farrell (revision 3) dated 8th February 2023 shall be implemented in the design, construction and ongoing operation of the development at all times to the satisfaction of the City of Rockingham including but not limited to the following requirements:
  - (i) Deliveries to only occur between 7am and 7pm week days and 9am and 5am on Sundays and Public Holidays.
  - (ii) Trucks are not allowed to idle within the loading bay and as part of best practise are required to switch all vehicles off during loading and unloading periods.
  - (iii) Acoustic screening is required around the Service/Loading Dock area, is to be constructed as follows:
    - (a) The screening shall be 3.5m taller than the ground level of the service area; and
    - (b) The screening shall be constructed of materials without gaps or slots, with a minimum surface density of 10 kg/m<sup>2</sup> (e.g. 6mm glass, 12mm Perspex, 6mm fibre-cement, single leaf of masonry, etc.).
  - (iv) Acoustic screening will also be required on the southern, western and northern side of the air-conditioning and refrigeration equipment located on the roof top of the supermarket to the specifications required within the report.
  - (v) A revised Noise Assessment is to be provided to the City of Rockingham within 30 days of the occupation of the development in order to determine compliance with the *Environmental (Noise) Regulations 199*.
12. The recommendations in the Waste Management Plan (WMP) prepared by Talis Consultants dated 7 November 2022 shall be implemented in the design, construction and ongoing operation of the development at all times to the satisfaction of the City of Rockingham including but not limited to the following requirements:
  - (i) A private waste collection company will collect refuse and recyclable waste once a week from the 2 allocated Bin Storage areas;
  - (ii) Waste vehicles (rear loaded) to obtain access from the loading dock area and circulate to the southern exit on Arpentuer Drive; and
  - (iii) Waste collection to occur within acceptable Noise Regulation parameters.
13. Prior to the occupation of the development, any damage to existing City infrastructure within the road reservation including kerb, road pavement, turf, irrigation, bollards and footpaths is to be repaired to the satisfaction of the City of Rockingham at the cost of the Applicant.
14. Prior to the occupation of the development, a final illumination report must be prepared which demonstrates to the satisfaction of the City of Rockingham, that the completed development complies with the requirements of Australian Standard AS 4282—2019, Control of the obtrusive effects of outdoor lighting and .
15. Prior to the occupation of the development and in accordance with City of Rockingham Planning Policy 3.3.14 - Bicycle parking and End of Trip Facilities, at least two showers (1 male, 1 female), change rooms and clothing lockers must be provided for the development which must be designed in accordance with that Policy and approved by the City of Rockingham. The showers, change rooms and lockers must be retained and maintained in good and safe condition for the duration of the development.
16. Prior to the occupation of the development, thirteen (13) long-term and twenty nine (29) short-term bicycle parking spaces must be designed in accordance with AS2890.3-1993, *Parking facilities, Part 3: Bicycle parking facilities*, and located within the development to the satisfaction of the City of Rockingham.
17. Prior to the occupation of the development, In accordance with Planning Policy 3.3.25 *Percent for Public Art – Private Developer Contribution*, the developer shall make a contribution to the City of Rockingham equal to 1% of the total construction value for the provision of public art, being \$140,000 in value.

18. Earthworks over the site associated with the development must be stabilised to prevent sand or dust blowing off the site, and appropriate measures shall be implemented within the time and in the manner directed by the City of Rockingham in the event that sand or dust is blown from the site.
19. All plant and roof equipment and other external fixtures must be designed to be located away from public view/or screened for the life of the development to the satisfaction of the City of Rockingham.

Advice Notes:

1. The disposal of wastewater into the Water Corporation's sewerage system must be with approval of the Water Corporation; the Applicant and owner should liaise with the Water Corporation in this regard.
2. The development must comply with the Food Act 2008, the Food Safety Standards and Chapter 3 of the Australian New Zealand Food Standards Code (Australia Only); the Applicant and owner should liaise with the City's Health Services in this regard.
3. A Building Permit must be obtained for the proposed works prior to commencement of site works. The Applicant and owner should liaise with the City's Building Services in this regard.
4. The development must comply with the Environmental Protection (Noise) Regulations 1997; contact the City's Health Services for information on confirming requirements.
5. All works in the road reserve, including construction of a crossover, planting of street trees, and other streetscape works and works to the road carriageway must be to the specifications of the City of Rockingham; the Applicant should liaise with the City of Rockingham's Engineering Services in this regard.
6. In regards to Condition 5, dust management is to be in accordance with the Department of Environment and Conservation Guideline: A guideline for managing the impacts of dust and associated contaminants from land development sites, contaminated sites remediation and other related activities.
7. All future development is to comply with the Liquor Control Act 1988, all relevant approvals, licences are to be sought prior to the occupation of the development in conjunction with the Department of Racing, Gaming and Liquor.
8. All playground installations must be installed and maintained in accordance with all relevant Australian Standards AS 4685:2014 1-6, 11 and all relevant amendments including additional criteria outlined in the following:
  - (i) AS 4685.0:2017 Playground equipment and surfacing Part 0: Development, installation, inspection, maintenance and operation; and
  - (ii) AS/NZS 4422:1996 - Playground Surfacing - Specifications, Requirements & Test Methods; Suitable impact absorbing surfacing, termed soft-fall must be installed, wherever falls from fixed or portable playground equipment is possible.
9. Where a development approval has so lapsed, no development shall be carried out without further approval having first been sought and obtained, unless the Applicant has applied and obtained Development Assessment Panel approval to extend the approval term under regulation 17(1)(a) of the *Planning and Development (Development Assessment Panels) Regulations 2011*.

**Carried en bloc**

<b>The Council's Reason for Varying the Committee's Recommendation</b>
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Not Applicable