Government of **Western Australia**
Development Assessment Panels

Metro North-West Joint Development Assessment Panel Agenda

Meeting Date and Time: Wednesday 29 August 2012, 2:00pm
Meeting Number: 14
Meeting Venue: City of Joondalup
Conference Room 1
90 Boas Avenue
Joondalup

Attendance

DAP Members

Ms Karen Hyde (Presiding Member)
Mr Rory O'Brien (Alternate Deputy Presiding Member)
Mr Terence Tyzack (Alternate Specialist Member)
Cr Mike Norman (Local Government member, City of Joondalup)
Cr Christine Hamilton-Prime (Local Government member, City of Joondalup)

Officers in attendance

Mr Stephen Ferguson (Department of Planning)
Ms Dale Page (City of Joondalup)
Ms Melinda Bell (City of Joondalup)
Ms Christine Mahncke (City of Joondalup)
Ms Deborah Gouges (City of Joondalup)
Mr John Byrne (City of Joondalup)
Mr Jamie Parry (City of Joondalup)
Mr Paul Lampropoulos (Arise Developments – Item 8.1)
Mr Adam Lisle (Arise Developments – Item 8.1)
Mr Matthew Toohey (Bunnings – Item 8.1)
Mr David Caddy (TPG – Item 8.1)
Mr Chris Harman (TPG – Item 8.1)
Mr Behnam Bordbar (Transcore – Item 8.1)
Mr Geoff Loxton (Property Development Solutions – Item 8.1)
Mr Paul McQueen (Lavan Legal – Item 8.1)
Mr Jonathan Riley (Riley Consulting – Item 8.1)
Mr Sean Fairfoul (Greg Rowe & Associates – Item 10.1)
Mr John Young (Masters – Item 10.1)
Mr Robert Hain (Masters – Item 10.1)

Local Government Minute Secretary

Mr Brad Sillence (City of Joondalup)

1. Declaration of Opening

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

2. Apologies

Cr Liam Gobbert (City of Joondalup)

3. Members on Leave of Absence

Mr Paul Drechsler (Deputy Presiding Member)
Mr Fred Zuideveld (Specialist Member)

4. Noting of Minutes

Note the minutes of the Metro North-West Meeting no.13 held on the 13 August 2012.

5. Disclosure of Interests

Nil

6. 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.

7. Deputations and Presentations

7.1 Mr Paul McQueen (Lavan Legal) will outline the benefits of Arise Developments proposed development and raise their concern in relation to the proposed access arrangements for Lot 806 and Lot 807.

7.2 The presentation by Mr Sean Fairfoul (Greg Rowe & Associates), Mr John Young (Masters) and Mr Tony Shaw (Shawmac) has been deferred to Item 10.1.

8. Form 1 - Responsible Authority Reports – DAP Application

8.1

Application Details:	Proposed Hardware Store, Showrooms, Offices and Take Away Food Outlets
Property Location:	Lot 807 (No. 16) Honeybush Drive, Joondalup
Applicant:	Arise Developments
Owner:	Landcorp
Responsible authority:	City of Joondalup
Report date:	29 August 2012
DoP File No:	DP/12/00582

9. Form 2 – Responsible Authority Reports - Amending or cancelling DAP development approval

Nil

10. Appeals to the State Administrative Tribunal

10.1 Mr Sean Fairfoul (Greg Rowe & Associates), Mr John Young (Masters) and Mr Tony Shaw (Shawmac) presenting for application 10.2 addressing Site Layout and Built Form, Traffic and Access considerations.

10.2

Application Details:	Proposed Hardware Store and Showrooms
Property Location:	Lot 806 (No.11) Injune Way, Joondalup
Applicant:	Greg Rowe and Associates
Owner:	Landcorp
Responsible authority:	City of Joondalup
Report date:	20 August 2012
DoP File No:	DP/12/00506

11. Meeting Closure

Government of **Western Australia**
Development Assessment Panels

Minutes of the Metro North-West Joint Development Assessment Panel

Meeting Date and Time: Monday, 13 August 2012, 2.00pm
Meeting Number: 13
Meeting Venue: City of Wanneroo
Leschenaultia Room
23 Dundebar Road
Wanneroo

Attendance

DAP Members

Mr Paul Drechsler	(A/ Presiding Member)
Mr Fred Zuideveld	(Specialist Member)
Cr Laura Gray	(Local Government Member – City of Wanneroo)
Cr Frank Cvitan	(Alternative Local Government Member – City of Wanneroo)

Officers in attendance

Mr Pas Bracone	(Manager Planning Implementation, City of Wanneroo)
Mr John Corbellini	(Coordinator Planning Implementation, City of Wanneroo)
Mr Jeremy Thompson	(Senior Projects Planner, City of Wanneroo)
Mr Ben Hesketh	(Planning Officer, City of Wanneroo)
Mr Craig Shepherd	(Department of Planning)

Local Government Minute Secretary

Ms Tonya De Villiers	(City of Wanneroo)

Applicant(s), Submitters and Members of the Public

Mr Dan Lees	(TPG, Town Planning, Urban Design & Heritage)
Mr Ryan Beelitz	(Building Management and Works)
Ms Sandra Krupa	(Building Management and Works)

1. Declaration of Opening

The A/Presiding Member, Mr Paul Drechsler declared the meeting open at 2.00pm on Monday, 13 August 2012.

The A/Presiding Member acknowledged the past and present traditional owners and custodians of the land on which the meeting is being held.

The A/Presiding Member advised that the meeting is being run in accordance with the Section 5.14 of the Standing Orders 2011; 'No Recordings of Meeting', which states: "A person must not use any electronic, visual or audio recording device or instrument to record the proceeding of a the DAP meeting unless the presiding member has given permission to do so". The Presiding Member stated that he gave permission for the minute taker to record proceedings of the meeting for the purpose of preparing the minutes only.

Mr Paul Drechsler
A/Presiding Member, Metro North-West JDAP

2. Apologies

Ms Karen Hyde (Presiding Member)
Mayor Tracey Roberts (City of Wanneroo Local Government Member)

3. Members on Leave of Absence

Nil

4. Noting of Minutes

Minutes of the Metro North-West Joint Development Assessment Panel (JDAP) Meeting No. 12 (State Administrative Tribunal Reconsideration) held in confidence on 2 August 2012 were noted by the JDAP members.

5. Disclosure of Interests

The A/Presiding Member advised that Presiding Member, Ms Karen Hyde, who was not present at the meeting, had declared an impartiality interest in Item 8.1.

6. Declarations of Due Consideration

All members confirmed they had given due consideration in accordance with Standing Order 4.5.

7. Deputations and Presentations

Nil

8. Responsible Authority Reports

Application Details:	Construction of a New Primary School
Property Location:	Lot 445 (No. 35) Beachside Parade, Yanchep
Applicant:	Oldfield Knott Architects Pty Ltd
Owner:	Minister for Education
Responsible authority:	Department of Finance (Building Management & Works)
Report date:	25 July 2012
DoP File No:	DP/12/00632

RECOMMENDATION / PRIMARY MOTION:

Moved: Cr Frank Cvitan **Seconded:** Cr Laura Gray

That the Metropolitan North-West Joint Development Assessment Panel resolves to:

Approve DAP Application reference DP/12/00632 and accompanying plans for the new Primary School in accordance with the 'North Yanchep Primary School' drawings prepared by Oldfield Knott Architects, being Drawing No. A1.01E, titled 'Site Plan – New Work', Drawing No. A2.02A, titled 'Administration Block Floor Plan & Elevations', Drawing No. A2.02A, titled 'Administration Block Roof Plan, Ceiling Plan & Sections', Drawing No. A3.01A, titled 'Library Block Floor Plan', Drawing No. A3.02A, titled 'Library Block Elevations & Sections', Drawing No. A.01B, titled 'Teaching Block 1 Floor Plan', Drawing No. A4.03A, titled 'Teaching Block 1 Elevations', Drawing No. A4.03A, titled 'Teaching Block 1 Elevations', Drawing No. A4.04A, titled 'Teach Block 1 Sections', Drawing No. A5.01A, titled 'Teaching Block 2 Floor Plan', Drawing No.

A5.02A, titled 'Teaching Block 2 Elevations', Drawing No. A5.03A, titled 'Teaching Block 2 Sections', Drawing No. A6.01A, titled 'Teaching Block 3 Floor Plan', Drawing No. A6.02A, titled 'Teaching Block 3 Elevations & Sections', Drawing No. A7.01A, titled 'Teaching Block 4 Floor Plan', Drawing No. A7.02, titled 'Teaching Block 4 Elevations', Drawing No. A7.03A, titled 'Teaching Block 4 Sections', Drawing No. A8.01B, titled 'Covered Assembly Block Floor Plan', Drawing No. A8.02B, titled 'Covered Assembly Block Elevations & Sections', all stamped 'TPG Received 13 June 2012', the 'North Yanchep Primary School Landscape Schematic Plan' prepared by EPCAD and the standard plans prepared by Spowers and SKM titled 'Architectural; Transportable Classrooms 2002; Floor Plan, Elevations, Section', Drawing No. A.011 and 'Full Time Pre-Primary Programme 2003; Transportable Units; Floor Plan, Elevations & Section', Drawing No. PPU.11, in accordance with the provisions of the Metropolitan Region Scheme under delegation instrument DEL 2009/02 Powers of Officers (Department of Finance), subject to the following conditions:

a) All stormwater produced is to be disposed of on-site to the specification of the City of Wanneroo and the satisfaction of the Western Australian Planning Commission.

b) Prior to the occupation of the proposed development, the Department of Education shall ensure that all footpaths on the adjoining verges of the proposed development site are provided in a manner that is to the specification of the City of Wanneroo and the satisfaction of the Western Australian Planning Commission.

c) All proposed crossovers, on-street car parking bays and works within the road reserve shall be to the specification of the City of Wanneroo and the satisfaction of the Western Australian Planning Commission.

d) All car parking and associated vehicle access areas shown on the approved plans shall be constructed, drained and marked prior to the occupation of the proposed development and thereafter maintained, to the specification of the City of Wanneroo and the satisfaction of the Western Australian Planning Commission.

e) The car parking and associated vehicle access areas shown on the approved plans shall be available for vehicles and shall not be used for the purpose of storage or obstructed in any way.

f) Parking areas are to be provided with one shade tree for every four (4) bays prior to the occupation of the proposed development and thereafter maintained, to the specification of the City of Wanneroo and the satisfaction of the Western Australian Planning Commission.

g) Detailed landscaping plans for the proposed development site (incorporating vegetation species and sizes, pavement areas and reticulation details) shall be prepared to the specification of the City of Wanneroo and the satisfaction of the Western Australian Planning Commission.

h) Landscaping as specified in the approved landscape plans referred to in Condition g shall be planted prior to the occupation of the proposed development and thereafter maintained to the satisfaction of the Western Australian Planning Commission.

i) A signage plan indicating the location and design of any proposed signage (including traffic directional signage) is to be prepared to the specification of the City of Wanneroo and the satisfaction of the Western Australian Planning Commission.

j) All piped and wired services, mechanical plant, equipment and storage areas are to be screened from public view to the satisfaction of the Western Australian Planning Commission.

k) A suitably screened bulk bin area is to be provided prior the occupation of the proposed development and designed to the specification of City of Wanneroo and the satisfaction of the Western Australian Planning Commission.

l) All site works shall be contained on the proposed development site and not encroach onto any adjoining road reserve or public open space without prior approval from the City of Wanneroo.

m) Any damage or removal of a City of Wanneroo asset within the road reserve or adjacent open space to the east shall be remedied at the cost of the Department of Education.

n) Retaining walls are to be provided where the angle of natural repose of the soil cannot be maintained, to the specification of the City of Wanneroo and the satisfaction of the Western Australian Planning Commission.

o) A Dust Management Plan to be prepared to the specification of the City of Wanneroo and the satisfaction of the Western Australian Planning Commission prior to the commencement of site works. Once approved, the Dust Management plan is to be implemented in its entirety.

p) The proposed location and configuration of on-street parking bays being redesigned so as to avoid any impacts on existing verge infrastructure.

q) All proposed one-way crossovers shall be modified to a maximum width of 3.0 metres and appropriately marked and signed to the specification of the City of Wanneroo and the satisfaction of the Western Australian Planning Commission.

r) The development site should be connected to the reticulated sewerage system of the Water Corporation before commencement of any use where possible. Where reticulated sewerage is not available the development should be connected to an approved effluent disposal system to the specification of the City of Wanneroo and the satisfaction of the Western Australian Planning Commission.

ADVICE NOTES

s) All development must comply with the provisions of the Health Regulations, Building Code of Australia, Public Building Regulations and all other relevant Acts, Regulations and Local Laws. This includes the provision of access and facilities for people with disabilities in accordance with the Building Codes of Australia.

t) The applicant is reminded of its obligations under the Building Act 2011.

u) With regard to Condition d, the car parking bays, driveways and points of ingress and egress are to designed in accordance with the requirements of Australian Standards for Offstreet car parking (AS 2890).

v) Car parking areas are to be provided with appropriate speed humps and pedestrian crossings in accordance with AS 2890.1: 2004 (Section 2.3.3) and AustRoads Guidelines.

w) Disabled car parking bays are to be provided in accordance with the National Construction Code and designed in accordance with the relevant AS 2890.6 – 2009.

x) Further information pertaining to Condition p and q can be obtained from Raktim Barua of the City's Land Development Service Unit on 9405 5448.

y) With regard to Condition k, suitably screened bulk bin area is to be provided prior to the development first being occupied and designed in accordance with the City's standards. This includes a concrete floor graded to a 100mm industrial floor waste gully connected to sewer, provision of a hose cock, screen walls and gates. No storage of bins, crates, pallets and other similar items shall be carried out except within the approved bin storage area. The bin storage area should be provided in accordance with the City's Health Local Law 1999.

z) With regard to Condition c, all proposed crossovers are to be constructed in concrete to the City's commercial specifications.

aa) With regard to Condition a, an on-site stormwater drainage system with the capacity to contain a 1:100 year storm event of 24 hours duration is to be provided prior to the development first being occupied and thereafter maintained.

The motion was put and CARRIED UNANIMOUSLY.

9. Amending or cancelling DAP Development Approval

Nil

10. Appeals

Nil

11. General Business

Nil

12. Meeting Close

There being no further business, the A/Presiding Member declared the Meeting closed at 2.07pm.

Mr Paul Drechsler
A/Presiding Member, Metro North-West JDAP

Government of **Western Australia**
Development Assessment Panels

Form 1 - Responsible Authority Report

(Regulation 12)

Application Details:	PROPOSED HARDWARE STORE, SHOWROOMS, OFFICES AND TAKE AWAY FOOD OUTLETS
Property Location:	Lot 807 (16) HONEYBUSH DRIVE, JOONDALUP
DAP Name:	Metro North-West JDAP
Applicant:	Arise Developments
Owner:	Landcorp
LG Reference:	DA12/0568
Responsible Authority:	City of Joondalup
Authorising Officer:	Dale Page Director Planning and Community Development
Application No and File No:	DP 12/00582
Report Date:	29 August 2012
Application Receipt Date:	22 May 2012
Application Process Days:	79 working days
Attachment(s):	1. Location Plan 2. Development Plans and Building Perspectives 3. Traffic Report 4. City of Joondalup Environmentally Sustainable Design Checklist 5. Department of Planning Traffic Comments

Recommendation:

That the Metro North West JDAP resolves to:

Approve DAP Application reference DP 12/00582 and accompanying plans (refer Attachment 2) in accordance with Clause 6.9 of the City of Joondalup District Planning Scheme No. 2, subject to the following conditions:

Conditions

1. **This decision constitutes planning approval only and is valid for a period of two (2) years from the date of this decision letter. If the subject development is not substantially commenced within the two (2) year period, the approval shall lapse and be of no further effect.**

2. **A Construction Management Plan being submitted and approved prior to the commencement of construction. The management plan shall detail how it is proposed to manage:**

    - **all forward works for the site;**
    - **the delivery of materials and equipment to the site;**
    - **the storage of materials and equipment on the site;**

- **the parking arrangements for the contractors and subcontractors;**
- **the management of dust during the construction process;**
- **other matters likely to impact on the surrounding properties;**

3. **A Refuse Management Plan indicating the method of rubbish collection is to be submitted to and approved by the City, prior to the commencement of construction.**

4. **Detailed landscaping plans shall be submitted to the City for approval prior to the commencement of construction. These landscaping plans are to indicate the proposed landscaping treatment(s) of the subject site and the adjoining road verge(s), and shall:**

   - **Be drawn at an appropriate scale of either 1:100, 1:200 or 1:500;**
   - **Provide all details relating to paving, treatment of verges and tree planting in the car park;**
   - **Show spot levels and/or contours of the site;**
   - **Indicate any natural vegetation to be retained and the proposed manner in which this will be managed;**
   - **Be based on water sensitive urban design principles to the satisfaction of the City;**
   - **Be based on Designing out Crime principles to the satisfaction of the City; and**
   - **Show all irrigation design details.**

5. **Landscaping and reticulation shall be established in accordance with the approved landscaping plans, Australian Standards and best trade practice prior to the development first being occupied and thereafter maintained to the satisfaction of the City.**

6. **The car parking shade trees as indicated on the approved plans shall be installed prior to the development first being occupied. The trees shall be located within tree wells and protected from damage by vehicles and maintained to the satisfaction of the City;**

7. **Any proposed external building plant, including air conditioning units, piping, ducting and water tanks, being located so as to minimise any visual and noise impact on surrounding landowners, and screened from view from the street, and where practicable from adjoining buildings, with details of the location of such plant being submitted for approval by the City prior to the commencement of construction;**

8. **An onsite stormwater drainage system, with the capacity to contain a 1:100 year storm of 24-hour duration, is to be provided prior to the development first being occupied, and thereafter maintained to the satisfaction of the City. The proposed stormwater drainage system is required to be shown on the Building Permit submission and be approved by the City prior to the commencement of construction;**

9. **The car parking bays, driveways and access points shown on the approved plans are to be designed, constructed, drained and marked in**

accordance with the Australian Standard for Off-street Car Parking (AS/NZS2890.1 2004), Off-street Parking for People with Disabilities (AS/NZS2890.6 2009) and Off-street Commercial Vehicle Facilities (AS2890.2:2002), prior to the occupation of the development. These bays are to be thereafter maintained to the satisfaction of the City.

10. **Bicycle parking facilities shall be provided in accordance with the Australian Standard for Off-street Car parking – Bicycles (AS2890.3-1993) prior to the development first being occupied. Details of bicycle parking area(s) shall be provided to, and approved by the City prior to the commencement of construction.**

11. **The retaining walls shall be treated with non-sacrificial anti-graffiti coating;**

12. **No obscure or reflective glazing is permitted to ground floor facades.**

13. **All signage shall be the subject of a separate Development Application;**

14. **All awnings shall have a minimum clearance of 2.75 metres above the level of the footpath;**

15. **Both crossovers onto Sundew Rise (to the at-grade and undercroft carparks) shall be restricted to left in and left out movements only. Detailed engineering drawings demonstrating how this will be achieved are to be submitted to the City for its approval prior to the commencement of construction.**

16. **Should the site be subdivided, a suitable easement shall be put in place between the landowners and the City of Joondalup to ensure reciprocal rights of parking and access between the new lots, at all times. This easement shall be registered on the certificate(s) of title prior to the occupation of the development or subdivision clearance being obtained.**

17. **The entry/exit arrangement for large vehicle movements on Honeybush Drive shall be reversed so as to remove the need for these vehicles to cross Honeybush Drive to access the roundabout. Details of this arrangement, including plans shall be submitted to the City for approval prior to the commencement of construction.**

<u>Advice Notes</u>

1. **Further to condition 1, where an approval has so lapsed, no development shall be carried out without the further approval of the City having first being sought and obtained.**

2. **The applicant/builder is advised that there is an obligation to design and construct the premises in compliance with the requirements of the *Environmental Protection Act 1986* and the *Environmental Protection (Noise) Regulations 1997*.**

3. **The applicant is advised that any proposed food premise will need to comply with the requirements of the *Food Act 2008* and the *Australia New Zealand Food Standards Code.* Prior to obtaining building**

certification for kitchen fit outs, applicant is encouraged to obtain feedback by contacting the City's Health Services on 9400 4933.

4. **All Bin Storage Areas are to be designed and equipped to the satisfaction of the City. Each bin area shall be provided with a hose cock and have a concrete floor graded to a 100mm industrial floor waste gully connected to sewer.**

5. **The development shall comply with the *Sewerage (Lighting, Ventilation and Construction) Regulations 1971* including all internal W.C.'s shall be provided with mechanical exhaust ventilation and flumed to the external air.**

6. **Any mechanical ventilation for the development shall comply with *Australian Standard 1668.2, Australian Standard 3666* and the *Health (Air Handling and Water Systems) Regulations 1994.***

Background:

Insert Property Address:	Lot 807 (16) Honeybush Drive, Joondalup
Insert Zoning MRS:	Central City Area
TPS:	Centre
Insert Use Class:	Hardware Store – 'P' use Showroom – 'P' use Office – 'P' use Take Away Food Outlet – 'D' use
Insert Strategy Policy:	N/A
Insert Development Scheme:	City of Joondalup District Planning Scheme No.2 Joondalup City Centre Development Plan and Manual (JCCDPM) Draft Joondalup City Centre Structure Plan (JCCSP)
Insert Lot Size:	5.41 hectares
Insert Existing Land Use:	Vacant
Value of Development:	$ 23, 854, 800.00

The subject site is located at the southern end of the City's Southern Business District, or the area commonly known as the "Quadrangle." It is bounded by Sundew Rise to the north, Joondalup Drive to the east, Eddystone Avenue to the south and Honeybush Drive to the west (Attachment 1 refers). The site is currently vacant.

The site is zoned Central City Area under the Metropolitan Region Scheme (MRS), and Centre under the City's District Planning Scheme No.2 (DPS2). The site is subject to the Southern Business District, Bulk Retail/Showroom provisions of the JCCDPM. In addition, as the draft Joondalup City Centre Structure Plan (JCCSP) is a "seriously entertained planning proposal", the Business Support provisions of that document also apply to the proposed development.

The subject site has recently been created as part of a larger subdivision of the immediate area. An application for development on the adjoining lot to the north of this site is also subject of an application to the Development Assessment Panel

(DAP12/00506 refers) and due regard to that proposal has been given in an assessment of the subject proposal in relation to traffic safety and management within a larger context. Further information is provided in the planning assessment section of this report.

The City recently received a referral from the Department of Planning, regarding an application which seeks to subdivide the site into two lots. Should the subdivision be approved, building 4 will be located on proposed Lot 1 and buildings 1, 2 and 3 will be located on proposed Lot 2. Should the subdivision proceed, approximately 417 car bays will be located on Lot 1 and 376 bays on Lot 2.

Details: outline of development application

The applicant seeks approval for a development which incorporates four separate buildings for several different land uses, and associated car parking. Vehicular access points are provided from Sundew Rise and Honeybush Drive.

The application includes:

- A single storey showroom building to the north of the site adjacent to Sundew Rise;
- A single storey development to the north east of the site which is comprised of two buildings and will be used for the purposes of offices, take away food outlets and showrooms. These buildings have their main frontage to Joondalup Drive and are positioned around a piazza;
- A single storey building located to the south west of the site which incorporates undercroft car parking below and a hardware store above. To the north of this building is an external outdoor nursery and bagged goods area and to the south is a building materials and landscape yard;
- 793 car bays in total with 251 being incorporated within the undercroft car park of the hardware store; and
- A pylon sign located between the office, take away food outlet and showroom buildings to the north east of the site.

Legislation & policy:

Legislation

- Planning and Development Act 2005;
- Metropolitan Region Scheme; and
- City of Joondalup District Planning Scheme No.2.
    - Joondalup City Centre Development Plan and Manual; and
    - Draft Joondalup City Centre Structure Plan.

State Government Policies
Nil

Local Policies

- Environmentally Sustainable Buildings within the City of Joondalup

  Encouraging the integration of environmentally sustainable design principles rather than mandating them, the policy requires applicants to complete the City's Environmentally Sustainable Checklist demonstrating the inclusion of environmentally sustainable design elements in the proposal and indicating if

the development has been designed and assessed against a national recognised rating tool (Attachment 4 refers).

- Signs

  To protect the quality and amenity of streetscapes, minimise the visual impact of signs, encourage well designed and appropriately located signage and a level of signage to support business within the City of Joondalup.

Consultation:

Public Consultation
Public consultation was not undertaken in relation to this proposal as the proposed land uses are permitted and discretionary uses under the JCCDPM and due to the location of the site, the development is not considered to result in any significant adverse impact on the locality.

Consultation with other Agencies or Consultants
The proposed development was referred to the Department of Planning in accordance with the notice of delegations for comments in relation to the traffic impacts on the surrounding road network. This is due to the fact that the proposal is anticipated to increase the volume of vehicles utilising Joondalup Drive by more than 100 vehicle trips per hour at peak periods.

Comments provided from the Department of Planning are attached (Attachment 5 refers). Whilst the Department supports the proposal in principle, a concern has been raised regarding entry and exit movements for larger vehicles and the access to/from the undercroft access which is further detailed in the planning assessment section of this report.

Planning assessment:

Land use
The proposal is for the development of four separate buildings on the subject site, containing a hardware store, showroom, office and take away food outlet, and associated car parking and signage. The development has been assessed against the JCCDPM and the draft JCCSP. The land uses Hardware Store, Showroom and Office are permitted uses in the relevant zones and Take Away Food Outlet is a discretionary use under the JCCDPM and the draft JCCSP.

Whilst it is noted that the hardware store development incorporates a warehouse, trade sales, building materials and landscaping yard, bagged goods and outdoor nursery, it is recognised within DPS2 that those individual land uses fall cumulatively within the definition of Hardware store as defined within Schedule 1 as set out below:

Hardware Store: means a shop in which tools, building materials, paint, garden improvement products and plants are for sale.

For that reason above, the individual components have not been considered separately in the assessment of land uses and in the calculation of car parking.

In addition, whilst buildings 1, 2 and 3 are indicated as proposed Showroom/Warehouse, these developments have been assessed based on the

showroom use class and car parking standard. The reason for this is that the warehouses are not separate tenancies and will provide storage for goods associated with the showroom only. In addition, the warehouses will not be accessible to the public.

The DPS2 definitions of showroom and warehouse are provided below.

Showroom: means premises providing large floor space used for the displaying of goods and which may involve the sale by wholesale or retail, or hire of such goods, being goods generally of a bulky nature and without limiting the generality of the forgoing including automotive parts and accessories, camping equipment, electrical light fittings, equestrian supplies, floor coverings, furnishings, furniture, household appliances, party supplies and second hand goods. The term does not include the sale of foodstuff, liquor or beverages, items of personal adornment, magazines, books, newspapers, paper products and medicinal or pharmaceutical products.

Warehouse: means premises used for storage of goods and the carrying out of commercial transactions involving the sale of such goods by wholesale.

The proposed development is subject to the provisions of both the JCCDPM and the draft JCCSP. The revised draft JCCSP was adopted by Council at its meeting held on the 17 April 2012 for the purposes of public consultation. The structure plan is considered to be a "seriously entertained planning proposal" and has therefore been referenced in the assessment of this development.

The following table outlines those aspects of the development that do not strictly comply with the provisions of the JCCSP and/or the draft JCCSP:

JCCDPM	**Draft JCCSP**	**Proposed**
6.3.1 Setbacks (i) 70% of the width of the front facade of the building shall be setback a minimum of 15m and a maximum of 25m. Where the maximum 25m setback is applied, a min area of 2 metres in depth shall be provided for uses other than vehicle access or parking (i.e. ped access, display purposes or landscaping)	7.2.b Building setbacks to the street A building must have a maximum setback of 3 metres from the street alignment to Joondalup Drive...for a minimum of 25% of the frontage of the lot. There is no minimum or maximum setback to the street alignment for the remainder of the frontage of the lot.	<u>Joondalup Drive</u> Building 1: 0.64m to 1.4m Building 2: Nil Building 3: Nil to 4.4m
(ii) 70% of the width of the front facade of the building shall be setback a minimum of 15m and a maximum of 25m. Where the maximum 25m setback is applied, a min area of 2 metres in depth shall be provided for uses other than vehicle access or parking (i.e. ped	A building must have a maximum setback of 3 metres from the street alignment for a minimum of 25% of the frontage of the lot. There is no minimum or maximum setback to the street alignment for the remainder of the frontage	<u>Eddystone Avenue</u> Building 3: Nil to 4.4m

access, display purposes or landscaping)	of the lot.	
(iv) The minimum setback from other roads shall be 6m from the primary street and a minimum of three metres from the secondary street	Building must have a minimum setback of three metres to the street alignment	<u>Honeybush Drive and Sundew Rise</u> Minimum setback of nil to Honeybush Drive and Sundew Rise
6.3.3 Landscaping A minimum 8% of the subject site shall be provided as landscaping with a minimum width of 3m along any street frontage. A min of 1 shade tree per 4 car parking bays shall also be required.	A minimum 8% of the area of a development site shall be designed, developed and maintained as landscaping which shall include an area no less than 3m wide along all street boundaries must be landscaped.	No landscaping provided between street alignment and building for most of the development. 4.57% soft landscaping proposed. 1 tree per 11.5 car bays Does not comply with JCCDPM and draft JCCSP
6.3.4 Car Parking Car parking shall be provided within the relevant scheme standard for the proposed use, as denoted in Table 2 of the scheme. Where no scheme standard is specified, 1 car bay for every 30m² NLA is to be provided.	In accordance with Table 2 of DPS2.	1010 car bays required 793 car bays provided 217 car bay shortfall 21.49% More detail regarding car parking calculations is provided in the comments section below.
6.3.6 Building Height The maximum building height permitted shall be 13m other than landmark architectural elements which may be up to a maximum 18m in height and limited in size by a maximum floor area of 80m².	To comply with the requirements of the Building Height Plan No minimum – 3 Storey maximum	Building 4: maximum building height is 19.3m and 21.5m to the top of architectural features.
6.3.7 Materials and Finishes All street facades shall be constructed in a masonry material with a minimum 50% of the facade to incorporate glass finishes. Where concrete tilt-up panelling is proposed, this shall only be permitted on	Not less than 50% of the area of the ground floor street facade is to be glass windows or doors.	<u>Joondalup Drive</u> Building 1: 8.77% Building 2: 14.42% and 15.47% Building 3: 10.9% <u>Eddystone</u> Building 3: 12.99% <u>Sundew:</u> Building 1: 6.18%

the street facades of buildings when provided with a textured paint, articulated or detailed finish or combination thereof. Corner lots must incorporate at least one tower element within its design. For other lot, the incorporation of a single tower element may be considered.		Building 4: Nil <u>Honeybush:</u> Building 3 : Nil Building 4: Nil Building 1 – entry statement with raised finished floor level, facade height and feature cladding
6.3.8 Boundary Fencing Where a building is located on the boundary, no fencing shall be required. Where buildings are setback from a rear or side boundary where appropriate, a minimum black chain mesh fence to a maximum height of 1.8m shall be provided. Fencing located between a street frontage and a building shall be of permeable construction, of a high aesthetic standard and shall be a maximum of 1.8m height.	A fence located between the street alignment and the building must be visually permeable above 0.75m from NGL, and must have a maximum height of 1.8m from NGL	Screen walls to service areas adjacent to street frontages have been screened. Honeybush Drive screen wall is 3m high and Sundew Rise screen wall is 1.8m high.

The aspects of the development which do not comply with the current or draft structure plan provisions as indicated above are discussed further below.

<u>Building Design</u>

Building setbacks

Proposed buildings 1, 2 and 3 have minimum setbacks of less than three metres to the Joondalup Drive property boundary.

The proposed setbacks are as follows:
Building 1 - 0.64 metres to 1.4 metres
Building 2 – Nil setback
Building 3 – Nil to 4.4 metres

These proposed setbacks do not meet the requirements of the JCCDPM however comply with the draft JCCSP.

The verge fronting the property boundary to Joondalup Drive is approximately 26 metres wide therefore the buildings will be setback a minimum of 26 metres from the street. It is considered that the buildings having setbacks between nil and 4.4 metres will optimise physical and visual interaction with the street and contribute to an attractive and positive streetscape experience.

Building 3 has been designed to address the Joondalup Drive and Eddystone Avenue frontages. This building has a minimum setback of nil and maximum setback of 4.4 metres to the Eddystone Avenue property boundary. It is noted that the majority of the setback to the Eddystone Avenue is nil and therefore the building will provide an active and interesting facade to this street frontage.

With regard to building setbacks to Honeybush Drive and Sundew Rise, buildings should be setback a minimum of three metres under the current and draft structure plan provisions. Buildings 3 and 4 have a minimum setback of nil to Honeybush Drive and buildings 1 and 4 have a minimum setback of nil to Sundew Rise.

To the Honeybush Drive property boundary, whilst buildings 3 and 4 have nil setbacks, building 3 has a maximum setback of 25.5 metres and building 4 has a maximum setback of 25 metres. Similarly, buildings 1 and 4 have nil setbacks to Sundew Rise and maximum setbacks of eight metres and 0.5m respectively. Due to the variation of setbacks and materials utilised for the building facades, the proposed setbacks will create visual interest and contribute to an attractive streetscape.

Building height

Under the JCCDPM, the maximum building height should be 13m and architectural features are limited to a maximum height of 18m and limited in size by a maximum floor area of 80sqm. The proposed hardware store building has a maximum height of 19.3m and architectural features to a maximum height of 21.5m.

The maximum height of the hardware store building is to the north western corner of the building where the natural ground levels are the lowest. It is noted that the building is a maximum of 13.8m high as measured from the proposed finished floor level. Given the location and higher finished floor levels of the building located north east of the hardware store building, the majority of the hardware store building will be screened by these buildings as viewed from Joondalup Drive. With regard to the architectural features (white fin element) on the hardware store building being a maximum height of 21.5m, it is noted that these are feature elements only and do not incorporate any floor area. It is therefore considered that the height and features of the proposed hardware store building will not be visually obtrusive and will complement the surrounding development.

Landscaping

The development proposal incorporates 4.57% of soft landscaping and a landscaping strip of less than three metres wide is provided to the street boundaries. Due to the buildings being predominantly set back less than three metres from the boundary, the landscaping area is generally between nil and three metres wide. The areas not occupied by buildings within the three metre width of the street setbacks are landscaped. The verge to Joondalup Drive is approximately 26 metres wide and soft landscaping is proposed in this area. It is noted that the verges to other street boundaries will also be landscaped. It is therefore considered that the soft landscaping on the verge will provide a sufficient buffer between the street and

buildings. In addition, it is noted that the buildings are of high quality design and incorporate varying setbacks and materials. Therefore, the landscaped verges and the buildings will contribute to the desired streetscapes.

Shade trees have been provided at a rate of approximately one tree per 11.5 car bays rather than at a rate of one tree per four bays. Overall, 4.57% of the site has been landscaped. As indicated above, it is considered that sufficient landscaped areas are provided to the street boundaries and verges. It is therefore considered that the 4.57% landscaping rather than 8% will not detract from the amenity of the streetscape. Given that shade trees have been provided across the site and that a piazza with playground and grass has been provided, there will be a combination of hard and soft landscaping treatments within the site.

Glazing

Glazing has been incorporated in the design of the proposed buildings however the glazing provided on the street facades is less than the required 50% under the provisions of the current and draft structure plans. The glazing provided for the street facades is between nil and 16% of the respective facades.

Building 1
The applicant has indicated that glazing has not been provided under the signage for Joondalup Square to the north east and north west elevations of the building. This is because the corner of the building is meant to act as an entry statement to the centre and the introduction of glazing will detract from the feature product (feature skin) used in this area. The feature product will be set off the wall to provide a 3D effect and be activated through the introduction of backlighting.

Building 2
The applicant has indicated in their submission that if the City were to assess the glazing provided based on the length of glazing over the length of facade as opposed to 50% of the facade area then glazing of 53.28% would be provided. This not however the prescribed method for assessing glazing as per the current and draft structure plans.

The facade treatment to the north east elevation of building 2 incorporates OKO skin planks to the facade, the Joondalup Square feature element and some glazing. The future incorporation of signage on this facade will further assist in providing a variety of colours, textures and materials to this facade. Based on the incorporation of the proposed finishes, it is considered that the building will provide visual interest and interaction with the street. Furthermore, the glazing proposed will provide adequate opportunities for surveillance between the buildings and street.

Building 3
The north eastern elevation (Joondalup Drive) of building 3 has been modified to include additional barcode concrete panels with backlit recesses to improve articulation of this elevation. In addition, it has been clarified by the applicant that the components of the building which originally appeared to be black in colour are dark blue (refer to Development Plans).

The south east elevation originally included a reference to signage on the large blank panel immediately east of the Joondalup Square feature product. The signage notation has been removed from the plans and any signage for the development, will be subject to further approvals.

Building 4
The applicant has indicated that the majority of the proposed building 4 will be blocked by the buildings and landscaping along Joondalup Drive. On this basis, the applicant has not provided further glazing.

Tower element

Further to the JCCDPM, corner lots should incorporate at least one tower element within its design. Whilst the development does not incorporate a single tower element, the corner of building 1 (refer north east and north west elevations) has been designed to present as an entry statement. This corner of the building has a raised facade height and incorporates feature skin treatment and the Joondalup Square branding.

Boundary fencing

The proposal includes screen walls to be located adjacent to the Honeybush Drive and Sundew Rise property boundaries which have been assessed as boundary fences. These walls are 3m and 1.8m high respectively and will screen the service areas from view from each street. The screen walls are masonary and therefore are not permeable as required under the current and draft structure plans. The nature of the site, being bound by four street boundaries is constraining in this manner. It is therefore acknowledged that there is a need for service areas to be provided toward these street boundaries. From a streetscape point of view it is desirable for these areas to be screened from view from the street and therefore these solid walls are considered appropriate in this instance. The landscaping plans requested as a condition of approval will need to demonstrate appropriate verge landscaping treatments to soften these walls without impacting on vehicle sightlines or traffic safety.

Car parking

Car parking for the proposed uses including Office, Take Away Food Outlet and Showroom have been calculated as per Table 2 of the City's District Planning Scheme. Further to 6.3.4 of the JCCDPM, where no scheme standard exists for a land use, 1 bay for every 30sqm of NLA is to be provided. The City has previously applied the showroom car parking standard of 1 car bay per 30m² of Net Lettable Area (NLA) for developments of this nature. As such, car parking for the hardware store has been assessed against the 1 bay per 30sqm of NLA standard. The car parking calculations are detailed below:

Proposed Use	**Car parking standard**	**Car bays required by DPS2**
Building 1 • Showroom	• 1 per 30sqm of NLA	• 1,261sqm NLA = 42.03
Building 2 • Showrooms (unit 2-8) • Offices (office A-D) • Take Away Food Outlets (Food A-F)	• 1 per 30sqm of NLA • 1 per 30sqm of NLA • 1 per 4 guests in seated areas plus 7 per 100sqm NLA	• 4,151sqm NLA = 138.37 • 833sqm NLA = 27.77 • 72 seats and 326.5sqm NLA for non seating serving areas = 40.86

	for non seating serving areas	
<u>Building 3</u> • Showroom	• 1 per 30sqm of NLA	• 5,979sqm NLA = 199.3
<u>Building 4</u> • Hardware Store	• 1 per 30sqm of NLA	• 16,828sqm NLA = 560.93

The proposed development requires 1010 car bays and only 793 are provided. As such, a car parking shortfall of 217 bays or 21.49% across the site is proposed. The applicant has provided the following justification for car parking proposed on site.

Parking surveys have been conducted across six existing Eastern states stores to evaluate the anticipated peak parking demand at the centre. The results indicated that the highest parking demand was experienced on a Saturday. The results of the surveys are summarised below:

- Bunnings (South Nowra) – 1.5 car bays per 100sqm
- Bunnings (North Paramatta) – 2 car bays per 100sqm
- Bunnings (Minchinbury) – 2.2 car bays per 100sqm
- Bunnings (Altona) – 2.33 spaces per 100sqm
- Bunnings (Scoresby) – 2.51 car bays per 100sqm
- Bunnings (Bankstown) – 2.57 car bays per 100sqm

The applicant has suggested that the average car parking ratio of 2.185 spaces per 100sqm should be used. Should this be applied, 370.18 or 371 car bays are required. The applicant has indicated that the number of car bays required for the site overall can be reduced by 10% if cross trade, reciprocal parking and different peak operating times for various land uses are taken into consideration. As such, the development overall would require 738 bays should the applicants proposed ratio minus 10% be applied.

In addition, the applicant has provided justification for the proposed car parking shortfall in relation a car parking demand survey undertaken at a mixed use site known as “South Central” which is located at 87 Armadale Road, Jandakot. South Central is comprised of land uses such as home entertainment and appliances stores, furniture, flooring and lighting stores, Bunnings, other hardware, automotive parts and accessories and other bulky goods stores. The total NLA for the development is 45,993sqm and 898 car bays are provided on site. Whilst the South Central site is slightly larger in scale than the proposed development, the land use mix is considered similar to that of the proposed development. In addition, both sites abut a major traffic route.

For the purposes of the survey the site was divided into zone A and zone B. Zone A includes the car parking for Bunnings and other uses and Zone B is for the remainder of land uses on site. The survey was undertaken on a Saturday between the hours of 11am and 1pm which is the typical peak period for land uses such as hardware and bulky goods. The survey revealed that the parking demand was an average of 71% in zone A and 54% in zone B.

The car parking of 898 bays and 45,933sqm of NLA equates to a parking supply of 1.955 bays per 100sqm of NLA. In contrast, 793 car bays have been provided to

service the 29,378sqm of NLA included in the subject proposal. This equates to a car parking ratio of 2.7 bays per 100sqm of NLA. On this basis, the applicant has indicated that the car parking supply ratio for the proposed centre is significantly higher than existing parking supply ratio at South Central. The applicant has additionally noted that based on the actual peak parking demand at South Central, 1.3 bays per 100sqm are utilised. If this peak utilisation is applied to the subject site then 383 car bays are required and 793 bays are proposed. As such, the proposed car parking supply for the subject site is approximately 50% more than the applicants' anticipated demand. The applicant has therefore suggested that the number of car bays provided is considered to be more than adequate to satisfy typical peak parking demand.

As indicated in the background section of this report, the City recently received a referral from the Department of Planning regarding an application to subdivide the site into two lots. Should the subdivision be approved, reciprocal rights for parking and access are required to be imposed for the site.

Based on the above, it is considered that the number of on-site car parking bays are sufficient to service the proposed development.

Signage

Further to Council Policy – Signs, multi-tenancy pylon signs should have a maximum area of 12sqm and maximum height of 8m. The proposed pylon sign to be located at the front of the development has an area of 84sqm and has a maximum height of 16.6m. Given the location, design and materials of the proposed pylon sign, the structure is considered to present as an architectural feature as viewed from Joondalup Drive. Given the location of the showroom, offices and take away food outlet buildings fronting Joondalup Drive, approximately half of the sign will be obscured from view by pedestrians or vehicles travelling along Joondalup Drive from the north or south. The pylon sign is therefore considered to be integrated with the proposed development.

Access and egress for the site

The proposal has been considered in the context of the development taking place at the adjacent site to the north (DAP12/00506 refers).

The development proposes an integral ingress and egress point on Sundew Rise, integrating generated traffic into the existing road network. An assessment of the adjoining site also identified integral vehicle access points along Sundew Rise. As a result of the potential cumulative effect of all access points and their proximity to the other, a consolidated traffic report was undertaken by GHD Services Pty Ltd on behalf of the City to ensure traffic would be appropriately managed in a safe and equitable manner.

The consolidated traffic report identified four access and intersection options that could provide satisfactory access into both sites. These options were as follows:

- Roundabout between both accesses along Sundew Rise;
- Banned right turns along Sundew Rise;
- Right turn only into Lot 806 (11) Injune Way (subject site); and
- Right turn into Injune Way from Joondalup Drive.

Each of the above four options were assessed in a matrix type system against seven different criteria, to identify which option(s) would provide the safest and most equitable access to both sites. It was determined that a right turn pocket into Lot 806 (11) Injune Way only would be the best option.

This option restricts the eastern most ingress/egress point of the subject site to left in/left out access only. A dedicated right turning pocket is proposed which will allow for right in, left in and left out access to the development at Lot 806 (11) Injune Way.

Comments provided by the Department of Planning indicate concern with the entry/exit arrangement for large vehicle movements on Honeybush Drive and the impact on road safety due to the close proximity of the exit location to the roundabout intersection of Honeybush Drive and Sundew Rise. In particular, large vehicles will have to cross the road to enter the roundabout. A possible solution could be to reverse the entry/exit arrangement for large vehicle movement to remove the need for these vehicles to cross Honeybush Drive. In addition, the Department of Planning have recommended that the undercroft access on Sundew Rise be restricted to left-in left-out in the interests of traffic safety and efficiency. These also form recommended conditions of approval.

Conclusion:

The proposed development meets the requirements of the JCCDPM and Draft JCCSP with the exception of the aspects discussed in this report. It is considered that the design variations should be supported as the proposal is of high quality built form and provides visual interest particularly to the Joondalup Drive and Eddystone Avenue frontages.

It is therefore recommended that the application be approved, subject to conditions.

Location Plan

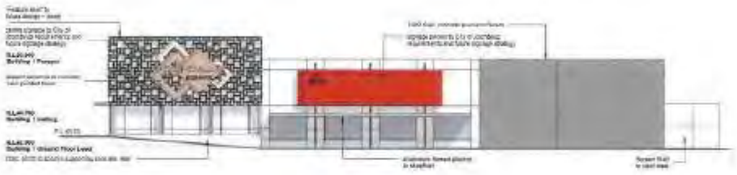
ATTACHMENT 1

ATTACHMENT 2

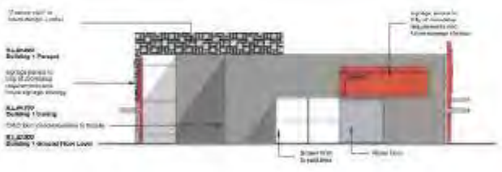
ATTACHMENT 2

Birds Eye Site Plan

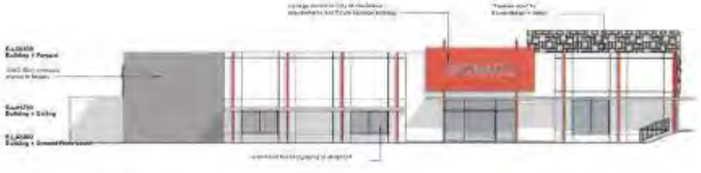
Building 1 - North East Elevation (Joondalup Drive Elevation)



Building 1 - North West Elevation (Sundew Drive Elevation)



Building 1 - South West Elevation



Building 1 - South East Elevation

Building 1 - Ground Floor Plan

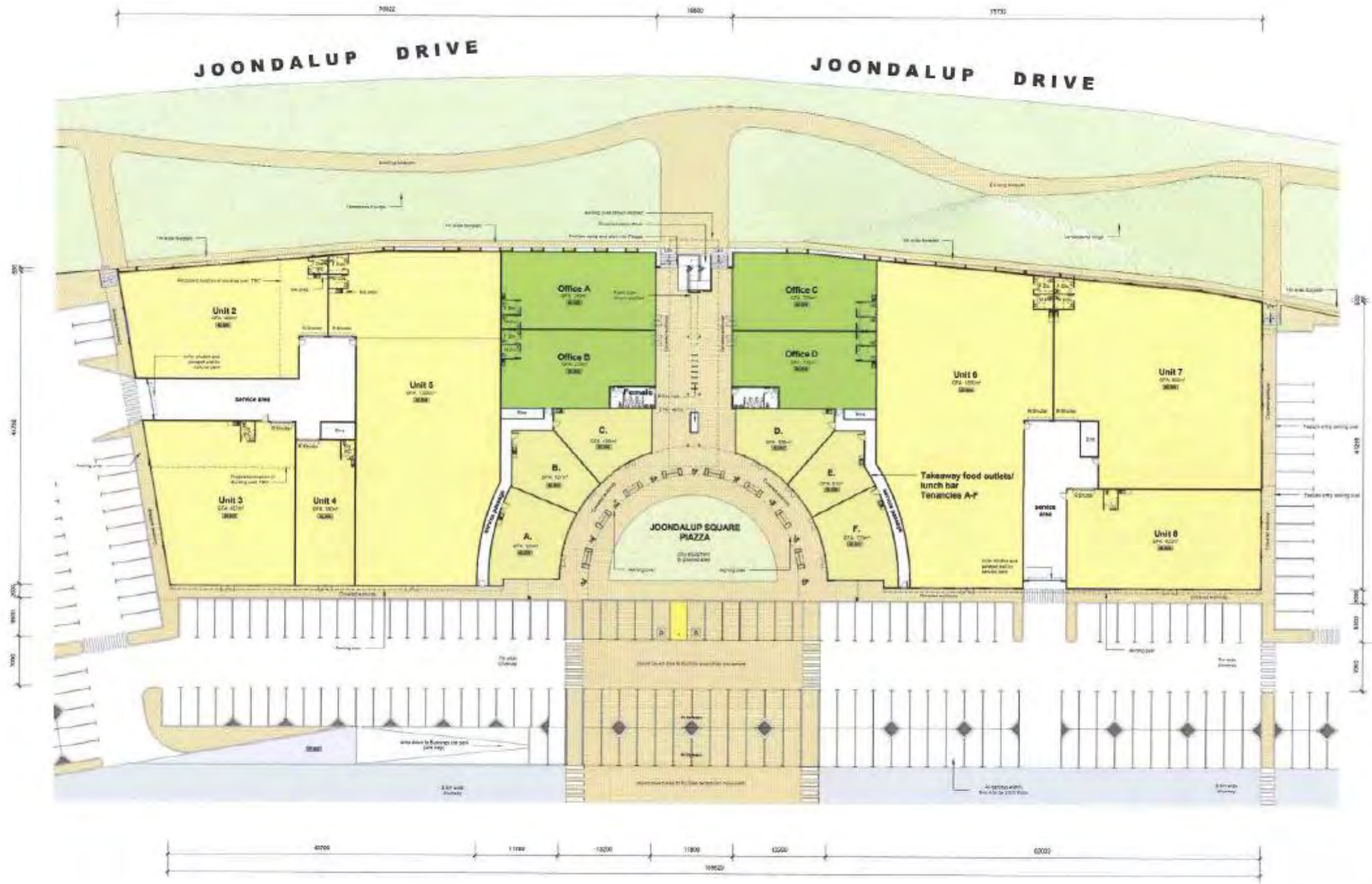
ATTACHMENT 2

View 1

View 2

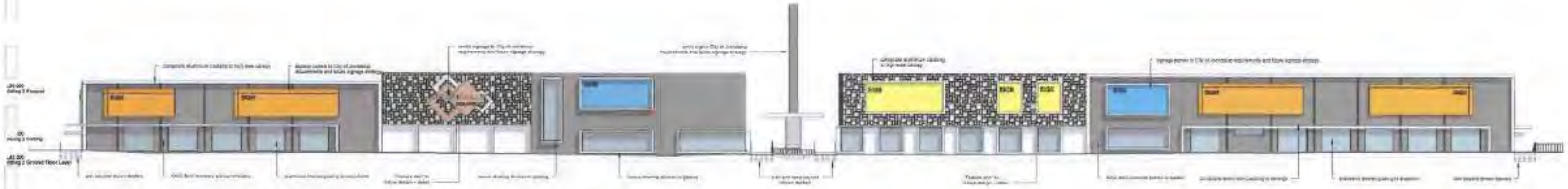
View 3

View 4



Building 2 - Ground Floor Plan

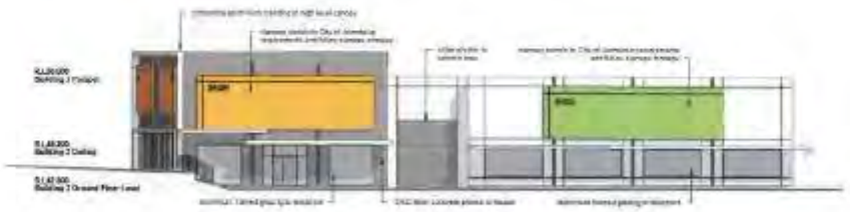
ATTACHMENT 2



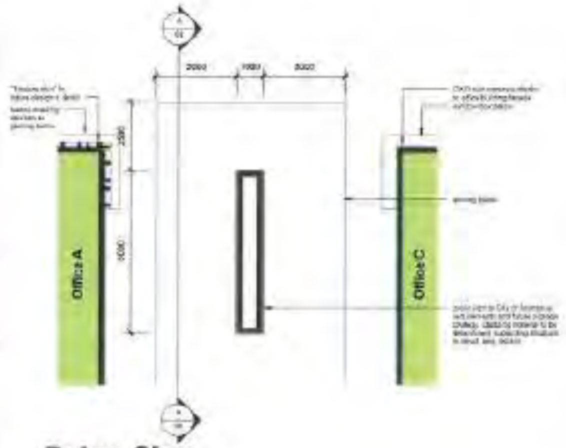
Building 2 - North East Elevation (Joondalup Drive Elevation)

Building 2 - South West Elevation

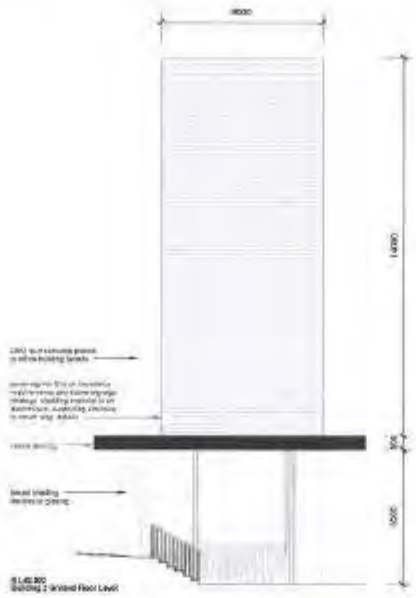
Building 2 - South East Elevation



Building 2 - North West Elevation



Pylon Sign



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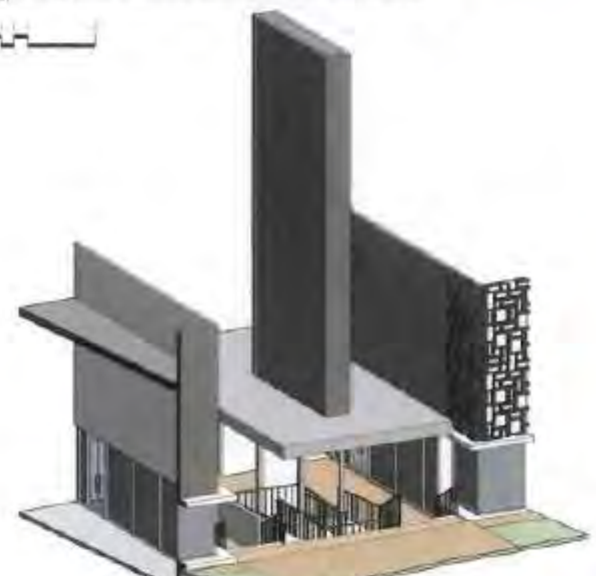


Pylon Sign (Cutaway)

Pylon Sign (Joondalup Drive)

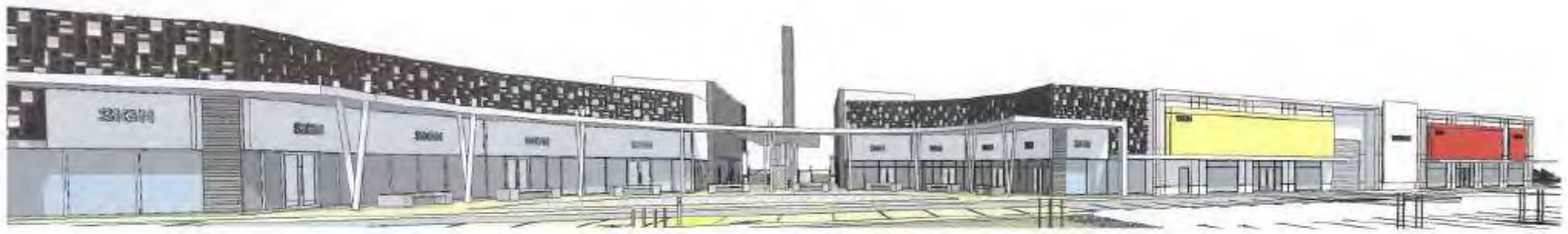
RECEIVED 4 JUL 2012 CUSTOMER SERVICE

Proposed Commercial Development

Location: LOT 807, JOONDALUP

For: ARISE DEVELOPMENTS

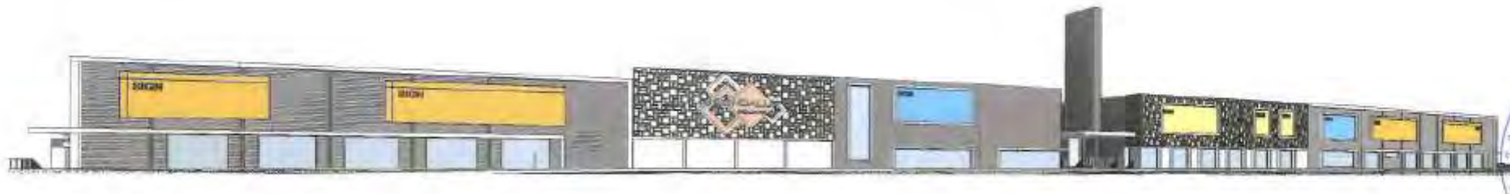
meyer shircore and associates architects



View 1

View 2

View 3

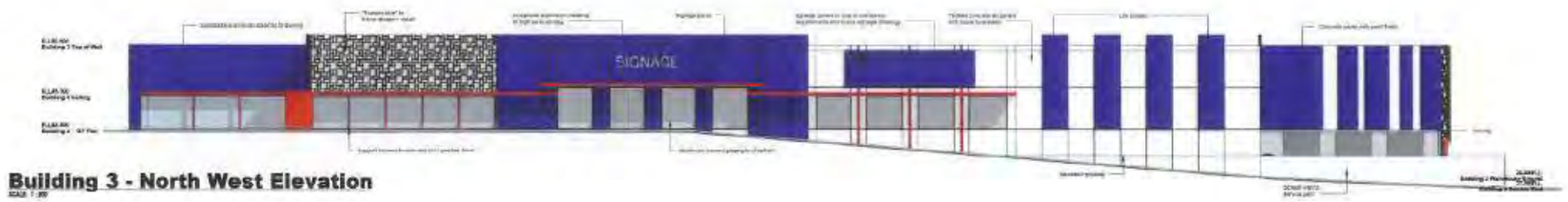


View 4

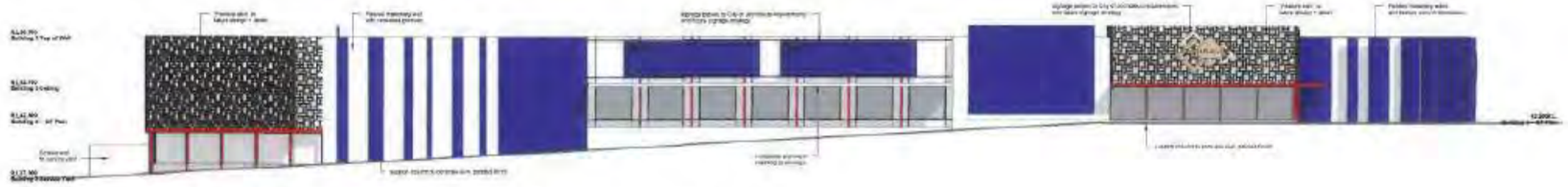
ATTACHMENT 2

ATTACHMENT 2

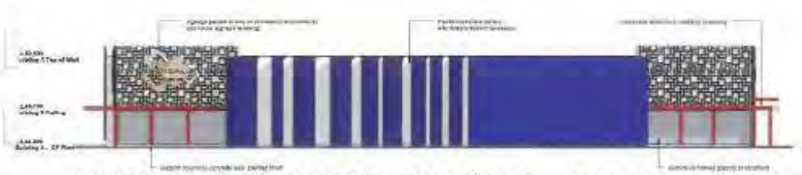
Building 3 - Ground Floor Plan



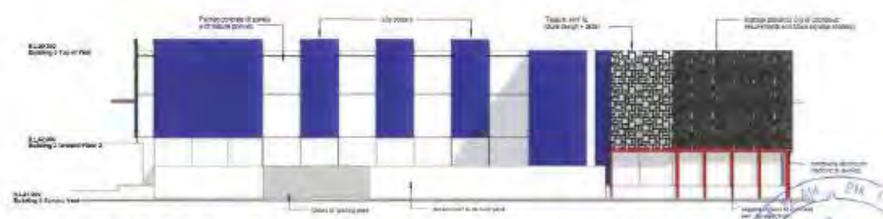
Building 3 - North West Elevation



Building 3 - South East Elevation (Eddystone Avenue Elevation)



Building 3 - North East Elevation Direct (Joondalup Drive Elevation)



Building 3 - South West Elevation (Honeybush Drive Elevation)

View 1

View 2

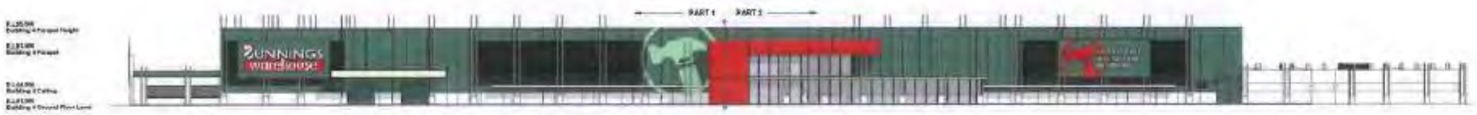
View 3

View 4

Building 4 - Ground Floor Plan

ATTACHMENT 2

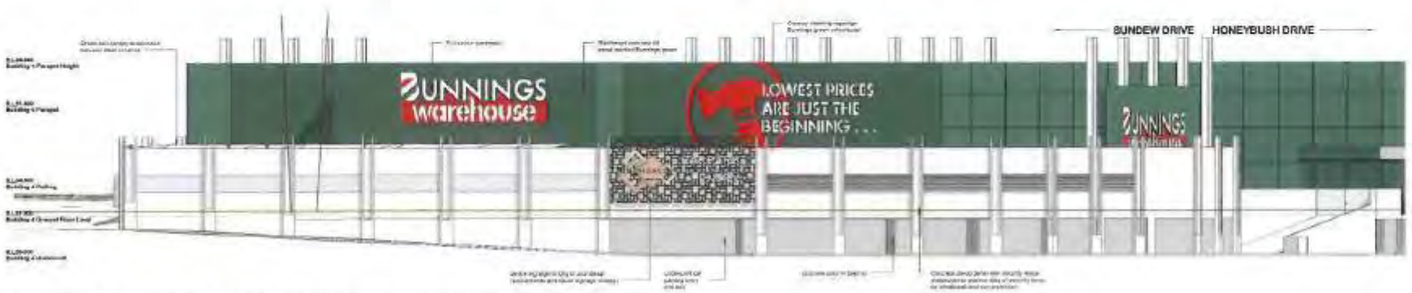
Building 4 - Undercroft Plan



Building 4 - North East Elevation

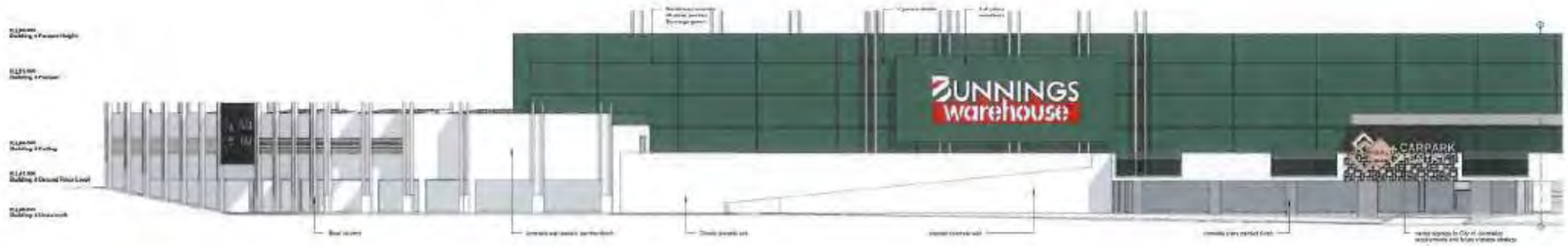
Building 4 - North East Elevation (1)

Building 4 - North East Elevation (2)

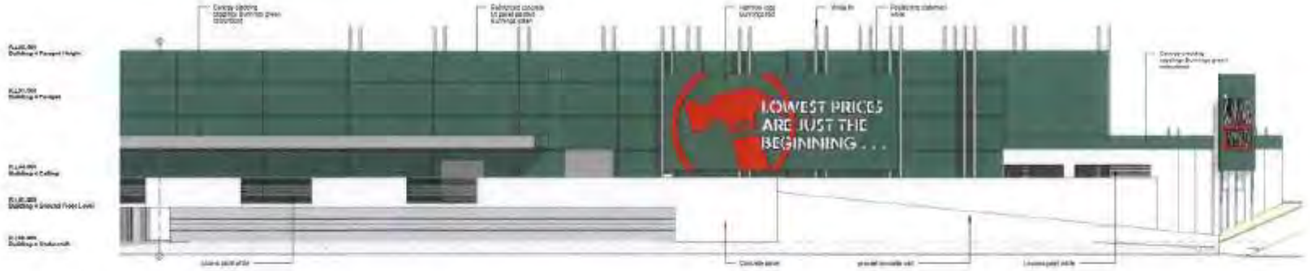


Building 4 - North West Elevation (Sundew Drive Elevation)

Building 4 - South West Elevation



Building 4 - South West Elevation (1)



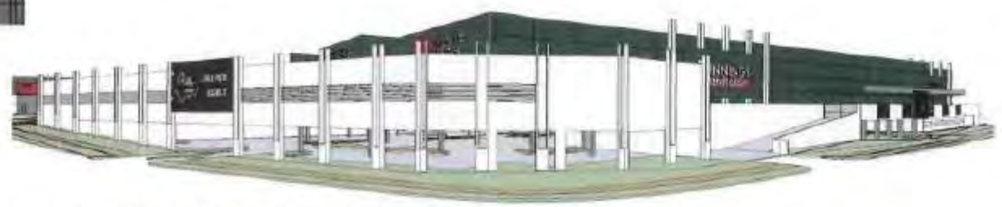
Building 4 - South West Elevation (2)

Building 4 - South East Elevation

North East Facade

North East Facade-Garden Entry View

North East Facade-Trade Entry View



Cnr of Sundew Rise & Honeybush Drive

Sundew Rise Entry View

Honeybush Drive View

Honeybush Drive Entry View

South East Ramp Off Honeybush Drive

ATTACHMENT 2

Proposed Commercial Development

Location: LOT 807, JOONDALUP

For: ARISE DEVELOPMENTS

PROJECT No
SKETCH No
SHEET No
SCALE
DATE

meyer shircore and associates ARCHITECTS

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w : www.meyershircore.com.au

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ACN 115 149 078

ATTACHMENT 3

The Quadrangle

Lot 807 Joondalup Drive, Joondalup

Transport Assessment

Prepared for:
Bunnings Joondalup Pty Ltd

May 2012

Prepared by:
TRANSCORE PTY LTD
61 York Street, Subiaco WA 6008
PO Box 42, Subiaco WA 6904
Telephone (08) 9382 4199
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ATTACHMENT 3

Document history and status

Author	Revision	Approved by	Date approved	Revision type
P Ghantous	r01	R White	24 May 2012	Draft
P Ghantous	r01b	B Bordbar	28 May 2012	Final

File name: t11.162.pg.r01b.doc

Author: Paul Ghantous

Project manager: B Bordbar

Client: Bunnings Joondalup Pty Ltd

Project: The Quadrangle

Document revision: r01b

Project number: t11.162

ATTACHMENT 3

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Appendix A: Site Plan

Appendix B: SIDRA Intersection Analysis

ATTACHMENT 3

1 Summary

This Transport Assessment relates to a development application for a proposed mixed use development (primarily comprising uses such as hardware and showroom) located at Lot 807 on Joondalup Drive in Joondalup (the **Site**). The Site has good road access from Joondalup Drive and Eddystone Avenue.

Traffic generation and parking requirements have been assessed and satisfactory intersection capacity has been confirmed. The Site also has good access to the existing and planned pedestrian and bicycle network and existing and future public transport services in the area of Joondalup.

2 Introduction

This Transport Assessment has been prepared by Transcore on behalf of Bunnings Joondalup Pty Ltd. The subject of this report is a proposed mixed use development (comprising uses such as hardware, showroom, warehouse, office, lunch bar and take away food outlet) located at Lot 807 on Joondalup Drive in Joondalup.

The location of the Site within the area of Joondalup and its proximity to regional roads as shown in the Metropolitan Region Scheme (the MRS) is illustrated in Figure 1.

Figure 1: Location of the Site

The location of the Site within the city centre of Joondalup is shown in Figure 2.

Figure 2: Location of the Site within the City of Joondalup

The key issues that will be addressed in this Transport Assessment include intersection capacity on Joondalup Drive, parking requirements and access to the Site by alternative modes of transport.

3 Development Proposal

The proposal is for a mixed use development including a new Bunnings Warehouse. The new Bunnings Warehouse will be comprised of three main components, being:

- the warehouse area;
- the plant nursery area; and

- the timber trade area.

Other land uses proposed for the Site include showroom, office, lunch bar and take away food outlet. The proposed land use floor area for the development is summarised in Table 1.

Residual	
Showroom	9,040m^2
Warehouse	2,595m^2
Office	913m^2
Lunch Bar & Take Away Food Outlet	658m^2
Subtotal:	*13,206m^2*
Bunnings Warehouse	
Nursery/Bagged Goods	3,262m^2
Entry/Showroom/Warehouse	9,918m^2
Trade	2,662m^2
Yard	995m^2
Subtotal:	*16,837m^2*
Total Floor Area:	**30,043m^2**

Table 1: Proposed land uses at the Site

The Site is bounded by Joondalup Drive to the east, Eddystone Avenue to the south, Honeybush Drive to the west and Sundew Rise to the north. Both Sundew Rise and Honeybush Drive have recently been constructed.

The proposed layout of the development is shown on the site plan contained in Appendix A.

At-grade parking is proposed for the area between the new Bunnings Warehouse (which is orientated along the eastern boundary of the Site) and the residual part of the development (which faces Joondalup Drive along the western boundary of the Site). The at-grade parking will be accessible via a crossover on Sundew Rise and a crossover on Honeybush Drive.

An undercroft car park is also proposed underneath the new Bunnings Warehouse. This parking will be accessible via a separate crossover from Sundew Rise and a separate crossover from Honeybush Drive. There will

also be an internal single direction entry ramp from the at-grade car park to the undercroft car park.

The at-grade crossover on Honeybush Drive will also act as an entry for vehicles servicing the new Bunnings Warehouse. There will be a dedicated additional crossover for service vehicles to exit near the intersection of Sundew Rise and Honeybush Drive.

An additional crossover is also provided on Honeybush Drive near Eddystone Avenue to service a staff parking area at the rear of Unit 9. In total, six crossovers are proposed for the Site, four of which accommodate general traffic for the development.

The parking calculations shown on the proposed site plan shows a total of 789 car bays (consisting of 535 at-grade car bays and 254 undercroft car bays). There are 11 ACROD bays and 4 longer bays designed to accommodate vehicles with trailers who visit the new Bunnings Warehouse.

Pedestrian access will be provided via an extensive path network running along the boundary of the Site. A wide pedestrian walk way is proposed for the main entrance into the Site from Joondalup Drive. This path leads into the main square piazza which has been designed to include a pedestrian rest area and children's playground.

A raised paved area with zebra line marking is proposed to facilitate pedestrian movement between the main square plazza and the entry to the new Bunnings Warehouse. An internal path network is also provided throughout the Site to facilitate pedestrian movements (with zebra crossings provided at each key movement path).

Delivery vehicles will access the goods inward area of the new Bunnings Warehouse via the t-grade crossover on Honeybush Drive. They will then ramp up to the loading area and then ramp down to exit from a separate 'exit only' crossover on Honeybush Drive.

4 Existing Characteristics of the Site

4.1 Existing Land Use

The Site is currently vacant land with some of the surrounding road infrastructure currently being constructed. In accordance with previous planning for the area, an internal road network has been constructed to provide access to the Site from Eddystone Avenue and Joondalup Drive.

As shown in Figure 3, planning for the Site indicates it will be served by Sundew Rise and Honeybush Drive. Sundew Rise will be altered to create a new four way signalised intersection with Lakeside Drive and Joondalup Drive. Honeybush Drive and Sundew Rise will form a

new four way roundabout as will Eddystone Avenue and the access road to the car park for Spotlight (located to the south of Eddystone Avenue).

Figure 3: Planning for the Quadrangle (Landcorp 2011)

As shown in a current aerial image of the Site (as at 6 April 2012 - see Figure 4), the construction of the supporting road infrastructure is almost completed.

Figure 4: Existing status of the Site

4.2 Existing Road Network

In the vicinity of the Site, Joondalup Drive is a 24m wide, dual divided carriageway, four-lane road with a speed limit of 70km/h. Joondalup Drive features on-street cycle lanes and wide pedestrian footpaths on both sides of the road. Pedestrian crossing facilities are currently in place at the signalised intersection with Sundew Rise and also at the signalised intersection with Eddystone Avenue.

A midblock pedestrian crossing facility comprising drop kerbs and pedestrian refuge is provided at the bus stop adjacent to the Site. Joondalup Drive is classified as a '*Distributor A*' road in the '*Metropolitan Functional Road Hierarchy*' issued by Main Roads WA.

Joondalup Drive is also covered by an 'Other Regional Roads' reservation in the MRS (as it is a 'Blue Road' – see Figure 1. SCATS intersection data provided by Main Roads WA indicates that

Joondalup Drive carried an average weekday traffic flow of 29,000 vehicles per day north of Eddystone Avenue (as at May 2012).

In the vicinity of the Site, Eddystone Avenue is a 10m wide, two-lane road with a built up area speed limit of 50km/h. Eddystone Avenue features on-street cycle lanes on both sides of the road. A wide pedestrian footpath is in place along the northern side of the road adjacent to the Site.

Pedestrian crossing facilities are currently provided at the signalised intersection of Eddystone Avenue and Joondalup Drive and at the roundabout intersection of Eddystone Avenue and Honeybush Drive. Eddystone Avenue is classified as a '*Distributor B*' road in the '*Metropolitan Functional Road Hierarchy*' issued by Main Roads WA.

Eddystone Avenue is also covered by an '*Other Regional Roads*' reservation in the MRS (see Figure 1). SCATS intersection data provided by Main Roads WA indicates that Eddystone Avenue carried an average weekday traffic flow of 9,660 vehicles per day west of Joondalup Drive (as at May 2012).

Honeybush Drive is a two lane, undivided road which forms a four-way roundabout with Eddystone Avenue and the access road to the car park for Spotlight. The road also provides access to the south and forms a 'Give-Way' T-intersection with Injune Way to the north. Honeybush Drive is a local access road for the area surrounding the Site and is likely to operate under the default built up area speed limit of 50km/h.

Sundew Rise connects halfway along Honeybush Drive at a roundabout intersection and also provides access to the area surrounding the Site. It is a two lane, boulevard style road with a wide, red-asphalt median strip. Sundew Rise will ultimately form a four-way signalised intersection with Joondalup Drive and Lakeside Drive (currently under construction).

The City of Joondalup has advised Transcore that Main Roads WA was requested to undertake a SIDRA intersection analysis for the proposed four way signalised intersection of Joondalup Drive / Lakeside Drive / Sundew Rise. One aim of the SIDRA analysis was to test the removal of filtered right turn phases in an effort to improve safety at the intersection.

Transcore obtained the modelled intersection geometry and phasing which was tested in SIDRA by Main Roads WA. This information was used as a reference by Transcore in undertaking SIDRA analysis of the change in traffic due to the proposed development. The modelled intersection layout is contained in Appendix B.

Information available on the Main Roads WA website indicates that the Joondalup Drive / Lakeside Drive intersection recorded a total of 31 road crashes during the five year period from 2006 to 2010 (inclusive). None of these crashes involved pedestrians or cyclists, however, 10 crashes involved casualties. The intersection ranked 721st in Western Australia in relation to crash frequency and 805th in Western Australia in relation to the cost (or severity) of those crashes.

The City of Joondalup has begun to address the safety concerns at the intersection through the removal of filtered right turn phases. A suite of upgrades are also planned for the intersection as shown in Appendix B. Some of these upgrades, including the connection of Sundew Rise to convert the intersection from three-way to a four–way intersection, are almost completed.

Information available on the Main Roads WA website also indicates that the Joondalup Drive / Eddystone Avenue intersection recorded a total of 57 road crashes during the five year period from 2006 to 2010 (inclusive). None of these crashes involved pedestrians or cyclists, however, 19 crashes involved casualties. The intersection ranked 351st in Western Australia in relation to crash frequency and 259th in Western Australia in relation to the cost (or severity) of those crashes.

4.3 Public Transport

The site is well serviced by existing bus services operating along Joondalup Drive. The closest bus stop on Joondalup Drive is directly adjacent to the Site and close to the intersection of Joondalup Drive and Eddystone Avenue. Bus routes provide connectivity to the city centre of Joondalup, Joondalup Train Station to the north, Whitfords Train Station to the south and Edith Cowan University.

A map outlining nearby bus routes passing the Site is shown in Figure 5.

Figure 5: Public transport services (Transperth Northern Timetable 66)

4.4 Pedestrian and Cyclist Facilities

Pedestrian access to the proposed development is via established footpaths along Joondalup Drive and Eddystone Avenue (and recently constructed footpaths abutting the Site).

The Perth Bicycle Network Map (see Figure 6) indicates good pedestrian and cyclist connectivity to the Site. An extensive shared path and on road cycle lane network is accessible to the Site and connects to attractors surrounding the Site (such as the Lakeside Joondalup Shopping Centre, Edith Cowan University and Joondalup

Train Station). A number of continuous signed routes are also in proximity to the Site including the PSP along Mitchell Freeway.

Figure 6: Extract from Perth Bicycle Network (Department of Transport)

4.5 Changes to the Surrounding Road Network

No changes to the surrounding road network are proposed as part of the development. The development proposes to provide access onto Sundew Rise and Honeybush Drive, however, no access onto Eddystone Avenue and Joondalup Drive is proposed.

4.6 Integration with the Surrounding Area

The development including the new Bunnings Warehouse is consistent with the type of land uses permitted for the Site and already developed in this area.

The Site has excellent road access from Sundew Rise and Honeybush Drive with multiple entry and exit routes to minimise any potential impact of traffic (including delivery vehicles accessing this proposed development).

The bus stop adjacent to the Site and the existing network of bus routes, paths and cycling facilities are all beneficial for this proposed development and provide suitable travel alternatives (particularly for employees at the Site). These also offer a good choice of travel options for interaction between this proposed development and other parts of Joondalup.

5 Traffic Assessment

5.1 Assessment Period

The proposed development will be predominantly retail oriented and will generate the heaviest traffic movements during the weekday afternoons and midday periods on Saturdays and Sundays. The new Bunnings Warehouse will have the following trading hours:

- Monday - Friday: 6:00am to 9:00pm
- Saturday - Sunday: 6:00am to 6:00pm

The residual part of the development will have the following trading hours:

- Monday - Friday: 9:00am to 9:00pm
- Saturday: 9:00am to 5:00pm
- Sunday: 11:00am to 5:00pm

We note that Joondalup has been designated as a '*Special Trading Precinct*' and therefore trading is permitted from the residual part of the development on a Sunday. This situation results in dispersion of peak trading times from the traditional Thursday evenings and Saturdays over a seven day period which in turn results in the dispersion of traffic peak periods.

The highest period of traffic generation to and from the Site will be the midday period on Saturday and Sunday. However, the traffic peak for the adjacent road network will occur during the typical

weekday AM and PM peak periods Overall, the combined peak period of traffic for the Site and the adjacent road network is expected to be the weekday PM peak period (which is typically between 5:00pm - 6:00pm). On this basis, the analysis in this Traffic Assessment focuses on this weekday PM peak period and will be based on 10 years post development (assumed to be 2024).

5.2 Trip Generation and Distribution

The traffic volume likely to be generated by the new Bunnings Warehouse has been estimated using trip generation rates derived primarily from the database of the Roads and Traffic Authority of New South Wales (2009).This database includes the results of four traffic surveys at Bunnings Warehouses in New South Wales (the **Stores**).

The Thursday PM peak hour traffic generation rates for the Stores ranged from 2.0 to 2.8 vph per 100m^2 of total area of the Stores (including the outdoor nursery and timber sales area). To ensure an accurate analysis is made, the highest of these four rates has been used for the assessment of the proposed development.

Rates for the remaining land uses were derived from the Roads and Traffic Authority of New South Wales '*Guide to Traffic Generating Developments*' (2002).

The resultant total PM peak hour traffic generated has been calculated as 711 vph. This figure was calculated by adding the traffic generated from each proposed land use on the Site. However, when combined together, the total number of individual trips will be less due to cross trade between the various stores on the Site (as some vehicle trips will be combined for multiple purposes). Transcore has assumed a 30% cross trade for the proposed development during the assessment period.

On this basis, the anticipated weekday PM peak hour traffic generation of the proposed development is estimated to be 498 vph (with 246 in and 252 out).

The distribution of traffic to and from the proposed development has been evaluated by considering the catchment area serviced by the new Bunnings Warehouse as well as the residual development on the Site. The primary catchment of the proposed development is assumed to include the suburbs between Ocean Reef Road and Burns Beach Road (including part of the Wanneroo area to the east of Lake Joondalup). In consideration of this primary catchment area, the direction of approach of traffic to and from the development is summarised in Table 2.

Approach Road	Proportion of Traffic
Joondalup Drive (north)	35%
Joondalup Drive (south)	30%
Lakeside Drive (east)	5%
Eddystone Avenue (west)	30%

Table 2: Trip Distribution

The traffic movements generated by the proposed development have been manually assigned on the adjacent road network. In assigning the traffic on to the adjacent road network, it was assumed that 30% of development traffic would be passing trade (which means that they would already be passing the Site on Joondalup Drive or Eddystone Avenue and then attracted to the development but not specifically generated by the development). These passing trade trips were discounted from the Joondalup Drive intersection through movements and diverted through the development. The resulting traffic movements generated by this development are shown in Figure 7.

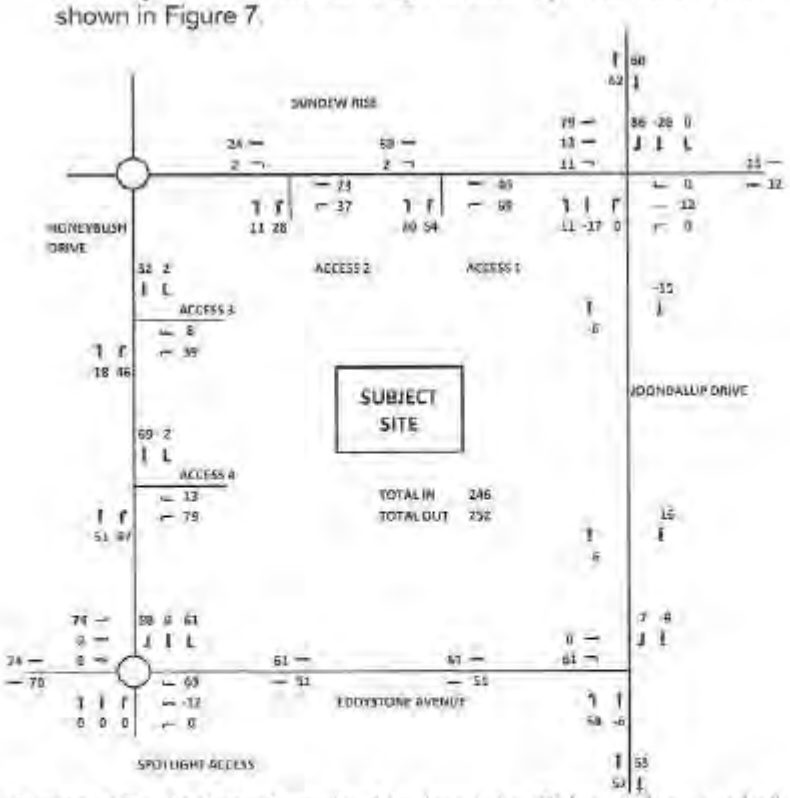


Figure 7: Traffic flows from the Site (weekday PM peak hour period)

5.3 Nearby Developments and Transport Proposals

As indicated in Figure 3, a number of other lots within the area of the Site have been planned for development (which will increase the traffic flow in the area around the proposed development). The focus of this traffic report is on the proposed development at Lot 807 and its impact on the surrounding road network.

5.4 Traffic Flows

Existing traffic flows at the signalised intersections of Joondalup Drive / Lakeside Drive and Joondalup Drive / Eddystone Avenue were obtained from recent SCATS data from Main Roads WA. Traffic counts were also undertaken for left turning movements at the intersections and for existing movements at the roundabout intersection of Honeybush Drive and Eddystone Avenue.

It was assumed that background traffic on Joondalup Drive and Eddystone Avenue would grow by approximately 2% per annum. Background through traffic was also increased appropriately at the signalised intersections of Joondalup Drive with Sundew Rise and Eddystone Avenue for the purpose of traffic analysis for the year 2024.

The total weekday PM peak hour traffic flows for ten years after full development of the Site are shown in Figure 8.

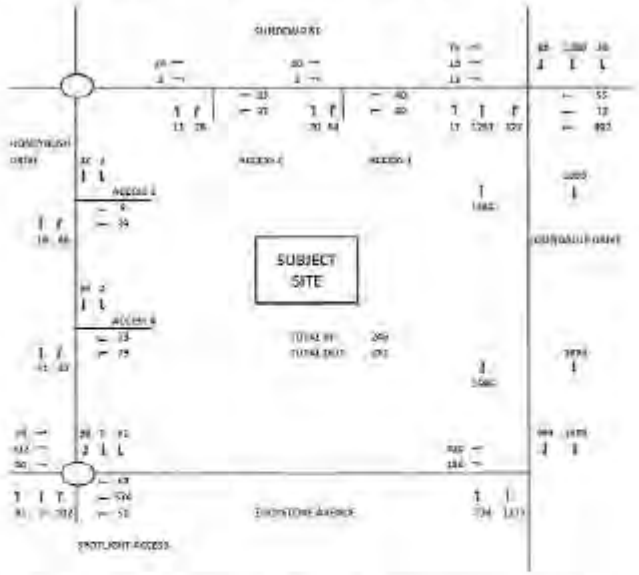


Figure 8: Total traffic flows including full development of the Site (2024 weekday PM peak hour period)

5.5 Analysis of Intersections and Development Accesses

The operation of the two intersections on Joondalup Drive adjacent to the development together with the two busiest driveway crossovers to the development have been analysed for the projected future weekday PM peak hour period traffic flows for 2024.

Capacity analysis of these intersections has been undertaken using the computer software package called SIDRA. SIDRA is an intersection modelling tool commonly used by traffic engineers for all types of intersection analysis. SIDRA outputs are presented in the form of Degree of Saturation, Level of Service, Average Delay and 95% Queue. These characteristics 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 infrequent 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 (ie. free flow) and Level of Service F the worst (ie. 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 contained in Appendix B.

The SIDRA analysis in Table B1 indicates that the signalised four way intersection at Joondalup Drive / Lakeside Drive / Sundew Rise will operate at the level of 'Service C' overall, with no movements worse than the level of 'Service E' during the weekday PM peak hour period.

The SIDRA analysis of the signalised T-intersection of Eddystone Avenue / Joondalup Drive is summarised in Table B2. Analysis indicates that the right turn pocket would need to be extended to around 180m in length by the year 2024 (due to increased traffic on Joondalup Drive). Overall the intersection will operate at the level of 'Service C' with no movements worse than the level of 'Service E' during the weekday PM peak hour period.

The SIDRA analysis of the busiest proposed driveway crossovers indicates all would operate satisfactorily in the weekday PM peak

hour period. All movements would be operating at the level of 'Service A'.

5.6 Impact on Surrounding Roads

The traffic generated by the proposed development represents 5% and 12.5% of the future PM peak traffic on Joondalup Drive and Eddystone Avenue respectively. On this basis, the impact on those roads is not expected to be significant and the current standard of the road network can accommodate this increase in traffic.

5.7 Impact on Neighbouring Areas

The traffic generated by the proposed development is not expected to significantly affect surrounding area as the road network has been designed to contemplate the traffic generated from the development of the Site.

5.8 Traffic Noise and Vibration

It generally requires a doubling of traffic volumes on a road to produce a perceptible 3dB(A) increase in road noise. The traffic from the proposed development only represent between 5% - 12.5% of future traffic (see section 5.6) so it will not represent a sufficient proportion of total traffic volumes to account for a perceptible increase in noise on the surrounding road network.

The nature of the development is essentially retail and will not generate significant traffic volumes late at night. On this basis, the noise and vibration from traffic at night are also not an issue for the development.

5.9 Road Safety

As mentioned in section 4, the intersection of Joondalup / Lakeside Drive recorded a total of 31 road crashes during the five-year period from 2006 to 2010 (inclusive). None of these crashes involved pedestrians or cyclists, however, 10 crashes involved casualties.

The intersection ranked 721st in Western Australia in relation to crash frequency and 805th in Western Australia in relation to the cost (or severity) of those crashes. The City of Joondalup has commenced addressing the safety concerns at the intersection through the removal of filtered right turn phases.

As also mentioned in section 4, the Joondalup Drive and Eddystone Avenue intersection recorded a total of 57 road crashes during the five-year period from 2006 to 2010 (inclusive). None of these crashes involved pedestrians or cyclists, however, 19 crashes involved casualties.

The intersection ranked 351st in Western Australia in relation to crash frequency and 259th in Western Australia in relation to the cost (or severity) of those crashes. The proposed development will not contribute a significant increase in right turn traffic from Joondalup Drive into Eddystone Avenue (which is anticipated to be a critical movement in terms of safe operation of this intersection). On this basis, the proposed development is not expected to significantly affect the safety of this intersection.

6 Parking

The calculation of the number of car bays required for the development under the *City of Joondalup District Planning Scheme No. 2* is shown on the site plan contained in Appendix A and reproduced in Figure 9.

1. Site Area	**54,178m²**		
2. Landscaping (8% of site required)			
a. Hard	**3,886m²**		
b. Soft	**2,475m²**		
Total	**6,361m² (11.7% of site)**		
3. Floor Areas			
a. Building 1			
i. Showroom	**1,100m²**	**@ 1/30**	**36.7 cars**
ii. Warehouse	**200m²**	**@ 1/100**	**2.0 cars**
b. Building 2			
i. Showroom (80%)	**3,440m²**	**@ 1/30**	**114.7 cars**
ii. Warehouse (20%)	**860m²**	**@ 1/100**	**8.6cars**
iii. Office	**913m²**	**@ 1/30**	**30.4cars**
iv. Takeway food outlets/ Tenancies A-F	**658m²**	**@ 7/100**	**46.06 cars**
c. Building 3			
i. Showroom	**4,500m²**	**@ 1/30**	**150 cars**
ii. Warehouse	**1,535m²**	**@ 1/100**	**15.35 cars**
d. Building 4			
i. Nursery/Bagged Goods	**3,262m²**	**@ 1/200**	**16.3 cars**
ii. Entry/Showroom/ Warehouse	**9,918m²**	**@ 1/30**	**330.6 cars**
iii. Trade	**2,662m²**	**@ 1/50**	**53.2 cars**
iv. Yard	**995m²**	**@ 1/200**	**5 cars**
Total	**30043m²**		**808.9cars**
4. Car Parking			
a. Cars Required			**809 cars**
b. Cars Provided			**789 cars**

Figure 9: Car Bay Calculation

The calculations indicate that 809 car bays are required and that 789 car bays are provided.

This calculation is based on adding up the individual land use parking requirements and does not allow for cross trade, reciprocal parking and different peak operating times for various land uses. If conservatively it is

assumed that these considerations would result in a reduction of 10% in the overall parking demand, the revised calculated parking demand for the Site would be 728 car bays. The proposed supply of 789 car bays exceeds this estimated revised parking demand.

7 Public Transport

The existing bus services in the area include routes passing the Site on Joondalup Drive with bus stops conveniently located adjacent to the site (as mentioned in section 4).

8 Pedestrians and Cyclists

Given the nature of the land uses proposed for the development, it is not expected that the development would attract a significant amount of walk in customers or bicycle trips. Even so, appropriate facilities are proposed for these modes of transport.

Pedestrian access will be provided via an extensive path network running along the boundary of the Site. A wide pedestrian walk way is proposed for the main entrance into the Site from Joondalup Drive. This path leads into the main square piazza which has a pedestrian rest area and children's playground.

A raised paved area with zebra line marking is proposed to facilitate pedestrian movement between the main square piazza and the entrance to the new Bunnings Warehouse. An internal path network is also provided throughout the Site to facilitate pedestrian movements (with zebra crossings provided at each key movement path).

Traffic volumes along Honeybush Drive and Sundew Rise will generally be sufficiently low for pedestrians and cyclists to cross without difficulty.

Crossing facilities on Eddystone Avenue are provided at the signalised intersection with Joondalup Drive and at the roundabout intersection with Honeybush Drive.

Crossing facilities on Joondalup Drive are provided at the signalised intersections with Sundew Rise to the north and Eddystone Avenue to the south. In addition, there is a midblock crossing facility with pedestrian median refuge provided at the bus stops between the two intersections.

9 Conclusion

This Transport Assessment provides information on the proposed mixed use development at Lot 807 on Joondalup Drive in Joondalup. The Site has good road access from the abutting road network.

Driveway crossovers to the parking area are proposed on Honeybush Drive and Sundew Rise.

Traffic generation has been assessed and the proposed development is anticipated to generate approximately 498 vph (with 246 in and 252 out) during the weekday peak hour period (which is anticipated to be the critical period for intersection operation on the surrounding road network).

The operation of the busiest driveway crossovers and the two intersections adjacent to the Site on Joondalup Drive have been analysed for the future weekday PM peak hour traffic flows ten years after full development of the Site. The analysis indicates these intersections will all operate satisfactorily.

The calculated parking demand, in consideration of cross trade and reciprocal parking, is estimated to be approximately 728 bays. It is noted that 789 bays are proposed for the Site which is more than enough to address the expected parking demand.

The Site also has good access to the existing and planned pedestrian and bicycle network and to existing and future public transport services in the area.

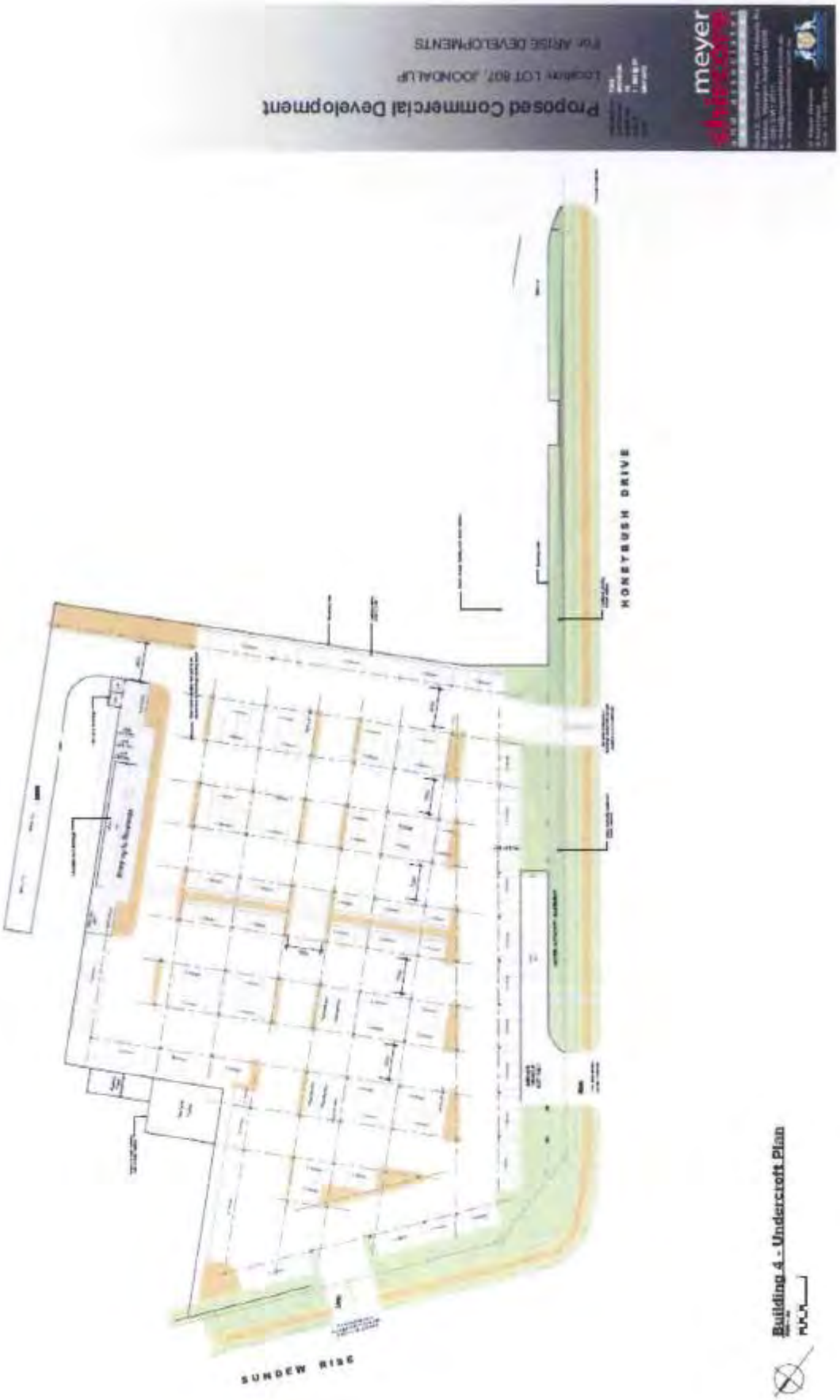
ATTACHMENT 3

APPENDIX A

SITE PLAN

ATTACHMENT 3

ATTACHMENT 3



ATTACHMENT 3

APPENDIX B

SIDRA INTERSECTION ANALYSIS

Movement Performance - Vehicles								
Mov ID	Turn	Demand Flow veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	95% Back of Queue Distance m
South: Joondalup Dr								
1	L	12	2.0	0.010	9.3	LOS A	0.1	0.4
2	T	1323	2.0	0.627	13.1	LOS B	18.2	129.8
3	R	344	2.0	0.697	61.9	LOS E	10.0	71.0
Approach		1679	2.0	0.697	23.0	LOS C	18.2	129.8
East: Lakeside Dr								
4	L	518	2.0	0.656	20.0	LOS B	16.4	116.6
5	T	13	2.0	0.126	59.0	LOS E	0.7	5.1
6	R	58	2.0	0.608	71.1	LOS E	3.5	24.6
Approach		588	2.0	0.656	25.8	LOS C	16.4	116.6
North: Joondalup Dr								
7	L	32	2.0	0.041	10.2	LOS B	0.3	1.9
8	T	1463	2.0	0.694	20.1	LOS C	29.6	210.4
9	R	91	2.0	0.355	58.5	LOS E	4.7	33.6
Approach		1585	2.0	0.694	22.1	LOS C	29.6	210.4
West: Sundew Rise								
10	L	83	2.0	0.201	13.0	LOS B	1.3	9.3
11	T	14	2.0	0.136	59.1	LOS E	0.8	5.5
12	R	12	2.0	0.121	67.6	LOS E	0.7	4.7
Approach		109	2.0	0.201	24.7	LOS C	1.3	9.3
All Vehicles		3961	2.0	0.697	23.1	LOS C	29.6	210.4

Table B1: SIDRA results for Joondalup Drive / Lakeside Drive / Sundew Rise Future PM peak hour period for the Site

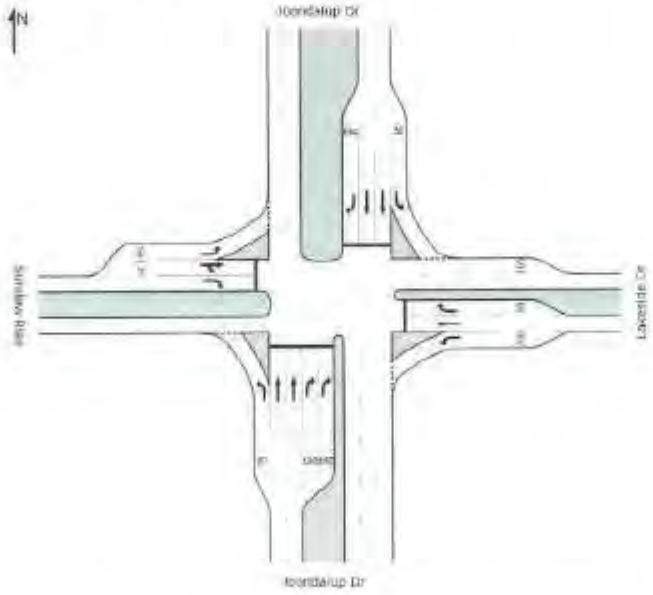


Figure B1: Intersection layout analysed in SIDRA

Movement Performance - Vehicles

Mov ID	Turn	Demand Flow veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	95% Back of Queue Distance m
South: Joondalup Drive								
1	L	236	2.0	0.298	14.4	LOS B	3.8	27.2
2	T	1342	2.0	0.872	30.6	LOS C	29.4	209.4
Approach		1578	2.0	0.872	28.4	LOS C	29.4	209.4
North: Joondalup Drive								
8	T	1504	2.0	0.510	4.3	LOS A	12.5	88.7
9	R	488	2.0	0.889	53.7	LOS D	25.0	178.0
Approach		1993	2.0	0.889	16.4	LOS B	25.0	178.0
West: Eddystone Avenue								
10	L	337	2.0	0.282	23.5	LOS C	4.3	30.7
12	R	164	2.0	0.897	64.3	LOS E	8.6	61.0
Approach		501	2.0	0.897	36.9	LOS D	8.6	61.0
All Vehicles		4072	2.0	0.897	23.6	LOS C	29.4	209.4

Table B2: SIDRA results for Joondalup Drive / Eddystone Avenue Future PM peak hour period for the Site

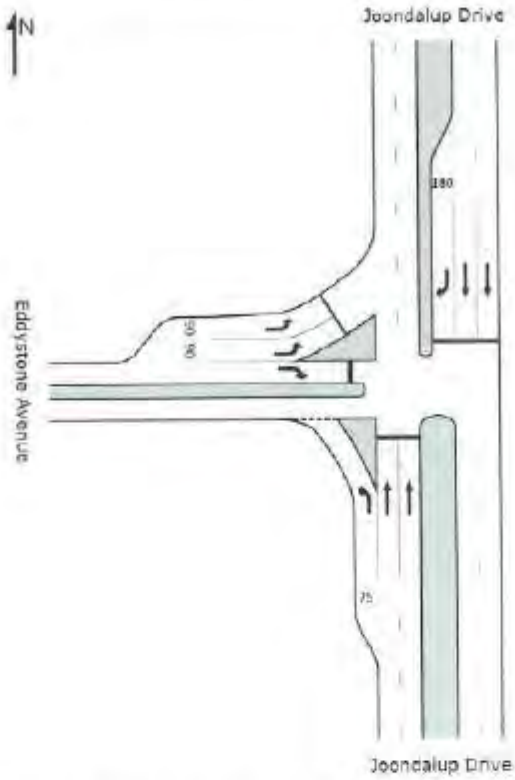


Figure B2: Intersection layout analysed in SIDRA

Movement Performance - Vehicles								
Mov ID	Turn	Demand Flow veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	95% Back of Queue Distance m
South: Access 1								
1	L	21	0.0	0.096	6.8	LOS A	0.4	2.6
3	R	57	0.0	0.096	7.0	LOS A	0.4	2.6
Approach		78	0.0	0.096	7.0	LOS A	0.4	2.6
East: Sundew Rise								
4	L	73	0.0	0.061	7.2	LOS A	0.0	0.0
5	T	42	0.0	0.061	0.0	LOS A	0.0	0.0
Approach		115	0.0	0.061	4.6	NA	0.0	0.0
West: Sundew Rise								
11	T	53	0.0	0.029	0.4	LOS A	0.2	1.2
12	R	2	0.0	0.029	7.9	LOS A	0.2	1.2
Approach		55	0.0	0.029	0.7	NA	0.2	1.2
All Vehicles		247	0.0	0.096	4.5	NA	0.4	2.6

Table B3: SIDRA results for 'Access 1' on Sundew Rise Future PM peak hour period for the Site

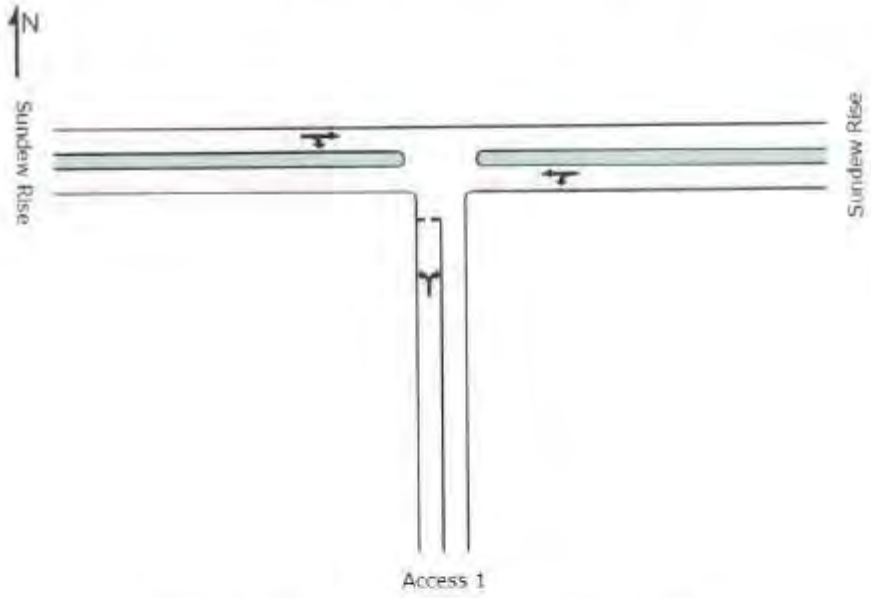


Figure B3: Intersection layout analysed in SIDRA

Movement Performance - Vehicles								
Mov ID	Turn	Demand Flow veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	95% Back of Queue Distance m
South: Honeybush Drive								
2	T	54	0.0	0.096	0.3	LOS A	0.5	3.2
3	R	92	0.0	0.096	7.9	LOS A	0.5	3.2
Approach		145	0.0	0.096	5.1	NA	0.5	3.2
East: Access 4								
4	L	83	0.0	0.096	7.8	LOS A	0.4	2.5
6	R	14	0.0	0.096	6.7	LOS A	0.4	2.5
Approach		97	0.0	0.096	7.7	LOS A	0.4	2.5
North: Honeybush Drive								
7	L	2	0.0	0.038	7.2	LOS A	0.0	0.0
8	T	73	0.0	0.038	0.0	LOS A	0.0	0.0
Approach		75	0.0	0.038	0.2	NA	0.0	0.0
All Vehicles		317	0.0	0.096	4.7	NA	0.5	3.2

Table B4: SIDRA results for 'Access 4' on Honeybush Drive Future PM peak hour period for the new Bunnings Warehouse

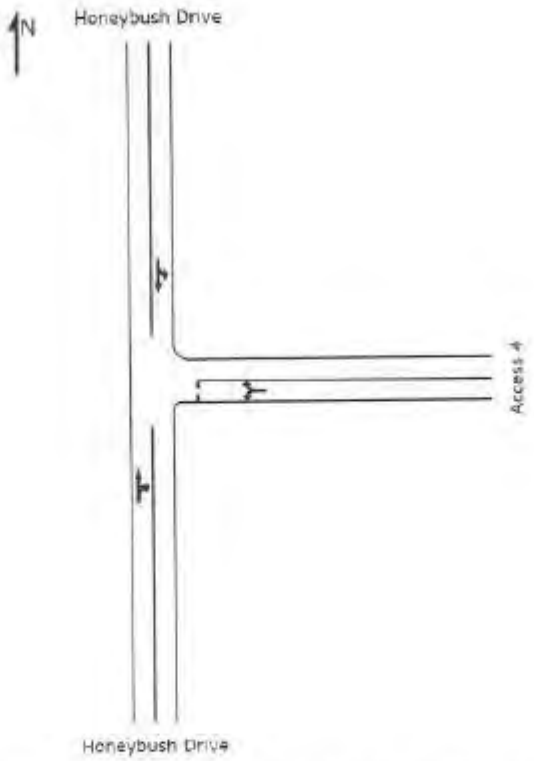


Figure B4: Intersection layout analysed in SIDRA

ATTACHMENT 4

City of Joondalup

Environmentally Sustainable Design – Checklist

Under the City's planning policy, *Environmentally Sustainable Design in the City of Joondalup*, the City encourages the integration of environmentally sustainable design principles into the construction of all new residential, commercial and mixed-use buildings and redevelopments (excluding single and grouped dwellings, internal fit outs and minor extensions) in the City of Joondalup.

Environmentally sustainable design is an approach that considers each building project from a 'whole-of-life' perspective, from the initial planning to eventual decommissioning. There are five fundamental principles of environmentally sustainable design, including: siting and structure design efficiency; energy efficiency; water efficiency; materials efficiency; and indoor air quality enhancement.

For detailed information on each of the items below, please refer to the *Your Home Technical Manual* at: **www.yourhome.gov.au**, and *Energy Smart Homes* at: **www.clean.energy.wa.gov.au**.

This checklist must be submitted with the planning application for all new residential, commercial and mixed-use buildings and redevelopments (excluding single and grouped dwellings, internal fit outs and minor extensions) in the City of Joondalup.

The City will seek to prioritise the assessment of your planning application and the associated building application if you can demonstrate that the development has been designed and assessed against a national recognised rating tool.

Please tick the boxes below that are applicable to your development.

Siting and structure design efficiency

Environmentally sustainable design seeks to affect siting and structure design efficiency through site selection, and passive solar design.

Does your development retain:

- ☐ existing vegetation; and/or
- ☒ natural landforms and topography

Does your development include:

- ☐ northerly orientation of daytime living/working areas with large windows, and minimal windows to the east and west
- ☒ passive shading of glass
- ☒ sufficient thermal mass in building materials for storing heat
- ☒ insulation and draught sealing
- ☐ floor plan zoning based on water and heating needs and the supply of hot water; and/or
- ☐ advanced glazing solutions

ATTACHMENT 4

Energy efficiency

Environmentally sustainable design aims to reduce energy use through energy efficiency measures that can include the use of renewable energy and low energy technologies.

Do you intend to incorporate into your development:

- [x] renewable energy technologies (e.g. photo-voltaic cells, wind generator system, etc); and/or
- [x] low energy technologies (e.g. energy efficient lighting, energy efficient heating and cooling, etc); and/or
- [x] natural and/or fan forced ventilation

Water efficiency

Environmentally sustainable design aims to reduce water use through effective water conservation measures and water recycling. This can include stormwater management, water reuse, rainwater tanks, and water efficient technologies.

Does your development include:

- [x] water reuse system(s) (e.g. greywater reuse system); and/or
- [x] rainwater tank(s)

Do you intend to incorporate into your development:

- [x] water efficient technologies (e.g. dual-flush toilets, water efficient showerheads, etc)

Materials efficiency

Environmentally sustainable design aims to use materials efficiently in the construction of a building. Consideration is given to the lifecycle of materials and the processes adopted to extract, process and transport them to the site. Wherever possible, materials should be locally sourced and reused on-site.

Does your development make use of:

- [x] recycled materials (e.g. recycled timber, recycled metal, etc)
- [ ] rapidly renewable materials (e.g. bamboo, cork, linoleum, etc); and/or
- [x] recyclable materials (e.g. timber, glass, cork, etc)
- [x] natural/living materials such as roof gardens and "green" or planted walls

Indoor air quality enhancement

Environmentally sustainable design aims to enhance the quality of air in buildings, by reducing volatile organic compounds (VOCs) and other air impurities such as microbial contaminants.

Do you intend to incorporate into your development:

- [x] low-VOC products (e.g. paints, adhesives, carpet, etc)

'Green' Rating

Has your proposed development been designed and assessed against a nationally recognised "green" rating tool?

- [ ] Yes
- [x] No

If yes, please indicate which tool was used and what rating your building will achieve:

NOT APPLICABLE

If yes, please attach appropriate documentation to demonstrate this assessment.

ATTACHMENT 4

If you have not incorporated or do not intend to incorporate any of the principles of environmentally sustainable design into your development, can you tell us why:

NOT APPLICABLE

Is there anything else you wish to tell us about how you will be incorporating the principles of environmentally sustainable design into your development:

PLEASE REFER TO ENCLOSED BOOKLET

When you have checked off your checklist, sign below to verify you have included all the information necessary to determine your application.

Thank you for completing this checklist to ensure your application is processed as quickly as possible.

Applicant's Full Name: WESTERN AUSTRALIAN LAND AUTHORITY **Contact Number:** 9482 7499

Applicant's Signature: [signature] **Date Submitted:** 22/5/12

BUSINESS MANAGER URBAN DEVELOPMENTS, LANDCORP

Accepting Officer's Signature:

Checklist Issued: March 2011

Government of **Western Australia**
Department of **Planning**

Your ref: 102474
Our ref: 808-02-34-3
Enquiries: Allson Vangel (Ph: 6551 9526)

City of Joondalup
PO Box 21
Joondalup WA 6919

17 August 2012

Attention: Christine Mahncke

Dear Madam

Re: Development Application for a Mixed Use Development at Lot 807 (16) Honeybush Drive, Joondalup

I refer to your letter dated 25 July 2012 regarding the above application. In accordance with the Western Australian Planning Commission's (WAPC) Notice of Delegation dated 23 December 2011, the following comments are provided with respect to this proposal.

Land Requirements

The subject property abuts Joondalup Drive, which is reserved as a Category 1 Other Regional Road (ORR) in the Metropolitan Region Scheme (MRS). Lot 1 is not affected by the ORR reservation for Joondalup Drive.

Transport Impact Assessment

The following comments are based on our assessment of the Transport Assessment prepared by Transcore dated May 2012.

Trip Generation & Distribution

The development is expected to generate an additional 771 trips in the PM peak hour, with a 30% cross trade rate. This will result in approximately 498 trips generated by the development in the PM peak hour. DoP have no objection to the methodology adopted to determine the traffic generation and distribution rates.

Access

The application proposes no access directly from Joondalup Drive. This is in accordance with the Commission's Regional Roads (Vehicular Access) Policy D.C. 5.1, which seeks to minimise the number of new crossovers onto regional roads.

Six accesses are proposed to the site, two on Sundew Rise and four on Honeybush Drive. The main access on Sundew Rise appears to be located directly opposite a proposed access for Lot 807, resulting in a 4-way priority controlled intersection. This does not appear to have been taken into consideration throughout the transport assessment.

140 William Street, Perth, Western Australia 6000
Tel: (08) 6551 9000 Fax: (08) 6551 9001 www.planning.wa.gov.au
ABN 79 051 750 680

DoP is concerned that the entry/exit arrangement for large vehicle movements on Honeybush Drive will impact on traffic safety as the proposed exit location is too close to the roundabout intersection of Honeybush Dr/Sundew Rise, particularly as large vehicles will have to cross the road to enter the roundabout. A possible solution could be to reverse the entry/exit arrangement for large vehicle movement to remove the need for these vehicles to cross Honeybush Drive.

DoP also recommend that the undercroft access on Sundew Rise be restricted to left-in left-out in the interests of traffic safety and efficiency.

Intersection Analysis

DoP has serious concerns that the 4-way intersection of Sundew Rise and the main accesses for Lots 806 and 807 have not been analysed adequately, particularly given its proximity (100m) to Other Regional Road Joondalup Drive. This will have an impact on the operation of the Joondalup Drive/Sundew Rise intersection.

Whilst we support the proposal in principal, we are not able to provide our full support until analysis of this intersection and the Joondalup Drive/Sundew Rise intersection take into consideration the adjacent development and access arrangements. Appropriate intersection treatment can then be determined in the interests of traffic safety and efficiency. It is important for transport planning to take a holistic approach using all available information, and this does not appear to have occurred. Given the high future traffic volume forecast on Joondalup Drive, this is particularly important.

We have been advised by the City they have had both transport assessments independently reviewed by GHD, and a suggested access arrangement is to allow left in/out only from each Lot onto Sundew Rise, with an additional right-turn pocket into Lot 806. DoP does not support this access arrangement as we have concerns that right-turning traffic could queue back to Joondalup Drive/Sundew Rise intersection, impacting on safety and operational efficiency of the intersection. Without proper analysis, we would only support Left-in Left-out access for both lots on Sundew Rise.

It is also noted that the Pedestrian phase was not included with the SIDRA analysis for the Joondalup Drive/Sundew Rise intersection. DoP expects that full pedestrian movement will be provided at this intersection and requests that the City liaises with Main Roads WA to ensure this. Furthermore, the Site Plans indicate that pedestrian crossing is not available on Sundew Rise at this intersection. Full pedestrian crossing facilities should be provided at this intersection in order to facilitate safe and efficient pedestrian and cyclist movements on the Principal Shared Path provided on the west side of Joondalup Drive.

Yours sincerely

Mohsin Muttaqui
Planning Manager
Transport & Movement

Government of **Western Australia**
Development Assessment Panels

Form 1 - Responsible Authority Report

(Regulation 12)

Application Details:	PROPOSED HARDWARE STORE AND SHOWROOMS
Property Location:	Lot 806 (11) Injune Way, Joondalup
DAP Name:	Metro North West JDAP
Applicant:	Greg Rowe & Associates
Owner:	Hydrox Nominees Pty Ltd
LG Reference:	DA12/0432
Responsible Authority:	City of Joondalup
Authorising Officer:	Dale Page Director Planning and Community Development
Application No and File No:	DAP12/00506
Report Date:	20 August 2012
Application Receipt Date:	23 April 2012
Application Process Days:	85 working days
Attachment(s):	1. Location Plan 2. Artist's Impression 3. Development Plans 4. Traffic Statement Report 5. City of Joondalup Environmentally Sustainable Design Checklist 6. Department of Planning Traffic Comments

Recommendation:

That the Metro North West JDAP resolves to:

A. **Determine** in accordance with Clause 4.8.2 of the City of Joondalup District Planning Scheme No. 2, that:

   (a) The car parking standard for the use "Hardware Store" shall be 1 car parking bay per 30m² Net Lettable Area.

B. Pursuant to section 31 of the State Administrative Tribunal Act 2004, reconsider its deemed refusal of application No. DAP12/00506 (DR 264 of 2012) and **approves** the application in accordance with clause 6.9 of the City of Joondalup District Planning Scheme No. 2 and the application details and accompanying plans [refer Attachment 3], subject to the condition(s) set out below.

Conditions

1. **This decision constitutes planning approval only and is valid for a period of two (2) years from the date of this decision letter. If the subject development is not substantially commenced within the two (2) year period, the approval shall lapse and be of no further effect.**

2. **A Construction Management Plan being submitted and approved prior to the commencement of construction. The management plan shall detail how it is proposed to manage:**

- **all forward works for the site;**
- **the delivery of materials and equipment to the site;**
- **the storage of materials and equipment on the site;**
- **the parking arrangements for the contractors and subcontractors;**
- **the management of dust during the construction process;**
- **other matters likely to impact on the surrounding properties;**

3. **A Refuse Management Plan indicating the method of rubbish collection is to be submitted to and approved by the City, prior to the commencement of construction.**

4. **Detailed landscaping plans shall be submitted to the City for approval prior to the commencement of construction. These landscaping plans are to indicate the proposed landscaping treatment(s) of the subject site and the adjoining road verge(s), and shall:**

- **Be drawn at an appropriate scale of either 1:100, 1:200 or 1:500;**
- **Provide all details relating to paving, treatment of verges and tree planting in the car park;**
- **Show spot levels and/or contours of the site;**
- **Indicate any natural vegetation to be retained and the proposed manner in which this will be managed;**
- **Be based on water sensitive urban design principles to the satisfaction of the City;**
- **Be based on Designing out Crime principles to the satisfaction of the City; and**
- **Show all irrigation design details.**

5. **Landscaping and reticulation shall be established in accordance with the approved landscaping plans, Australian Standards and best trade practice prior to the development first being occupied and thereafter maintained to the satisfaction of the City.**

6. **Landscaping of a sufficient height and density to screen the rear service yard walls shall be indicated on the landscaping plans required by condition 4 of this approval. This landscaping shall be established in accordance with the approved landscaping plans prior to the development first being occupied and thereafter maintained to the satisfaction of the City.**

7. **The car parking shade trees as indicated on the approved plans shall be installed prior to the development first being occupied. The trees shall be located within tree wells and protected from damage by vehicles and maintained to the satisfaction of the City;**

8. **Any proposed external building plant, including air conditioning units, piping, ducting and water tanks, being located so as to minimise any visual and noise impact on surrounding landowners, and screened from view from the street, and where practicable from adjoining buildings, with details of the location of such plant being submitted for approval by the City prior to the commencement of construction;**

9. **An onsite stormwater drainage system, with the capacity to contain a 1:100 year storm of 24-hour duration, is to be provided prior to the development first being occupied, and thereafter maintained to the satisfaction of the City. The proposed stormwater drainage system is required to be shown on the Building Permit submission and be approved by the City prior to the commencement of construction;**

10. **The car parking bays, driveways and access points shown on the approved plans are to be designed, constructed, drained and marked in accordance with the Australian Standard for Off-street Car Parking (AS/NZS2890.1 2004), Off-street Parking for People with Disabilities (AS/NZS2890.6 2009) and Off-street Commercial Vehicle Facilities (AS2890.2:2002), prior to the occupation of the development. These bays are to be thereafter maintained to the satisfaction of the City.**

11. **Bicycle parking facilities shall be provided in accordance with the Australian Standard for Off-street Car Parking – Bicycles (AS2890.3-1993) prior to the development first being occupied. Details of bicycle parking area(s) shall be provided to, and approved by, the City prior to the commencement of construction.**

12. **The retaining walls shall be treated with non-sacrificial anti-graffiti coating;**

13. **No obscure or reflective glazing is permitted to ground floor facades.**

14. **All signage not provided on the approved signage strategy plans shall be the subject of a separate Development Application;**

15. **All awnings shall have a minimum clearance of 2.75 metres above the level of the footpath;**

16. **A right turning pocket shall be provided within the existing paved median on Sundew Rise to provide access to the easternmost crossover to the site on Sundew Rise. Detailed engineering drawings are to be submitted to the City for approval prior to the commencement of construction of the vehicle parking and accesses.**

17. **A seagull island or similar traffic treatment shall be provided within the easternmost crossover on Sundew rise to ensure right turn movements out of the site are prevented at this point. Detailed engineering drawings are to be submitted to the City for approval prior to the commencement of construction of the vehicle parking and accesses.**

18. **The crossover to the service yard to the western crossover on Sundew Rise shall be restricted to left in and left out movements only. Detailed engineering drawings indicating how these movements are to be**

controlled are to be submitted to the City for its approval prior to the commencement of construction.

Advice Notes

1. **Further to condition 1, where an approval has so lapsed, no development shall be carried out without the further approval of the City having first being sought and obtained.**

2. **Bin stores to be provided with a hose cock, graded concrete floor and a floor waste connected to sewer in accordance with the City's *Health Local Law 1999*.**

3. **Areas to be used for the sale of food are to comply with the *Food Act 2008.***

Background:

Insert Property Address:		Lot 806 (271) Joondalup Drive, Joondalup
Insert Zoning	MRS:	Central City Area
	TPS:	Centre
Insert Use Class:		Hardware Store Showroom
Insert Strategy Policy:		N/A
Insert Development Scheme:		City of Joondalup District Planning Scheme No. 2 (DPS2)
Insert Lot Size:		44,260m²
Insert Existing Land Use:		Not applicable – vacant site
Value of Development:		$17,300,000.00

The subject site is located at the northern end of the City's Southern Business District, or the area commonly known as the "Quadrangle." It is bound by Injune Way to the north, Joondalup Drive to the east, Sundew Rise to the south and Honeybush Drive to the west (Attachment 1 refers).

The site is zoned Central City Area under the Metropolitan Region Scheme (MRS) and Centre under the City's District Planning Scheme No. 2 (DPS2). The site is subject to the requirements of the Joondalup City Centre Development Plan and Manual (JCCDPM). Under the JCCDPM the site is subject to the provisions of the Southern Business District, Bulk Retail/Showroom precinct.

In addition to the requirements of the JCCDPM, due regard is to be given to the Draft Joondalup City Centre Structure Plan (JCCSP) which is considered a "seriously entertained planning proposal." Under the draft JCCSP, the site is subject to the provisions of the Business Support district.

The subject site has recently been created as part of a larger subdivision of the immediate area. An application for development on the adjoining southern lot is also subject of an application to the Development Assessment Panel (DAP12/00506 refers) and due regard to that proposal has been given in an assessment of the subject proposal in relation to traffic safety and management within a larger context.

The proposed development the subject of this application is currently also the subject of a review by the State Administrative Tribunal (SAT) (DR264 of 2012 refers) as the applicant has sought a review of a deemed refusal of this application. It is noted that the review is sought as a determination had not been made within the statutory timeframe due to the City seeking additional traffic engineering advice by way of a consolidated traffic report. The matter has been considered at a Directions Hearing and the SAT has made an order pursuant to section 31 of the *State Administrative Tribunal Act 2004* that the Metro North-West Joint Development Assessment Panel determine the proposal at its meeting of 29 August 2012.

Details: outline of development application

The proposed development consists of the following:

- A hardware store including:
    - A showroom floor area of 8,293m² inclusive of ancillary administration and staff areas;
    - A garden centre component with an area of 2,220m² screened externally by chain mesh;
    - A trade centre component with an area of 2,347m²;
    - A back-of-house (receiving) component with an area of 860m²;
- Five (5) additional showrooms to be located up to the Joondalup Drive, Injune Way and Sundew Rise frontages of the property with a cumulative area of 4,885m²; and
- A 578 bay at grade car park with the main ingress and egress points from Sundew Rise and Injune Way.

Legislation & policy:

Legislation
Planning and Development Act 2005;
Metropolitan Region Scheme; and
City of Joondalup District Planning Scheme No. 2. (DPS2)

- Joondalup City Centre Development Plan and Manual (JCCDPM)
- Draft Joondalup City Centre Structure Plan (JCCSP)

State Government Policies
Nil

Local Policies

- Environmentally Sustainable Buildings within the City of Joondalup

  Encouraging the integration of environmentally sustainable design principles rather than mandating them, the policy requires applicants to complete the City's Environmentally Sustainable Checklist demonstrating inclusion of environmentally sustainable design features in the design of the development and advising if the development has been designed and assessed against a national recognised rating tool (Attachment 5 refers).

- Signs

  To protect the quality and amenity of streetscapes, minimise the visual impact of signs, encourage well designed and appropriately located signage and a level of signage to support business within the City of Joondalup.

Consultation:

Public Consultation
Public consultation was not undertaken in relation to this proposal as the development is considered to largely meet the requirements of DPS2 except as set out below. Also, it is not anticipated that the development will have a detrimental impact on surrounding developments, or the locality.

Consultation with other Agencies or Consultants
The proposed development was referred to the Department of Planning in accordance with the notice of delegations, for comments in relation to the traffic impacts on the surrounding road network. This is due to the fact that the proposal is anticipated to increase the volume of vehicles utilising Joondalup Drive by more than 100 vehicle trips per hour at peak periods.

Comments provided from the Department of Planning are attached (Attachment 6 refers). Whilst the Department supports the proposal in principle, concerns were raised, particularly regarding the need for a consolidated traffic report to be undertaken.

The Department's concerns have been reviewed by the City in conjunction with the consolidated traffic report which was commissioned by the City and prepared by GHD Services Pty Ltd. The recommendations of this independent report, which was prepared at the City's request prior to receiving formal feedback from the Department of Planning as well as additional and subsequent comments from the Department of Planning are discussed within the planning assessment section of this report.

Planning assessment:

Land Use
The application is for a new hardware store and showroom development across the subject site. The land uses "Hardware Store" and "Showroom" are both permitted land uses under both the JCCDPM and the draft JCCSP and are considered to be consistent with the objectives of both structure plans.

Whilst it is noted that the development incorporates a showroom, garden centre and trade centre within the Masters tenancy, it is recognised within DPS2 that those individual land uses fall cumulatively within the definition of Hardware store as defined within Schedule 1 and set out below:

Hardware Store: means a shop in which tools, building materials, paint, garden improvement products and plants are for sale.

For that reason above, the individual components have not been considered separately in the assessment of land uses and in the calculation of car parking.

JCCDPM and JCCSP

The proposed development is subject to the provisions of both the JCCDPM and the draft JCCSP. The revised draft JCCSP was adopted by Council at its meeting held on the 17 April 2012 for the purposes of public consultation. The structure plan is considered to be a "seriously entertained planning proposal" and has therefore been referenced in an assessment of this development.

The following table outlines those aspects of the development that do not strictly comply with the provisions of the JCCDPM and/or the draft JCCSP:

JCCDPM	**Draft JCCSP**	**Proposed**
6.3.1 Setbacks (i) Joondalup Drive 70% of the width of the front facade of the building shall be set back a minimum of 15m and a maximum of 25m. Where the maximum 25m setback is applied, a minimum area of 2 metres in depth shall be provided for uses other than vehicle access or parking (for example, pedestrian access, display purposes or landscaping) (iv) Other Roads The minimum setback from other roads shall be 6m from the primary street (street to which the building fronts) and a minimum of 3m from the secondary street.	7.2.b Building setbacks to the street A building must have a maximum setback of 3 metres from the street alignment to Joondalup Drive for a minimum of 25% of the frontage of the lot. There is no minimum or maximum setback to the street alignment for the remainder of the frontage of the lot. For all other streets, a building must have a minimum setback of 3 metres to the street alignment.	<u>Joondalup Drive</u> **3.0m minimum building setback provided to the Joondalup Drive frontage for 19% of the frontage of the lot.** **A minimum building setback of 2.86m from Tenancy 1 to Sundew Rise.** All other building setbacks in accordance with structure plan requirements.
6.3.2 Building Orientation All buildings shall be orientated to the road that the lot upon which the building is proposed fronts. Where a lot is located at the intersection of Joondalup Drive and another road then buildings within that lot shall be orientated towards Joondalup Drive.	N/A	Masters Hardware store component directed towards Joondalup Drive. **Showroom tenancies orientated internally to the site.**
6.3.3 Landscaping A minimum of 8% of the subject site shall be	7.2.i Landscaping A minimum of 8% of the subject site shall be	8.9% or 3,979m² landscaping proposed across the site.

provided as landscaping with a minimum width of 3m along any street frontage. A minimum of 1 shade tree per 4 car parking bays shall also be required.	provided as landscaping with a minimum width of 3m along any street boundaries except to the extent that a building is located within that area.	<u>Sundew Rise</u> **0.5m landscaping strip** extending to a maximum of 5.3m <u>Injune Way</u> 3.0m or greater landscaping strip provided <u>Honeybush Drive</u> **1.5m landscaping strip provided** to a maximum of greater than 3.0m to the truncations. **Shade trees to a rate of 1:9 proposed.**
6.3.7 Materials and Finishes (i) All street facades shall be constructed in a masonary material with a minimum of 50% of the facade to incorporate galss finishes. Where concrete tilt-up panelling is proposed this shall only be permitted on the street facades of building when provided with a textured paint, articulated or detailed finish or combination thereof. (ii) That part of any street facade other than the glass finish component is to incorporate other architectural elements to enhance design and visual appearance. (iii) Reflective glazing shall not be permitted and where non reflective glazing is provided such glazing shall not be used for any form of signage. (iv) Corner lots must incorporate at least one	7.2.e Ground Floor Facade Note less than 50% of the area of the ground floor street facade is to be glass windows or doors.	<u>Joondalup Drive</u> **Masters: 10.37%** **Tenancy 4: 12.4%** **Tenancy 5: 20.34%** <u>Sundew Rise</u> **Tenancy 1: 13.7%** **Tenancy 4: 29.1%** <u>Injune Way</u> **Chain mesh fencing proposed to Garden Centre facade.** **Tenancy 5: 13.93%** <u>Honeybush Drive</u> **No glazing to service yard.** Storage yard screened from view by the incorporation of screens and building design.

tower element within its design. For other lots, the incorporation of a single tower element may be considered. (v) Side and rear facades shall be constructed of a masonry material and have a painted finish. Side and rear facades directly fronting on to areas accessible to the public shall be painted with anti-graffiti paint. (vi) All servicing and building infrastructure items shall be screened from view from the street through building design, provision of landscaping or other built form means.		

Car Parking

Car parking for the proposed development has been assessed in accordance with both the current JCCDPM and clause 4.8.2 of DPS2 and is shown in the table below.

It is noted that no car parking standard is specified within Table 2 of DPS2 for the land use Hardware Store. The City has previously applied the showroom car parking standard of 1 car bay per 30m² of Net Lettable Area (NLA) for developments of this nature. Furthermore, the JCCDPM states that where no scheme standard is specified, 1 car bay for every 30m² NLA is to be provided.

Car parking in this instance has been calculated based on Gross Floor Area's (GFA) as NLA details have not been provided. A car parking surplus of twenty one car bays exists for the site as a result although it is recognised that the surplus would be greater if the development were to be assessed based on the NLA's of the various tenancies.

	Total Gross Floor Areas (GFA)	**Car Bays Required**
Masters - Main showroom - Garden Centre - Trade Centre	13,600m²	408 bays
Tenancy 1	1,040m²	31.2 (32) bays
Tenancy 2	650m²	19.5 (20) bays
Tenancy 3	575m²	17.25 (18) bays
Tenancy 4	1,000m²	30 bays
Tenancy 5	1,620m²	48.6 (49) bays
Total Bays Required		**557 bays**

Total Bays Provided		**578 bays**

Traffic Impacts

In order to effectively assess the impact of this development on the surrounding road network, the proposal was considered in conjunction with the development proposed to be constructed on the site immediately to the south of the subject site (DP12/00582 refers).

This proposal includes an ingress and egress point to Sundew Rise that is integral to the development, integrating generated traffic into the existing road network. An assessment of the adjoining site also identified integral vehicle access points along Sundew Rise. As a result of the potential cumulative effect of all access points and their proximity to one another, a consolidated traffic report was commissioned by the City and prepared by GHD Services Pty Ltd. This report was commissioned to ensure traffic and accesses to both sites would be appropriately managed in a safe and equitable manner.

The consolidated traffic report identified four access and intersection options that could provide varying levels of satisfactory access into both sites. These options were as follows:

- Roundabout between both accesses along Sundew Rise;
- Banned right turns along Sundew Rise;
- Right turn only into Lot 806 (11) Injune Way (subject site); and
- Right turn into Injune Way from Joondalup Drive.

Each of the above four options were assessed in a matrix type system against seven different criteria, to identify which option(s) would provide the safest and most equitable access to both sites. It was determined that a right turn pocket into Lot 806 (11) Injune Way only would be the best option.

This option would restrict the eastern most ingress/egress point of the adjoining Lot 807 to left in/left out movements only, with a dedicated right turning pocket allowing for right in, left in and left out access to the subject development at Lot 806 (11) Injune Way.

Based on the findings of the GHD Services Pty Ltd consolidated report, the City is satisfied that a right turning pocket into Lot 806 (271) Joondalup Drive is the safest and most equitable option of traffic management for the two adjoining developments. Modifications to the existing road and median strip are required in order to cater for this configuration and a condition of approval has been incorporated into this determination to allow for the appropriate adjustments to be made.

Comments provided by the Department of Planning indicate concern with the option of a right turn pocket into the subject site due to queuing distances to the Joondalup Drive/Sundew Rise intersection. This was considered in the GHD Services Pty Ltd report and, based on traffic modelling data for both developments; the right turn movement would be unlikely to have an effect on either the signalised intersection or to vehicles accessing Sundew Rise. It is noted that the Department of Planning was not provided with a copy of the GHD Services Pty Ltd report to assist with its review of the developments as this was being prepared at the same time.

The consolidated traffic report also indentified that pedestrian access between the two sites would be best approached at the proposed site accesses. As a result, no further pedestrian access path is sought for the subject site.

In addition to the above, the applicant seeks to modify the existing median strip along Sundew Rise adjacent to the proposed service yard to limit the ingress and egress to left in and left out access only. Those modifications have been assessed by City officers; with the raising of kerb levels to restrict movements not supported due to the proximity of a crossover to the adjoining site's undercroft car park. It is considered that this issue can be satisfactorily addressed through a condition of approval.

Building Design

The proposed development has been designed to ensure that the Master's building remains the primary focal point of the site, with the external showroom tenancies orientated internally. The incorporation of glazing and contrasting colours to the street facades of those tenancies ensures that an interactive frontage is maintained, despite the internal orientation.

The JCCDPM requires developments along Joondalup Drive to be setback a minimum of 15m for 70% of the width of the facade. The draft JCCSP however requires buildings to be setback a maximum of 3 metres for 25% of the frontage of the lot.

Tenancy 5, which is proposed at a setback of 3 metres to the Joondalup Drive frontage occupies 19% of the frontage of the lot excluding truncations. It is however considered that the design achieves the intent of both structure plans ensuring that the development relates appropriately to the street with the established entrance of Masters located within the centre of the frontage promoting the Masters building as the primary focal point.

The development also seeks a reduced setback from Tenancy 1 to the Sundew Rise frontage with a setback of 2.86m sought where both the current and draft structure plans require a minimum 3.0m building setback. The variation to the standard is considered minimal, with sufficient landscaping provided in front of the tenancy to soften the impact of the building, together with adequate glazing and a painted finish to ensure articulation is provided for this portion of the development.

The draft JCCSP requires not less than 50% of the ground floor street facades to be glazed. The design of the Masters building proposes glazing to only 10.37% of the eastern facade of the building. However, the incorporation of a visually permeable chain wire mesh to the garden centre and coloured panels to the main facade ensure that sufficient articulation is provided to the building facade. The Masters building design has been based on the store design model used nationally with exceptions made in this instance to provide greater glazing and articulation to the main facade in order to align with the objectives of both structure plans.

Glazing has been provided to both the internal and external street facades of the showroom tenancies as viewed from Joondalup Drive, Sundew Rise and Injune Way, although at a substantial percentage less than the required 50% under the draft JCCSP.

An amount of remnant vegetation is proposed to remain along the Joondalup Drive frontage obscuring a portion of Tenancy 4 as viewed from the primary frontage. Sufficient articulation has been achieved in addition to the glazing proposed, by the

incorporation of painted tilt up panels to reduce the perception of building bulk of those tenancies as viewed from the street.

Landscaping

Landscaping of the site exceeds the required minimum of 8% of the site area. The applicant seeks approval however, for reduced landscaping strips to Sundew Rise and Honeybush Drive. Whilst both DPS2 and the draft JCCSP require a 3.0 metre wide landscaping strip, it is considered appropriate in this instance to approve variations to that requirement to accommodate additional car bays. It is important to note that although there are portions of the landacping that do not meet the widths required, there are portions of the landscaping strips that exceed the minimum requirement.

In addition it is intended that as a part of the "Quadrangle" development, the developer (Landcorp) has commenced landscaping treatments to the verge as part of the subdivision works, adding an additional 5,250m² of landscaping as viewed from the street and adjoining properties.

It is considered that the Honeybush Drive façade of the development will remain primarily a service yard area and that a condition requiring screening of a sufficient height and density so as to reduce the visual impact and bulk of this wall is appropriate.

A reduced shade tree rate of 1:9 bays has been applied to the development where DPS2 requires a rate of 1:4 bays. Given that the development exceeds the landscaping requirements in respect to site coverage and that extensive planting within the verge is proposed, the reduced shade tree ratio is considered sufficient to reduce the visual impacts of the car park on the street whilst allowing for some shade, shelter and whilst still ensuring casual surveillance within the car park and to and from the buildings on site.

Conclusion:

As outlined above, the proposed development for a Hardware Store and Showrooms generally complies with the requirements of both the JCCDPM, the draft JCCSP and DPS2

The design of the development has been well thought out to ensure the objectives of both structure plans are met and ensuring that the physical and visual interaction between the development and Joondalup Drive creates an attractive and positive streetscape appearance.

Location plan

ATTACHMENT 1

ATTACHMENT 2

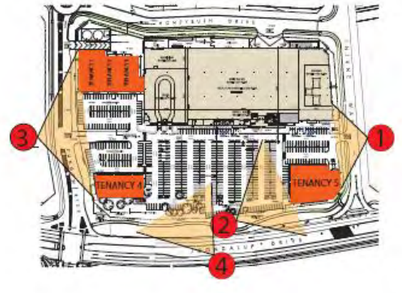
DATE	ISSUE	AMENDMENT	CHK
08-05-2012	PRELIMINARY ISSUE		

VIEW 1

VIEW 2

VIEW 3

VIEW 4



ARTIST'S IMPRESSION

Masters Home Improvement

PRIDE

Masters Home Improvement
Joondalup Drive (WA)

5 10 20 50 SCALE:

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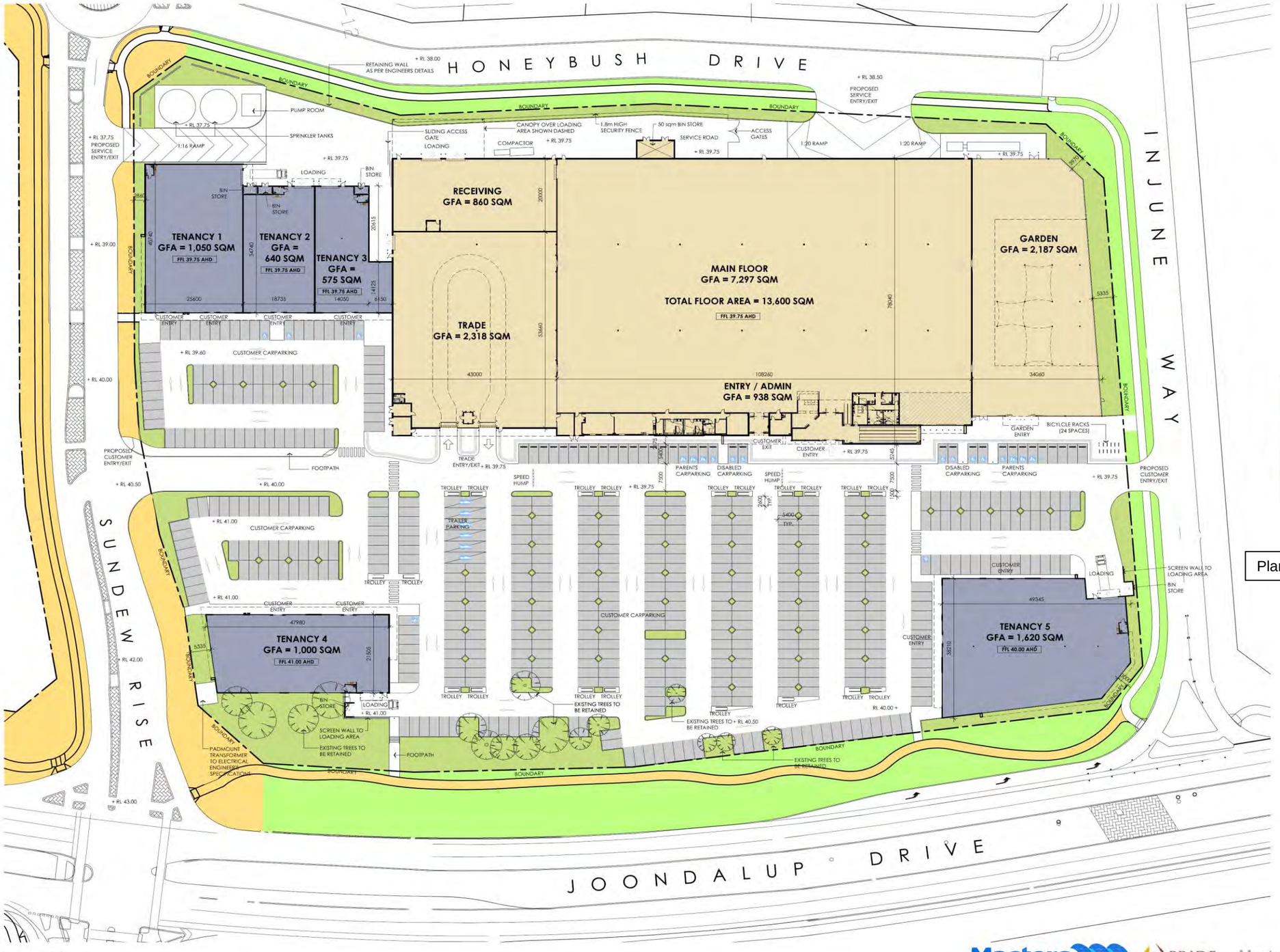
JOB NO: 2742
DATE: MAY 2012
DRAWN: JP

DA 09

LEFFLER SIMES ARCHITECTS



DATE	ISSUE	AMENDMENT	CHK
08.06.12	A	SUNDEW RISE ENTRY REVISED. PATH ADDED ALONG SUNDEW RISE. ROUNDABOUT ADDED TO SUNDEW RISE. BIN STORES ADDED. 2 CAR BAYS ADDED.	SAJ
15.06.12	B	SUNDEW RISE ENTRY REVISED. REAR FENCE REDUCED TO 1.8M HIGH. BIN STORES MOVED & SCREENS ADDED TO T4 & T5 LOADING AREAS.	SAJ

LEGEND

eRL	EXISTING LEVELS
RL	PROPOSED FINISHED SURFACE LEVELS
GL	GROUND LEVEL

SIGNAGE STRATEGY

LEGEND

- LANDSCAPING INSTALLED BY LANDCORP
- ON SITE LANDSCAPING 3979sqm (8.98%)
- OFF SITE VERGE. C.O.J. REQUIRE OWNER TO LANDSCPAPE & MAINTAIN 5250sqm

Plan Received 18 June 2012

Site Plan

5 10 20 50 SCALE: 1:250_@_A1

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DATE: JUNE 2012
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DA01/B

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Masters Home Improvement

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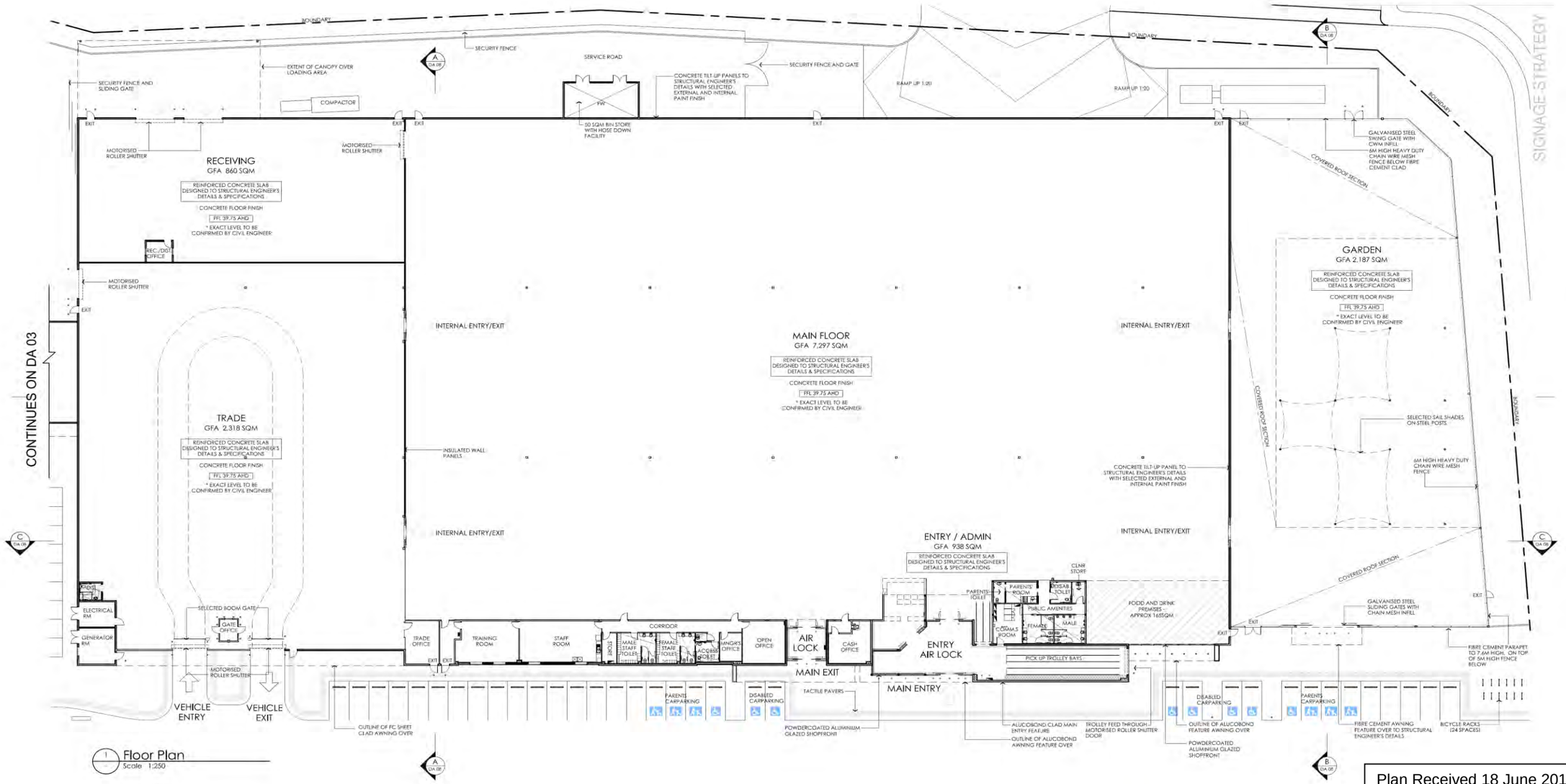
Masters Home Improvement
Joondalup Drive (WA)

DATE	ISSUE	AMENDMENT	CHK
20-04-12	P1	PRELIMINARY ISSUE	SAJ
03-05-12	P2	PRELIMINARY ISSUE	SAJ
08.06.12	A	MASTERS BIN STORE ADDED	SAJ
13.06.12	B	ADDITIONAL WINDOWS ADDED IN FACADE	SAJ



1 Floor Plan
Scale 1:250

Plan Received 18 June 2012

Floor Plan

Masters Home Improvement | PRIDE | Masters Home Improvement Joondalup Drive (WA)

5 10 20 50 SCALE: 1:250_@_A1

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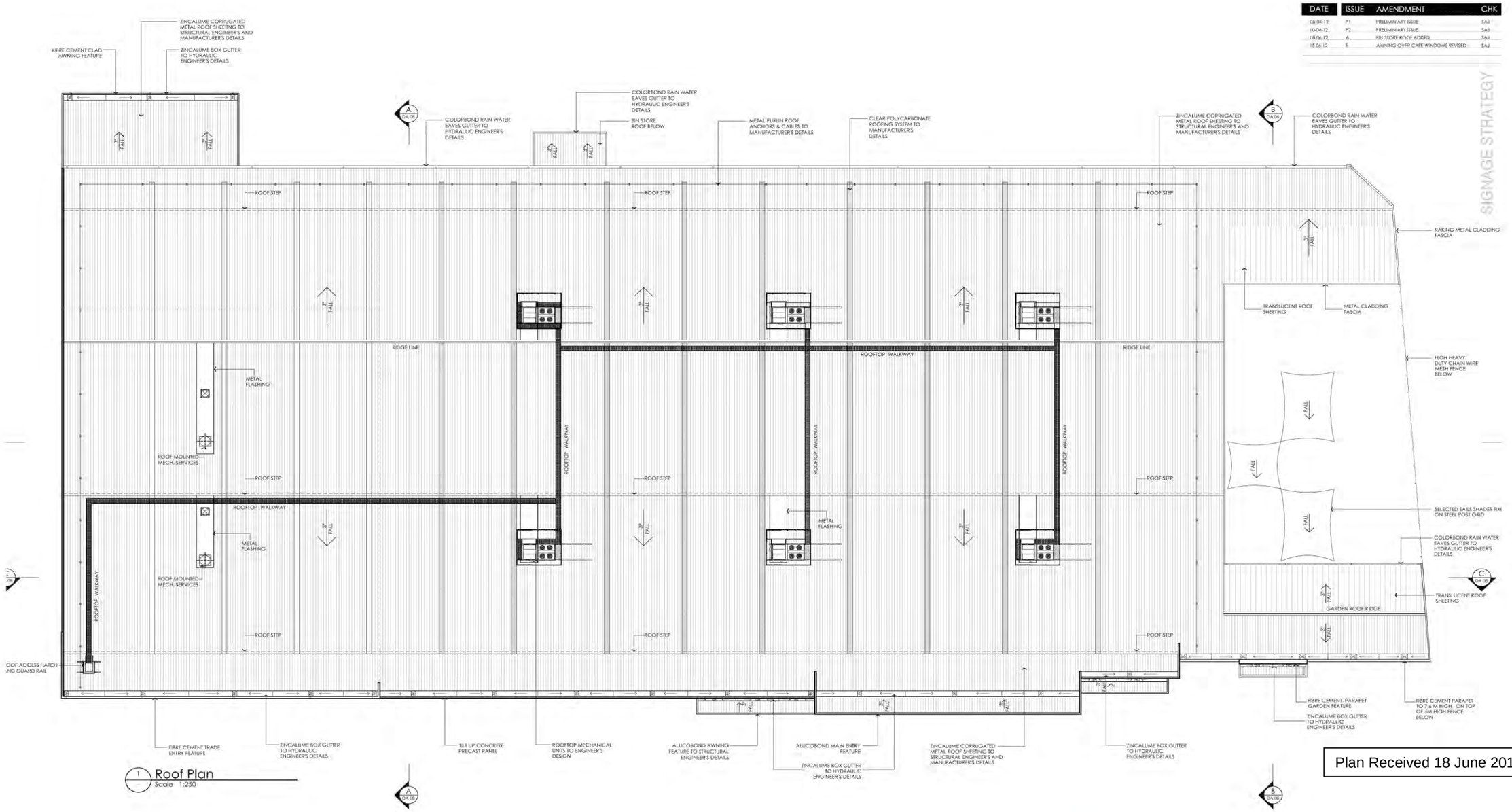
JOB NO: 2742
DATE: JUNE 2012
DRAWN: TSC

DA02/B

LEFFLER SIMES ARCHITECTS

DATE	ISSUE	AMENDMENT	CHK
05.04.12	P1	PRELIMINARY ISSUE	SAJ
10.04.12	P2	PRELIMINARY ISSUE	SAJ
18.06.12	A	BIN STORE ROOF ADDED	SAJ
15.06.12	B	AWNING OVER CAFE WINDOWS REVISED	SAJ

SIGNAGE STRATEGY



1 Roof Plan
Scale 1:250

Plan Received 18 June 2012

Roof Plan

5 10 20 50 SCALE: 1:250_@_A1

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JOB NO: 2742
DATE: JUNE 2012
DRAWN: TSC

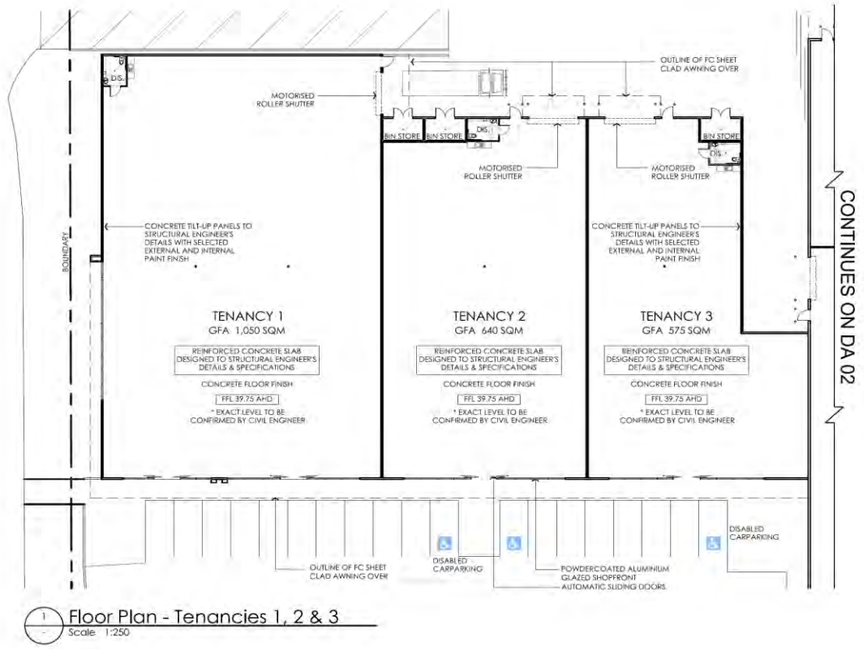
DA04/B

LEFFLER SIMES ARCHITECTS

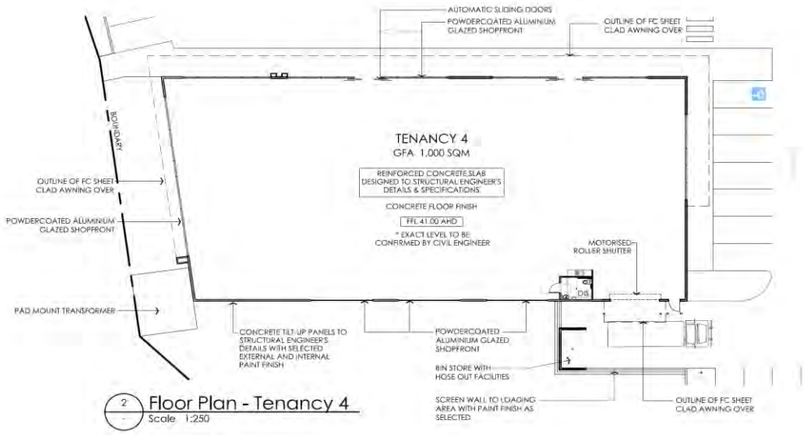
Masters Home Improvement PRIDE Masters Home Improvement Joondalup Drive (WA)

DATE	ISSUE	AMENDMENT	CHK
05.04.12	P1	PRELIMINARY ISSUE	SAJ
10.04.12	P2	PRELIMINARY ISSUE	SAJ
04.06.12	A	PLANS REVISED TO SUIT CHANGES TO ELEVATIONS. BIN STORES ADDED	SAJ
15.06.12	B	T4 & T5 BIN STORES RELOCATED & SCREEN WALLS ADDED TO LOADING AREAS. T4 ADDITIONAL WINDOWS ADDED	SAJ

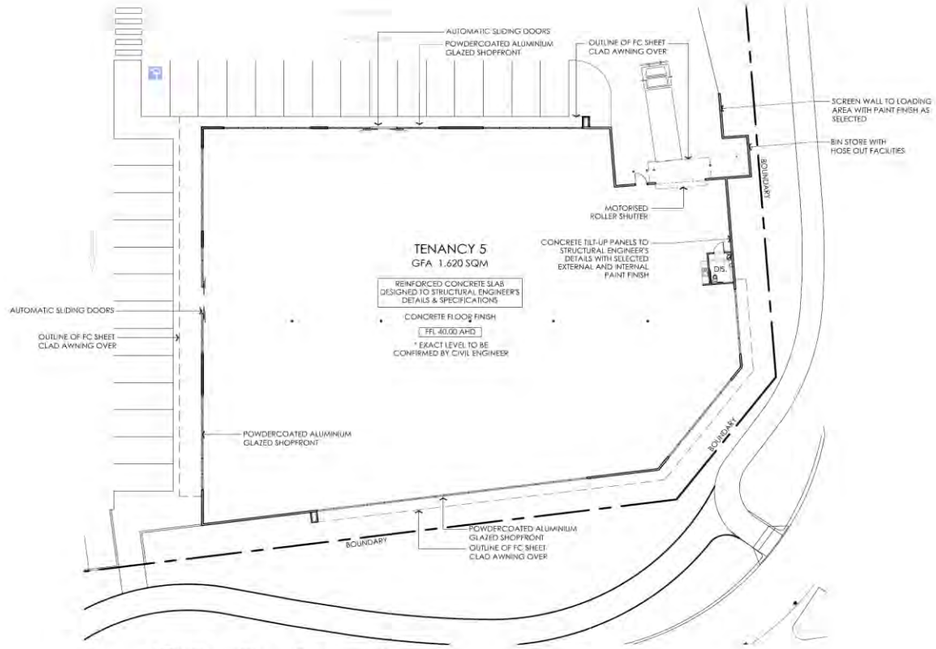
SIGNAGE STRATEGY



1 Floor Plan - Tenancies 1, 2 & 3
Scale 1:250



2 Floor Plan - Tenancy 4
Scale 1:250



3 Floor Plan - Tenancy 5
Scale 1:250

Plan Received 18 June 2012

Floor Plans - Tenancies

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1:5 1:10 1:20 1:50 SCALE: 1:250_@_A1

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JOB NO: 2742
DATE: JUNE 2012
DRAWN: TSC

DA03/B

LEFFLER SIMES ARCHITECTS

DATE	ISSUE	AMENDMENT	CHK
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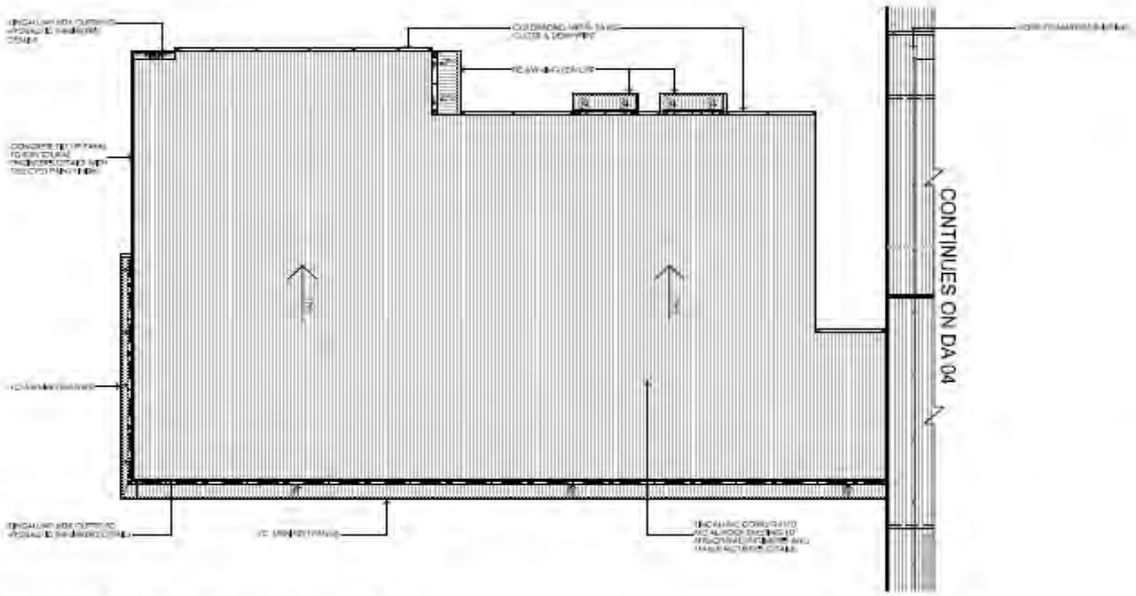
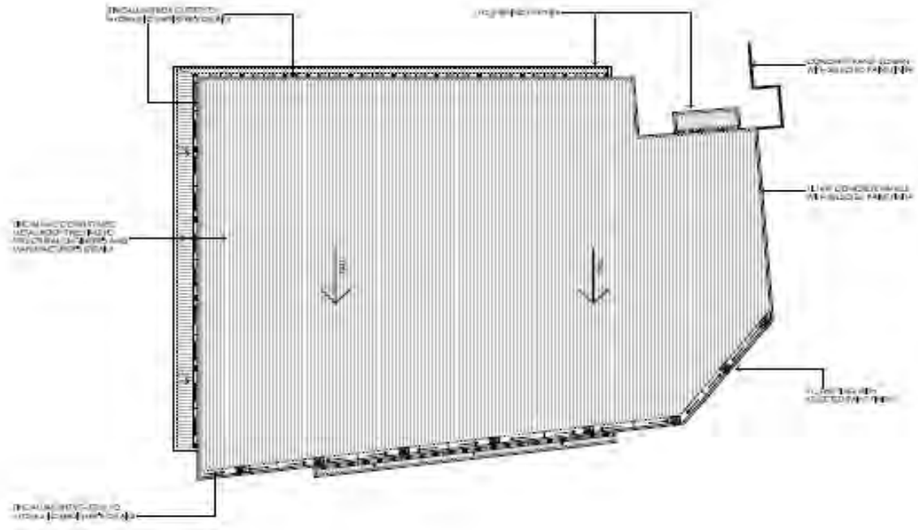
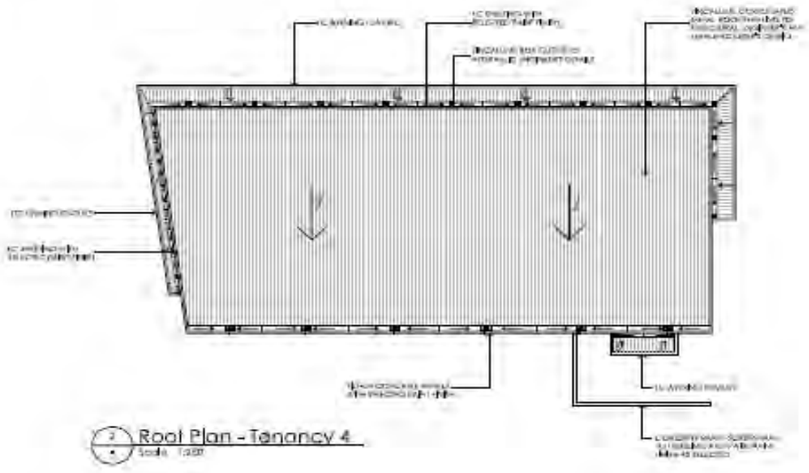


1 Roof Plan - Tenancies 1, 2 & 3
Scale 1:200



2 Roof Plan - Tenancy 5
Scale 1:200



3 Roof Plan - Tenancy 4
Scale 1:200

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Roof Plans - Tenancies

Masters PRIDE Masters Home Improvement Joondalup Drive (WA)

0 5 10 20 50 SCALE: 1:250 @ A1

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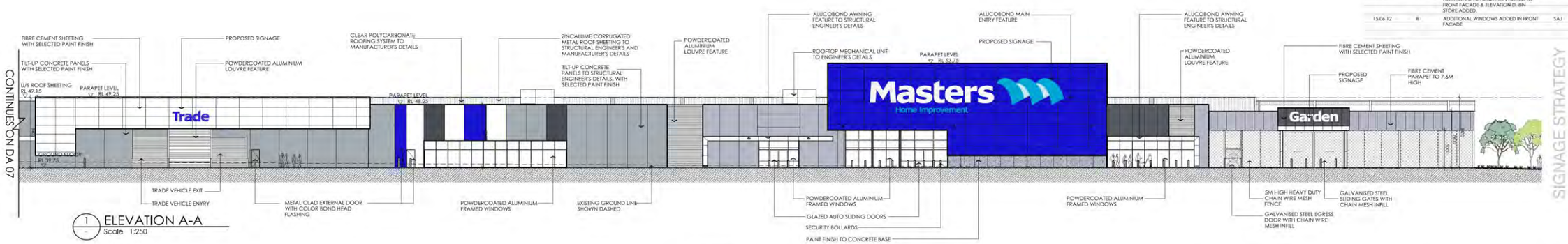
JOB NO: 2742
DATE: JUNE 2012
DRAWN: TSC/CHW

DA05/A

LEFFLER SIMES ARCHITECTS

DATE	ISSUE	AMENDMENT	CHK
24.08.12	A	ENTRY FEATURE HEIGHT INCREASED, ADDITIONAL ARTICULATION ADDED TO FRONT FACADE & ELEVATION D. BIN STORE ADDED.	SAJ
15.06.12	B	ADDITIONAL WINDOWS ADDED IN FRONT FACADE	SAJ



1 ELEVATION A-A
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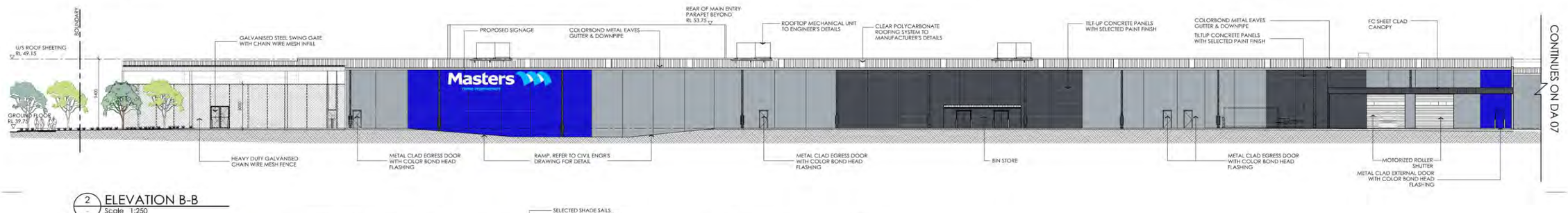

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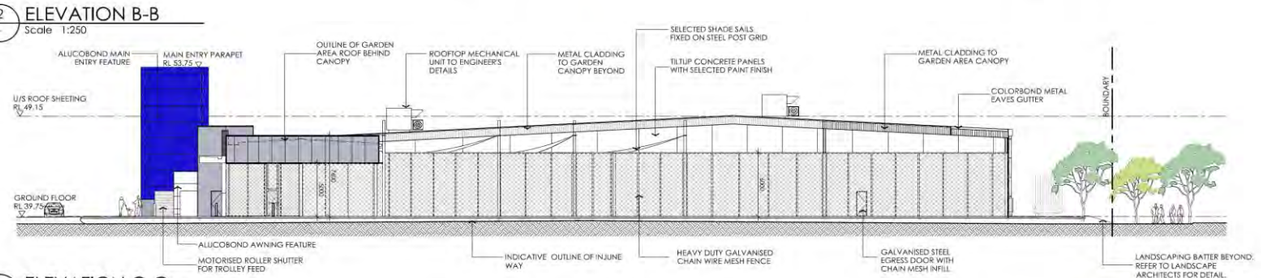
Scale 1:250



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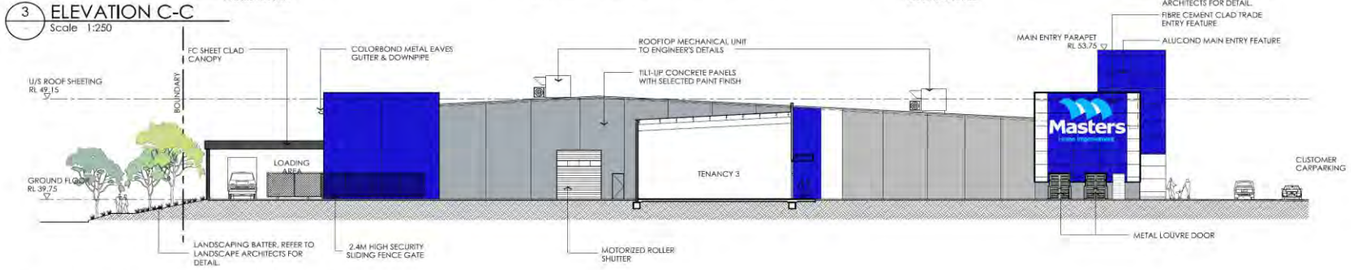
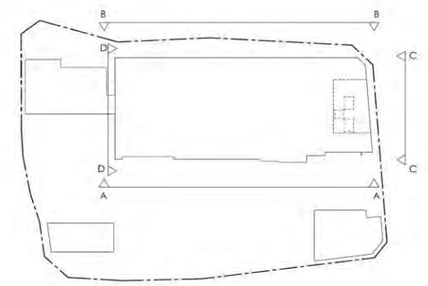


4 ELEVATION D-D
Scale 1:250

Plan Received 18 June 2012



KEY PLAN NTS

Elevations

Masters Home Improvement PRIDE Masters Home Improvement Joondalup Drive (WA)

5 10 20 50 SCALE: 1:250_@_A1

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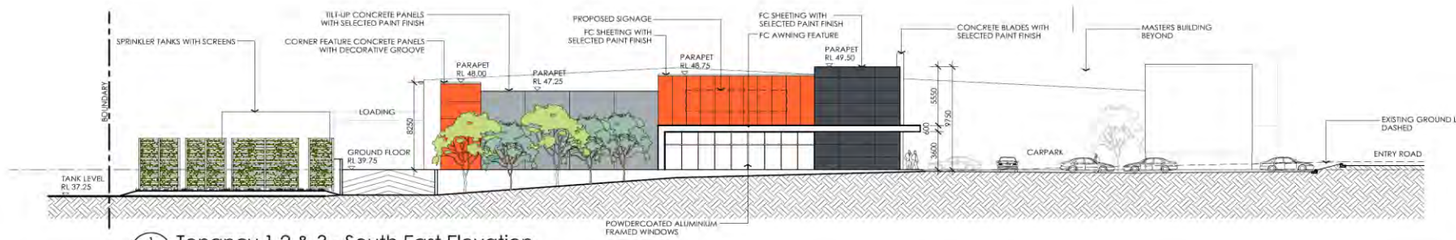
JOB NO: 2742
DATE: JUNE 2012
DRAWN: CHW

DA06/B

LEFFLER SIMES ARCHITECTS

DATE	ISSUE	AMENDMENT	CHK
08.06.12	A	ORANGE COLOUR ADDED. T5 NE & NW ELEVATIONS REVISED. PYLON DELETED. T4 NW & T5 SE ELEV AWNING REVISED. BIN STORE DOORS ADDED.	SAJ
15.06.12	B	WINDOWS & SCREEN WALL ADDED T4 NE ELEVATION. SCREEN WALL ADDED T5 NW ELEV.	SAJ

SIGNAGE STRATEGY

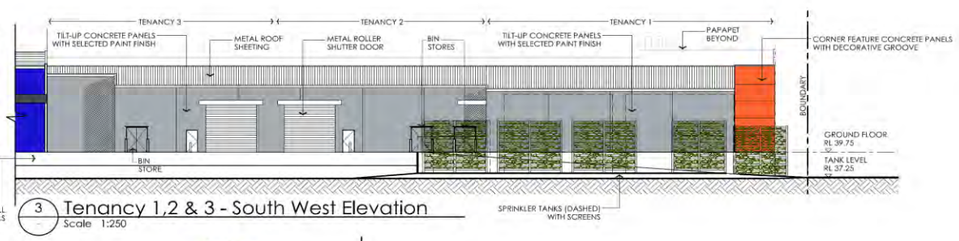


1 Tenancy 1,2 & 3 - South East Elevation
Scale 1:250

2 Tenancy 1,2 & 3 - North East Elevation
Scale 1:250

CONTINUES ON DA 06

RETAINING WALL TO ENGR'S DETAILS



3 Tenancy 1,2 & 3 - South West Elevation
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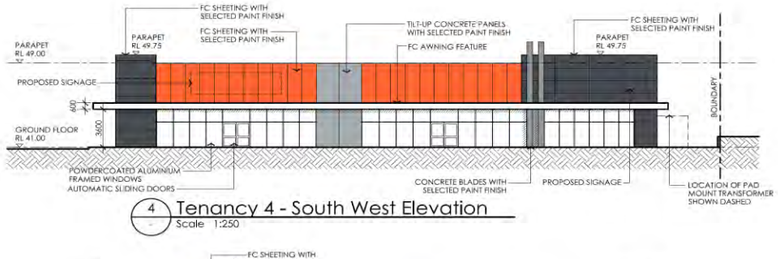
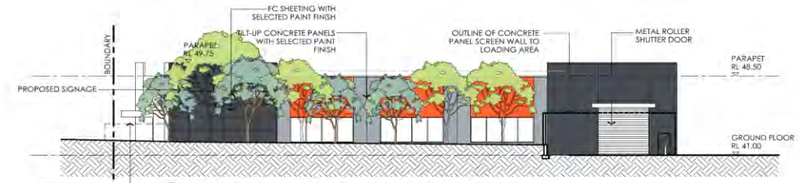


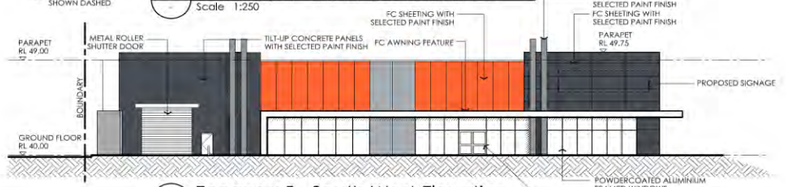
4 Tenancy 4 - South West Elevation
Scale 1:250

5 Tenancy 4 - South East Elevation
Scale 1:250



6 Tenancy 4 - North East Elevation
Scale 1:250

7 Tenancy 4 - North West Elevation
Scale 1:250



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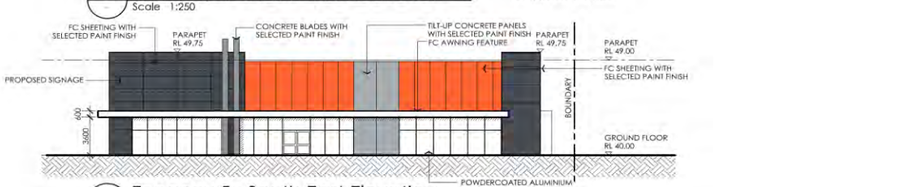

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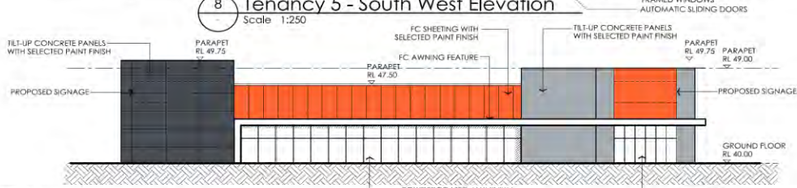

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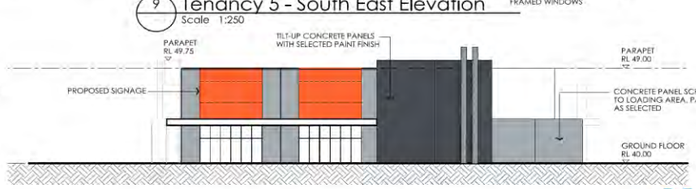

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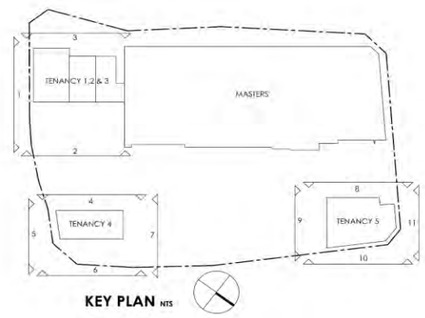

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Elevations

5 10 20 50 SCALE: 1:250_@_A1

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DA07/B

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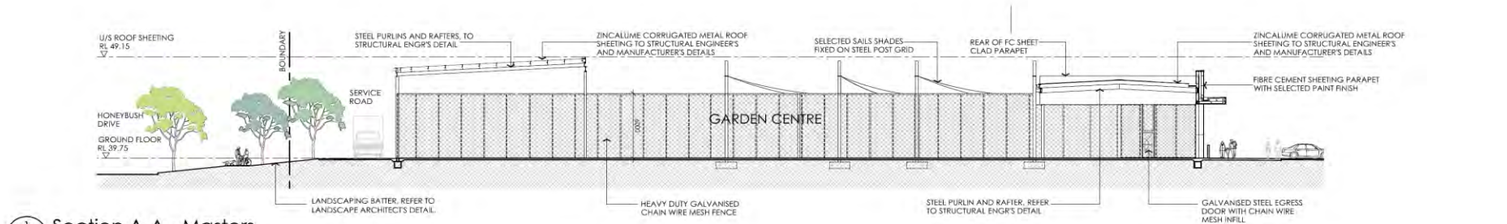
DATE	ISSUE	AMENDMENT	CHK
01.06.12	A	PYLON SIGN DELETED, MASTERS ENTRY FEATURE SAJ PARAPET LEVEL RAISED	
15.06.12	B	WINDOWS EXTENDED IN MASTERS CAFE AREA. SAJ WINDOWS ADDED IN T4 SECTION E-E.	

SIGNAGE STRATEGY



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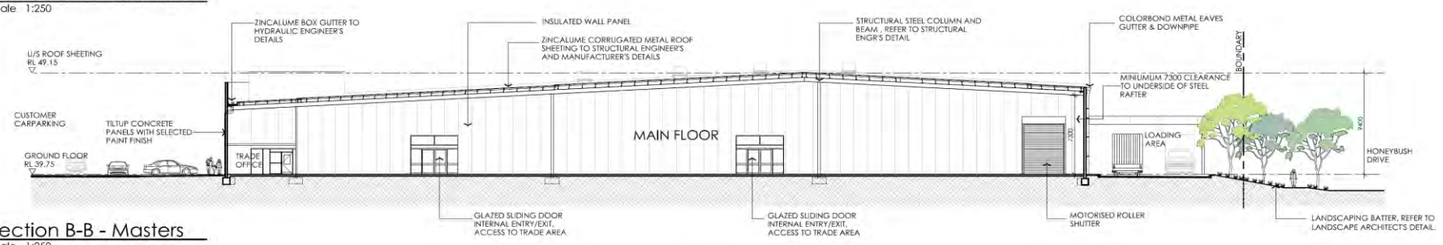

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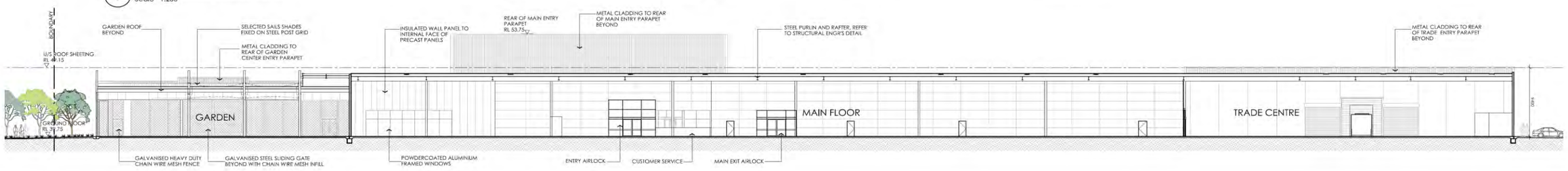

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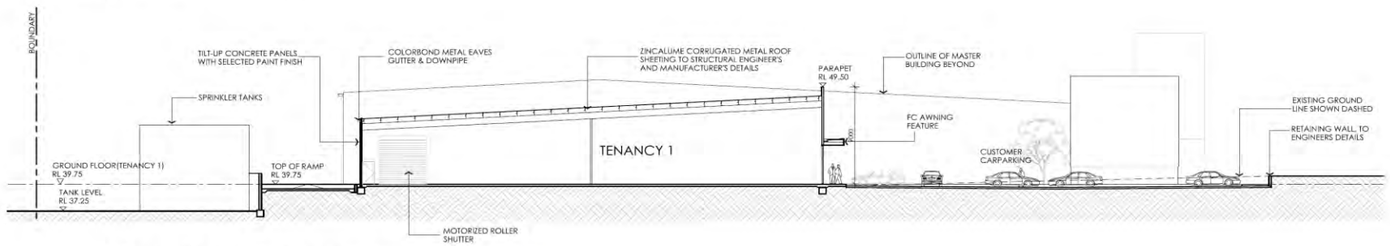

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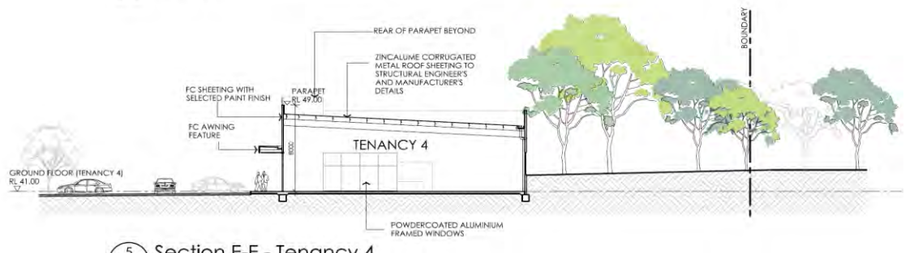

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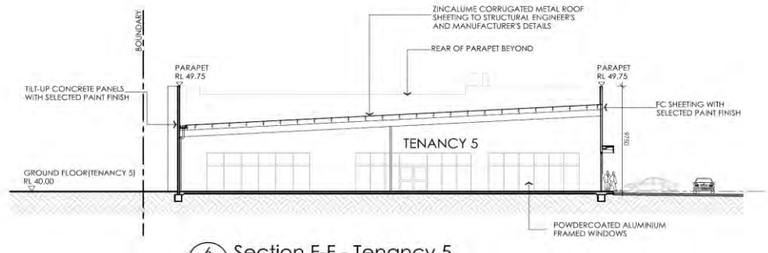

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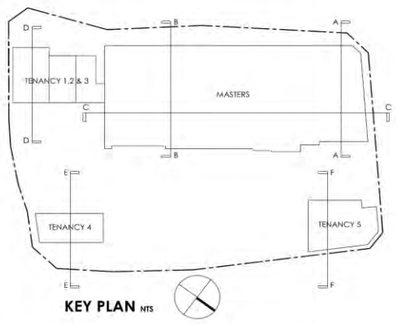

KEY PLAN NTS

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Sections

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DRAWN: TSC/CHW

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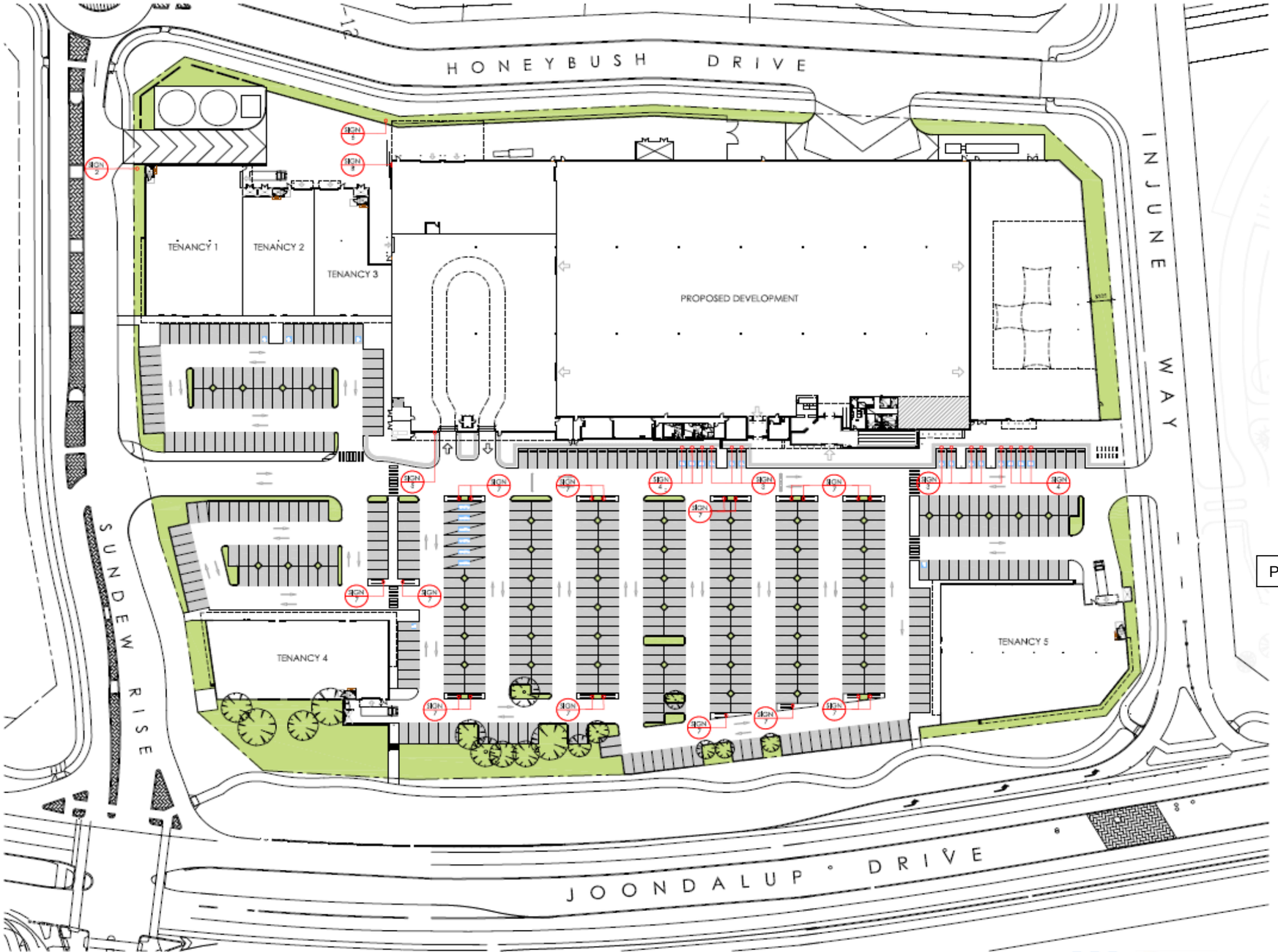

DATE	ISSUE	AMENDMENT	CHK
10.04.12	P1	PRELIMINARY ISSUE	SAJ
04.06.12	A	SIGNAGE REVISED	SAJ
15.06.12	B	SITE PLAN REVISED	SAJ

SIGNAGE STRATEGY

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Signage Site Plan

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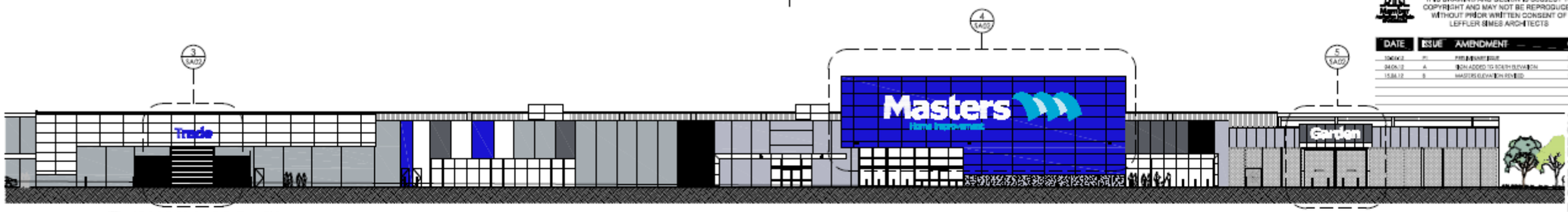
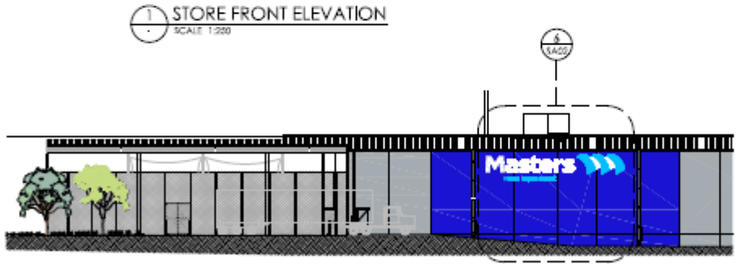
DATE	ISSUE	AMENDMENT	CHK
13.04.12	P1	PRELIMINARY ISSUE	SAJ
24.04.12	A	SIGN ADDED TO SOUTH ELEVATION	SAJ
15.06.12	B	MASTERS ELEVATION REVISED	SAJ

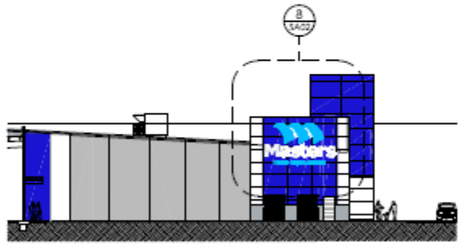
SIGNAGE STRATEGY



1 STORE FRONT ELEVATION
SCALE 1:200



2 STORE REAR ELEVATION
SCALE 1:200



7 SOUTH ELEVATION
SCALE 1:200

8 STORE SIGNAGE SIDE SIGN
SCALE 1:100

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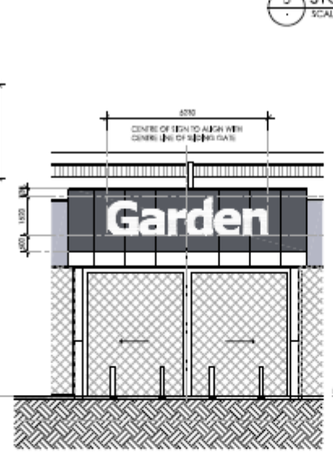
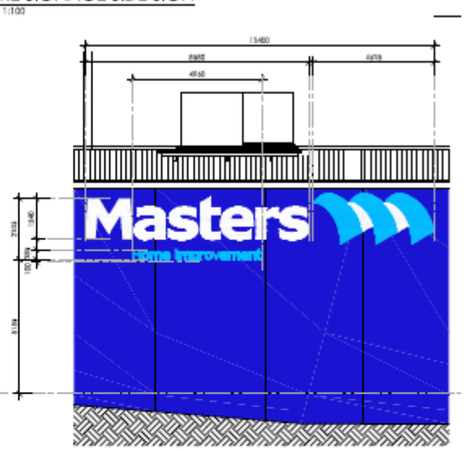
3 STORE SIGNAGE TRADE SIGN
SCALE 1:100

4 STORE SIGNAGE - MASTERS SIGN
SCALE 1:100



5 STORE SIGNAGE GARDEN SIGN
SCALE 1:100



6 STORE SIGNAGE REAR SIGN
SCALE 1:100

Building Signage Elevations and Details

SCALE: AS SHOWN @ A1

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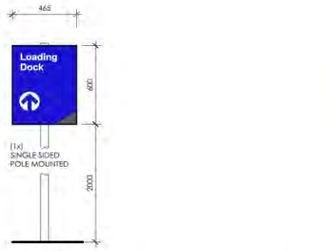
DATE	ISSUE	AMENDMENT	CHK
10-04-12	P1	PRELIMINARY ISSUE	SAJ
04.06.12	A	PYLON DELETED, QTY OF TROLLEY SIGNS REVISED	SAJ

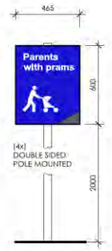
SIGNAGE STRATEGY



Carpark sign, portrait
- 465mm x 600mm high
- Type white reflective vinyl
- Double or single-sided, freestanding sign positioned near the respective area indicated
- Posts to be capped. Capping in aluminium to match posts. Footings to engineers specification
- For single-sided, freestanding signs, paint entire rear panel to match Alucobond Ultramarine Blue
- Can be single-sided, fixed to wall if needed
- When wall mounted screw fix panel to aluminium angle, 2mm aluminium panel notched and folded all sides
- Non illuminated signs

SIGN 2 LOADING DOCK SIGNAGE
SCALE 1:20

SIGN 3 ACCESSIBLE CARPARKING SIGNAGE
SCALE 1:20



SIGN 4 PARENTS WITH PRAMS CAR PARK SIGNAGE
SCALE 1:20

SIGN 5 TRADE ENTRY SIGNAGE
SCALE 1:20

SIGN 6 TRUCK SERVICE ROAD SIGNAGE
SCALE 1:20

Trolley Bay Signage
- 750mm x 600mm High
- Type white reflective vinyl to face.
- Single-sided sign to be mounted on Trolley Bay steelwork
- Paint entire rear panel to match Alucobond Ultramarine Blue
- Non Illuminated Signs

SIGN 7 TROLLEY BAY RETURN SIGNAGE
SCALE 1:20

Carpark sign, landscape
- 930mm x 600mm High
- Type white reflective vinyl to face.
- Double or single-sided, freestanding sign positioned near the respective area indicated
- Posts to be capped. Capping in aluminium to match posts. Footings to engineers specification
- For single-sided, freestanding signs, paint entire rear panel to match Alucobond Ultramarine Blue
- Can be single-sided, fixed to wall if needed.
- Non Illuminated Signs

SIGN 8 LOADING DOCK SIGNAGE
SCALE 1:20

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Ancillary Signage Elevations and Details

Masters Home Improvement PRIDE Masters Home Improvement Joondalup Drive (WA)

SCALE: AS SHOWN @ A1

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SA03/P1

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SHAWMAC

CONSULTING CIVIL & TRAFFIC ENGINEERS, RISK MANAGERS

Project: **Transport Assessment**

HOME IMPROVEMENT SUPERSTORE

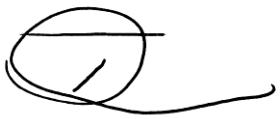
Joondalup Drive, Joondalup V3

Site Ref

Client: **Pride Projects**

Author: Tony Shaw. BSc Dip Eng Surv Grad Dip Bus MIPWEA RABQSA

Signature:



Date: 03/07/12

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1. Summary

This report assesses the traffic impacts associated with the proposed development of a home improvement superstore commercial facility on Joondalup Drive at the intersection of Sundew Rise, Joondalup.

This report was commissioned by the development project management consultant, Pride Projects Pty Ltd, and was prepared by Shawmac Pty Ltd.

This transport statement looks to quantify and comment on the likely traffic impacts associated with the proposed development of a home improvement superstore facility site in conjunction with the existing transport network and any changes that are expected to occur.

Key transport issues focus on the utilisation of road links adjacent to the site.

The peak activity time for the home improvement superstore business is around midday on weekend days. That peak activity time is during a moderate time for general road activity and therefore is not at the time of highest impact of traffic from other sources on the external transport network. The peak traffic demand on the roads around the site is expected to occur in the weekday evening period.

The total traffic generated by the site is estimated to be 6,200 vehicles per day. That traffic flow will be distributed across the two main access locations and onto Sundew Rise, Injune Way and ultimately onto Joondalup Drive. The peak flow is estimated to be 570 vehicles per hour. Traffic flow estimates indicate that no road would be expected to exceed the infrastructure capacity due to traffic generation from this site's land use.

The pedestrian and cycle movements near the site are in the public domain and there are few dedicated facilities for those users. The proposed site uses are unlikely to generate many bicycle or pedestrian oriented trips.

2. Introduction

Shawmac has been requested to determine and consider the traffic impacts that the development of a commercial facility on Joondalup Drive Joondalup will have on the road network through increased traffic and parking demands. The commercial development site is situated on part lot 271 and is bounded by Joondalup Drive, Injune Way, Honeybush Drive and Sundew Rise.

The report is prepared in response to a request from Pride Projects Pty Ltd as the project managers for the developers of the commercial site.

The development proposal looks to utilise the 4.4 hectare lot area to create a large bulky goods commercial building and associated car park.

The development site is located in the suburb of Joondalup approximately 17 km north of Perth CBD as shown on Figure 1.

Figure 1. Metropolitan context

This transport statement looks to quantify and comment on the likely traffic impacts associated with the proposed altered site use, including impacts associated with the expected increases in vehicle numbers and movements at links to existing roads.

The transport assessment considers aspects associated with:

- Generation of traffic including impacts on existing roads and key intersections;
- Movement of commercial vehicles;
- Interaction with proposed general land uses on vacant lands around this site;
- Use of public transport;
- Development ingress and egress issues;
- Internal parking needs and movement around parking facilities;
- Any potential conflicts between vehicles, pedestrians and cyclists.

The site is covered by the current City of Joondalup Town Planning Scheme and is zoned "Centre".

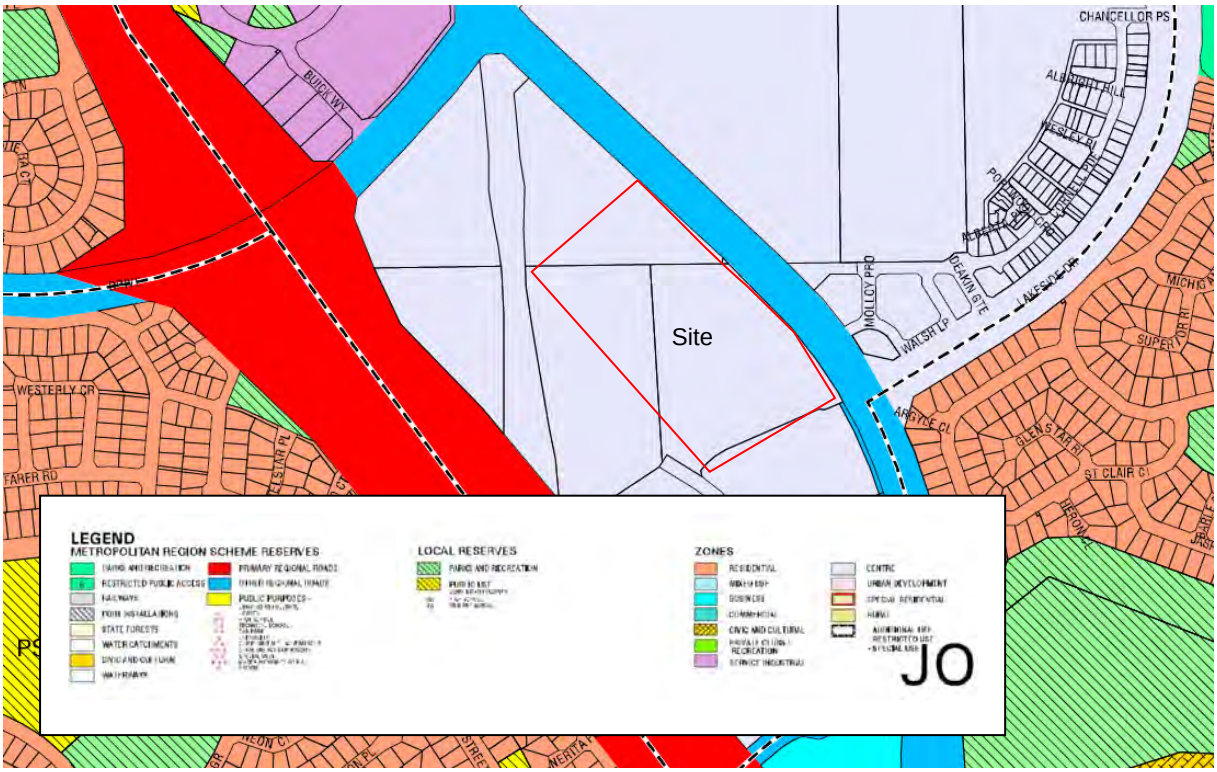


Figure 2. Town Planning Scheme extract

The proposed development is considered to be a home improvement superstore for the purposes of assessing the transport impact.

The internal design and operation of the proposed home improvement superstore is different from existing large hardware stores generally found across Australia and the concept is based upon a successful model utilised in North America. The following four photographs illustrate the difference expected with many design guidance areas and operating displays of products.


Kitchen Project Center
Centro de proyectos para la cocina
Countertop Design Center
Diamond


Toilet Kits
Fashion Bath
Decoración para baños
Bath Cabinetry
Gabinetes para baño

The land use of "home improvement superstore" has a definition in the Institute of Transport Engineers Trip Generation publication as:

> *"Home improvement superstores are free-standing facilities that specialise in the sale of home improvement merchandise. These stores generally offer a variety of customer services and centralised cashiering. Home improvement superstores typically maintain long store hours 7 days a week. Examples of items sold in these stores include lumber, tools, paint, lighting, wallpaper and panelling, kitchen and bathroom fixtures, lawn equipment and plant and garden accessories."*

3. Development Proposal

3.1. Regional Context

The proposed development is in accordance with the land use aim identified in the Town Planning Scheme and the provision of a large home improvement superstore facility is a use that is compatible within the zoning.

Joondalup Drive provides strong transport links to the Perth Metropolitan major road network.

3.2. Proposed Land Use

The development layout of the proposed home improvement superstore is shown in Figure 3.

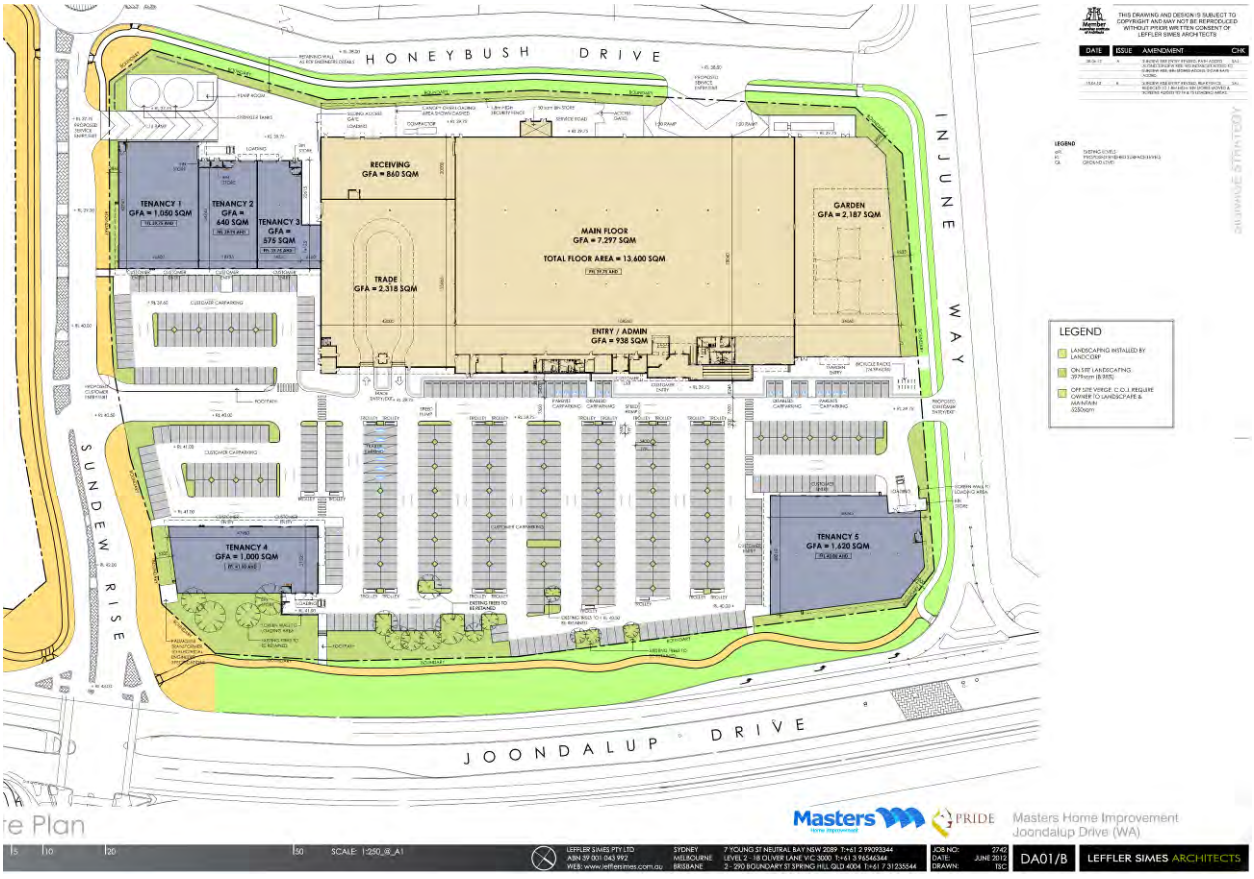


Figure 3. Concept layout

Proposed building uses and the quantum of each use type is shown on Table 1 below.

Facility	Units	Quantity
Home improvement store	m^2 of Gross Floor Area	8,293
Garden Centre		2,220
Building Materials - trade		2,347
Delivery / receiving area		860
Tenancies		4,350
Car parking	bays	513

Table 1 - Building Area Use

The public accessible parking area includes eight bays of suitable size and location for universal access particularly for use by persons who may have a disability.

3.3. Access

The site has property boundaries along three existing roads with the fourth road to be constructed. Access is not provided from Joondalup Drive.

Figure 4. Existing Site - Undeveloped

3.3.1. Customer and General Public Vehicle Access

There are two proposed customer and general public accesses to the site and two minor staff / service vehicle only accesses as summarised below.

- Injune Way - near the centre of the northern boundary of the development site; this access

is located about 100 m west of the Joondalup Drive intersection. The access forms a three way intersection and vehicular movements are unrestricted.

- The Sundew Rise access – Approximately 100 m west of the Sundew Rise – Joondalup Drive intersection. The access forms a three way intersection and vehicular movements are provided for left in, right in and left out.
- Sundew Rise northern access - at the western end of the site approximately 20 m east of the Sundew Rise – Honeybush Drive intersection. The access provides for service vehicles (12.5 m HRV) and is left in – left out only.
- Honeybush Drive western access - On the western boundary approximately 40 m south of Injune Way. The access forms a three way intersection and caters for service vehicles.

3.3.2. Pedestrian Access

Pedestrian access is expected to be a minor transport requirement in this location.

There is to be a pedestrian walk area along the building frontage to provide access to the main entrance and across the parking area to provide connectivity to the existing paths in Injune Way, Honeybush drive and Joondalup Drive.

3.3.3. Cycle Access

Bicycle access is via the vehicle access locations from three adjacent roads. Marked bicycle lanes are provided on Joondalup Drive.

3.3.4. Service Vehicle Access

Service vehicles are to have access to loading areas on the west side of the building.

Access to the garden centre delivery area, the main floor area, the trade area and the rear of 3 tenancies will be from Honeybush Drive and Sundew Rise and will utilise an internal two-way road along the side of the building. Access to the two tenancies on the east side of the site will be via the internal parking area access roads.

3.4. Parking

The proposed on-site parking is located in a major car park between the building and Joondalup Drive.

On-street parking is not available on frontage roads. AS well as normal parking bays, the site provides for:

1. 8 car bays for disabled drivers.

2. Dedicated double length bays for 6 car/trailer combinations.

All parking is at ground level for easier transport of bulky goods between building and vehicles.

3.5. End-of-Trip facilities

Bicycle facilities for short term storage during the day can be provided close to the entrance to the building in an 8m wide area of pathway. Employee end of trip change facilities are indicated as being provided in the staff only mezzanine facilities.

The use of bicycle transport for moving bulky goods is not common in Western Australia and the demand is expected to be very low when compared to a general retail or commercial facility such as a shopping centre or multi-use strip shop development.

4. The Site and Surrounding Road Network

The proposed development site occupies part lot 271 Joondalup Drive in Joondalup and is situated between the intersections of Sundew Rise and Joondalup Drive and Injune Way and Joondalup Drive.

Characteristics of the roads immediately adjacent to the site or likely to be impacted upon by the site are shown on Table 2.

Road	**Carriageway configuration**	**Theoretical capacity at LOS D**	**Major intersections**	**Intersection configuration**
Joondalup Drive	4 lane dual carriageway.	27,000vpd	Sundew Rise	4-way signalised intersection.
			Injune Way	3-way non signalised intersection with left in – left out movements.
Honeybush Drive	2 lane carriageway.	13,500vpd	Sundew Rise	4-way intersection with single lane roundabout.
			Injune Way	3-way non signalised intersection.
Injune Way	2 lane carriageway.	13,500vpd	Honeybush Drive.	3-way non signalised intersection.
			Joondalup Drive	3-way non signalised intersection with left in – left out movements.
Sundew Rise	To be constructed			

Table 2 - Road details

Road	AADT	AM Peak	PM Peak
Joondalup Drive (northbound north of Lakeside Drive)	11,389 vpd	938 vph	1,107 vph
Joondalup Drive (southbound north of Lakeside Drive)	14,839 vpd	969 vph	1,104 vph
Joondalup Drive (northbound south of Lakeside Drive)	14,618 vpd	1,447 vph	1,300 vph
Joondalup Drive (southbound south of Lakeside Drive)	15,277 vpd	1,142 vph	1,548 vph
Lakeside Drive (eastbound east of Joondalup Drive)	4,307 vpd	518 vph	344 vph
Lakeside Drive (eastbound east of Joondalup Drive)	4,376 vpd	331 vph	487 vph
Injune Way	1,000 vpd (est)	100 vph (est)	100 vph (est)
Honeybush Drive	1,500 vpd (est)	150 vph (est)	150 vph (est)
Sundew Rise	1,500 vpd (est)	150 vph (est)	150 vph (est)

Table 3 - Current Traffic Flows

4.1. Future Changes.

Enquiries were made to the Local Authority and MRWA to ascertain whether or not information was available with respect to predictions of future flow patterns.

5. Existing Situation

5.1. Site Use

The current land usage on part lot 271 is vacant land previously undeveloped and partially cleared. .

5.2. Parking Facilities

Public access and parking has been unnecessary on the existing site. No parking facilities exist on-site or along the road reserves.

5.3. Access Locations

There is no formal access onto the site though the site is unfenced therefore pedestrian / vehicle access is unhindered though not permitted onto the site.

5.4. Site Traffic Generation

The previous and existing traffic generation is nil.

5.5. Surrounding land uses

The site is abutted to the south and west by vacant land, educational development to the north and to the east by commercial and educational developments.

5.6. Surrounding Road Network

5.6.1. Road Carriageway Configuration

The existing road infrastructure is summarised in Table 4.

Road Name	Joondalup Drive	Honeybush Drive	Injune Way	Sundew Rise
Carriageway (number)	2	1	1	Not constructed
Median (width m)	10	-	-	
Lanes (total number)	4	2	2	
Lanes (width)	3.5 m	5.0 m	5.0m	
Kerbed	yes	yes	yes	
Underground Drainage	yes	yes	yes	
Pathways	yes	yes	yes	
On street parking	no	yes	yes	

Table 4 - Physical Road Configuration

5.6.2. Road Hierarchy

The road network around the site will support the changes in land use by a hierarchical approach to meet the competing demands of traffic and amenity. The basis to classify the surrounding roads is in accordance with the Western Australian Planning Commission's Liveable Neighbourhoods Road Hierarchy. The definitions of that hierarchy and relationship to the Main Roads WA Functional Road Hierarchy are shown on Table 5.

Indicative volume. (vpd)	Liveable Neighbourhoods Classification.	MRWA equivalent classification	Liveable Neighbourhoods Indicative Reserve Width.	Liveable Neighbourhoods Indicative Carriageway Width.
50,000.	Primary Distributor	Primary Distributor		Determined by Main Roads WA
35,000.	Primary Distributor			Determined by Main Roads WA
15,000 to 35,000.	Integrator Arterial A	Primary Distributor / District Distributor A	50.6 – 52.6 metres.	2 X 8.2 metre carriageways including bike lane and 2 X 5.5 metre service roads containing parking.
<25,000	Integrator Arterial A	District Distributor A	35.6 metres.	2 X 10.7 metre carriageways including combined on street parking and bike lane.
7,000 to 15,000.	Integrator Arterial B	District Distributor A / District Distributor B	29.2 metres.	2 X 7.5 metre carriageways with on street parking and bike lane.
15,000.	Integrator Arterial B	District Distributor B	25.2 metres.	2 X 7.5 metre carriageways with on street parking.
7,000.	Neighbourhood Connector A.	Local Distributor	24.4 metres	2 X 7.1 metres including parking, on street bike lane, median plus shared path on one verge.
3,000.	Neighbourhood Connector B.	Local Distributor	19.4 metres	11.2 metres including parking plus shared path on one verge.

Indicative volume. (vpd)	Liveable Neighbourhoods Classification.	MRWA equivalent classification	Liveable Neighbourhoods Indicative Reserve Width.	Liveable Neighbourhoods Indicative Carriageway Width.
3,000.	Access Street A (Avenue).	Local Distributor / Access Road	20 - 24 metres.	2 x 3.5 metre lanes plus indented parking.
3,000.	Access Street B (Wider street).	Local Distributor / Access Road	16.5 - 18 metres.	9.7 metre lane.
3,000.	Access Street C (Yield or give way street).	Access Road	15.4 - 16 metres.	7.2 (7.0 – 7.5) metre lane.
1,000.	Access Street D (Narrow yield or give way street).	Access Road	14.2 metres.	5.5 – 6.0 metre lane.
150	Access Street D (Narrow yield or give way street).	Access Road	14.2 metres.	3.5 metre lane plus parking indents.
3,000.	Access Street D (Wider street).	Access Road	16.5 - 18 metres.	9.7 metre lane.

Table 5 - Road Classification.

The character of the roads around the site as determined from the variety of planning documents and maps have been examined to categorise them within the adopted road hierarchy which is shown on Figure 5.

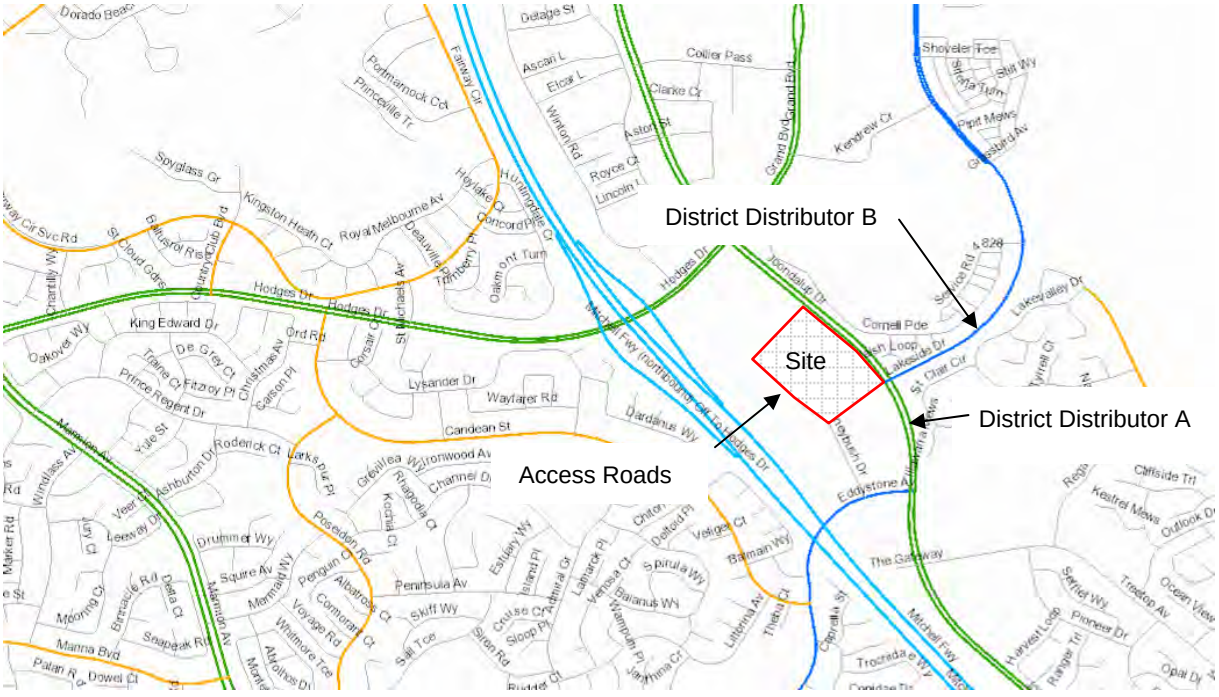


Figure 5. Road Hierarchy

The Liveable Neighbourhoods document describes the desirable maximum traffic volumes and

speeds applicable for each of the roads around the site as detailed in Table 6. While there is some tolerance for traffic volumes above desirable limits in access type roads this is only acceptable if a low speed environment can be maintained.

Road Name	Road Classification	Desirable Max Traffic Volume (Vehicles per day)	Desirable traffic Speed
Joondalup Drive	District Distributor A / Integrator Arterial A	15,000 - 25,000	70km/h
Lakeside Drive	District Distributor B / Integrator Arterial B	15,000	70km/h
Honeybush Drive	Access road	< 3,000	50km/h
Injune Way	Access road	< 3,000	50km/h
Sundew Rise	Access road	< 3,000	50km/h

Table 6 - Road Hierarchy Traffic Targets

5.6.3. Existing Speed Zones

The speed environment on the existing roads is 70km/h on Joondalup Drive, 60km/h on Lakeside Drive and 50km/h on other roads.

5.6.4. Local Suburban Network

The connectivity of the site to the surrounding road network is strong in all directions with effective and clearly identifiable road links from the existing road networks for drivers to reach accesses to this site.

5.7. Traffic Management near site

Traffic management treatment consists of a single lane roundabout at the intersection of Honeybush Drive and sundew Rise and a signalised intersection at Joondalup Drive and Lakeside Drive.

5.8. Traffic Flows

The following table outlines the approximate traffic flows expected on the streets surrounding the development site. The table places the flows in the context of the maximum desirable flows detailed above. Traffic data was sourced from records at Main Roads WA and from the City of Joondalup.

Where counts are not available the likely daily flow has been estimated from the potential traffic catchment.

Road Name	Effective Classification	Desirable Max Traffic Volume	Current Average Daily Traffic	Comment
Joondalup Drive	Integrated Arterial A	15,000 to 35,000	30,000vpd	Within desired capacity
Lakeside Drive	Integrated Arterial B	15,000	9,000vpd	Within desired capacity
Injune Way	Access Road	< 3,000	1,000vpd (est)	Within desired capacity
Honeybush Drive	Access Road	< 3,000	1,500vpd (est)	Within desired capacity
Sundew Rise	Access Road	< 3,000	1,500vpd (est)	Within desired capacity

Table 7 - Traffic Volumes

5.9. Crash History

The crash history at the existing major intersection of Joondalup Drive and Lakeside Drive has been reviewed.

The crash potential near this site can be assessed by considering the MRWA data available in the recording period of the five years up to December 2010.

5.9.1. Joondalup Drive – Lakeside Drive

The crash statistics show 31 reported crashes at this signal controlled intersection. This is higher than the network average for similar intersections.

Crash Details										
Rear End	**Side Swipe**	**Right Angle**	**Right Thru**	**Wet**	**Night**	**Ped**	**Cycle**	**Truck**	**Motorcycle**	**Casualty**
14	0	8	7	7	8	0	0	1	0	10

5.9.2. Joondalup Drive – Injune Way

No recorded crashes at this intersection in the five year period.

5.9.3. Honeybush Drive – Injune Way

No recorded crashes at this intersection in the five year period.

5.10. Existing pedestrian/cyclist networks

The network for travel by other than motorised methods includes pathways along:

- The east side of Joondalup Drive along the nature strip.
- The south side of Injune Way.

– The east side of Honeybush Drive.

The pathways on Honeybush Drive and Injune Way are of a suitable width to be shared pathways however they are not signed as such. The path on the east side of Joondalup Drive is a shared path and suitable for both pedestrians and cyclists. There are 1.5m wide sealed shoulders designated as cycle lanes along both carriageways of Joondalup Drive.

Figure 6. Perth Bike Plan extract

The existing cycling environment is considered to provide safety to cyclists with good overall connectivity to the site.

A safe walk assessment undertaken on the existing pathways around the site indentified they were in good condition.

The pedestrian environment is considered to be in a safe condition.

5.11. Public Transport

The site is well serviced by public transport with bus services along Joondalup Drive providing connection between Whitfords Station and Joondalup Station. Stops on Joondalup Drive are located within 250 metres of the site.

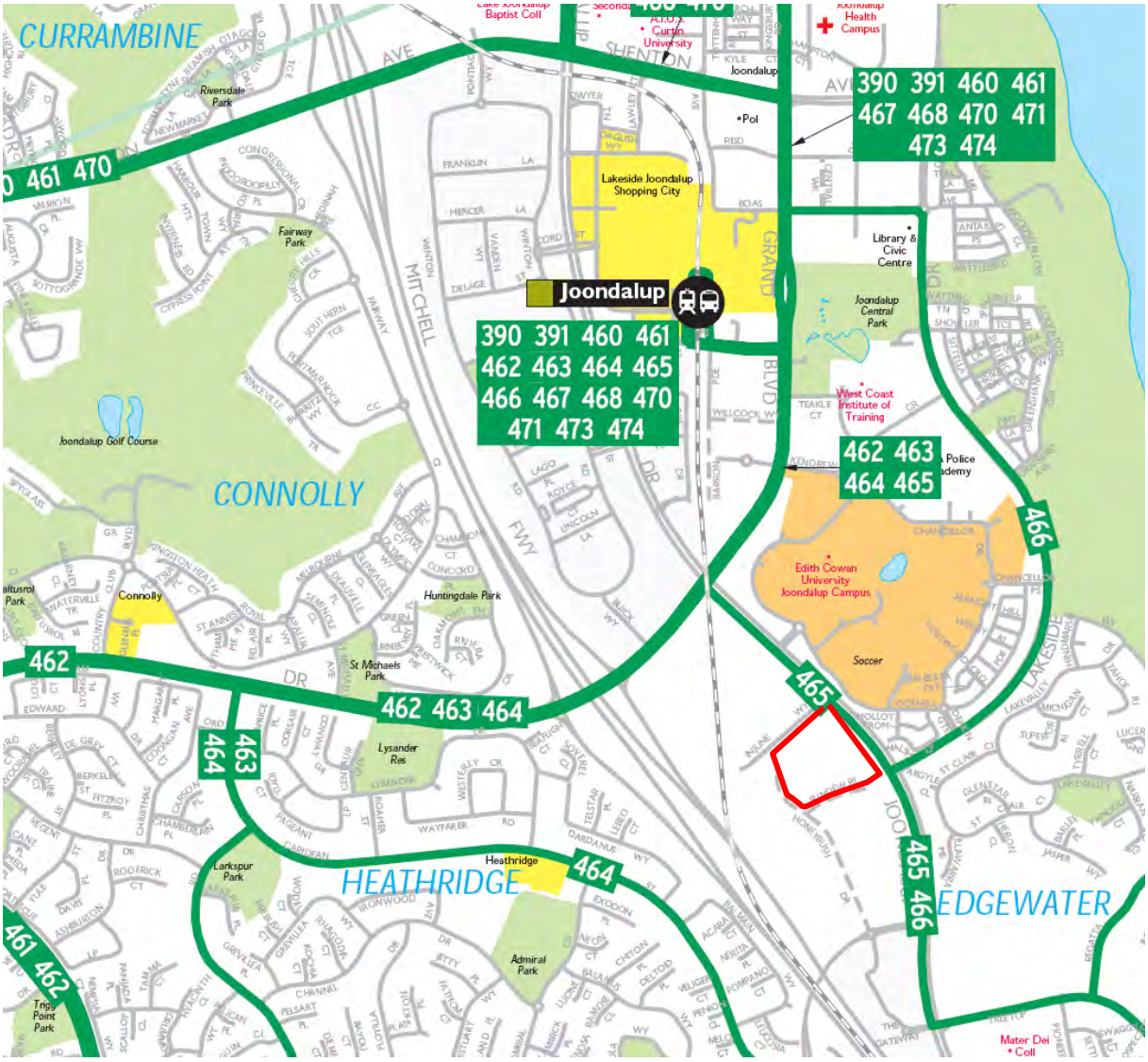


Figure 7. Bus Services

6. Integration with Surrounding Area

The proposed development site is located to allow the traffic generated to integrate into the existing road network.

The future traffic from this building development site can be integrated into the surrounding area on the present and future road network.

The assessment indicates that the predicted transport load will not have an unacceptable adverse affect to the overall existing transport network.

7. Analysis of Transport Networks

7.1. Assessment Years

The transport assessment is based on the completion of development of the site within two years.

The assessment cannot practically be extended to consider transport needs at 10 years after completion of the development of the site as the annual rate of surrounding development cannot be confidently estimated with the range of factors that can vary. Also, the effect of infrastructure changes cannot be accurately predicted.

7.2. Time Periods for Assessment

The time periods to be considered for the impact on the transport networks are the two peak vehicular traffic periods on the network. Those peak periods are on weekdays in the morning hour between 7:15am to 8:15am and the evening hour between 4:15pm and 5:15pm.

8. Traffic Generation characteristics

The existing and future land uses and expected operation times are shown in Table 8 and have been used as the basis for the short-term traffic generation estimates prepared.

Land use	Generation rate			Unit	Quantum	Estimated Generation			Source
	ADT	AM Peak	PM Peak			ADT	AM Peak	PM Peak	
Home Improvement superstores	29.80	1.26	2.37	GFA (m2)	8293	2471	104	197	ITE Guide
Plant nurseries (Garden Centre) Weekday	38.00	1.40	4.00	GFA ('00)	2220	844	31	89	ITE Guide
Building Materials - weekday	48.00	2.76	4.78	GLA	2347	1127	65	112	ITE Guide
Showrooms (retail homewares).	40.00	4.00	4.00	GFA (m2)	4350	1740	174	174	SA Guide
Total						**6181**	**374**	**572**	

Table 8 - Weekday Traffic Generation

Land use	Peak Distribution			
	AM Peak in	AM Peak out	PM Peak in	PM Peak out
Home Improvement superstores	60	45	94	102
Plant nurseries (Garden Centre) Weekday	16	16	44	44
Building Materials - weekday	43	21	53	59
Showrooms (retail homewares).	113	61	87	87
Total	**232**	**143**	**278**	**293**

Table 9 - Weekday Peak Hour Traffic

The customer generated traffic is assumed to reflect the major access roads from residential areas within 5km as an assumed typical catchment radius. The assumed traffic split is summarised below:

- Joondalup Drive north 40%
- Joondalup Drive south 40%
- Lakeside Drive east 20%

9. Traffic Distribution Assessment and Network Assignment

The existing traffic flows are shown on Figure 8.

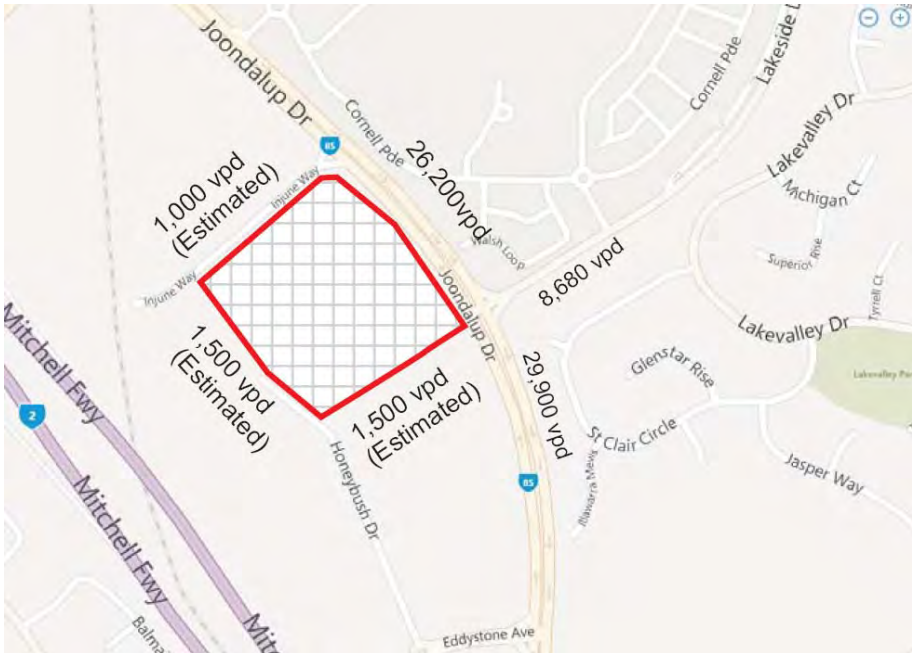


Figure 8. Existing Traffic Flows

The assignment of the generated traffic onto the existing road network is based on the QRS II modelling shown on Figure 9.

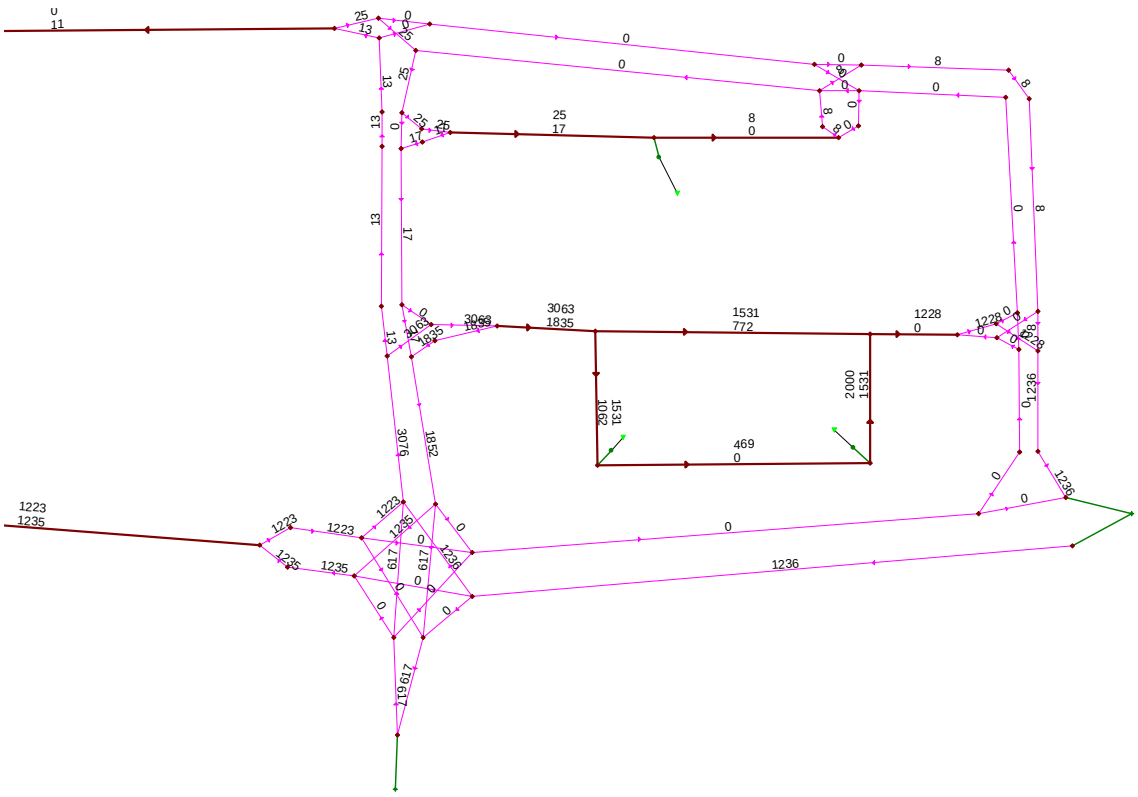


Figure 9. Modelled Traffic Distribution onto Existing Roads

The post development traffic on the existing road network is shown on Figure 10.

Figure 10. Predicted Weekday Daily Traffic

The capacity of the road network to accommodate the development traffic is summarised in Table 10.

Road Name	Desirable Max Traffic Volume	Daily Traffic	Comment
Joondalup Drive	15,000 to 35,000	31,200 vpd	Within desired range
Honeybush Drive	<3,000	1,520 vpd	Within desired range
Injune Way	< 3,000	2,780 vpd	Within desired range
Sundew Rise	< 3,000	5,900 vpd	Exceeds indicative maximum; however given the nature of the road and the site is considered to be acceptable.

Table 10 - –Traffic Volumes

10. Parking Assessment and Management

The WAPC Transport Assessment Guidelines recommends the projected parking demand for a development is based upon two main methods:

1. Survey a comparable development.
2. Extract typical rates from appropriate land use databases.

One of the WAPC identified databases is the Roads & Traffic Authority (RTA) Guideline: Guide to Traffic Generating Developments (2002). That guide indicates it is not possible to make conclusive recommendations on parking provision as the peak parking demands vary vastly.

Method 1

The most appropriate comparable sites to survey are several of the existing Bunnings Warehouse stores. The comparative rates of parking provided at five large hardware stores with trade and garden centres when related to overall GLA averaged 2.67 bays per 100m^2. The size of stores surveyed varied from smaller to larger than the proposed development with details shown on Tables 11 to 13.

Suburb location	Total number bays	Peak performance
Belmont	251	Bays available
Cannington	352	Bays available
Midland	330	Nearly full - some bays available
Morley	200	Fully used - slight delays and queuing
Rockingham	461	Bays available

Table 11 - Parking Availability at Similar Sites

Operation size comparisons:

Suburb location	Main Floor	Garden	Building Trade	Total GLA
Ellenbrook	7,892m^2	2,205m^2	2,152m^2	12,249m^2
Belmont	6,560m^2	2,300m^2	1,350m^2	10,210m^2
Cannington	5,000m^2	1,600m^2	3,100m^2	9,700m^2
Midland	9,690m^2	1,250m^2	3,400m^2	14,340m^2
Morley	6,350m^2	925m^2	2,300m^2	9,575m2
Rockingham	8,700m^2	2,800m^2	4,700m^2	16,200m2

Table 12 - Land Use Size Comparison

The comparative rates of parking provided at large hardware stores with trade and garden centres when related to overall GLA are shown on Table 17.

Suburb location	Bays per 100m^2
Belmont	2.46
Cannington	3.63
Midland	2.30
Morley	2.09
Rockingham	2.85
Average	2.67

Table 13 - Comparison Existing Parking Rates

Based on the survey of parking utilisation, the Joondalup site would require 459 bays for the Master's development.

Method 2

The NSW RTA Guide indicates that surveyed peak parking rates for bulky goods stores varied from 0.3 to 5.1 vehicles per 100 m^2 GLFA with a mean rate of 1.9 vehicles. The standard deviation was 1.5 vehicles. The range of most common parking rates would be between 0.4 to 3.4 vehicles per 100 m^2 GLFA.

The ITE being another data source listed in the WAPC document has data recorded for home improvement superstores that when analysed showed weekday parking usage at 2.4 cars per 100 m^2 and on weekends the usage rate was 3.4 cars per 100 m^2.

Calculating the parking demand based upon published surveys rates Table 14 indicates the weekday number of bays required.

Land use	Quantum	Unit	ITE Generation rate	RTA Generation rate	Peak demand time

			Rate	Peak demand	Rate	Peak demand	
Home Improvement Superstore Weekday	82.93	GFA ('00m2)	2.42	201	<<->>	<<->>	2PM-3PM
Plant Nurseries	22.20	GFA ('00m2)	0.50	11	0.50	11	6PM-9PM
Building materials store - weekday (area)	23.50	GFA ('00m2)	1.80	42	<<->>	<<->>	<<->>
Discount store weekday (area)	43.50	GFA ('00m2)	1.44	63	2.00	87	11AM-7PM
Total				**317**		**98**	

Table 14 - Parking Rates and Quantum

The parking demand calculated using the published guidelines for parking rates would be 317 bays.

The City of Joondalup District Planning Scheme No2 contains the requirements for car parking for a variety of land uses listed in that document's Table No.2. The land uses of home improvement store and building trade centre are not included in those listed uses.

The nearest listed land uses to the type of intended use are shown in the Table 15 that require:

Showroom	1bay for every 30 square metres of net leasable area
Garden Centre	1bay for every 500 square metres of display area plus 1 bay for every 10 square metres of NLA of internal display area

Table 15 - DPS No2 Parking Rates

Based on a GFA of 10,640 m^2 for the Home Improvement and 2,220 m^2 for the garden Centre, the calculated parking would be 360 bays.

10.1.1. Parking Demand Retail Tenancies

There are 5 retail tenancies of 4,350 m^2 in total GFA proposed for the site as well as the Home Improvement Superstore.

The RTA, ITE and City of Joondalup guides to parking rates do not have a specific category that would be precisely applicable to the proposed retail land use. Those documents have either very specific definitions or a very broad category. The typical parking rates that may be applied to retail tenancies are shown in Table 16.

Source	Land Use	Rate	Number of Bays
RTA	Tyre Outlet	3 bays per 100m^2	124

	Bulky Goods	2.7 bays per 100m^2	112
	Video Store	6.1 bays per 100m^2	253
	Warehouse	1.0 bays per 300m^2	14
ITE	General Light Industrial	0.81 bays per 100m^2	34
	Automobile parts sales	2.3 bays per 100m^2	96
	Tyre Outlet	4.49 bays per 100m^2	187
	Electronics Store	3.26 bays per 100m^2	135
	Office Supplies	0.66 bays per 100m^2	27
City of Joondalup	Showroom	1 bay per 30m^2	138

Table 16 - Retail Tenancy Parking Rates -Range of Uses

At this early planning stage the potential occupants of the tenancies are unknown therefore the applicable parking rate is difficult to determine. What is certain is that the three areas would have different uses, therefore applying one parking rate across the total GFA could over or under estimate the parking demand.

In the absence of details of individual tenancy land uses it is considered appropriate to adopt the rate for showrooms.

This gives a demand of 145 bays.

10.1.2. Total Parking Demand

The three methods of determining the parking demand provide dissimilar results for the proposed Superstore.

	Superstore	Tenancies	Total
WAPC Method 1	459 bays	N/A bays	459 bays
WAPC Method 2	254 bays	63 bays	317 bays
CoJ	360 bays	145 bays	505 bays

The proposal incorporates the supply of 513 formal marked bays. This exceeds the actual demand for parking and it is considered appropriate that the Council decide this proposal with 513 formal bays will provide adequate parking for the customers of this proposed facility.

10.2. Parking Layout

The parking layout has to be considered in two parts:

- the parking bay and access aisle dimensions, and
- the layout of bays, aisles and accesses.

The City of Joondalup District Planning Scheme 2 requires parking to be sealed, drained and marked to the local government's specifications, and bays for the use by persons with a disability are to be designed in accordance with the appropriate ACROD standard.

In 2011 ACROD ceased to exist and has been replaced by the National Disability Services (NDS). As NDS does not specify the physical size of the parking bays, Australian Standard AS 2890.6-2009 Parking Facilities Part 6 Off-street Parking for People with Disabilities is applicable, and universal bays are assessed against this.

The Building Code of Australia sets down the minimum ratio of parking bays that must be provided for people with disabilities at 1% of the total number of parking bays in a car park with more than 10 spaces.

The site plan drawing provided is not dimensioned and dimensions have been measured from the base computer drafting files.

The right angle parking bays are 5.4 m long by 2.6 m wide with aisle widths of 6.6m. The Universal bays are 5.4 m long by 2.4 m wide with a shared clear zone of 2.4 m. The main access road is 7.5m wide. These dimensions allow the full opening of car doors and in accordance with the Australian Standard AS 2890.1 Parking Facilities Part 1 Off-Street Car Parking, are suitable for short-term, high turnover parking listed as the AS 2890.1 Category User Class 3A car park.

The Universal bays are in accordance with the Australian Standard AS 2890.6 Parking Facilities Part 6 Off-street Parking for People with Disabilities.

The right angle parking bays and aisles are the minimum size recommended for single movement entry / exit at each bay.

The configuration of the parking area provides clear circulation routes within the site. There is a transit spine along the front of the building that gives access directly to most of the car park aisles. There is a second spine/aisle with parking along one side of the aisles close to the western boundary of the car park. The aisles are short at 40m in length and provide a short pedestrian walk distance to the building. There are no blind (dead-end) aisles proposed and that allows for vehicles to circulate easily.

11. Development Accesses

The proposed development has four indicated access points for vehicles to existing or new public

roads.

11.1. The Sundew Rise Access

This is proposed to be an unrestricted access.

The traffic flow is estimated to be about 4,000 light vehicles entering and exiting the site. AS2890.1 identifies that accesses should be clearly recognised as designed to be either be a driveway or an intersection. The primary differentiation is whether the kerbs and footpaths are continuous across the access. In this instance there is a discontinuation of kerb and path therefore the access should be designed to the requirements of an intersection.

Preliminary assessment as shown on Figure 11 indicates that a priority intersection can operate at an overall expected Level of Service of "C".

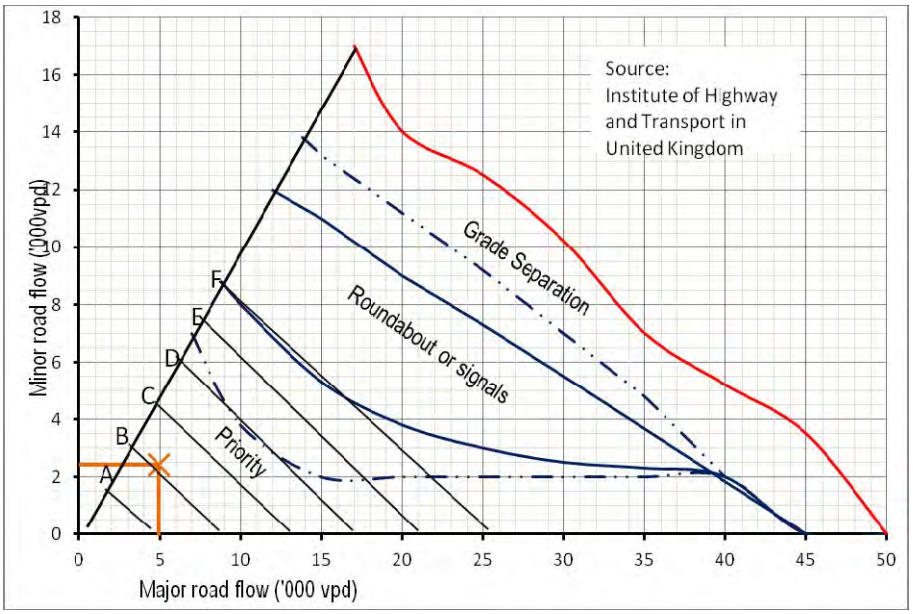


Figure 11. Initial Access Assessment Sundew Rise

Assessment using Sidra Intersection 5.1 as shown on Figure 12 indicates that the access will operate satisfactorily for a typical peak hour period.

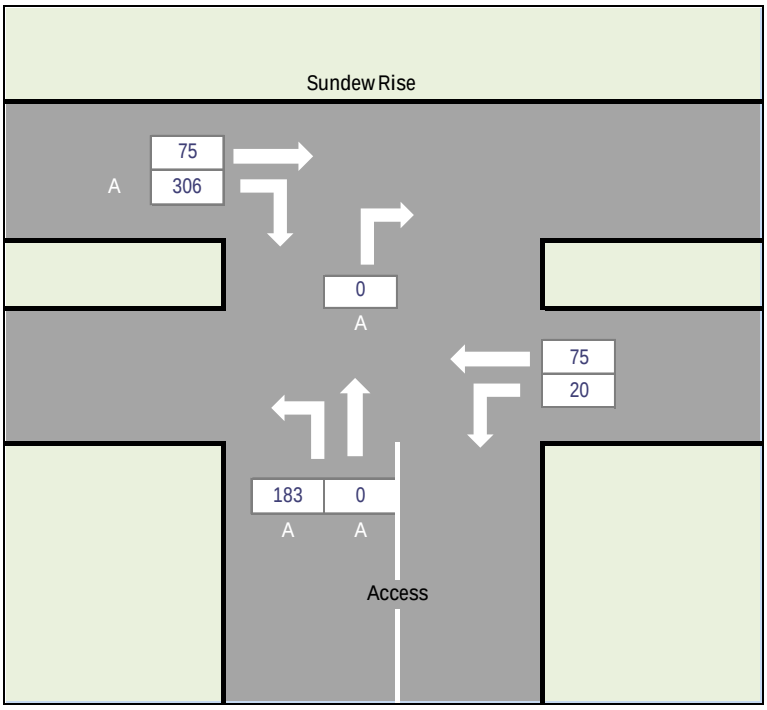


Figure 12. Access Flows

Movement Performance - Vehicles											
Mov ID	Turn	Demand Flow	HV	Deg. Satn	Average Delay	Level of Service	95% Back of Queue		Prop. Queued	Effective Stop Rate	Average Speed
							Vehicles	Distance			
		veh/h	%	v/c	sec		veh	m		per veh	km/h
South: Sundew Rise											
2	T	79	3.0	0.236	0.4	LOS A	1.3	9.5	0.24	0.00	54.3
3	R	322	3.0	0.236	8.8	LOS A	1.3	9.5	0.24	0.67	48.0
Approach		401	3.0	0.236	7.1	NA	1.3	9.5	0.24	0.54	49.1
East: Access											
4	L	193	3.0	0.176	8.7	LOS A	0.7	5.1	0.21	0.63	48.0
Approach		193	3.0	0.176	8.7	LOS A	0.7	5.1	0.21	0.63	48.0
North: Sundew Rise											
7	L	21	3.0	0.053	8.3	LOS A	0.0	0.0	0.00	0.96	49.0
8	T	79	3.0	0.053	0.0	LOS A	0.0	0.0	0.00	0.00	60.0
Approach		100	3.0	0.053	1.7	NA	0.0	0.0	0.00	0.20	57.3
All Vehicles		694	3.0	0.236	6.8	NA	1.3	9.5	0.20	0.52	49.8

Figure 13. Sundew Rise Access Modelling

The analysis shows the queuing within the site associated with traffic exiting into the higher traffic flow along Sundew rise will be minor with an average delay of 7 seconds.

11.2. Injune Way Access

This access operates as a T-intersection with full turning movements. There are no restrictions on internal or external movement from this access.

The traffic flow is estimated to be 1700 light vehicles entering and exiting the site daily. Preliminary assessment as shown on Figure 14 indicates that a priority intersection can operate at an overall

expected Level of Service of “A”.

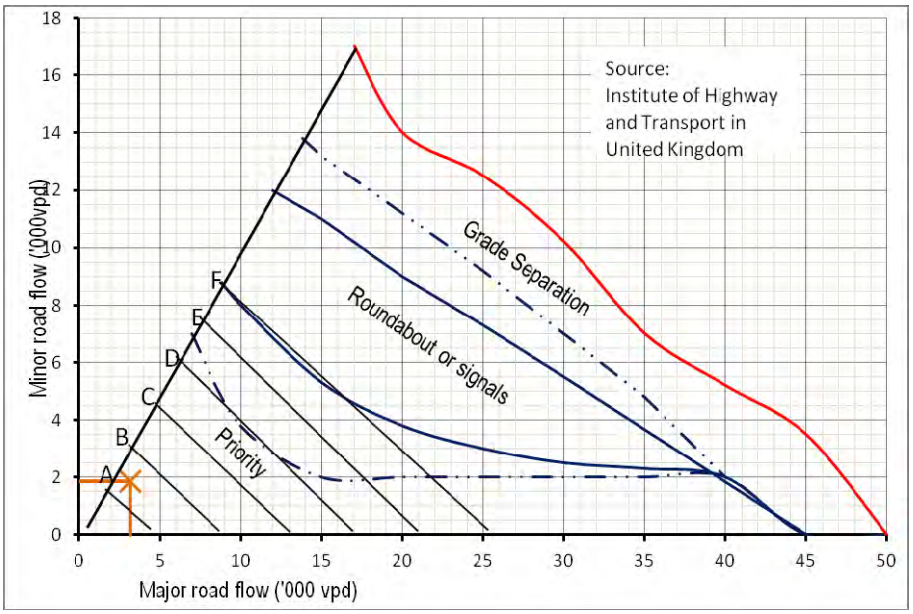


Figure 14. Initial Access Assessment Injune Way

Assessment using Sidra Intersection 5.1 as shown on Figure 16 indicates that the access will operate satisfactorily for a typical peak hour period.

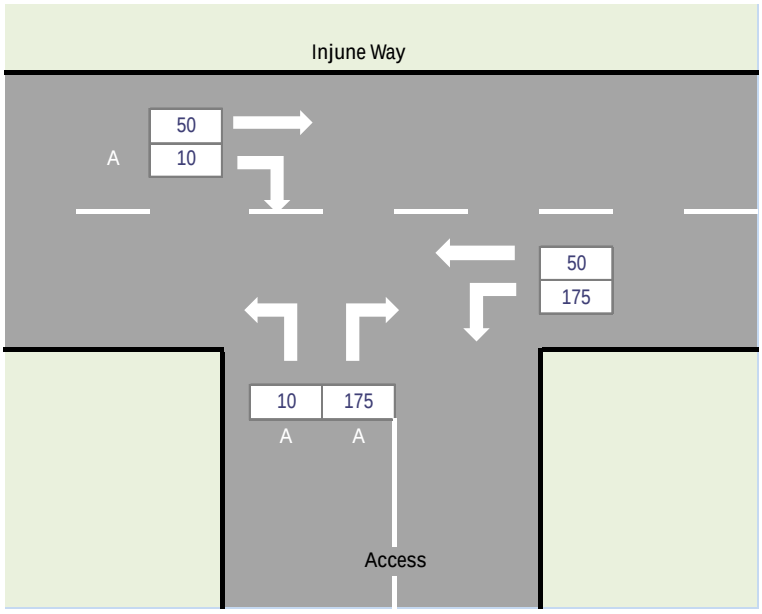


Figure 15. Access Flows

Movement Performance - Vehicles											
Mov ID	Turn	Demand Flow	HV	Deg. Satn	Average Delay	Level of Service	95% Back of Queue		Prop. Queued	Effective Stop Rate	Average Speed
							Vehicles	Distance			
		veh/h	%	v/c	sec		veh	m		per veh	km/h
South: Access											
1	L	11	0.0	0.133	8.9	LOS A	0.6	4.4	0.32	0.62	47.4
3	R	184	0.0	0.133	9.1	LOS A	0.6	4.4	0.32	0.66	47.4
Approach		195	0.0	0.133	9.1	LOS A	0.6	4.4	0.32	0.66	47.4
East: Injune Way											
4	L	184	0.0	0.126	8.2	LOS A	0.0	0.0	0.00	0.73	49.0
5	T	53	0.0	0.126	0.0	LOS A	0.0	0.0	0.00	0.00	60.0
Approach		237	0.0	0.126	6.4	NA	0.0	0.0	0.00	0.57	51.0
West: Injune Way											
11	T	53	0.0	0.034	0.7	LOS A	0.2	1.3	0.34	0.00	53.6
12	R	11	0.0	0.034	9.2	LOS A	0.2	1.3	0.34	0.89	48.8
Approach		63	0.0	0.034	2.1	NA	0.2	1.3	0.34	0.15	52.7
All Vehicles		495	0.0	0.133	6.9	NA	0.6	4.4	0.17	0.55	49.7

Figure 16. Injune Way Access Modelling

The analysis shows the queuing within the site associated with traffic exiting into the higher traffic flow along Injune Way will be minor with an average delay of 9 seconds.

11.3. Commercial Access

Commercial access is provided off Honeybush Drive and Sundew Rise

The internal site configuration of parking and access is designed primarily for service vehicle access with vehicles entering and exiting both from the Honeybush Drive and Sundew Rise access. The present indicated geometry generally accommodates 19m semi-trailers and 12.5m HRV's as shown on Figures 17 to 19. Some modifications to the crossovers and the Sundew Rise median will be necessary as summarised below.

- Right turn pocket to be provided on Sundew Rise to facilitate general access to the site.
- Continuous raised median in Sundew Rise to prevent undesirable turns across the existing flush median.
- Modifications to driveway radii to cater for turning movements.

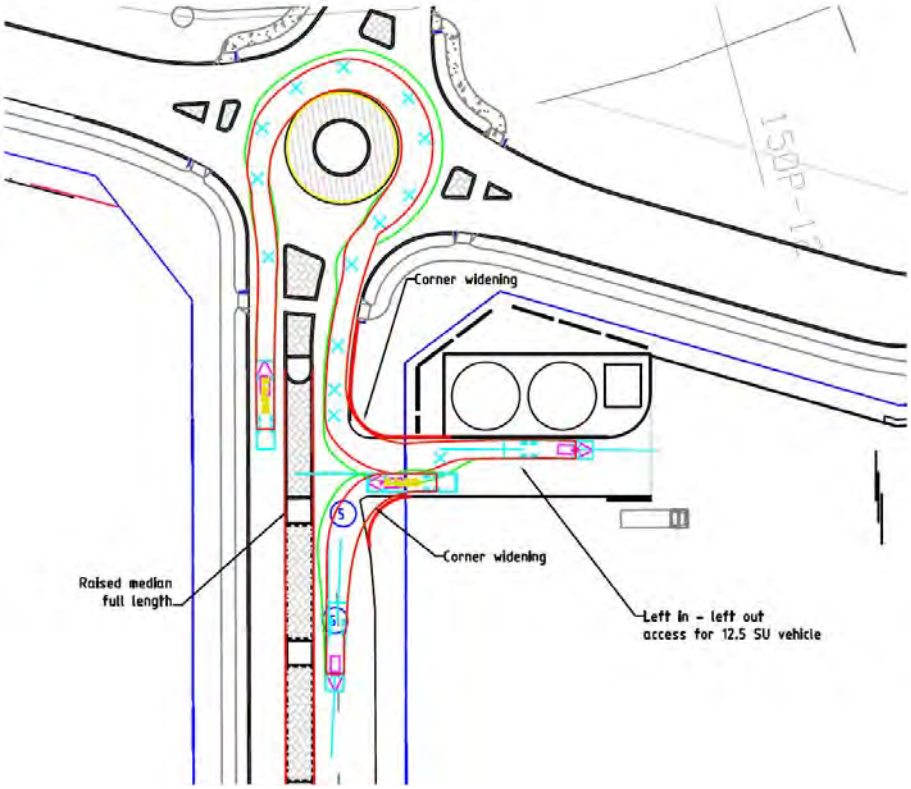


Figure 17. Westbound Truck Entry from Sundew Rise

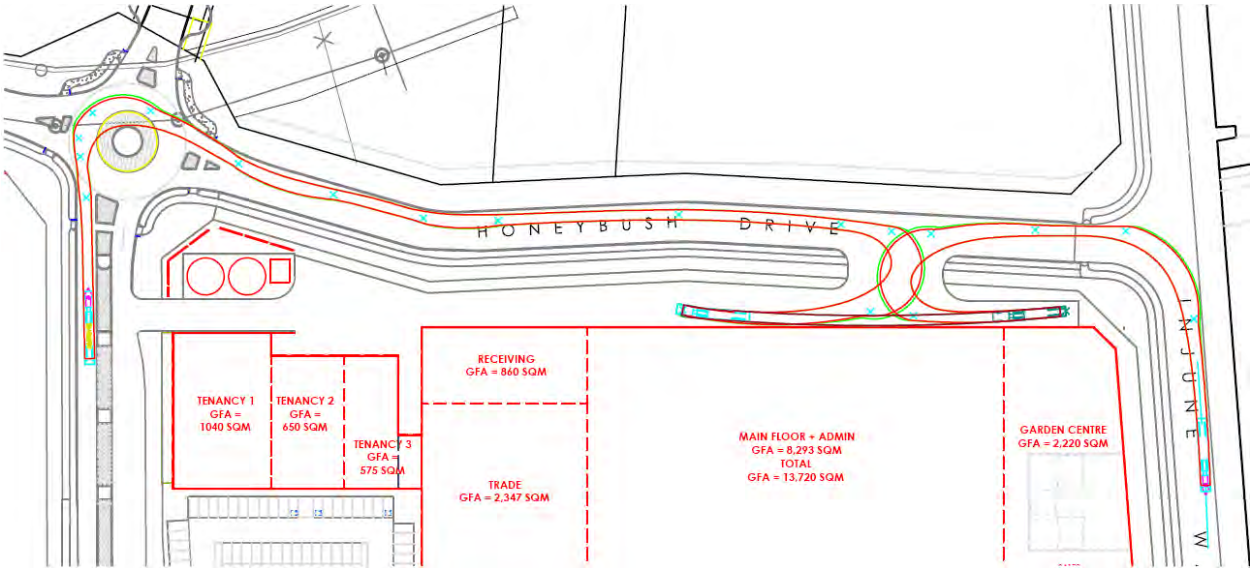


Figure 18. Truck Entry from Sundew Rise / Honeybush Drive with Exit to Injune Way

Figure 19. Exit onto Sundew Rise

12. Intersection Capacity Analysis

The site will impact on the intersection of Lakeside Drive and Joondalup Drive. Modelling of the intersection as a 4 way signal controlled intersection indicates the following.

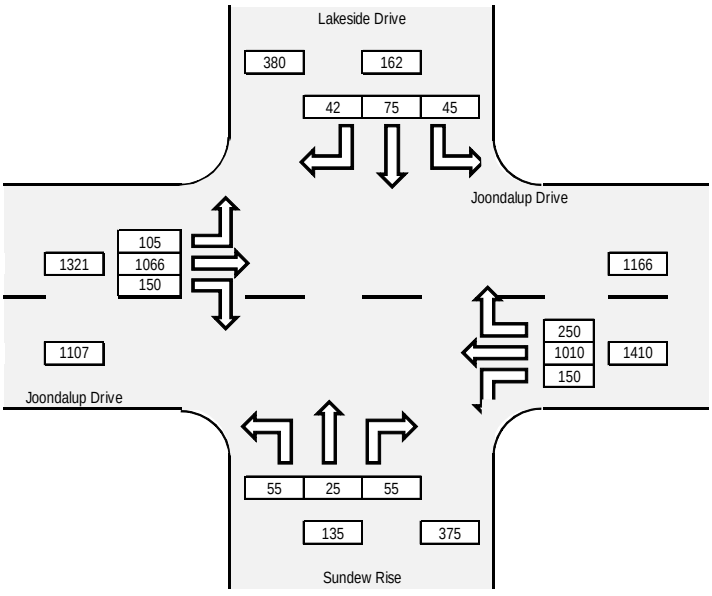


Figure 20. Predicted Intersection Flows Joondalup Drive – Lakeside Drive

Movement Performance - Vehicles											
Mov ID	Turn	Demand Flow	HV	Deg. Satn	Average Delay	Level of Service	95% Back of Queue		Prop. Queued	Effective Stop Rate	Average Speed
							Vehicles	Distance			
		veh/h	%	v/c	sec		veh	m		per veh	km/h
South: Joondalup Drive											
1	L	158	0.0	0.213	19.0	LOS B	2.6	18.0	0.69	0.77	39.4
2	T	1063	0.0	0.682	14.2	LOS B	11.2	78.7	0.88	0.79	40.7
3	R	263	0.0	0.632	23.0	LOS C	5.6	39.3	0.95	0.85	36.9
Approach		1484	0.0	0.682	16.2	LOS B	11.2	78.7	0.87	0.80	39.8
East: Lakeside Drive											
4	L	47	0.0	0.078	11.7	LOS B	0.4	3.1	0.52	0.68	45.4
5	T	79	0.0	0.281	23.0	LOS C	1.6	11.0	0.94	0.70	34.8
6	R	44	0.0	0.235	32.2	LOS C	1.1	7.6	0.96	0.73	31.9
Approach		171	0.0	0.281	22.3	LOS C	1.6	11.0	0.83	0.70	36.3
North: Joondalup Drive											
7	L	111	0.0	0.084	8.7	LOS A	0.4	2.9	0.31	0.66	48.1
8	T	1121	0.0	0.719	15.1	LOS B	12.4	87.0	0.90	0.83	39.9
9	R	158	0.0	0.374	20.4	LOS C	2.9	20.3	0.85	0.79	38.3
Approach		1389	0.0	0.719	15.2	LOS B	12.4	87.0	0.85	0.81	40.3
West: Sundew Rise											
10	L	58	0.0	0.337	31.7	LOS C	1.8	12.8	0.95	0.76	32.5
11	T	26	0.0	0.337	23.6	LOS C	1.8	12.8	0.95	0.72	32.8
12	R	58	0.0	0.337	31.5	LOS C	1.6	11.3	0.95	0.75	32.4
Approach		142	0.0	0.337	30.1	LOS C	1.8	12.8	0.95	0.75	32.5
All Vehicles		3186	0.0	0.719	16.7	LOS B	12.4	87.0	0.86	0.80	39.4

Figure 21. Predicted Intersection Performance Joondalup Drive – Lakeside Drive

13. Traffic Noise and Vibration

The proposed development is not likely to generate any changed traffic noise or result in any vibration issues.

14. Road Safety Assessment

The assessment of the road safety is that there is low risk of deterioration in road safety external to the site arising from the development.

15. Pedestrain and Cyclist Demand and Facility Assessment

Home Improvement stores showroom bulky goods and are not major attractors for bicycle transport and special facilities are not required. Cycle parking could be provided near the main entrance for the occasional bicycle visitors.

Similarly external pedestrian visitors are not expected to be a daily occurrence. Pedestrian links are provided to the entrance of the building from Joondalup Drive.

Internal to the site pedestrian demand would be between the car parking areas and the main entry to the building. Pedestrian safety moving between the car park and the building entrance may be an

issue to review and speed control treatments may be required along the internal access road.

16. Public Transport Accessibility

The use of public transport reduces the number of private vehicle trips, hence reducing the volume of traffic on the road network and the requirements for parking facilities. That is a criterion relevant to office, recreational and educational land uses. The relevance to commercial retail activities is not strong in Western Australia.

In particular to purchasing bulky home improvement goods, hardware and nursery plants the transport by public vehicles is not always convenient to other users or the service providers.

The site is well serviced by public transport.

17. Conclusions

The development of the Joondalup site will have little transport impact on the surrounding public infrastructure or on the surrounding land uses.

The traffic assessment identifies that while the proposed development has the potential to generate additional traffic volumes up to 6,200vpd, the additional traffic is predicted to have little impact on the road network performance due to the well designed infrastructure along Joondalup Drive and adjacent network roads.

There are no significant issues identified with the transport flows around this site.

Bicycle parking facilities could be included in the redevelopment.

On this basis it is concluded that the proposed development will have minimum adverse impact on safety and the satisfactory operation of the surrounding road network.

18. Assessment Criteria

Checklist for a transport assessment of a development

Item	Status	Comments / Proposals
Summary	✓	
Introduction/Background		
name of applicant and consultant	✓	
development location and context	✓	
brief description of development	✓	
key issues	✓	
background information	✓	
Development proposal		
regional context	✓	
proposed land uses	✓	
table of land uses and quantities	✓	
access arrangement	✓	
parking provision	✓	
end of trip facilities		
any specific issues		
Existing situation		
existing site uses (if any)	✓	
existing parking and demand (if appropriate)	✓	
existing access arrangements	✓	
existing site traffic	✓	
surrounding land uses	✓	
surrounding road network	✓	
traffic management on frontage roads	✓	
traffic flows on surrounding roads (usually AM and PM peak hours)	✓	
traffic flows at major intersections (usually AM and PM peak hours)	✓	
operation of surrounding intersections	✓	
existing pedestrian/ cycle networks	✓	
existing public transport services surrounding the development	✓	
crash data	✓	
Changes to surrounding transport networks		Changes as new land properties developed
road network	✓	
intersection controls	✓	
pedestrian/cycle networks and crossing facilities		No change
public transport services		No change
Integration with surrounding area		

surrounding major attractors/generators	✓	
proposed changes to land uses within 1200 metres	✓	
travel desire lines from development to these attractors/generators	✓	
adequacy of existing transport networks	✓	
deficiencies in existing transport networks	N/A	None identified
remedial measures to address deficiencies	N/A	
Analysis of transport networks		
assessment years	✓	
time periods	✓	
development generated traffic	✓	
distribution of generated traffic	✓	
parking supply and demand	✓	
committed developments and transport proposals	✓	
base and "with development" traffic flows	✓	
analysis of development accesses	✓	
impact on surrounding roads	✓	
impact on intersections	✓	
impact on neighbouring areas	✓	
traffic noise and vibration	✓	
road safety	✓	
public transport access	✓	
pedestrian access / amenity	✓	
cycle access / amenity	✓	
analysis of pedestrian / cycle networks	✓	
safe walk/cycle to school (for residential and school site developments only)	N/A	
traffic management plan (where appropriate)	N/A	
Conclusions	✓	

Proponent's name	**Company**	**Signature**	**Date**
Transport assessor's name	**Company**	**Signature**	**Date**
Tony Shaw	Shawmac Pty Ltd		12/03/2012

19. Road Hierarchy

ROAD HIERARCHY

The Western Australian Planning Commission's Liveable Neighbourhoods document Edition 3 2004 categorised the road network into primary distributors, integrated arterials, neighbourhood connectors and access roads each with its own desirable characteristics that support land use through a hierarchical approach to meet the competing demands of traffic and amenity.

- Primary distributor roads have the function of shifting large volumes of commercial and passenger traffic between regions, have very limited access with few intersections and often have to forego street amenity and private property access for the benefits to effective traffic flow.
- Integrated arterial roads cater for the medium to high traffic volumes within or between districts with intersections more for major access into distinct traffic catchments than for direct access to private properties.
- Neighbourhood connector roads cater for the medium traffic volumes within smaller districts where traffic is mainly related to passenger transport and property access is part of the street amenity.
- Access roads are usually the common residential streets with the function of providing property access and maintaining street amenity. While there is some tolerance by residents when traffic volumes above desirable limits in access roads this is only acceptable if a low speed environment can be maintained.

The Main Roads WA has a similar hierarchy based upon traffic usage of a road and the categories are named:

- Regional Road
- Distributor Roads, A or B
- Local Distributor Road
- Local Access Road

20. Level of Service Defined

The LOS is described in Austroads Guide to Traffic Engineering Practice Part 2 Roadway Capacity as follows:

LOS	Flow Condition	Descriptors
A	Free	Individuals unaffected by others. Able to select desired speeds. Easy to manoeuvre within traffic stream. Level of convenience is excellent.
B	Stable	Some impact by others. Usually able to select desired speeds. Able to manoeuvre within traffic stream. Level of convenience is a little lower than LOS A.
C	Stable but restricted	Most drivers are restricted in selection of speeds and ability to manoeuvre. Level of convenience declines noticeably.
D	Close to limit of stable	All drivers severely restricted in selection of speed and ability to manoeuvre. Level of convenience is poor. Small increases in traffic flow will cause operational problems.
E	Unstable	Traffic volumes are close to capacity. No freedom to select speeds or manoeuvre. Minor disturbances within unstable flow will cause break-down.
F	Forced	Traffic inflow exceeds potential outflow. Breakdown occurs with queuing and resultant delays.

ATTACHMENT 5

City of Joondalup

Environmentally Sustainable Design – Checklist

Under the City's planning policy, *Environmentally Sustainable Design in the City of Joondalup*, the City encourages the integration of environmentally sustainable design principles into the construction of all new residential, commercial and mixed-use buildings and redevelopments (excluding single and grouped dwellings, internal fit outs and minor extensions) in the City of Joondalup.

Environmentally sustainable design is an approach that considers each building project from a 'whole-of-life' perspective, from the initial planning to eventual decommissioning. There are five fundamental principles of environmentally sustainable design, including: siting and structure design efficiency; energy efficiency; water efficiency; materials efficiency; and indoor air quality enhancement.

For detailed information on each of the items below, please refer to the *Your Home Technical Manual* at: **www.yourhome.gov.au**, and *Energy Smart Homes* at: **www.clean.energy.wa.gov.au**.

This checklist must be submitted with the planning application for all new residential, commercial and mixed-use buildings and redevelopments (excluding single and grouped dwellings, internal fit outs and minor extensions) in the City of Joondalup.

The City will seek to prioritise the assessment of your planning application and the associated building application if you can demonstrate that the development has been designed and assessed against a national recognised rating tool.

Please tick the boxes below that are applicable to your development.

Siting and structure design efficiency

Environmentally sustainable design seeks to affect siting and structure design efficiency through site selection, and passive solar design.

Does your development retain:

- ☑ existing vegetation; and/or
- ☐ natural landforms and topography

Does your development include:

- ☐ northerly orientation of daytime living/working areas with large windows, and minimal windows to the east and west
- ☑ passive shading of glass
- ☑ sufficient thermal mass in building materials for storing heat
- ☐ insulation and draught sealing
- ☐ floor plan zoning based on water and heating needs and the supply of hot water; and/or
- ☐ advanced glazing solutions

Energy efficiency

Environmentally sustainable design aims to reduce energy use through energy efficiency measures that can include the use of renewable energy and low energy technologies.

Do you intend to incorporate into your development:

- ○ renewable energy technologies (e.g. photo-voltaic cells, wind generator system, etc); and/or
- ✓ low energy technologies (e.g. energy efficient lighting, energy efficient heating and cooling, etc); and/or
- ✓ natural and/or fan forced ventilation

Water efficiency

Environmentally sustainable design aims to reduce water use through effective water conservation measures and water recycling. This can include stormwater management, water reuse, rainwater tanks, and water efficient technologies.

Does your development include:

- ○ water reuse system(s) (e.g. greywater reuse system); and/or
- ✓ rainwater tank(s)

Do you intend to incorporate into your development:

- ✓ water efficient technologies (e.g. dual-flush toilets, water efficient showerheads, etc)

Materials efficiency

Environmentally sustainable design aims to use materials efficiently in the construction of a building. Consideration is given to the lifecycle of materials and the processes adopted to extract, process and transport them to the site. Wherever possible, materials should be locally sourced and reused on-site.

Does your development make use of:

- ○ recycled materials (e.g. recycled timber, recycled metal, etc)
- ○ rapidly renewable materials (e.g. bamboo, cork, linoleum, etc); and/or
- ○ recyclable materials (e.g. timber, glass, cork, etc)
- ○ natural/living materials such as roof gardens and "green" or planted walls

Indoor air quality enhancement

Environmentally sustainable design aims to enhance the quality of air in buildings, by reducing volatile organic compounds (VOCs) and other air impurities such as microbial contaminants.

Do you intend to incorporate into your development:

- ○ low-VOC products (e.g. paints, adhesives, carpet, etc)

'Green' Rating

Has your proposed development been designed and assessed against a nationally recognised "green" rating tool?

- ○ Yes
- ✓ No

If yes, please indicate which tool was used and what rating your building will achieve:

_____

_____

_____

If yes, please attach appropriate documentation to demonstrate this assessment.

If you have not incorporated or do not intend to incorporate any of the principles of environmentally sustainable design into your development, can you tell us why:

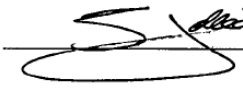
Is there anything else you wish to tell us about how you will be incorporating the principles of environmentally sustainable design into your development:

- PLEASE REFER TO SUSTAINABILITY SCORECARD TABLE CONTAINED WITHIN THE SUPPLEMENTARY DESIGN INFORMATION (APPENDIX 5) OF THE REPORT. → SECTION 2.4
- PLEASE NOTE THAT THE SCORECARD APPEARS TWICE IN THE APPENDIX.

When you have checked off your checklist, sign below to verify you have included all the information necessary to determine your application.

Thank you for completing this checklist to ensure your application is processed as quickly as possible.

Applicant's Full Name: SAM JELERIC **Contact Number:** 9221 1991

Applicant's Signature:  **Date Submitted:** 9/05/12

Accepting Officer's Signature:

Checklist Issued: March 2011

ATTACHMENT 6

Government of **Western Australia**
Department of **Planning**

Your ref: 101954
Our ref: 808-02-34-3
Enquiries: Alison Vangel (Ph: 6551 9526)

City of Joondalup
PO Box 21
Joondalup WA 6919

17 August 2012

Attention: Christine Mahncke

Dear Madam

Re: Development Application for a Mixed Use Development at Lot 806 (11) Injune Way, Joondalup

I refer to your letter dated 25 July 2012 regarding the above application. In accordance with the Western Australian Planning Commission's (WAPC) Notice of Delegation dated 23 December 2011, the following comments are provided with respect to this proposal.

Land Requirements

The subject property abuts Joondalup Drive, which is reserved as a Category 1 Other Regional Road (ORR) in the Metropolitan Region Scheme (MRS). Lot 11 is not affected by the ORR reservation for Joondalup Drive.

Transport Impact Assessment

The following comments are based on our assessment of the Transport Assessment prepared by Shawmac dated April 2012.

Trip Generation & Distribution

The development is expected to generate an additional 570 trips in the PM peak hour. DoP have no objection to the methodology adopted to determine the traffic generation and distribution rates.

Access

The application proposes no access directly from Joondalup Drive. This is in accordance with the Commission's Regional Roads (Vehicular Access) Policy D.C. 5.1, which seeks to minimise the number of new crossovers onto regional roads.

Three accesses are proposed to the site, one each on Sundew Rise, Honeybush Drive and Injune Way. The main access on Sundew Rise appears to be located directly opposite a proposed access for Lot 807, resulting in a 4-way priority controlled intersection. This does not appear to have been taken into consideration throughout the transport assessment.

140 William Street, Perth, Western Australia 6000
Tel: (08) 6551 9000 Fax: (08) 6551 9001 www.planning.wa.gov.au
ABN 79 051 750 680

Regarding the service entry/exit access on Sundew Rise, due to its proximity to the Sundew Rise/Honeybush Dr intersection, it is recommended this access be restricted to Left-in Left-out only in the interests of traffic safety and efficiency.

Intersection Analysis

DoP has serious concerns that the 4-way intersection of Sundew Rise and the main accesses for Lots 806 and 807 have not been analysed adequately, particularly given its proximity (100m) to Other Regional Road Joondalup Drive. This will have an impact on the operation of the Joondalup Drive/Sundew Rise intersection.

Whilst we support the proposal in principal, we are not able to provide our full support until analysis of this intersection and the Joondalup Drive/Sundew Rise intersection take into consideration the adjacent development and access arrangements. Appropriate intersection treatment can then be determined in the interests of traffic safety and efficiency. It is important for transport planning to take a holistic approach using all available information, and this does not appear to have occurred. Given the high future traffic volume forecast on Joondalup Drive, this is particularly important.

We have been advised by the City they have had both transport assessments independently reviewed by GHD, and a suggested access arrangement is to allow left in/out only from each Lot onto Sundew Rise, with an additional right-turn pocket into Lot 806. DoP does not support this access arrangement as we have concerns that right-turning traffic could queue back to Joondalup Drive/Sundew Rise intersection, impacting on safety and operational efficiency of the intersection. Without proper analysis, we would only support Left-in Left-out access for both lots on Sundew Rise.

It is also noted that the Pedestrian phase was not included with the SIDRA analysis for the Joondalup Drive/Sundew Rise intersection. DoP expects that full pedestrian movement will be provided at this intersection and requests that the City liaises with Main Roads WA to ensure this. Furthermore, the Site Plans indicate that pedestrian crossing is not available on Sundew Rise at this intersection. Full pedestrian crossing facilities should be provided at this intersection in order to facilitate safe and efficient pedestrian and cyclist movements on the Principal Shared Path provided on the west side of Joondalup Drive.

Yours sincerely

Mohsin Muttaqui
Planning Manager
Transport & Movement